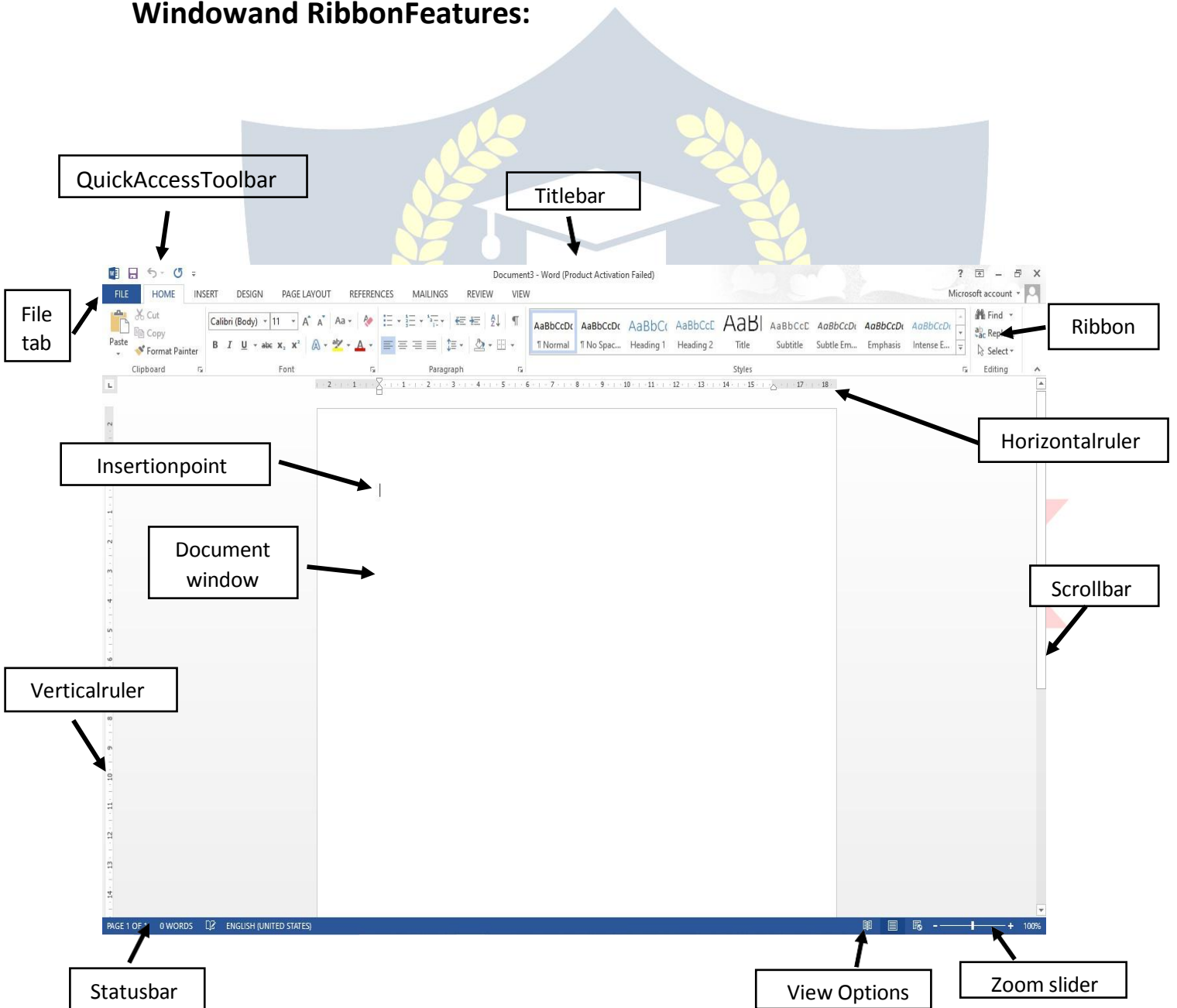


# MS – WORD

## To start Word 2013:

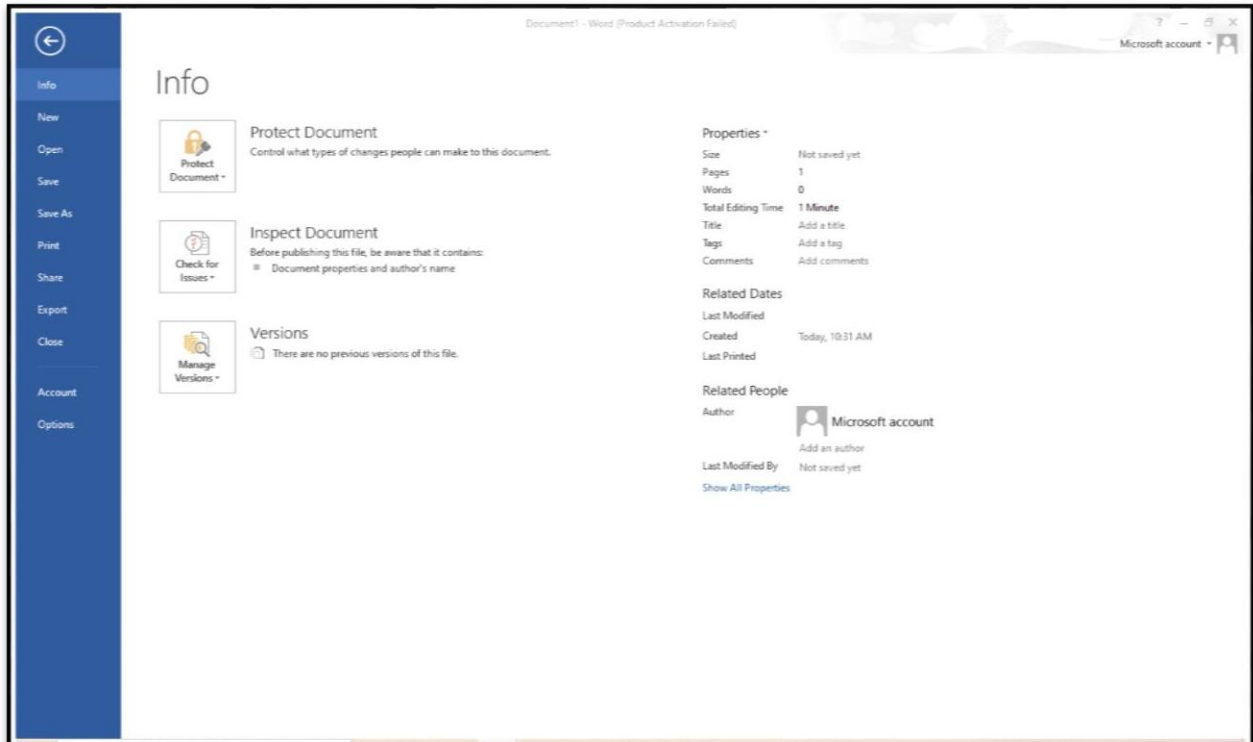
Click on the **Start** button, select **All Programs**, select **Microsoft Office**, and then select **Microsoft Word 2013** from the menu options.

## Window and Ribbon Features:



# FILETAB

The **File** tab provides you with the **Backstage** that provides information pertaining to your document and options to help setup your window defaults. The Backstage also contains standard commands such as, **Save, Save As, New, Print**, etc.

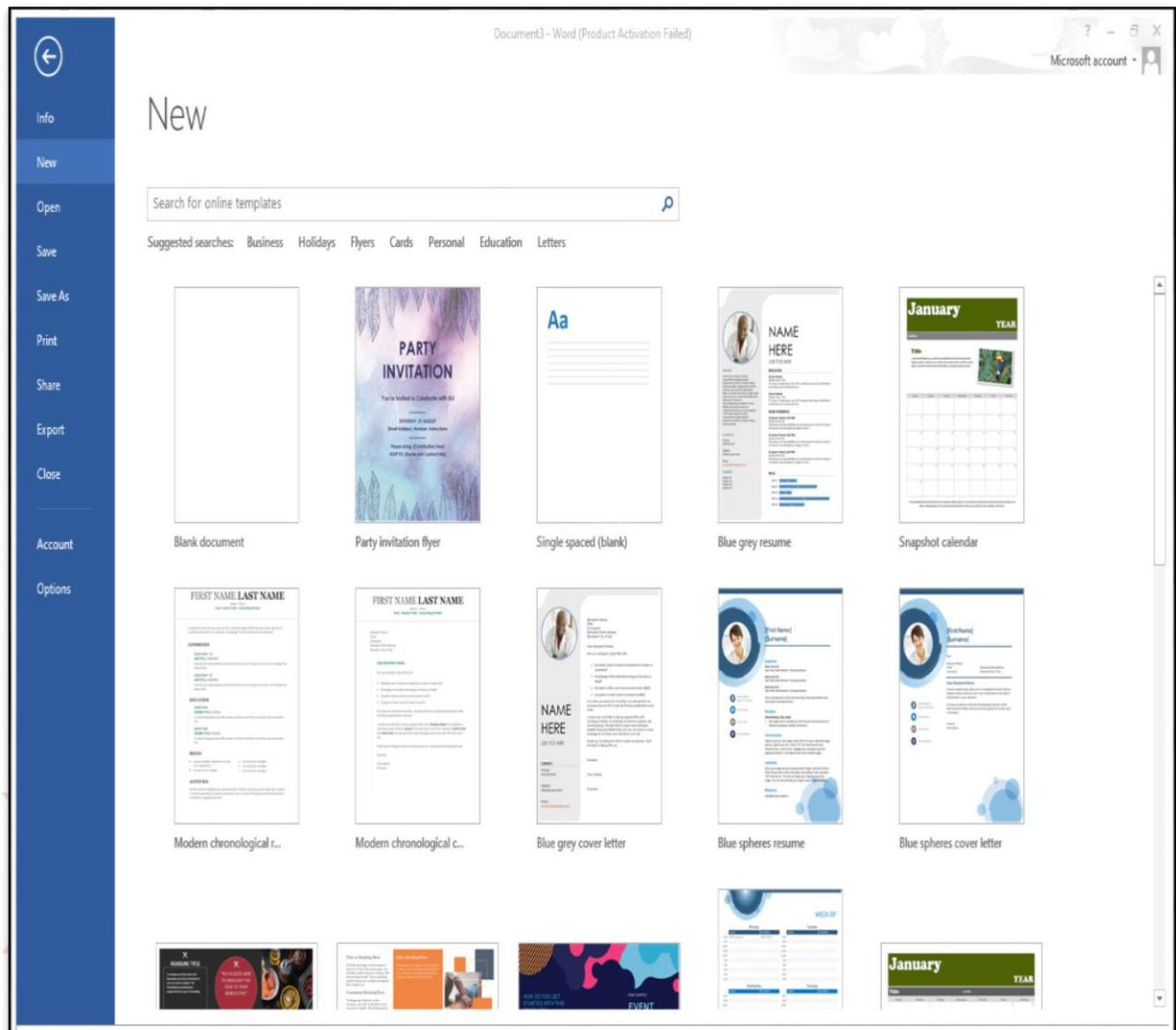


1. **New**– create a new **file** or folder.
2. **Open**– open a particular **file** or folder....
3. **Save**: save the **file**.
4. **Save As**: enabled to save the **file** with changes in the name of another **file**.
  - Click on the **File** tab, then select the **Save As** option to save a document permanently to your hard drive or other storage device. (The instructor will demonstrate where to save document.)
  - The **Save As** window will appear.
  - In the **Directory** sections on the left side of the window, click on the icon where you wish to save your document. In this exercise, click on the **Desktop**.
  - In the **File Name** box, type your desired document name, and then click on the **Save** button.
5. **Print**: used to give print command.
6. **Exit**: used to close the application and exit.
7. **Templates**:

Microsoft Office has a variety of predesigned templates within specific categories.

### Open Templates

1. Select the **File** tab, and then click on the **New** option.
2. The **Available Templates** window will appear.

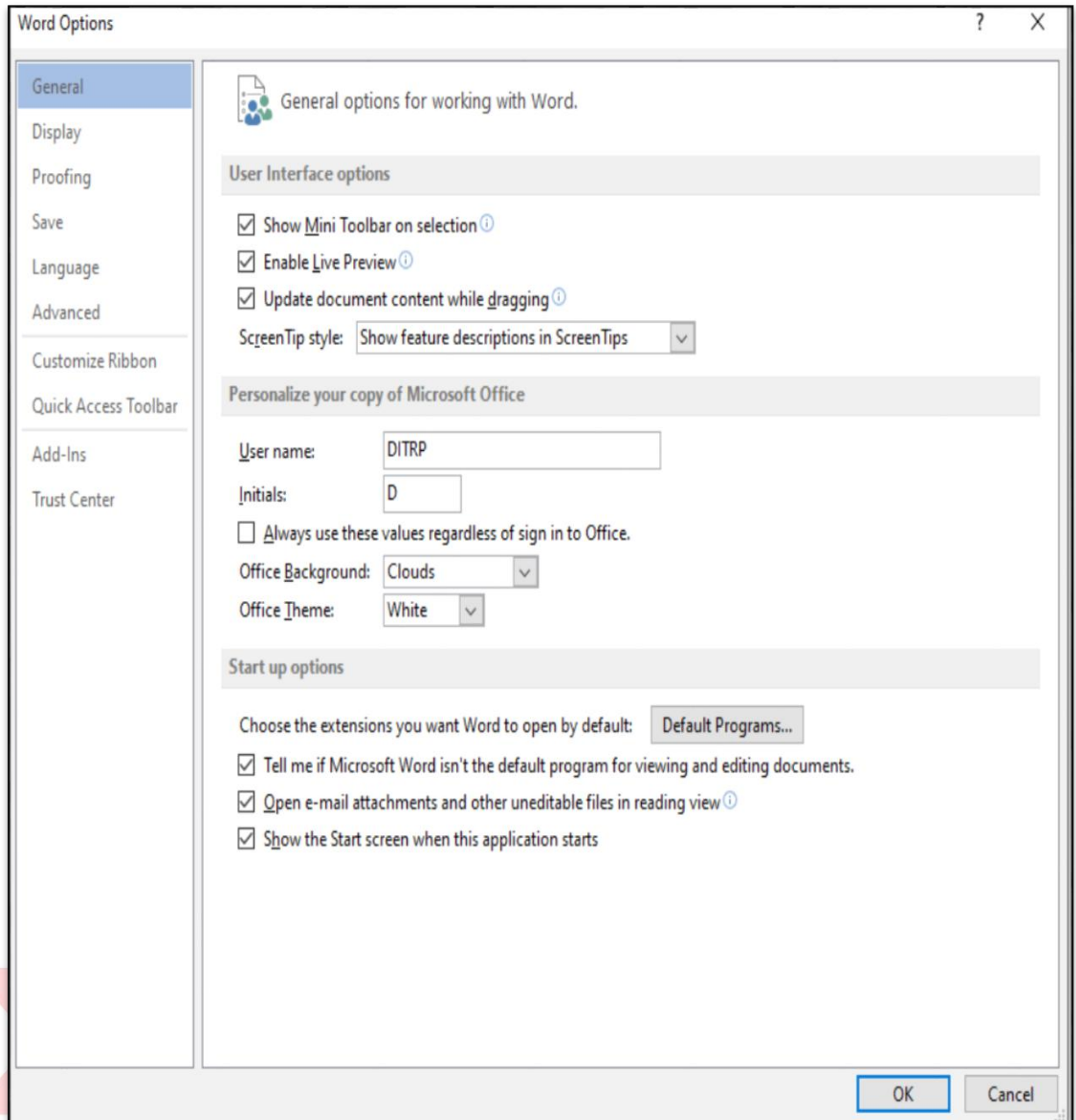


### 8. Window Options:

The Microsoft Word application allows you to customize settings and preferences as you work within your Word document.

#### Set options

1. Click on the **File** tab, and then select the **Options** item.
2. The **Word Options** window will appear. This is where you can choose your desired settings and preferences.

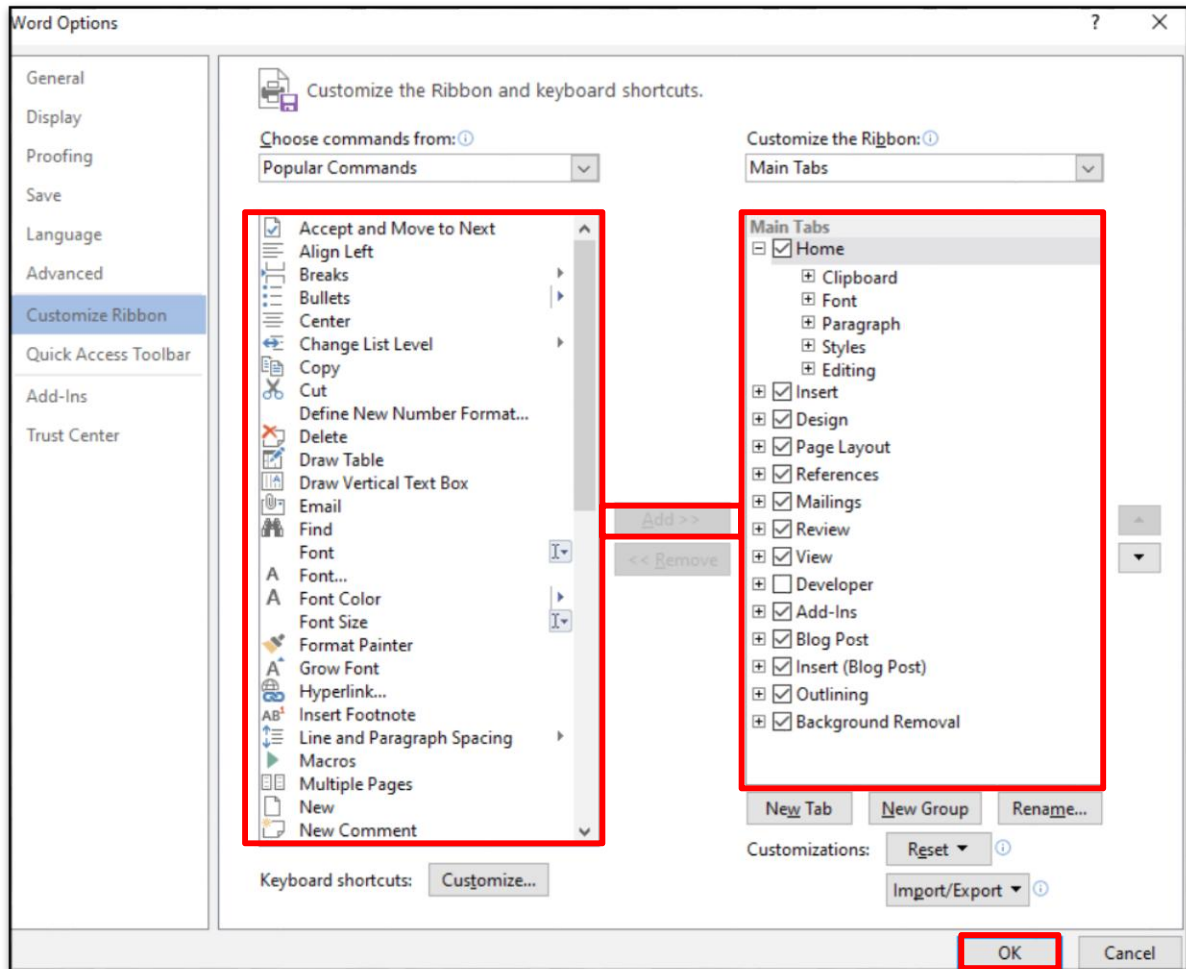


### **A) Customize Your Ribbon:**

You can easily customize the Ribbon to suit your needs by creating new tabs and filling them with the commands you use the most.

Customize Ribbon commands

1. Click on the **File** tab, and then select the **Options** Item.
2. The **Word Options** window will appear.
3. Click on the **Customize Ribbon** option.



4. From the **Choose commands from** list, click on your desired ribbon option, and then click on the **Add** button to place it in the **Customize the Ribbon** list.

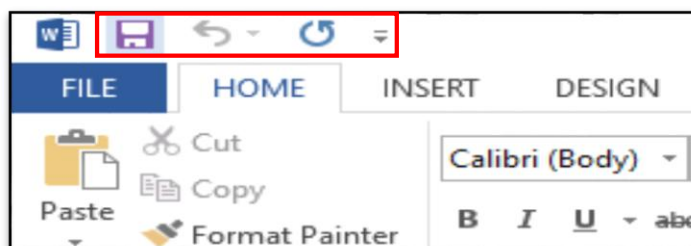
5. Click on the **OK** button.

### B) Quick Access Toolbar:

Microsoft Word 2013 has a Quick Access Toolbar, so you can have quick access to your most used commands.

Add Commands

1. To add your most used commands to the **Quick Access Toolbar**, click on the drop-down arrow next to the **Quick Access Toolbar**.
2. The **Customize Quick Access Toolbar** option panel will appear.

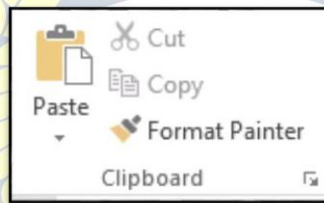


1. Click on your desired command option to be placed on the **QuickAccess Toolbar**.

## HOMETAB

### A. Clipboard

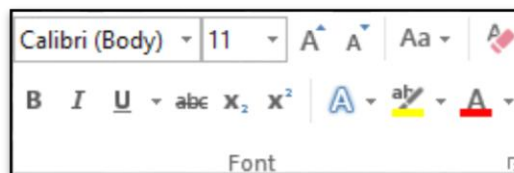
You can quickly display the Clipboard task pane by clicking on the dialog launcher in the bottom right corner of this group.



- Paste-Button with Drop-Down. The drop-down contains the commands: Paste, Paste Special and Paste as Hyperlink.
- Cut-(Ctrl+X). Cuts the current selection to the clipboard.
- Copy-(Ctrl+C). Copies the current selection to the clipboard.
- Format Painter-(Ctrl+Shift+C). Copies the formatting from one place in a document and lets you apply it somewhere else. This works across multiple documents.

### B. Font

This group provides access to all the Character Formatting commands. You can quickly display the "Font" dialog box, Font Tab, by clicking on the dialog box launcher in the bottom right corner of this group.



- Font-(Ctrl+Shift+F). Provides a list of all the available fonts (based on your current printer selection).

- FontSize-(Ctrl+Shift+P). Let's you adjust the character size (based on your current printer selection).
- Grow Font-(Ctrl+ >). Increases the font size of the current selection to the next larger size in the Font Size box. This was called Increase Font in Word.
- Shrink Font-(Ctrl + <). Decreases the font size of the current selection to the next smaller size in the Font Size box. This was called Decrease Font in Word.
- Change Case- Drop-Down. Changes the selected text to either uppercase, lowercase or another type of capitalisation. The drop-down contains the commands: Sentence Case, Lowercase, Uppercase, Capitalize Each Word and Toggle Case.
- Clear All Formatting-(Ctrl+Spacebar). Clears all the formatting from the current selection.
- Bold-(Ctrl+B). Toggles bold on the current selection
- Italic-(Ctrl+I). Toggles italics on the current selection.
- Underline-(Ctrl+U). Button with Drop-Down. The button toggles bold on the current selection. The drop-down contains the commands: Underline, Double Underline, Thick Underline, Dotted Underline, Dashed Underline.
- Strikethrough-Draws a line through the middle of the selected text.
- Subscript-(Ctrl+=). Converts the selection to small letters below the text baseline.
- Superscript-(Ctrl+Shift++). Converts the selection to small letters above the text baseline.
- Text Effects and Typography-You can add shadows, bevels, reflections, and much more. The Text Effects button is in the Font group of the ribbon. The top options in the Text Effects menu have some pre-created styles to choose from. The Text Effects menu also has the options Outline, Shadow, Reflection, and Glow.
- Text Highlight Color - Button with Drop-Down. Shades the background behind the current selection. The drop-down contains the commands: No Color and Stop Highlighting. For more details please refer to the Characters>Text Highlight page.
- Font Color-Button with Drop-Down. The button changes the colour of the font of the current selection. The drop-down contains the commands: Automatic, Theme Colors, Standard Colors and More Colors.

### C. Paragraph

This group provides access to all the Paragraph Formatting commands. You can quickly display the "Paragraph" dialog box, Indents and Spacing Tab, by clicking on the dialog box launcher in the bottom right corner of this group.



- Bullets -Button with Drop-Down. The button toggles single level bullets from the selected paragraphs. The drop-down contains the commands: Recently Used Bullets, Bullet Library, Document Bullets, Change List Level and Define New Bullet. The Change List Level extension displays levels 1 to 9. The Define New Bullet displays the "Define New Bullet" dialog box.
- Numbering - Button with Drop-Down. The button toggles single level numbering from the selected paragraphs. The drop-down contains the commands: Recently Used Numbering, Change List Level, Define New Number Format and Set Numbering Value.
- Multilevel List - Drop-Down. The drop-down contains the commands: Current List, List Library, Change List Level, Define New Multilevel List and Define New List Style. A multilevel list shows the list of items at different levels, rather than just at one level. This was previously accessible from the Outline Numbered tab on the Bullets & Numbering dialog box and has replaced Outline numbering. Please refer to the [Bullets > Multilevel List](#) for more details.
- Decrease Indent - Decreases the indent by 1 or removes the indent completely.
- Increase Indent - Increases the indent by 1.
- Sort - Displays the "Sort Text" or "Sort" dialog boxes allowing you to sort paragraphs of text or text within tables. If your current selection is not in a table then the "Sort Text" dialog box is displayed. If the current selection is in a table then the "Sort" dialog box is displayed. This command was previously on the Table drop-down in 2013 but now appears both on the Home Tab and Table Tools - Layout contextual tab.
- Show/Hide Paragraph Marks - (Ctrl + \*). Toggles the display of paragraph marks and other hidden formatting.
- Align Left - (Ctrl + L). Aligns text to the left.
- Center - (Ctrl + E). Aligns text to the center.
- Align Right - (Ctrl + R). Aligns text to the right.
- Justify - (Ctrl + J). Aligns text to both left and right margins adding extra space between words where necessary.
- Line Spacing - Drop-Down. The drop-down contains the commands: 1.0, 1.15, 1.5, 2.0, 2.5, 3.0, Line Spacing Options, Add Space before Paragraph and Add Space after Paragraph. The Line Spacing Options command displays

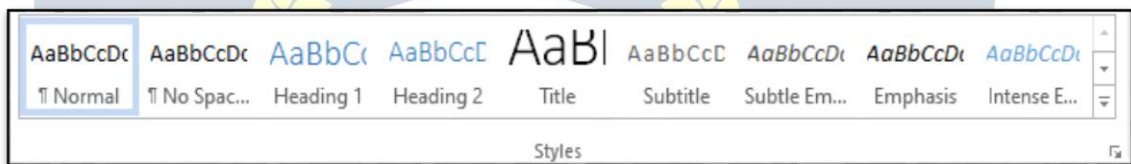


the "Paragraphs" dialog box (Indents and Spacing tab). The default line spacing is 1.15.

- **Shading**- Button with Drop-Down. The button applies the selected shading to the current selection. The drop-down contains the commands: Theme Colors, Standard Colors, No Color and More Colors.
- **Border**- Button with Drop-Down. The button applies the selected border to the current selection. The drop-down contains the commands: Bottom Border, Top Border, Left Border, Right Border, No Border, All Borders, Outside Borders, Inside Borders, Inside Horizontal Border, Inside Vertical Border, Diagonal Down Border, Diagonal Up Border, Horizontal Line, Draw Table, View Gridlines and Borders and Shading.

## D. Styles

You can quickly toggle the display of the **Styles Task Pane** by clicking on the dialog box launcher in the bottom right corner of this group.



- **Quick Styles**- Displays a gallery of available styles (with auto preview). Is the Heading 1 styled differently in 2007 and 2010 to 2013. Yes, the Normal template and styles are very different.
- **Create a style**- Styles are format settings that you apply to multiple sections of text. For example, you can apply Heading 1 style to all your top level headings, and Heading 2 style to all subheadings at the next level.

## E. Editing

- **Find**- Button with "Find and Replace" The drop-down Go To. The Go To tab the Page: 1 of 2 bottom left corner.



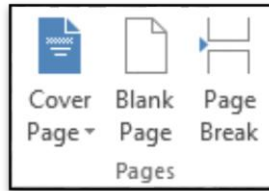
Drop-Down. The button displays the dialog box and displays the Find tab. It contains the commands: Find and can also be displayed by clicking on the indicator on the status bar in the

- **Replace**- This displays the "Find and Replace" dialog box and displays the Replace tab.
- **Select** - Drop-Down. The drop-down contains the commands: Select All, Select Objects and Select Text with similar Formatting. The Select Text will select text with similar formatting.

# INSERT TAB

This tab contains all the commands for inserting items into your documents.

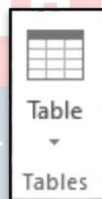
## 1. Pages



- **Cover Page**-Drop-Down. The drop-down contains the commands: Built-in, Remove Current Cover Page and Save Selection to Cover Page Gallery. The list of built-in cover pages is Alphabet, Annual, Austere, Conservative, Contrast, Cubicles, Exposure, Mod, Motion, Pinstripes, Puzzle, Side-line, Stacks, Tiles and Transcend.
- **Blank Page**-Inserts a blank page by inserting two page breaks, one above the current insertion point and one below it.
- **Page Break**-(Ctrl+Enter). Inserts a page break instead of displaying the Breaks dialog box. You can access all the other types of breaks using the Breaks drop-down on the Page Layout tab, Page Setup group.

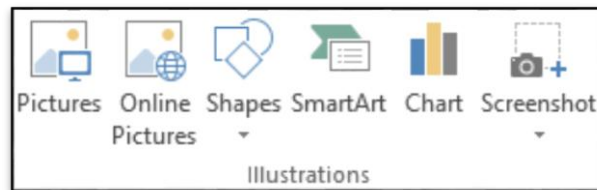
## 2. Tables

When a table is selected you will see additional contextual tabs Tables > Table Tools Design



- **Table** - Drop-Down. This lets you quickly drag out the table size. The maximum size you can drag is (10 by 8). The drop-down contains the commands: Insert Table, Draw Table, Convert Text to Table, Excel Spreadsheet and Quick Tables. The Insert Table displays the "Insert Table" dialog box. The Draw Table lets you create a table by inserting horizontal and vertical lines using the mouse. The Convert Text to Table displays the "Convert Text to Table" dialog box. The Excel Spreadsheet command inserts an Excel worksheet into the document. The Quick Tables lets you insert tables that have been stored as building blocks.

### 3. Illustrations



- Pictures-Displays the "Insert Picture" dialog box.
- Online Pictures-Find and insert pictures from online resources.
- Shapes-Drop-Down. The drop-down contains the commands: Recently Used Shapes, Lines, Rectangles, Basic Shapes, Block Arrows, Flowchart, Callouts and Stars and Banners. This list is slightly different in Excel.
- SmartArt-Displays the "Choose a SmartArt Graphic" dialog box which lets you choose from the following different types of smartart: list, process, cycle, hierarchy, relationship, matrix and pyramid.
- Chart-Displays the "Insert Chart" dialog box. There is no more MS Graph and datasheet. Chart data is now opened up in an Excel spreadsheet.
- Screenshot-The drop-down contains the commands: Available Screen Shots and Screen Clipping.

### 4. Apps for Office

Insert an App into your document to introduce additional functionality.



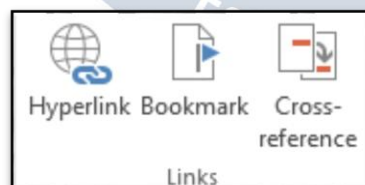
### 5. Media

- Online Video-Find and insert videos from online resources.



### 6. Links

- Hyperlink-document other files. dialog box. (Ctrl + K). Create a link in your document for quick access to web pages and other files. Displays the "Insert Hyperlink" dialog box.
- Bookmark-This displays the "Bookmark" dialog box.
- Cross-Reference-Displays the "Cross Reference" dialog box. This lets you cross reference other parts of your document. Typically used for figure numbers and section heading



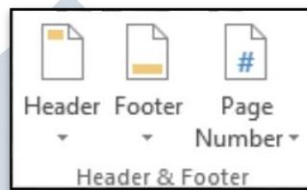
## 7. Comments

- Comment-Insert a comment into this part of the document.



## 8. Header & Footer

- Header-Drop-Down. This displays a gallery of the built-in headers. The drop-down also contains the commands Edit Header, Remove Header and Save Selection to Header Gallery. Also appears on the Header and Footer Tools - Design contextual tab.
- Footer-Drop-Down. This built-in footers. The drop-down commands Edit Footer, Save Selection to Footer on the Header and Footer contextual tab.
- Page Number- Drop-Down. The drop-down contains the commands: Top of Page, Bottom of Page, Page Margins, Current Position, Format Page Numbers and Remove Page Numbers. The first four commands all display galleries of built-in page number options and allow you to save your row to the gallery. The Format Page Numbers command displays the familiar "Page Number Format" dialog box. Also appears on the Header and Footer Tools - Design contextual tab. Why/When is this disabled?

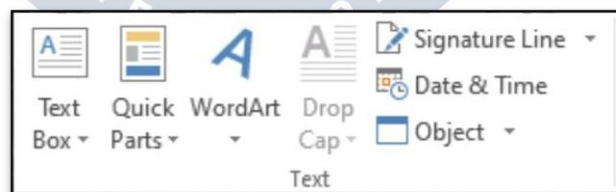


displays the gallery of down also contains the Remove Footer and Gallery. Also appears Tools-Design



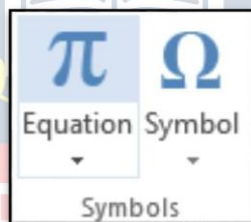
## 9. Text

- Text Box - Drop-Down. Let's you insert a textbox that can be positioned anywhere on the page. The drop-down commands: Text Box and Save Selection to Text Box Gallery. There are 36 different types of built-in textbox shapes and positions.
- Quick Parts-Drop-Down. The drop-down contains the commands: AutoText (Added in 2010), Document Property, Field, Building Blocks Organizer, Get More on Office Online (Removed in 2010) and Save Selection to Quick Part Gallery.



- WordArt- Drop-Down. The drop-down gives you a choice of Word Art styles to insert. The "EditWordArtText" dialog box is displayed when you click on a word art style. The styles are slightly different to those in Excel.
- Drop Cap - Drop-Down. The drop-down contains the commands: None, Dropped, In Margin and Drop Cap Options. The Drop Cap Options command displays the "Drop Cap" dialog box.
- Signature Line - Button with Drop-Down. Let's you use and insert digital signatures into your documents. The button inserts a digital signature line that specifies the individual who must sign. The drop-down contains the commands: Microsoft Office Signature Line and Add Signature Service.
- Date & Time- Displays the "Date and Time" dialog box.
- Object- Button with Drop-Down. The button displays the "Object" dialog box allowing you to insert embedded objects. The drop-down contains commands: Object and Text from File.

## 10. Symbols



- Equation- Button with Drop-Down. The button inserts an equation at the current location and then displays the Equation Tools-Design Tab. The drop-down contains the following built-in equations: Area of Circle, Binomial Theorem, Expansion of a Sum, Fourier series, Pythagorean Theorem, Quadratic Formula. At the bottom are the commands: Insert New Equation and Save Selection to Equation Gallery.
- Symbol - Drop-Down. Let's you insert symbols into your documents. The drop-down contains the commands: Euro, Pound, Yen, Copyright, Registered, Trademark, Plus-Minus, Not Equal To, Less-Than or Equal To, Greater-Than or Equal To, Division, Multiplication, Infinity, Micro, Alpha, Beta, Pi, Ohm, Summation, Smiley Face and More Symbols. The More Symbols command displays the "Symbol" dialog box. Different to Excel it displays the common symbols for quick insertion.

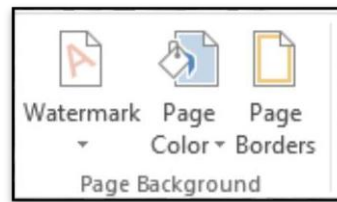
# DESIGN TAB

## 1. Document Formatting



- Themes- (Moved in 2013). Drop-Down. The drop-down contains the commands: Built-in, More Themes on Microsoft Office Online, Browse for Themes and Save Current Theme. The built-in themes are: Office, Apex, Aspect, Civic, Concourse, Equity, Flow, Foundry, Median, Metro, Module, Opulent, Oriel, Origin, Paper, Solstice, Technic, Trek, Urban and Verve. Tooltip indicates the current theme. The default theme is "Office". Tooltip indicates the current theme. Quick Access to more themes saved down on Microsoft Office Online. Default theme is "Office". Change the overall design of the entire document in colours, fonts and effects. This drop-down has an additional command not found in Excel or PowerPoint which is "Reset to Theme from Template".
- StyleSet- (Added in 2013). Change the look of your document by choosing a new style set. Style sets change the font and paragraph properties of your entire document.
- Colors- (Moved in 2013). Drop-Down. Displays a list of all the available colors and lets you change the color component of the active theme.
- Fonts- (Moved in 2013). Drop-Down. Displays a list of all the available fonts and lets you change the font component of the active theme.
- Paragraph Spacing- (Added in 2013). Drop-Down. Quickly change the line and paragraph spacing in your document. The drop-down contains the commands: No Paragraph Space, Compact, Tight, Open, Relaxed, Double, Custom Paragraph Spacing.
- Effects- (Moved in 2013). Drop-Down. Displays a list of all the available effects and lets you change the effect component of the active theme. The drop-down contains the commands: Office, Apex, Aspect, Civic, Concourse, Equity, Flow, Foundry, Median, Metro, Module, Opulent, Oriel, Origin, Paper, Solstice, Technic, Trek, Urban and Verve.
- Set As Default- (Added in 2013). Use the current look for all new documents.

## 2. Page Background



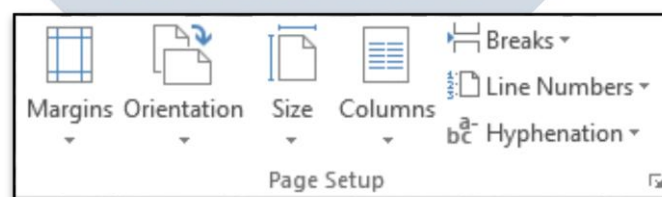
- Watermark-Drop-Down.The drop-down contains the commands: Custom Watermark, Remove Watermark and Save Selection to Watermark Gallery.
- Page Color-Drop-Down.Let's you change the background colour of the page. Displays the full theme colour palette.
- Page Borders-Displays the "Border and Shading" dialog box.

## PAGELAYOUTTAB

This tab provides quick access to Page Setup options as well as additional paragraph indent and spacing options.

### 1. Page Setup

You can display the "Page Setup" dialog box, Margins Tab, by clicking on the dialog box launcher in the bottom right corner of this group.



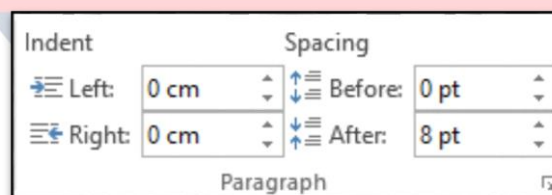
- Margins- Drop-Down. Let's you choose from one of the built-in margin settings or lets you customise your own. Similar to Excel but has 2 more options "Moderate" and "Mirrored". Custom Margins displays the "Page Setup" dialog box (Margins tab).

- Orientation-Drop-Down. Let's you change the orientation of the current section. The drop-down contains the commands: Portrait and Landscape. This provides a shortcut to the (Page Setup) (Page tab, Orientation).
- Size-Drop-Down. Let's you select from all the different available paper sizes. This provides a shortcut to the (Page Setup) (Page tab, Paper size drop-down).
- Columns - Drop-Down. The drop-down contains the commands: One, Two, Three, Left and Right and the command More Columns. Provides access to 1, 2, 3 column layouts.
- Breaks-Drop-Down. The drop-down contains the commands: Insert Page Break, Remove Page Break and Reset All Page Breaks.
- Line Numbers-Drop-Down. The drop-down contains the commands: None, Continuous, Restart Each Page, Restart Each Section, Suppress for Current Paragraph and Line Numbering Options. The Line Numbering Options displays the "Page Setup" dialog box (Layout tab).
- Hyphenation-Drop-Down. The drop-down contains the commands: None, Automatic, Manual and Hyphenation Options. The Hyphenation Options displays the "Hyphenation" dialog box.

## 2. Paragraph

You can quickly display the "Paragraph" dialog box, Indents and Spacing tab, by clicking on the launcher in the bottom right corner of this group.

These are options taken from the (Format Paragraph) (Indents and Spacing tab) for quick access.



- Indent Left - Textbox. This automatically updates to indicate how much indentation has been applied to the paragraph of the current selection. This can be used to change the left indentation for the current selection.
- Indent Right - Textbox. This automatically updates to indicate how much indentation has been applied to the paragraph of the current selection. This can be used to change the right indentation for the current selection.
- Spacing Before - Textbox. This automatically updates to indicate how much

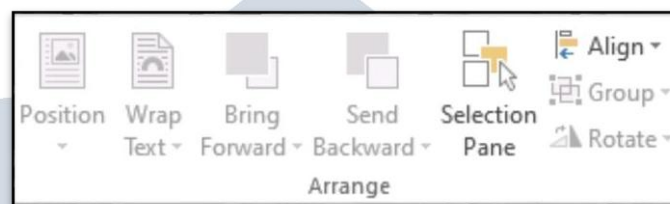


spacing is defined before the paragraph of the current selection. This can be used to change the spacing for the current selection.

- Spacing After - Textbox. The automatically updates to indicate how much spacing is defined after the paragraph of the current selection. This can be used to change the spacing for the current selection.

### 3. Arrange

This group also appears on the Drawing Tools-Format contextual tab.

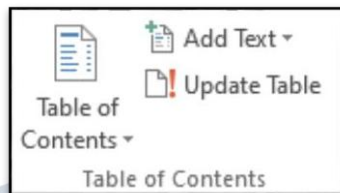


- Position-Drop-Down. Displays a list of picture positioning options. The drop-down contains the commands: In Line with Text and Text Wrapping. You can select More Layout Options to display the "Advanced Layout" dialog box.
- Wrap Text-(Text Wrapping in 2007). Drop-Down. The drop-down contains the commands: In Line with Text, Square, Tight, Through, Top and Bottom, Behind Text, In Front of Text, Edit Wrap Points and More Layout Options.
- Bring Forward-(Bring to Front in 2007). Button with Drop-Down. The button brings the selected object forward one level. The drop-down provides a command to bring the selected object in front of all the other objects.
- Send Backward-(Send to Back in 2007). Button with Drop-Down. The button brings the selected object back one level. The drop-down provides a command to send the selected object to the back of all the other objects.
- Selection Pane-(Added in 2010). Displays the Selection Pane task pane.
- Align-Drop-Down. The drop-down contains the commands: Align Left, Align Center, Align Right, Align Top, Align Middle, Align Bottom, Distribute Horizontally, Distribute Vertically, Align to Page, Align to Margin, Align Selected Objects, View Gridlines and Grid Settings. The Grid Settings displays the "Drawing Grid" dialog box.
- Group-Drop-Down. The drop-down contains the commands: Group, Regroup and Ungroup.
- Rotate-Drop-Down. The drop-down contains the commands: Rotate Right 90, Rotate Left 90, Flip Vertical, Flip Horizontal and More Rotation Options.

# REFERENCETAB

This tab gives you access to all the commands for creating references within your documents.

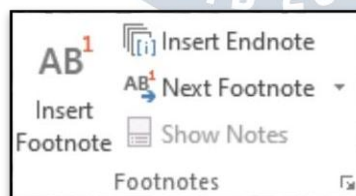
## 1. Table of Contents



- Table of Contents- Drop-Down. Provide an overview of your document by adding a table of contents. The drop-down contains the commands: Built-in, Insert Table of Contents and Save Selection to Table of Contents Gallery.
- Add Text-Drop-Down. The drop-down contains the commands: Do Not Show in Table of Contents, Level 1, Level 2 and Level 3.
- Update Table-Update the table of contents so that all the entries refer to the correct page numbers.

## 2. Footnotes

You can quickly display the "Footnote and Endnote" dialog box by clicking on the dialog box launcher in the bottom right corner of this group.

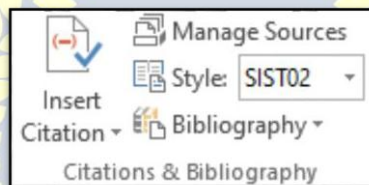


- Insert Footnote-(Alt+Ctrl+F). Inserts a footnote at the current position. Footnotes are automatically renumbered as you move text around the document.

- InsertEndnote-(Alt+Ctrl+D).Insertsanendnoteattheendofthe document. End notes are always placed at the end of a document.
- Next Footnote- Button with Drop-Down. The button moves to the next footnote.The drop-down providesthe commandsNextFootnote,Previous Footnote, Next Endnote and Previous Endnote.
- ShowNotes-Showswhere footnotesandendnotesare located.

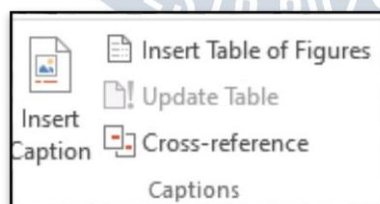
### 3. Citations&Bibliography

In2003theMarkCitationdialogboxwasfoundontheTableofAuthorities dialog box?



- InsertCitation-Drop-Down.The drop-downcontains the commands: Add New Source, Add New Placeholder and Search Libraries.
- ManageSources-Displaysalistof allthesourcescitedintheactive document.
- Style-Choosethestyleofcitationtouseinthe document.
- Bibliography-Drop-Down.The drop-downcontains the commands: Insert Bibliography and Save Selection to Bibliography Gallery.

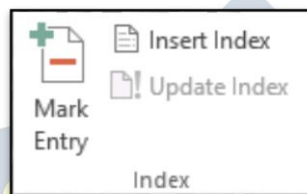
### 4. Captions



- InsertCaption-Insertacaptionbelowapictureorgraphic toprovideashort description.
- InsertTableofFigures-Adda listofcaptionedobjectsandtheirpage numbers.

- UpdateTable-Updatesthetableoffiguresstoincludealloftheentriesinthe document.
- Cross-reference- Displays the "Cross-reference" dialog box allowing you to insertcross-referencingintoyourdocument,forexample:turntopage3or please refer to page 12. Cross references are inserted as hyperlinks.

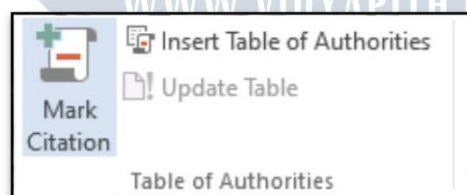
## 1. Index



- MarkEntry-(Alt+Shift+X).Marksthecurrentlyselectedtextsoitwill appear in the index of the document.
- InsertIndex-Addanindexlistingkeywordsandpagenumberstheyappear on.
- UpdateIndex-Updatestheindex table.



## 6. Table of Authorities

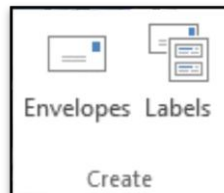


- MarkCitation-(Alt+Shift+I).Addsthecurrentlyselectedtextsoitwill appear in the table of authority.
- InsertTableofAuthorities-Inserts atableofauthoritiesforcases,statutes and other authorities in the document.
- UpdateTable-Updatesthetableofauthoritiestoincludeallthecitationsin the document.

# MAILINGSTAB

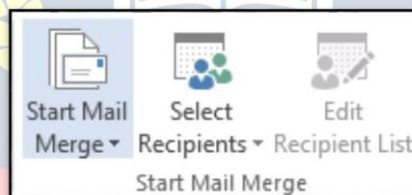
This tab contains everything needed to complete a successful mail merge.

## 1. Create



- Envelopes- Lets you create and print envelopes.
- Labels- Lets you create and print labels.

## 2. Start Mail Merge



- Start Mail Merge- Drop-Down. The drop-down contains the commands: Letters, E-mail Messages, Envelopes, Labels, Directory, Normal Word Document and Step-by-Step Mail Merge Wizard. Creates a form letter which you intend to email or print multiple times sending each copy to a different recipient. Displays the "New Address List" dialog box.
- Select Recipients- Drop-Down. The 3 options are from step 3 of the wizard. The drop-down contains the commands: Type New List, Use Existing List and Select from Outlook Contacts. Type New List displays the "New Address List" dialog box. You will have to save this list as a Microsoft Office Address List (.mdb).
- Edit Recipient List- Displays the "Mail Merge Recipients" dialog box allowing you to change or filter the list of recipients.

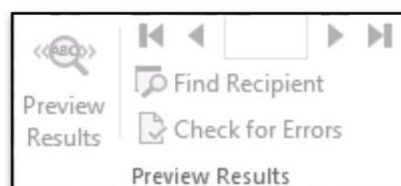
### 3. Write & Insert Fields

These commands are only available when you are in a mail merge document.



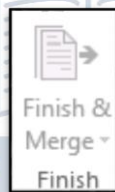
- Highlight Merge Fields - Highlights all the fields in the active document that have been inserted. This makes it easy to see what will be replaced.
- Address Block - Displays the "Insert Address Block" dialog box. This allows you to customize how the address will be inserted.
- Greeting Line - Displays the "Insert Greeting Line" dialog box. Let's you add a greeting line to your document.
- Insert Merge Field - Button with Drop-Down. The button displays the "Insert Merge Field" dialog box. The drop-down allows you to quickly insert a merge field just by clicking on it in the list and contains the commands: Title, First Name, Last-name, Company Name, Address\_Line\_a, Address\_Line\_2, City, State, Zip Code, Country\_or\_Region, Home\_Phone, Work Phone, Email Address.
- Rules - Drop-Down. Let's you add decision making rules to the mail merge. The drop-down contains the commands: Ask, Fill-in, If-Then-Else, Merge Record, Merge Sequence, Next Record, Next Record If, Set Bookmark, Skip Record If.
- Match Fields - Displays the "Match Fields" dialog box allowing you to match the required fields with the recipients list.
- Update Labels - Only enabled when creating labels. Updates all the labels in the document to be consistent with the first label.

### 4. Preview Results



- PreviewResults-This is disabled when there are no fields in your document. Toggles the merged fields in your document with actual data from your recipient list.
- FirstRecord-View the first record in the recipient list.
- PreviousRecord-View the previous record in the recipient list.
- GotoRecord-View a specific record in the recipient list.
- NextRecord-View the next record in the recipient list.
- LastRecord-View the last record in the recipient list.
- FindRecipient-Displays the "Find Entry" dialog box to search for a particular text entry.
- AutoCheckforErrors-(Alt+Shift+K). Displays the "Checking and Reporting Errors" dialog box. This allows you to simulate the mail merge and to specify how to handle any errors that occur during mail merge. You can even simulate the merge and report errors in a new document.

## 5. Finish



- Finish & Merge-Drop-Down. The drop-down contains the commands: Edit Individual Documents, Print Documents and Send E-mail Messages.

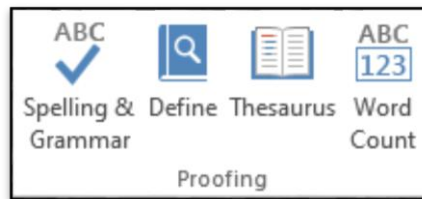
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## REVIEWTAB

This tab provides commands previously found on the Reviewing toolbar, Comments toolbar, Protection toolbar and Tools menu.

## 1. Proofing



- Spelling&Grammar-Displays the "Spelling and Grammar" dialog box. This allows you to check the spelling and grammar in the active document.
- Research-Toggles the display of the Research task pane. Same as Excel.
- Thesaurus-Toggles the display of the Research task pane defaulting the research service to the thesaurus. Same as Excel.
- Word Count- This displays the "Word Count" dialog box displaying the document statistics. This replaces the Word Count Toolbar. This dialog box can also be displayed by clicking on the word count indicator on the status bar.

## 2. Language



- Translate-Drop-Down. Displays the Research task pane. This drop-down contains the commands: Translate Document, Translate Selected Text, Mini Translator and Choose Translation Language.
- Language -Drop-Down. This drop-down contains the commands: Set Proofing Language and Language Preferences. Set Proofing Language displays the "Language" dialog box. Language Preferences displays the "Options" dialog box, Language Tab.

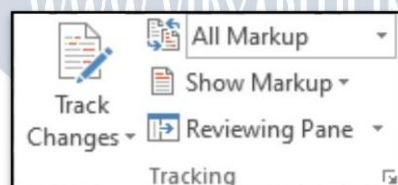
## 3. Comments





- **New Comment**- (Shift + F2). Inserts a comment at the active cell. This command does not change to Edit Comment when a comment is selected like it does in Excel.
- **Delete**- Button with Drop-Down. Deletes the selected comment. The button deletes the comment in the active selection. The drop-down contains the commands: Delete All Comments Shown and Delete all comments in Document. This is disabled when the document does not contain any comments.
- **Previous**- Go to the previous comment in the active document. This is disabled when the document does not contain any comments.
- **Next**- Go to the next comment in the active document. This is disabled when the document does not contain any comments.
- **Show Comments**- To view all comments, no matter which document view is chosen, summon the Reviewing pane: Click the Review tab, and in the Tracking group, click the Reviewing Pane button. Choose either the horizontal or vertical display to summon the Reviewing pane and peruse comments as well as text revisions.

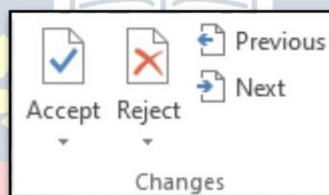
#### 4. Tracking



- **Track Changes**- (Ctrl + Shift + E). Button with Drop-Down. The button is the Track Changes command from the Reviewing toolbar that? The drop-down is the old (Show > Options) from the Reviewing toolbar and contains the commands Track Changes, Change Tracking Options and Change User Name. Change Tracking Options displays the Track Changes Options dialog box. Change User Name displays the Word Options dialog box (Popular tab).

- Display for Review-Drop-Down. The drop-down contains the commands: Simple Markup (previously Final Showing Markup), All Markup (previously Showing Markup), No Markup (previously Final) and Original.
- Show Markup- Drop-Down. The drop-down contains the commands: Comments, Ink, Insertions and Deletions, Formatting, Markup Area Highlight (removed in Specific People (previously Balloons (Highlight Updates Other Authors
  - Balloons- Drop-Down. Let's you choose how to display the revisions either in the margin or in the actual document. The drop-down contains the commands: Show Revisions in Balloons, Show all Revisions In Line and Show Only Comments and Formatting in Balloons.
- Reviewing Pane-Button with Drop-Down. The button toggles the display of the Reviewing pane. The drop-down contains the commands: Reviewing Pane Vertical and Reviewing Pane Horizontally. There is now also summary information at the top of the pane.

## 5. Changes



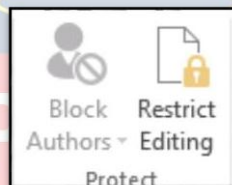
- Accept- Button with Drop-Down. The button is the Accept and Move to Next command which accepts the current change and moves to the next proposed change. The drop-down contains the commands: Accept and Move to Next, Accept Change, Accept all Changes Shown and Accept all Changes in Document. This drop-down is disabled when the document is protected.
- Reject- Button with Drop-Down. The button is the Reject and Move to Next command which rejects the current change and moves to the next proposed change. The drop-down contains the commands: Reject and Move to Next, Reject Change, Reject all Changes Shown and Reject all Changes in Document. This drop-down is disabled when the document is protected.
- Previous- Moves to the previous revision in the active document. This is a bit confusing as it does exactly the same as the Previous in the comments group?
- Next- Move to the next revision in the active document.

## 6. Compare



- Compare-Drop-Down. The drop-down contains the commands: Compare and Combine. The Compare command lets you compare two versions of the same document and displays the "Compare Documents" dialog box. The Combine command lets you combine revisions from multiple authors and displays the "Combine Documents" dialog box. This drop-down is disabled when the document is protected.

## 7. Protect



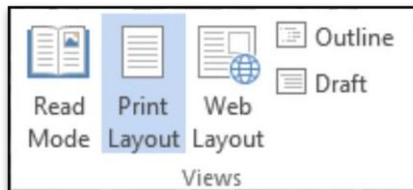
- Block Authors-Drop-Down. Prevent others from making changes to the selected text.
- Restrict Editing-Toggle the display of the Restrict Editing task pane. This task pane was called "Restrict Formatting and Editing" it's called "Protect Document".

# VIEW TAB

This tab provides commands previously found in the View menu and Window menu.

## 1. Views

This group contains all the commands relating to the different ways you can view your documents.



- Read Mode-In 2010 this was called Full Screen Reading. Maximises the Word window on the screen and removes all toolbars etc to allow easy reading.
- Print Layout-Displays the document as it would appear if printed and is the default view.
- Web Layout-Displays the document as it would appear as a web page.
- Outline-Displays the document as an outline and displays the Outlining contextual tab.
- Draft- Displays the document in draft mode allowing for quick editing. When using this view certain aspects of the document are not visible, for example any headers or footers.

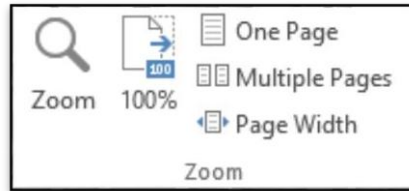
## 2. Show



- Ruler-Toggles the display of the ruler(s).
- Gridlines-Toggles the display of gridlines.
- Navigation Pane-Toggles the display of the Navigation task pane. This is a combination of the Find, Document Map and Thumbnails.

### 3. Zoom

Everything relating to adjusting the display percentage of the active document. There is also a new zoom slider in the bottom right corner next to the status bar.



- Zoom-Displays the "Zoom" dialog box. This can also be accessed from the status bar by clicking on the view percentage.
- 100%-Adjusts the zoom to 100% of its normal size. Let's you quickly return to 100%.
- One Page-Adjusts the zoom so an entire page fits in the application window.
- Two Pages-Adjusts the zoom so two entire pages fit in the application window.
- Page Width-Adjusts the zoom so the width of the page is the same as the width of the application window.

### 4. Window

Every document you open in Word can be thought of as a window. It is possible to open multiple windows of the same document.



- New Window-Lets you create a new window of the active document.
- Arrange All-Tile all the open windows side by side on the screen. This will also maximise the application / document to a full screen.
- Split-Split the current window into two parts.
- View Side by Side- Displays two documents side by side so they can be easily compared. If you have more than two documents open the "Compare Side by Side" dialog box is displayed so you can choose which document to display next to the active document. Allowing you to scroll multiple windows at the same time.
- Synchronous Scrolling-Toggle the synchronizes scrolling of the two documents that are displayed side by side. This is only enabled when you are viewing two documents side by side.

- ResetWindowPosition-Resets the window positions so they take up the same amount of space on the screen when two documents are displayed side by side. This is only enabled when you are viewing two documents side by side.
- SwitchWindows-Drop-Down. Let's you switch between all the currently active documents. This displays all the window/documents that are currently open in the particular session. Previously these were displayed on the Window menu.

## 6. Macros

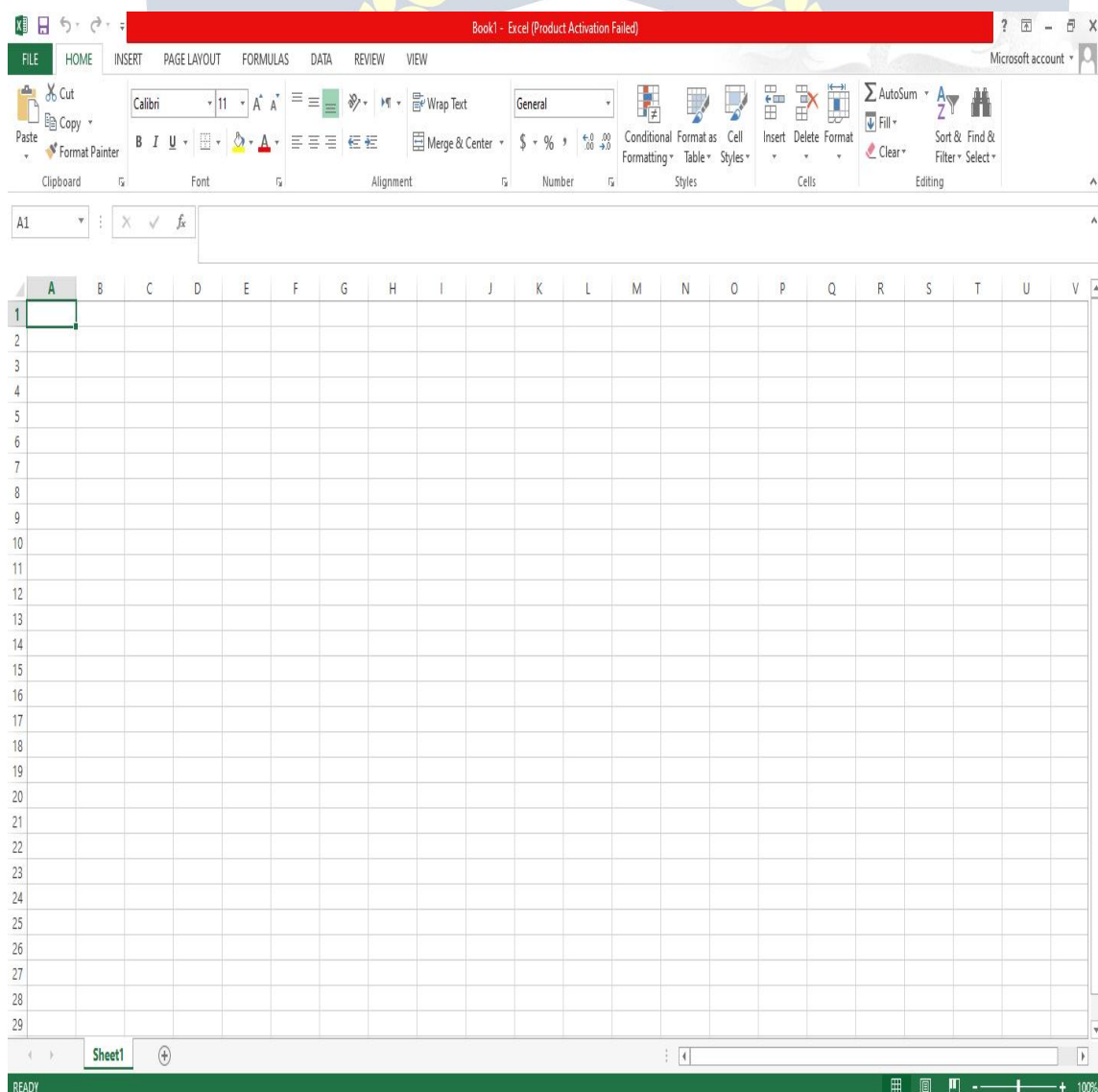
- Macros-Button with Drop-Down. The button is the View Macros command and displays the "Macros" dialog box. The drop-down contains the commands: View Macros, Record Macro and Pause Recording. If you want to edit macros or do anything more complicated then you should have the Developer tab displayed as well.



# MS EXCEL

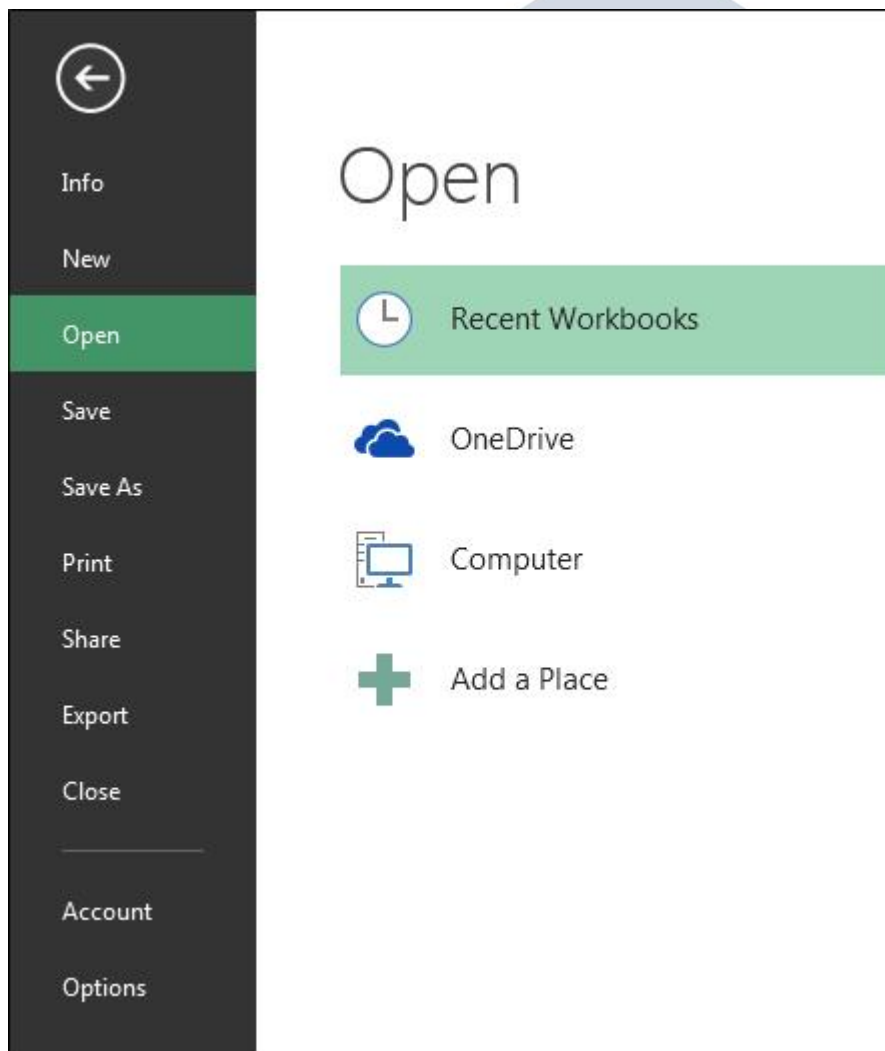
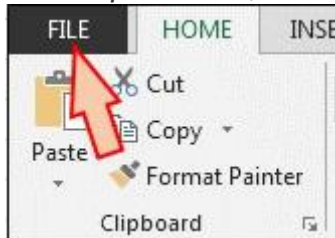
Excel 2013 is a spreadsheet program that allows you to store, organize, and analyze information. While you may think that Excel is only used by certain people to process complicated data, anyone can learn how to take advantage of Excel's powerful features. Whether you're keeping a budget, organizing a training log, or creating an invoice, Excel makes it easy to work with different kinds of data.\*

Launching Excel 2013\*\*\*Excel can be started either by selecting the program from the Windows start menu, or if there is an existing Excel shortcut available on your computer, it can be double-clicked to launch the program. Open Excel by going through these steps: 1. Click the Start button 2. Select All Programs 3. Select Microsoft Office 4. Click Microsoft Excel 2013



# FILETAB

filetab contains the basic required options such as New, Open, Save, Save as, Print, Share, Export, and Close options. Other than the aforementioned options, we can find account and Excel options tab, too.



a) **Info:**-With this option, we can get the information about the particular Excel file. Created date, last modified date, Author name, Properties, versions etc.



## Info

**Protect Workbook**  
Control what types of changes people can make to this workbook.

**Inspect Workbook**  
Before publishing this file, be aware that it contains:  
■ Author's name and absolute path

**Versions**  
There are no previous versions of this file.

**Browser View Options**  
Pick what users can see when this workbook is viewed on the Web.

**Properties**

Size: Not saved yet  
Title: Add a title  
Tags: Add a tag  
Categories: Add a category

**Related Dates**

Last Modified  
Created: Today, 4:37 PM  
Last Printed

**Related People**

Author: Excel Tip  
Add an author

Last Modified By: Not saved yet  
[Show All Properties](#)

**b) New:** -We use this option to open the new Excel file. We can open new file using shortcutkey, Ctrl+N or by Clicking on File tab>New>Blank workbook. If Excel file is not opened, then Press Window+R and type Excel, New Excel file will open.

## New

Search for online templates

Suggested searches: Business Personal Industry Small Business Calculator Finance - Accounting Lists

Blank workbook

Welcome to Excel

PayPal Invoicing

His and her weight loss tracker

Retirement financial planner

Monthly college budget

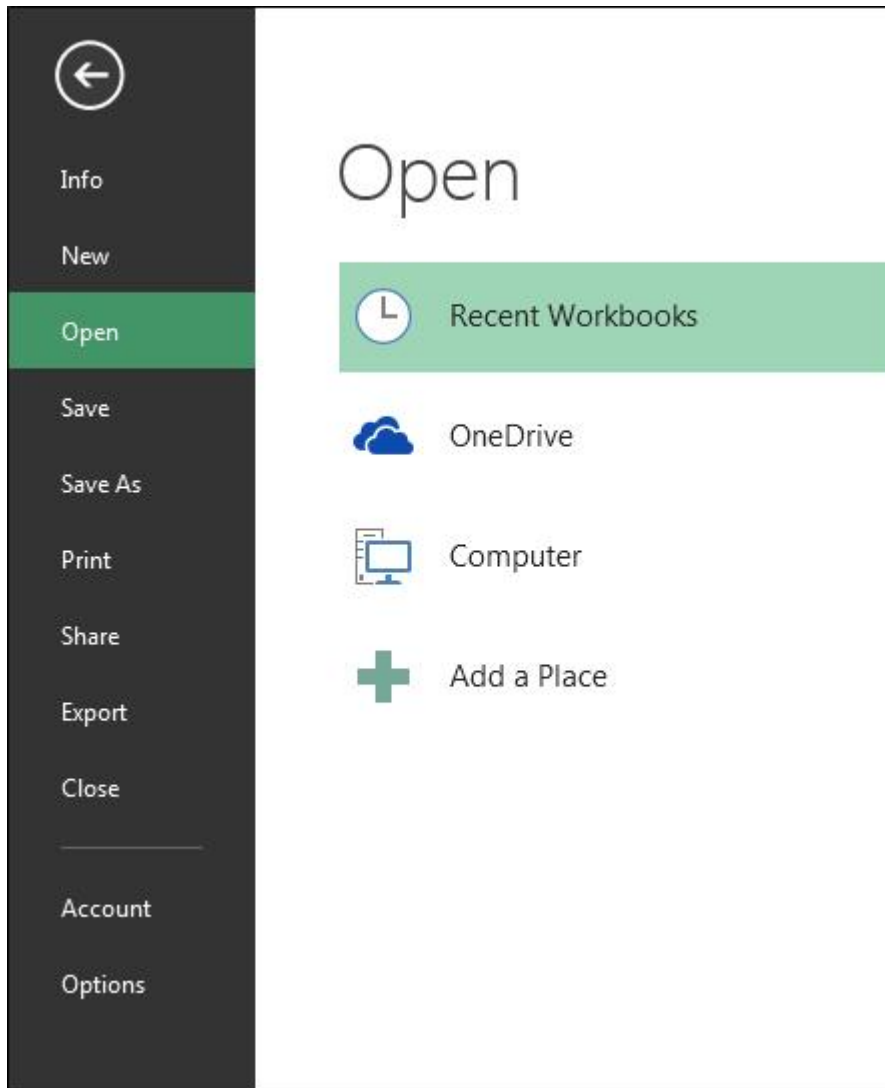
Event budget

Daily work schedule

Family monthly budget planner

Employee absence schedule

**c) Open:** -We use this option to open the existing file (shortcut Ctrl+O). "Open" option appears and you can choose to open the file. Alternatively, File tab>Open>choose the file

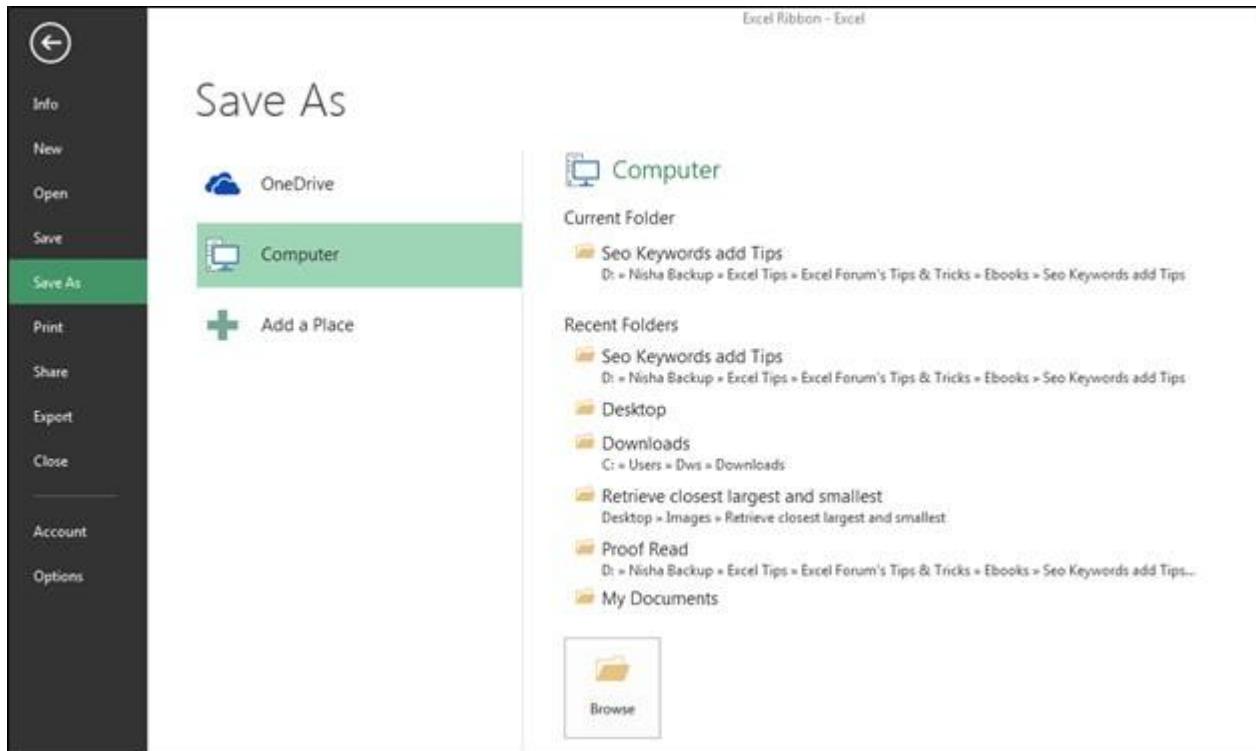


d) **Save**:-We use this option to save the current file.

Shortcut: - Ctrl+S

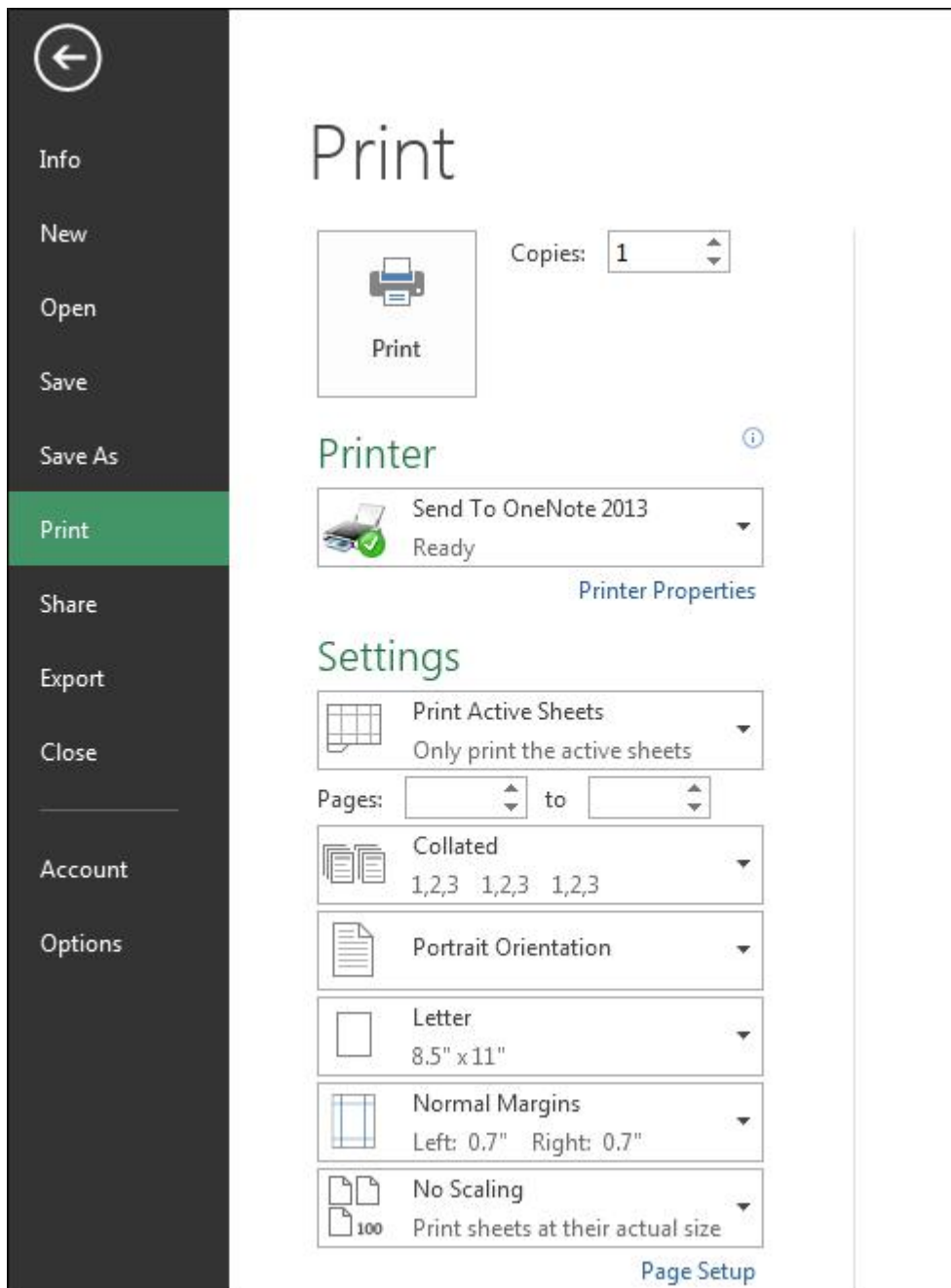
Path:-Click on File tab>Save

e) **Save as**:-We use this option to make another copy or save the file at another place. F12 is the shortcut key to save as the file or we can save the file following these steps: - Click on File tab > Save as and then choose the location.

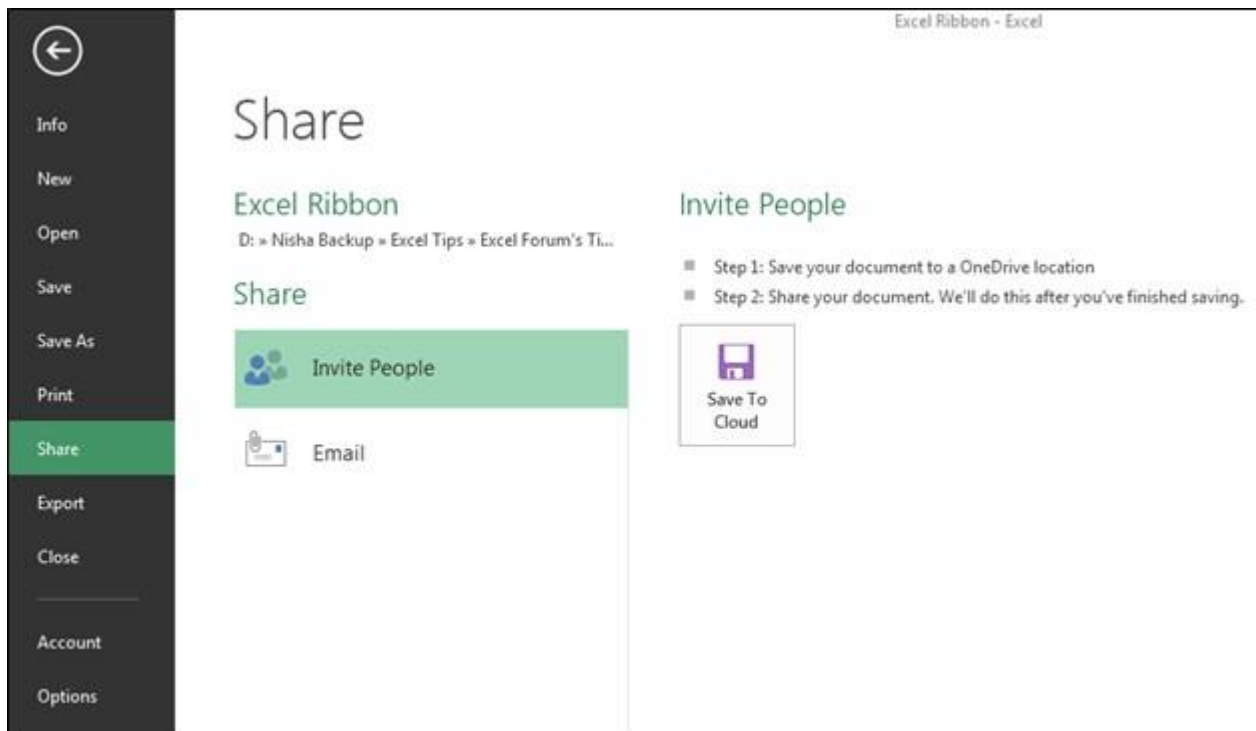


f) **Print:**-We use this option to print the current file. Ctrl+P is the shortcut key to print, or we can follow these steps: - File > Print and then we will have the page setup option. We can set the page according to our requirements.

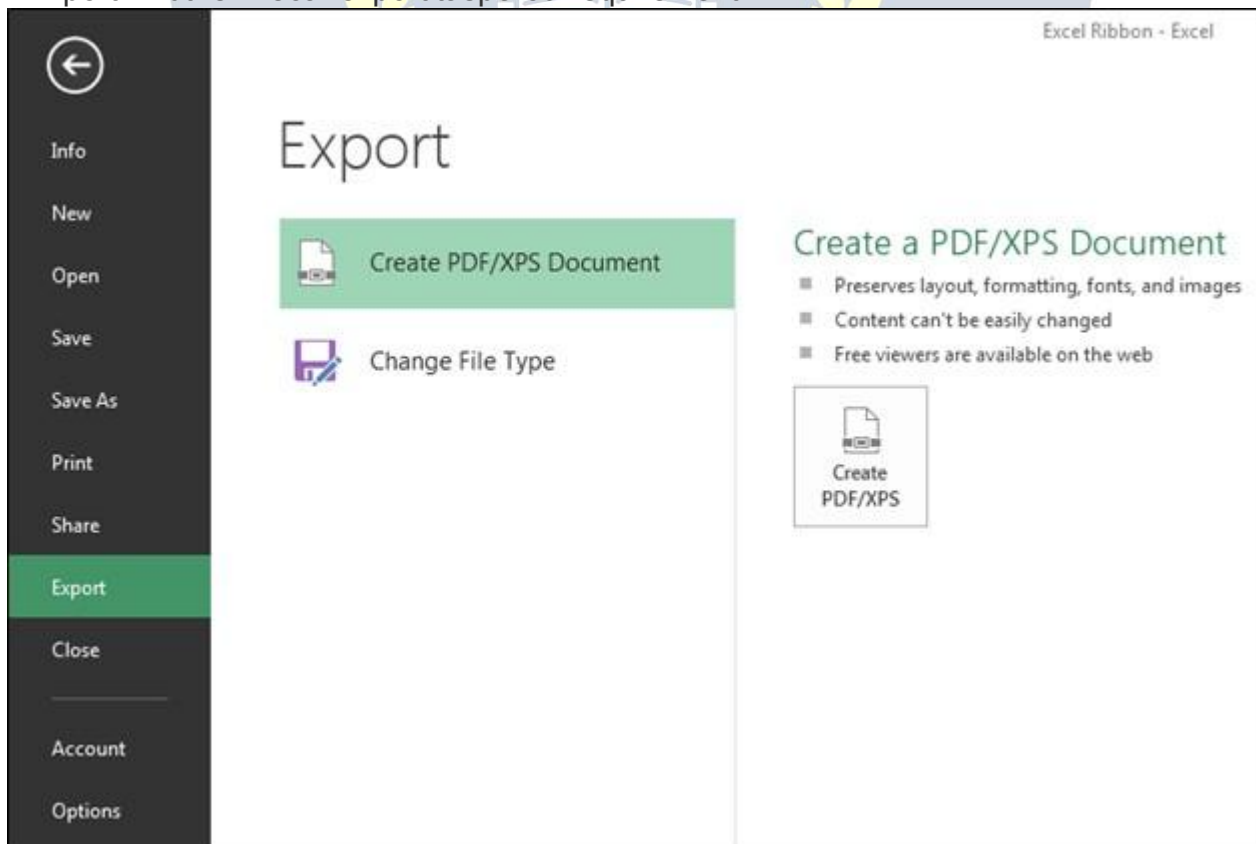




g) **Share**:-We use this option to share the file with multiple users and send it over email. To share the file we can follow the steps: - Click on File tab >Share.

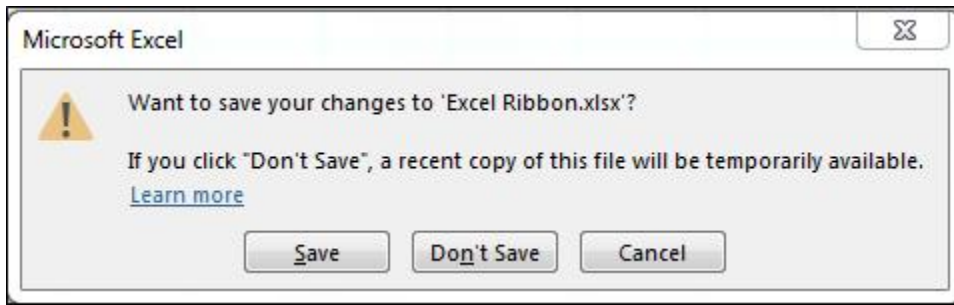


h) **Export:** -We use this option to export the file in PDF or XPS document and we can change the file type as well. To export the file, we can follow the steps: -Click on File tab > Export. And then we can export it as per our requirement.

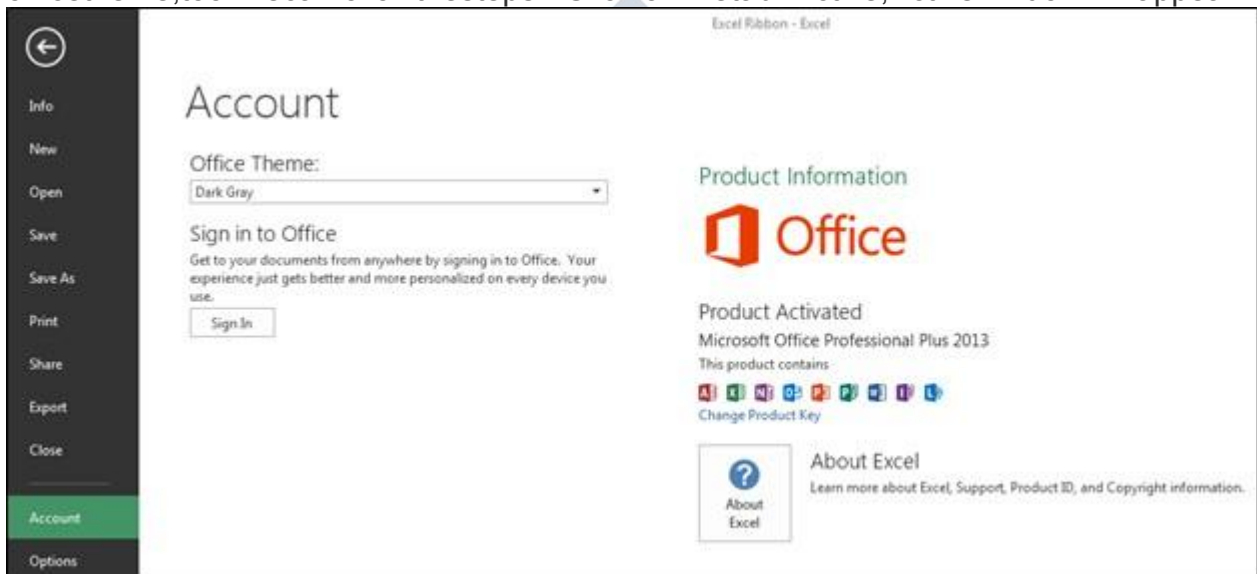


i) **Close:** -We use this option to close the file. Ctrl+W is the shortcut key to close the workbook or we can follow the steps: -Click on File tab > Close, active file will be closed.

When we close the file, we get the confirmation message to save the file or not or cancel the command.



j) **Account:** - We use this option to sign in to our office account and we can change office theme, too. We can follow the steps: - Click on File tab > Active, Active window will appear.

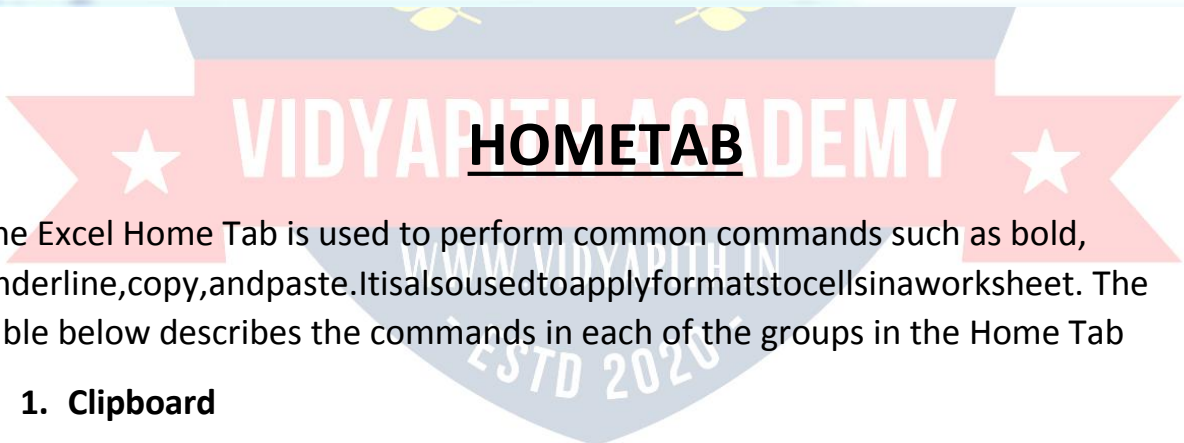
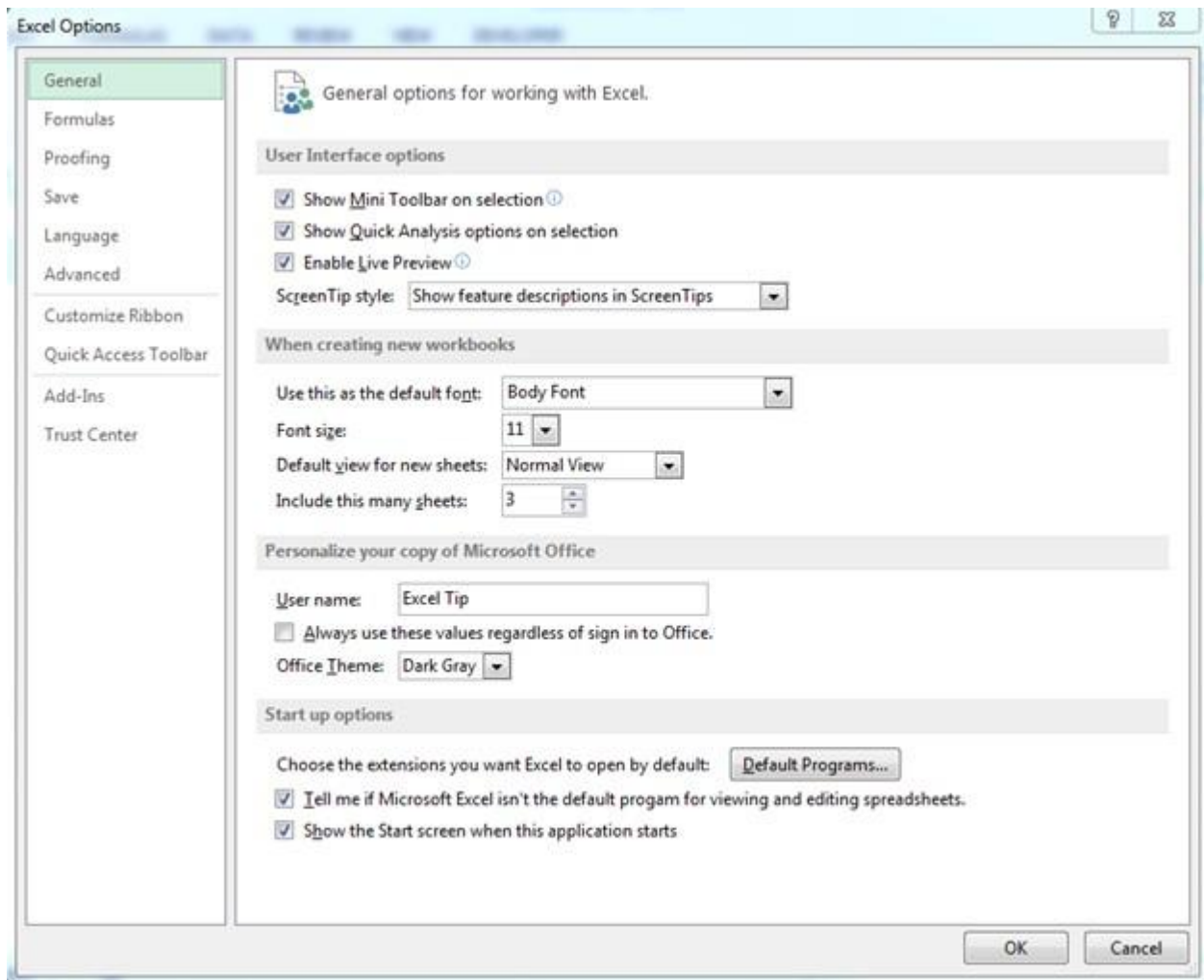


k) **Options:** - It was in the tool menu of the previous versions of 2007 MS. We use this option to add extra and advanced features, like Developer tab, Power pivot, Analysis toolpak and many more. Also, we can change default settings, like font size, font style, number of sheets etc. In Excel options, we have 10 categories:-

- 1) General
- 2) Formulas
- 3) Proofing
- 4) Save
- 5) Language
- 6) Advanced
- 7) Customize Ribbon
- 8) Quick Access toolbar
- 9) AddIns
- 10) Trust Center

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The Excel Home Tab is used to perform common commands such as bold, underline, copy, and paste. It is also used to apply formats to cells in a worksheet. The table below describes the commands in each of the groups in the Home Tab

### 1. Clipboard

**Paste** To insert data that has been placed on the clipboard into a worksheet cell, click this button.

**Cut** This button is used to remove data from a worksheet cell and place it on the clipboard. Once the data has been placed on the clipboard, it can be inserted into another cell in the same worksheet or into a different worksheet.

**Copy** To copy data from a cell in a worksheet so that it can be placed into another area of the worksheet, click this button. The data that is copied is placed on the clipboard.

**Format Painter** Click this button to apply formatting from one cell in a worksheet to another cell or range of cells in the same worksheet. Clicking the button once will apply the formatting to only one other cell or range. Double-clicking makes it possible to apply the formatting to more than one cell or range of cells.

**Clipboard Task Pane Launcher** This button is used to open the Clipboard Task Pane. It is located in the bottom right corner of the Clipboard Group. The task pane shows the items that have been added to the Clipboard. Items can then be pasted into the worksheet.

## 2. Font

**Font Type** This button is used to change the style of the font within a cell or a range of cells in a worksheet. A list of different font styles will appear. Move the mouse pointer over the style to see a Live Preview.

**Font Size** To change the size of the font in a cell or range of cells in a worksheet, click this button. Move the mouse pointer over each of the sizes to see a Live Preview. A list of different font sizes will appear. Click the desired size to select it.

**Increase Font Size** This button is used to increase the font size within a cell or range of cells. Each time the button is clicked, the size of the font increases by one or two points.

**Decrease Font Size** Click this button to decrease the size of the font by one or two point increments. Each time the button is clicked, the size of the font will decrease one or two points.

**Bold** To apply bold formatting to a cell or range of cells, click this button.

**Italics** To change the style of the font to italics, click this button.

**Underline** Click this button to underline the text in a cell or range of cells. **Border** This button is used to apply a border around a cell or a range of cells.

**Fill Color** To fill in the background color for a cell or range of cells, click this button.

**Font Color** Click this button to change the font for the text in a cell or range of cells.



**FontSettingsDialogBoxLauncher** To open the Format Cells dialog box with the Font Tab selected, click this button. The button is located in the bottom right corner of the Font Group.

### 3. Alignment

**Top Align** To vertically align the text in a cell at the top of the cell or range of cells, click this button.

**Middle Align** This button is used to vertically align the text in the middle of a cell.

**Bottom Align** Click this button to vertically align the text at the bottom of the cell.

**Orientation** To change the way text is displayed in a cell, click this button. The text will rotate in a different direction each time the button is clicked.

**Wrap Text** When working with text in a cell, clicking this button will allow long text entries to wrap within the cell. When a word won't fit within the width of the cell, it will move to the next line. The height of the cell will expand to accommodate the text.

**Align Left** To place text or numbers at the left margin of a cell, click this button. This is the default for all text items that are placed in a cell.

**Center** Click this button to center text or numbers within a cell.

**Align Right** This button is used to align text or number entries at the right margin of a cell. This is the default for all numbers that are placed in a cell.

**Decrease Indent** An indent creates a temporary left margin within a cell. To decrease this temporary margin, click this button.

**Increase Indent** An indent is used to set a temporary left margin within a cell. It usually is set in increments of .5 inches. To increase the temporary left margin, click this button.

**Merge and Center** To center text across a range of cells, click this button. The purpose of this feature is to allow for the placement of a heading across a range of columns in a worksheet.

**Alignment Settings Dialog Box Launcher** This button is used to open the Format Cells dialog box with the Alignment Tab selected. In this dialog box, it is possible to make changes to the horizontal and vertical cell alignment, as well as other

alignment options. The button is located in the bottom right corner of the Alignment Group.

#### 4. Number Group

**Number Format** Click the list arrow for this option to display a list of number formats. Click the format that is to be applied to the number.

**Accounting Number Format** This format will display with a dollar sign and two decimal places. To select a different number format, such as the Euro symbol, click this button.

**Percent Style** To display the value in the cell or range of cells as a percentage, click this button.

**Comma Style** When this button is clicked, the values in the cell will display with a comma separator and two decimal places.

**Increase Decimal** To increase the number of decimal places that are displayed for a value, click this button.

**Decrease Decimal** Click this button to decrease the number of decimal places that are displayed for a value. **Number**

**Format Dialog Box Launcher** This button is used to open the Format Cells dialog box with the Numbers Tab selected. It can be found in the lower right corner of the Number Group. This dialog box is used to make changes to the format of the numbers in the selected cells in the worksheet.

#### 5. Styles Group

**Conditional Formatting** This button is used to select different formatting for cells based on particular criteria. It is possible to highlight interesting cells, emphasize unusual values, and visualize data using Data Bars, Color Scales, and Icon sets.

**Format as Table** Click this button to quickly format a selected range of cells as a table using a gallery of table styles.

**Cell Styles** This button is used to apply predefined formatting to a single cell. A gallery of styles will appear. Move the mouse pointer over the style to see a Live Preview of the style.

#### 6. Cells Group

**Insert** To insert cells, sheet rows, or sheet columns, click this button. A list of possible options will appear. Click the option that is to be applied to the worksheet.

**Delete** This button is used to delete cells, sheet rows, or sheet columns from a worksheet. If the arrow is clicked, a list of available options will appear.

**Format** Click this button to change the row or column height and width, to organize worksheets in the workbook, to protect the document, or to hide a sheet in the workbook. A list of available options will appear when the arrow is clicked.

## 7. Editing Group

**AutoSum** To display the sum of selected cells directly to the right or below the selection, click this button. Where the sum is displayed will depend on whether the selection range is a column or row.

**Fill** Click this button to continue a pattern of values in a selected range of cells.

**Clear** This button is used to clear the contents from the cells in the selected range. It can also be used to clear the formatting or comments associated with the cell selection. **S**

**Sort and Filter** To sort the data in a selected range of cells, click this button. It is also possible to filter out specific data in the selected cells.

**Find and Select** Click this button to locate specific data in a worksheet or a range of cells. It is also possible to replace data within the worksheet or range of cells.

## INSERT TAB

The Insert Tab is used to insert objects such as charts, pictures, hyperlinks, headers and footers, and text boxes. The table below provides a list of the different groups and buttons that appear on this ribbon. Groups/Buttons Description

### 1. Tables Group

**PivotTable** This button is used to insert a PivotTable or PivotChart into a current worksheet or a new worksheet. Pivot tables are used to summarize and organize complicated data.

**Recommended PivotTables** Click this button to display a customized list of PivotTables that will best suit the data in an Excel table.

**Table** This button is used to insert a table into the worksheet. Tables make it easy to analyse and sort data.

### 2. Illustrations Group

**Picture** To insert a picture that has been stored on the computer, click this button. When the button is clicked, the Insert Picture dialog box will appear. This dialog box is used to locate the picture that is to be inserted into the worksheet.

**Online Pictures** To insert an image into the worksheet, click this button. Clip art images include movies, pictures, and sounds. When the button is clicked the Insert

Picture window will display. Input the Search criteria and click the Search button. A gallery of images will appear.

**Shapes** Shapes are objects, such as rectangles, circles, lines, and arrows. To insert a shape into the worksheet, click this button. When the button is clicked, a gallery of different shapes is displayed.

**SmartArt** To insert objects such as organization charts, click this button. A gallery of different objects is displayed. This gallery is divided into categories, such as list, process, cycle, hierarchy, relationship, matrix, or pyramid.

**Screenshot** This feature can be used to insert a picture of any program that is not minimized to the taskbar. Click the Screen Clipping link to insert a picture of any part of the screen.

### 3. Apps Group

**Store** Select this option to find apps in the Office Store

### 4. Charts Group

**Recommended Charts** Select the data in a worksheet and then click this button to see a list of customized charts that Excel recommends for the selected data.

**Column or Bar** Use this chart type to visually compare values across a few categories.

**Hierarchy** This chart is used to compare parts to a whole or when several columns of categories form a hierarchy.

**Waterfall or Stock** To visualize the impact of multiple data points as a running total these chart types. They are generally useful for visualizing data over time to see the starting points versus the current point and how those points were reached.

**Line or Area** These charts are used to show trends for categories over a period of time such as days, months, or years.

**Statistic** To show statistical analysis of data, use this type of chart.

**Combo** This chart type is used to highlight different types of information. It can be used when range of data in the chart varies widely or when a wide range of mixed data is used.

**Pie or Doughnut** This button is used to insert a pie or doughnut chart into the worksheet. These chart types are used to display the contribution of each item to the total.

**Scatter or Bubble** These chart types are used to compare pairs of values.

**Surface or Radar** This type of chart is useful when optimum combinations between two sets of data need to be found.

**Pivot Chart in Excel** is an in-built Program tool in excel which helps you out to summarize selected rows and column of data in a spreadsheet. It's the visual

representation of a pivot table or any tabular data which helps to summarize & analyse the datasets, patterns, and trends.

**Create Chart Dialog Box** Launcher to open the Insert Chart dialog box, click this button. The purpose of this dialog box is to provide additional chart types that can be used in Excel.

### 5. Power View group

Import Data into Excel 2013, and Create a Data Model. Extend Data Model relationships using Excel 2013, Power Pivot, and DAX. Create Map-based Power View Reports. Incorporate Internet Data, and Set Power View Report Defaults.

Create Amazing Power View Reports.

### 6. Sparkline's Group

**Line** This option is used to insert a line chart within a single cell. When the button is clicked a dialog box will appear asking for the range of data that is to be plotted. **Column** Use this option to insert a column chart within a single cell. When the button is clicked a dialog box will appear asking for the range of data that is to be plotted.

**Win/Loss** To insert a win/loss chart into a single cell, select this option. When the button is clicked a dialog box will appear asking for the range of data that is to be plotted.

### 7. Filter Group

**Slicer** As a slicer is used to filter data interactively. This makes it faster and easier to filter Pivot Tables, Pivot Charts, and cube functions.

**Timeline** This feature is used to filter dates interactively. This makes it faster and easier to select time periods in order to filter Pivot Tables, Pivot Charts, and cube functions.

### 8. Links Group

**Hyperlink** To insert a link to another worksheet, a website, another program, a picture, or an e-mail address, click this button.

### 9. Text Group

**Text Box** This button is used to insert a text box into the worksheet. Text boxes can be used to highlight an item in a chart or within the worksheet. Text boxes can be inserted and/or positioned anywhere within the worksheet page.

**Header and Footer** To insert a header and/or footer into a worksheet, click this button. The header or footer area of the worksheet will display when this button is clicked. The header or footer can be inserted directly into this area.

**WordArt** Click this button to insert a Word Art object into the worksheet or chart. A gallery of Word Art styles will appear. Select any of the styles to display the text box. The text box is where the text for the Word Art can be specified.

**SignatureLine** Use this button to insert a signature line into the worksheet. The signature line specifies the individual who is to sign the file in order to access it.

**Object** To insert an embedded object, such as documents from other programs, click this button. A dialog box will display from which a list of options can be chosen. Click the Create from File option to insert a designated file.

## 10. SymbolsGroup

**Equation** This button is used to insert a mathematical equation into a document. The equation tools ribbon will appear when the button is clicked. This ribbon is used to create the equation. A list of common equations is also available.

**Symbol** This button is used to insert a symbol, such as a copyright symbol, into the worksheet. When the button is clicked, a gallery of different symbols will appear.

# PAGELAYOUTTAB

## 1. Theme

**Themes** - Drop-Down. Changes the overall look and feel of your workbook including colours, fonts and effects. The drop-down contains the commands: Built-in, More Themes on Microsoft Office Articles (Removed in 2010), Browse for Themes and Save Current Theme. The built-in themes are: Office, Facet, Integral, Ion, Boardroom, Organic, Retrospect, Slice, Wisp, Berlin and Frame. Tooltip indicates the current theme. The default theme is "Office".

**Colors**-Drop-Down. Displays a list of all the available colours and lets you change the colour component of the active theme. The drop-down contains the commands: Built-in and Customize Colors.

**Fonts**-Drop-Down. Displays a list of all the available fonts and lets you change the font component of the active theme. The drop-down contains the commands: Built-in and Customize Fonts.

**Effects**-Drop-Down. Displays a list of all the available effects and lets you change the effect component of the active theme. The drop-down contains the commands: Office, Office 2007-2010, Subtle Solids, Banded Edges, Smokey Glass, Glow Edge, Grunge Texture, Frosted Glass, Top Shadow, Inset, Milk Glass, Riblet, Reflection, Extreme Shadow, Glossy.

## 2. Page Setup

You can quickly display the "Page Setup" dialog box, Page tab, by clicking on the launcher in the bottom right corner of this group.

**Margins** -Drop-Down. Lets you choose from one of your built-in margin settings or lets you customise your own. The drop-down contains the commands: Normal, Wide, Narrow and Custom Margins. The Custom Margins displays the "Page Setup" dialog box, Margins tab.

**Orientation** -Drop-Down. Lets you switch between Portrait and Landscape.

**Size** -Drop-Down. Lets you select from all the different available paper sizes. The More Paper Sizes displays the "Page Setup" dialog box, Page tab.

**Print Area** -Drop-Down. This drop-down contains the commands: Set Print Area and Clear Print Area.

**Breaks** -Drop-Down. This drop-down contains the commands: Insert Page Break, Remove Page Break and Reset All Page Breaks.

**Background** - Displays the "Sheet Background" dialog box to let you add a background image to the back of a worksheet. This caption changes to 'Delete Background' if an image is assigned to the active worksheet.

**Print Titles** - Displays the "Page Setup" dialog box, Sheet tab. This allows you to enter rows or columns to repeat.

## 3. Scale to Fit

You can quickly display the "Page Setup" dialog box, Page tab, by clicking on the launcher in the bottom right corner of this group.

**Width** - Choice of 1 to 9 pages. The combo box contains Automatic, 1 to 9 pages and More Pages. The More Pages displays the "Page Setup" dialog box, Page tab. Provides a shortcut to (Page Setup)(Page tab, Scaling).

**Height** - Choice of 1 to 9 pages. The combo box contains Automatic, 1 to 9 pages and More Pages. The More Pages displays the "Page Setup" dialog box, Page tab. Provides a shortcut to (Page Setup)(Page tab, Scaling).

**Scale** - Changes the page scale in increments of 5%. Provides a shortcut to the (Page Setup)(Page tab, Scaling).

## 4. Sheet Options

You can quickly display the "Page Setup" dialog box, Sheet tab, by clicking on the launcher in the bottom right corner of this group.

**Sheet right to left** - In order to move one sheet to the right, hold down Ctrl, then press the PgDn key. To keep moving to the right, press the PgDn key again. In order to move back or one sheet to the left, hold down Ctrl, then press the PgUp key. To keep moving to the left, press the PgUp key again.

**Gridlines View** - Toggles the display of gridlines on the active worksheet. Provides a shortcut to (Page Setup)(Sheet tab, "Gridlines").

**Gridlines Print** - Toggles whether the gridlines are printed. Provides a shortcut to (Excel Options)(Advanced tab, "Show gridlines").

**Headings View** - Toggles the display of row and column headers on the active worksheet. Provides a shortcut to (Excel Options)(Advanced tab, "Show row and column headers").

**Headings Print** - Toggles whether the row and column headers are printed. Provides a shortcut to (Page Setup)(Sheet tab, "Row and column headings").

## 5. Arrange

This whole group also appears on the Drawing Tools-Format Tab, Picture Tools-Format Tab.

**Bring Forward** - Button with Drop-Down. The button brings the selected object forward one level. The drop-down contains the commands: Bring to Front and Bring Forward. Bring to Front will bring the selected object in front of all the other objects.

**Send Backward** - Button with Drop-Down. The button brings the selected object back one level. The drop-down contains the commands: Send to Back and Send Backward. Send to Back will send the selected object to the back of all the other objects.

**Selection Pane** - Drop-Down. Displays the Selection Task Pane.

**Align** - Drop-Down. This drop-down contains the commands: Align Left, Align Center, Align Right, Align Top, Align Middle, Align Bottom, Distribute Horizontally, Distribute Vertically, Snap to Grid, Snap to Shape, View Gridlines.

**Align (Word extras)** Align to Page, Align to Margin, Align Selected Objects, View Gridlines and Grid Settings.

**Align (PowerPoint extras)** Align to Slide, Align Selected Objects, View Gridlines and View Settings.

**Group** - Drop-Down. This drop-down contains the commands: Group, Regroup and Ungroup.

**Rotate** - Rotate or flip the selected object. Drop-Down. This drop-down contains



thecommands:RotateRight90,RotateLeft90,FlipVertical,FlipHorizontaland More Rotation Options.

## FORMULASTAB

CompatibilityExcelFormulas&Functions

Functions	ExcelFormulas	Description
CONCATENATE	=CONCATENATE(text1,text2,...)	Joinsseveraltextitemsintoonetextitem.Easier to use '&' instead of the function usually.
FLOOR	=FLOOR(number,significance)	Roundsanumberdown, towardzero
BINOMDIST	=BINOMDIST(number_s,trials,probability_s,cumulative)	Returnstheindividualtermbinomialdistribution probability
CHIDIST	=CHIDIST(x,deg_freedom)	Returnstheone-tailedprobabilityofthechi-squared distribution
CHIINV	=CHITEST(actual_range,expected_range)	Returnsthetestforindependence
CONFIDENCE	=CONFIDENCE(alpha,standard_dev,size)	Returnstheconfidenceintervalforapopulation mean
FTEST	=FTEST(array1,array2)	
LOGINV	=LOGINV(probability,mean,standard_dev)	Returnstheinverseofthelognormalcumulative distribution

LOGNORMDIST	=LOGNORMDIST(x, mean, standard_dev)	Returnsthecumulativelognormaldistribution
MODE	=MODE(number1, number2,...)	Returnsthemostcommonvalueinadata set
NORMDIST	=NORMDIST(x,mean ,standard_dev,cumulative)	Returnsthenormalcumulative distribution
NORMINV	=NORMINV(probability,mean,standard_dev)	Returnstheinverseofthenormalcumulative distribution
NORMSDIST	=NORMSDIST(z)	Returnsthestandardnormalcumulative distribution
NORMSINV	=NORMSINV(probability)	Returnstheinverseofthestandardnormal cumulative distribution
PERCENTILE	=PERCENTILE(array, k)	Returnsthek-thpercentileofvaluesinarange
PERCENTRANK	=PERCENTRANK(array,x,significance)	Returnsthepercentagerankofavalueinadata set
POISSON	=POISSON(x,mean,cumulative)	ReturnsthePoissondistribution
QUARTILE	=QUARTILE(array,quart)	Returnsthequartileofadataset
RANK	=RANK(number,ref, order)	Returnstherankofanumberinalistof numbers
STDEV	=STDEV(number1,number2,...)	Estimatesstandarddeviationbasedonasample

STDEVP	=STDEVP(number1, number2,...)	Calculates standard deviation based on the entire population
TDIST	=TDIST(x,deg_freedom,tails)	Returns the Student's t-distribution
TINV	=TINV(probability,deg_freedom)	Returns the inverse of the Student's t-distribution
VAR	=VAR(number1,number2,...)	Estimates variance based on a sample
VARP	=VARP(number1,number2,...)	Calculates variance based on the entire population
FINV	=FINV(probability,deg_freedom1,deg_freedom2)	Returns the inverse of the F probability distribution
FORECAST	=FORECAST(x,known_y's,known_x's)	Returns a value along a linear trend
BETADIST	=BETADIST(x,alpha,beta,A,B)	Returns the beta cumulative distribution function
BETAINV	=BETAINV(probability,alpha,beta,A,B)	Returns the inverse of the cumulative distribution function for a specified beta distribution
COVAR	=COVAR(array1,array2)	Returns covariance, the average of the products of paired deviations
CRITBINOM	=CRITBINOM(trials,probability_s,alpha)	Returns the smallest value for which the cumulative binomial distribution is less than or equal to a criterion value
EXPONDIST	=EXPONDIST(x,lambda,cumulative)	Returns the exponential distribution

POISSON	=POISSON(x,mean,cumulative)	ReturnsthePoissondistribution
FDIST	=FDIST(x,deg_freedom1,deg_freedom2)	ReturnstheFprobabilitydistribution
GAMMADIST	=GAMMADIST(x,alpha,beta,cumulative)	Returnsthegamma distribution
GAMMAINV	=GAMMAINV(probability,alpha,beta)	Returnstheinverseofthegammacumulative distribution
HYPGEOMDIST	=HYPGEOMDIST(sample_s,number_sample,population_s,number_pop)	Returnsthehypergeometricdistribution
NEGBINOMDIST	=NEGBINOMDIST(number_f,number_s,probability_s)	Returnsthenegativebinomialdistribution
TTEST	=TTEST(array1,array2,tails,type)	ReturnstheprobabilityassociatedwithaStudent's t-test
WEIBULL	=WEIBULL(x,alpha,beta,cumulative)	Calculatesvariancebasedontheentirepopulation, including numbers, text, and logical values
ZTEST	=ZTEST(array,x,sigma)	Returnstheone-tailedprobability-valueofaz-test

## CubeExcelFormulas&Functions

Functions	Excel Formulas	Description
CUBEKPIMEMBER	=CUBEKPIMEMBER(connection,	Returns a key performance indicator (KPI) name, property, and measure,anddisplaysthe nameandpropertyinthecell.AKPIis a quantifiable measurement, such as monthly gross profit or

	kpi_name, kpi_property,caption)	quarterlyemployeeturnover,usedtomonitoranorganization's performance.
CUBEMEMBER	=CUBEMEMBER(connection,member_expression,caption)	RReturnsamembertupleinacubehierarchy.Usetovalidate that the member or tuple exists in the cube.
CUBEMEMBERPROPERTY	=CUBEMEMBERPROPERTY(connection,member_expression,property)	Returnsthevalueofamemberpropertyinthecube.Useto validate that a member name exists within the cube and to return the specified property for this member.
CUBERANKEDMEMBER	=CUBERANKEDMEMBER(connection,set_expression,rank,caption)	Returnsthenth,orranked,memberinaset.Usetoreturnone or more elements in a set, such as the top sales performer or top 10 students.
CUBESET	=CUBESET(connection ,set_expression,caption,sort_order,sort_by)	Defines a calculated set of members or tuples by sending a set expression to the cube on the server, which creates the set, and then returns that set to Microsoft Office Excel.
CUBESETCOUNT	=CUBESETCOUNT(set )	Returnsthenumberof itemsinaset.
CUBEVALUE	=CUBEVALUE(connection,member_expression1,...)	Returnsanaggregatedvaluefromacube

## Database Excel Formulas & Functions

Functions	Excel Formulas	Description
DGET	=DGET(database,field,criteria)	Extracts from a database as a single record that matches the specified criteria
DSUM	=DSUM(database,field,criteria)	Adds the numbers in the field column of records in the database that match the criteria
DAVERAGE	=DAVERAGE(database,field,criteria)	Returns the average of selected database entries
DCOUNT	=DCOUNT(database,field,criteria)	Counts the cells that contain numbers in a database
DCOUNTA	=DCOUNTA(database,field,criteria)	Counts nonblank cells in a database
DMAX	=DMAX(database,field,criteria)	Returns the maximum value from selected database entries
DMIN	=DMIN(database,field,criteria)	Returns the minimum value from selected database entries
DPRODUCT	=DPRODUCT(database,field,criteria)	Multiplies the values in a particular field of records that match the criteria in a database
DSTDEV	=DSTDEV(database,field,criteria)	Estimates the standard deviation based on a sample of selected database entries
DSTDEVP	=DSTDEVP(database,field,criteria)	Calculates the standard deviation based on the entire population of selected database entries
DVAR	=DVAR(database,field,criteria)	Estimates variance based on a sample from selected database entries
DVARP	=DVARP(database,field,criteria)	Calculates variance based on the entire population of selected database entries

## Date&Time ExcelFormulas&Functions

Functions	ExcelFormulas	Description
DATE	=DATE(year,month,day )	Returnstheserialnumberof a particular date
DATEVALUE	=DATEVALUE(date_text)	Converts a date in the form of text to a serial number
DAY	=DAY(serial_number)	Converts a serial number to a day of the month
HOUR	=HOUR(serial_number)	Converts a serial number to an hour
MINUTE	=MINUTE(serial_number)	Converts a serial number to a minute
MONTH	=MONTH(serial_number)	Converts a serial number to a month
NOW	=NOW()	Returnstheserialnumberof the current date and time
SECOND	=SECOND(serial_number)	Converts a serial number to a second
TIME	=TIME(hour,minute,second)	Returnstheserialnumberof a particular time
TIMEVALUE	=TIMEVALUE(time_text)	Converts a time in the form of text to a serial number
TODAY	=TODAY()	Returnstheserialnumberof today's date
YEAR	=YEAR(serial_number)	Converts a serial number to a year
DAYS360	=DAYS360(start_date,end_date,method)	Calculates the number of days between two dates based on a 360-day year

EDATE	=EDATE(start_date, months)	Returns the serial number of the date that is the indicated number of months before or after the start date
EOMONTH	=EOMONTH(start_date, months)	Returns the serial number of the last day of the month before or after a specified number of months
NETWORKDAYS	=NETWORKDAYS(start_date, end_date, [holidays])	Returns the number of whole workdays between two dates
NETWORKDAYS.INTL	=NETWORKDAYS.INTL(start_date, end_date, [weekend], [holidays])	Returns the number of whole workdays between two dates using parameters to indicate which and how many days are weekend days
WEEKDAY	=WEEKDAY(serial_number, [return_type])	Converts a serial number to a day of the week
WEEKNUM	=WEEKNUM(serial_number, [return_type])	Converts a serial number to a number representing where the week falls numerically with a year
WORKDAY	=WORKDAY(start_date, days, [holidays])	Returns the serial number of the date before or after a specified number of workdays
WORKDAY.INTL	=WORKDAY.INTL(start_date, days, weekend, holidays)	Returns the serial number of the date before or after a specified number of workdays using parameters to indicate which and how many days are weekend days
YEARFRAC	=YEARFRAC(start_date, end_date, basis)	Returns the year fraction representing the number of whole days between start_date and end_date

## Information Excel Formulas & Functions

Functions	Excel Formulas	Description
CELL	=CELL(info_type, [reference])	Returns information about the formatting, location, or contents of a cell



ISBLANK	=ISBLANK(value)	ReturnsTRUEifthevalueisblank
ISERROR	=ISERROR(value)	ReturnsTRUEifthevalueisany error value
ISNONTEXT	=ISNONTEXT(value)	ReturnsTRUEifthevalueisnottext
ISNUMBER	=ISNUMBER(value)	ReturnsTRUEifthevalueisnumber
ISTEXT	=ISTEXT(value)	ReturnsTRUEifthevalueistext
ERROR.TYPE	=ERROR.TYPE(error_val )	Returnsanumbercorrespondingtoan errortype
INFO	=INFO(type_text)	Returnsinformationaboutthecurrentoperating environment
ISERR	=ISERR(value)	ReturnsTRUEifthevalueisanyerrorvalueexcept #N/A
ISEVEN	=ISEVEN(number)	ReturnsTRUEifthenumberiseven
ISLOGICAL	=ISLOGICAL(value)	ReturnsTRUEifthevalueisalogicalvalue
ISNA	=ISNA(value)	ReturnsTRUEifthevalueisthe#N/Aerror value
ISODD	=ISODD(number)	ReturnsTRUEifthenumberisodd
ISREF	=ISREF(value)	ReturnsTRUEifthevalueisareference
N	=N(value)	Returnsavalueconverted to anumber
NA	=NA()	Returnstheerrorvalue#N/A
TYPE	=TYPE(value)	Returnsanumberindicatingthedatatypeofavalue

## Logical Excel Formulas & Functions

Functions	Excel Formulas	Description
AND	=AND(logical1,logical2,...)	Returns TRUE if all of its arguments are TRUE
FALSE	=FALSE	Returns the logical value FALSE
IF	=IF(logical_test, [value_if_true], [value_if_false])	Specifies a logical test to perform
IFERROR	=IFERROR(value, value_if_error)	Returns a value you specify if a formula evaluates to an error; otherwise, returns the result of the formula
NOT	=NOT(logical)	Reverses the logic of its argument
OR	=OR(logical1,logical2,...)	Returns TRUE if any argument is TRUE
TRUE	=TRUE	Returns the logical value TRUE
LOOKUP	=LOOKUP(lookup_value, array) – 2 types	Lookup values in a vector or array

## Lookup & Reference Excel Formulas & Functions

Functions	Excel Formulas	Description
ADDRESS	=ADDRESS(row_num, column_num, [abs_num], [a1], [sheet_text])	Returns a reference as text to a single cell in a worksheet

COLUMN	=COLUMN([reference])	Returnsthecolumnnumberofa reference
COLUMNS	=COLUMNS(array)	Returnsthenumberof columnsina reference
HLOOKUP	=HLOOKUP(lookup_value,table_array,row_index_num,[range_lookup])	Looksinthetoprowofanarrayandreturnsthe value of the indicated cell
INDEX	=INDEX(array,row_num,[column_num])– 2 types	Usesanindextochooseavaluefroma reference or array
INDIRECT	=INDIRECT(ref_text,a1)	Returnsareferenceindicatedbyatextvalue
MATCH	=MATCH(lookup_value,lookup_array,match_type)	Looksupvaluesinareferenceorarray
OFFSET	=OFFSET(reference,rows,cols,height,width)	Returnsareferenceoffsetfrom agivenreference
ROW	=ROW([reference])	Returnstherownumberof areference
ROWS	=ROWS(array)	Returnsthenumberofrowsina reference
VLOOKUP	=VLOOKUP(lookup_value,table_array,col_index_num,[range_lookup])	Looksinthefirstcolumnofanarrayandmoves across the row to return the value of a cell
CHOOSE	=CHOOSE(index_num,value1,value2,...)	Choosesavaluefromalistof values
GETPIVOTDATA	=GETPIVOTDATA(data_field,pivot_table,field,item,...)	Returnsdatastored inaPivotTablereport

HYPERSLINK	=HYPERSLINK(link_location,friendly_name)	Creates a shortcut or jump that opens a document stored on a network server, an intranet, or the Internet
TRANSPOSE	=TRANSPOSE(array)	Returns the transpose of an array
AREAS	=AREAS(reference)	Returns the number of areas in a reference
RTD	=RTD(progID,server,topic1,topic2,...)	Retrieves real-time data from a program that supports COM automation (Automation: A way to work with an application's objects from another application or development tool. Formerly called OLE Automation, Automation is an industry-standard and a feature of the Component Object Model (COM).)

### Text Excel Formulas & Functions

Functions	Excel Formulas	Description
EXACT	=EXACT(text1,text2)	Checks to see if two text values are identical
LOWER	=LOWER(text)	Converts text to lowercase
PROPER	=PROPER(text)	Capitalizes the first letter in each word of a text value
TRIM	=TRIM(text)	Removes spaces from text
UPPER	=UPPER(text)	Converts text to uppercase
CHAR	=CHAR(number)	Returns the character specified by the code number
CLEAN	=CLEAN(text)	Removes all nonprintable characters from text

CODE	=CODE(text)	Returns a numeric code for the first character in a text string
DOLLAR	=DOLLAR(number, decimals)	Converts a number to text, using the \$(dollar) currency format
FIXED	=FIXED(number, decimals, no_commas)	Formats a number as text with a fixed number of decimals
PHONETIC	=PHONETIC(reference)	Extracts the phonetic (furigana) characters from a text string
REPT	=REPT(text, number_times)	Repeats text a given number of times
SUBSTITUTE	=SUBSTITUTE(text, old_text, new_text, instance_num)	Substitutes new text for old text in a text string
T	=T(value)	Converts its argument to text
VALUE	=VALUE(text)	Converts a text argument to a number
ASC	=ASC(text)	Changes full-width (double-byte) English letters or katakana within a character string to half-width (single-byte) characters
BAHTTEXT	=BAHTTEXT(number)	Converts a number to text, using the ฿ (baht) currency format

## Most Common Excel Formulas & Functions

Functions	Excel Formulas	Description
FIND	=FIND(find_text, within_text, start_num)	Findsonetextvalue within another (case-sensitive)

LEFT	=LEFT(text,num_chars )	Returnstheleftmostcharactersfromatextvalue
LEN	=LEN(text)	Returnsthenumberof charactersinatext string
MID	=MID(text,start_num,num_chars)	Returnsaspecificnumberofcharactersfromatext string starting at the position you specify
REPLACE	=REPLACE(old_text,start_num,num_chars,new_text)	Replacescharacterswithin text
RIGHT	=RIGHT(text,num_chars)	Returnstherightmostcharactersfromatext value
SEARCH	=SEARCH(find_text,within_text,start_num)	Findsonetextvaluewithinanother(notcase-sensitive)

## EngineeringExcelFormulas&Functions

Functions	ExcelFormulas	Description
CONVERT	=CONVERT(number,from_unit,to_unit)	Convertsanumberfromonemeasurementsystem to another
DELTA	=DELTA(number1,number2)	Testswhethertwovaluesareequal
ERF	=ERF(lower_limit,upper_limit)	Returnstheerrorfunction
ERFC	=ERFC(x)	Returnsthecomplementaryerrorfunction
GESTEP	=GESTEP(number,step )	Testswhetheranumberisgreaterthanathreshold value
ERF.PRECISE	=ERF.PRECISE(X)	Returnstheerrorfunction

ERFC.PRECISE	=ERFC.PRECISE(X)	ReturnsthecomplementaryERFfunction integrated between x and infinity
BESSELI	=BESSELI(x,n)	ReturnsthemodifiedBesselfunctionIn(x)
BESSELJ	=BESSELJ(x,n)	ReturnstheBesselfunctionJn(x)
BESSELK	=BESSELK(x,n)	ReturnsthemodifiedBesselfunctionKn(x)
BESSELY	=BESSELY(x,n)	ReturnstheBesselfunctionYn(x)
BIN2DEC	=BIN2DEC(number)	Convertsabinarynumbertodecimal
BIN2HEX	=BIN2HEX(number,places)	Convertsabinarynumbertohexadecimal
DEC2OCT	=DEC2OCT(number,places)	Convertsadecimalnumbertooctal
HEX2BIN	=HEX2BIN(number,places)	Convertsa hexadecimalnumbertobinary
HEX2DEC	=HEX2DEC(number)	Convertsa hexadecimalnumbertodecimal
HEX2OCT	=HEX2OCT(number,places)	Convertsa hexadecimalnumbertooctal
IMABS	=IMABS(inumber)	Returnstheabsolutevalue(modulus)ofacomplex number
IMAGINARY	=IMAGINARY(inumber)	Returnstheimaginarycoefficientofacomplex number
IMARGUMENT	=IMARGUMENT(inumber)	Returnstheargumenttheta,anangleexpressedin radians
IMCONJUGATE	=IMCONJUGATE(inumber)	Returnsthecomplexconjugateofacomplex number

IMCOS	=IMCOS(inumber)	Returnsthecosineofacomplexnumber
IMDIV	=IMDIV(inumber1,inu mber2)	Returnsthequotientoftwocomplexnumbers
IMEXP	=IMEXP(inumber)	Returnstheexponentialofacomplexnumber
IMLN	=IMLN(inumber)	Returnsthenaturallogarithmofacomplexnumber
IMLOG10	=IMLOG10(inumber)	Returnsthebase-10logarithmofacomplexnumber
IMLOG2	=IMLOG2(inumber)	Returnsthebase-2logarithmofacomplexnumber
IMPOWER	=IMPOWER(inumber, number)	Returnsacomplexnumberraisedtoanintegerpower
IMPRODUCT	=IMPRODUCT(inumbe r1,inumber2,...)	Returnstheproductofcomplexnumbers
IMREAL	=IMREAL(inumber)	Returnstherealcoefficientofacomplexnumber
IMSIN	=IMSIN(inumber)	Returnsthesineofacomplexnumber
IMSQRT	=IMSQRT(inumber)	Returnsthesquarerootofacomplexnumber
IMSUB	=IMSUB(inumber1,inu mber2)	Returnsthedifferencebetweentwocomplex numbers
IMSUM	=IMSUM(inumber1,in umber2,...)	Returnsthesumofcomplexnumbers
OCT2BIN	=OCT2BIN(number,pl aces)	Convertsanoctalnumbertobinary
OCT2DEC	=OCT2DEC(number)	Convertsanoctalnumbertodecimal



OCT2HEX	=OCT2HEX(number,places)	Converts an octal number to hexadecimal
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## Financial Excel Formulas & Functions

Functions	Excel Formulas	Description
AMORDEGRC	=AMORDEGRC(cost, date_purchased, first_period, salvage, period, rate, basis)	Returns the depreciation for each accounting period by using a depreciation coefficient
AMORLINC	=AMORLINC(cost, date_purchased, first_period, salvage, period, rate, basis)	Returns the depreciation for each accounting period
DOLLARDE	=DOLLARDE(fractional_dollar, fraction)	Converts a dollar price, expressed as a fraction, into a dollar price, expressed as a decimal number
DOLLARFR	=DOLLARFR(decimal_dollar, fraction)	Converts a dollar price, expressed as a decimal number, into a dollar price, expressed as a fraction
SLN	=SLN(cost, salvage, life)	Returns the straight-line depreciation of an asset for one period
SYD	=SYD(cost, salvage, life, per)	Returns the sum-of-years' digits depreciation of an asset for a specified period
DB	=DB(cost, salvage, life, period, month)	Returns the depreciation of an asset for a specified period by using the fixed-declining balance method
DDB	=DDB(cost, salvage, life, period, factor)	Returns the depreciation of an asset for a specified period by using the double-declining balance method or some other method that you specify
EFFECT	=EFFECT(nominal_rate, npery)	Returns the effective annual interest rate

FV	=FV(rate,nper,pmt,pv,type)	Returnsthefuturevalueof aninvestment
IPMT	=IPMT(rate,per,nper,pv,fv,type)	Returnstheinterestpaymentforaninvestmentfor a given period
IRR	=IRR(values,guess)	Returnstheinternalrateofreturnforaseriesof cash flows
MIRR	=MIRR(values,finance_rate,reinvest_rate)	Returnstheinternalrateofreturnwherepositive and negative cash flows are financed at different rates
NOMINAL	=NOMINAL(effect_rate,npery)	Returnstheannualnominalinterestrate
NPER	=NPER(rate,pmt,pv,fv,type)	Returnsthenumberof periodsforaninvestment
NPV	=NPV(rate,value1,value2,...)	Returnsthenetpresentvalueofaninvestment based on a series of periodic cash flows and a discount rate
PV	=PV(rate,nper,pmt,fv,type)	Returnsthepresentvalueof aninvestment
RATE	=RATE(nper,pmt,pv,fv,type,guess)	Returnstheinterestrateperperiodofan annuity
YIELD	=YIELD(settlement,maturity,rate,pr,redemption,frequency,basis)	Returnstheyieldonasecuritythatpaysperiodic interest
ACCRINT	=ACCRINT(issue,first_interest,settlement,rate,par,frequency,basis,calc_method)	Returnstheaccruedinterestforasecuritythat pays periodic interest
ACCRINTM	=ACCRINTM(issue,settlement,rate,par,basis)	Returnstheaccruedinterestforasecuritythat pays interest at maturity

COUPDAYBS	=COUPDAYBS(settlement,maturity,frequency,basis)	Returnsthenumberofdaysfromthebeginningof the coupon period to the settlement date
COUPDAYS	=COUPDAYS(settlement,maturity,frequency,basis)	Returnsthenumberofdaysinthecouponperiod that contains the settlement date
COUPDAYSNC	=COUPDAYSNC(settlement,maturity,frequency,basis)	Returnsthenumberofdaysfromthesettlement date to the next coupon date
COUPNCD	=COUPNCD(settlement,maturity,frequency,basis)	Returnsthenextcoupondateafterthesettlement date
COUPNUM	=COUPNUM(settlement,maturity,frequency,basis)	Returnsthenumberofcouponspayablebetween the settlement date and maturity date
COUPPCD	=COUPPCD(settlement,maturity,frequency,basis)	Returnsthepreviouscoupondatebeforethe settlement date
CUMIPMT	=CUMIPMT(rate,nper,pv,start_period,end_period,type)	Returnsthecumulativeinterestpaidbetweentwo periods
CUMPRINC	=CUMPRINC(rate,nper,pv,start_period,end_period,type)	Returnsthecumulativeprincipalpaidonaloan between two periods
DISC	=DISC(settlement,maturity,pr,redemption,basis)	Returnsthediscount rateforasecurity
DURATION	=DURATION(settlement,maturity,coupon,yld,frequency,basis)	Returnstheannualdurationofasecuritywith periodic interest payments

FVSCHEDULE	=FVSCHEDULE(principal,schedule)	Returnsthefuturevalueofaninitialprincipalafter applying a series of compound interest rates
INTRATE	=INTRATE(settlement,maturity,investment,redemption,basis)	Returnstheinterestrateforafullyinvested security
ISPMT	=ISPMT(rate,per,nper,pv)	Calculatestheinterestpaidduringaspecificperiod of an investment
MDURATION	=MDURATION(settlement,maturity,coupon,yld,frequency,basis)	ReturnstheMacaulaymodifieddurationfora security with an assumed par value of \$100
ODDFPRICE	=ODDFPRICE(settlement,maturity,issue,first_coupon,rate,yld,redemption,frequency,basis)	Returnsthepriceper\$100facevalueofasecurity with an odd first period
ODDFYIELD	=ODDFYIELD(settlement,maturity,issue,first_coupon,rate,pr,redemption,frequency,basis)	Returnstheyieldofasecuritywithanoddfirst period
ODDLPRICE	=ODDLPRICE(settlement,maturity,last_interest,rate,yld,redemption,frequency,basis)	Returnsthepriceper\$100facevalueofasecurity with an odd last period
ODDLYIELD	=ODDLYIELD(settlement,maturity,last_interest,rate,pr,redemption,frequency,basis)	Returnstheyieldofasecuritywithanoddlast period
PMT	=PMT(rate,nper,pv,fv,type)	Returnstheperiodicpaymentfor anannuity
PPMT	=PPMT(rate,per,nper,pv,fv,type)	Returnsthepaymentontheprincipalforan investment for a given period

PRICE	=PRICE(settlement,maturity,rate,yld,redemption,frequency,basis)	Returnsthepriceper\$100facevalueofasecurity that pays periodic interest
PRICEDISC	=PRICEDISC(settlement,maturity,discount,redemption,basis)	Returnsthepriceper\$100facevalueofa discounted security
PRICEMAT	=PRICEMAT(settlement,maturity,issue,rate,yld,basis)	Returnsthepriceper\$100facevalueofasecurity that pays interest at maturity
RECEIVED	=RECEIVED(settlement,maturity,investment,discount,basis)	Returnstheamountreceivedatmaturityfor afully invested security
TBILLEQ	=TBILLEQ(settlement,maturity,discount)	Returnsthebond-equivalentyieldfora Treasury bill
TBILLPRICE	=TBILLPRICE(settlement,maturity,discount)	Returnsthepriceper\$100facevaluefora Treasury bill
TBILLYIELD	=TBILLYIELD(settlement,maturity,pr)	Returnstheyieldfora Treasurybill
VDB	=VDB(cost,salvage,life,start_period,end_period,factor,no_switch)	Returnsthe depreciation of an asset for a specified or partial period by using a declining balance method
XIRR	=XIRR(values,dates,guess)	Returnstheinternalrateofreturnforascheduleof cash flows that is not necessarily periodic
XNPV	=XNPV(rate,values,dates)	Returnsthenetpresentvalueforascheduleof cash flows that is not necessarily periodic
YIELDDISC	=YIELDDISC(settlement,maturity,pr,redemption,basis)	Returnstheannualyieldforadiscoutedsecurity; for example, a Treasury bill

YIELDMAT	=YIELDMAT(settlement,maturity,issue,rate,pr,basis)	Returns the annual yield of a security that pays interest at maturity
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## Math and Trigonometry Excel Formulas & Functions

Functions	Excel Formulas	Description
ABS	=ABS(number)	Returns the absolute value of a number
PRODUCT	=PRODUCT(number1, number2,...)	Multiplies its arguments
RAND	=RAND()	Returns a random number between 0 and 1
RANDBETWEEN	=RANDBETWEEN(bottom,top)	Returns a random number between the numbers you specify
ROUND	=ROUND(number, num_digits)	Rounds a number to a specified number of digits
ROUNDDOWN	=ROUNDDOWN(number, num_digits)	Rounds a number down, toward zero
ROUNDUP	=ROUNDUP(number, num_digits)	Rounds a number up, away from zero
SUBTOTAL	=SUBTOTAL(function_num,ref1,...)	Returns a subtotal in a list or database
SUM	=SUM(number1, number2,...)	Adds its arguments
SUMIF	=SUMIF(range,criteria,[sum_range])	Adds the cells specified by a given criteria

SUMIFS	=SUMIFS(sum_range,criteria_range,criteria,...)	Addsthecellsinarangethatmeetmultiplecriteria
SUMPRODUCT	=SUMPRODUCT(array1,array2,[array3],...)	Returnsthesumoftheproductsofcorresponding array components
CEILING	=CEILING(number,significance)	Roundsanumbertothenearestintegerorto the nearest multiple of significance
CEILING.PRECISE	=CEILING.PRECISE(number,significance)	Rounds a number the nearest integer or to the nearestmultipleofsignificance.Regardless of the sign of the number, the number is rounded up.
EVEN	=EVEN(number)	Roundsanumberup tothenearesteveninteger
EXP	=EXP(number)	Returnseraisedtothepowerofagivennumber
FACT	=FACT(number)	Returnsthefactorialofa number
FLOOR.PRECISE	=FLOOR.PRECISE(number,significance)	Rounds a number the nearest integer or to the nearestmultipleofsignificance.Regardless of the sign of the number, the number is rounded up.
GCD	=GCD(number1,number2,...)	Returnsthegreatestcommondivisor
INT	=INT(number)	Roundsanumberdownto thenearestinteger
ISO.CEILING	=ISO.CEILING(number,significance)	Returns a numberthat is rounded up to the nearestintegerortothenearestmultiple of significance
LCM	=LCM(number1,number2,...)	Returnstheleastcommonmultiple
MOD	=MOD(number,divisor)	Returnstheremainderfromdivision

MROUND	=MROUND(number,multiple)	Returns a number rounded to the desired multiple
ODD	=ODD(number)	Rounds a number up to the nearest odd integer
PI	=PI()	Returns the value of pi
POWER	=POWER(number,power)	Returns the result of a number raised to a power
QUOTIENT	=QUOTIENT(numerator,denominator)	Returns the integer portion of a division
SERIESSUM	=SERIESSUM(x,n,m,coefficients)	Returns the sum of a power series based on the formula
SIGN	=SIGN(number)	Returns the sign of a number
SQRT	=SQRT(number)	Returns a positive square root
SUMSQ	=SUMSQ(number1,number2,...)	Returns the sum of the squares of the arguments
TRUNC	=TRUNC(number,number_of_digits)	Truncates a number to an integer
AGGREGATE	=AGGREGATE(function_num,options,array,k)	Returns an aggregate in a list or database
COMBIN	=COMBIN(number,number_chosen)	Returns the number of combinations for a given number of objects
COS	=COS(number)	Returns the cosine of a number
COSH	=COSH(number)	Returns the hyperbolic cosine of a number
FACTDOUBLE	=FACTDOUBLE(number)	Returns the double factorial of a number



LN	=LN(number)	Returnsthenaturallogarithmof a number
LOG	=LOG(number,base)	Returnsthe logarithmofanumbertoaspecified base
LOG10	=LOG10(number)	Returnsthebase-10logarithmofanumber
MULTINOMIAL	=MULTINOMIAL(number1,number2,...)	Returnsthemultinomialofasetofnumbers
SIN	=SIN(number)	Returnsthesineofthegivenangle
SINH	=SINH(number)	Returnsthehyperbolic sineofanumber
SUMX2MY2	=SUMX2MY2(array_x,array_y)	Returnsthesumofthedifferenceofsquaresof corresponding values in two arrays
SUMX2PY2	=SUMX2PY2(array_x,array_y)	Returnsthesumofthesumofsquaresof corresponding values in two arrays
SUMXMY2	=SUMXMY2(array_x,array_y)	Returnsthesumofsquaresofdifferencesof corresponding values in two arrays
TAN	=TAN(number)	Returnsthetangentofanumber
TANH	=TANH(number)	Returnsthehyperbolic tangentof anumber
ACOS	=ACOS(number)	Returnsthearccosineofa number
ACOSH	=ACOSH(number)	Returnstheinversehyperbolic cosineof anumber
ASIN	=ASIN(number)	Returnsthearcsineofanumber
ASINH	=ASINH(number)	Returnstheinversehyperbolic sineofanumber
ATAN	=ATAN(number)	Returnsthearctangentof anumber

ATAN2	=ATAN2(x_num,y_num)	Returnsthearctangentfromx- andy-coordinates
ATANH	=ATANH(number)	Returnstheinversehyperbolictangentofa number
DEGREES	=DEGREES(angle)	Convertsradianstodegrees
MDETERM	=MDETERM(array)	Returnsthematrixdeterminantof an array
MINVERSE	=MINVERSE(array)	Returnsthematrixinverseofan array
MMULT	=MMULT(array1,array 2)	Returnsthematrixproductof two arrays
RADIANS	=RADIANS(angle)	Convertsdegresto radians
ROMAN	=ROMAN(number,form)	Convertsanarabicnumeral toroman,astext
SQRTPI	=SQRTPI(number)	Returnsthesquarerootof (number*pi)

## Statistical Excel Formulas & Functions

Functions	Excel Formulas	Description
AVERAGE	=AVERAGE(number1, number2,...)	Returnstheaverageofitsarguments
AVERAGEIF	=AVERAGEIF(range,criteria,[average_range])	Returnstheaverage(arithmeticmean)ofallthe cells in a range that meet a given criteria
COUNT	=COUNT(value1,value 2,...)	Countshowmanynumbersareinthelistof arguments
COUNTA	=COUNTA(value1,valu e2,...)	Countshowmanyvaluesareinthelistof arguments

COUNTBLANK	=COUNTBLANK(range)	Countsthenumberofblankcellswithinarange
COUNTIF	=COUNTIF(range,criteria)	Countsthenumberofcellswithinarangethat meet the given criteria
COUNTIFS	=COUNTIFS(criteria_range,criteria,...)	Countsthenumberofcellswithinarangethat meet multiple criteria
MAX	=MAX(number1,number2,...)	Returnsthemaximumvalueinalistof arguments
MEDIAN	=MEDIAN(number1,number2,...)	Returnsthemedianofthegivennumbers
MIN	=MIN(number1,number2,...)	Returnsthemimumvalueinalistof arguments
TEXT	=TEXT(value,format_text)	Formatsanumberandconvertsittotext
AVERAGEA	=AVERAGEA(value1,value2,...)	Returnstheaverageofitsarguments,including numbers, text, and logical values
AVERAGEIFS	=AVERAGEIFS(average_range,criteria_range,criteria,...)	Returnstheaverage(arithmeticmean)ofallcells that meet multiple criteria
GEOMEAN	=GEOMEAN(number1,number2,...)	Returnsthegeometricmean
INTERCEPT	=INTERCEPT(known_y's,known_x's)	Returnstheinterceptofthelinearregression line
LARGE	=LARGE(array,k)	Returnsthek-thlargestvalueinadata set
LINEST	=LINEST(known_y's,known_x's,const,stats)	Returnstheparametersofalineartrend

LOGEST	=LOGEST(known_y's,known_x's,const,stats)	Returnstheparametersofanexponentialtrend
MAXA	=MAXA(value1,value2,...)	Returnsthemaximumvalueinalistofarguments, including numbers, text, and logical values
MINA	=MINA(value1,value2,...)	Returnsthesmallestvalueinalistofarguments, including numbers, text, and logical values
MODE.MULT	=MODE.MULT(number1,number2,...)	Returns a vertical array of the most frequently occurring,orrepetitivevaluesinanarrayorrange of data
MODE.SNGL	=MODE.SNGL(number1,number2,...)	Returnsthemostcommonvalueinadata set
PROB	=PROB(x_range,prob_range,lower_limit,upper_limit)	Returnstheprobabilitythatvaluesinarangeare between two limits
RANK.AVG	=RANK.AVG(number,ref,order)	Returnstherank ofanumberinalistofnumbers
RANK.EQ	=RANK.EQ(number,ref,order)	Returnstherank ofanumberinalistofnumbers
SKEW	=SKEW(number1,number2,...)	Returnstheskewnessofa distribution
SLOPE	=SLOPE(known_y's,known_x's)	Returnstheslopeofthelinearregressionline
SMALL	=SMALL(array,k)	Returnsthek-thsmallestvalueinadataset
STANDARDIZE	=STANDARDIZE(x,mean,standard_dev)	Returnsanormalizedvalue
TREND	=TREND(known_y's,known_x's,new_x's,const)	Returnsvaluesalongalinear trend

NORM.S.INV	=NORM.S.INV(probability)	Returnstheinverseofthestandardnormal cumulative distribution
AVEDEV	=AVEDEV(number1,number2,...)	Returnstheaverageoftheabsolutedeviationsof data points from their mean
BETA.DIST	=BETA.DIST(x,alpha,beta,cumulative,A,B)	Returnsthebetacumulativedistributionfunction
BETA.INV	=BETA.INV(probability,alpha,beta,A,B)	Returnstheinverseofthecumulativedistribution function for a specified beta distribution
BINOM.DIST	=BINOM.DIST(number_s,trials,probability_s,cumulative)	Returnstheindividualtermbinomialdistribution probability
BINOM.INV	=BINOM.INV(trials,probability_s,alpha)	Returns the smallest value for which the cumulativebinomialdistributionislessthanor equal to a criterion value
CHISQ.DIST	=CHISQ.DIST(x,deg_freedom,cumulative)	Returnsthecumulativedistributionprobabilitydensity function
CHISQ.DIST.RT	=CHISQ.DIST.RT(x,deg_freedom)	Returnstheone-tailedprobabilityofthechi-squared distribution
CHISQ.INV	=CHISQ.INV(probability,deg_freedom)	Returnsthecumulativedistributionprobabilitydensity function
CHISQ.INV.RT	=CHISQ.INV.RT(probability,deg_freedom)	Returnstheinverseoftheone-tailedprobabilityof the chi-squared distribution
CHISQ.TEST	=CHISQ.TEST(actual_range,expected_range)	Returnsthetestforindependence
CONFIDENCE.NORM	=CONFIDENCE.NORM(alpha,standard_dev,size)	Returnstheconfidenceintervalforapopulation mean

CONFIDENCE.T	=CONFIDENCE.T(alpha,standard_dev,size)	Returnstheconfidenceintervalforapopulation mean, using a Student's t distribution
CORREL	=CORREL(array1,array 2)	Returnsthecorrelationcoefficientbetweentwo data sets
COVARIANCE.P	=COVARIANCE.P(array 1,array2)	Returnscovariance,theaverageoftheproductsof paired deviations
COVARIANCE.S	=COVARIANCE.S(array 1,array2)	Returns the samplecovariance,the averageofthe productsdeviationsforeachdatapointpairintwo data sets
DEVSQ	=DEVSQ(number1,number2,...)	Returnsthesumofsquaresofdeviations
EXPON.DIST	=EXPON.DIST(x,lambd a,cumulative)	Returnstheexponentialdistribution
F.DIST	=F.DIST(x,deg_freedom1,deg_freedom2,cumulative)	ReturnstheFprobabilitydistribution
F.DIST.RT	=F.DIST.RT(x,deg_freedom1,deg_freedom2)	ReturnstheFprobabilitydistribution
F.INV	=F.INV(probability,deg_freedom1,deg_freedom2)	ReturnstheinverseoftheFprobabilitydistribution
F.INV.RT	=F.INV.RT(probability,deg_freedom1,deg_freedom2)	Returnsthe inverseoftheFprobabilitydistribution
F.TEST	=F.TEST(array1,array2 )	Returnstheresultof anF-test
FISHER	=FISHER(x)	ReturnstheFishertransformation
FISHERINV	=FISHERINV(y)	ReturnstheinverseoftheFishertransformation

FREQUENCY	=FREQUENCY(data_array,bins_array)	Returns a frequency distribution as a vertical array
GAMMA.DIST	=GAMMA.DIST(x,alpha,beta,cumulative)	Returns the gamma distribution
GAMMA.INV	=GAMMA.INV(probability,alpha,beta)	Returns the inverse of the gamma cumulative distribution
GAMMALN	=GAMMALN(x)	Returns the natural logarithm of the gamma function, $\Gamma(x)$
GAMMALN.PRECISE	=GAMMALN.PRECISE(x)	Returns the natural logarithm of the gamma function, $\Gamma(x)$
GROWTH	=GROWTH(known_y's,known_x's,new_x's,const)	Returns values along an exponential trend
HARMEAN	=HARMEAN(number1,number2,...)	Returns the harmonic mean
HYPGEOM.DIST	=HYPGEOM.DIST(sample_s,number_sample,population_s,number_pop,cumulative)	Returns the hypergeometric distribution
KURT	=KURT(number1,number2,...)	Returns the kurtosis of a dataset
LOGNORM.DIST	=LOGNORM.DIST(x,mean,standard_dev,cumulative)	Returns the cumulative lognormal distribution
LOGNORM.INV	=LOGNORM.INV(probability,mean,standard_dev)	Returns the inverse of the lognormal cumulative distribution

NEGBINOM.DIST	=NEGBINOM.DIST(number_f,number_s,probability_s,cumulative)	Returnsthenegativebinomialdistribution
NORM.DIST	=NORM.DIST(x,mean,standard_dev,cumulative)	Returnsthenormalcumulative distribution
NORM.INV	=NORM.INV(probability,mean,standard_dev)	Returnstheinverseofthenormalcumulative distribution
NORM.S.DIST	=NORM.S.DIST(z,cumulative)	Returnsthestandardnormalcumulative distribution
PEARSON	=PEARSON(array1,array2)	ReturnsthePearsonproductmomentcorrelation coefficient
PERCENTILE.EXC	=PERCENTILE.EXC(array,k)	Returnsthek-thpercentileofvaluesinarange, where k is in the range 0..1, exclusive
PERCENTILE.INC	=PERCENTILE.INC(array,k)	Returnsthek-thpercentileofvaluesinarange
PERCENTRANK.EXC	=PERCENTRANK.EXC(array,x,significance)	Returnstherankofavalueinadatasetasa percentage (0..1, exclusive) of the data set
PERCENTRANK.INC	=PERCENTRANK.INC(array,x,significance)	Returnsthepercentagerankofavalueinadata set
PERMUT	=PERMUT(number,number_chosen)	Returnsthenumberofpermutationsforagiven number of objects
POISSON.DIST	=POISSON.DIST(x,mean,cumulative)	ReturnsthePoissondistribution
QUARTILE.EXC	=QUARTILE.EXC(array,quart)	Returnsthequartileofthedataset,basedon percentile values from 0..1, exclusive



QUARTILE.INC	=QUARTILE.INC(array, quart)	Returnsthequartileofadataset
RSQ	=RSQ(known_y's,known_x's)	ReturnsthesquareofthePearsonproduct moment correlation coefficient
STDEV.P	=STDEV.P(number1,number2,...)	Calculatesstandarddeviationbasedontheentire population
STDEV.S	=STDEV.S(number1,number2,...)	Estimatesstandarddeviationbasedonasample
STDEVA	=STDEVA(value1,value2,...)	Estimatesstandarddeviationbasedonasample, including numbers, text, and logical values
STDEVPA	=STDEVPA(value1,value2,...)	Calculatesstandarddeviationbasedontheentire population, including numbers, text, and logical values
STEYX	=STEYX(known_y's,known_x's)	Returnsthestandarderrorofthepredictedy-value for each x in the regression
T.DIST	=T.DIST(x,deg_freedom,cumulative)	ReturnsthePercentagePoints(probability)forthe Student t-distribution
T.DIST.2T	=T.DIST.2T(x,deg_freedom)	ReturnsthePercentagePoints(probability)forthe Student t-distribution
T.DIST.RT	=T.DIST.RT(x,deg_freedom)	ReturnstheStudent'st-distribution
T.INV	=T.INV(probability,deg_freedom)	Returns the t-valueof the Student's t-distribution as a function of the probability and the degrees of freedom
T.INV.2T	=T.INV.2T(probability,deg_freedom)	ReturnstheinverseoftheStudent's t-distribution
T.TEST	=T.TEST(array1,array2,tails,type)	ReturnstheprobabilityassociatedwithaStudent's t-test

TRIMMEAN	=TRIMMEAN(array,percent)	Returnsthemean oftheinteriorofadata set
VAR.P	=VAR.P(number1,number2,...)	Calculatesvariancebasedontheentire population
VAR.S	=VAR.S(number1,number2,...)	Estimatesvariancebasedon asample
VARA	=VARA(value1,value2,...)	Estimatesvariancebasedonasample,includings numbers, text, and logical values
VARPA	=VARPA(value1,value2,...)	Calculatesvariancebasedontheentirepopulation, includings numbers, text, and logical values
WEIBULL.DIST	=WEIBULL.DIST(x,alpha,beta,cumulative)	ReturnstheWeibulldistribution
Z.TEST	=Z.TEST(array,x,sigma)	Returnstheone-tailedprobability-valueofaz-test



## DefinedNames

**NameManager**-Displays the [NameManager](#) dialog box.

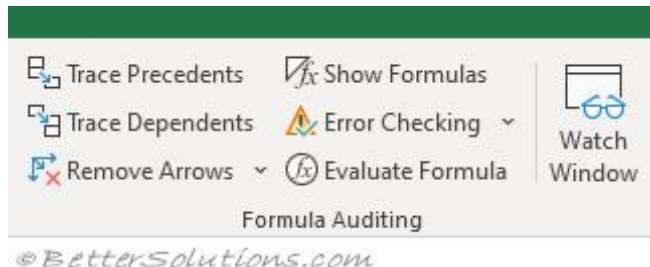
**DefineName** -Button with Drop-Down.The button displays the "NewName" dialog box . The drop-down contains the commands: Define Names and Apply Names. The Define Names allows you to create workbook and worksheet level named ranges and displays the "New Name" dialog box. The Apply Names displays the "Apply Names" dialog box.

**UseinFormula**- Drop-Down. The drop-down contains a list of all the named ranges in the workbook (25 with scrolling) and Paste Names. The Paste Names command displays the "Paste Name" dialog box.

**CreatefromSelection**-Displays the "CreateNamesfromselection" dialog box. This

enables you to name a selected range of cells using a row or column title that you've entered.

## Formula Auditing



**Trace Precedents** - Displays arrows that indicate what cells affect the value of the currently selected cell.

**Trace Dependents** - Displays arrows that indicate what cells are affected by the value in the currently selected cell.

**Remove Arrows** - Button with Drop-Down. The button removes all the arrows drawn by the trace precedents and trace dependents. The drop-down contains the commands: Remove Arrows, Remove Precedent Arrows and Remove Dependent Arrows.

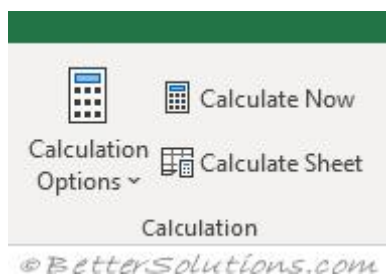
**Show Formulas** - (Ctrl+'). Toggles the display of the formulas rather than the result.

**Error Checking** - Button with Drop-Down. The button displays the "Error Checking" dialog box. The drop-down contains the commands: Error Checking, Trace Error and Circular References. The Circular References extension will only be enabled when the active workbook contains at least one circular reference.

**Evaluate Formula** - Displays the "Evaluate Formula" dialog box. This allows you to step through a formula calculation.

**Watch Window** - Displays the [Watch Window](#). Allows you to view the contents of cells and their results as you make changes.

## Calculation



**Calculation Options** - Drop-Down. The drop-down lets you quickly change the calculation setting in the active workbook between Manual, Automatic and Automatic

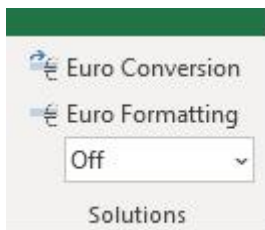
except for Data Tables. This setting is in fact an application setting. For more information please refer to the [Calculation](#) page.

**Calculate Now** - (F9). Provides a shortcut to the (Excel Options) (Calculation tab, "Calc Now"). This option no longer appears on the Excel Options dialog box.

**Calculate Sheet** - (Shift+F9). Provides a shortcut to the (Excel Options) (Calculation tab, "Calc Sheet"). This option no longer appears on the Excel Options dialog box.

## Solutions

This group is only displayed if you have the [Euro Currency Tools](#) add-in loaded.



**Euro Conversion** - Launch the Euro Conversion Wizard.

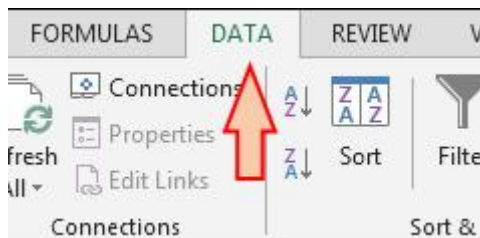
**Euro Formatting** - Apply Euro formatting to the selected cells.

**Quick Conversion** - Perform quick conversions.



## DATATAB

*We use Data tab for the large amount of data. It is useful to import the data by connecting with the server, and we can import data automatically from web, MS Access etc. And sort & filter are very helpful options we have in Excel; it makes easy to read vast data.*

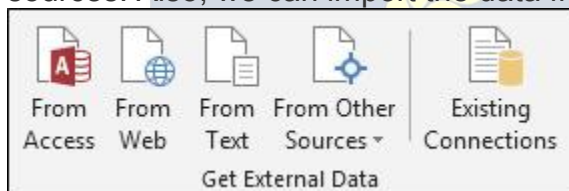


Datatab contains 5 groups:-

## 5 groups of Data Tab

- 1) Get External Data
- 2) Connections
- 3) Sort & Filter
- 4) Data Tools
- 5) Outline

a) **Get External Data:** - In Excel, we can import data from MS Access, Web, Text and other sources. Also, we can import the data from other applications.



b) **Connections:** - It is used to display the entire data connections for the workbook. Data connections are links to the data outside the workbook which can be updated if the source data changes. And updated data can be obtained by refreshing all sources in workbook.

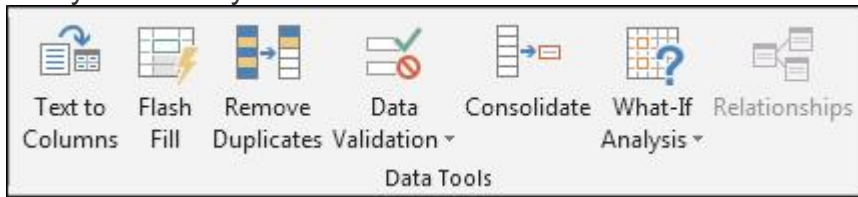


c) **Sort & Filter:** - To set the data in ascending or descending order on the basis of value or as per the first letter of a word, we use Sort option. Also, we can put the basic and advanced filter from here only.

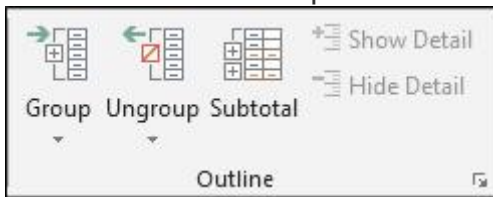


d) **Data Tools:** - This option is very important to make the report interactive; it helps us to make the data authentic, and using this tab, we can restrict or validate the entries if the data is being updated by multiple users. Text to Columns helps us to split the single column into multiple columns as per data. Flash fills the values in the range. We can delete duplicate rows from the data by using Remove Duplicates option. We use Data Validation to provide the list that can be entered in cell, or we can restrict the entries, or

we can validate the entries in the cell. We use Consolidate option to summarize data from separate ranges, and consolidate the result in a single output range. We use What-if-Analysis to analyse the data.

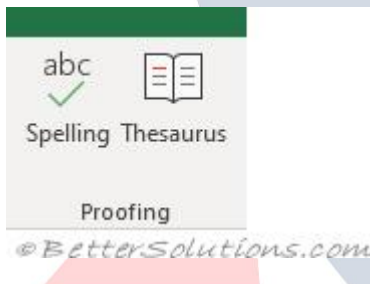


e) **Outline:** -We use this option to make the data more analytical and understandable. We can make group of rows or columns or automatically create an outline. We can ungroup the data; quickly calculate rows of related data by inserting subtotals and totals. We use Show and Hide options when we want to insert the Subtotal in data.



## REVIEW TAB

### Proofing



**Spelling**- (F7). Displays the "Spelling" dialog box. Allows you to check the spelling on the active worksheet.

**Research**- (Removed in 2016). Toggles the display of the [Research Task Pane](#).

**Thesaurus**- Toggles the display of the Research task pane defaulting the research service to the thesaurus.

### Accessibility



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**Check Accessibility**-(Added in 2016). Displays the [Accessibility Checker Task Pane](#). This identifies any aspects of your workbook that could be altered to assist people with disabilities.

## Insights



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**Smart Lookup**-(Added in 2016). Displays the [Smart Lookup Task Pane](#). This is powered by Bing and provides wiki articles and top related searches from the web.

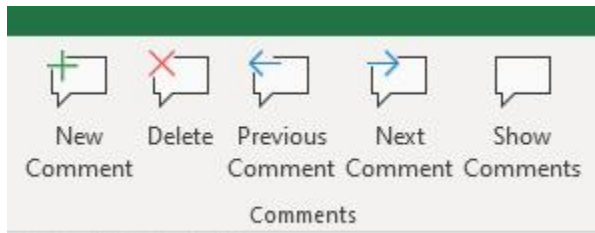
## Language



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**Translate**-(Added in 2010). Toggles the display of the Research task pane defaulting the research service to the translation.

## Comments



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**New Comment/ Edit Comment**-(Shift+F2). Inserts a comment at the active cell.

**Delete**-Deletes the selected comment.

**Previous Comment**- Move to the previous comment in the active workbook.

**Next Comment**- Move to the next comment in the active workbook.

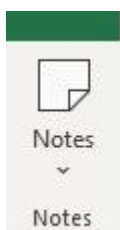
**Show Comments**- Toggle the display of the Comments taskpane.

**Show/Hide Comment**-(Removed in 2019). Toggle the display of the comment in the active cell.

**Show All Comments**-(Removed in 2019). Toggle the display of comments in the active workbook (all worksheets).

**Show Ink**-(Removed in 2019). Show or hide ink in the active workbook. This is tablet specific.

## Notes



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**Notes**-(Added in 2019). Drop-Down. The drop-down contains the commands: New Note, Previous Note, Next Note, Show/Hide Note, Show All Notes and Convert to Comments.

## Changes

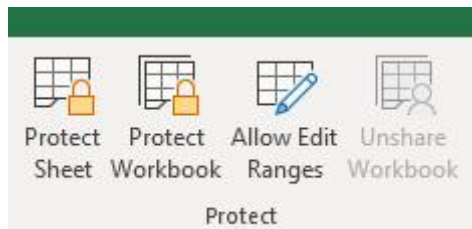
In 2019 this group was removed.

**Protect and Share Workbook** -(Removed in 2019). Displays the "Protect Shared Workbook" dialog box.

**Track Changes**-(Removed in 2019). Drop-Down. The drop-down contains the commands: Highlight Changes and Accept/Reject Changes.



## Protect



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**ProtectSheet**- Displays the "ProtectSheet" dialog box.

**ProtectWorkbook**- The drop-down displays the following commands: Protect Structure and Windows as well as other Restrict Permission options. These can only be used if you have IRM [link] installed.

**Allow Edit Ranges** - Allows specific users to edit certain ranges in a workbook or sheet. Before using this option, you need to define your security settings using the Protect Sheet command. This command is disabled when the worksheet is protected.

**UnshareWorkbook**- This is disabled by default. If you open a workbook that is currently being shared using the legacy "Share Workbook" feature, this button will become enabled, allowing you to unshare the workbook. Shared workbooks have been replaced with [Co-Authoring](#). Press the 'Share' button in the top right corner to display the [Share Task Pane](#). Workbooks must be saved to an online location.

**ShareWorkbook**- (Removed in 2019) (Added in 2016). Allows multiple users to work in a workbook at the same time. The workbook should be saved to a shared drive. Workbooks containing tables cannot be shared. Displays the "Share Workbook" dialog box.

## Ink



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**HideInk**- Drop-Down. The drop-down contains the commands: Hide Ink, Delete All Ink on Sheet and Delete All Ink on Workbook.

# VIEW TAB

The commands for hiding and showing worksheets are on the [Home Tab](#) under (Format > Unhide).

The commands for hiding and showing workbooks (and windows) can be found on this tab.

## SheetView

Lets you create different views of the same worksheet when you are collaborating with others. Only enabled in Excel online or on the Desktop when your workbook has been saved in OneDrive.

**Switch SheetView-**

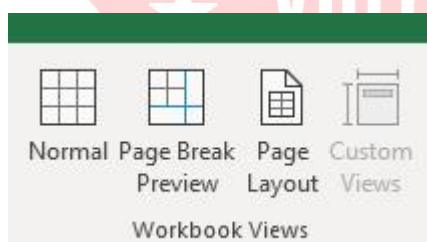
**Keep-**

**Exit -**

**New -**

**Options-** Displays sheet view options.

## Workbook Views



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**Normal-** Displays the worksheet in the normal view. There is also a shortcut to this view in the bottom right corner of the status bar.

**PageBreak Preview-** (Moved in 2013). Used for adjusting page breaks. There is also a shortcut to this view in the bottom right corner of the status bar.

**PageLayout-** Displays the worksheet as it will appear on a printed page. Displays a very

useful horizontal and vertical ruler plus you can add/change headers and footers, check margins, row/column headings and scaling options. Not to be confused with Print Preview. There is also a shortcut to this view in the bottom right corner of the status bar. **Custom Views** - Displays the "Custom Views" dialog box. **FullScreen** - (Removed in 2013). Displays the workbook in full screen mode. Press Esc to return to the normal screen.

## Show



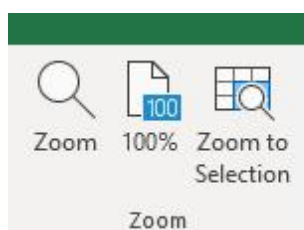
**Ruler** - Toggles the display of the horizontal and vertical rulers. This is only available when you are in PageLayout view. You can change the units displayed from the (Excel Options, Advanced tab)(Display, Ruler Units). By default the ruler displays the default units that are specified in the control panel, regional settings. These units can be either inches, centimeters or millimeters.

**Gridlines** - Toggles the display of gridlines on the active worksheet. Provides a shortcut to (Excel Options, Advanced tab)(Display options for this worksheet, show gridlines).

**Formula Bar** - Toggles the display of the formula bar. Provides a shortcut to (Excel Options)(Advanced tab, Show formula bar).

**Headings** - Toggles the display of the heading rows. Provides a shortcut to (Excel Options)(Advanced tab, Show row and column headers).

## Zoom



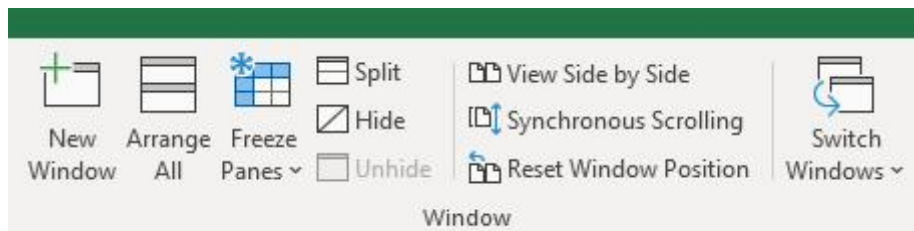
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**Zoom**-Displays the "Zoom" dialog box.

**100%**-Zoom the workbook to 100% of its normal size.

**Zoom to Selection**-Zoom the worksheet to display just the currently selected cells.

## Window



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**New Window**-Creates a new window of your current workbook.

**Arrange All**-Tile all open windows side by side on the screen.

**Freeze Panes**-Drop-Down. The drop-down contains the commands: Freeze Panes, Freeze Top Row and Freeze First Column.

**Split**-Split the window into multiple resizable panes which allow you to have multiple views of the same workbook.

**Hide**-Hides the current workbook or window.

**Unhide**-Displays the "Unhide" dialog box allowing you to unhide a workbook or window.

**View Side by Side**-View two workbooks side by side to allow you to compare their contents.

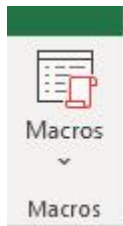
**Synchronous Scrolling** - Synchronize the scrolling of two windows so they scroll together. The View Side by Side option must be switched on for this command to be enabled.

**Reset Window Position** - Reset the window position of the two windows being compared so that they share the screen equally. The View Side by Side option must be switched on for this command to be enabled.

**Save Workspace** - (Removed in 2013). Displays the "Save Workspace" dialog box. This allows you to save the layout of all the workbooks that are currently open so this layout can be reopened at a later date.

**Switch Windows**-Drop-Down. The drop-down contains a list of all the workbooks/windows that are currently open.

## Macros



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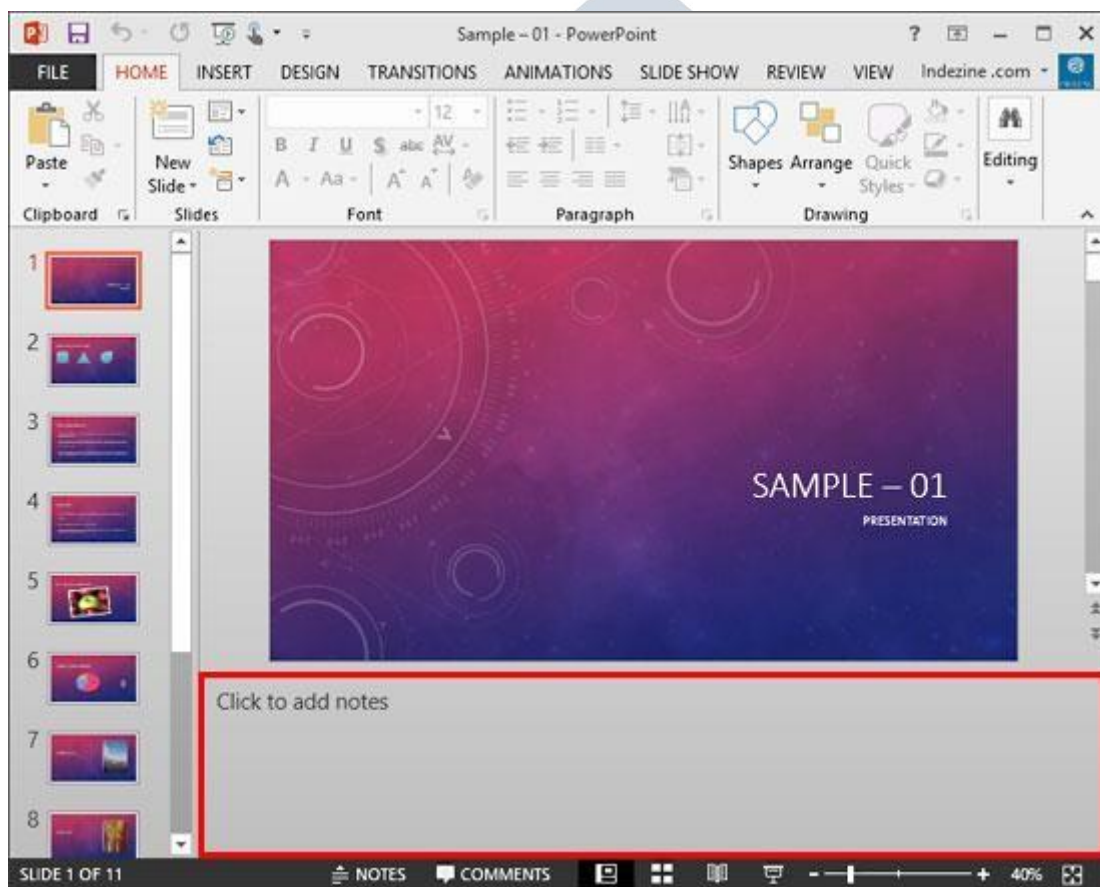
**Macros** - Button with Drop-Down. The button is a shortcut to View Macros which displays the "Macro" dialog box displaying all the available macros. The drop-down contains the commands: View Macros, Record Macro and Use Relative References.



# MS-POWERPOINT

PowerPoint2013's stri-paned interface has three regions: the Slides Pane, the SlideArea, and the **Notes Pane**. The Notes Pane is placed right below the Slide area, as shown highlighted in red within **Figure 1**. The Notes Pane provides space to add speaker's notes that can be so helpful to the presenter while presenting - you can also write any sort of information about the presentation or individual slide.

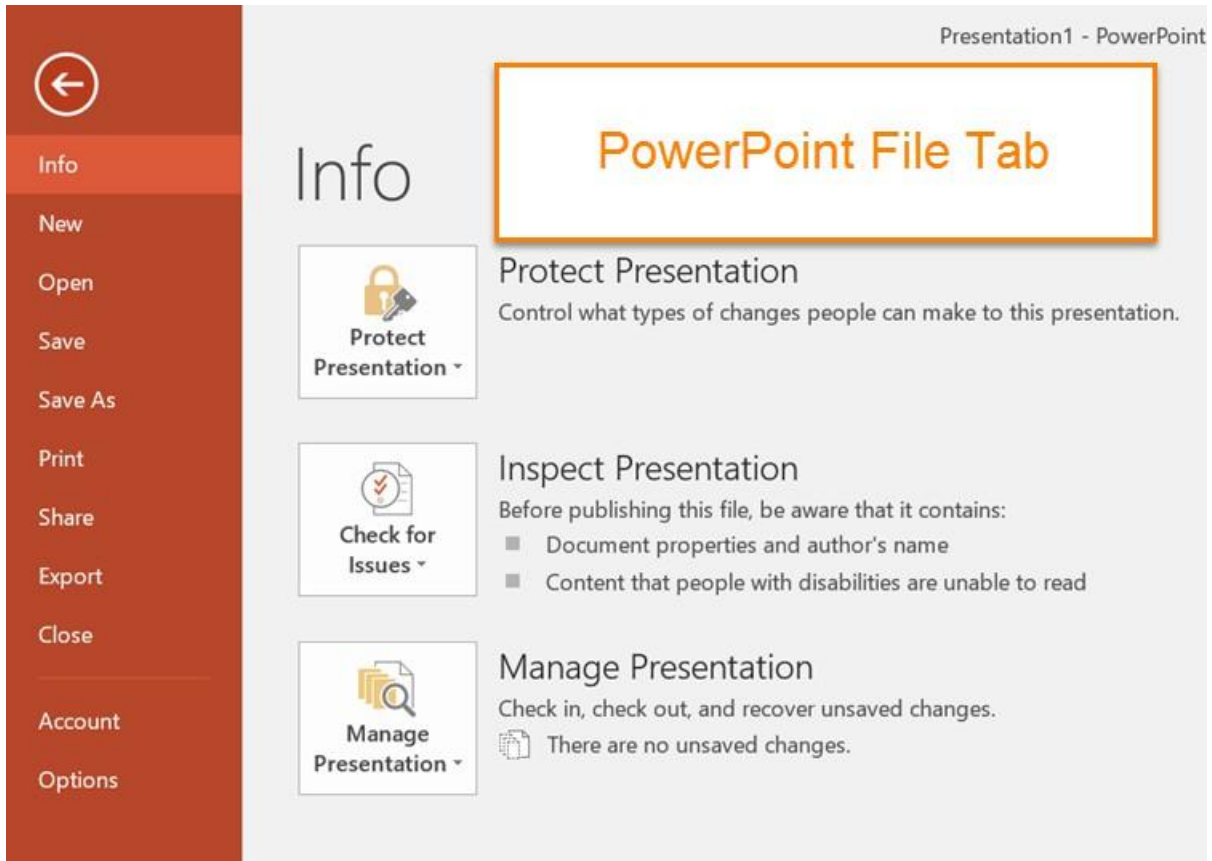
By default, the Notes Pane may be completely empty -- you may also see some boilerplate text such as "Click to add notes", as shown in



To add your notes in this area, you typically just insert your cursor on the boilerplate text and start typing -- we explain this in more detail within the next section.

What's important to realize is that each slide in your presentation has its own notes. When you navigate to another slide, you will have to add more notes relevant to the active slide.

# FILE TAB



The File Tab in PowerPoint 2013S is some of the most important tabs in PowerPoint. Some of the important actions are listed in File Tab like Sharing, Saving, Protecting, Save & Save As and more.

If you click on the other tabs like Home Tab or Insert Tab, just the ribbon will change, but when you click on the File Tab in PowerPoint 2016, the complete Interface will change. In the File tab, there are many different actions for the presentation like you can save, export, share, print or add a new presentation. The file tab also provides info about your presentation If that is completed or not. File Tab in PowerPoint 2016 is divided into many branches. I will give some short information about each of them in this post.

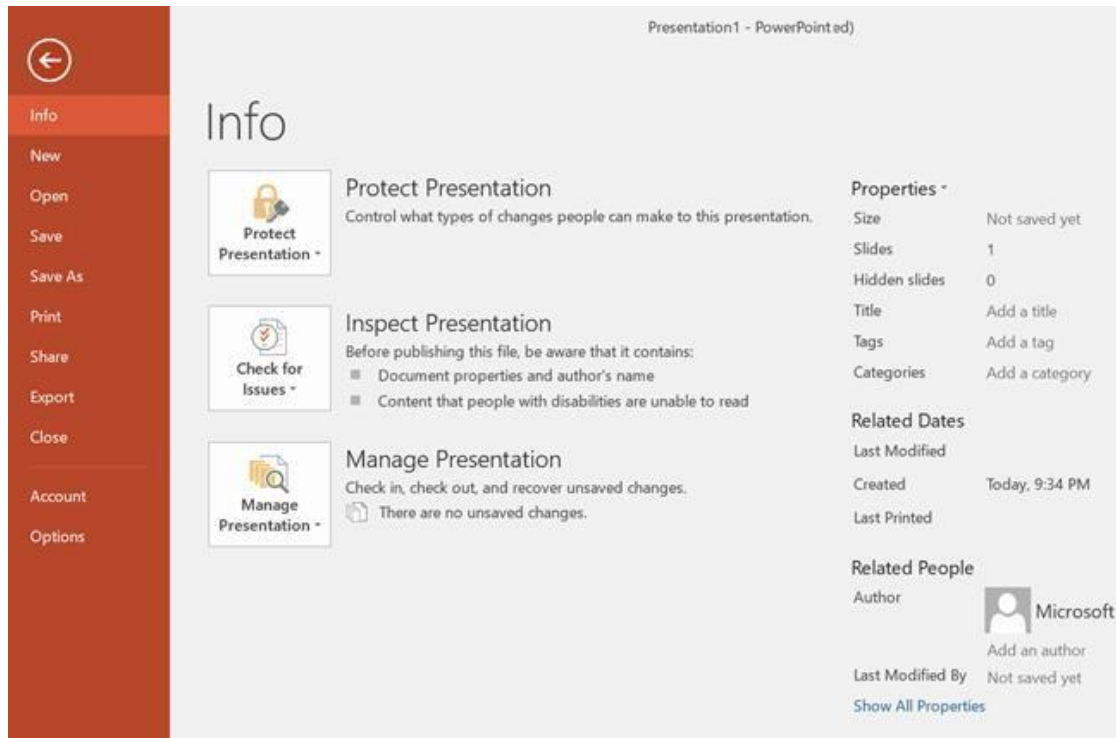
## File Tab in PowerPoint 2013

### 1. Info

You can manage File data setting, protect your presentation, give a password, restrict access to the presentation.

If you have many accounts, so it will provide information that when and which

presentation was opened and edited. Also, show last time when you worked with PowerPoint.



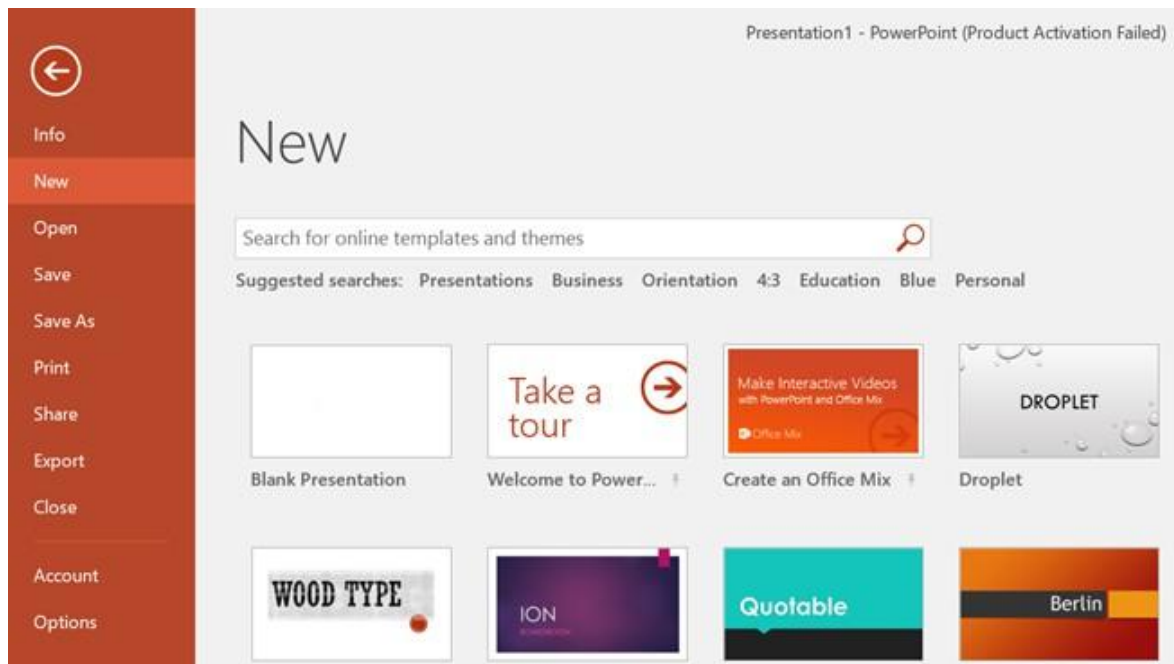
Information about presentation

## 2. New

You can open new **templates** that you want or a blank page. You can search for online templates if you have an internet connection. You also can use the filter templates that are below the search bar. If the blank page is needed, go to insert tab and click on the (Blank Page).







Addnewtemplateorblankpage

### 3. Open

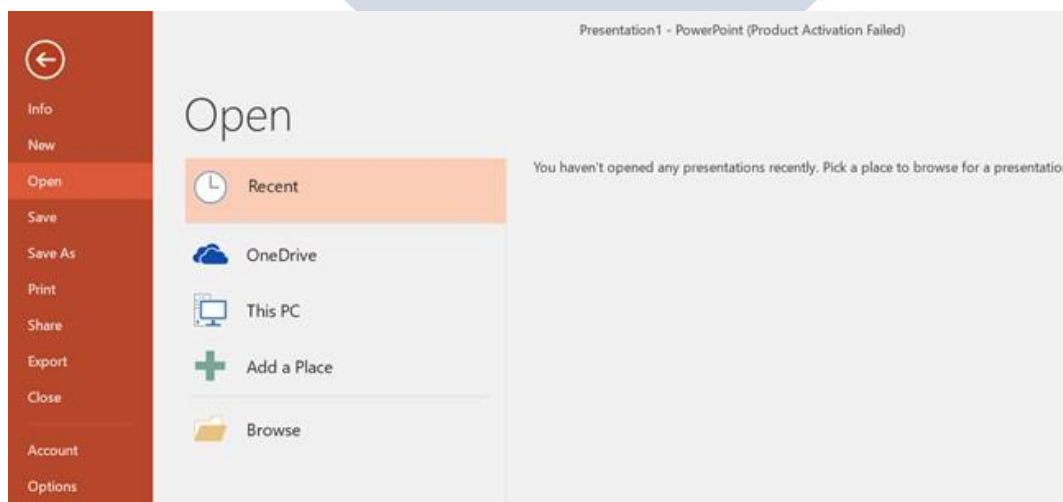
In this option, there are many options that you can open a presentation from there as well.

**Recent:** The recent presentation that you have opened are listed on the right side, and you can click and open the presentation that you need.

**OneDrive:** You can insert a presentation from any device that has the OneDrive app. **This PC:** If you have any presentation and that is not in the recent files, you can browse and open that presentation. You can browse through the (documents) folder on your PC.

**Browse:** It is the fourth way that you can open a file or a presentation. Simply just browse and find the presentation and click "Open" to open.

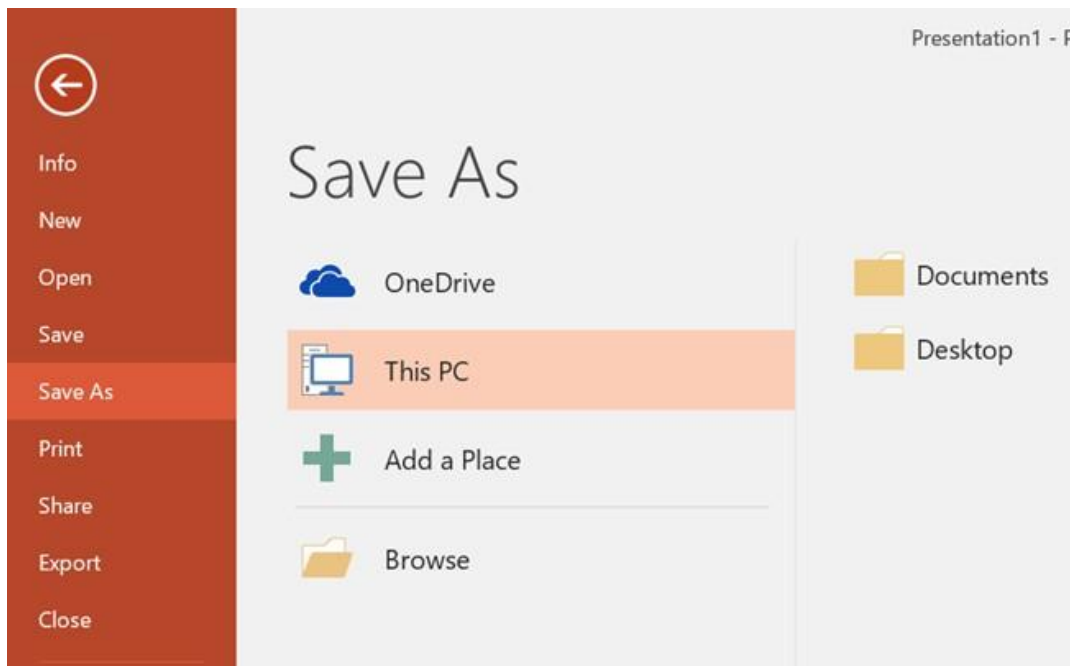
If you're interested in opening a document in Word 2013 visit



## Openfileorpresentation

### 4. Save&Saveas

Save and Save As are similar to each other, If you have saved the presentation before by any other name then the second time if you want to save you have to click on Save As. If you have not saved the presentation before so you can click on the Save option. Save as mean you can save it as a PDF, XPS document, and many more types.



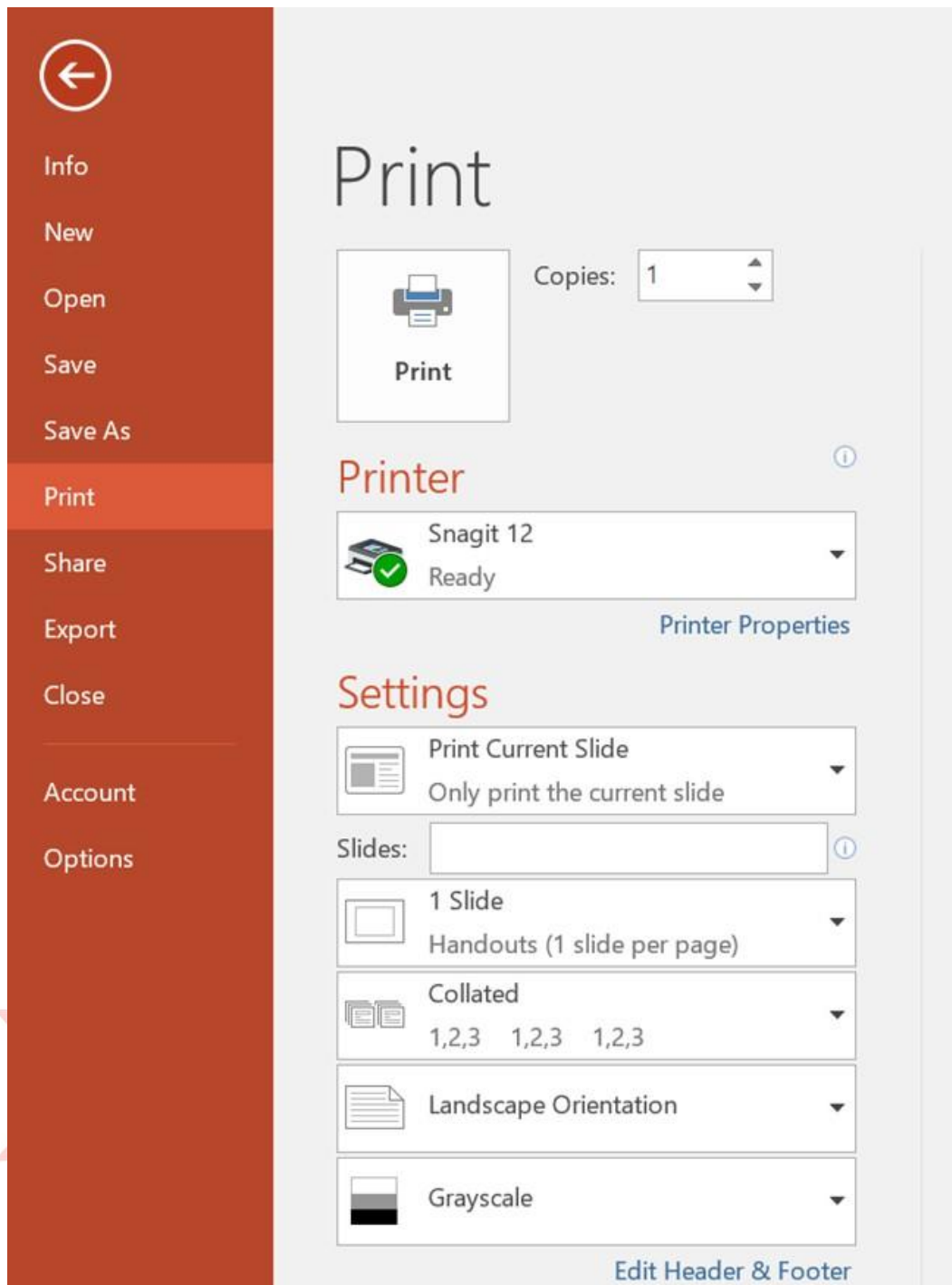
Save&SaveAs

### 5. Print

You can print the presentation that you have made. It is very easy just select the correct options.

First, select how many copies you want to copy then select your printer.

After that select the page if it should be landscape or portrait, grayscale or colored and then click on the print button. The Printing option in PowerPoint 2016 and 2013 are same.

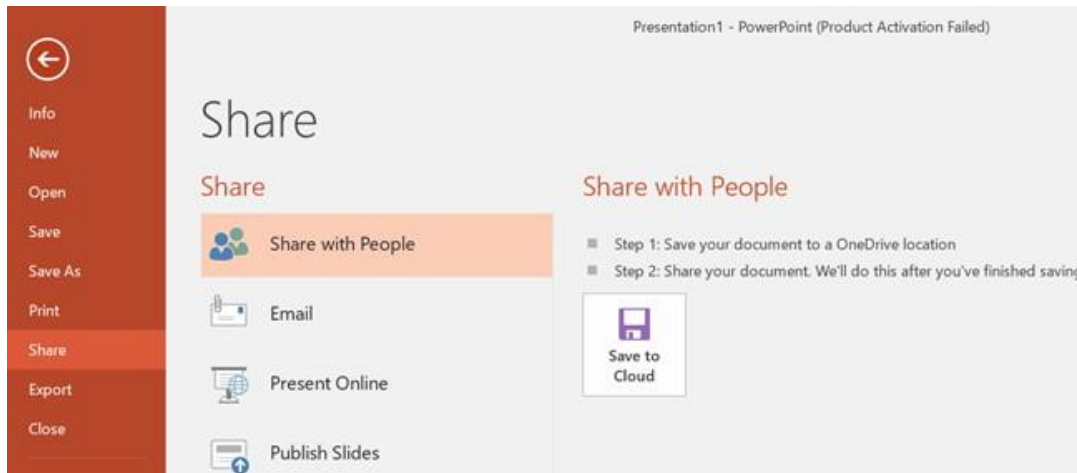


Printanypresentation

## 6. Share

The presentation can be shared with two computers if they are linked. You can share presentations via Email and publish the slide directly if you have a website. You can present a presentation online on a website for that you need to have a **Microsoft account**.

**Working with Filetab in MS Word 2016 (Share, Export and Close)**



SharinginPowerPoint2013

## 7. Close

Closetheslidesandallcontentfromthepresentationyouhaveopened.

# HOMETAB

The Home Tab is used to perform many of the common tasks such as changing fonts, cutting and pasting text and images into presentations, changing paragraph formats, drawing objects, and editing text. The groups and buttons for this ribbon are described in the table below.

### Clipboard Group

**Paste** This button is used to insert items into a document that have been stored on the clipboard.

**Cut** To remove text or other items from a document and store it on the clipboard, click this button.

**Copy** Click this button to make a copy of selected text or other items in a presentation and store it on the clipboard.

**Format Painter** To make a copy of selected text and then apply the formatting to other text in a slide, click this button. A single click will apply the formatting to other selected text one time. To apply the formatting to other selected text several times, double-click the format painter button. When all the formatting has been applied, click the button again to deactivate the format painter.

**Clipboard Task Pane Launcher** This button is located in the lower right corner of the Clipboard group. It is used to open the Clipboard Task Pane. This is the task pane that will display when items that are added to the clipboard are displayed. This allows more than one item to be added to the clipboard before the items are pasted into the document.

### SlidesGroup

**New Slide** Click this button to insert a new slide into the presentation. The slide will be inserted after the current slide with the same format as the current slide. Clicking the arrow will display a gallery of different slide layouts. Click any of the slide layouts to insert a new slide into the presentation.

**Layout** When this button is clicked, a gallery of different slide layouts will appear. Click one of the layouts to apply it to the current slide; the slide where the insertion point is located.

**Reset** This button is used to reset the slide position, size, and formatting to its default value.

**Section** Use this button to organize the slides in a presentation into sections.

### FontGroup

**FontType** To select the type of font for a whole document or for selected text within the document, click this button.

**FontSize** This button is used to change the size of the font for the whole document or for selected text within the document.

**Increase Font Size** Click this button to increase the size of the font for selected text. Each time the button is clicked, the font size will increase by one or two point sizes.

**Decrease Font Size** To decrease the size of selected text, click this button. The size of the font will decrease by one or two point sizes each time the button is clicked.

**Clear All Formatting** To clear all the formatting that has been applied to selected text, click this button.

**Bold** Click this button to bold selected text in a document. This is a toggle button. When the button is clicked the second time the bold formatting will be removed.

**Italics** This button is used to italicize selected text in a document. This is a toggle button. When the button is clicked the second time the italics will be removed from the selected text.

**Underline** To underline selected text in a document, click this button. This is a toggle button. When the button is clicked the second time the underline formatting will be removed.

**Text Shadow** Use this button to apply a shadow behind the selected text to help it stand out on the slide. Click the button a second time to remove the shadow from the selected text.

**Strikethrough** This button is used to draw a line through selected text in a document. To remove the strikethrough, click the button a second time.

**Character Spacing** Click this button to change the spacing between characters. A list of spacing options will appear.

**Change Case** To change the selected text to UPPERCASE, lowercase, or other common capitalizations, click this button. A list of possible capitalizations will appear.

**Font Color** This button is used to change the color of the font for the selected text. When the button is clicked, a gallery of theme and standard colors will appear.

**Font Dialog Box Launcher** This button is located in the lower right corner of the Font group. It is used to launch the Font dialog box where additional changes can be made to the font.

### Paragraph Group

**Bullets** To create a bulleted list within a slide, click this button. Click the list arrow to display a gallery of bullet styles.

**Numbering** This button is used to create a numbered list within a slide. When the list arrow is clicked, a gallery of number styles will display.

**Decrease List Level** When an indent has been applied to text in a slide, this button is used to decrease the indent. Click the button to decrease each level of the indent.

**Increase List Level** Click this button to increase the indent for a paragraph, numbered list, bulleted list, or a multilevel list. Each time the button is clicked, the indent will increase one level.

**Line Spacing** This button is used to specify the amount of space between lines of text. When the button is clicked, a list of possible line spacing options will appear.

**Align Left** Click this button to align all the text in a document or paragraph at the left margin. The text at the left margin will be even. The text in the right margin will be uneven. This is the default alignment for all presentations created in PowerPoint.

**Center** To center selected text or a paragraph in a document, click this button.

**Align Right** This button is used to align text in a slide at the right margin. The text at the right margin will be even. The text on the left side will be uneven.

**Justify** When this button is clicked, the text in a slide will be aligned evenly at both the left and right margin. Additional spacing will be inserted between words as necessary.

**Add/Remove Column** Click this button to split the text in the slide into two or more columns.

**Text Direction** To change the orientation of text to vertical or stacked, click this button. It is also possible to rotate the text using this button.

**Align Text** This button is used to specify how text is aligned vertically in the text box. The default options are top, bottom, and middle.

**Insert Smart Art Graphic** When this button is clicked, the selected bullet items are converted to a Smart Art graphic. There are several different styles to choose from.

**Paragraph Dialog Box Launcher** This button is located in the lower right corner of the Paragraph Group. It is used to open the Paragraph Dialog Box where additional Paragraph formatting options are available.

### Drawing Group

**Shapes Gallery** Click the arrow next to this button and then select an item in the gallery to insert different shapes such as rectangles, triangles, and circles into a slide. When the button is clicked, a gallery of different shapes will appear.

**Arrange** To arrange objects on the slide by changing the order, position, and rotation click this button. A list of different options will appear when the button is clicked.

**Quick Styles** Use this button to apply a visual style to the shape or text. A gallery of different styles will appear when the button is clicked.

**Shape Fill** This button is used to change the fill color for the selected shape. A gallery of different colors and formatting options will appear when the button is clicked.

**Shape Outline** When this button is clicked, a gallery of different outline colors and options that can be applied to the selected shape will appear.

**Shape Effects** To apply shadows or other effects to a shape, click this button. A list of different categories of effects will appear. Move the mouse pointer over any of the effects to see a gallery of effects for each category.

**Format Shape Task Pane Launcher** This button appears in the lower right corner of the Drawing group. It is used to launch the Format Shape Dialog Box.

### Editing Group

**Find** To locate a particular word or phrase within a presentation, click this button. The Find dialog box will display. Within this box, the word or phrase that is to be found can be specified.

**Replace** This feature is used to locate text within a presentation and replace it with other text. When the button is clicked, the Replace dialog box will display. This is where the word(s) to be found and replaced are specified. **Select** Click this button to select text or objects within a presentation. The options are to select all the objects in the active slide, select objects within the presentation, or to open the Selection Task Pane.



## INSERT TAB

The Insert Tab is used to insert different features such as tables, pictures, clipart, shapes, charts, page numbers, word art, or headers, and footers into a presentation. The table below describes each of the groups and buttons available on this tab.

### Slides Group

**New Slide** This button is used to insert a new slide into the presentation. The slide will be inserted after the one where the insertion point is located. To insert a slide with a different layout, click the arrow at the bottom of the button.

### Tables Group



**Tables** This button is used to insert a table into a slide. A list will appear with a grid that can be used to create the table. Additional options for creating a table, such as drawing a table, are also listed.

### Images Group

**Pictures** To insert a picture from a file into the document, click this button. The Insert Picture dialog box will appear. This dialog box is used to select the picture.

**Online Pictures** Click this button to insert an image from Bing Image Search or OneDrive.

**Screenshot** This button is used to insert a picture of any program that is not minimized to the Task Bar. To insert any part of the screen, click the Screen Clipping link.

**Photo Album** To create a presentation based on a set of pictures, click this button. Options can be set for how the pictures display on the slide. Also, captions may be added to each picture.

### Illustrations Group

**Shapes** This button is used to insert different shapes into a slide. A gallery of different kinds of shapes will appear when the button is clicked. To insert a shape, click the desired shape and then draw the shape in the slide.

**Smart Art** To insert a Smart Art graphic into a slide, click this button. Smart Art graphics are objects such as Venndiagrams and organizational charts. When the button is clicked, a gallery of different categories and shapes will be displayed.

**Chart** Click this button to display the Insert Chart dialog box. This will display a gallery of different types of charts that can be created in a Word document.

### Add-Ins Group

**Store** These features allow you to find add-ins at the Office Store.

**My Add-Ins** With this feature you can select an add-in that will enhance your work.

### Links Group

**Hyperlink** To insert a link to items such as a Web page, another document, or an email address, click this button. The Hyperlink dialog box will display where the link can be specified. It is also possible to create a new document, worksheet, or presentation while creating a link to the item.

**Action** When some type of actions such as creating a hyperlink to an object or inserting a sound is to be specified, click this button. The Action Settings dialog box will appear. In this dialog box, it is possible to create hyperlinks to other files, other PowerPoint presentations, to the first or last slide in the presentation, or to many other areas. It is also possible to apply a sound to the selected object.

### CommentsGroup

**Comments** Use this feature to add a note about a portion of the presentation. This is a good feature to use when working with others on a presentation.

### TextGroup

**Text Box** Text boxes are used to highlight text within a presentation. Click this button to display a gallery of different types of text boxes. Move the mouse pointer over the items for a description of each style.

**Header & Footer** This button is used to insert a header or footer into the presentation or for handouts. When the button is clicked, the header and footer dialog box will display.

**WordArt** Use this button to insert decorative text into a slide. When the button is clicked, a gallery of Word Art styles will be displayed. Click one of the styles to apply it to the slide.

**Date and Time** To insert the date and time into the current presentation, click this button. The Header and Footer dialog box will display. This dialog box is used to insert the Date and Time into the presentation.

**Slide Number** Click this button to insert the slide number into the slide. The slide number reflects the position of the slide within the presentation.

**Object** Use this button to insert an object such as an Excel Worksheet or an Excel Chart into the presentation.

### SymbolsGroup

**Equation** To insert common mathematical equations into a slide, click this button. It is also possible to build equations using a gallery of math symbols.

**Symbol** This button is used to insert symbols that are not on the keyboard into the document. These include copyright symbols, trademark symbols, and paragraph marks, plus many others.

### MediaGroup

**Video** This button is used to insert a video clip into a presentation slide. Videos can be inserted from the Web, Facebook, or from a file that is stored in a folder on the computer.

**Audio** To insert a sound or recording into a presentation, click this button. Sound can be inserted from Office.com, or a file on the computer.

**Screen Recording** This feature can be used to record the computer screen and related audio before inserting the recording onto a slide.



This tab is used to apply a design to a PowerPoint presentation. It is also possible to make changes to the slide size, slide background, and other design attributes. The table below provides a listing of the groups and buttons on this ribbon. A description of each of the buttons is also provided.

#### Themes Group

**Theme Designs** Move the mouse pointer over each of the designs to see a Live Preview. Click the design to apply it to the presentation. To access additional themes, click the arrows at the end of the Styles Gallery. To display all the designs, click the more button in the lower right corner of the gallery.

#### Variants Group

**Variants Gallery** Once a theme has been chosen for a presentation this area is used to select different colors, fonts, and effects for the theme. It is also possible to change the background styles.

**Colors** This option is used to change the colors for the selected theme. To access this option, click the More button in the lower right corner of the Variants Gallery. When the option is selected, a list of different theme colors will appear.

**Fonts** When this option is selected, a list of available theme fonts will be displayed. To access this option, click the More button in the Variants Gallery. **Effects** These

are set of lines and fill effects that can be applied to a theme in a presentation. When the button is clicked, a gallery of these different effects will display.

**Background Styles** When the background for a slide needs to be changed, click this button. A gallery of different backgrounds will display. Click the **Format Background** link to open the Format Background Task Pane.

### Customize Group

**Slide Size** To change the slide from Standard to Widescreen, click this button. Select Custom Slide Size to make additional size changes, such as Portrait or Landscape.

**Format Background** Use this button to open the Format Background Task Pane. This task pane is used to add background pictures to a slide or to apply other formatting features to the design of a presentation.



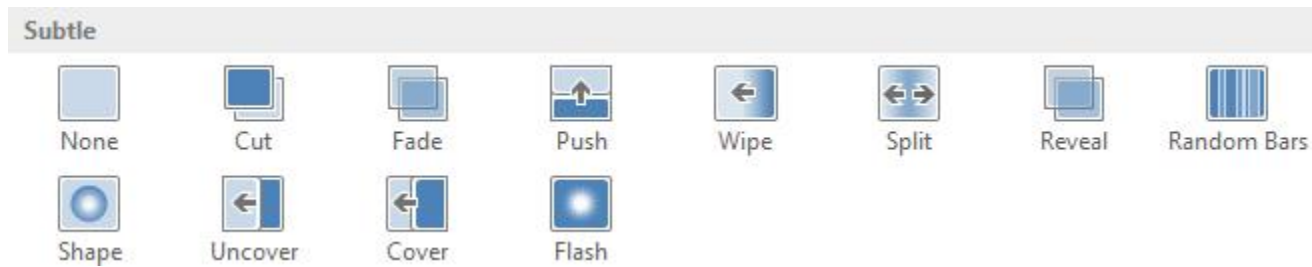
## Transition tab

If you've ever seen a PowerPoint presentation that had special effects between each slide, you've seen **slide transitions**. A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect. PowerPoint makes it easy to apply transition to some or all of your slides, giving your presentation a polished, professional look.

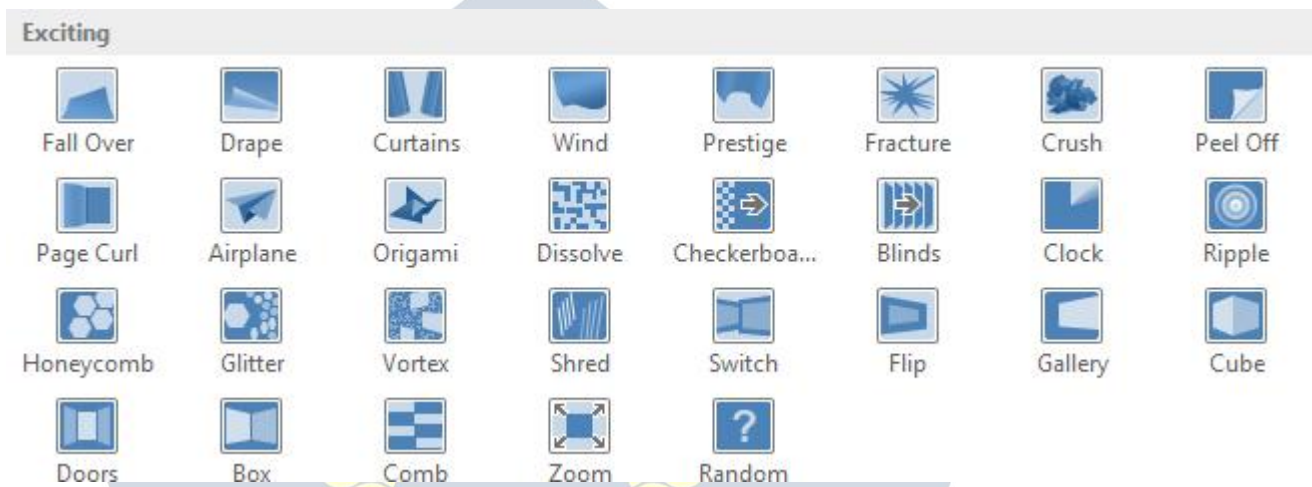
### About transitions

There are **three categories** of unique transitions to choose from, all of which can be found on the **Transitions** tab:

- **Subtle:** These are the most basic types of transitions. They use **simple animations** to move between slides.



- **Exciting:** These use more **complex animations** to transition between slides. While they're more visually interesting than **Subtle** transitions, adding too many can make your presentation look less professional. However, when used in moderation they can add a nice touch between important slides.



- **Dynamic Content:** If you're retransitioning between two slides that use similar **slide layouts**, dynamic transitions will move only the **placeholders**, not the slides themselves. When used correctly, dynamic transitions can help **unify** your slides and add a further level of polish to your presentation.

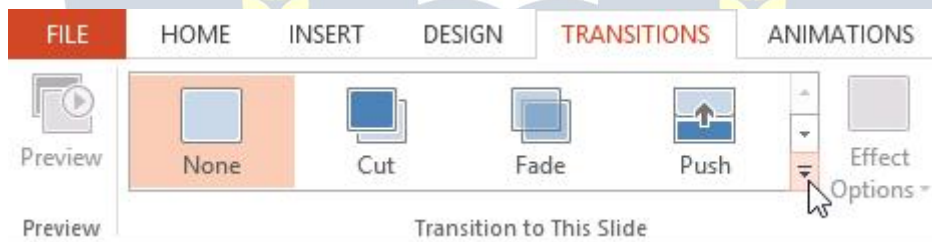


### To apply a transition:

1. Select the **desired slide** from the **Slide Navigation** pane. This is the slide that will appear **after** the transition.



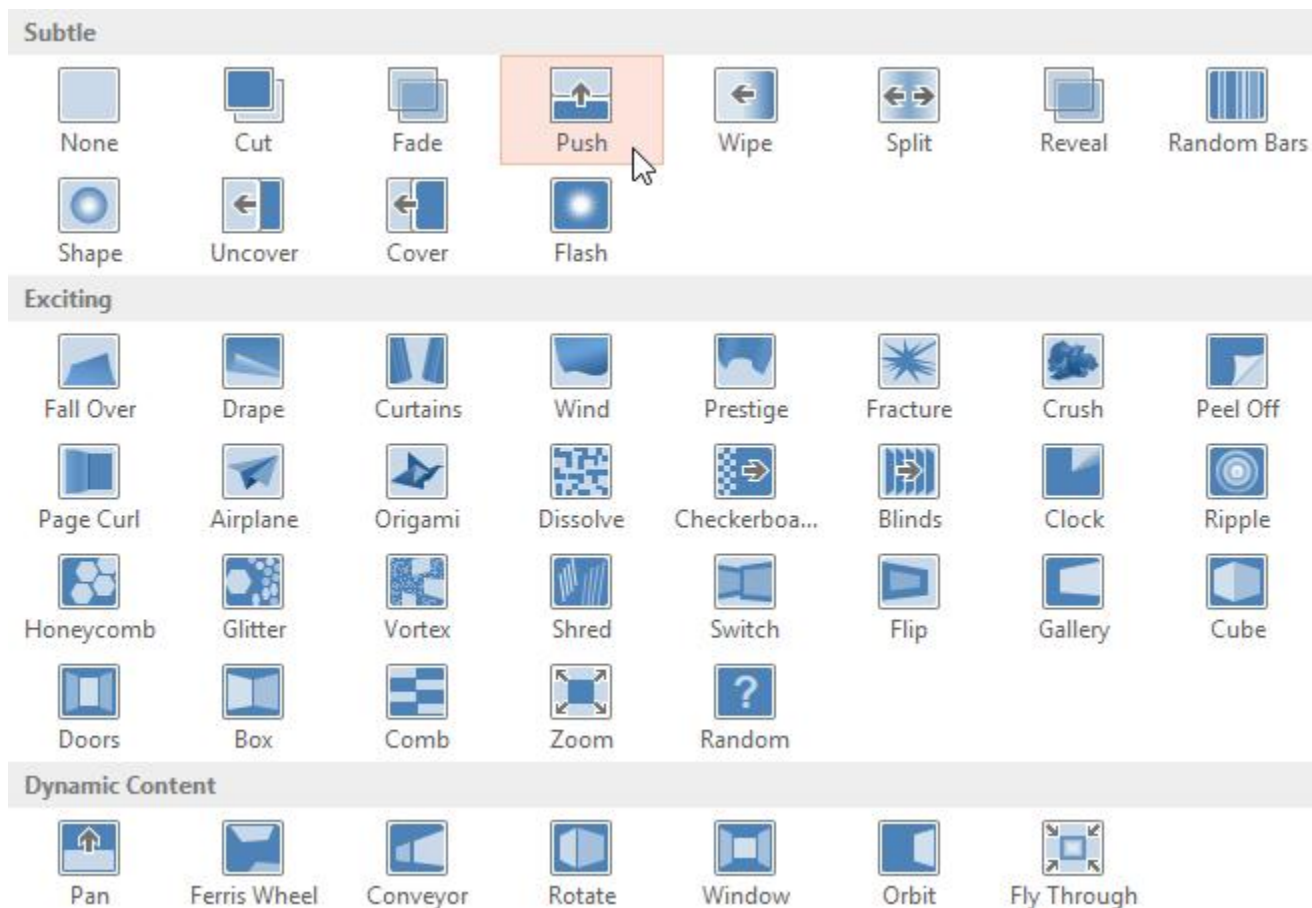
2. Click the **Transition** tab, then locate the **Transition to This Slide** group. By default, **None** is applied to each slide.
3. Click the **More** drop-down arrow to display all transitions.



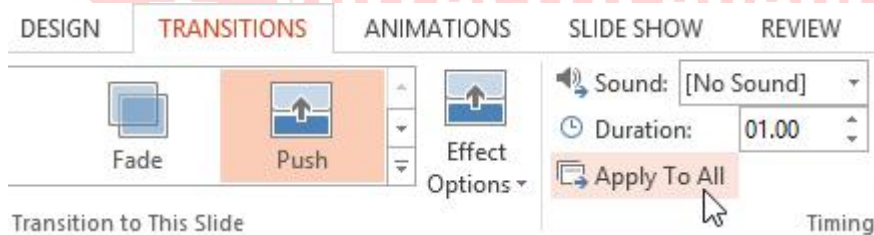
4. Click a **transition** to apply it to the selected slide. This will automatically preview the transition.

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You can use the **Apply To All** command in the **Timing** group to apply the same transition to all slides in your presentation. Keep in mind that this will modify any other transitions you've applied.

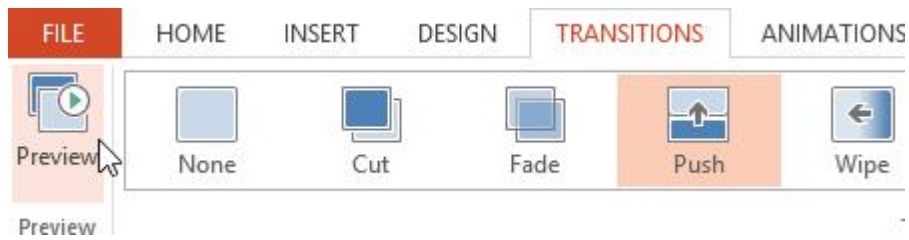


Try applying a few different types of transitions to various slides in your presentation. You may find that some transitions work better than others, depending on the content of your slides.

### Topreviewatransition:

You can **preview** the transition for a selected slide at any time using either of these two methods:

- Click the **Preview** command on the **Transition** tab.



- Click the **Play Animations** command in the **Slide Navigation** pane.



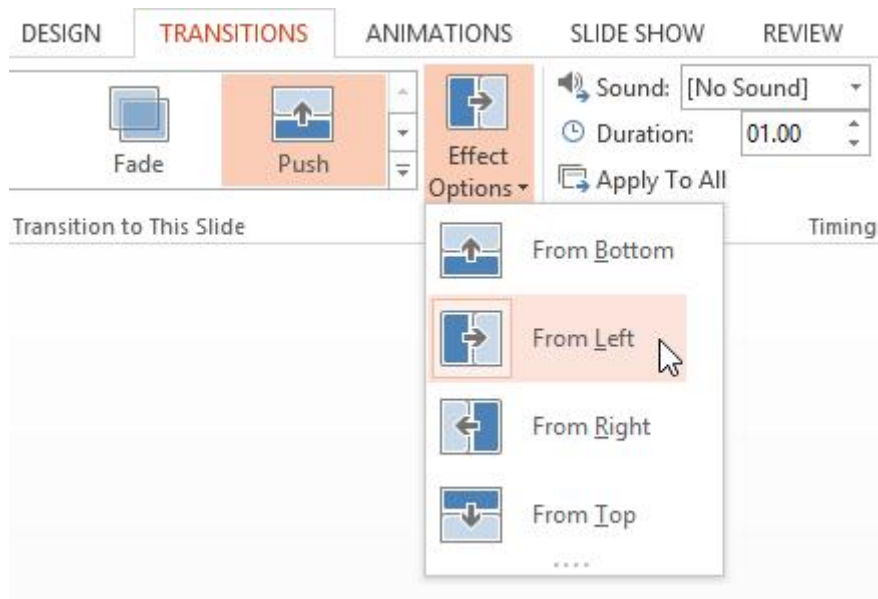
## Modifying transitions

### To modify the transition effect:

You can quickly customize the look of a transition by changing its **direction**.

1. Select the **slide** with the transition you want to modify.
2. Click the **Effect Options** command, and choose the desired option. These options will vary depending on the selected transition.



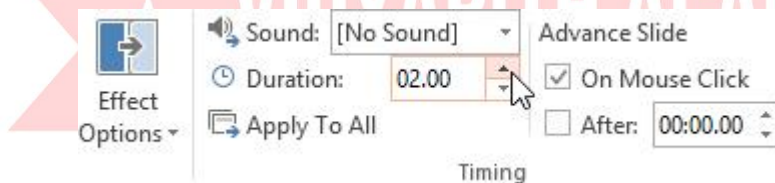


3. The transition will be **modified**, and a **preview** of the transition will appear.

Some transitions do not allow you to modify the direction.

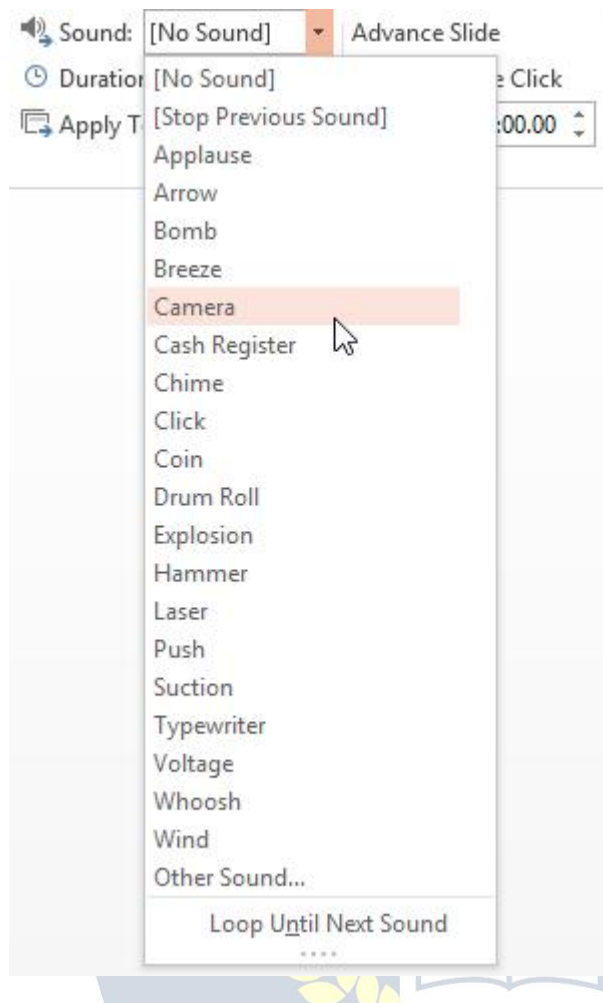
#### To modify the transition duration:

1. Select the **slide** with the transition you want to modify.
2. In the **Duration** field in the **Timing** group, enter the **desired time** for the transition. In this example, we'll increase the time to two seconds—or 02.00—to make the transition **slower**.



#### To add sound:

1. Select the **slide** with the transition you want to modify.
2. Click the **Sound** drop-down menu in the **Timing** group.
3. Click a **sound** to apply it to the selected slide, then preview the transition to hear the sound.



Sounds are best used in moderation. Applying a sound between every slide could become overwhelming or even annoying to an audience when presenting your slide show.

### To remove a transition:

1. Select the **slide** with the transition you want to remove.
2. Choose **None** from the **Transition to This Slide** group. The transition will be removed.



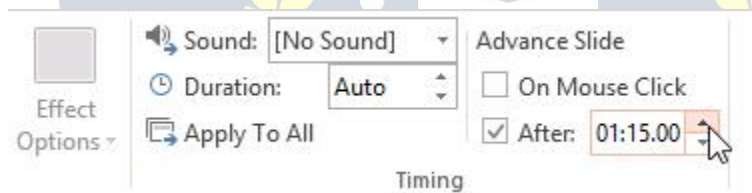
To remove transitions from **all slides**, apply the **None** transition to a slide, then click the **Apply to All** command.

## Advancing slides

Normally, in Slide Show view you would advance to the next slide by clicking your mouse or by pressing the space bar or arrow keys on your keyboard. The **Advance Slides** settings in the **Timing** group allows the presentation to advance **on its own** and display each slide for a specific amount of time. This feature is especially useful for **unattended presentations**, such as those at a trade show booth.

### To advance slides automatically:

1. Select the slide you want to modify.
2. Locate the **Timing** group on the **Transition** tab. Under **Advance Slide**, uncheck the box next to **On Mouse Click**.
3. In the **After** field, enter the amount of time you want to display the slide. In this example, we will advance the slide automatically after 1 minute and 15 seconds, or 01:15:00.



4. Select another slide and repeat the process until all the slides have the desired timing. You can also click the **Apply to All** command to apply the same timing to all slides.

## Animation tab

In PowerPoint, you can **animate** text and objects such as clipart, shapes, and pictures. Animation—or movement—on the slide can be used **to draw the audience's attention** to specific content or to make the slide easier to read.

### The four types of animations

There are several animation effects you can choose from, and they are organized into four types:

- **Entrance:** These control how the object enters the slide. For example, with the **Bounce** animation the object will "fall" onto the slide and then bounce several times.



- **Emphasis:** These animations occur while the object is on the slide, often triggered by a **mouseclick**. For example, you can set an object to **spin** when you click the mouse.



- **Exit:** These control how the object exits the slide. For example, with the **Fade** animation the object will simply fade away.

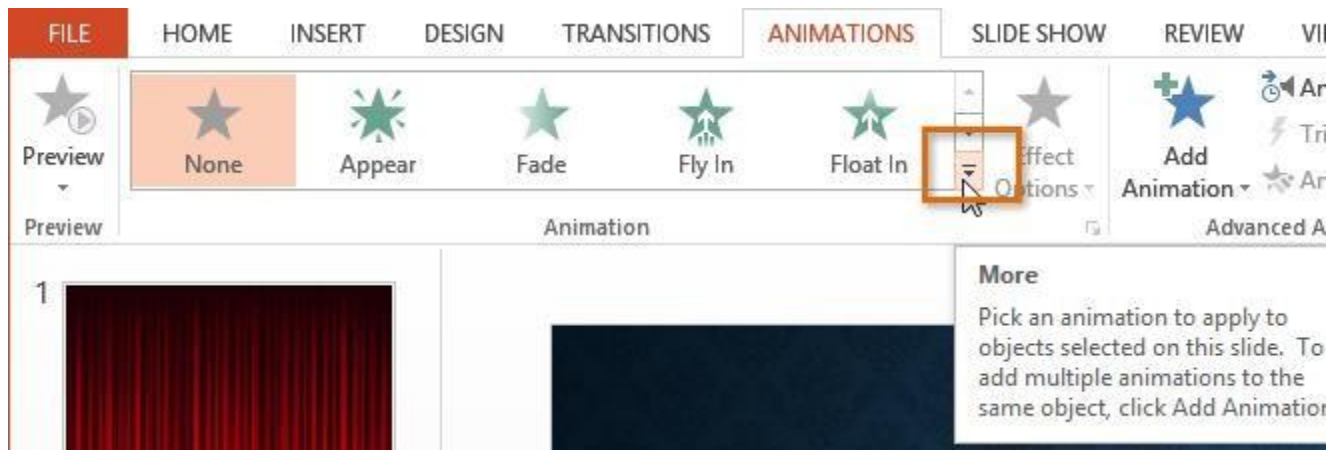


- **Motion Paths:** These are similar to **Emphasis** effects, except the object moves within the slide along a predetermined path, like a **circle**.

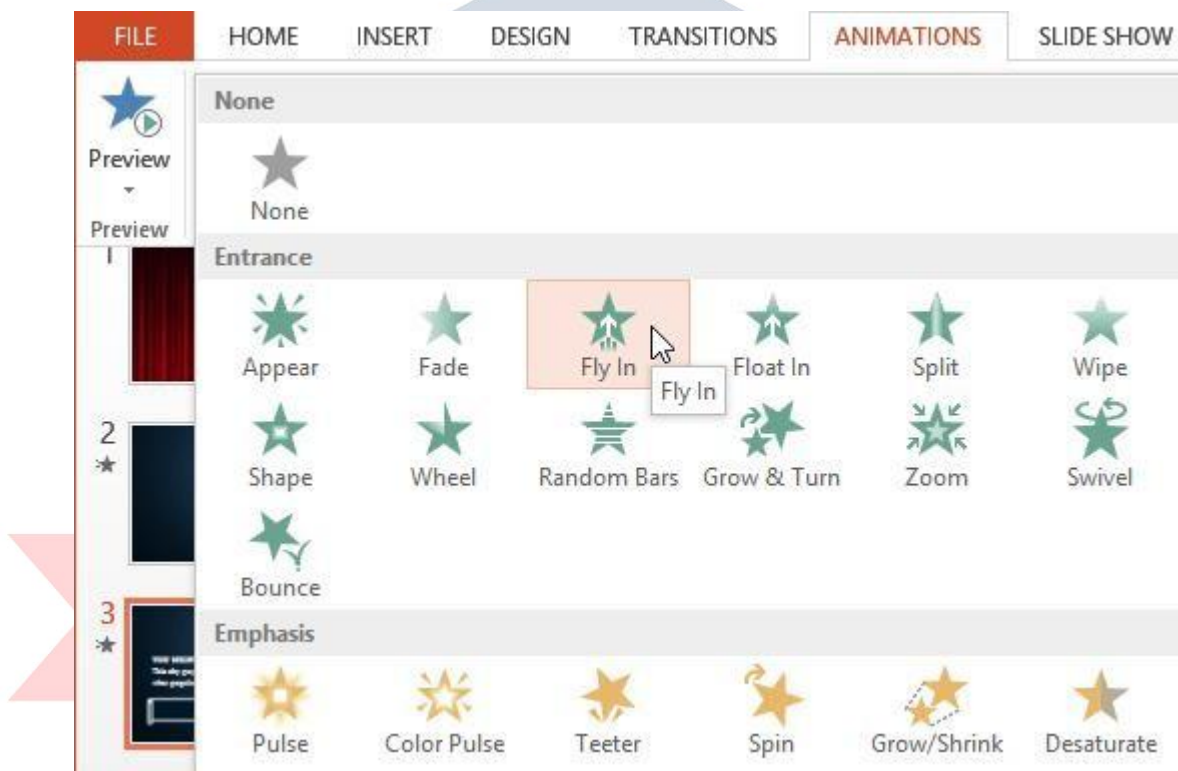


**To apply an animation to an object:**

1. Select the object you want to animate.
2. On the **Animation** tab, click the **More** drop-down arrow in the **Animation** group.



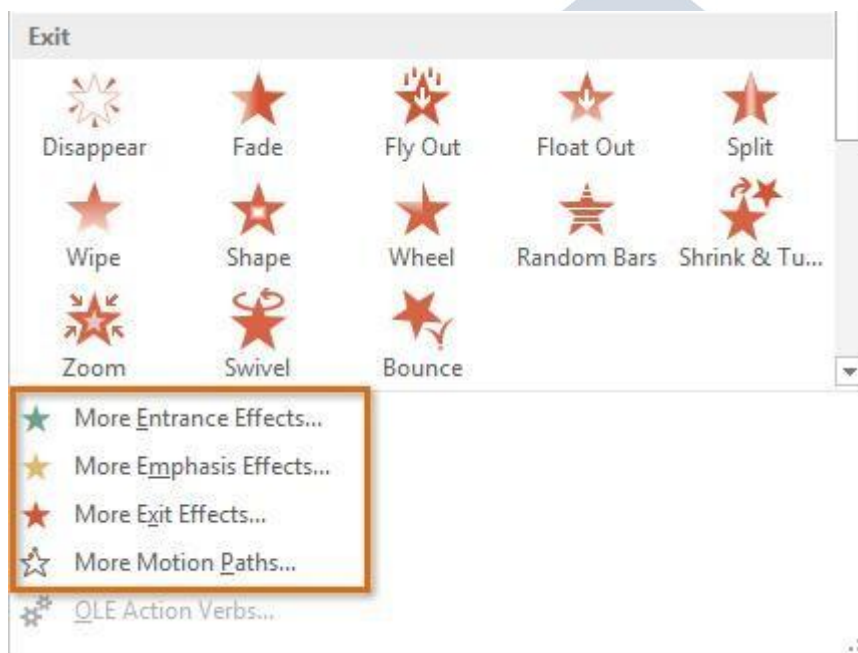
3. A drop-down menu of animation effects will appear. Select the desired effect.



4. The effect will apply to the object. The object will have a small **number** next to it to show that it has an animation. In the Slide pane, a **star** symbol also will appear next to the slide.

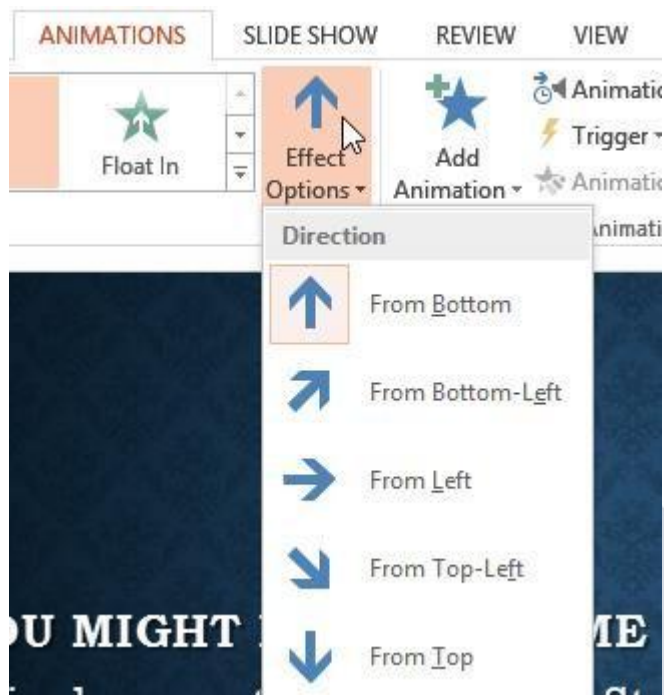


At the bottom of the menu, you can access even more effects.



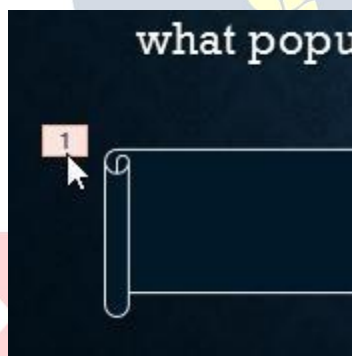
## Effect options

Some effects will have **options** you can change. For example, with the **Fly In** effect you can control **which direction** the object comes from. These options can be accessed from the **Effect Options** command in the Animation group.



### To remove an animation

1. Select the small number located next to the animated object.



2. Press the **Delete** key. The animation will be deleted.

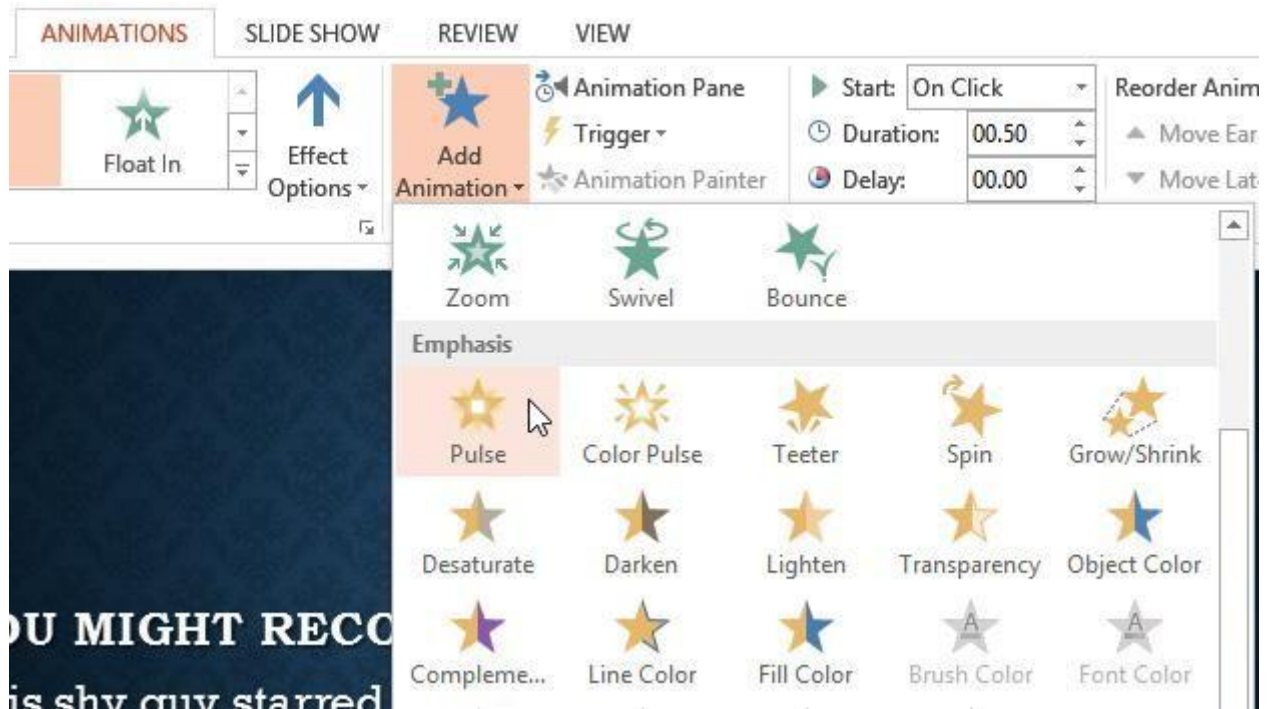
### Working with animations

#### To add multiple animations to an object:

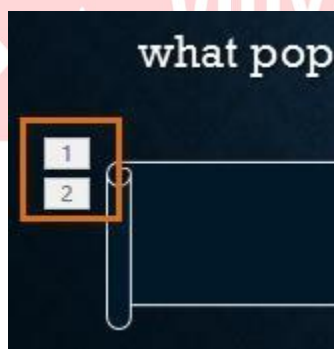
If you select a new animation from the menu in the Animation group, it will **replace the object's current animation**. However, you'll sometimes want to place **more than one animation** on an object, like an **Entrance** and an **Exit** effect. To do this, you'll need to use the **Add Animation** command, which will allow you to keep your current animations while adding new ones.

1. Select an object.

2. Click the **Animations** tab.
3. In the **Advanced Animation** group, click the **Add Animation** command to view the available animations.
4. Select the desired animation effect.



5. If the object has more than one effect, it will have a different number for each effect. The numbers indicate the **order** in which the effects will occur.



#### To copy animations with the Animation Painter:

In some cases, you may want to apply the same effect to more than one object. You can do this by **copying** the effects from one object to another using the **Animation Painter**. In our example, we want text to appear on our banner shape, so we've added a text box on top of the banner. We'd like the text to

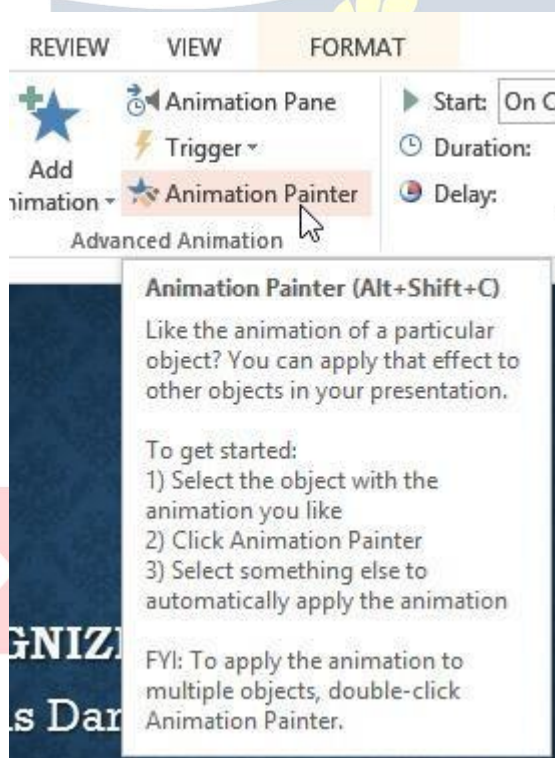


appearing the same effects we used on the banner, so we'll use the Animation Painter to copy the effects from the banner to the text box.

1. Click the **object** that has the **effects** you want to copy. In our example, we'll click our banner shape.



2. From the **Animations** tab, click the **Animation Painter** command.



3. Click the **object** you want to copy the effects to. The effects are applied to the object. In our example, the effects from the shape are applied to the text box.

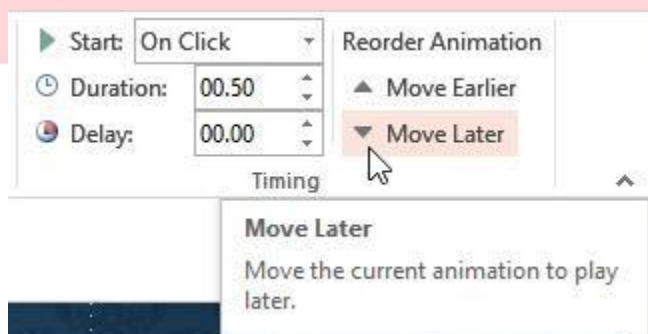


### To reorder the animations:

1. Select the number of the effect you want to change.



2. From the Animationstab, click the Move Earlier or Move Later commands to change the ordering.



### To preview animations:

Any animation effects you have applied will show up when you play the slide show. However, you can also quickly **preview** the animations for the current slide without viewing the slide show.

1. Navigatetotheslideyouwanttopreview.
2. Fromthe**Animation**stab,clickthe**Preview**command.The animations for the current slide will play.

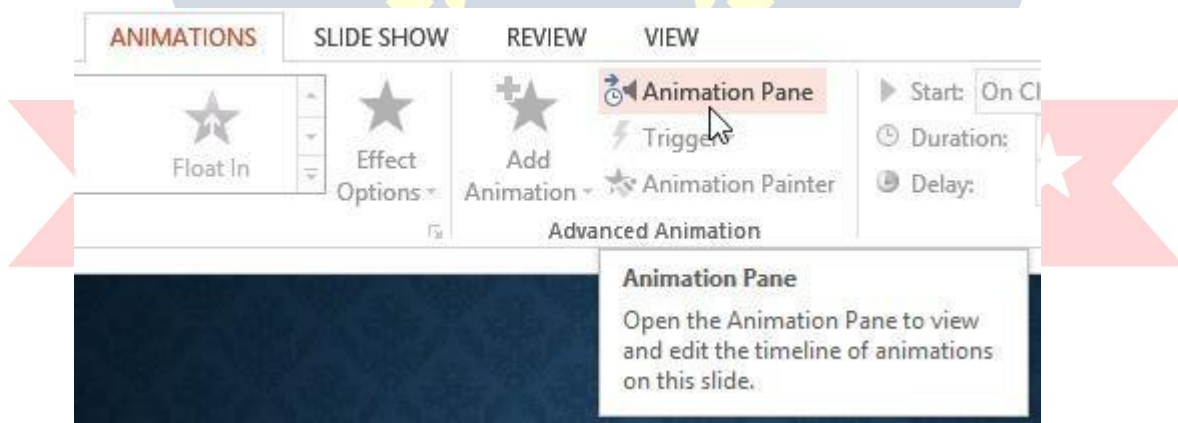


### TheAnimationPane

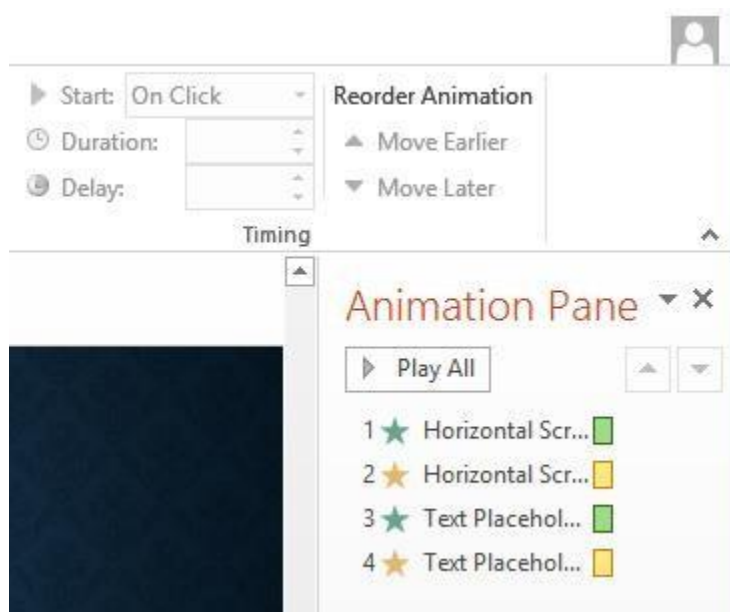
The **Animation Pane** allows you to view and manage all of the effects that are on thecurrentslide.Youcan **modifyandreorder**effectsdirectlyfromtheAnimation Pane, which is especially useful when you have several effects.

### ToopentheAnimationPane:

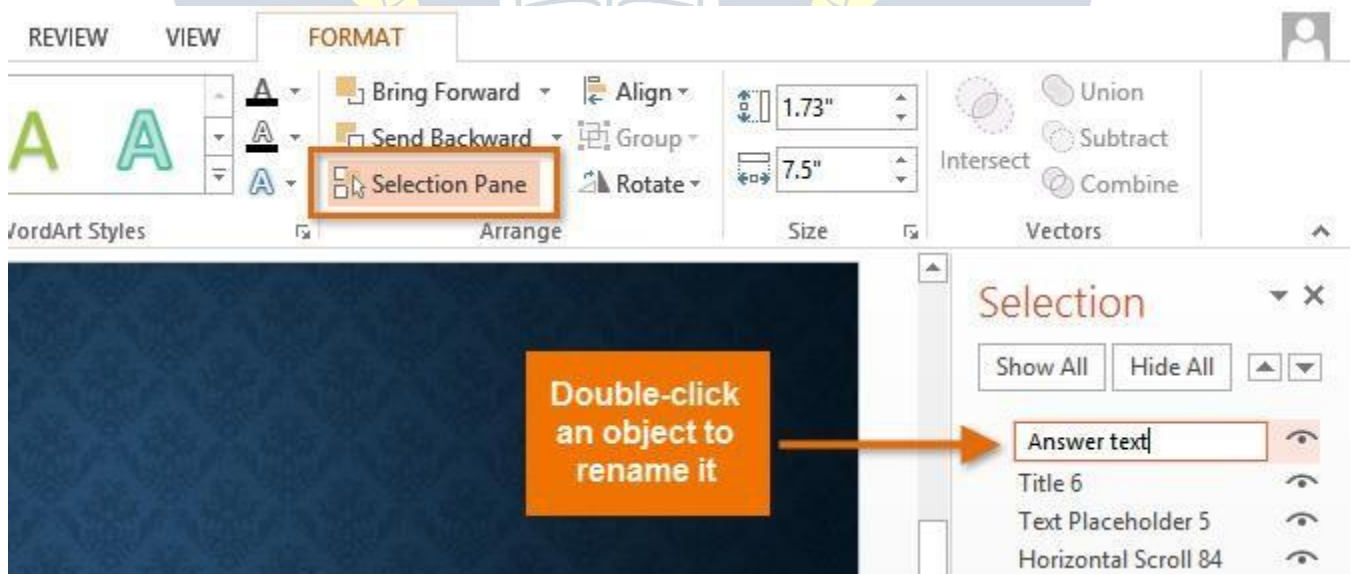
1. Fromthe**Animation**stab,clickthe**AnimationPane**command.



2. The Animation Panewill open on the right side of the window. It will showalloftheeffectsforthecurrentslideintheorder inwhichthey will appear.

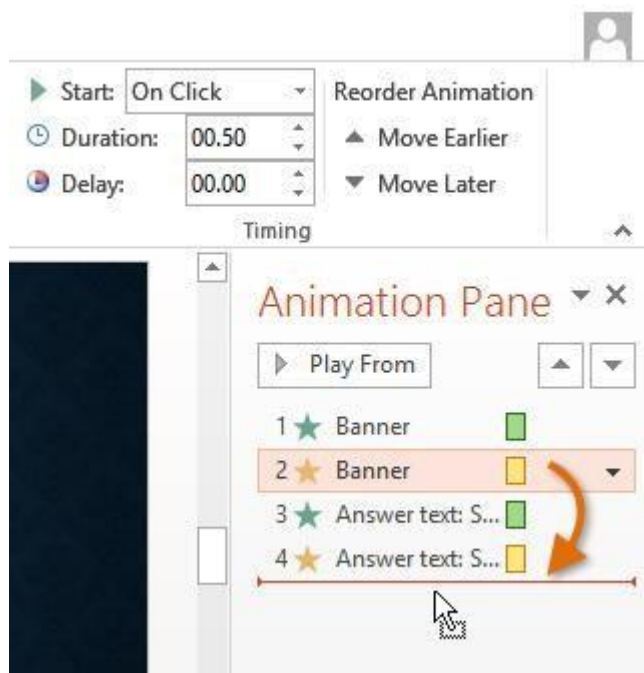


If you have several animated objects, it may help to rename the objects before reordering them in the Animation Pane. You can rename them in the **Selection Pane**. To open the Selection Pane, click an **object**, then from the **Format** tab click **Selection Pane**. Double-click the name of an object to rename it.



**To reorder effects from the Animation Pane:**

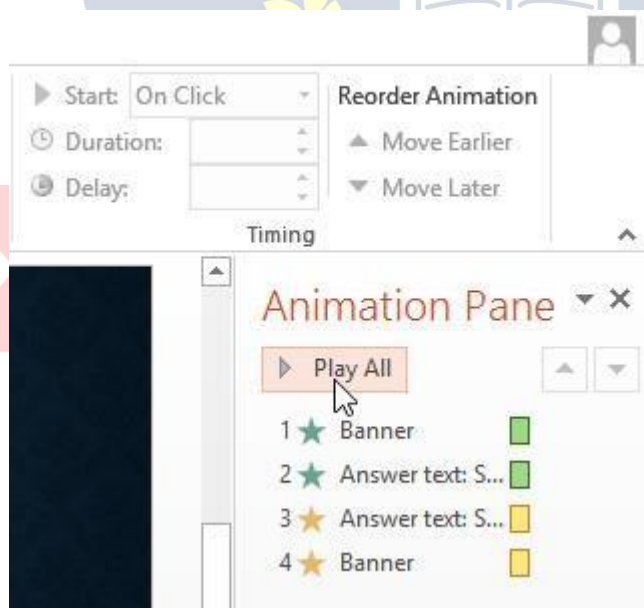
1. On the **Animation Pane**, click and drag an effect up or down.



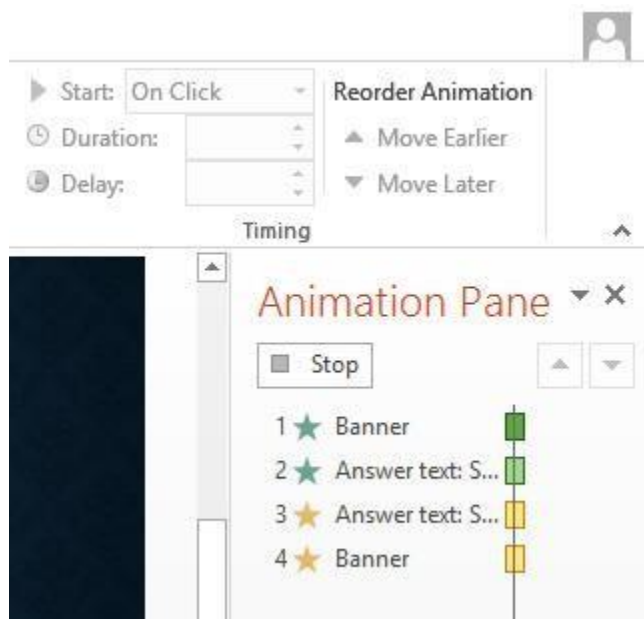
2. The effects will reorder themselves.

**To preview effects from the Animation Pane:**

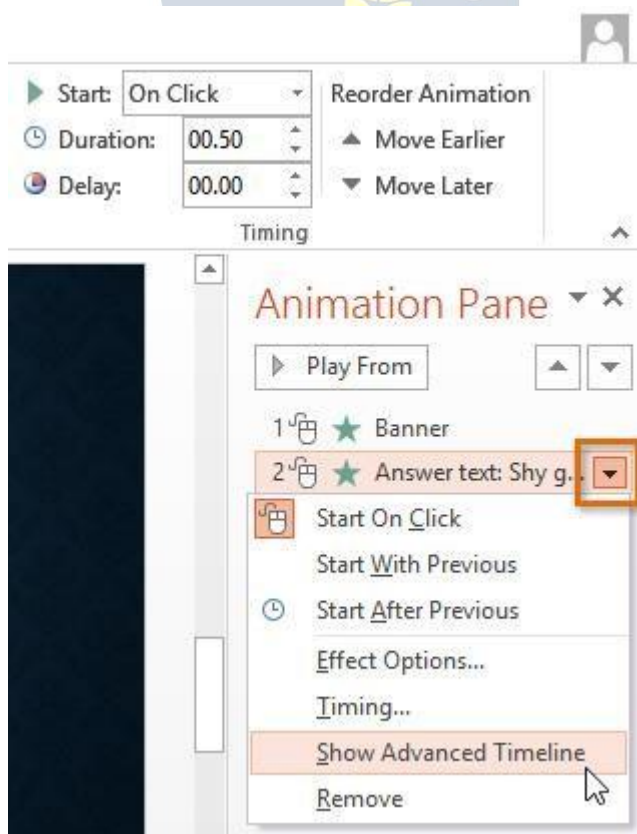
1. From the **Animation Pane**, click the **Play** button.



2. The effects for the current slide will play. On the right side of the Animation Pane, you will be able to see a **timelin**e that shows the progress through each effect.



If the timeline is not visible, click the drop-down arrow for an effect, then select **Show Advanced Timeline**.

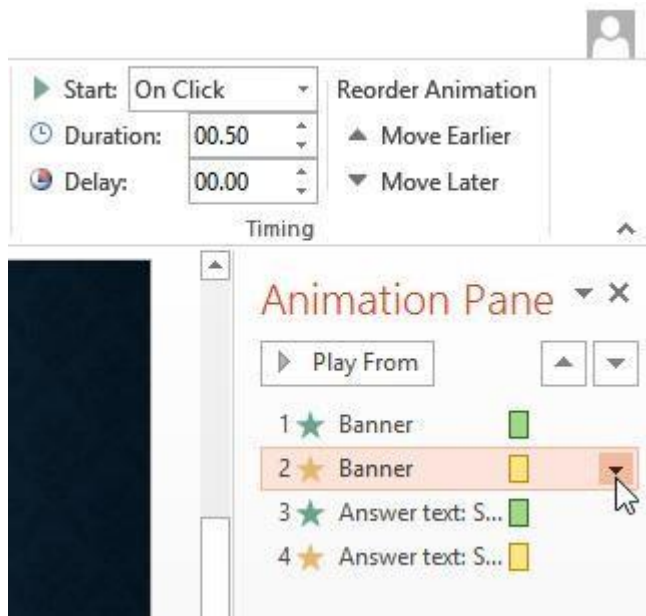


**To change an effect's start option:**

By default, an effect starts playing when you click the mouse during a slideshow. If you have multiple effects, you will need to click multiple times to start each effect

individually. However, by changing the **start option** for each effect, you can have effects that automatically play **at the same time** or **one after the other**.

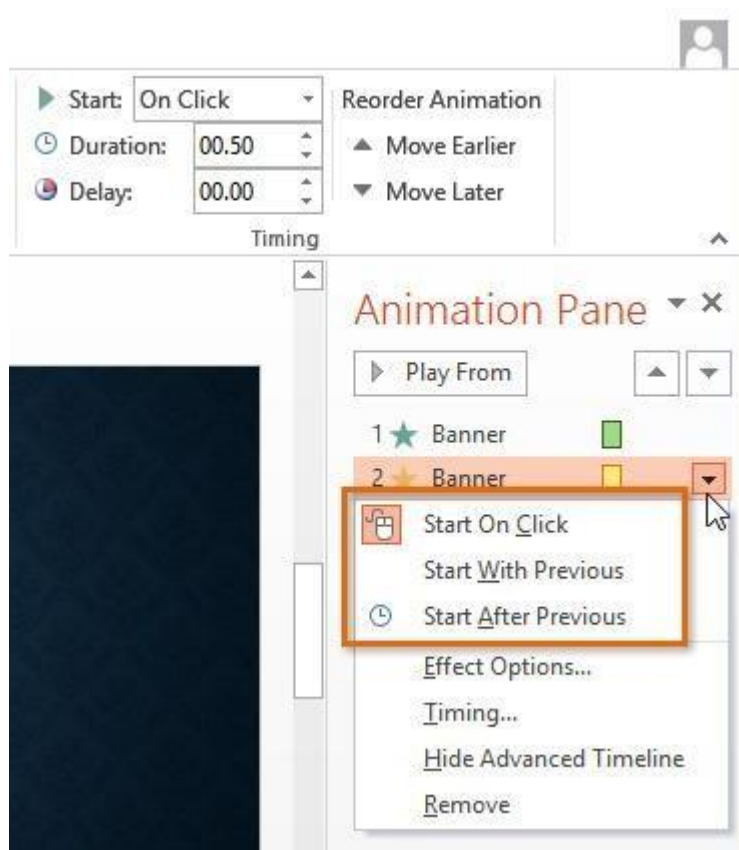
1. From the **Animation Pane**, select an effect. A drop-down arrow will appear next to the effect.



2. Click the drop-down arrow. You will see three start options:
  - **Start on Click:** This will start the effect when the mouse is clicked.
  - **Start With Previous:** This will start the effect at the same time as the previous effect.
  - **Start After Previous:** This will start the effect when the previous effect ends.

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3. Select the desired start option.

When you **preview** the animations, all of the effects will play through automatically. To test effects that are set to **Start on Click**, you will need to play the slide show.

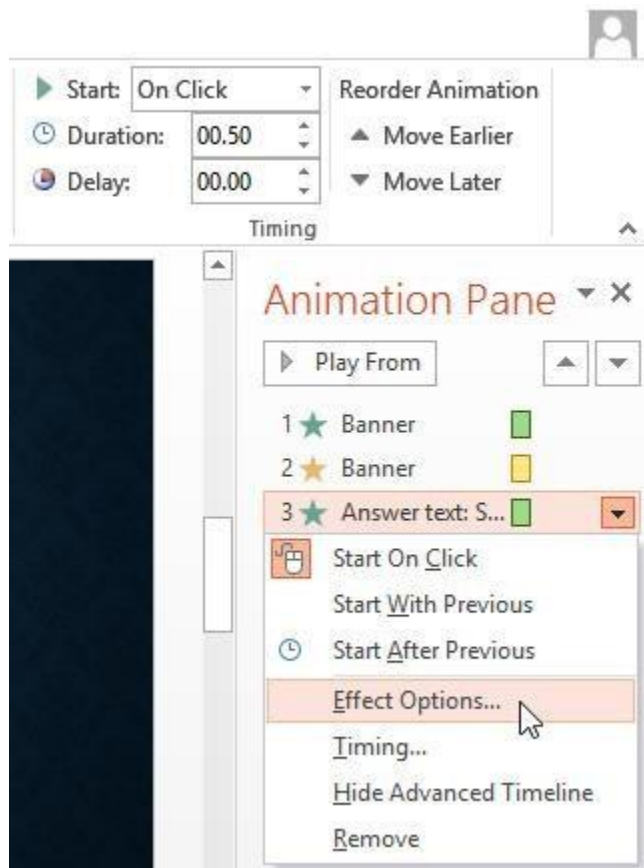
### The Effect Options dialog box

From the Animation Pane, you can access the **Effect Options** dialog box, which contains more advanced options you can use to fine tune your animations.

### To open the Effect Options dialog box:

1. From the **Animation Pane**, select an effect. A drop-down arrow will appear next to the effect.
2. Click the drop-down arrow, then select **Effect Options**.



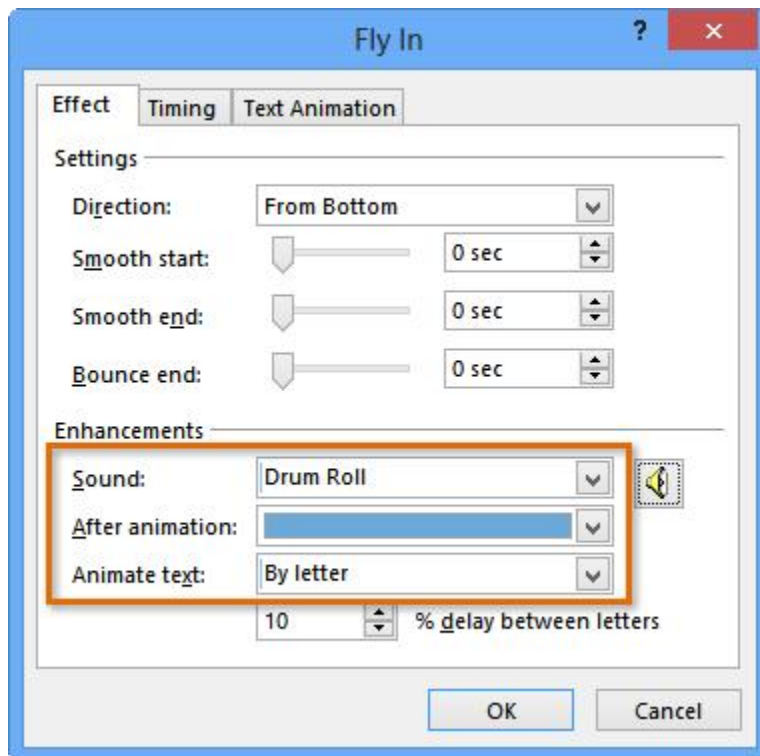


3. The Effect Options dialog box will appear. From here, you can add various **enhancements** to the effect:

- **Sound:** Adds a sound effect to the animation
- **After animation:** Changes the color or hides the object after the animation is over
- **Animate text:** Allows you to animate text **all at once**, **one word at a time**, or **one letter at a time**

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## SLIDESHOW TAB

This tab provides options for presenting the Slide Show to the audience. Narration for the show can be recorded. Decisions can be made as to where to start the presentation. In addition, custom shows can be created. The table below provides a listing of the groups and buttons available on the ribbon for this tab. A description of each of the buttons is also provided.

### Start Slide Show Group

**From Beginning** Click this button to start the slide show at the first slide. This will start the show at the beginning even though the insertion point is not in the first slide.

**From Current Slide** When the insertion point is in a different slide than the first one, clicking this button will start the show on the selected slide.

**Present Online** This option is used to present a PowerPoint presentation on the Internet using the default presentation service. The viewers can watch the presentation through a Web browser.

**Custom Slide Show** A custom slide show displays only selected slides. This option makes it possible to have several slide shows within the same presentation.

### Set Up Group

**Set Up Slide Show** This button is used to set up advanced options for a presentation such as viewing the show on a kiosk.

**Hide Slide** To hide a slide within the presentation, click this button. This means that the slide will not be shown during the presentation. However, it will still display in Normal view. This is a toggle button that when clicked the first time will hide the slide. When it is clicked the second time, it will display the slide.

**Rehearse Timings** This option is used to rehearse the timing for a presentation. These timings can be used when a presentation is a self-running show, such as when displaying it on a kiosk.

**Record Slide Show** To record a narration to go with the slides in the presentation, click this button. The Record Narration dialog box will display where the options for recording can be set.

**Play Narrations** This option allows narrations and laser gestures to be played back during a slide show.

**Use Timings** Click the checkbox for this option if the timings that were set up will be used during the presentation.

**Show Media Controls** Select this option to have media controls for audio and video show when the mouse pointer is moved over an object during a slide show presentation.

### Monitors Group

**Show Presentation On** Click the arrow for this option to choose whether to let PowerPoint choose the monitor to show the presentation on or to allow the presenter to select the monitor. This option is only available when more than one monitor is connected to the computer.

**Use Presenter View** This option is used when a computer is connected to more than one monitor. One monitor can be used to show the slide show while the other

screen can be used to show speaker notes for the presenter. If the computer only has one monitor Alt+F5 can be used to display the slide show in Presenter View

## Reviewtab

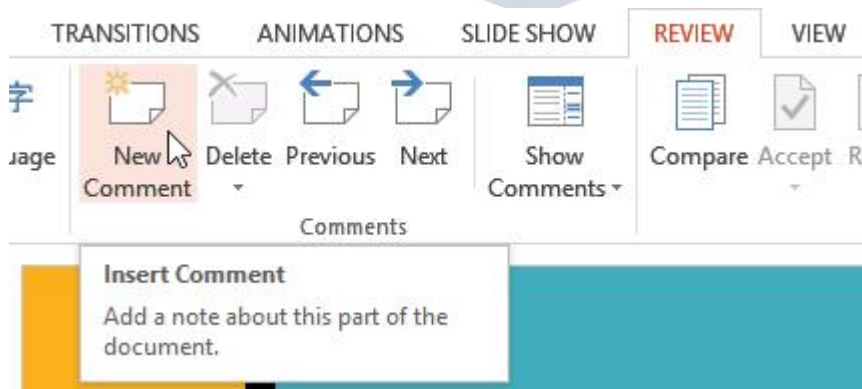
Before presenting your PowerPoint, you might decide to ask someone else to look over it. The two of you might even collaborate on a presentation. If you were revising a hard copy of a report, you might add **comments** in the margins or **compare** your rough and final drafts side by side. You can also do these things in PowerPoint using the Comments and Compare features

### Commenting on presentations

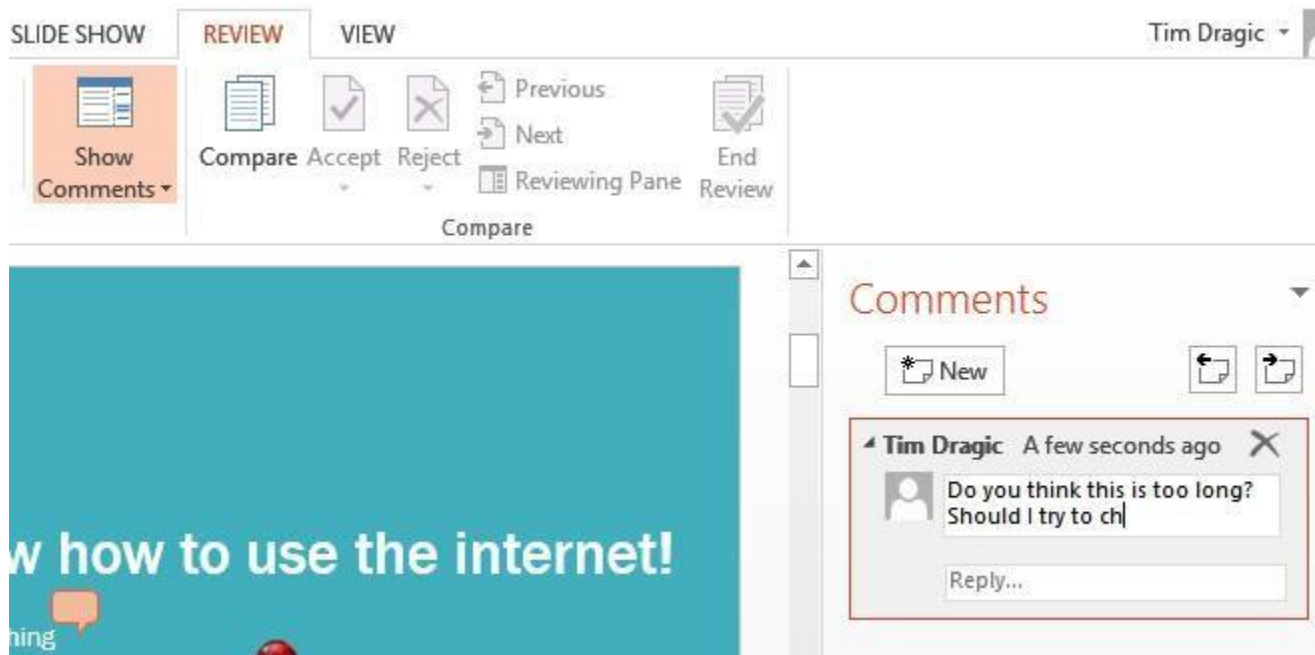
When you are revising or collaborating on a presentation, you might want to make notes or suggestions without actually changing anything on the slide. Using **comments** allows you to take note of anything on a slide without altering the slide itself. Comments can be added and read by the original author or any other reviewers.

### To add a comment:

1. Select the text or click on the area of the slide where you want the comment to appear.
2. Select the **Review** tab, then locate the **Comments** group.
3. Click the **New Comment** command.

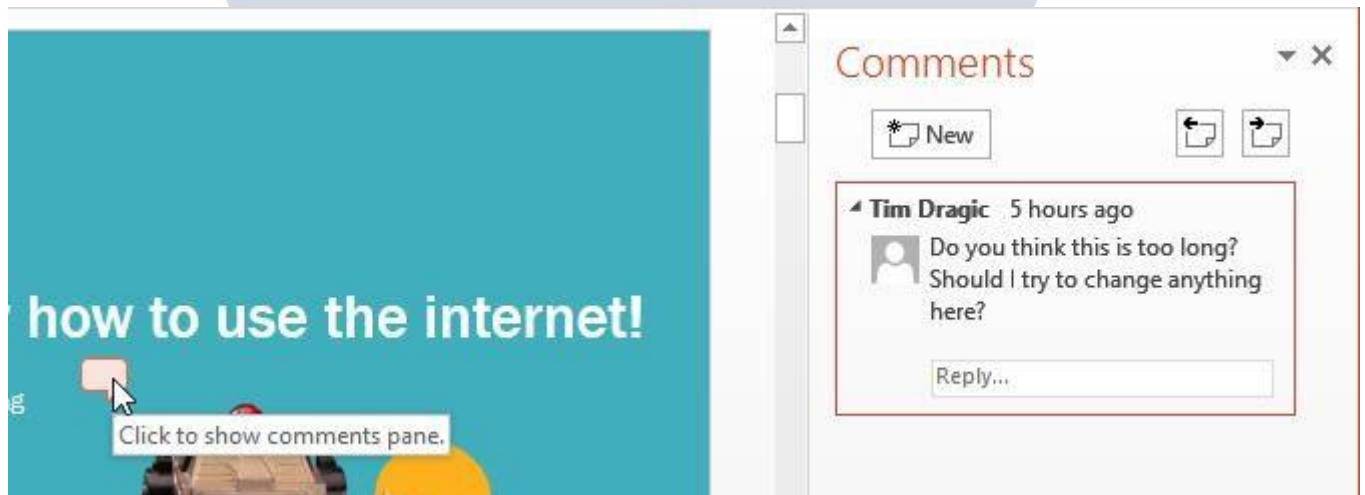


4. The **Comments** pane will appear on the right side of the window. Type your comment.



5. Press **Enter** or click anywhere on the slide to return to your presentation.

Added comments show up as small **thumbnails** rather than full-sized notes. To read a comment, click the thumbnail to open the **Comments** pane.

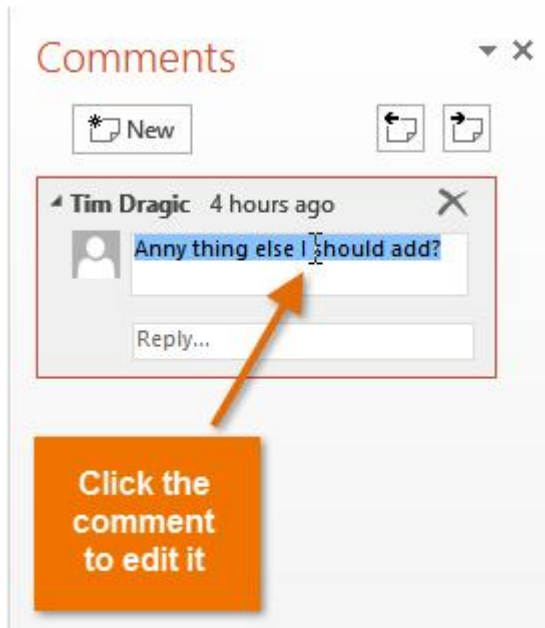


### To edit a comment:

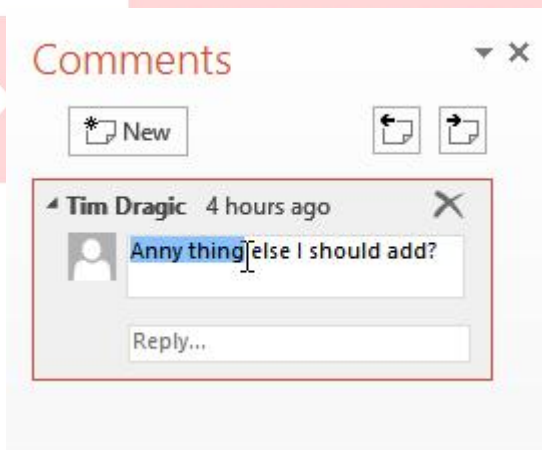
1. Select the comment you want to edit by clicking the **comment thumbnail**.



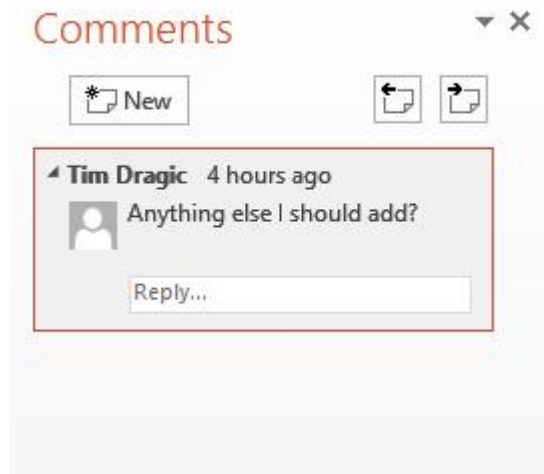
2. The **Comments** pane will appear. Click the **comment** to edit it.



3. Make the desired changes.



4. Press **Enter** or click anywhere on the slide, and the comment will update to reflect your edits.

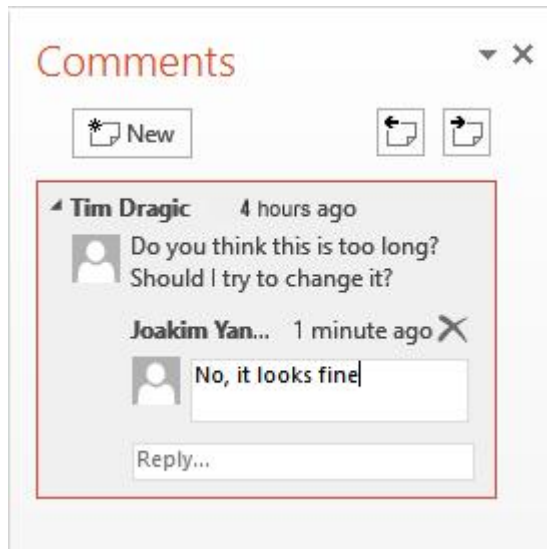


### To respond to a comment:

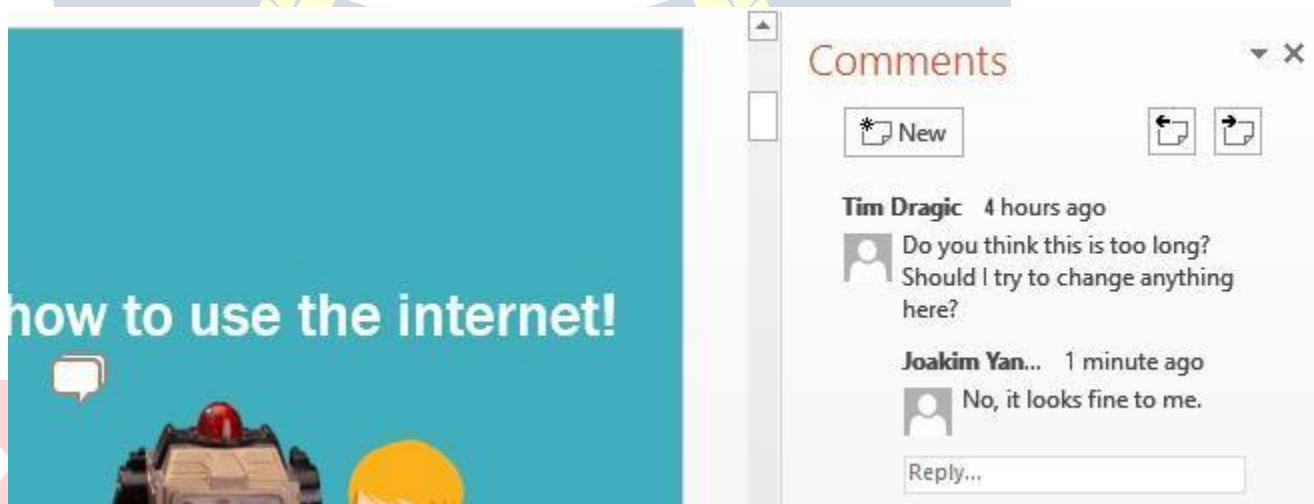
1. Click the **thumbnail** of the comment you want to edit. The **Comments** pane will appear.
2. The selected comment will be highlighted. Click **Reply...**



3. Type your comment.

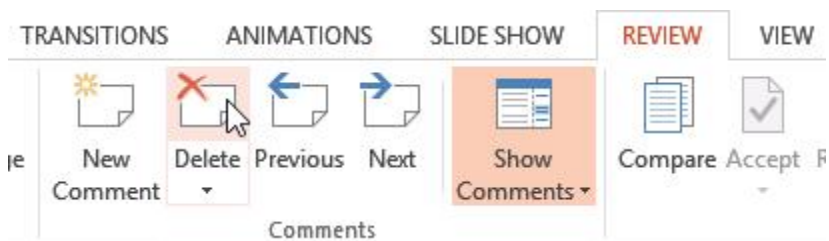


4. Press **Enter** or click anywhere on the slide. The new comment will appear below the original comment, and a new thumbnail will appear on the slide.



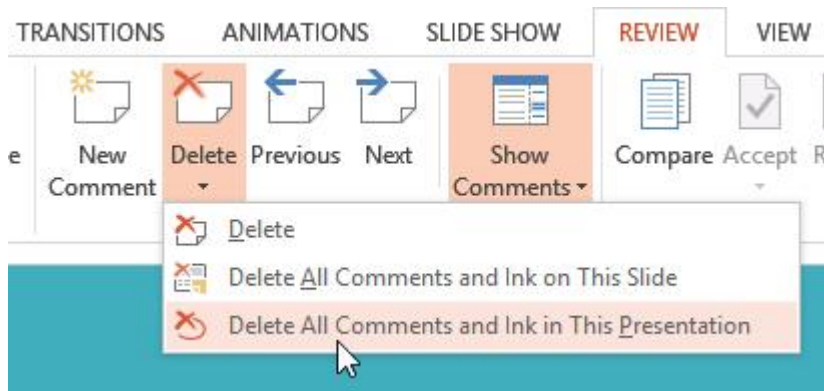
#### To delete a comment:

1. Select the comment you want to delete.
2. From the **Review** tab, click the **Delete** command.





To delete multiple comments, click the **Deleted** drop-down arrow and select **Delete All Comments and Ink on This Slide** or **Delete All Comments and Ink in This Presentation**.



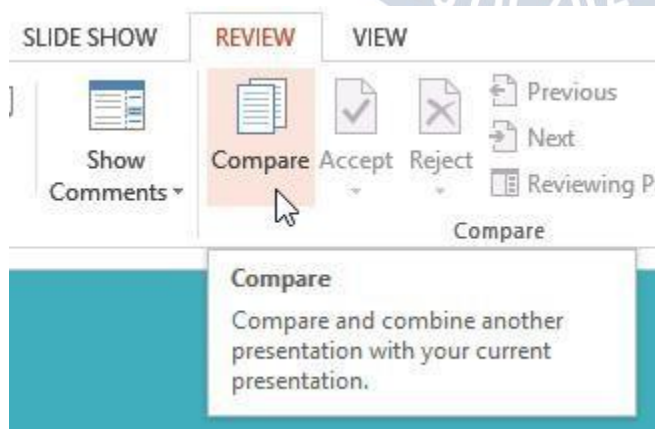
## Comparing presentations

If you are collaborating on a presentation or asking someone else to review your presentation, you might want to use the **Compare** feature. The **Compare** feature combines two versions of the same presentation. This allows you to see the differences between the two and decide which changes to include in the final version of your presentation.

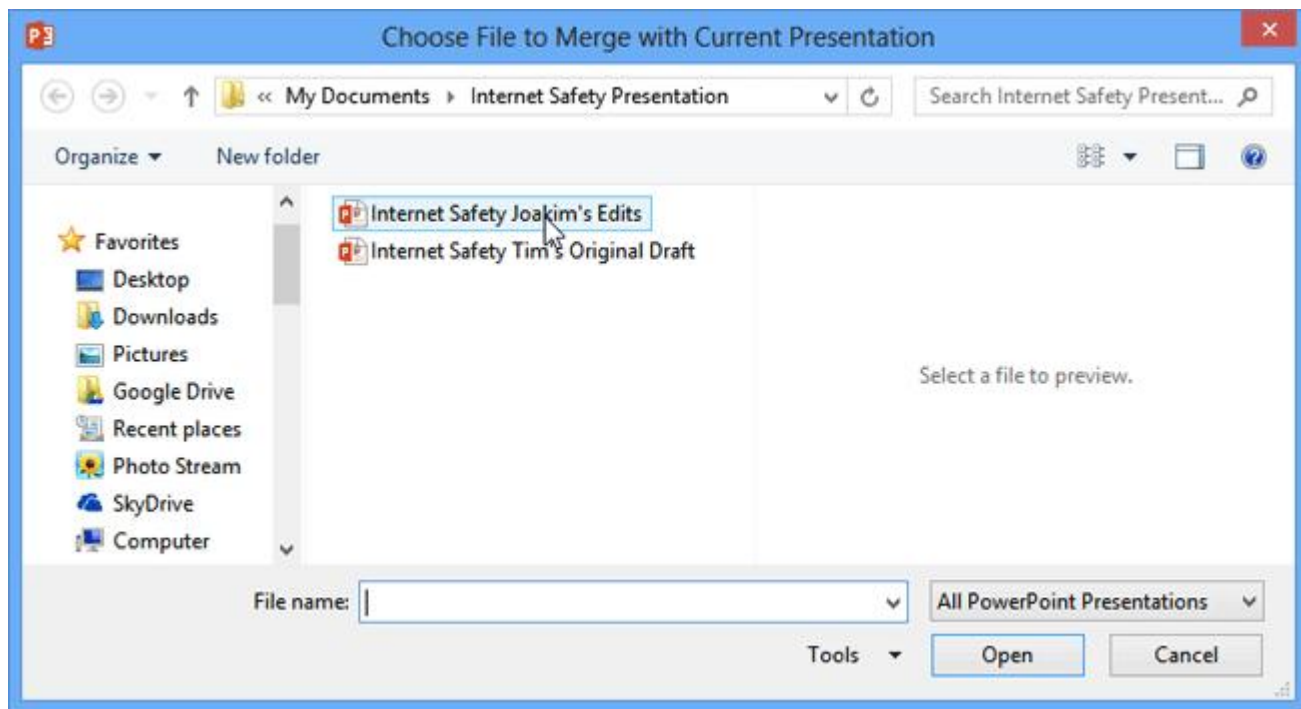
### To compare two presentations:

Before you start, you'll need to have one version of the presentation open. When you're ready to compare, you'll select the second version.

1. Select the **Review** tab, then locate the **Compare** group.
2. Click **Compare**.



3. A dialog box will appear. Browse for and select the desired file.



4. Click **Open**.

5. The **Revisions** pane will appear, allowing you to compare the two presentations.

## View Tab

When working with PowerPoint, this tab is used to view the presentation in different formats, it is also used to view more than one PowerPoint window at a time, or to decide whether to display the ruler within the window. This document lists each of the groups and buttons on the ribbon for this tab. A description of each of the buttons on the ribbon is also provided.

### Presentation Views Group

**Normal** This is the default view for all PowerPoint presentations. In this view, the slide pane and thumbnails of the slides will be displayed.

**Outline View** Click this button to view the presentation as an outline. The outline will appear in the frame to the left of the slide pane. It will replace the slides pane.

**Slide Sorter** To view the slides as thumbnails, click this button. The slides will appear in columns and rows. This format makes it easy to rearrange the slides.

**Notes Page** When this view is chosen, the slides appear at the top of the page and the speaker notes that have been entered for the presentation will show at the bottom of the page.

**Reading View** This view is used to view the presentation as a slideshow that fits within the window.

### Master Views Group

**Slide Master** Click this button to change the design and layout of the slide masters. These masters are the ones that each slide in the presentation is based on. The changes affect what is displayed on all the slides with that layout in the presentation. Animations and transitions can be added in the slide master. The top, larger slide is used to change options for all the slides in the presentation no matter what the layout.

**Handout Master** To change the design and layout of the printed handouts for a presentation, click this button.

**Notes Master** This button is used to change the way the notes page is displayed and printed.

### Show Group

**Ruler** To display the horizontal and vertical ruler in the PowerPoint window, check the checkbox for this option.

**Gridlines** Click the checkbox for this option to display gridlines in a presentation. The gridlines are used to align objects on a slide.

**Guides** Use this option to show adjustable drawing guides to which objects can be aligned on the slide.

**Notes** Click this button to add speaker notes to a presentation. These notes can be used for quick reference during a presentation.

### Zoom Group

**Zoom** To specify the zoom level for viewing the slide in the PowerPoint window, click this button. The Zoom dialog box will display where zoom levels may be specified.

**FittoWindow** This button is used to zoom the presentation so that the slide fills the window.

### Color/Grayscale Group

**Color** To view the presentation in color, choose this option. This is the default option for viewing presentations.

**Grayscale** This button is used to view the presentation in grayscale. Gray-scale shows the presentation in black and white with gray tones.

**Black and White** When this option is chosen, the presentation will be shown in black and white without any gray tones.

### Window Group

**New Window** To open a new PowerPoint window, click this button. A new window will open with the same presentation. The presentation will have a number after the name.

**Arrange All** Click this button to tile the open windows on the screen side-by-side.

**Cascade** Use this button to tile the open windows so that they overlap vertically on the screen.

**Move Split** This option is used to move the splitters that separate the different sections of the window.

**Switch Windows** Click this button to switch from one window to another window. A list of the open windows will display when the button is clicked.

### Macros Group

**Macros** These are miniature programs that are used to perform specified tasks within a program. Examples of macros are Ctrl + P for print or Ctrl + S for save. When this button is clicked, a list of macros will be displayed.

# INTERNET

## Introduction

The **Internet** is an increasingly important part of everyday life for people around the world. But if you've never used the Internet before, a lot of this new information might feel a bit confusing at first.

Throughout this tutorial, we'll try to answer some basic questions you may have about the Internet and how it's used. When you're done, you'll have a good understanding of **how the Internet works**, how to **connect to the Internet**, and **how to browse the Web**. What

## is the Internet?

The Internet is a **global network** of billions of computers and other electronic devices. With the Internet, it's possible to access almost any information, communicate with anyone else in the world, and do much more.

You can do all of this by connecting a computer to the Internet, which is also called **going online**. When someone says a computer is online, it's just another way of saying it's connected to the Internet.



## What is the Web?

The **World Wide Web**—usually called the **Web** for short—is a collection of different **websites** you can access through the Internet. A **website** is made up of related text, images, and other resources. Websites can resemble other forms of

media—likewebpagearticlesortelevisionprograms—ortheycanbeinteractive in a way that's unique to computers.

The purpose of a website can be almost anything: a news platform, an advertisement,anonline library, a forum for sharing images, or an educational site like us!



Once you are connected to the Internet, you can access and view websites using a type of application called a **web browser**. Just keep in mind that the web browser itself is not the Internet; it only displays websites that are stored on the Internet.

### How does the Internet network?

At this point you may be wondering, **how does the Internet work?** The exact answer is pretty complicated and would take a while to explain. Instead, let's look at some of the most important things you should know.

It's important to realize that the Internet is a global network of **physical cables**, which can include copper telephonewires, TV cables, and fiber optic cables. Even wireless connections like Wi-Fi and 3G/4G rely on these physical cables to access the Internet.

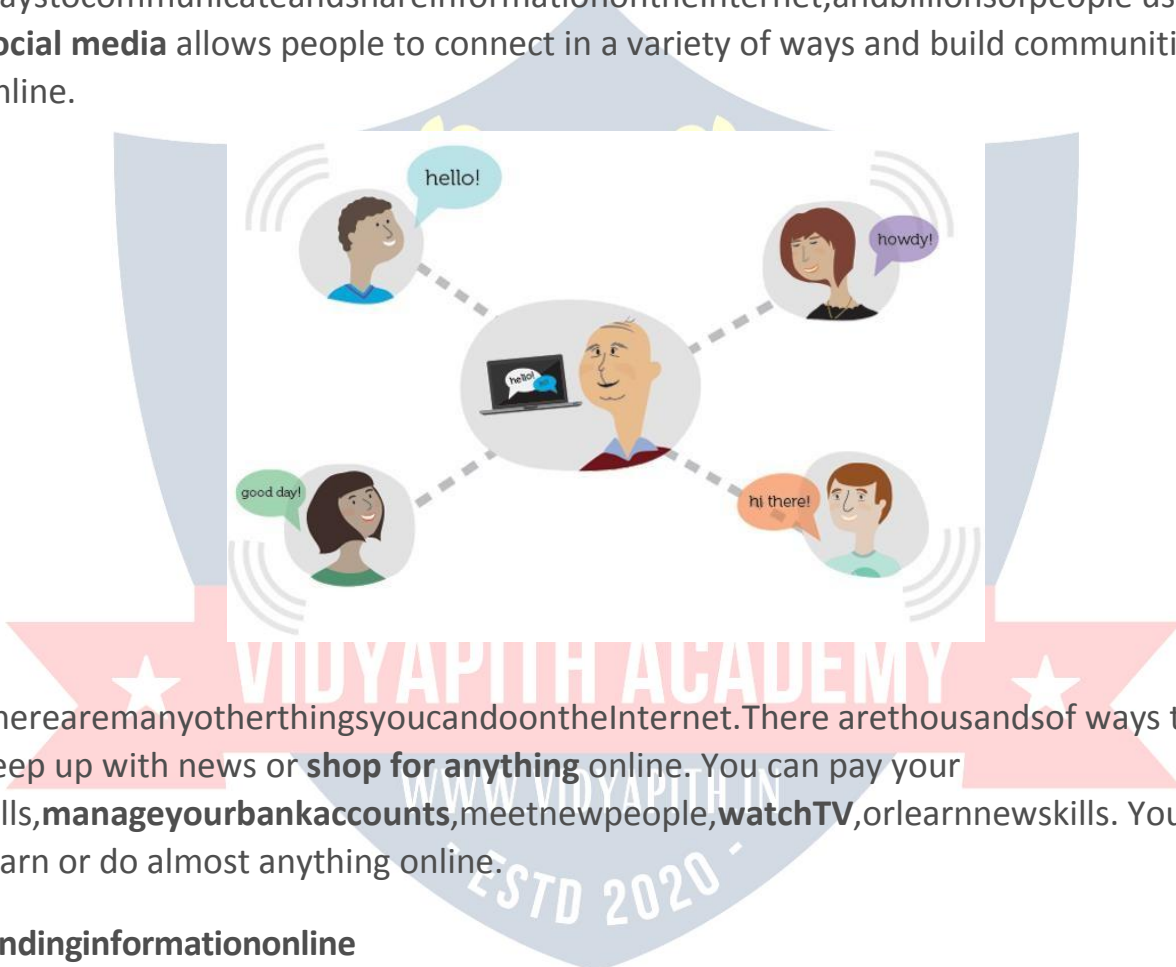
When you visit a website, your computer sends a request over these wires to a **server**. A server is where websites are stored, and it works a lot like your computer's hard drive. Once the request arrives, the server retrieves the website

andsendsthecorrectdatabacktoyourcomputer.What'samazingisthatthisall happens in just a few seconds!

Watchthevideobelowfrom TataCommunicationstolearnmoreabouthowthe Internet functions.

### OtherthingsyoucandoontheInternet

One of the best features of the Internet is the ability to communicate almost instantly with anyone in the world. **Email** is one of the oldest and most universal waystocommunicateandshareinformationontheInternet,andbillionsofpeople use it. **Social media** allows people to connect in a variety of ways and build communities online.

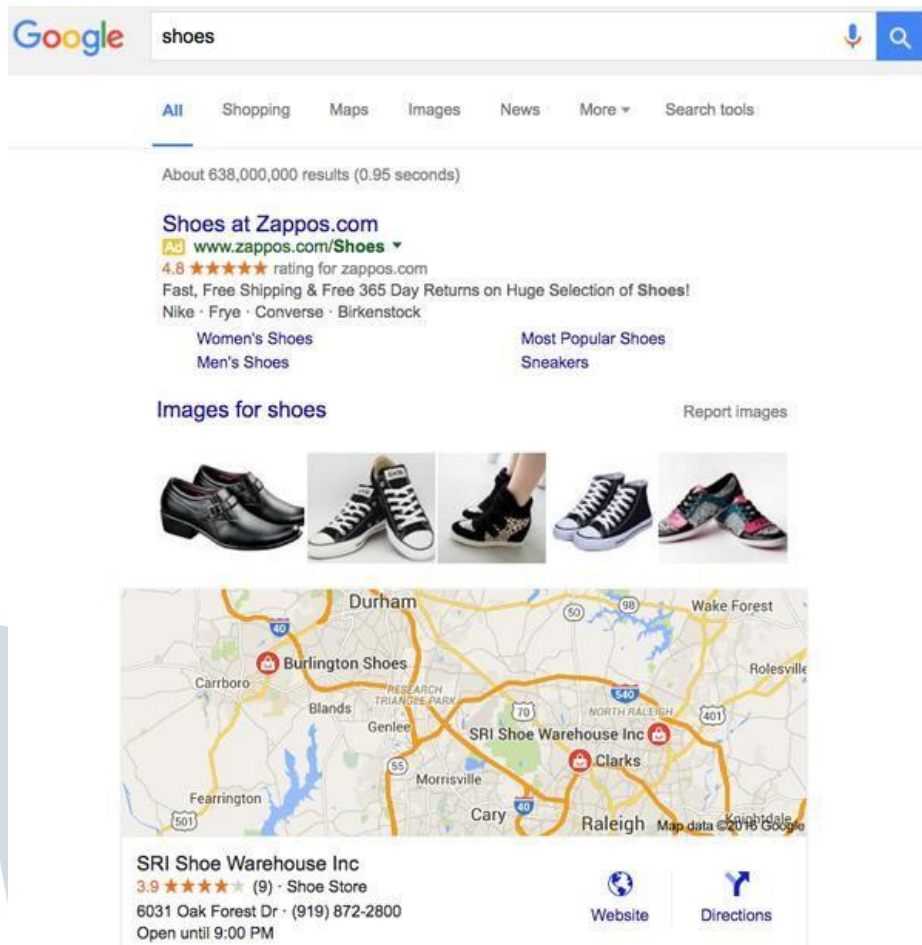


TherearemanyotherthingsyoucandoontheInternet.There arethousandsof ways to keep up with news or **shop for anything** online. You can pay your bills,**manageyourbankaccounts**,meetnewpeople,**watchTV**,orlearnnewskills. You can learn or do almost anything online.

### Findinginformationonline

With billions of websites online today, there is **a lot** of information on the Internet.**Searchengines**makethisinformationeasiertofind.Allyouhavetodois typeoneormore**keywords**,andthe searchenginewilllookfor**relevant websites**.

For example, let's say you're looking for a new pair of shoes. You could use a searchenginetolearnaboutdifferenttypesofshoes,getdirectionsto anearby shoe store, or even find out where to buy them online!



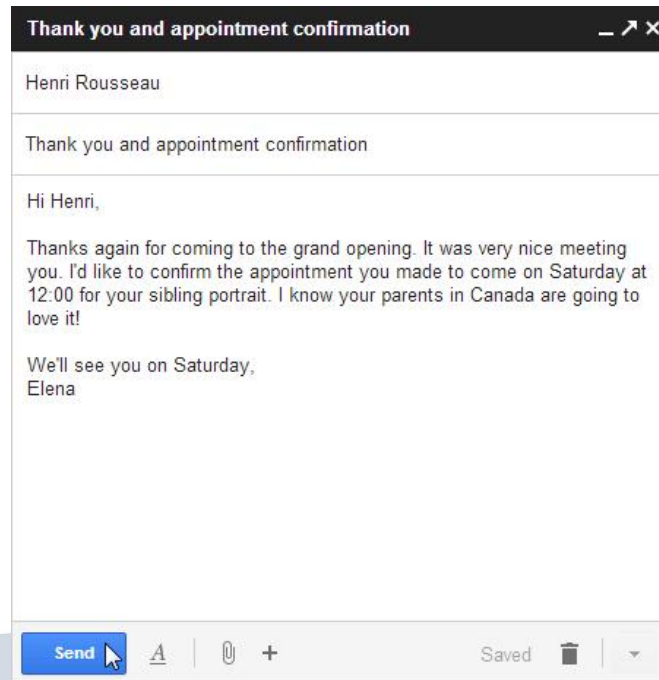
There are many different search engines you can use, but some of the most popular include **Google**, **Yahoo!**, and **Bing**.

## Email

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Short for electronic mail, **email** is a way to **send and receive messages** across the Internet. Almost everyone who uses the Internet has their own email account, usually called an **email address**. This is because you'll need an email address to do just about anything online, from online banking to creating a Facebook account.





## Social networking

**Social networking websites** are another way to **connect and share** with your family and friends online. Rather than sharing with just a few people over email, social networks make it easier to **connect and share** with many people at the same time. **Facebook** is the world's largest social networking site, with **more than 1 billion users** worldwide.

## Chat and instant messaging

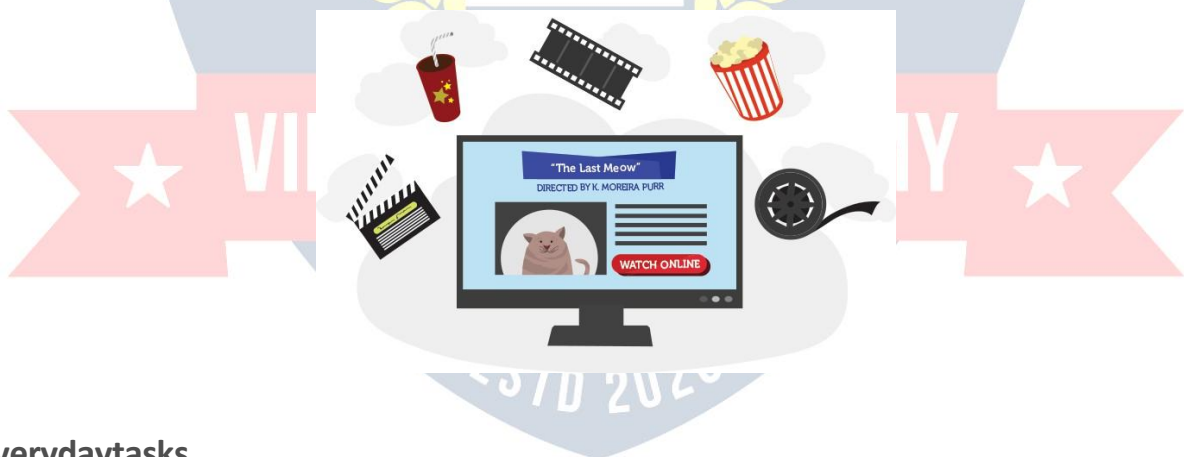
**Chat and instant messaging (IM)** are short messages sent and read **in real time**, allowing you to converse more quickly and easily than email. These are generally used when both (or all) people are online, so your message can be read immediately. By comparison, **emails** won't be seen until recipients check their inboxes.



Examples of instant messaging applications include **Yahoo Messenger** and **Google Hangouts**. Some sites, like **Gmail** and **Facebook**, even allow you to chat within your web browser.

### Online media

There are many sites that allow you to **watch videos** and **listen to music**. For example, you can watch millions of videos on **YouTube** or listen to Internet radio on **Pandora**. Other services, like **Netflix** and **Hulu**, allow you to watch movies and TV shows. And if you have a **set-top streaming box**, you can even watch them directly on your television instead of a computer screen.



### Everyday tasks

You can also use the Internet to complete many **everyday tasks** and **errands**. For example, you can manage your bank account, pay your bills, and shop for just about anything. The main advantage here is **convenience**. Rather than going from place to place, you can do all of these tasks at home!



## And a whole lot more!

Remember, these are just a few of the things you'll be able to do online. Keep working through this tutorial to learn more about connecting to the Internet and using the Web!

## How do I connect to the Internet?

Once you've set up your computer, you may want to purchase **home Internet access** so you can send and receive email, browse the Web, stream videos, and more. You may even want to set up a **home wireless network**, commonly known as **Wi-Fi**, so you can connect multiple devices to the Internet at the same time.

Watch the video below to learn about connecting to the Internet.

## Types of Internet service

WWW.VIDYAPITH.IN

The type of Internet service you choose will largely depend on which **Internet service providers** (ISPs) serve your area, along with the types of service they offer. Here are some common types of Internet service.

- **Dial-up:** This is generally the slowest type of Internet connection, and you should probably avoid it unless it is the only service available in your area. Dial-up Internet uses your **phone line**, so unless you have multiple phone lines you will not be able to use your landline and the Internet at the same time.

- **DSL:** DSL service uses a **broadband connection**, which makes it much faster than dial-up. DSL connects to the Internet **via a phone line** but does not require you to have a landline at home. And unlike dial-up, you'll be able to use the Internet and your phone line at the same time.
- **Cable:** Cable service connects to the Internet **via cable TV**, although you do not necessarily need to have cable TV in order to get it. It uses a broadband connection and can be faster than both dial-up and DSL service; however, it is only available where cable TV is available.
- **Satellite:** A satellite connection uses broadband but does not require cable or phone lines; it connects to the Internet **through satellites orbiting the Earth**. As a result, it can be used almost anywhere in the world, but the connection may be affected by weather patterns. Satellite connections are also usually slower than DSL or cable.
- **3G and 4G:** 3G and 4G service is most commonly used with mobile phones, and it connects **wirelessly** through your ISP's network. However, these types of connections aren't always as fast as DSL or cable. They will also **limit the amount of data** you can use each month, which isn't the case with most broadband plans.

### Choosing an Internet service provider

Now that you know about the different types of Internet service, you can do some research to find out what ISPs are available in your area. If you're having trouble getting started, we recommend talking to friends, family members, and neighbours about the ISPs they use. This will usually give you a good idea of the types of Internet service available in your area.

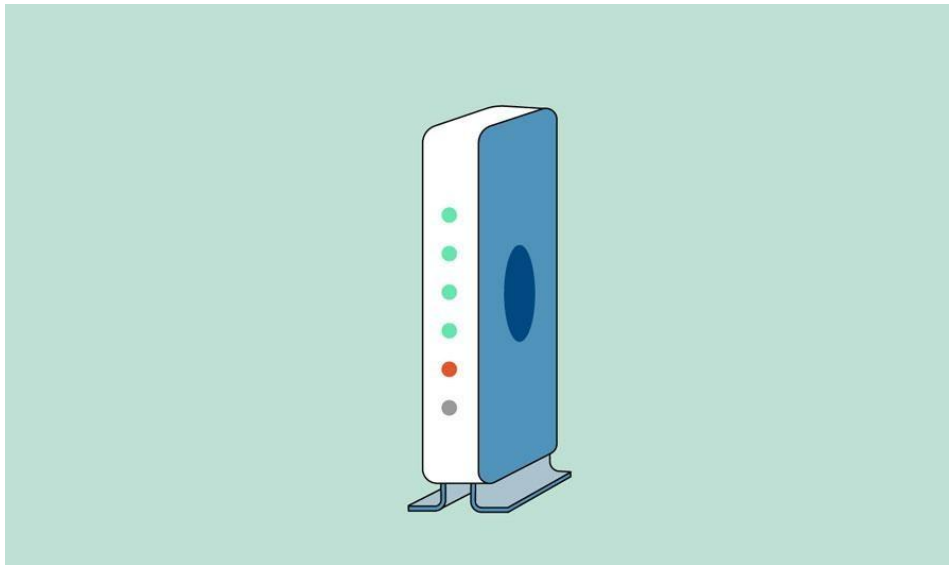
Most ISPs offer several tiers of service with different Internet speeds, usually measured in **Mbps** (short for **megabits per second**). If you mainly want to use the Internet for **email** and **social networking**, a slower connection (around 2 to 5 Mbps) might be all you need. However, if you want to **download music or stream videos**, you'll want a faster connection (at least 5 Mbps or higher).

You'll also want to **consider the cost** of the service, including installation charges and monthly fees. Generally speaking, the faster the connection, the more expensive it will be per month.

Although **dial-up** has traditionally been the **least expensive** option, many ISPs have raised dial-up prices to be the **same as broadband**. This is intended to encourage people to switch to broadband. We do not recommend dial-up Internet unless it's your only option.

## Hardware needed

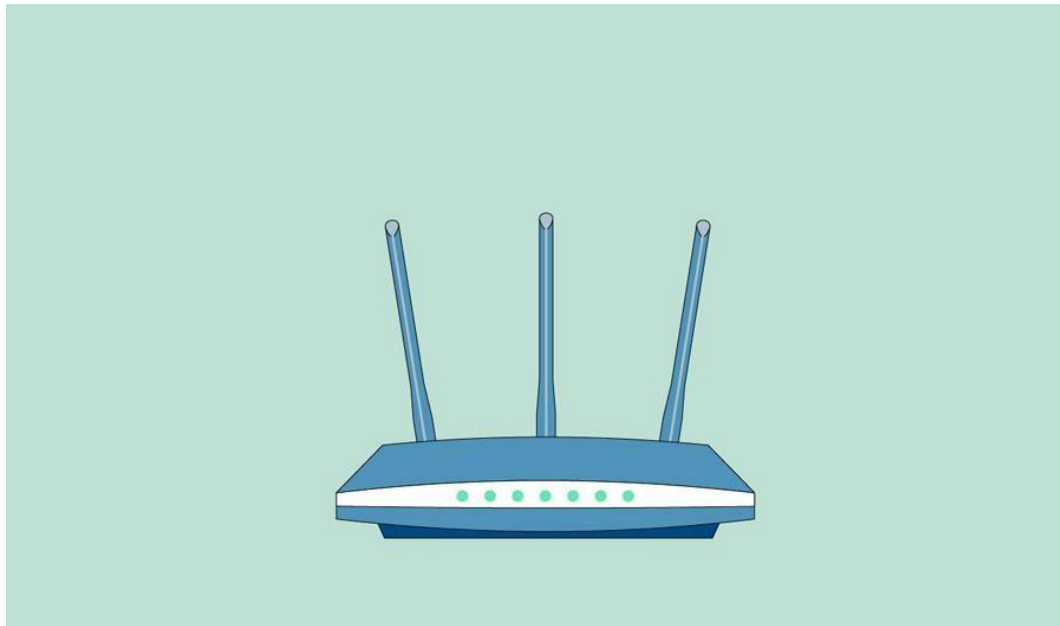
### Modem



Once you have your computer, you really don't need much additional hardware to connect to the Internet. The primary piece of hardware you need is a **modem**.

The type of Internet access you choose will determine the type of modem you need. **Dial-up** access uses a **telephone modem**, **DSL** service uses a **DSL modem**, **cable** access uses a **cable modem**, and **satellite** service uses a **satellite adapter**. Your ISP may give you a modem—often for a fee—when you sign a contract, which helps ensure that you have the **right type** of modem. However, if you would prefer to shop for a **better or less expensive** modem, you can choose to buy one separately.

### Router

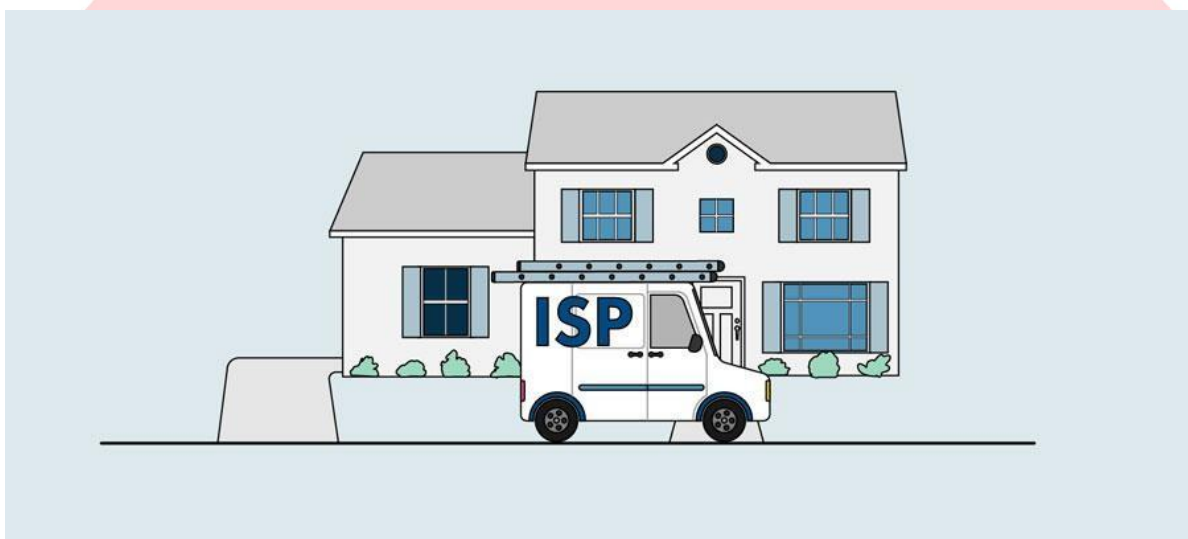


A **router** is a hardware device that allows you to connect **several computers** and **other devices** to a single Internet connection, which is known as a **home network**. Many routers are **wireless**, which allows you to create a **home wireless network**, commonly known as a **Wi-Fi network**.

You **don't necessarily need to buy a router** to connect to the Internet. It's possible to connect your computer directly to your modem using an Ethernet cable. Also, many modems include a **built-in router**, so you have the option of creating a Wi-Fi network without buying extra hardware.

Setting up your Internet connection

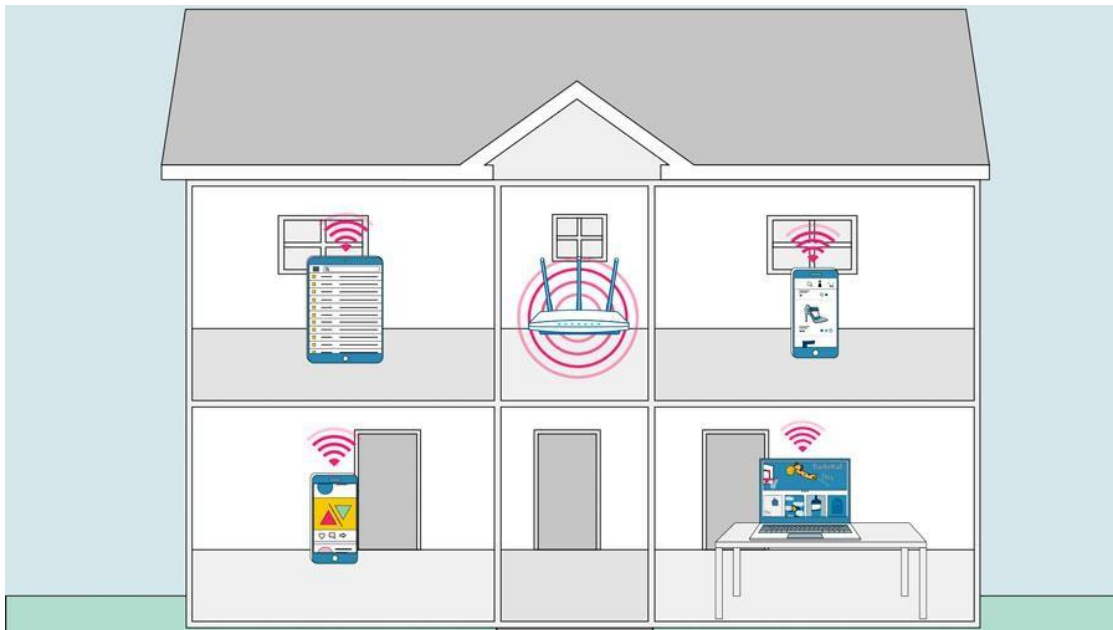
VIDYAPITH ACADEMY



Once you've chosen an ISP, most providers will **send a technician to your house** to turn on the connection. If not, you should be able to use the instructions provided by your ISP—or included with the modem—to set up your Internet connection.

After you have everything set up, you can open your **web browser** and begin using the Internet. If you have any problems with your Internet connection, you can call your ISP's **technical support** number.

## Home networking



If you have multiple computers at home and want to use all of them to access the Internet, you may want to create a **home network**, also known as a **Wi-Fi network**. In a home network, all of your devices connect to your **router**, which is connected to the **modem**. This means everyone in your family can use the Internet **at the same time**.

Your ISP technician may be able to set up a home Wi-Fi network when installing your Internet service. If not, you can review our lesson on **How to Set Up a Wi-Fi Network** to learn more.

If you want to connect a computer that does not have built-in Wi-Fi connectivity, you can purchase a **Wi-Fi adapter** that plugs into your computer's USB port.

## What is the cloud?

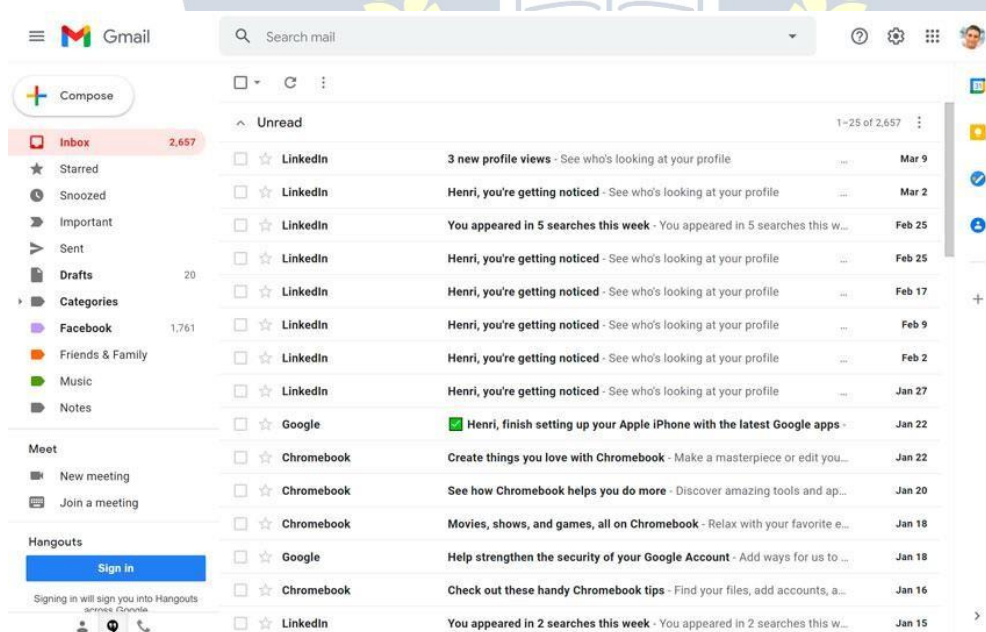
You may have heard people using terms like **the cloud**, **cloud computing**, or **cloud storage**. But what exactly is the cloud?

Simply put, the cloud is **the Internet**—more specifically, it's all of the things you can **access remotely** over the Internet. When something is **in the cloud**, it means it's stored on **Internet servers** instead of your computer's hard drive.

Watch the video below to learn more about the cloud.

## Why use the cloud?

Some of the main reasons to use the cloud are **convenience** and **reliability**. For example, if you've ever used a **web-based email service**, such as **Gmail** or **Yahoo! Mail**, you've already used the cloud. All of the emails in a web-based service are stored on servers rather than on your computer's hard drive. This means you can access your email from any computer with an Internet connection. It also means you'll be able to recover your emails if something happens to your computer.

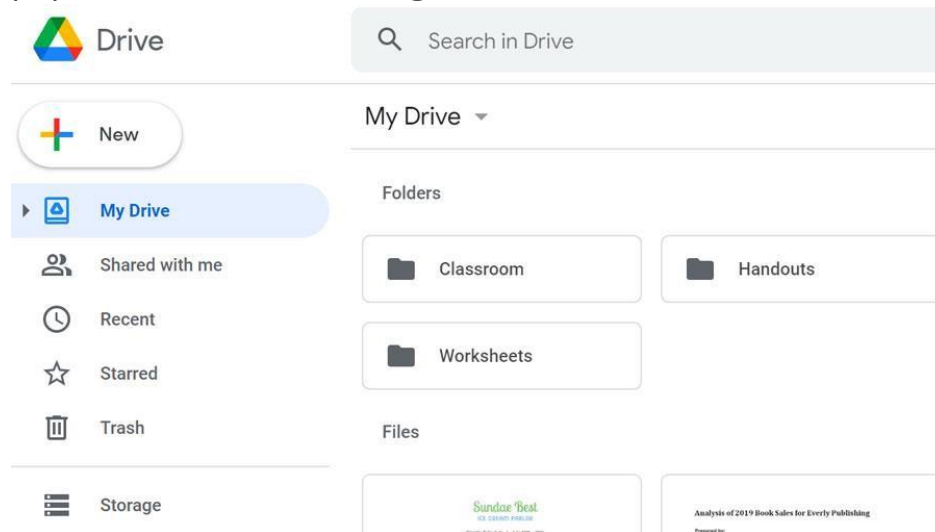


Let's look at some of the most common reasons to use the cloud.

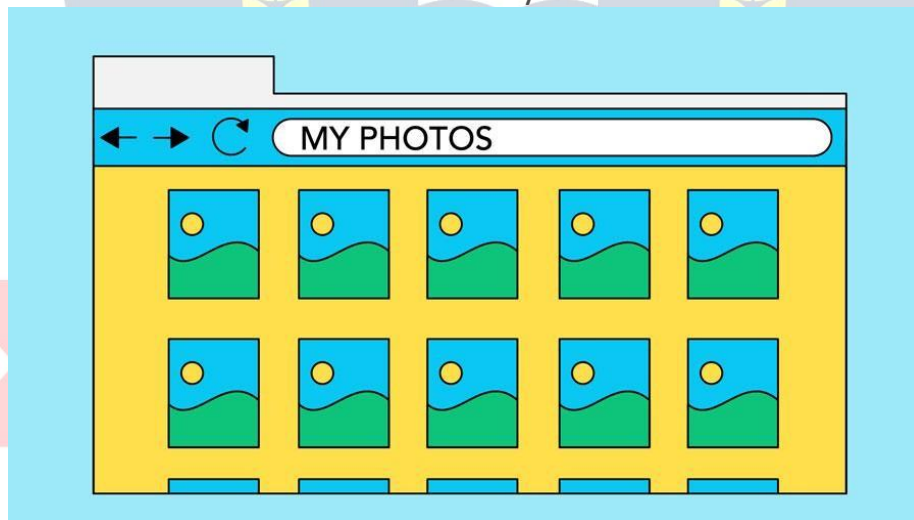
- **File storage:** You can store all types of information in the cloud, including files and email. This means you can access these things from **any computer** or **mobile device** with an Internet connection, not



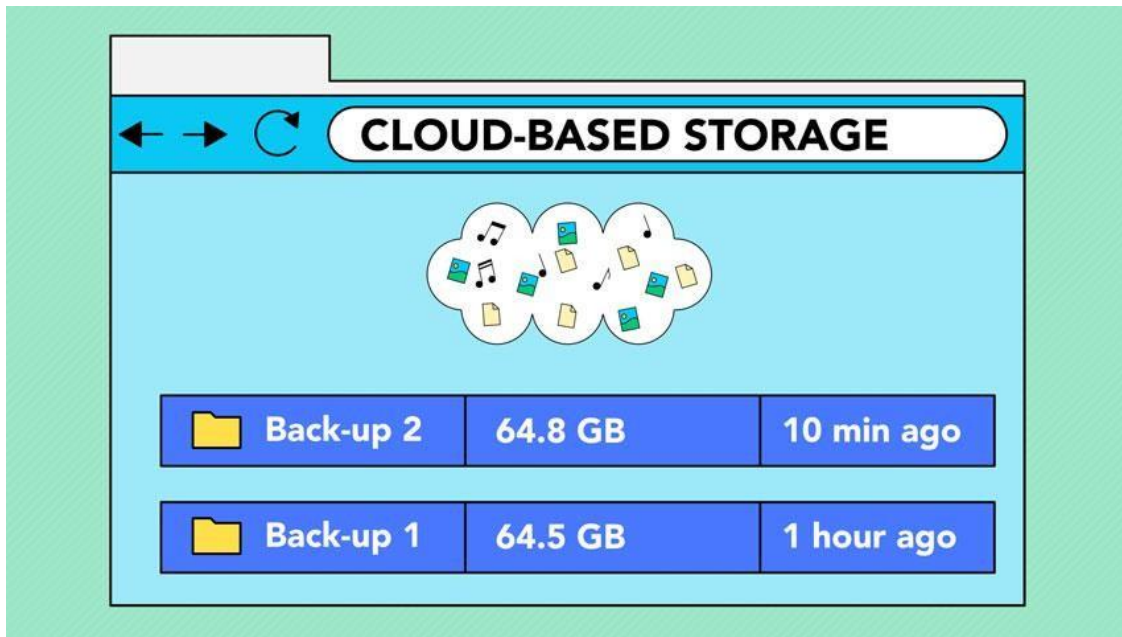
just your home computer. **Dropbox** and **Google Drive** are some of the most popular cloud-based storage services.



- **File sharing:** The cloud makes it easy to **share files** with several people at the same time. For example, you could upload several photos to a cloud-based photo service like **Flickr** or **iCloud Photos**, then quickly share them with friends and family.



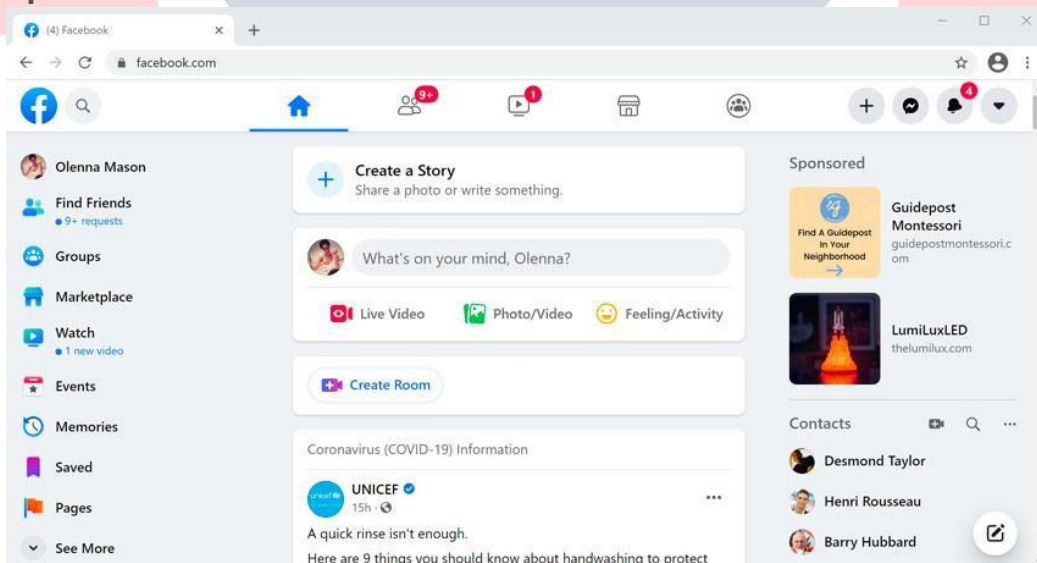
- **Backing up data:** You can also use the cloud to protect your files. There are apps such as **Carbonite** that **automatically back up your data** to the cloud. This way, if your computer ever is lost, stolen, or damaged, you'll still be able to recover these files from the cloud.



## Whatisawebapp?

Previously, we talked about how **desktop applications** allow you to perform tasks on your computer. But there are also **web applications**—or **web apps**—that run **in the cloud** and do not need to be installed on your computer. Many of the most popular sites on the Internet are actually web apps. You may have even used a web app without realizing it! Let's take a look at some popular web apps.

- **Facebook:** Facebook lets you create an online **profile** and interact with your **friends**. Profiles and conversations can be updated at any time, so Facebook uses web app technologies to **keep the information up to date**.



- **Pixlr:** Pixlr is an **image editing application** that runs in your web browser. Much like **Adobe Photoshop**, it includes many advanced features, like color correction and sharpening tools.



- **GoogleDocs:** GoogleDocs is an **officesuite** that runs in your browser. Much like **Microsoft Office**, you can use it to create **documents, spreadsheets, presentations**, and more. And because the files are stored **in the cloud**, it's easy to **share** them with others.



## Using a web browser

A **web browser** is a type of software that allows you to find and view websites on the Internet. Even if you didn't know it, you're using a web browser right now to read this page! There are many different web browsers, but some of the most

common ones include **Google Chrome, Internet Explorer, Safari, Microsoft Edge**, and **Mozilla Firefox**.

No matter which web browser you use, you'll want to learn the basics of browsing the Web. In this lesson, we'll talk about **navigating** to different websites, **using tabbed browsing**, creating **bookmarks**, and more.

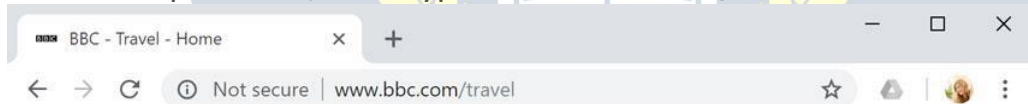
Watch the video below to learn the basics of using a web browser.

We'll be using the **Google Chrome web browser** throughout this lesson, but you can use any browser you want. Keep in mind that your browser may look and act a bit differently, but all web browsers work in basically the same way.

### URLs and the address bar

Each website has a unique address, called a **URL** (short for **Uniform Resource Locator**). It's like a street address that tells your browser where to go on the Internet. When you type a URL into the browser's **address bar** and press **Enter** on your keyboard, the browser will load the page associated with that URL.

In the example below, we've typed **www.bbc.com/travel** into the address bar.

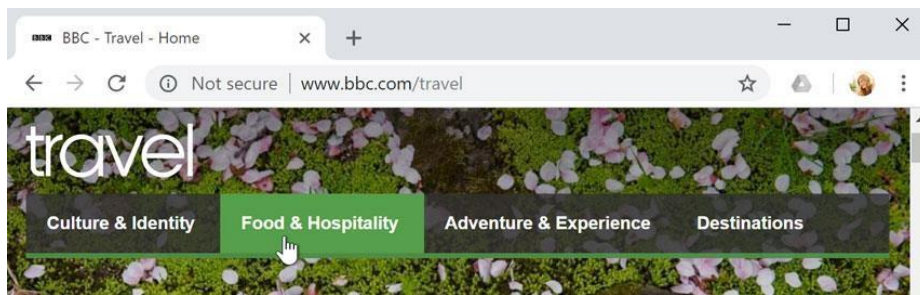


### Links

Whenever you see a word or phrase on a website that's **blue or underlined in blue**, it's probably a **hyperlink**, or **link** for short. You might already know how links work, even if you've never thought about them much before. For example, try clicking the link below.

### Hey, I'm a link! Click me!

Links are used to **navigate the Web**. When you click a link, it will usually take you to a different webpage. You may also notice that your cursor changes into a **hand icon** whenever you hover over a link.



If you see this icon, it means you've found a link. You'll find other types of links this way too. For example, many websites actually use **images** as links, so you can just **click the image** to navigate to another page.

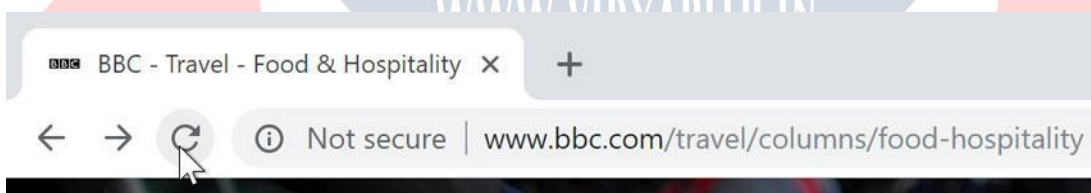
Review our lesson on **Understanding Hyperlinks** to learn more.

### Navigation buttons

The **Back** and **Forward** buttons allow you to move through websites you've recently viewed. You can also click and hold either button to see your recent history.



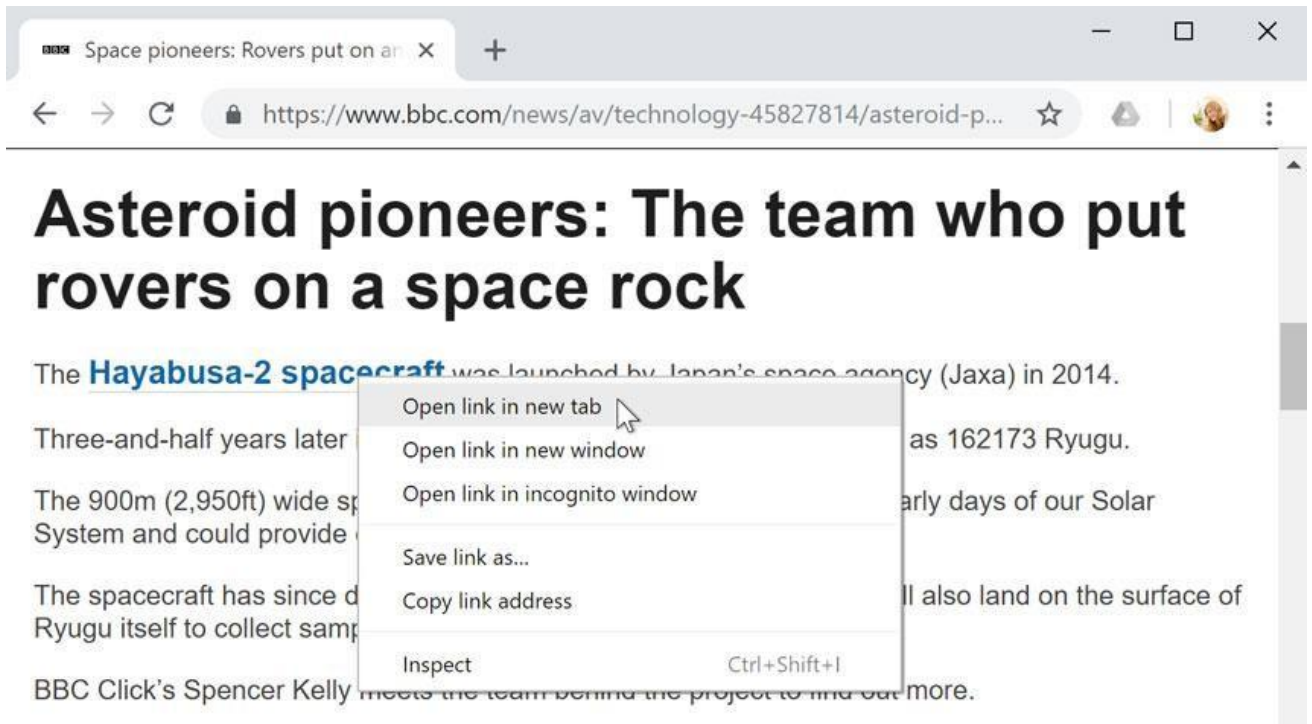
The **Refresh** button will **reload** the current page. If a website stops working, try using the Refresh button.



### Tabbed browsing

Many browsers allow you to open links in a new **tab**. You can open as many links as you want, and they'll stay in the **same browser window** instead of cluttering your screen with multiple windows.

To open a link in a new tab, **right-click** the link and select **Open link in new tab** (the exact wording may vary from browser to browser).



To close a tab, click the X.

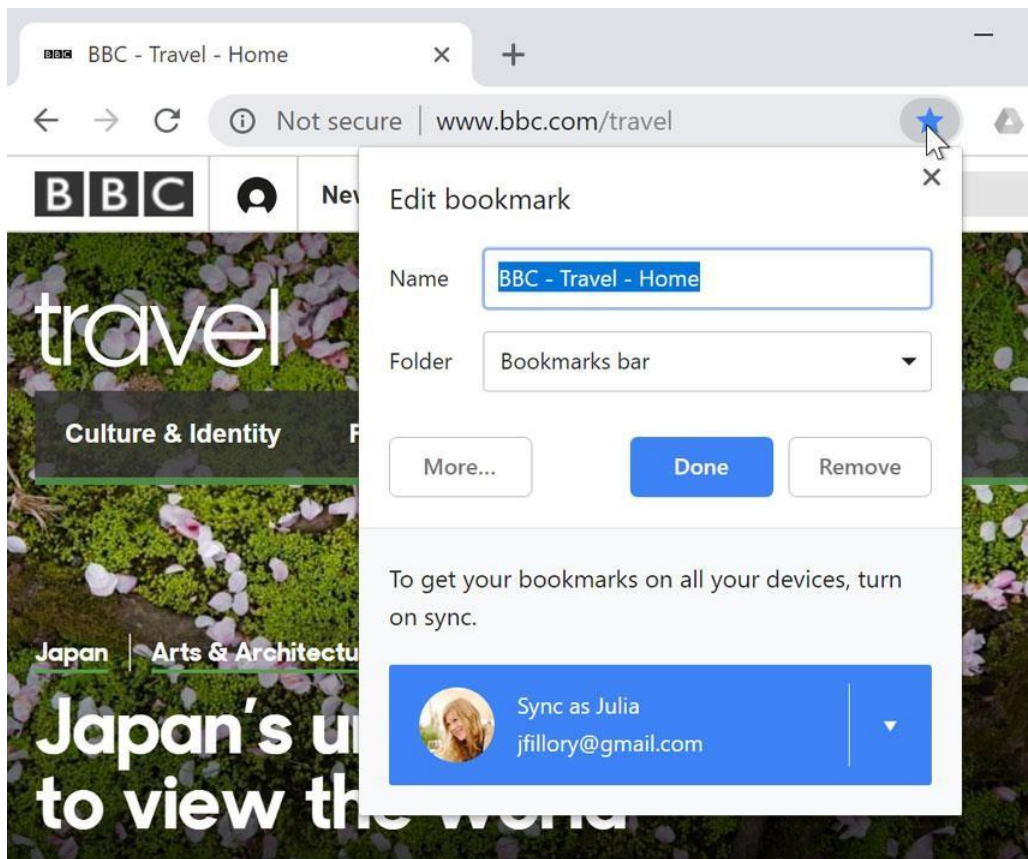


To create a new blank tab, click the button to the right of any open tabs.

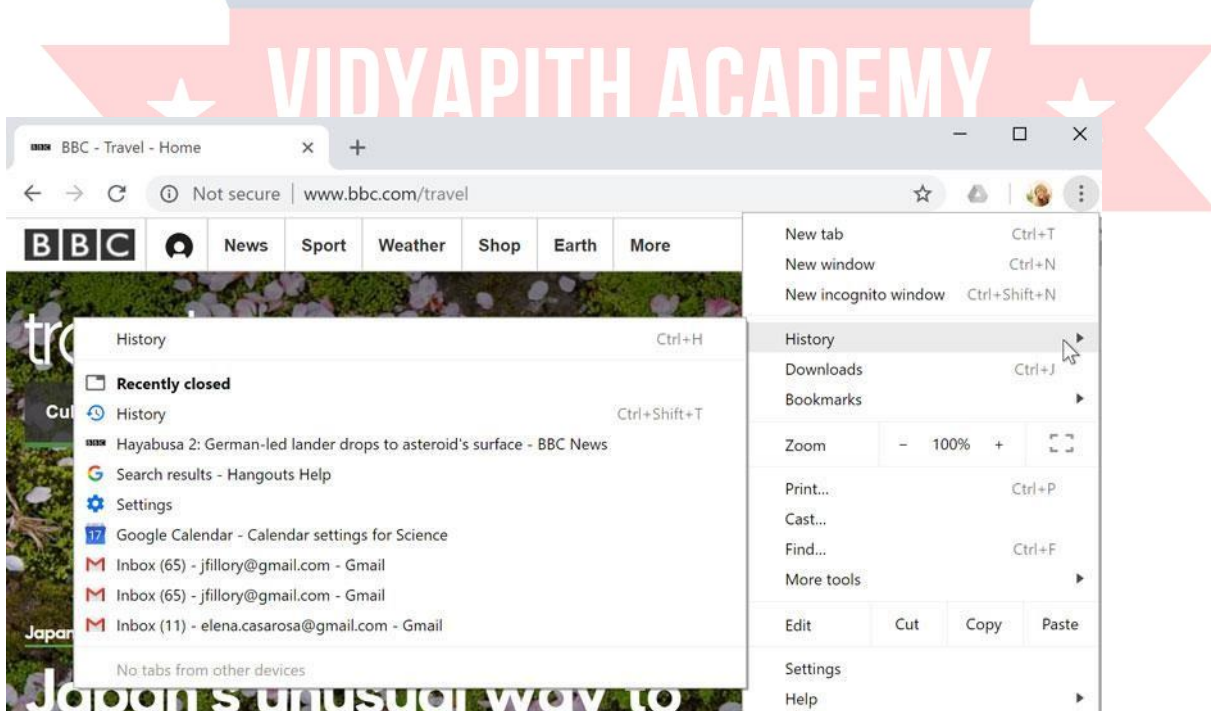


## Bookmarks and history

If you find a website you want to view later, it can be hard to memorize the exact web address. **Bookmarks**, also known as **favorites**, are a great way to save and organize specific websites so you can revisit them again and again. Simply locate and select the **Star** icon to bookmark the current website.



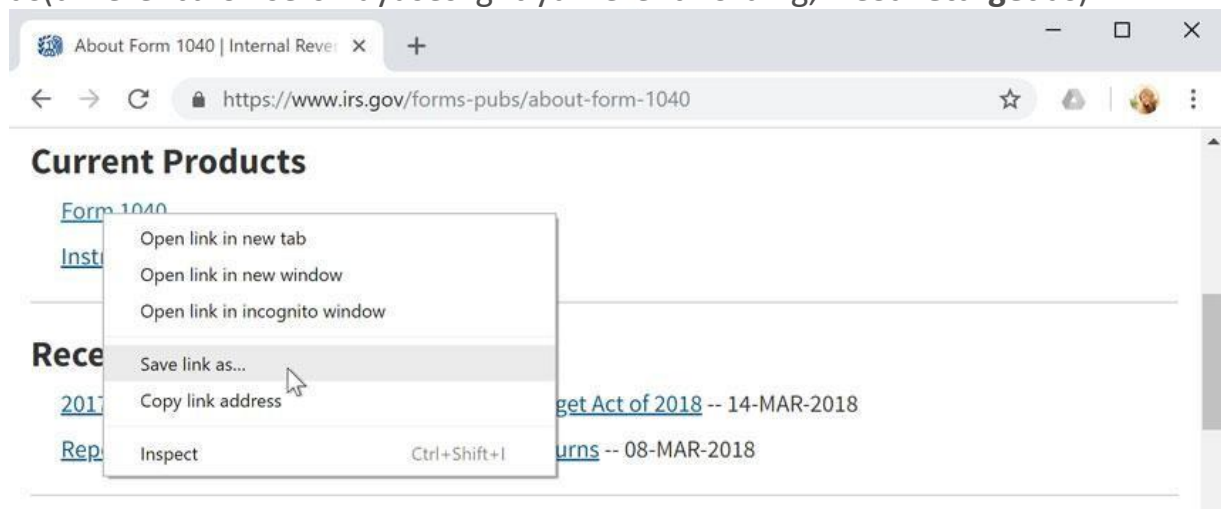
Your browser will also keep a history of every site you visit. This is another good way to find a site you visited previously. To view your history, open your browser settings—usually by clicking the icon in the upper-right corner—and select **History**.



## Downloading files

Links don't always go to another website. In some cases, they point to a **file** that can be **downloaded**, or saved, to your computer.

If you click a link to a file, it may download automatically, but sometimes it just **opens within your browser** instead of downloading. To prevent it from opening in the browser, you can **right-click** the link and select **Save link as** (different browsers may use slightly different wording, like **Save target as**).



Review our lesson on **Downloading and Uploading** to learn more.

## Saving images

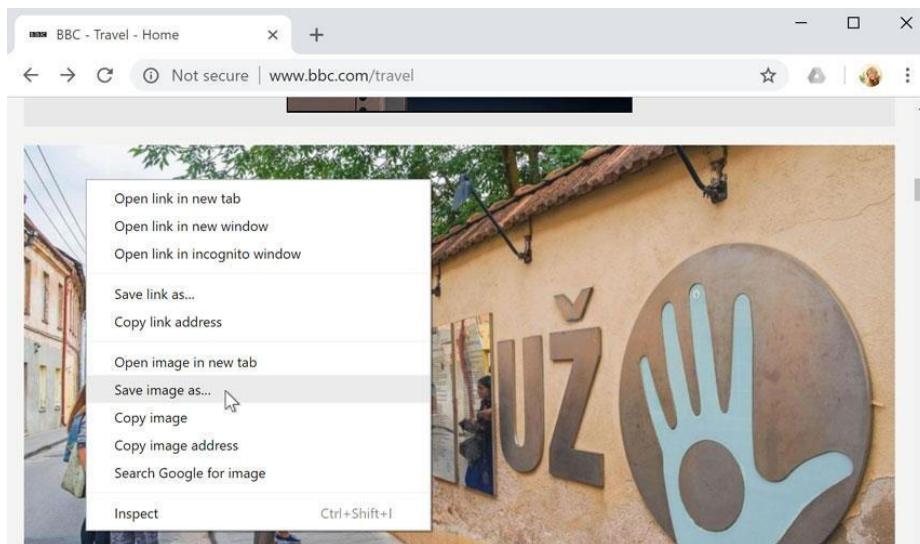
Sometimes you may want to save an image from a website to your computer. To do this, right-click the image and select **Save image as** (or **Save picture as**).

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## Plug-ins

**Plug-ins** are small applications that allow you to view certain types of content within your web browser. For example, **Adobe Flash** and **Microsoft Silverlight** are sometimes used to play videos, while **Adobe Reader** is used to view PDF files.

If you don't have the correct plug-in for a website, your browser will usually provide a link to download it. There may also be times when you need to **update** your plug-ins. Review our lesson on **Installing and Updating Plug-ins** to learn more.



## Understanding hyperlinks

Have you ever noticed that certain words on the Web look a little bit different? Whenever you see a word or phrase that's **underlined in blue**, it's probably a **hyperlink**, or **link** for short. You might already know how links work, even if

you've never thought about them much before. For example, try clicking the link below.

**Hey, I'm a link! Click me!**

Links are used to **navigate the Web**. When you click a link, it will take you to a different webpage. In the example below, we're clicking a link to learn more about the Cape Hatteras National Seashore.

## Outer Banks

From Wikipedia, the free encyclopedia

*For the 2020 TV series, see [Outer Banks \(TV series\)](#).*

The **Outer Banks** (frequently abbreviated **OBX**) are a 200-mile (320 km) string of barrier islands and spits off the coast of [North Carolina](#) and southeastern [Virginia](#), on the east coast of the [United States](#). They line most of the North Carolina coastline, separating Currituck Sound, [Albemarle Sound](#), and [Pamlico Sound](#) from the [Atlantic Ocean](#). A major tourist destination, the Outer Banks are known for their wide expanse of open beachfront and the [Cape Hatteras National Seashore](#).<sup>[1]</sup> The seashore and surrounding ecosystem are important biodiversity zones, including

The Outer Banks were sites of early cultural sites. Most notably the English first location where an English person shipwrecks along the Outer Banks is The Graveyard of the Atlantic Museum Hatteras ferry. The Wright brothers' the Outer Banks on December 17, 1903. [Brothers National Monument](#) comm aviation airfield located there.

The Outer Banks are on the front line

**Cape Hatteras National Seashore** is a United States national seashore which preserves the portion of the Outer Banks of North Carolina from Bodie Island to Ocracoke Island, stretching over 70 miles (110 km), and is managed by the National Park Service. Included within



When you hover over a Wikipedia link, a preview of the linked site appears to give you more information. It is important to note that most web browsers show the link's URL in the bottom-left corner of the window.

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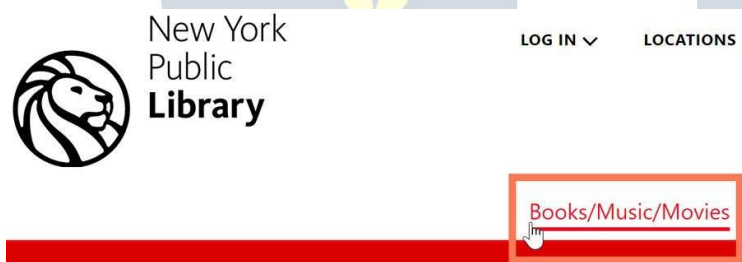
the North Carolina coastline, separating Currituck Sound, Albemarle Sound, and the Atlantic Ocean. A major tourist destination, the Outer Banks are known for the beachfront and the [Cape Hatteras National Seashore](#).<sup>[1]</sup> The seashore and surrounding areas are important biodiversity zones, including the [Cape Hatteras National Seashore](#).

The Outer Banks were sites of early settlement and cultural sites. Most notably the English first location where an English person was killed. Shipwrecks along the Outer Banks have been used to create the [Graveyard of the Atlantic Museum](#). The [Hatteras ferry](#). The [Wright brothers' first flight](#) on the Outer Banks on December 17, 1903. The [Brothers National Monument](#) commemorates the [aviation airfield](#) located there.

The Outer Banks are on the front line of [sea level rise](#) and [coastal erosion](#) caused by climate change, compounding existing [poor coastal management](#) and construction practices.<sup>[4]</sup> In some locations on the Outer Banks, the coastline has eroded by several inches from 2011 to 2015.<sup>[4]</sup> Some sections have significantly eroded already at 25% of its original width as of 2014.<sup>[5]</sup> Tropical storms like [Hurricane Irene](#) have caused significant infrastructure and property damage.<sup>[5]</sup>

[https://en.wikipedia.org/wiki/Cape\\_Hatteras\\_National\\_Seashore](https://en.wikipedia.org/wiki/Cape_Hatteras_National_Seashore)

You may also notice that your cursor changes into a **hand icon** whenever you hover over a link.



New York Public Library

LOG IN ▾ LOCATIONS

[Books/Music/Movies](#)

If you see this icon, it means you've found a link. You'll find other types of links this way too. For example, many websites actually use **images** as links, so you can just **click the image** to navigate to another page. In the example below, we're clicking the picture of a coffee mug to open a page with more information about it.

Etsy

joy coffee mug

Valentine's Day Jewelry & Accessories Clothing & Shoes Home & Living Wedding & Party

Price Any price

Shipping

All Filters



Choose Joy Rustic Campfire C...  
Ad by sweetwaterdecor  
★★★★★ (6,514)  
\$18.00 FREE shipping



Choose Joy Coffee Mug  
Ad by DesignsByLITA  
★★★★★ (412)  
\$9.99 FREE shipping



Pure Joy Mug  
Ad by GoodWithin  
★★★★★ (121)  
\$22.00

Links don't always go to another website. In some cases, they allow you to **download a file**. When you click a link like this, the file will be downloaded to your computer. In the example below, we're downloading an installation file for a new application.

Adobe Acrobat Reader

## The best PDF viewer just got better.

View, sign, collaborate on, and annotate PDFs with our free Adobe Acrobat Reader. And to create, protect, convert, and edit PDFs, try out Acrobat Pro.

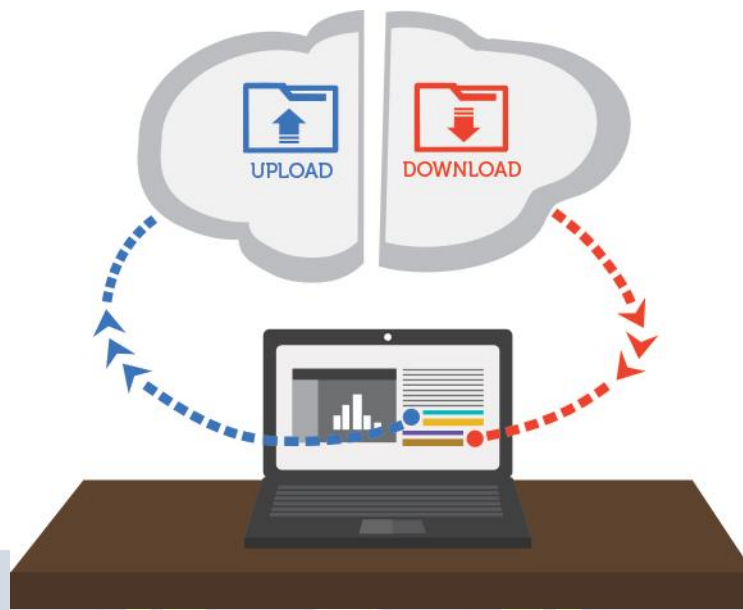
Download Reader

Try Acrobat Pro

Download Reader

As you can see, links are an important part of using the Web. They allow you to navigate between different webpages, download files, and do a whole lot more.

## Downloading and uploading



While exploring the Internet, you've probably encountered the terms **downloading** and **uploading**. **Downloading** means receiving data or a file from the Internet on your computer. **Uploading** means sending data or a file from your computer to somewhere on the Internet.

These terms describe activities you may have already learned how to do. If you've ever opened an example document in one of our tutorials, you've downloaded that file. If you've ever shared a photo you took on Facebook or another social media site, you've uploaded that photo.

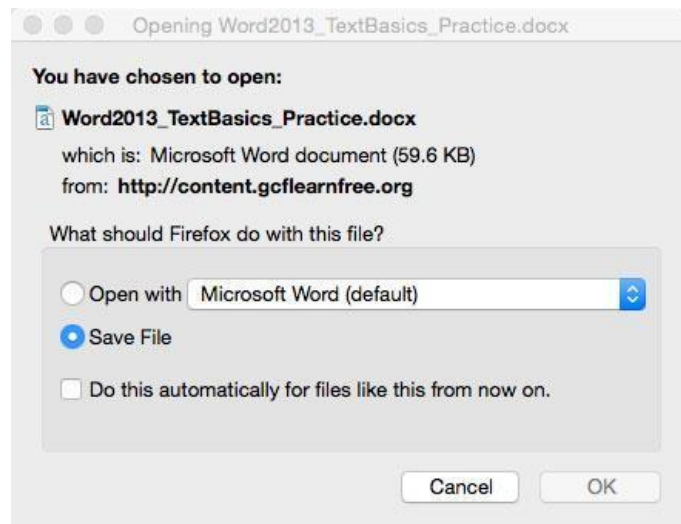
### Downloading

Usually, when you download a file you will start the download by clicking a link to that file. Many of our tutorials contain links to files, like this:

Download our **practice document**.

If you click the link, your browser should prompt you to select one of two methods for downloading the file.

- **Open with** will download the file and load it immediately in the specified program.
- **Save File** will download it and save it to your hard drive.



Either way, once you click OK, the download begins. Your browser will indicate the progress and time remaining on the download.



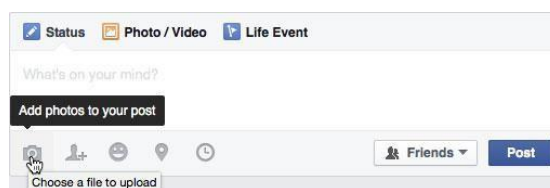
Once the download is complete, either the file will be saved to your computer or it will open in the program you selected. If you have trouble finding the file after you've downloaded it, check out our **Finding Your Downloads** lesson.

Some browsers don't always start this download process when you click the link to a file. In these cases, you can right-click the link, then click **Save Link As**, then select a location to download the file.

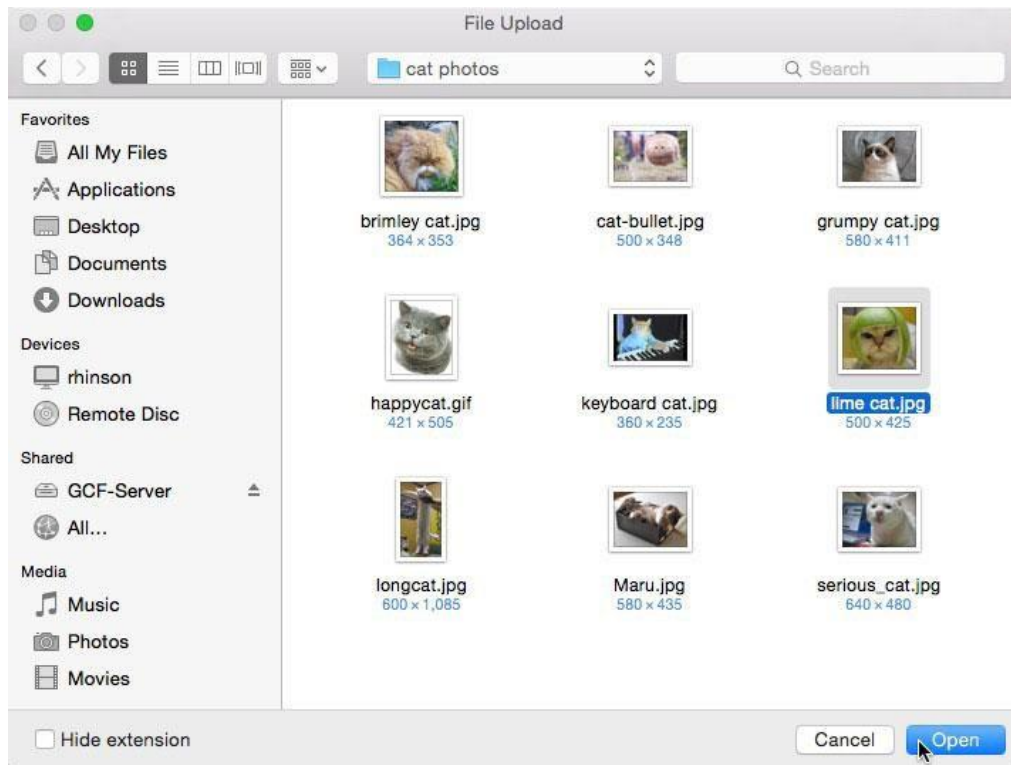
## Uploading

If a site allows uploads, it will have an upload utility to help perform the file transfer. Each site handles this process differently, but we'll give some common examples. Usually, the site will have help pages to walk you through the upload process.

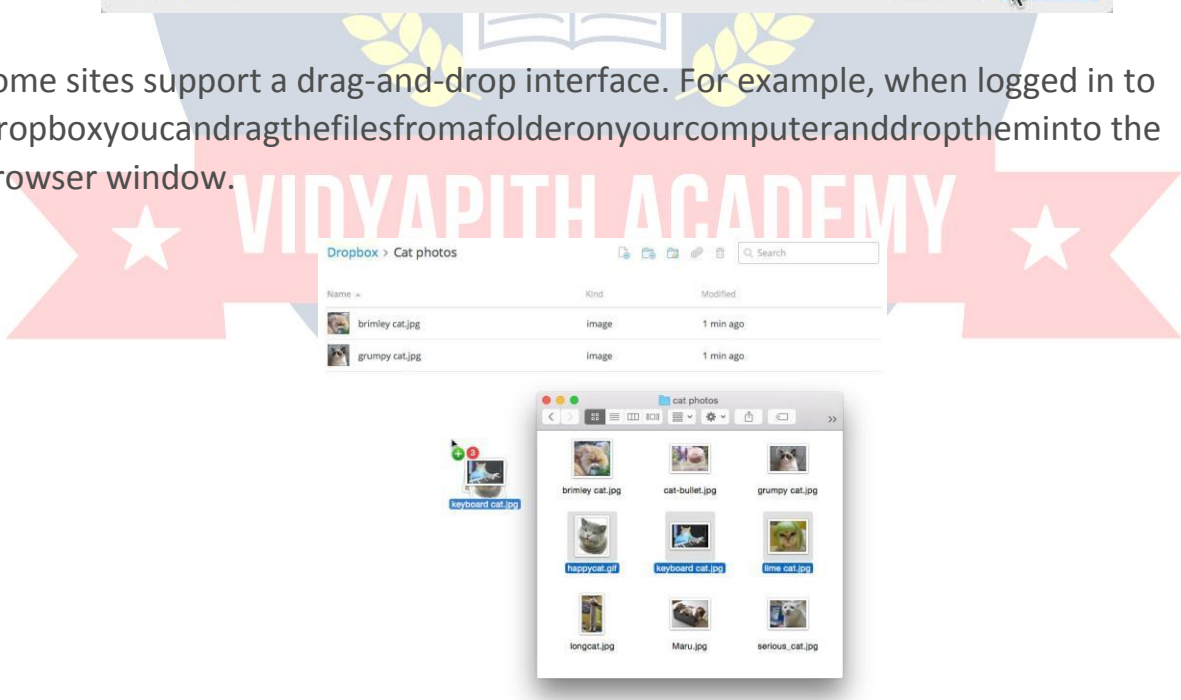
Many sites have an upload button that opens a dialog box. For example, Facebook has a camera icon that begins the upload process.



A dialog box will appear, prompting you to select a file. Browse to the location where your file is stored, select it, then click the Open button. Afterward, a progress bar tracking the upload process will appear on the page.



Some sites support a drag-and-drop interface. For example, when logged in to Dropbox you can drag the files from a folder on your computer and drop them into the browser window.



Many other upload utilities have similar features. A more detailed example of uploading a file is available in our **Google Drive tutorial**.

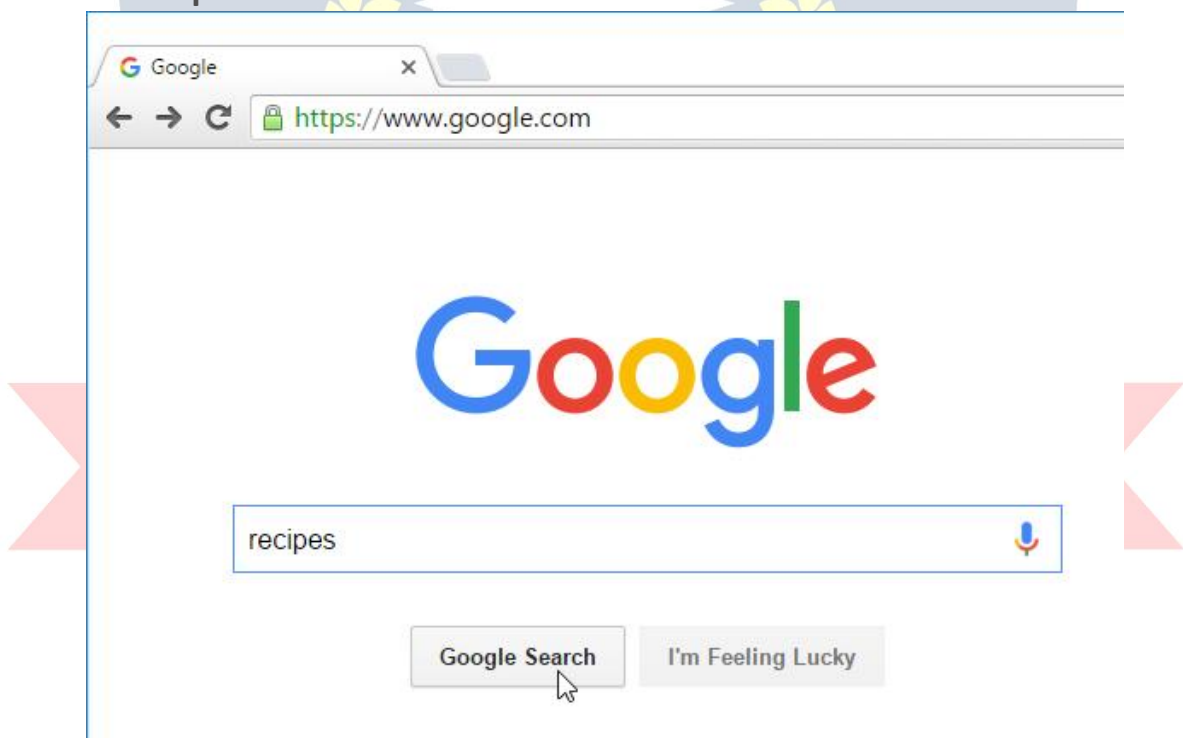
## Using search engines

With billions of websites online today, there is **a lot** of information on the Internet. **Search engines** make this information easier to find. Let's look at the basics of using a search engine, as well as some techniques you can use to get **better search results**.

Watch the video below to learn more about searching the Web.

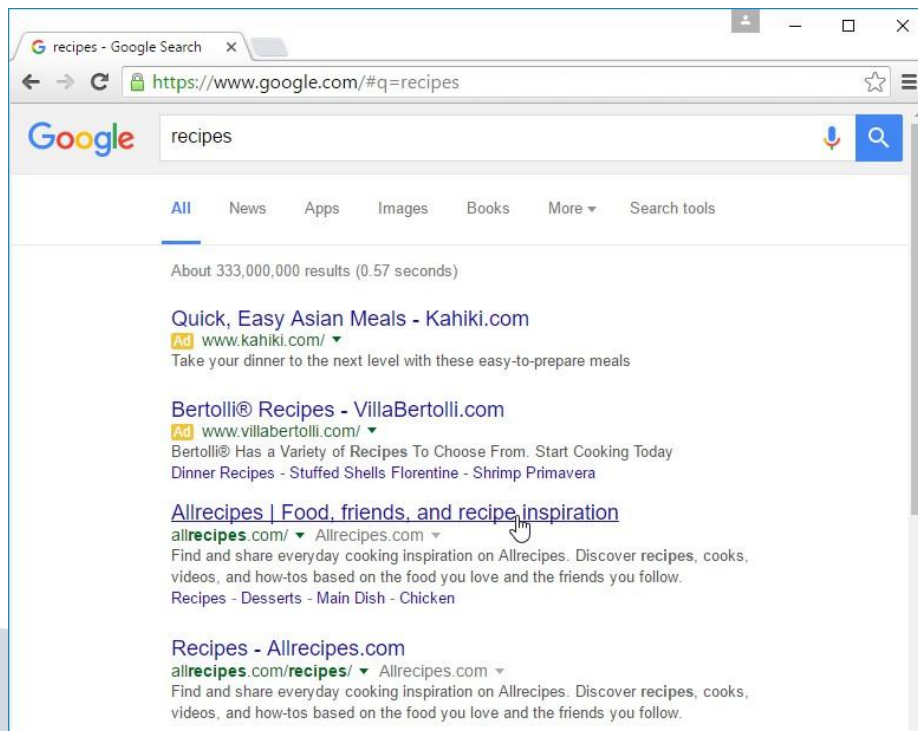
## How to search the Web

There are many different search engines you can use, but some of the most popular include **Google, Yahoo!, and Bing**. To perform a search, you'll need to navigate to a search engine in your web browser, type one or more **keywords**—also known as **search terms**—then press **Enter** on your keyboard. In this example, we'll search for **recipes**.

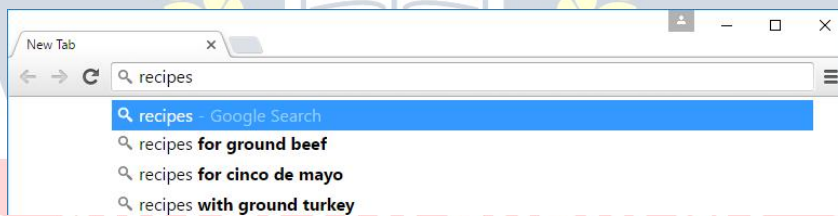


After you run a search, you'll see a list of **relevant websites** that match your search terms. These are commonly known as **search results**. If you see a site that looks interesting, you can click a link to open it. If the site doesn't have what you need, you can simply return to the results page to look for more options.





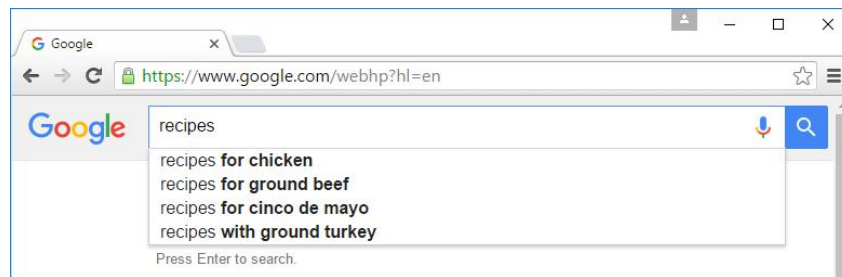
Most browsers also allow you to perform a web search directly from your **address bar**, although some have a separate **search bar** next to the address bar. Simply type your search terms and press **Enter** to run the search.



## Search suggestions

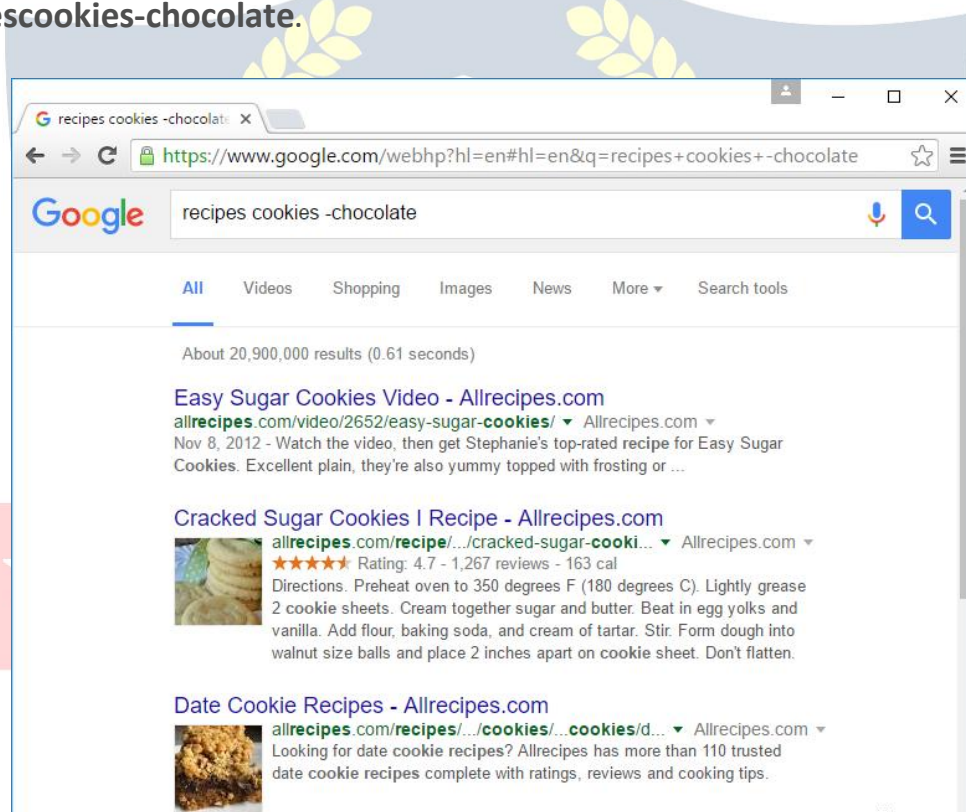
If you don't find what you're looking for on the first try, don't worry! Search engines are good at finding things online, but they're not perfect. You'll often need to **try different search terms** to find what you're looking for.

If you're having trouble thinking of new search terms, you can use **search suggestions** instead. These will usually appear as you're typing, and they're a great way to find new keywords you might not have tried otherwise. To use a search suggestion, you can click it with your mouse, or select it with the arrow keys on your keyboard.

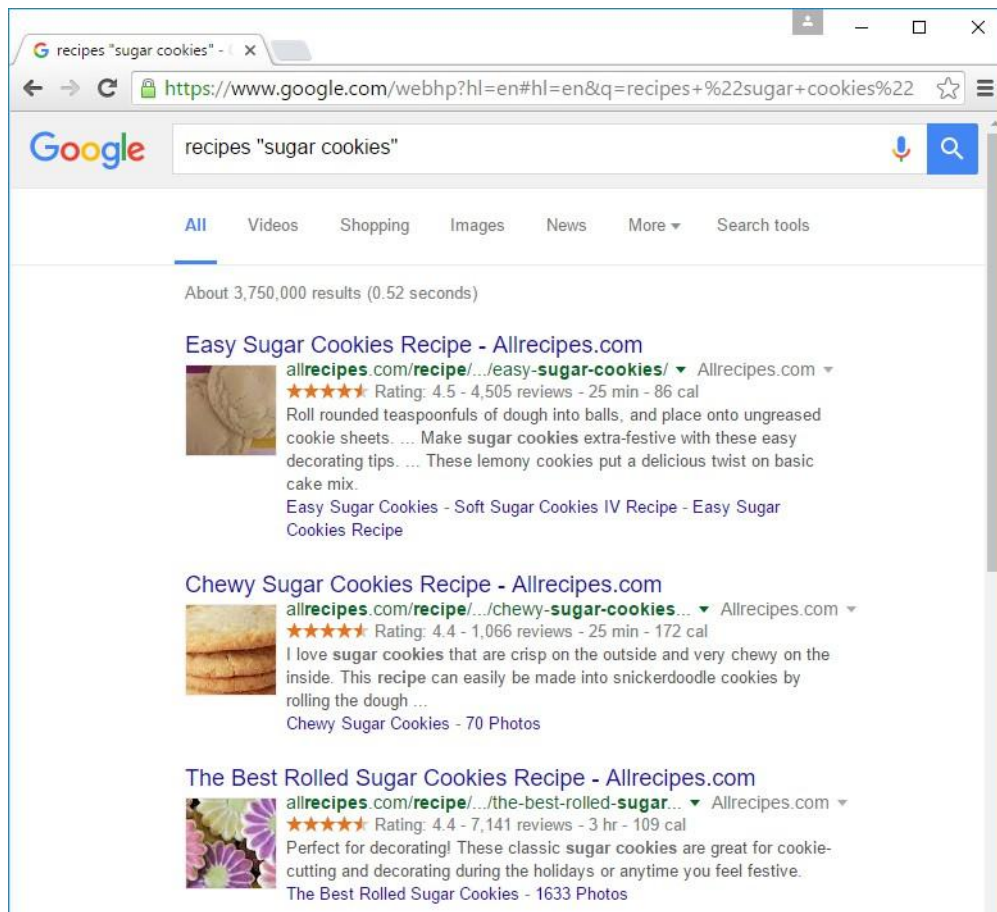


## Refining your search

If you're still having trouble finding exactly what you need, you can use some special characters to help refine your search. For example, if you want to **exclude a word** from a search, you can type a **hyphen (-)** at the beginning of a word. So if you wanted to find cookie recipes that don't include chocolate, you could search for **recipes cookies-chocolate**.



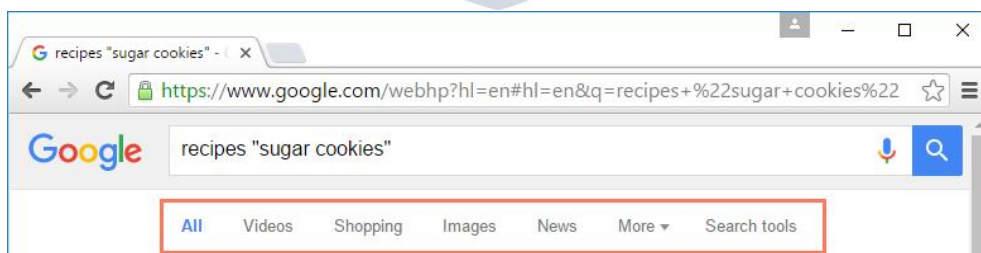
You can also search for **exact words or phrases** to narrow down your results even more. All you need to do is place **quotation marks ("")** around the desired search terms. For example, if you search for **recipes "sugar cookies"**, your search results will only include recipes for sugar cookies, instead of any cookies that happen to use sugar as an ingredient.



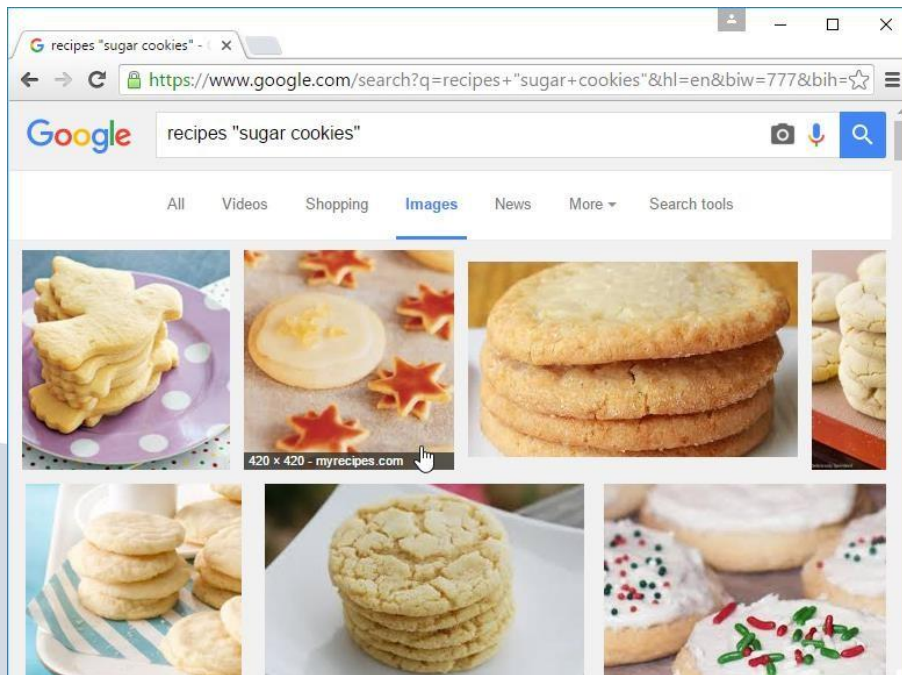
These techniques may come in handy in certain cases, but you probably won't need to use them with most searches. Search engines can usually figure out what you're looking for without these extra characters. We recommend trying a few different **search suggestions** before using this method.

### Content-specific searches

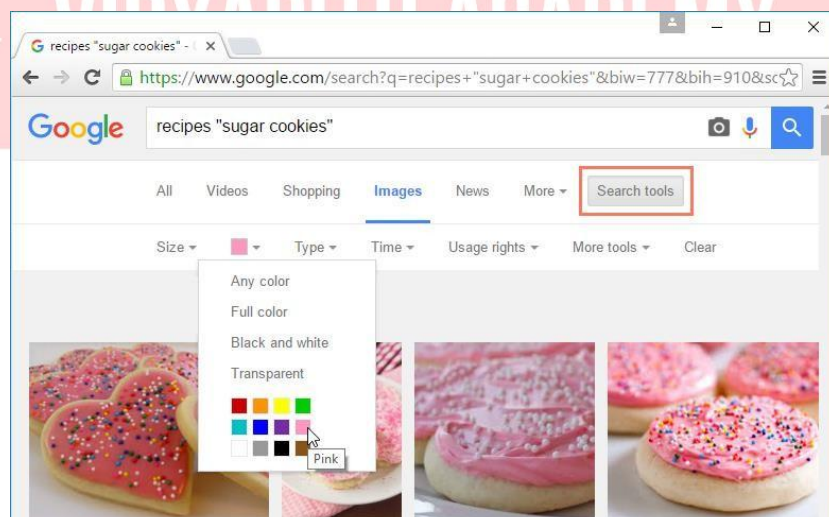
There may be times when you're looking for something more specific, like a **news article**, **picture**, or **video**. Most search engines have **links** at the top of the page that allow you to perform these unique searches.



In the example below, we've used the same search term to look for **images** instead of websites. If you see an image you like, you can click to visit the website it originally came from.

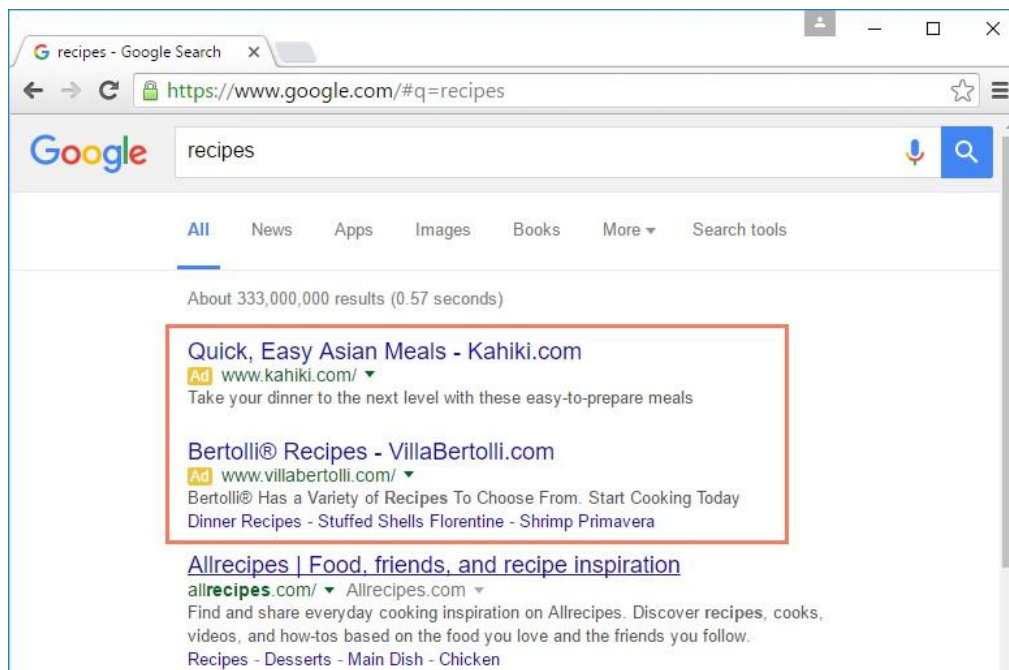


You can use the extra **search tools** to narrow your result even more. These tools will change based on the type of content you're looking for, but in this example we can filter our images by **size**, **color**, **image type**, and more. So if you wanted to find cookies with pink frosting, you could search for images that are mostly pink.



## Advertisements

One final thing to note: Most search engines include **advertisements** with search results. For example, you can see advertisements at the top of the search results below.



These ads are based on your search terms, and they often look similar to other search results. While they may be useful in some cases, it's usually more helpful to focus on the actual search results.

For even more search tips, check out our **Search Better** tutorial.

## Understanding URLs

Every time you click a link on a website or type a web address into your browser, it's a **URL**. URL stands for Uniform Resource Locator. Think of it like a street address, with each portion of the URL as different parts of the address, and each giving you different information. Let's examine each component of a URL and what we can learn from it.

Watch the video below to learn the different parts of a URL.

## Scheme

Every **URL** begins with the **scheme**. This tells your browser what type of address it is so the browser can connect to it correctly. There are many types of schemes, but for typical web browsing you will mostly see **http** and **https**. Your browser usually won't show the scheme in the address bar, and usually you don't need to type the scheme when typing a web address; instead, you can just begin with the **domain name**. The scheme is still always part of the URL; it just isn't being displayed.

<http://www.gcflearnfree.org/reading/grammar/than-or-then>

↑  
*scheme*

## Domain name

The **domain name** is the most prominent part of a web address. Typically, different pages on the same site will continue to use the same **domain name**. For example, all pages on this site share the GCFLearnFree.org **domain name**.

<http://www.gcflearnfree.org/reading/grammar/than-or-then>

↑  
*domain name*

Each segment of the **domain name** separated by a period is called a **domain**. The domain on the right is called a **top-level domain**, with the domain to the left of it called the **second-level domain**, then **third-level domain**, and so on.

[www.gcflearnfree.org](http://www.gcflearnfree.org)

↑                    ↑                    ↑  
*sub-domain*                    *second level*                    *top level*

You can often learn something about the site from the domains. One of the domains usually identifies the organization, while the top-level domain may give you more general information on what kind of site it is. For example, in the domain

namenc.gov, the .gov domain means it is a government website in the United States, the nc domain identifies it as the website of North Carolina.

In most URLs, the www domain can be

omitted. Google.com and www.google.com lead to the same page. However, other subdomains cannot be omitted. For example, all pages under news.google.com require the news subdomain in the URL.

## Filepath

The **file path**—often just called the **path**—tells your browser to load a specific page. If you don't specify a **path** and only enter a **domain name**, your browser is still loading a specific page; it's just loading a default page, which usually will help you navigate to other pages.



URLs that end with the **domain name** without a **file path** usually will load a homepage or an index page that's designed to help you navigate to specific pages on the site. Often, if you can't remember the file path for a specific page, you can go to the homepage and search for it.

## Parameters

Some **URLs** include a string of characters after the path—beginning with a question mark—called the **parameter string**. You have probably noticed this part of a **URL** appear in your address bar after performing a search on Google or YouTube. The parameter string can be clear or confusing to a human user, but it is critical information for the server.

www.youtube.com/watch?v=dQw4w9WgXcQ



## Anchor

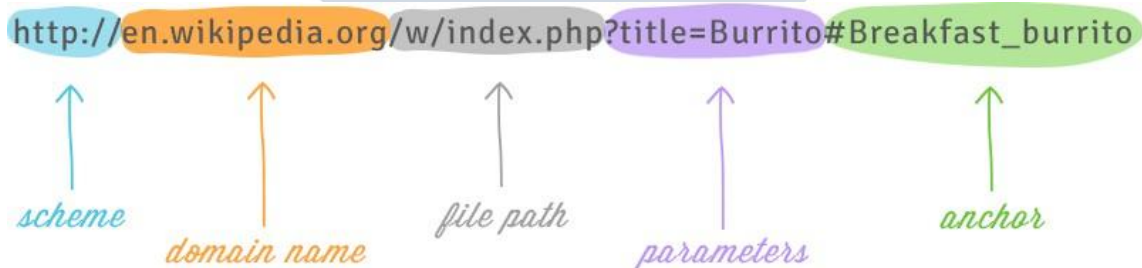
Also appearing after the path, the **anchor** tells your browser to scroll to or load a specific part of the page. Usually the **anchor** begins with a hashtag and is used to direct your browser to a specific part of a very long page, much like a bookmark. Different **anchors** don't load different pages; they simply tell the browser to display different parts of the page.

tolkiengateway.net/wiki/J.R.R.\_Tolkien#Writing



## A whole URL

When combined, these elements make up a URL, although not all URLs will have all five parts.

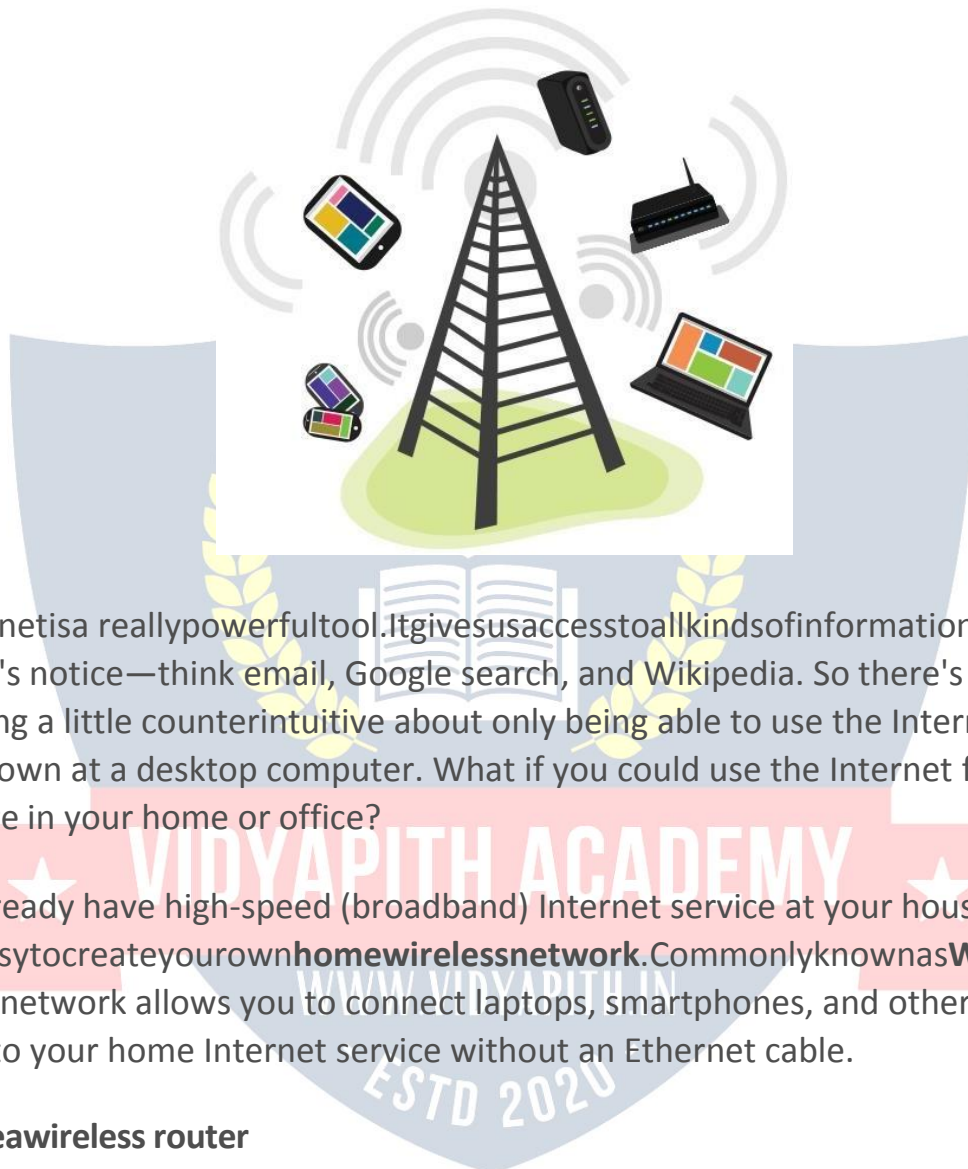


Using what we learned in this tutorial, we can tell from the domain name of this URL that it's on Wikipedia, from the parameters that the page is probably about burritos, and from the anchor that we'll be looking at this section on burritos for breakfast.



Keep in mind that these are the most common components of a URL. There are many other parts, but these are the five you will see most often and that can usually give you the most information.

## How to set up a Wi-Fi network



The Internet is a really powerful tool. It gives us access to all kinds of information at a moment's notice—think email, Google search, and Wikipedia. So there's something a little counterintuitive about only being able to use the Internet when you sit down at a desktop computer. What if you could use the Internet from anywhere in your home or office?

If you already have high-speed (broadband) Internet service at your house, it's pretty easy to create your own **homewireless network**. Commonly known as **Wi-Fi**, a wireless network allows you to connect laptops, smartphones, and other mobile devices to your home Internet service without an Ethernet cable.

### Purchase a wireless router

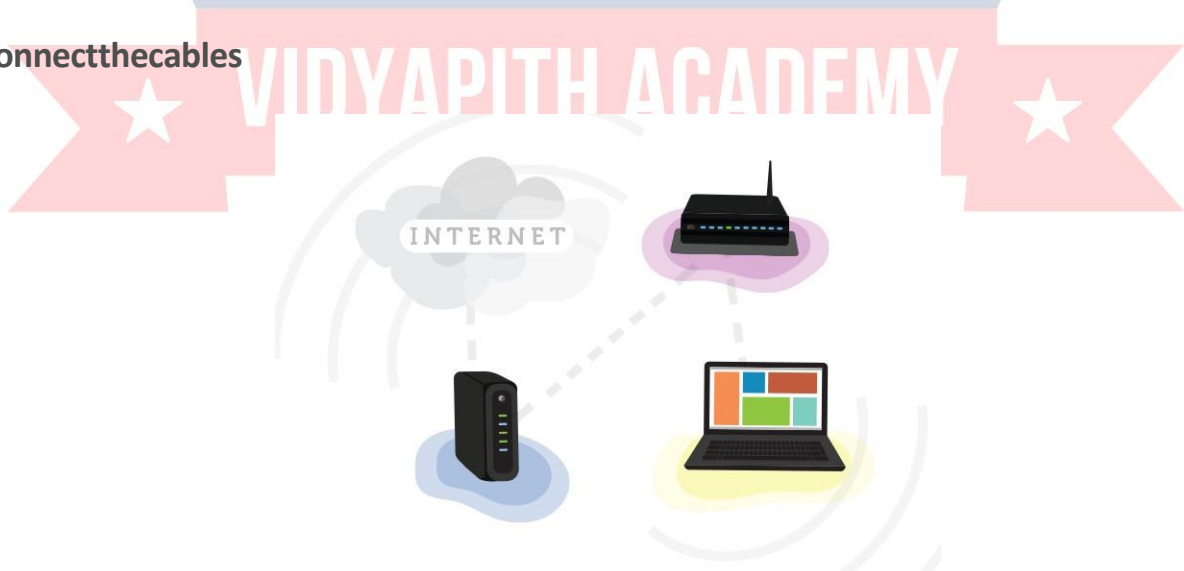


To create your own Wi-Fi network, you'll need a **wireless router**. This is the device that will broadcast the Wi-Fi signal from your Internet modem throughout your house. Your Internet service provider (ISP) may offer you a wireless router for a small monthly fee. If you've never set up a Wi-Fi network before, this may be the easiest option.

If you want to buy your own router, we'd recommend spending a little more time researching different options. CNET offers a comprehensive guide on **How to Buy a Router**.

Some Internet modems may already have a built-in wireless router, which means you won't need to purchase a separate one.

**Connect the cables**



1. Once you've acquired a wireless router, you'll need to connect it to your existing Internet modem.

2. Connect an Ethernet cable from your modem to the wireless router (there is usually a short Ethernet cable included with your wireless router for this purpose).
3. Plug in the power cable for the wireless router.
4. Wait at least 30 to 60 seconds, and make sure the lights on your router are working correctly.

### Configure your router

Next, you'll need to use your computer to configure your router's default settings. This includes setting a **unique name** and **password** for your wireless network.

1. Using your web browser, enter the **router's default IP address** into the address bar, then press **Enter**. Your router's instructions should include this information, but some of the most common addresses include **192.168.0.1**, **192.168.1.1**, and **192.168.2.1**.
2. The router's sign-in page will appear. Again, the exact sign-in details should be included with your router's instructions, but most routers use a standard user name and password combination, such as **admin** and **password**.
3. Your router's settings page will appear. Locate and select the **Network Name** setting, then enter a unique network name.
4. Locate and select the **Network Password** setting, and choose an Encryption option. There are several types of **encryption** you can use, but we recommend **WPA2**, which is generally considered to be the most secure.
5. Enter your desired password. Make sure to use a **strong password** to help ensure no one else can access your network.
6. Locate and select the **Save** button to save your settings.

### Connect!

That's it! Now you're ready to connect to your Wi-Fi network and make sure it's working. The process for connecting to a Wi-Fi network will vary slightly depending on what type of computer or device you're using, but any system will require these basic steps.

1. Locate your computer's network settings, and search for nearby Wi-Fi networks.
2. Select your network, and enter your password.
3. If the connection is successful, open your web browser and try navigating to a web page like [www.google.com](http://www.google.com). If the page loads, it means your Wi-Fi connection is working correctly.

### **Congratulations!**

You've just set up your own home wireless network. Way to go!

### **Choosing a web browser**

A **web browser** is a type of software that allows you to find and view websites on the Internet. Even if you didn't know it, you're using a web browser right now to read this page!

For many years, especially in the early 2000s, there was one browser that almost everyone used: Microsoft's **Internet Explorer**. If you used the Internet at that time, you probably clicked an icon like this to access the Web:



In the past, Internet Explorer was pre-installed on any PC you buy. Starting in the mid-2000s, other software companies introduced new browsers, including **Mozilla Firefox** and **Google Chrome**. At the time, these browsers allowed for more experimental features. Because of this, web developers began creating websites with browsers like Chrome and Firefox in mind, which meant they didn't always work as well in Internet Explorer. If you have a PC with Windows 10, you'll have

Microsoft Edge as your web browser instead. Watch this video to learn more about browsing in Edge.

It's always a good idea to keep **at least two web browsers** on your computer or mobile device. This way, if a website isn't working correctly you can try opening the page in a different web browser. More often than not, this trick can solve a lot of problems you might encounter online.

## Choosing a Web Browser Infogram

### Using a PC or Android? Try Google Chrome.

**Google Chrome** is probably the best web browser right now for PCs. It's free to download, it's very fast, and it's secure. Chrome is also the default web browser for many Android devices. Watch this video to learn about browsing in Chrome. If you have a Google account, you can even sync your saved passwords and browsing history across multiple devices. And because it downloads updates automatically, you'll always be protected from current security threats and viruses online. If you want to learn more, review our **Chrome tutorial**.

### Using an iPhone, iPad, or Mac? Try Safari.

**Safari** is the default web browser for Mac computers and iOS devices, including the iPhone and iPad. Aside from being fast and secure, Safari has a lot of unique features. For example, Reader view allows you to see a simplified version of a webpage that's optimized for reading. It's also easy to add articles you find to your Reading List so you can save them for later. Watch this video to learn more about browsing in Safari.

Again, we recommend keeping at least two web browsers on your device. Chrome is a good secondary browser to use on a Mac, iPhone, or iPad. It's also important to note that you cannot use Internet Explorer on a Mac or iOS device.

### Other recommended web browsers

**Firefox:** This free web browser from Mozilla works on Windows, Mac, and Android. It's built by an open-source community of developers, so it will usually support even the most experimental web features. Like Chrome, it will be updated

automatically,soyou'llbeprotectedfromvirusesandotherthreatsonline.Next, watch this video about browsing in Firefox.

Ifyouwanttolearnmore,reviewour**Firefox**tutorial.

**Opera:**Originallyreleasedin1994,theOperawebbrowserhasbeenaroundmuch longer than Firefox and Chrome. You may find that some websites don't load perfectly on Opera, but it's still regarded as a fast and secure alternative to your defaultbrowser.It'salsoavailableforall majoroperatingsystems(Windows,Mac, Android, and iOS).

