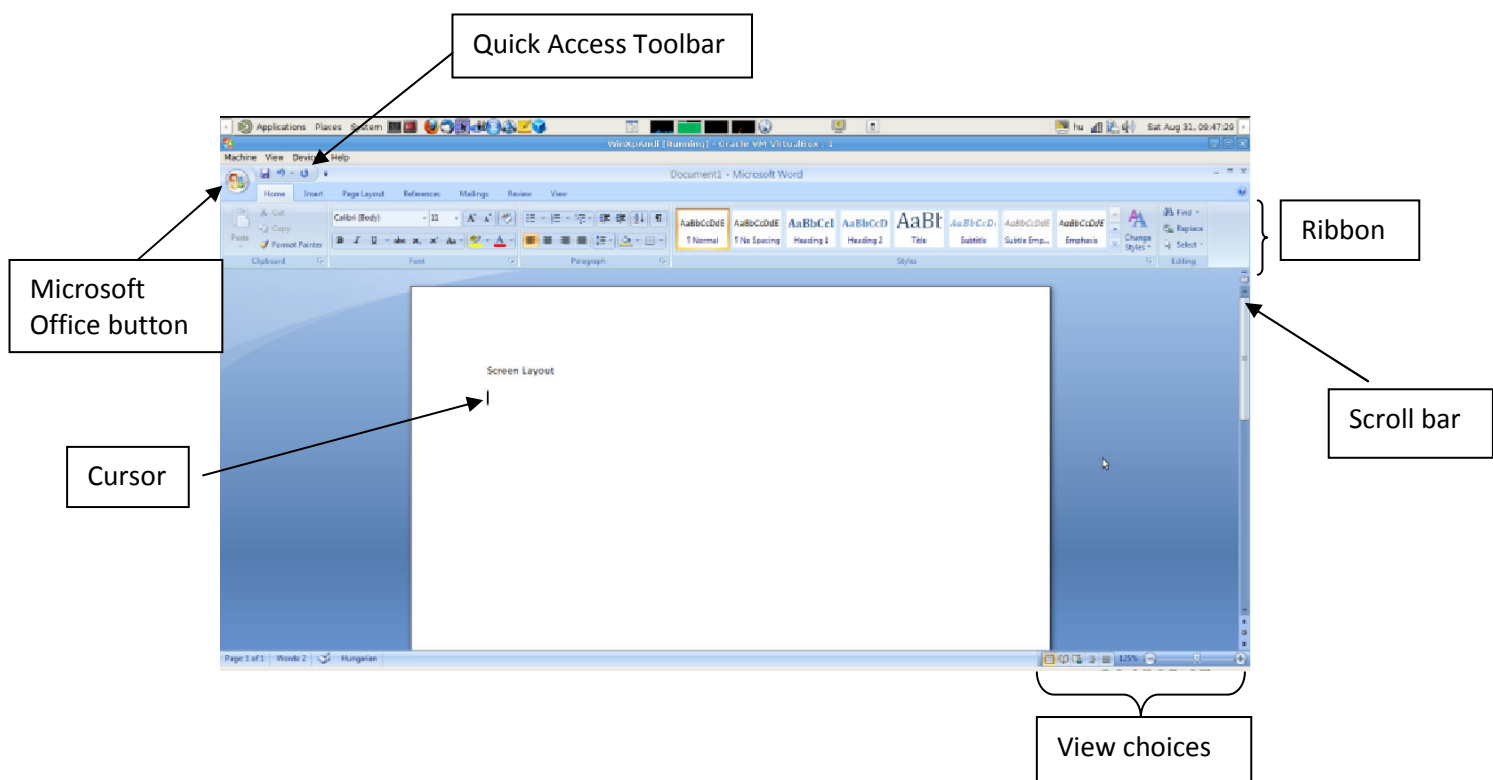


Opening Microsoft Word 2007

1. **Nyelvi beállítások az Office 2007**-hez (Language settings for Office 2007 (not 2003))→ English.
2. Double click on the **Word 2007** icon on your desktop.
3. View / Zoom / Page width.
4. View / Show/Hide / Turn on the ruler (check the checkbox).
5. Home / Paragraph / Show paragraph marks and other hidden formatting symbols (top right icon).
6. Set the margins (you can use a real ruler).

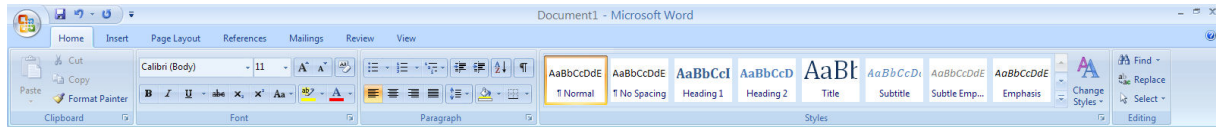
Screen Layout



The Microsoft Office Button

You click on it to see these options: New, Open, Save, Save As, Print, Prepare, Send, Publish and Close.





The Ribbon

The Ribbon is the panel above the document. It has seven tabs: Home, Insert, Page Layout, References, Mailings, Review, and View. Each tab is divided into groups. The groups are collections of features designed to perform functions. Commonly used features are displayed on the Ribbon, to view additional features within each group, click on the arrow at the bottom right of each group. A blue information box will pop up just below where you stop your pointer.

Home: Clipboard, Fonts, Paragraph, Styles, and Editing.

Insert: Pages, Tables, Illustrations, Links, Header & Footer, Text, and Symbols

Page Layout: Themes, Page Setup, Page Background, Paragraph, Arrange

References: Table of Contents, Footnote, Citation & Bibliography, Captions, Index, and Table of Authorities

Mailings: Create, Start Mail Merge, Write & Insert Fields, Preview Results, Finish

Review: Proofing, Comments, Tracking, Changes, Compare, Protect

View: Document Views, Show/Hide, Zoom, Window, Macros

To remove the toolbar, **right** click on the blue section beside the Ribbon. Choose Minimize the Ribbon. To view again, do the same.

Quick Access Toolbar

The quick access toolbar is a customizable toolbar that contains commands that you may want to use frequently. You can add items to it. Right click on any item in the Office Button or the Ribbon and click on Add to Quick Access Toolbar and a shortcut will be added to the Quick Access Toolbar.

Moving in the text

The Cursor

The cursor is the short vertical flashing line on your screen.

- The cursor shows you where you will start typing in a Word document.
- When you are using the Tools in Microsoft Word your cursor will change to an arrow. This is called a pointer.

Scrolling

- Your **scroll bar** is at the right-hand side of your screen.
- Click on the **up/down arrow** to go up/down the page.

Hold down the left mouse button to scroll up and down the screen more quickly.

Using the Keyboard in MS Word

- The arrow keys on your keyboard move your cursor around.
- To make a letter a capital letter:
 - *Hold down the **Shift** and the letter key at the same time.*
- For the signs on your keyboard:
 - *Hold down the **Shift** and the number key at the same time.*
- The **Shift** keys are on both sides of the keyboard.
- The **Space bar** makes spaces between words when typing. Tap the bar one time to make a space.
- Use the **Enter** key to move your cursor to finish the line and make a new one.
- The **Backspace** key deletes everything to the left of the cursor.
- The **Delete** key will erase everything to the right of the cursor.
- To make the cursor go to the end of the line press **End**.
- To make the cursor go to the start of a line press **Home**.
- To make the cursor go to one page up/down press **Page Up/Page Down**.
- To make the cursor go to the top/end of the document press **Ctrl+Home/Ctrl+End**.

Selecting text

- Put the cursor at the beginning or end of the words you want to select.
- Put your finger on the left mouse button.
- Hold down the left mouse button.
- Move the mouse across the words.
- Lift up your finger.
- The word will be highlighted in blue. When this is done, you can move words or change the size, the colour, and the style of the words on the computer.

Alternatives

To select a **word**, double click within the word.

To select a **paragraph**, triple-click within the paragraph.

To select the entire document: **Home/Editing/Select/Select All** or press **Ctrl+A**

To Deselect

Click your mouse on any WHITE part of the page to deselect.

Basic actions with documents

Create a New Document

There are several ways to create new documents, open existing documents, and save documents in Word:

Microsoft Office Button / New / Blank document

Opening an Existing Document

Microsoft Office Button -> Open -> Choose from the list

Saving a Document

Microsoft Office Button/ Save or Save as

or

Press **Ctrl+S** on the keyboard,

or

Click the **File** icon on the Quick **Access Toolbar**

Working on Multiple Documents

Several documents can be opened. All open documents will be listed in the **View Tab** of the Ribbon when you click on **Switch Windows**. The current document has a checkmark beside the file name. Select another open document to view it.

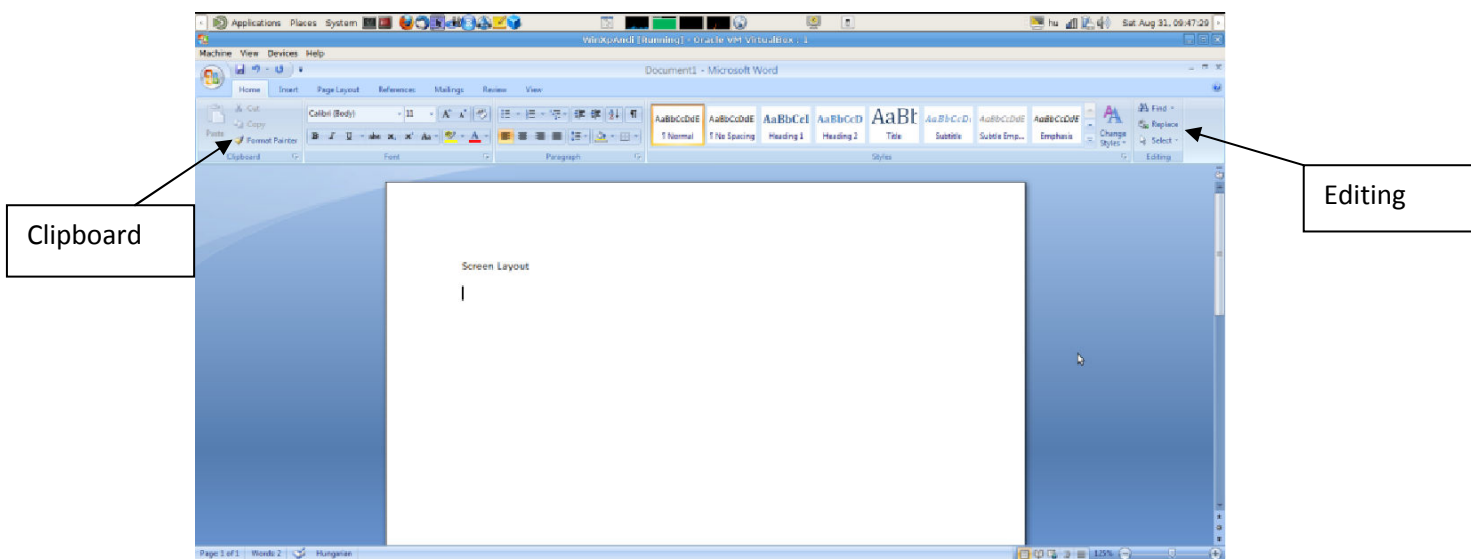
Document Views

- **Print Layout:** This is a view of the document as it would appear when printed. It includes all tables, text, graphics, and images.
- **Full Screen Reading:** This is a full view length view of a document. Good for viewing two pages at a time.
- **Web Layout:** This is a view of the document as it would appear in a web browser.
- **Outline:** This is an outline form of the document in the form of bullets.
- **Draft:** This view does not display pictures or layouts, just text.
- To view a document in different forms, click the document views shortcuts at the bottom of the screen or:
 - Click the **View Tab** on the Ribbon
 - Click on the appropriate document view.

Close a Document

Microsoft Office Button / Close

Editing document



Inserting Additional Text:

- **Type Text:** Put your cursor where you want to add the text and begin typing
- **Copy and Paste Text:** Highlight the text you wish to copy and right click and click **Copy** (or **Ctrl+C**), put your cursor where you want the text in the document and right click and click **Paste** (or **Ctrl+V**).
- **Cut and Paste Text:** Highlight the text you wish to cut and right click and click **Cut** (or **Ctrl+X**), put your cursor where you want the text in the document and right click and click **Paste** (or **Ctrl+V**).

- **Drag Text:** Highlight the text you wish to move, click on it and drag it to the place where you want the text in the document.

You can also use the **Clipboard** group on the Ribbon (Home tag).

Search and Replace Text

To find a particular word or phrase in a document:

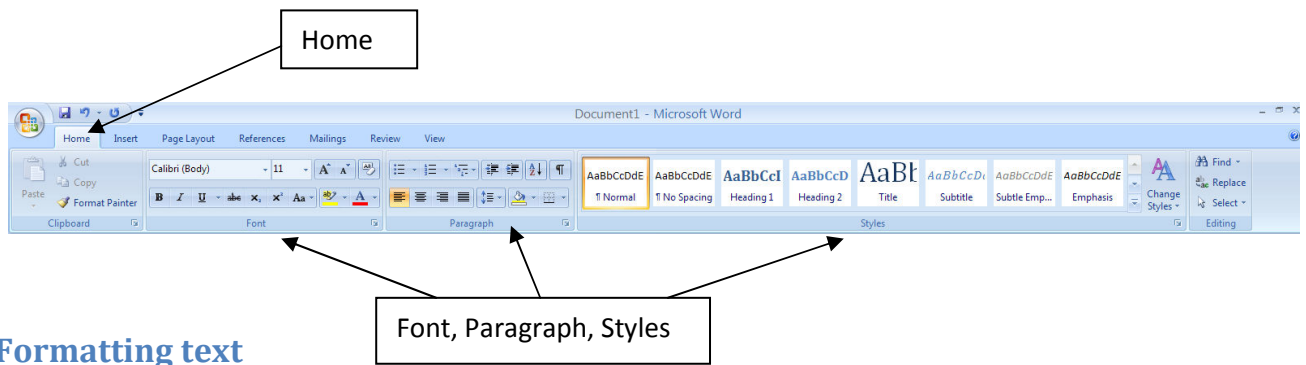
- Editing / Find

To find and replace a word or phrase in the document:

- Editing / Replace

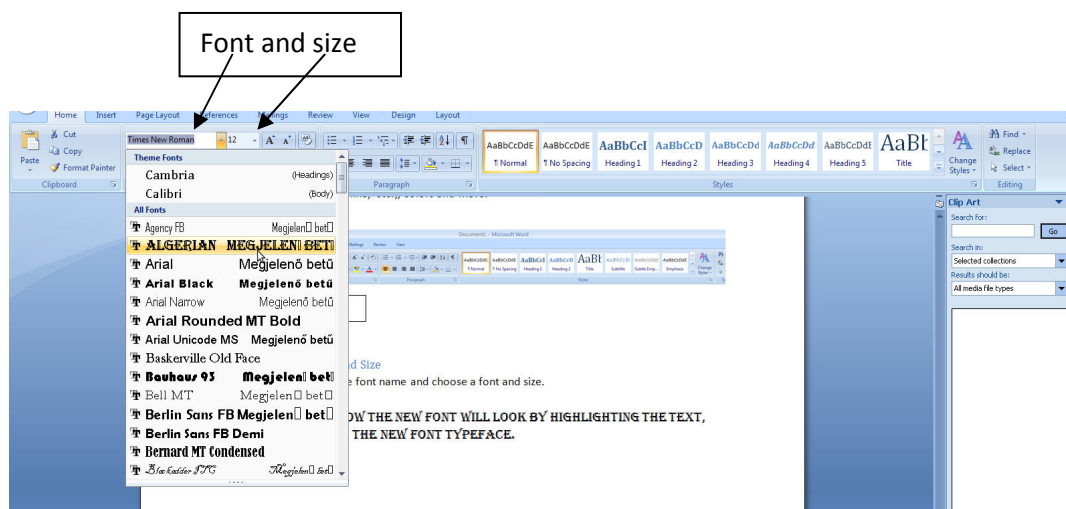
Undo Changes

Click the **Undo Button** on the Quick Access Toolbar.



Formatting text

On the Home Tab of the Ribbon, there are several areas controlling the style of the document: Font, Paragraph, and Styles. A style is a format enhancing tool that includes font typefaces, font size, effects (bold, italics, underline, etc.), colors and more.



Change Font Typeface and Size

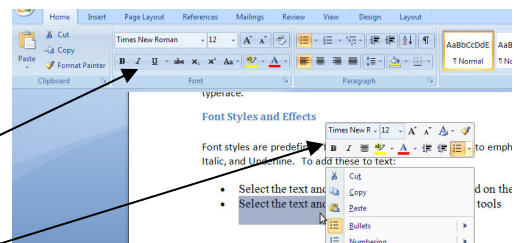
Click the **arrow** next to the font name and choose a font and size.

You can preview how the new font will look by highlighting the text, and hovering over the new font typeface.

Font Styles and Effects

Font styles are predefined formatting options that are used to emphasize text: Bold, Italic, and Underline.

- Select the text and click the **Font Styles** included on the Font Group of the Ribbon, or
- Select the text and right click to display the font tools



Change the spacing between characters

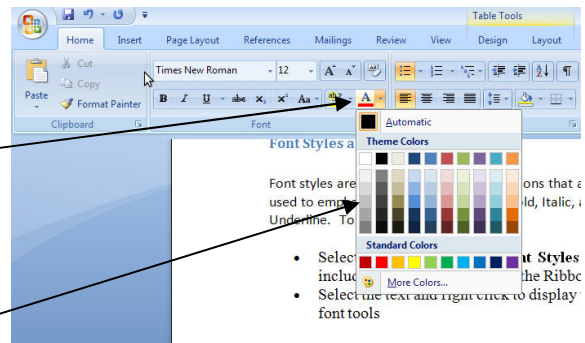
Selecting Expanded or Condensed alters the spacing between all selected letters by the same amount. Kerning alters the spacing between particular pairs of letters.

Expand or condense the space evenly between all the selected characters

- Select the text that you want to change.
- On the Home tab, click the Font Dialog Box Launcher, and then click the Character Spacing tab.
- In the Spacing box, click Expanded or Condensed, and then specify how much space you want in the By box.

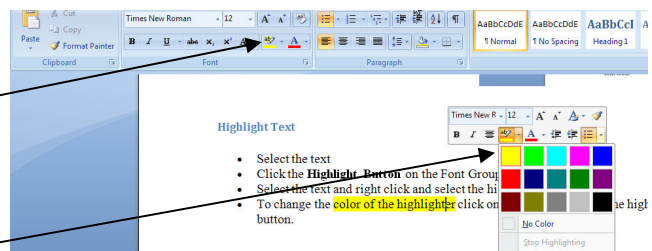
Change Text Color

- Select the text and click the **Colors** button included on the Font Group of the Ribbon, or
- Highlight the text and right click and choose the colors tool.
- Select the color by clicking the down arrow next to the font color button.



Highlight Text

- Select the text
- Click the **Highlight Button** on the Font Group of the Ribbon, or
- Select the text and right click and select the highlight tool
- To change the **color of the highlighter** click on down arrow next to the highlight button.



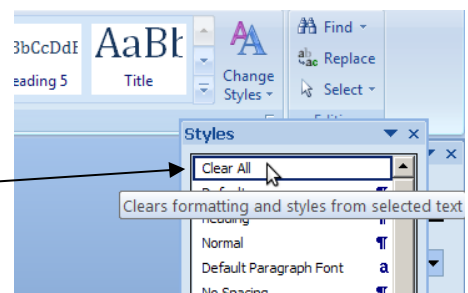
Copy Formatting

If you have already formatted text the way you want it and would like another portion of the document to have the same formatting, you can copy the formatting. To copy the formatting, do the following:

- Select the text with the formatting you want to copy.
- Copy the format of the text selected by clicking the **Format Painter** button on the **Clipboard** Group of the **Home** Tab
- Apply the copied format by selecting the text and clicking on it.

Clear Formatting

- Select the text you wish to clear the formatting.
- Click the **Styles** dialogue box on the Styles Group on the Home Tab.
- Click **Clear All**.

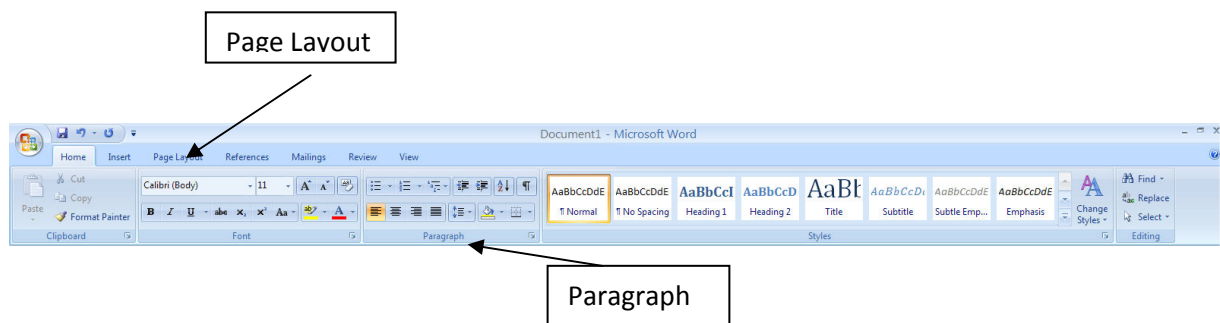


Make a Hyperlink

- Select the text you wish to by a hyperlink.
- Click the **Insert** tab.
- Click on **Hyperlink** and OK.

Insert current Date and Time

- Click the **Insert** tab.
- Click on **Date & Time**.
- Select the appropriate language and format.

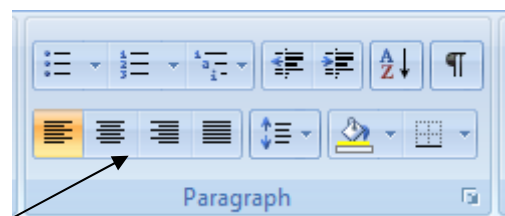


Formatting Paragraphs

Formatting paragraphs allows you to change the look of the overall document. You can access many of the tools of paragraph formatting by clicking the **Page Layout** Tab of the Ribbon or the **Paragraph** Group on the Home Tab of the Ribbon.

Change Paragraph Alignment

- Click the **Home Tab**
- Choose the appropriate button for alignment on the Paragraph Group.
 - **Align Left:** the text is aligned with your left margin
 - **Center:** The text is centered within your margins
 - **Align Right:** Aligns text with the right margin
 - **Justify:** Aligns text to both the left and right margins.



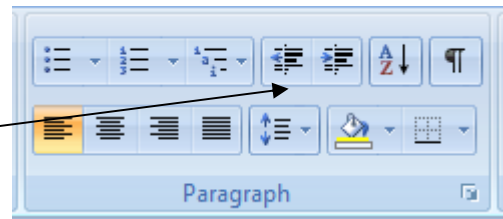
Indent Paragraphs

Indenting paragraphs allows you set text within a paragraph at different margins. There are several options for indenting:

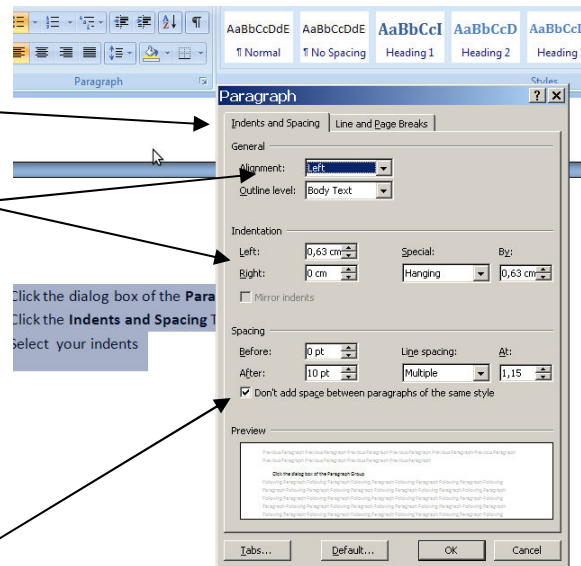
- **First Line:** Controls the left boundary for the first line of a paragraph
- **Hanging:** Controls the left boundary of every line in a paragraph except the first one
- **Left:** Controls the left boundary for every line in a paragraph
- **Right:** Controls the right boundary for every line in a paragraph

To indent paragraphs, you can do the following:

- Click the **Indent** buttons to control the indent.
- Click the **Indent** button repeated times to increase the size of the indent.



- Click the dialog box of the **Paragraph** Group
- Click the **Indents and Spacing** Tab
- Select your indents



Alignment also can be changed within this Tab.

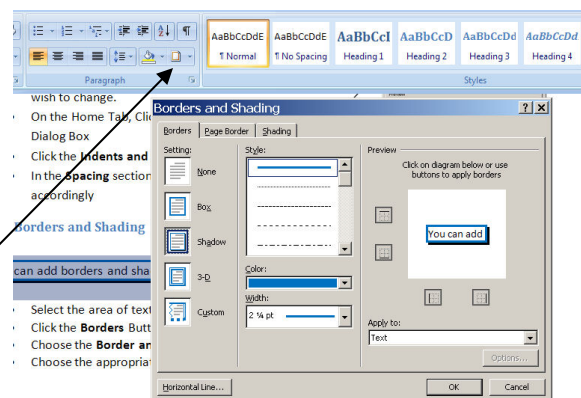
Change Spacing Between Paragraphs and Lines

- Select the paragraph or paragraphs you wish to change.
- On the Home Tab, Click the **Paragraph** Dialog Box
- Click the **Indents and Spacing** Tab
- In the **Spacing** section, adjust your spacing accordingly

Add Borders and Shading

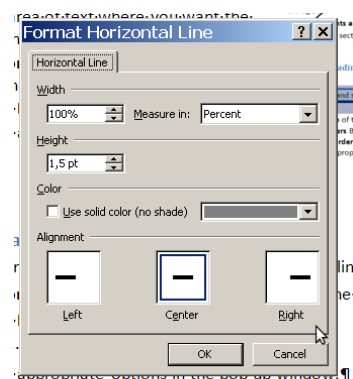
You can add borders and shading to paragraphs and entire pages.

- Select the area of text where you want the border or shading.
- Click the **Borders** Button on the Paragraph Group on the Home Tab
- Choose the **Border and Shading**
- Choose the appropriate options



Drawing horizontal line

- Put your cursor where you want to add the horizontal line.
- Click the **Borders** Button on the Paragraph Group on the Home Tab
- Choose the **Horizontal line**
- Click on the line
- Choose the appropriate options in the pop up window.



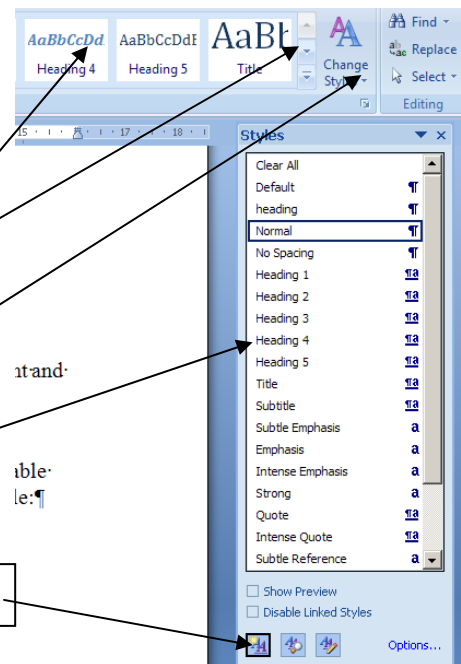
Styles

The use of Styles in Word will allow you to quickly format a document with a consistent and professional look. Styles can be saved for use in many documents.

Apply Styles

There are many styles that are already in Word ready for you to use. To view the available styles click the **Styles** dialog box on the Styles Group in the Home Tab. To apply a style:

1. Select the text
2. Click the **Styles** Dialog Box, or **Styles Drop Down menu**
3. Click the **Style** you choose



Creating New Styles

- Click the **Styles** Dialog Box
- Click the **New Style** Button
- Complete the New Style dialog box.

At the bottom of that dialog box, you can choose to add this to the Quick Style List or to make it available only in this document.

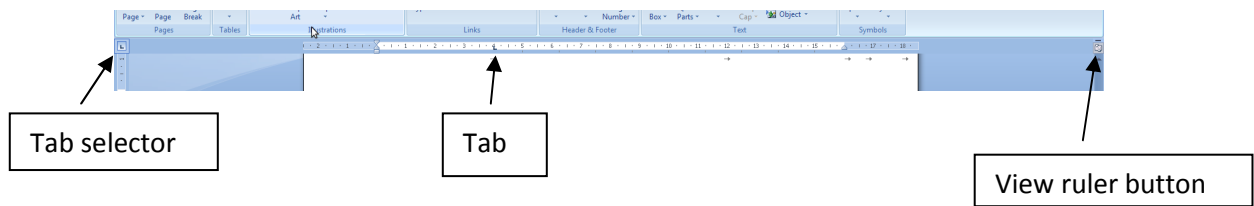
New Quick Style

- Insert your cursor anywhere in the text formatted as the chosen style
- Click the **Styles** dialog box
- Click on New style and click on Add to Quick Style list and OK.

Style Inspector

To determine the style of a particular section of a document:

- Insert cursor anywhere in the text that you want to explain the style
- Click the **Styles Drop Down** Menu
- Put the arrow on the bordered style. The formatting options will appear in a text box.








Set, edit, or clear tabs

Set the tab stops

With the ruler it is possible to set manual tab stops at the left side, middle, and right side of your document.

Note: If you don't see the horizontal ruler that runs along the top of the document, click the **View Ruler** button at the top of the vertical scroll bar.

It is easy to set tabs by clicking the **tab selector** at the left end of the ruler until it displays the type of tab that you want and then clicking the ruler at the location you want. Tab types:

-  A **Left Tab** stop sets the start position of text that will then run to the right as you type.
-  A **Center Tab** stop sets the position of the middle of the text. The text centers on this position as you type.
-  A **Right Tab** stop sets the right end of the text. As you type, the text moves to the left.
-  A **Decimal Tab** stop aligns numbers around a decimal point. Independent of the number of digits, the decimal point will be in the same position.
-  A **Bar Tab** stop doesn't position text. It inserts a vertical bar at the tab position.

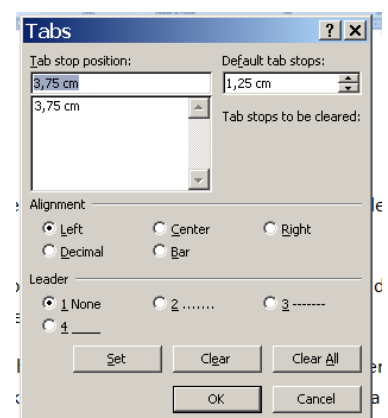
For more precise positions, use the **Tabs** dialog box: double-click any tab stop on the ruler, or:

- On the **Page Layout** tab, click the **Paragraph** Dialog Box Launcher.
- At the bottom of **Paragraph** dialog box, click **Tabs**.

Add leaders between tab stops

You can add dot leaders between tab stops or choose other formatting options in the **Tabs** dialog box.

- Type the text that you want.
- On the horizontal ruler, set the tab stop that you want.
- On the **Page Layout** tab, click the **Paragraph** Dialog Box Launcher.
- In the **Paragraph** dialog box, click **Tabs**.
- Under **Leader**, click the leader option that you want.

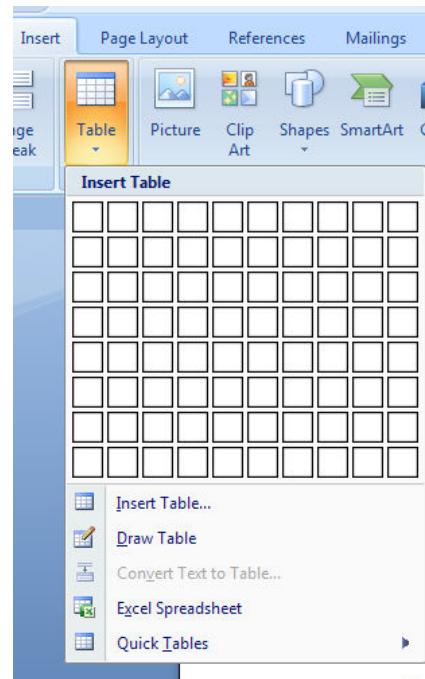


When you press ENTER to start a new line, the formatted tab stop is available on the new line.

Adding Tables

Create a Table:

- Place the cursor on the page where you want the new table
- Click the **Insert** Tab of the Ribbon
- Click the **Tables** Button on the Tables Group. You can create a table one of four ways:
 - Highlight the number of row and columns
 - Click **Insert Table** and enter the number of rows and columns
 - Click the **Draw Table**, create your table by clicking and entering the rows and columns
 - Click **Quick Tables** and choose a table

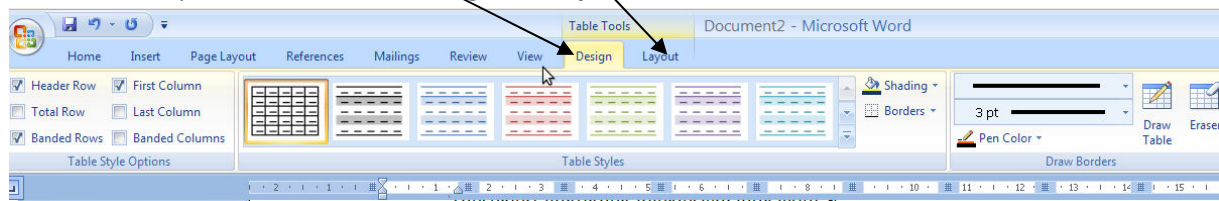


Enter Data in a Table:

- Place the cursor in the cell where you wish to enter the information. Begin typing.

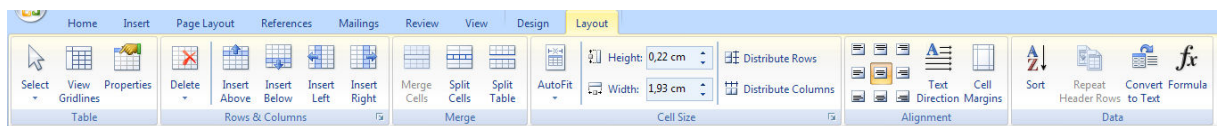
Modify the Table Structure and Format a Table

- Click the table and notice that you have two new tabs on the Ribbon: **Design** and **Layout**. These pertain to the table **design** and **layout**.



On the **Design** Tab, you can choose:

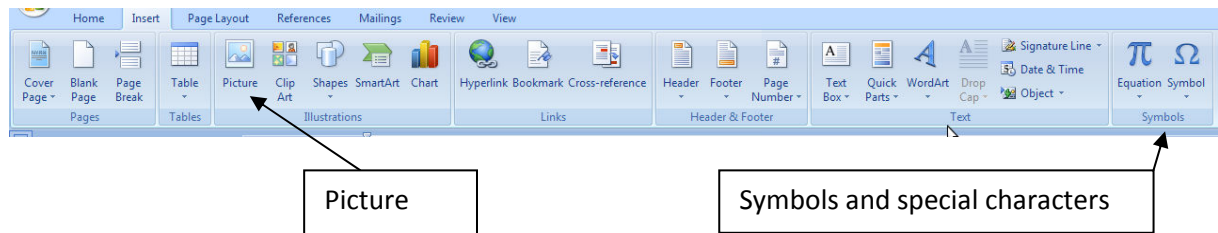
- **Table Style Options**
- Choose **Table Styles**
- **Shading and Borders**



To format a table, click the table and then click the **Layout** Tab on the Ribbon. This Layout tab allows you to:

- **View Gridlines** and **Properties** (from the **Table** Group)
- **Insert Rows** and **Columns** (from the **Rows & Columns** Group)
- **Delete** the **Table**, **Rows** and/or **Columns** (from the **Rows & Columns** Group)
- **Merge** or **Split Cells** (from the **Merge** Group)
- Increase and Decrease cell **Height** and **Width** size (**Cell Size** Group)
- Align text within the cells and change text directions (**Alignment** Group)

You can insert special characters, symbols, pictures, illustrations, and watermarks.



Symbols and Special Characters: punctuation, spacing, or typographical

- Place your cursor in the document where you want the symbol
- Click the **Insert** Tab on the Ribbon
- Click the **Symbol** button on the Symbols Group
- Choose the appropriate symbol.

Illustrations, Pictures, and SmartArt

To insert **illustrations**:

- Place your cursor in the document where you want the illustration/picture
- Click the **Insert** Tab on the Ribbon
- Click the **Clip Art/ Picture /Smart Art** Button
- The dialog box will open on the screen and you can search for clip art / picture / smart art.
- Choose the illustration you wish to include

To insert a **picture**:

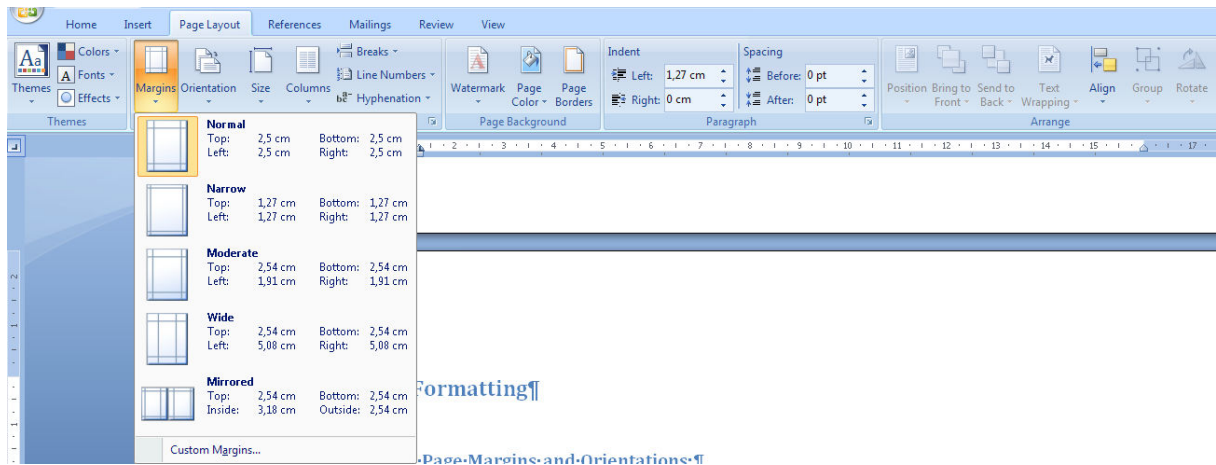
- Place your cursor in the document where you want the illustration/picture
- Click the **Insert** Tab on the Ribbon
- Click the **Picture** Button
- Browse to the picture you wish to include
- Click the **Picture**
- Click **Insert**

Resize Graphics

All graphics can be resized by clicking the image and clicking one corner of the image and dragging the cursor to the size you want the picture.

•

Page Formatting



Modify Page Margins:

- Click the **Page Layout** Tab on the Ribbon
- On the **Page Setup** Group, Click **Margins**
- Click a **Default Margin**, or
- Click **Custom Margins** and complete the dialog box.

Orientation, Size of the Page, or Columns:

- Click the **Page Layout** Tab on the Ribbon
- On the Page Setup Group, Click the **Orientation**, **Size**, or **Columns** drop down menus
- Click the appropriate choice

Page Border and Color

- Click the **Page Layout** Tab on the Ribbon
- On the Page Background Group, click the **Page Colors** or **Page Borders** drop down menus

Insert Common Header and Footer Information

To insert Header and Footer information such as page numbers, date, or title, first, decide if you want the information in the header (at the top of the page) or in the Footer (at the bottom of the page), then:

- Click the **Insert** Tab on the Ribbon
- Click **Header or Footer**
- Choose a style

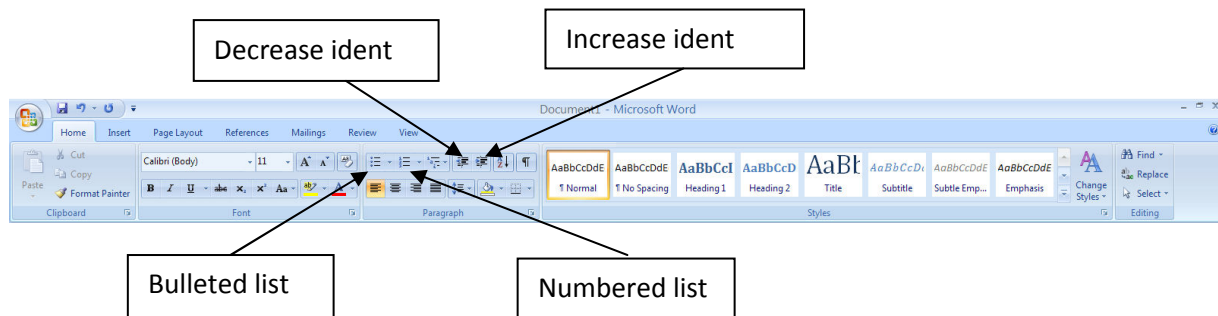
Footnotes

Footnotes are sometimes necessary for providing additional information in your document. They normally use a superscript number as a marker, making it easy for the reader to simply look down from the text to the notes at the bottom to gather further information. Word automatically keeps track of the numbering and placement of the footnotes for you, making this a painless task to perform when writing that thesis, book, or scientific paper. To insert footnotes into your Word document, do the following...

- Click the place in your document that you wish to place the insertion point for the reference mark to the footnote.
- In the **Ribbon**, click the **References** tab.
- In the **Footnotes** section, click **Insert Footnote**. Word will insert the reference mark at the point you selected and then take you to the bottom of the page.
- Type your footnote.
- When you are done, right-click the footnote and select **Go to Footnote** to take you back to the insertion point in the main body so you can continue working on your document.

Bulleted and Numbered Lists

Lists allow you to format and organize text with numbers, bullets, or in an outline. Bulleted lists have bullet points, numbered lists have numbers, and outline lists combine numbers and letters depending on the organization of the list.



To create a list from an existing text:

- Select the text you wish to make a list
- From the Paragraph Group on the Home Tab, Click the **Bulleted or Numbered Lists** button

New list

- Place your cursor where you want the list in the document
- Click the **Bulleted or Numbered Lists** button
- Begin typing

Nested Lists

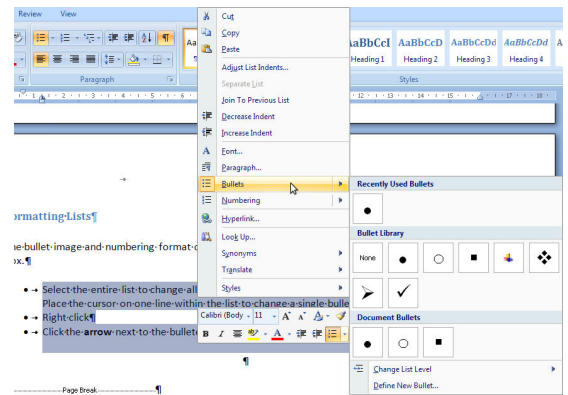
A nested list is list with several levels of indented text. To create a nested list:

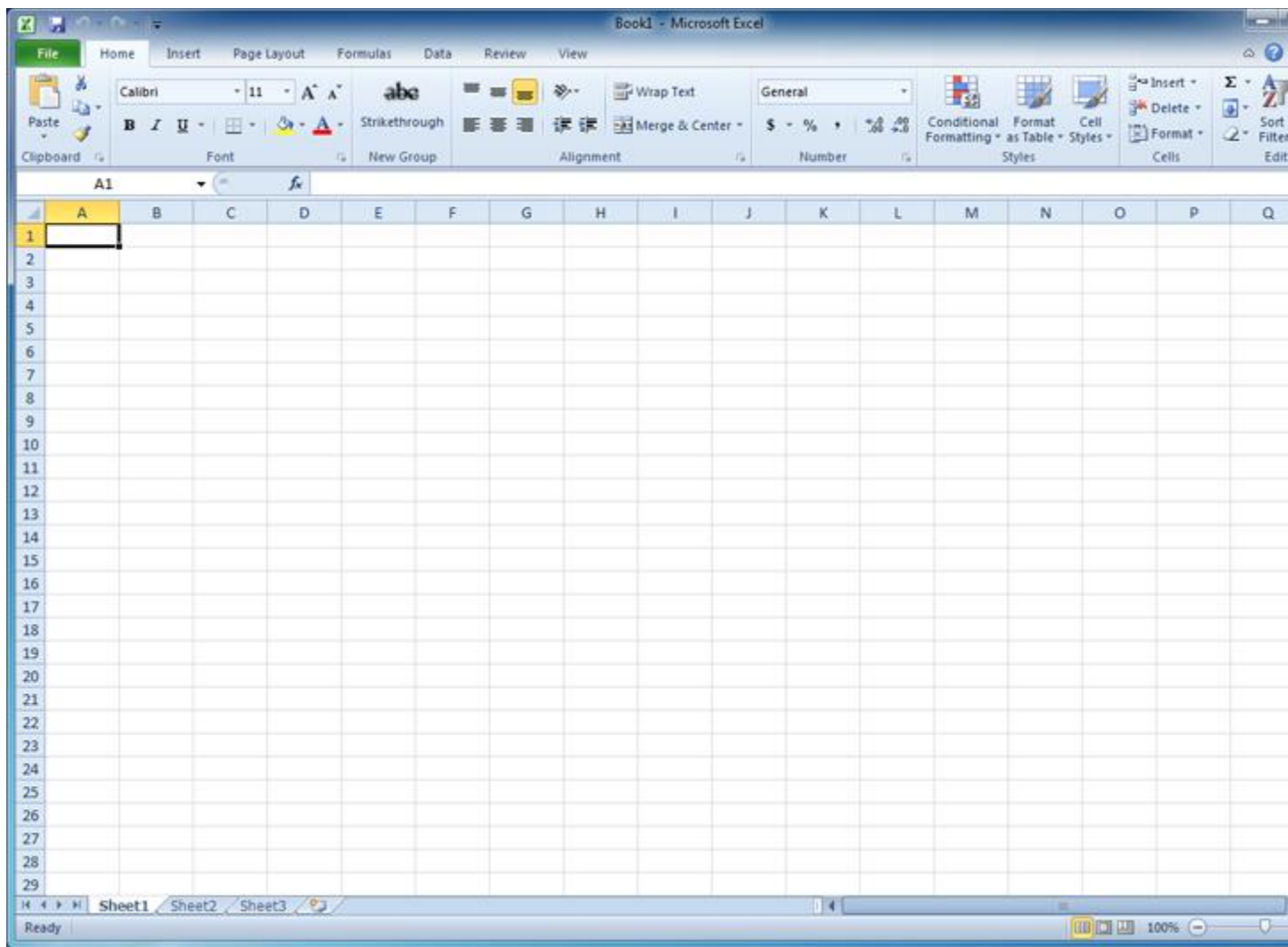
- Create your list following the directions above
- Click the **Increase or Decrease Indent** button

Formatting Lists

The bullet image and numbering format can be changed by using the **Bullets or Numbering** dialog box.

- Select the entire list to change all the bullets or numbers, or
Place the cursor on one line within the list to change a single bullet
- Right click
- Click the **arrow** next to the bulleted or numbered list and choose a bullet or numbering style.

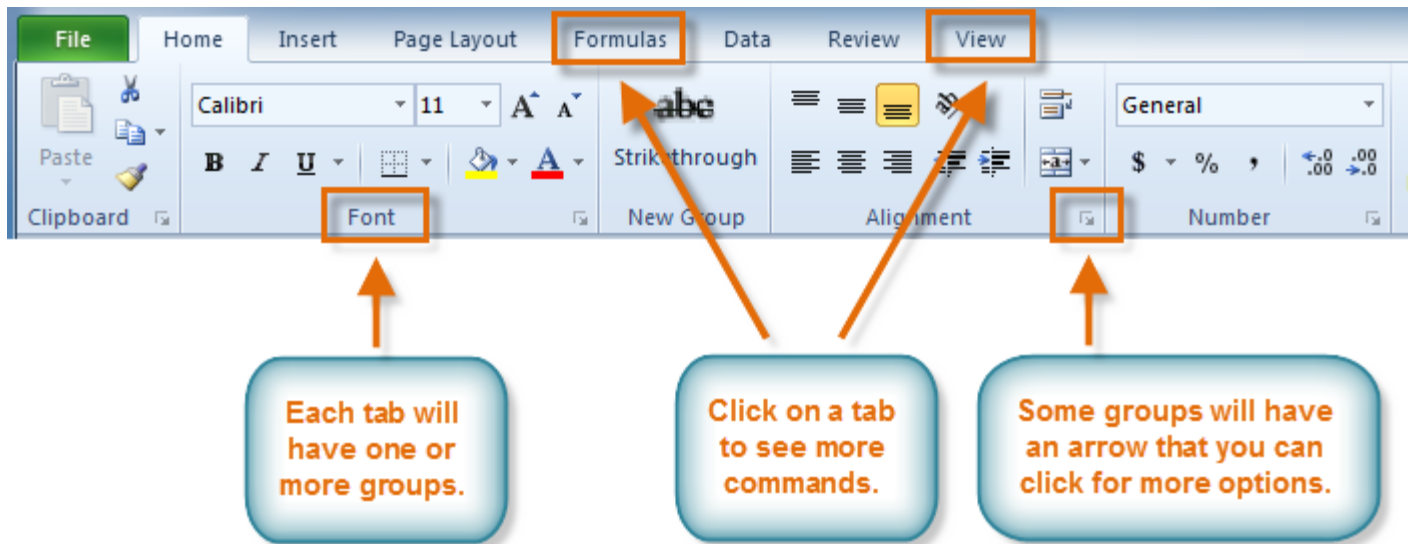




Working with your Excel environment

The Ribbon

The Ribbon contains multiple **tabs**, each with several **groups** of commands. You can add your own tabs that contain your favorite commands.

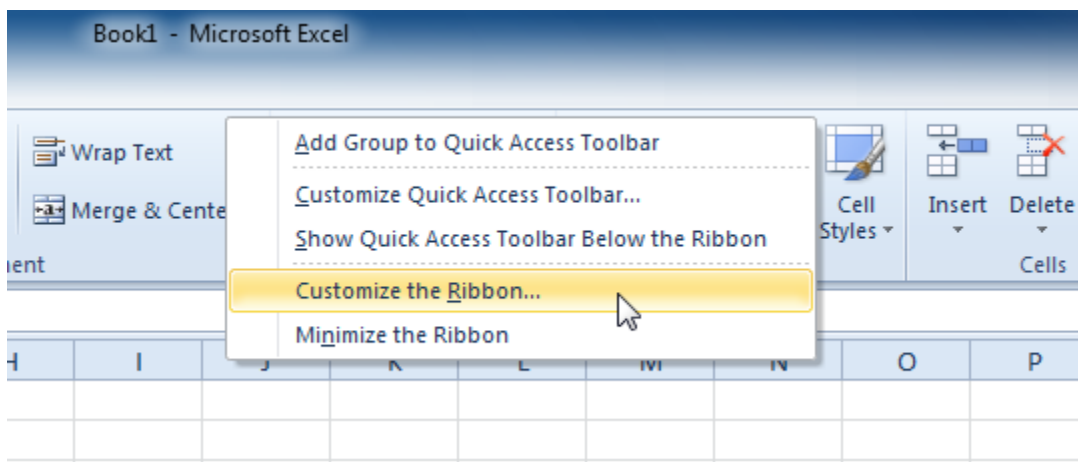


Certain programs—such as **Adobe Acrobat Reader**—may install additional tabs to the Ribbon. These tabs are called **add-ins**.

To customize the Ribbon:

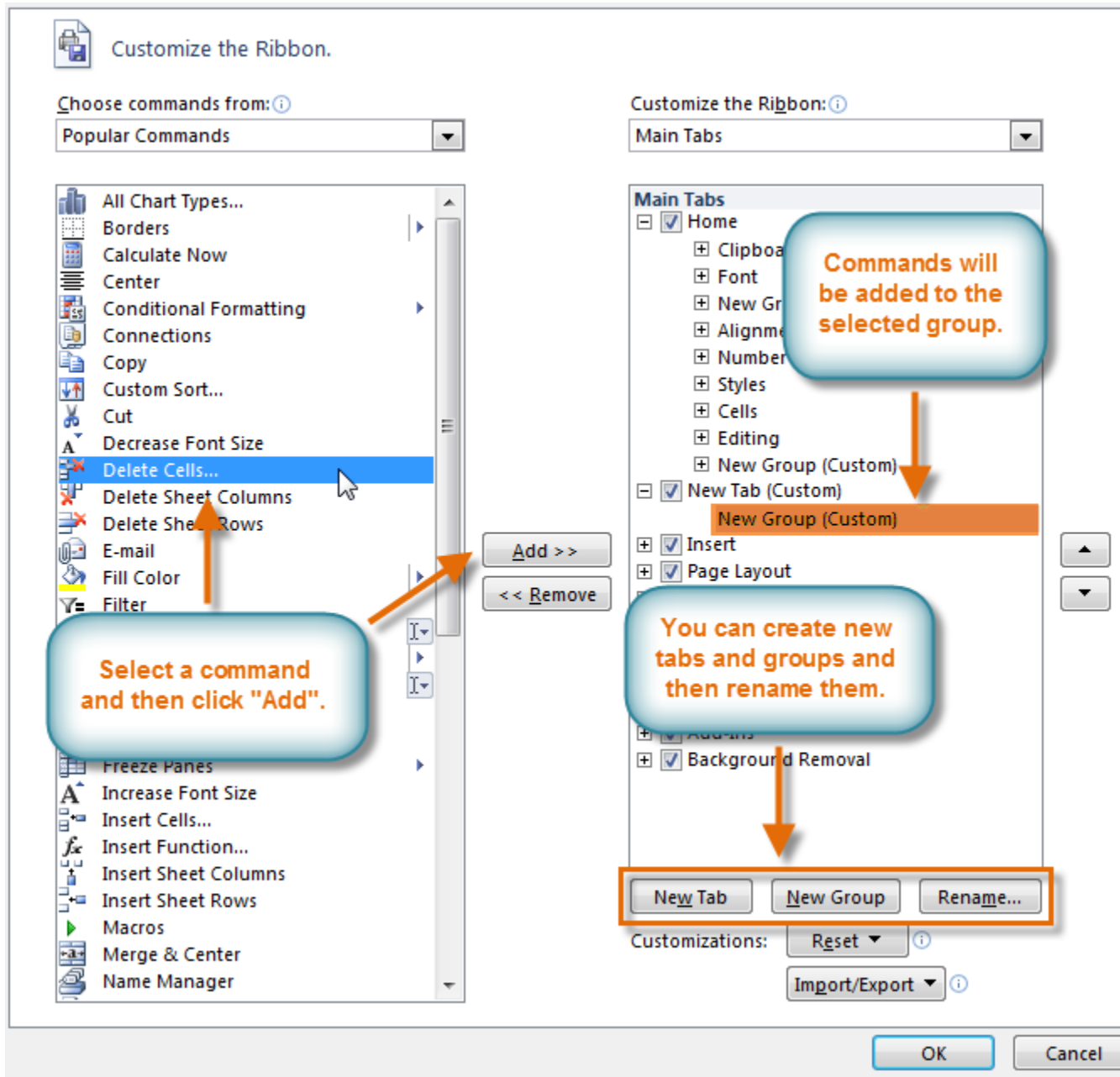
You can customize the Ribbon by creating your own **tabs** that house your desired commands. Commands are always housed within a **group**, and you can create as many groups as you need to keep your tabs organized. You can also add commands to any of the default tabs as long as you create a custom group within the tab.

1. Right-click the Ribbon, then select **Customize the Ribbon**. A **dialog box** will appear.

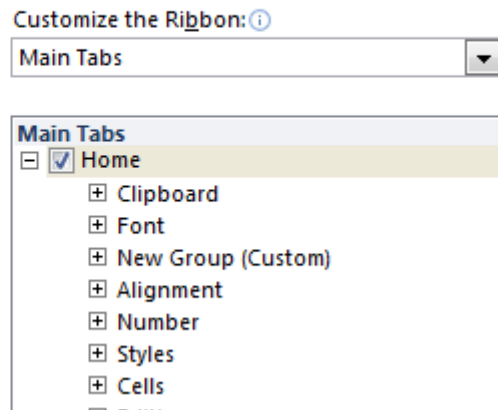
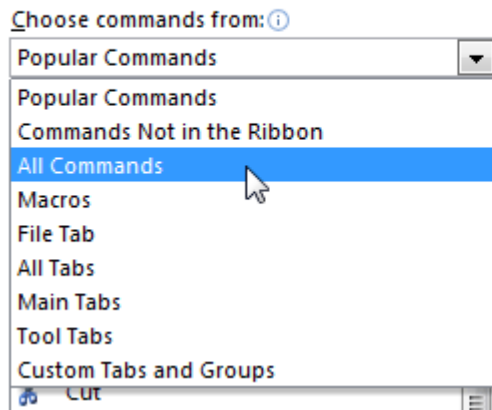


2. Click **New Tab**. A new tab will be created with a new group inside it.

3. Make sure the new group is selected.
4. Select a command from the list on the left, then click **Add**. You can also drag commands directly into a group.
5. When you are done adding commands, click **OK**.



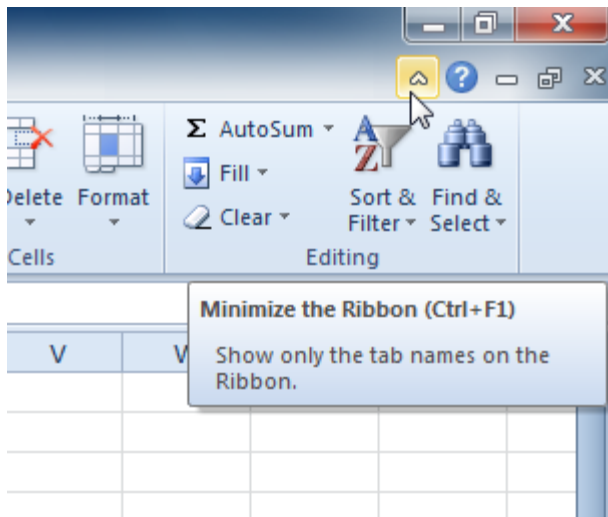
If you do not see the command you want, click the **Choose commands** drop-down box and select **All Commands**.



To minimize and maximize the Ribbon:

The Ribbon is designed to be easy to use and responsive to your current tasks; however, if you find that it's taking up too much of your screen space, you can **minimize** it.

1. Click the **arrow** in the upper-right corner of the Ribbon to minimize it.



2. To maximize the Ribbon, click the arrow again.

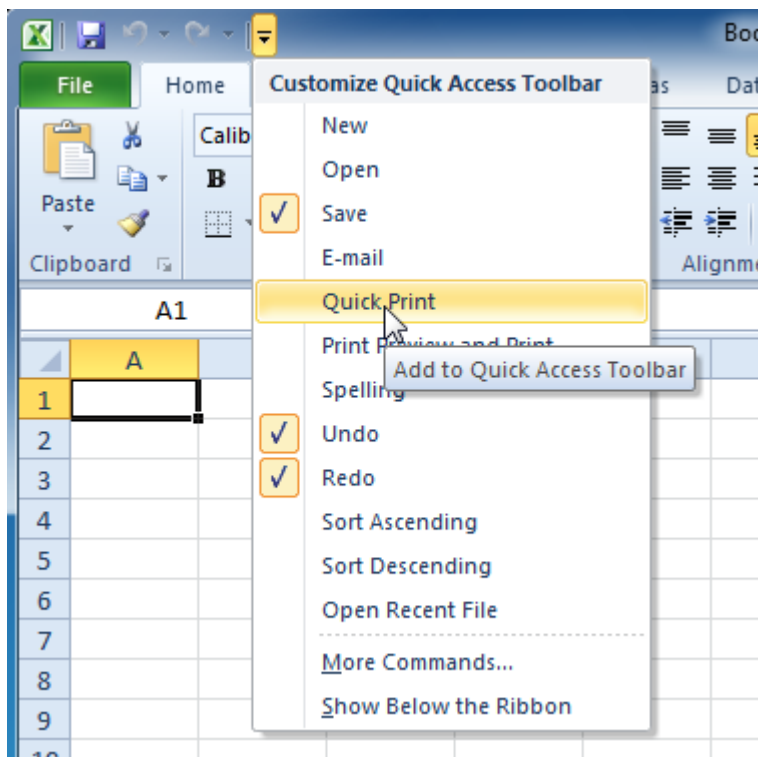
When the Ribbon is minimized, you can make it reappear by clicking a tab. However, the Ribbon will disappear again when you're not using it.

The Quick Access toolbar

The **Quick Access toolbar**, above the Ribbon, lets you access common commands no matter which tab you are on. By default, it shows the **Save**, **Undo**, and **Repeat** commands. You can add other commands to make it more convenient for you.

To add commands to the Quick Access toolbar:

1. Click the **drop-down arrow** to the right of the **Quick Access toolbar**.
2. Select the **command** you want to add from the drop-down menu. To choose from more commands, select **More Commands**.

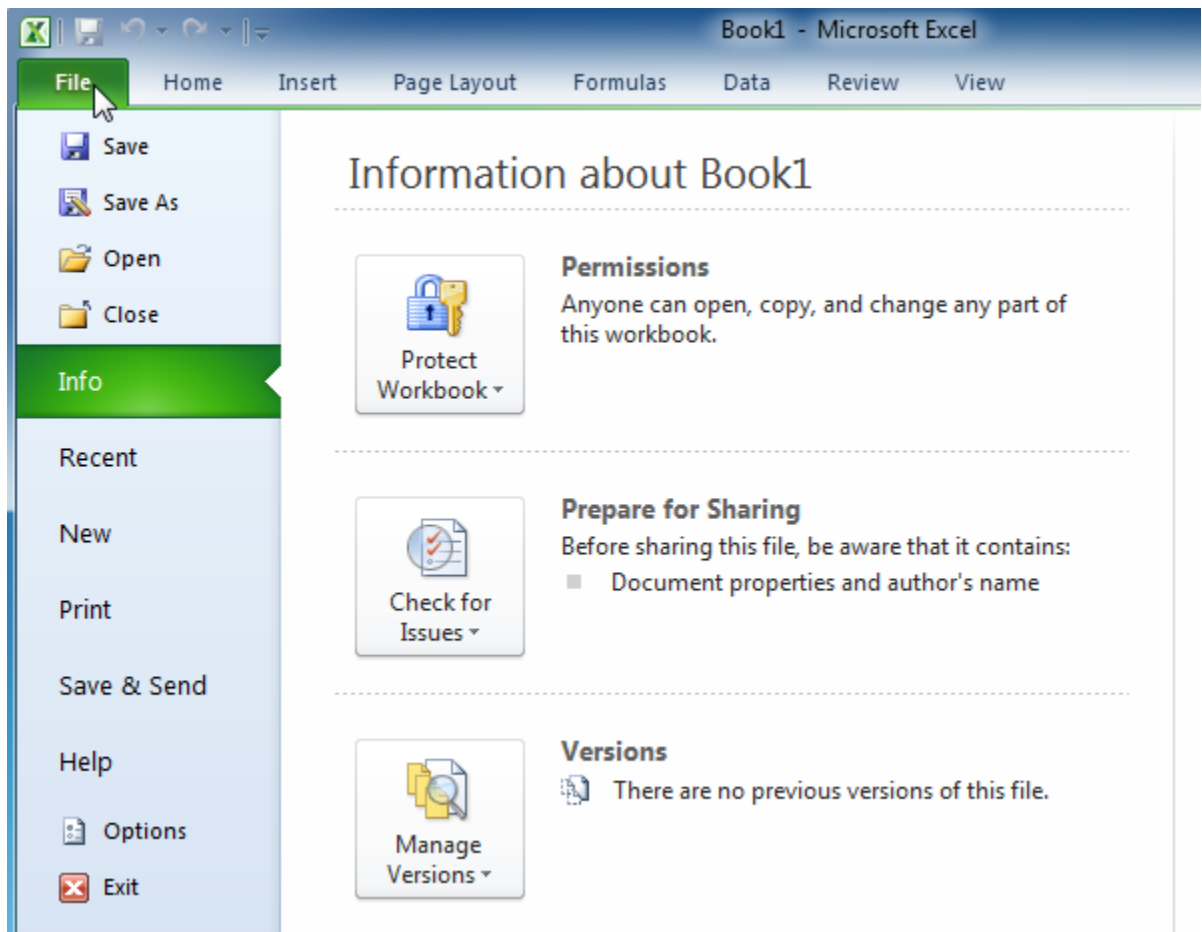


Backstage view

Backstage view gives you various options for saving, opening a file, printing, and sharing your document. It is similar to the **Microsoft Office button menu** from Excel 2007 and the **File menu** from earlier versions of Excel. However, instead of just a menu it's a full-page view, which makes it easier to work with.

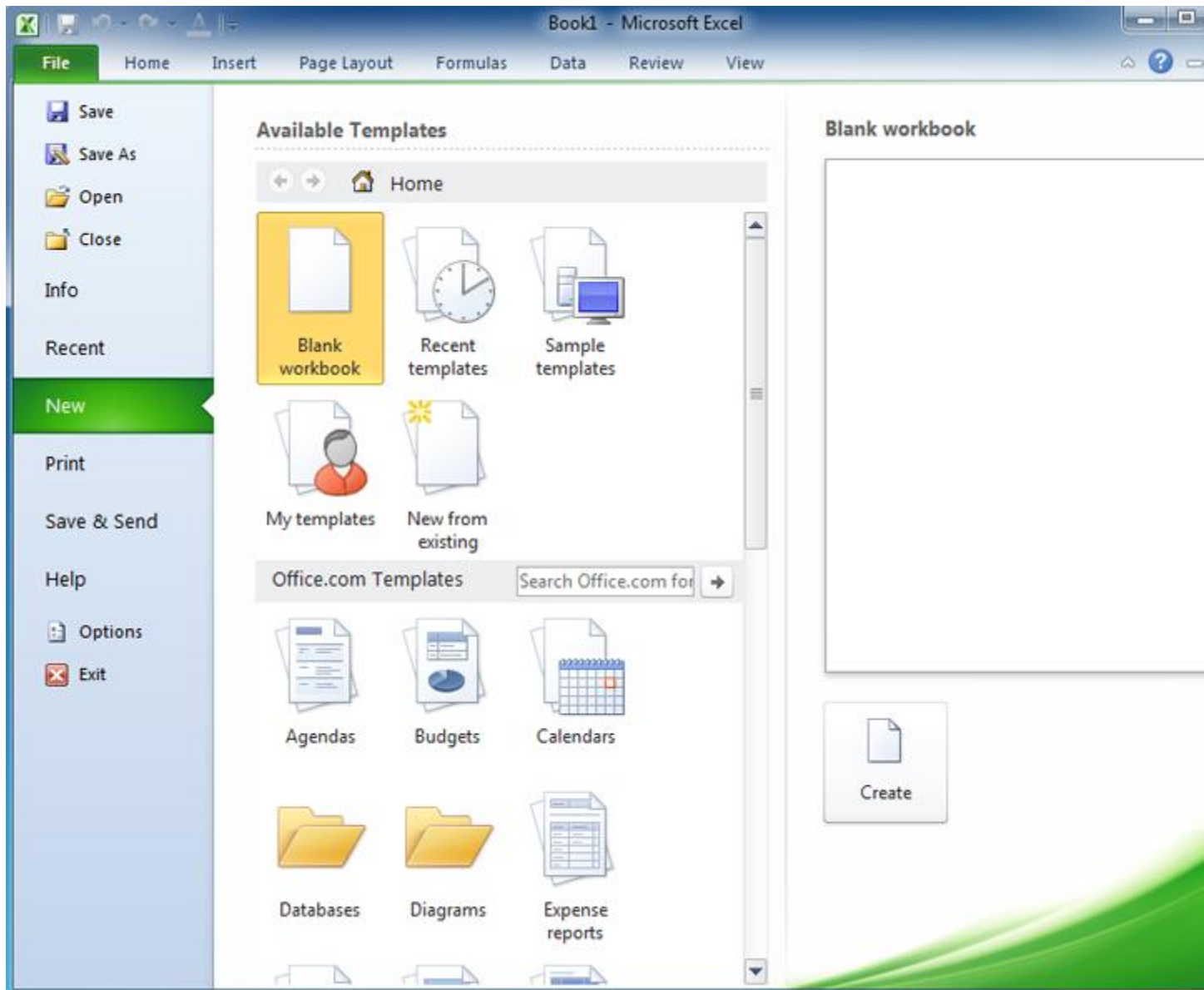
To get to Backstage view:

1. On the Ribbon, click the **File** tab.



2. Choose your desired option, or return to your workbook by clicking any tab on the Ribbon.

Click the buttons in the interactive below to learn about the different things you can do in Backstage view.



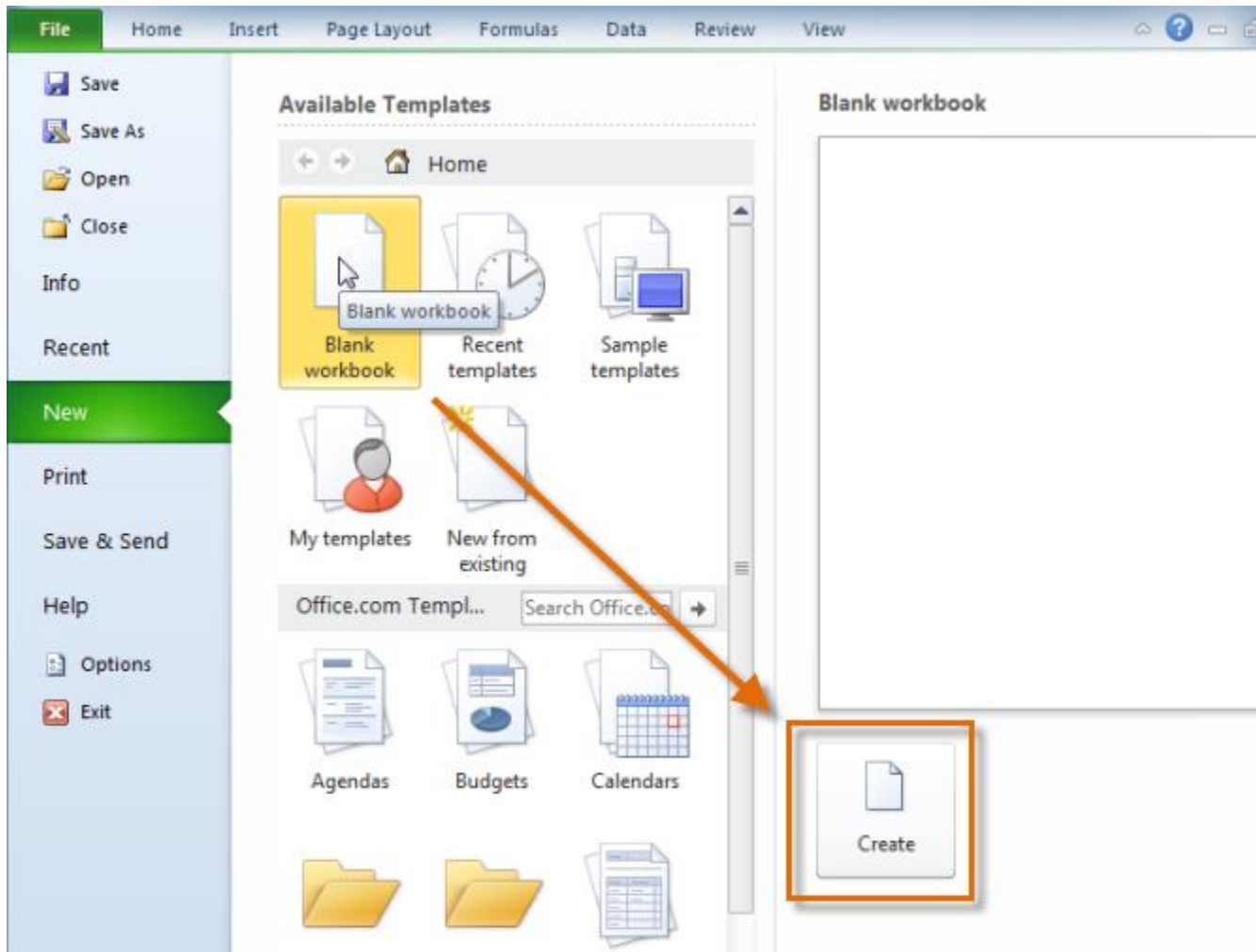
Creating and opening workbooks

Excel files are called **workbooks**. Each workbook holds one or more **worksheets** (also known as spreadsheets).

To create a new blank workbook:

1. Click the **File** tab. This takes you to **Backstage view**.
2. Select **New**.

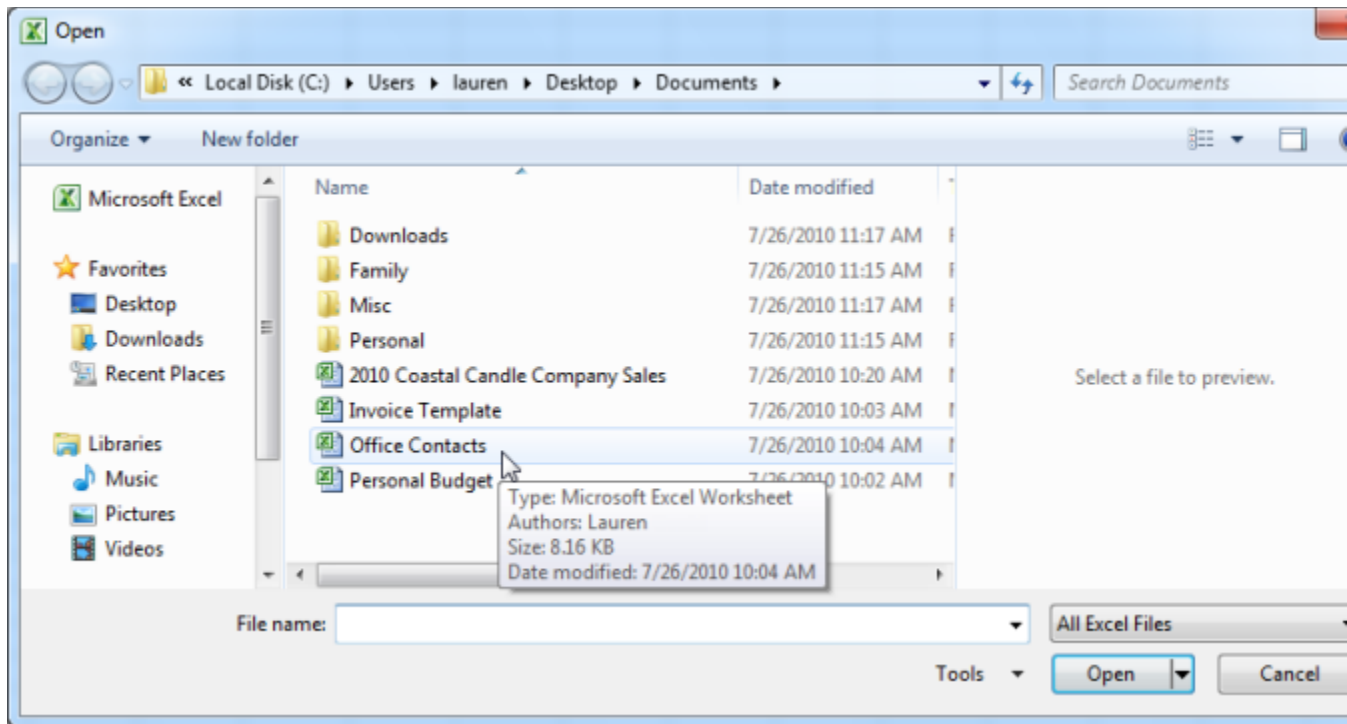
3. Select **Blank workbook** under **Available Templates**. It will be highlighted by default.
4. Click **Create**. A new blank workbook appears in the Excel window.



To save time, you can create your document from a **template**, which you can select under Available Templates. We'll talk more about this in a later lesson.

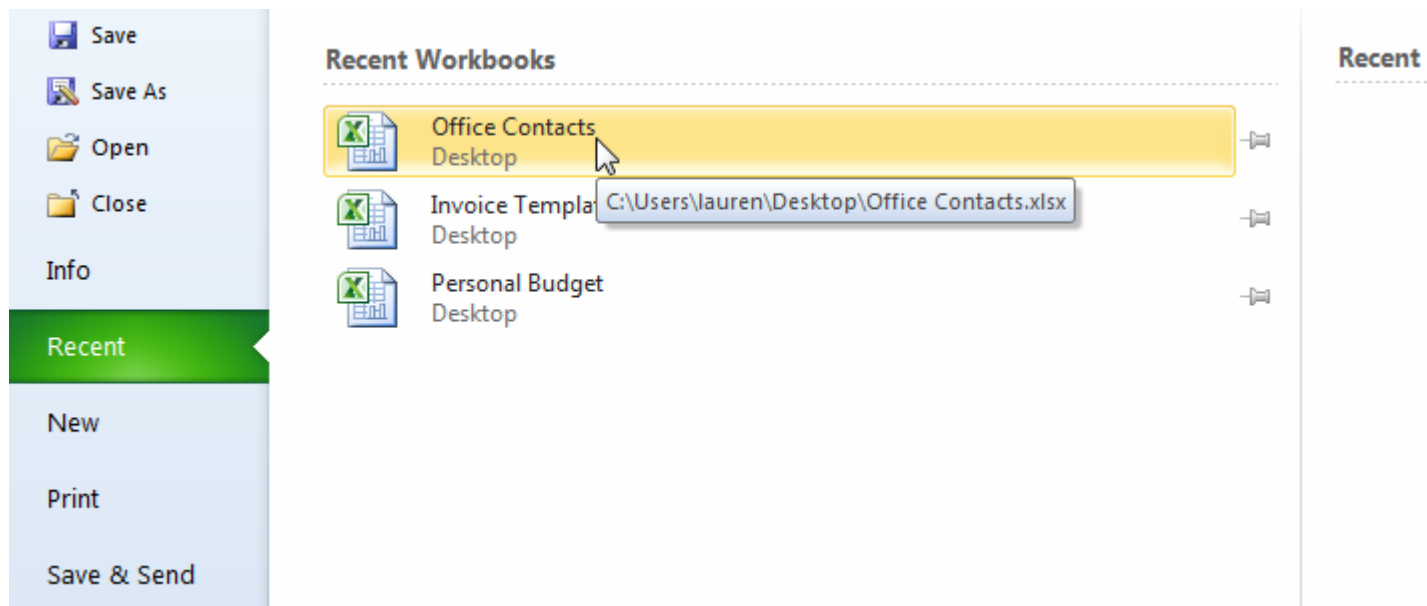
To open an existing workbook:

1. Click the **File** tab. This takes you to **Backstage view**.
2. Select **Open**. The Open dialog box appears.



3. Select your desired workbook, then click **Open**.

If you have opened the existing workbook recently, it may be easier to choose **Recent** from the **File tab** instead of **Open** to search for your workbook.



Excel cell

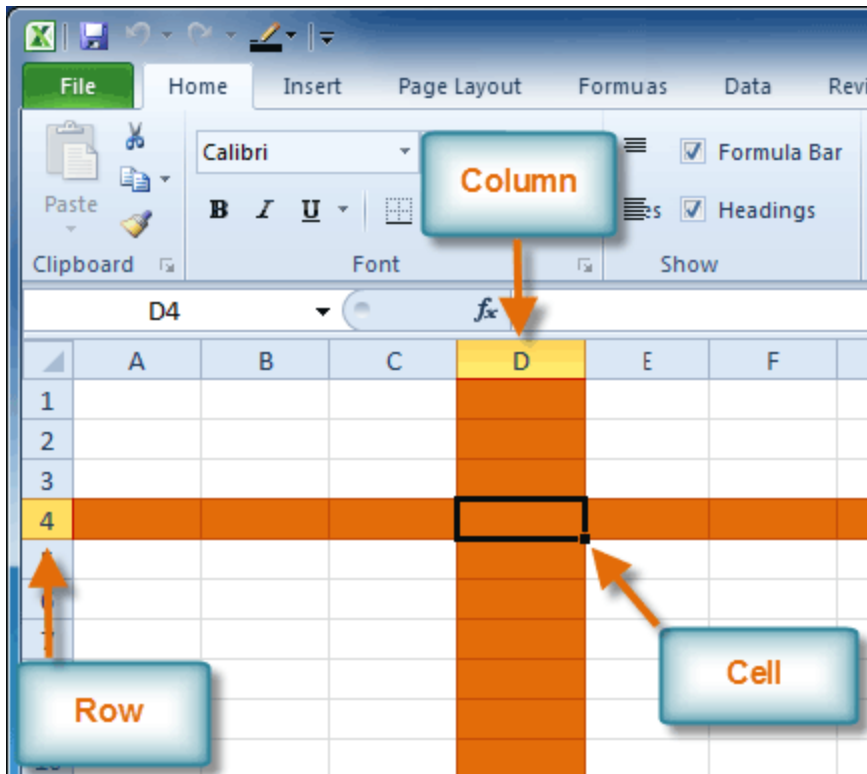
You will need to know the basic ways you can work with cells and cell content in Excel to be able to use it to calculate, analyze, and organize data. In this lesson, you will learn how to **select cells**, **insert content**, and **delete cells** and **cell content**. You will also learn how to **cut**, **copy**, and **paste cells**; **drag and drop cells**; and **fill cells** using the fill handle.

Introduction to cells and cell content

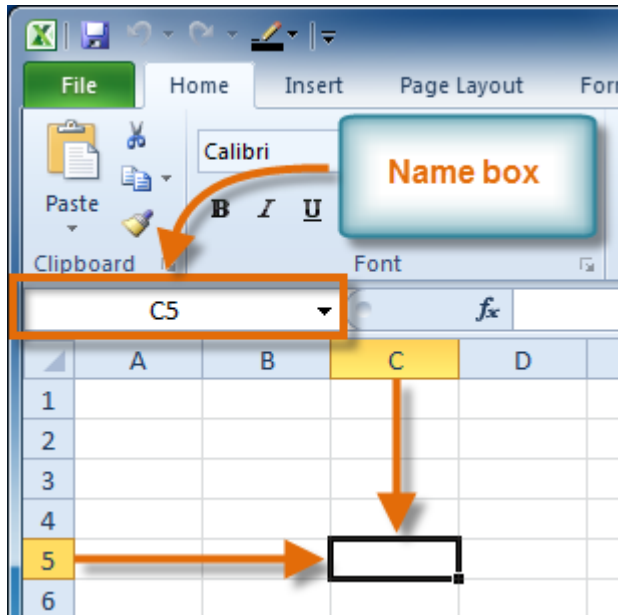
Cells are the basic building blocks of a worksheet. They can contain a variety of content such as **text**, **formatting attributes**, **formulas**, and **functions**. To work with cells, you'll need to know how to **select** them, **insert content**, and **delete cells** and **cell content**.

The cell

Each rectangle in a worksheet is called a **cell**. A cell is the intersection of a **row** and a **column**.

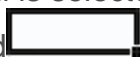


Each cell has a name, or a **cell address** based on which **column and row** it intersects. The **cell address** of a selected cell appears in the **name box**. Here, you can see that **C5** is selected.



You can also select **multiple cells** at the same time. A group of cells is known as a **cell range**. Rather than a single cell address, you will refer to a cell range using the cell addresses of the **first** and **last** cells in the cell range, separated by a **colon**. For example, a cell range that included cells A1, A2, A3, A4, and A5 would be written as **A1:A5**.

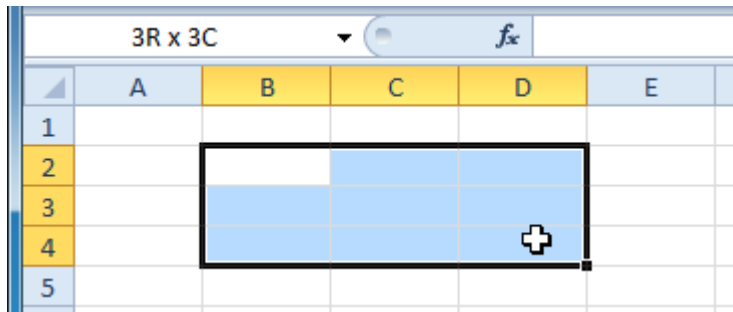
To select a cell:

1. **Click a cell** to select it. When a cell is selected, you will notice that the **borders** of the cell appear bold  and the **column heading** and **row heading** of the cell are highlighted.
2. Release your mouse. The cell will stay selected until you click another cell in the worksheet.

You can also navigate your worksheet and select a cell by using the **arrow keys** on your keyboard.

To select multiple cells:

1. **Click and drag your mouse** until all of the adjoining cells you want are highlighted.



2. Release your mouse. The cells will stay selected until you click another cell in the worksheet.

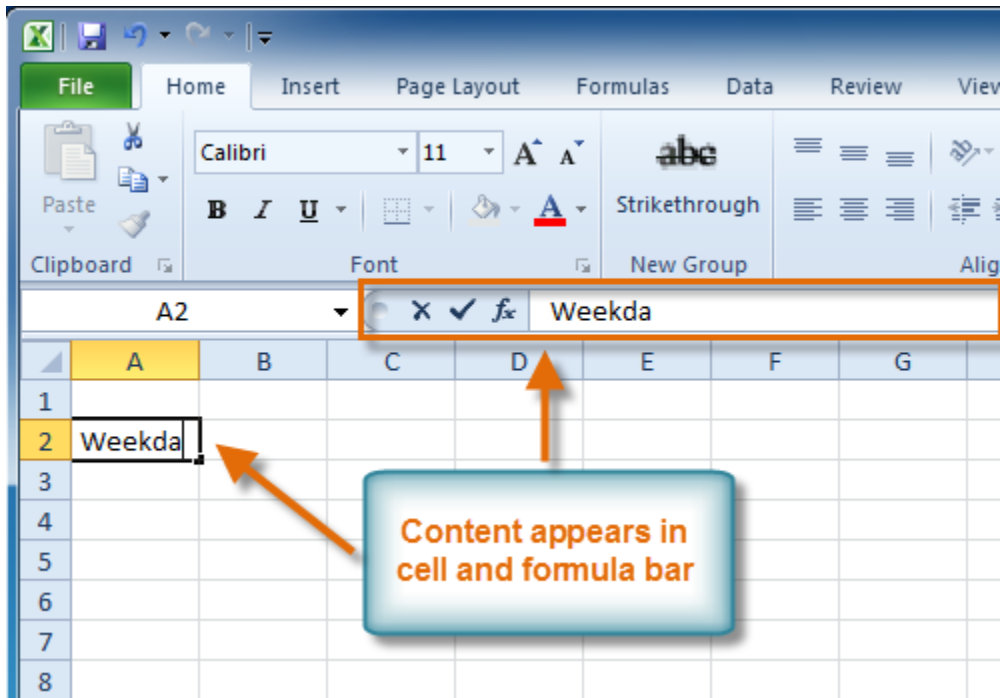
Cell content

Each cell can contain its own text, formatting, comments, formulas, and functions.

- **Text**
Cells can contain letters, numbers, and dates.
- **Formatting attributes**
Cells can contain formatting attributes that change the way letters, numbers, and dates are displayed. For example, dates can be formatted as MM/DD/YYYY or M/D/YYYY.
- **Comments**
Cells can contain comments from multiple reviewers.
- **Formulas and functions**
Cells can contain formulas and functions that calculate cell values. For example, **SUM(cell 1, cell 2...)** is a formula that can add the values in multiple cells.

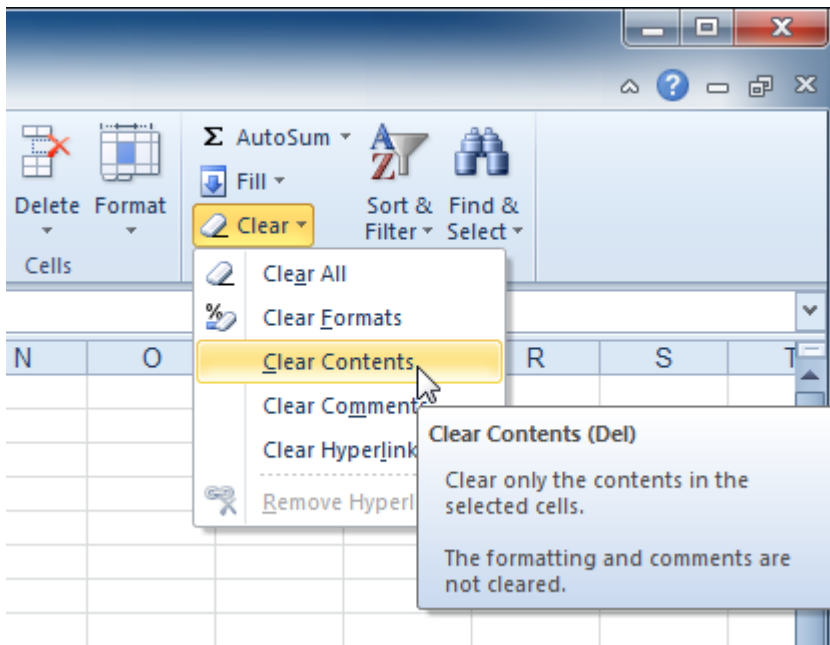
To insert content:

1. Click a cell to select it.
2. Enter content into the selected cell using your keyboard. The content appears in the **cell** and in the **formula bar**. You can also enter or edit cell content from the formula bar.



To delete content within cells:

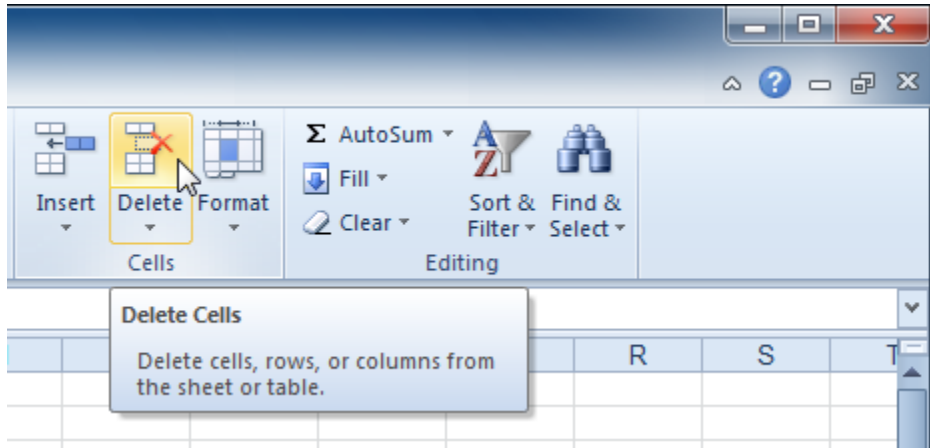
1. Select the cells containing content you want to delete.
2. Click the **Clear** command on the Ribbon. A **dialog box** will appear.
3. Select **Clear Contents**.



You can also use your keyboard's **Backspace** key to delete content from a **single cell** or the **Delete** key to delete content from **multiple cells**.

To delete cells:

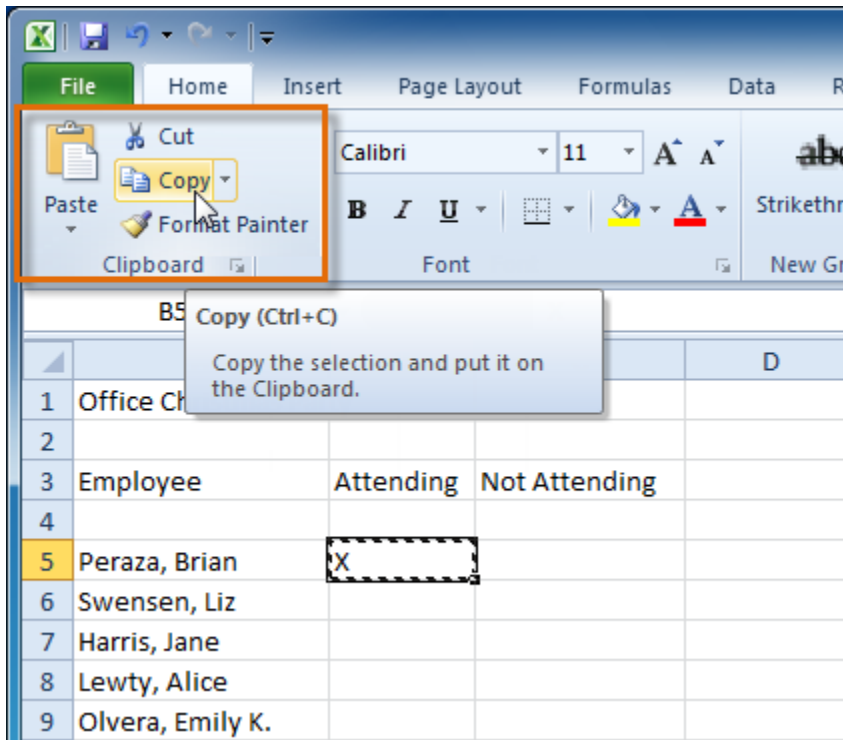
1. Select the cells you want to delete.
2. Choose the **Delete** command from the Ribbon.



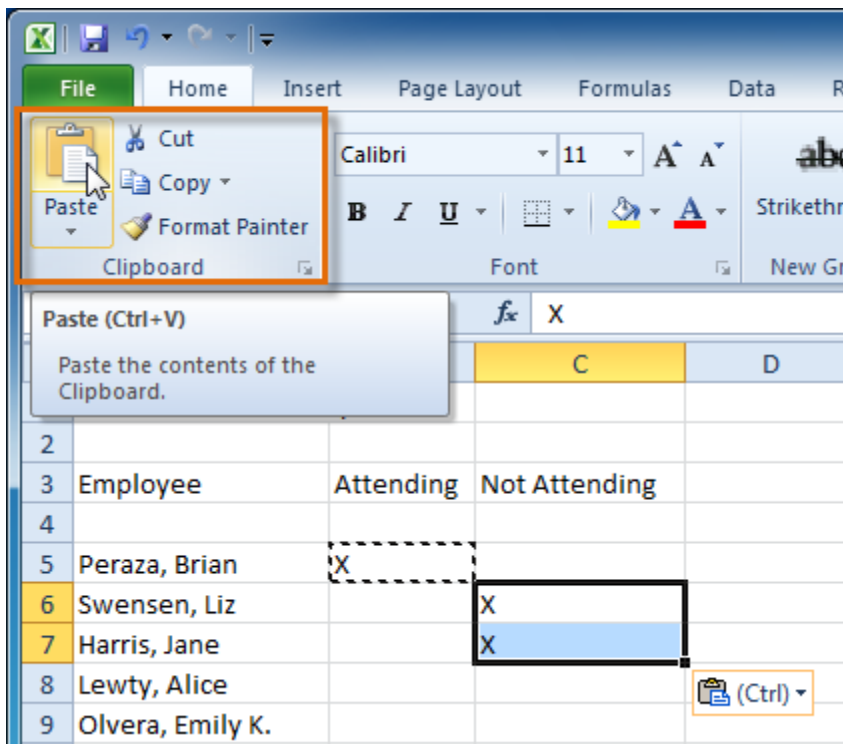
There's an important difference between **deleting the content of a cell** and **deleting the cell itself**. If you delete the cell, by default the cells underneath it will shift up and replace the deleted cell.

To copy and paste cell content:

1. Select the cells you want to copy.
2. Click the **Copy** command. The border of the selected cells will change appearance.

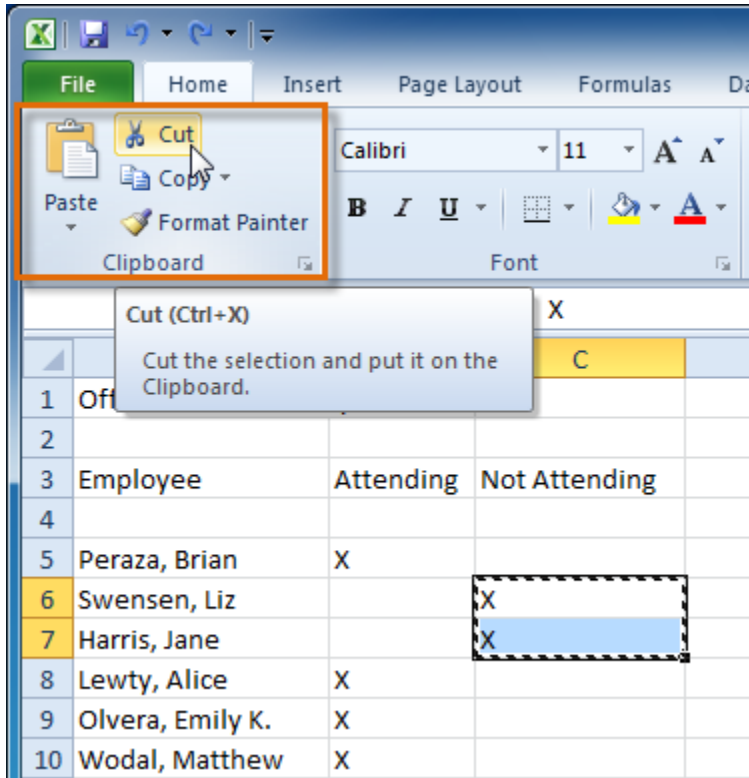


3. Select the cell or cells where you want to paste the content.
4. Click the **Paste** command. The copied content will be entered into the highlighted cells.

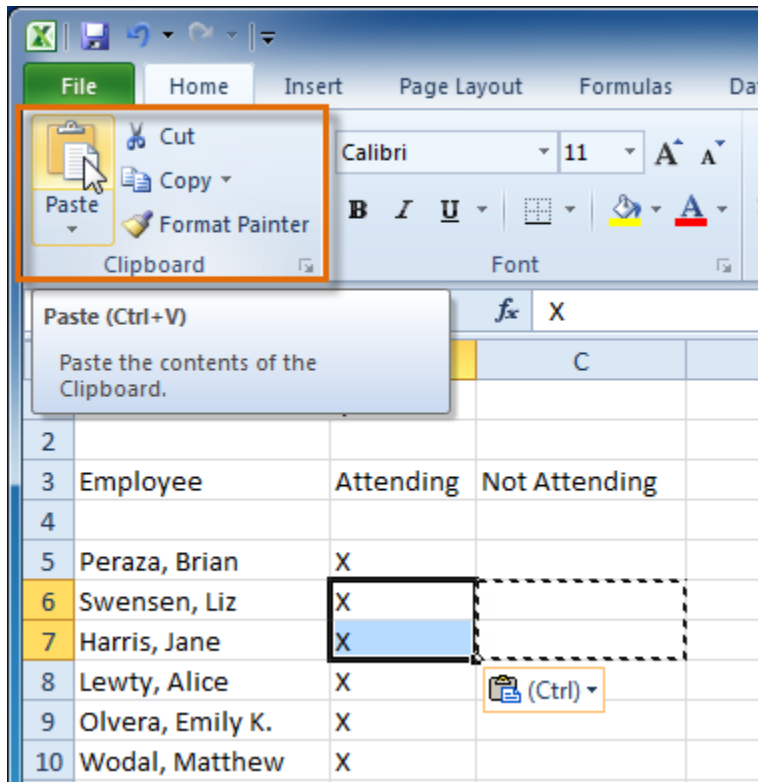


To cut and paste cell content:

1. Select the cells you want to cut.
2. Click the **Cut** command. The border of the selected cells will change appearance.

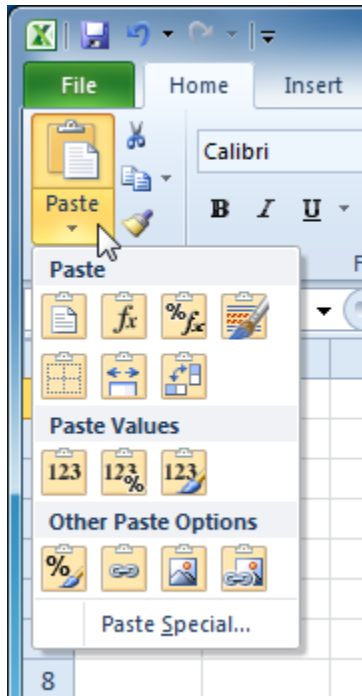


3. Select the cells where you want to paste the content.
4. Click the **Paste** command. The cut content will be removed from the original cells and entered into the highlighted cells.



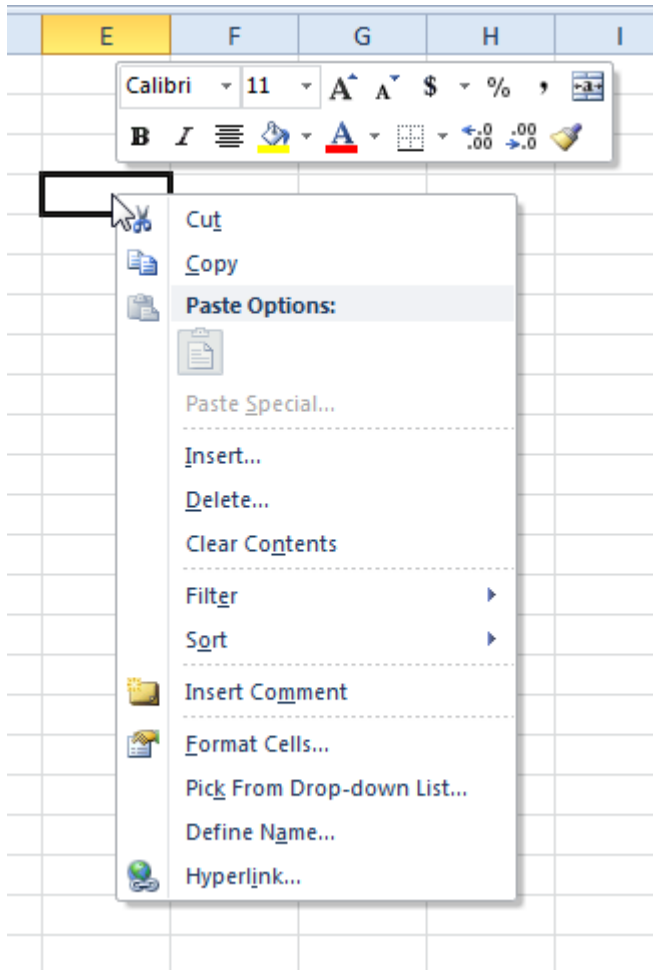
To access more paste options:

There are more Paste options you can access from the drop-down menu on the **Paste** command. These options may be convenient to advanced users who are working with **cells that contain formulas or formatting**.



To access formatting commands by right-clicking:

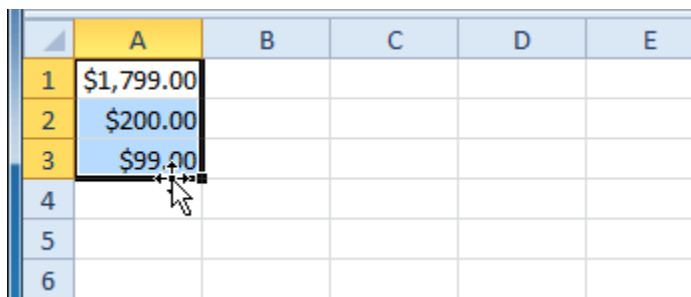
1. Select the cells you want to format.
2. **Right-click** the selected cells. A **dialog box** will appear where you can easily access many commands on the Ribbon.



To drag and drop cells:

1. Select the cells you want to move.
2. Position your mouse on one of the **outside edges** of the selected cells. The mouse changes from a **white cross** to a **black cross with 4**

arrows.





3. **Click and drag the cells** to the new location.

4. Release your mouse, and the cells will be dropped there.


	A	B	C	D	E
1			\$1,799.00		
2			\$200.00		
3			\$99.00		
4					
5					
6					

To use the fill handle to fill cells:

1. Select the cell or cells containing the content you want to use. You can fill cell content either vertically or horizontally.
2. Position your mouse over the **fill handle** so the **white cross**  becomes a **black cross** .

	A	B	C
1	Office Christmas Party		
2			
3	Employee	Attending	Not Attending
4			
5	Peraza, Brian	X	
6	Swensen, Liz		X
7	Harris, Jane		X
8	Lewty, Alice	X	
9	Olvera, Emily K.		
10	Wodal, Matthew		
11	McMillan, J.E.		
12	Dees, Robert		
13	Wimblet, Grace		
14	Salter, Joe Ann		

3. **Click and drag the fill handle** until all of the cells you want to fill are **highlighted**.
4. Release the mouse, and your cells will be filled.

	A	B	C
1	Office Christmas Party		
2			
3	Employee	Attending	Not Attending
4			
5	Peraza, Brian	X	
6	Swensen, Liz		X
7	Harris, Jane		X
8	Lewty, Alice	X	
9	Olvera, Emily K.	X	
10	Wodal, Matthew	X	
11	McMillan, J.E.	X	
12	Dees, Robert		
13	Wimblet, Grace		
14	Salter, Joe Ann		

Home Insert Page Layout

Cut

Copy

Format Painter

board

Font

Calibri

B *I* U

A1 Width: 29.57 (21)

A

North Carolina Board of Director

WORKBOOK

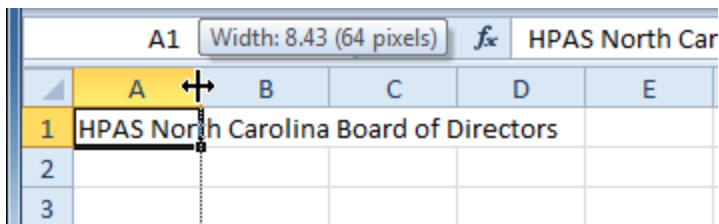
When you open a new blank workbook, the cells are set to a **default size**. You have the ability to modify cells, as well as to insert and delete columns, rows, and cells as needed. In this lesson, you will learn how to **change row height and column width**, **insert** and **delete rows and columns**, **wrap text** in a cell, and **merge cells**.

Working with columns, rows, and cells

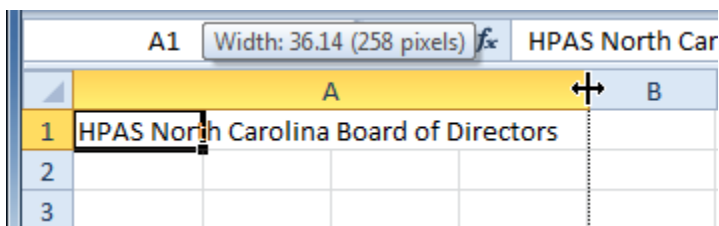
By default, every row and column of a new workbook is set to the same **height** and **width**. Excel allows you to modify column width and row height in different ways.

To modify column width:

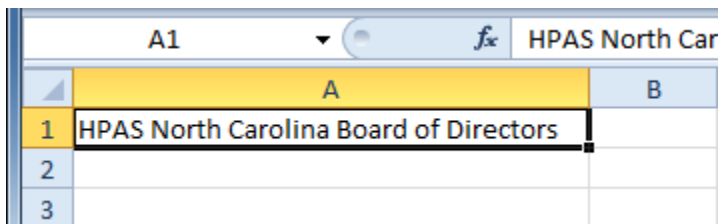
1. Position your mouse over the **column line** in the **column heading** so the **white cross** becomes a **double arrow**.



2. **Click and drag the column** to the right to increase column width or to the left to decrease column width.



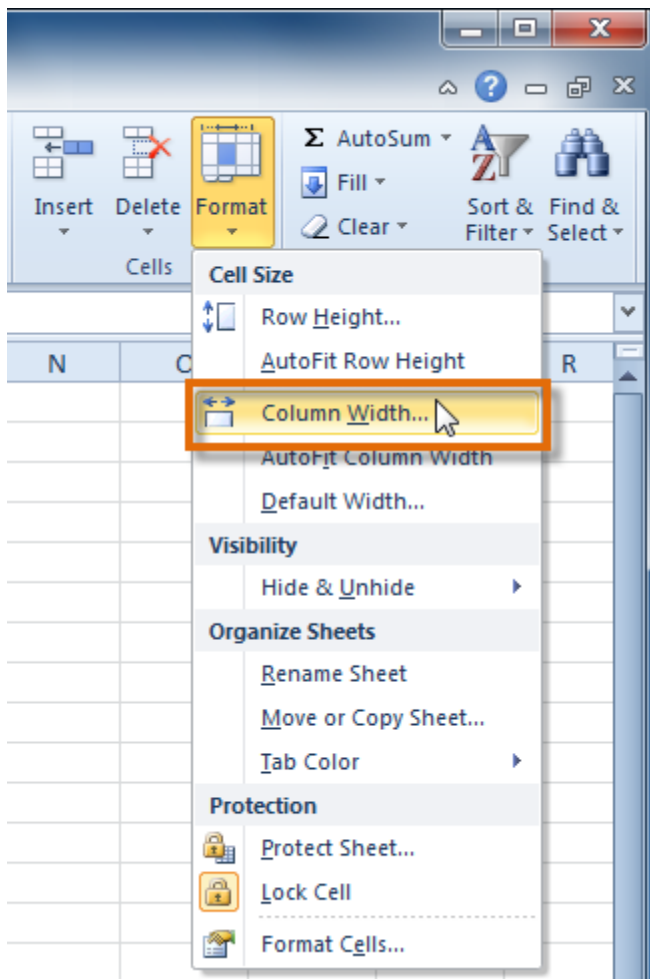
3. Release the mouse. The column width will be changed in your spreadsheet.



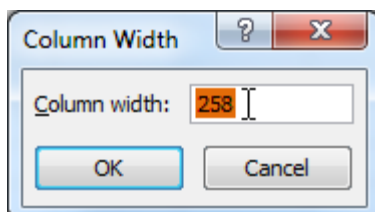
If you see **pound signs** (#####) in a cell, it means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

To set column width with a specific measurement:

1. Select the columns you want to modify.
2. Click the **Format** command on the **Home** tab. The format drop-down menu appears.
3. Select **Column Width**.



4. The **Column Width** dialog box appears. Enter a specific measurement.

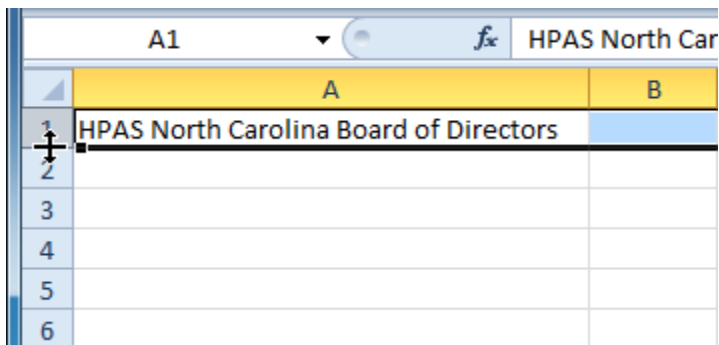


5. Click **OK**. The width of each selected column will be changed in your worksheet.

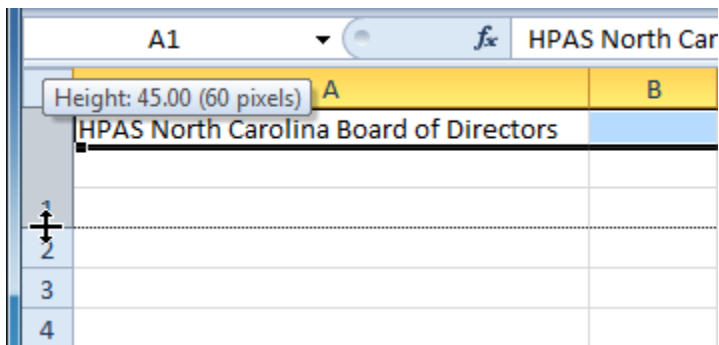
Select **AutoFit Column Width** from the format drop-down menu, and Excel will automatically adjust each selected column so all of the text will fit.

To modify row height:

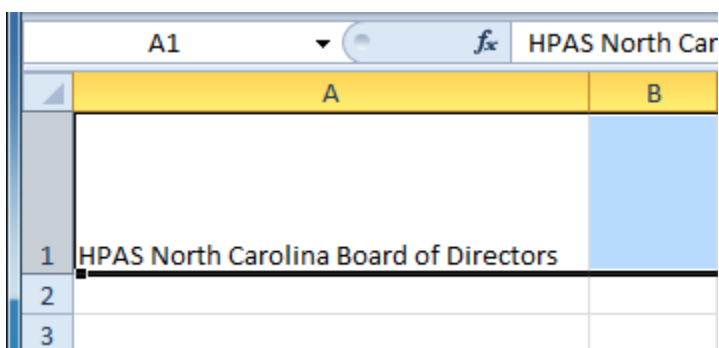
1. Position the **cursor** over the **row line** so the **white cross**  becomes a **double arrow** .



2. **Click and drag the row** downward to increase row height or upward to decrease height.

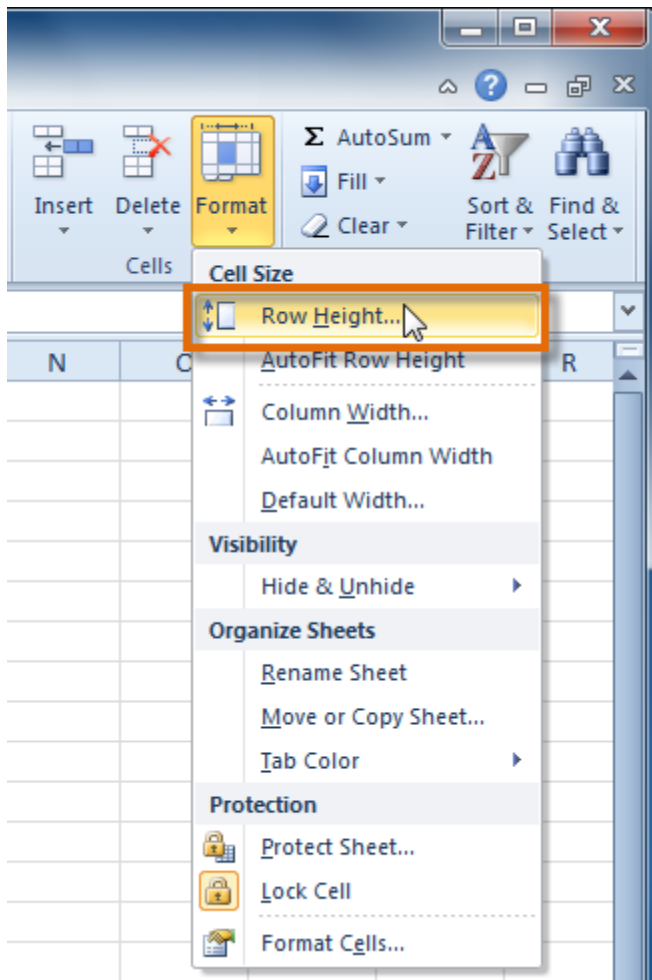


3. Release the mouse. The height of each selected row will be changed in your worksheet.

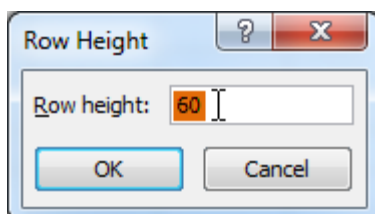


To set row height with a specific measurement:

1. Select the rows you want to modify.
2. Click the **Format** command on the **Home** tab. The format drop-down menu appears.
3. Select **Row Height**.



4. The **Row Height** dialog box appears. Enter a specific measurement.



5. Click **OK**. The selected rows heights will be changed in your spreadsheet.

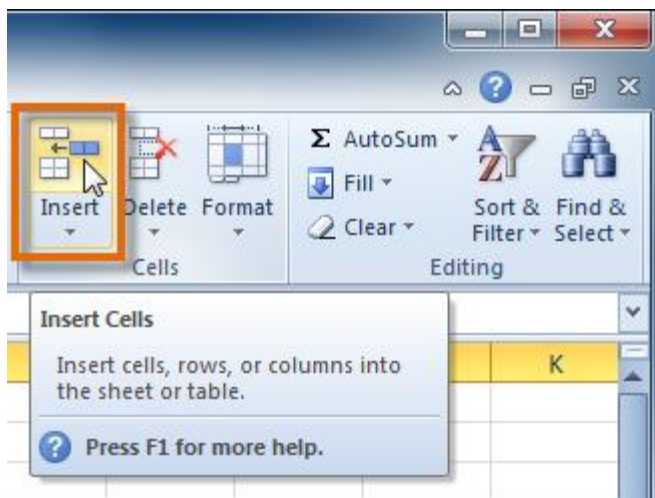
Select **AutoFit Row Height** from the format drop-down menu, and Excel will automatically adjust each selected row so all of the text will fit.

To insert rows:


1. Select the row **below** where you want the new row to appear.


	A	B	C
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org
3	Eberhardt, Elizabeth	252-985-3558	eberhardtte@hpasnc.org
4	Everett, Carol	919-503-9560	everettc@hpasnc.org
5	Hepburn, Katie H.	704-882-5559	hepburnk@hpasnc.org
6	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org
7	McBride, Rebecca	828-357-0072	mcbrider@hpasnc.org
8	Mixon, Daniel	919-821-7425	mixond@hpasnc.org
9	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org

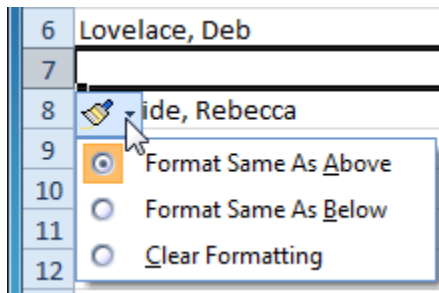
2. Click the **Insert** command on the **Home** tab.



3. The new row appears in your worksheet.

	A	B	C
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org
3	Eberhardt, Elizabeth	252-985-3558	eberhardte@hpasnc.org
4	Everett, Carol	919-503-9560	everettc@hpasnc.org
5	Hepburn, Katie H.	704-882-5559	hepburnk@hpasnc.org
6	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org
7			
8	 Bride, Rebecca	828-357-0072	mcbrider@hpasnc.org
9	Mixon, Daniel	919-821-7425	mixond@hpasnc.org
10	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org

When inserting new rows, columns, or cells, you will see the **Insert Options** button  by the inserted cells. This button allows you to choose how Excel formats them. By default, Excel formats inserted rows with the same formatting as the cells in the row above them. To access more options, hover your mouse over the Insert Options button and click the drop-down arrow that appears.

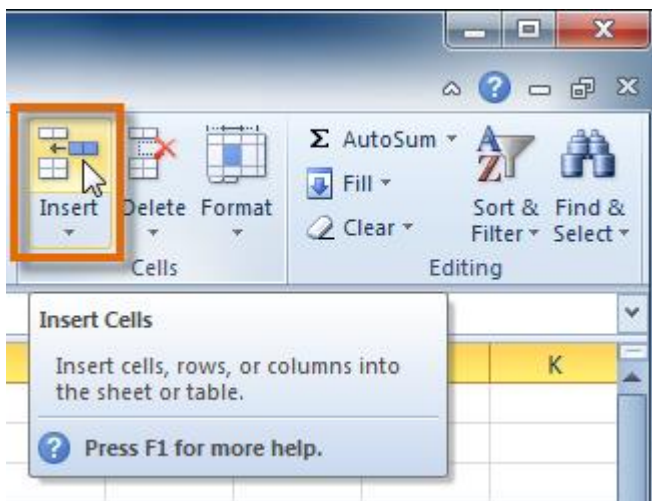


To insert columns:

1. Select the column to the **right** of where you want the new column to appear. For example, if you want to insert a column between A and B, select column B.

	A	B	C
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org
3	Eberhardt, Elizabeth	252-985-3558	eberhardte@hpasnc.org
4	Everett, Carol	919-503-9560	everettc@hpasnc.org
5	Hepburn, Katie H.	704-882-5559	hepburnk@hpasnc.org
6	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org
7	Manning, Christopher L.	919-976-7569	manningc@hpasnc.org
8	McBride, Rebecca	828-357-0072	mcbrider@hpasnc.org
9	Mixon, Daniel	919-821-7425	mixond@hpasnc.org
10	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org

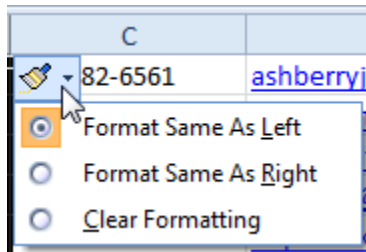
- Click the **Insert** command on the **Home** tab.



- The new column appears in your worksheet.

	A	B	C	D
1	Ashberry, Jane		919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett		919-576-4562	davisg@hpasnc.org
3	Eberhardt, Elizabeth		252-985-3558	eberhardte@hpasnc.org
4	Everett, Carol		919-503-9560	everettc@hpasnc.org
5	Hepburn, Katie H.		704-882-5559	hepburnk@hpasnc.org
6	Lovelace, Deb		919-785-9656	lovelaced@hpasnc.org
7	Manning, Christopher L.		919-976-7569	manningc@hpasnc.org
8	McBride, Rebecca		828-357-0072	mcbrider@hpasnc.org
9	Mixon, Daniel		919-821-7425	mixond@hpasnc.org
10	Stevens, Kevin		919-783-8564	stevensk@hpasnc.org

By default, Excel formats inserted columns with the same formatting as the column to the left of them. To access more options, hover your mouse over the **Insert Options** button and click the drop-down arrow that appears.



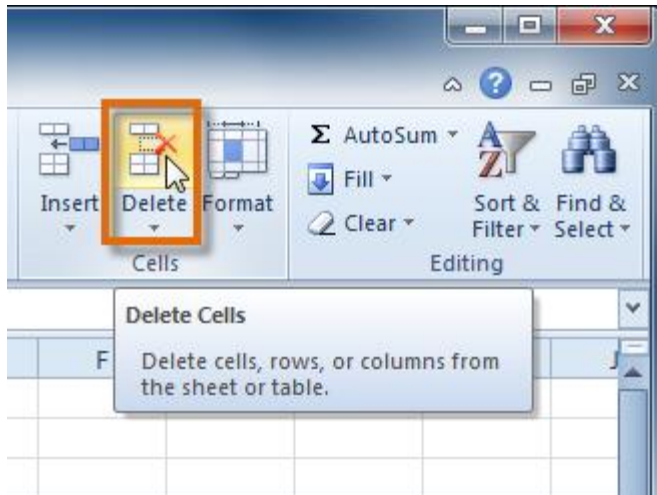
When inserting rows and columns, make sure to select the row or column by clicking its heading so all of the cells in that row or column are selected. If you select just a cell in the row or column, only a new cell will be inserted.

To delete rows:

1. Select the rows you want to delete.

	A	B	C
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org
3	Eberhardt, Elizabeth	252-985-3558	eberhardtte@hpasnc.org
4	Everett, Carol	919-503-9560	everettc@hpasnc.org
5	Hepburn, Katie H.	704-882-5559	hepburnk@hpasnc.org
3R	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org
7	Manning, Christopher L.	919-976-7569	manningc@hpasnc.org
8	McBride, Rebecca	828-357-0072	mcbriider@hpasnc.org
9	Mixon, Daniel	919-821-7425	mixond@hpasnc.org
10	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org

2. Click the **Delete** command on the **Home** tab.



3. The rows are deleted from your worksheet.

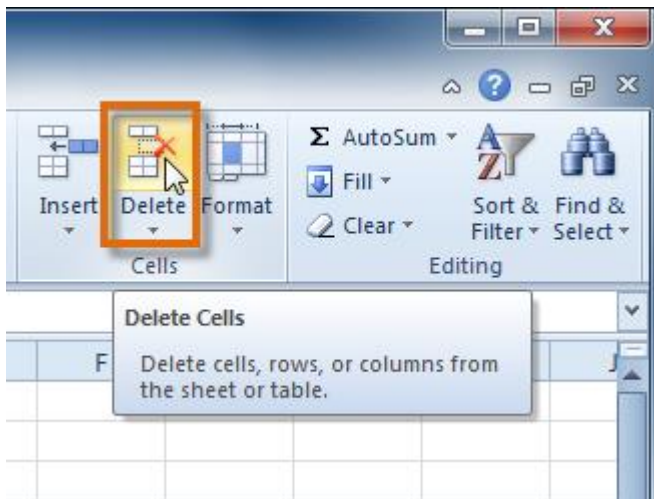
	A	B	C
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org
3	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org
4	Manning, Christopher L.	919-976-7569	manningc@hpasnc.org
5	McBride, Rebecca	828-357-0072	mcbrider@hpasnc.org
6	Mixon, Daniel	919-821-7425	mixond@hpasnc.org
7	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org
8			
9			
10			

To delete columns:

1. Select the columns you want to delete.

	A	B	C	D	E	F	G
1	Ashberry, Jane	Raleigh	27589	919-882-6561	ashberryj@hpasnc.org		
2	Davis, Garrett	Raleigh	27576	919-576-4562	davisg@hpasnc.org		
3	Eberhardt, Elizabeth	Louisberg	27079	252-985-3558	eberhardt@hpasnc.org		
4	Everett, Carol	Chapel Hill	27051	919-503-9560	everettc@hpasnc.org		
5	Hepburn, Katie H.	Cary	27057	704-882-5559	hepburnk@hpasnc.org		
6	Lovelace, Deb	Newbern	24484	919-785-9656	lovelaced@hpasnc.org		
7	Manning, Christopher L.	Raleigh	27587	919-976-7569	manningc@hpasnc.org		
8	McBride, Rebecca	Cary	27054	828-357-0072	mcbriider@hpasnc.org		
9	Mixon, Daniel	Raleigh	27086	919-821-7425	mixond@hpasnc.org		
10	Stevens, Kevin	Durham	27054	919-783-8564	stevensk@hpasnc.org		

- Click the **Delete** command on the **Home** tab.



- The columns are deleted from your worksheet.

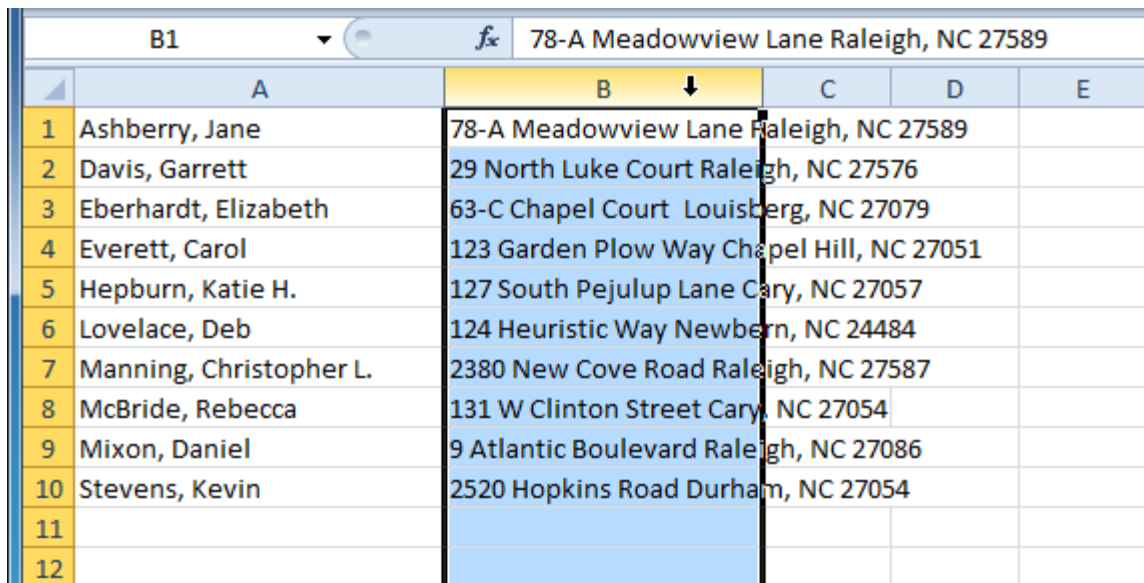
	A	B	C	D	E	F	G
1	Ashberry, Jane	919-882-6561	ashberryj@hpasnc.org				
2	Davis, Garrett	919-576-4562	davisg@hpasnc.org				
3	Eberhardt, Elizabeth	252-985-3558	eberhardt@hpasnc.org				
4	Everett, Carol	919-503-9560	everettc@hpasnc.org				
5	Hepburn, Katie H.	704-882-5559	hepburnk@hpasnc.org				
6	Lovelace, Deb	919-785-9656	lovelaced@hpasnc.org				
7	Manning, Christopher L.	919-976-7569	manningc@hpasnc.org				
8	McBride, Rebecca	828-357-0072	mcbriider@hpasnc.org				
9	Mixon, Daniel	919-821-7425	mixond@hpasnc.org				
10	Stevens, Kevin	919-783-8564	stevensk@hpasnc.org				

Wrapping text and merging cells

If a cell contains more text than can be displayed, you can choose to wrap the text within the cell or merge the cell with empty adjoining cells. **Wrap text** to make it display on multiple lines of the cell. **Merge cells** to combine adjoining cells into one larger cell.

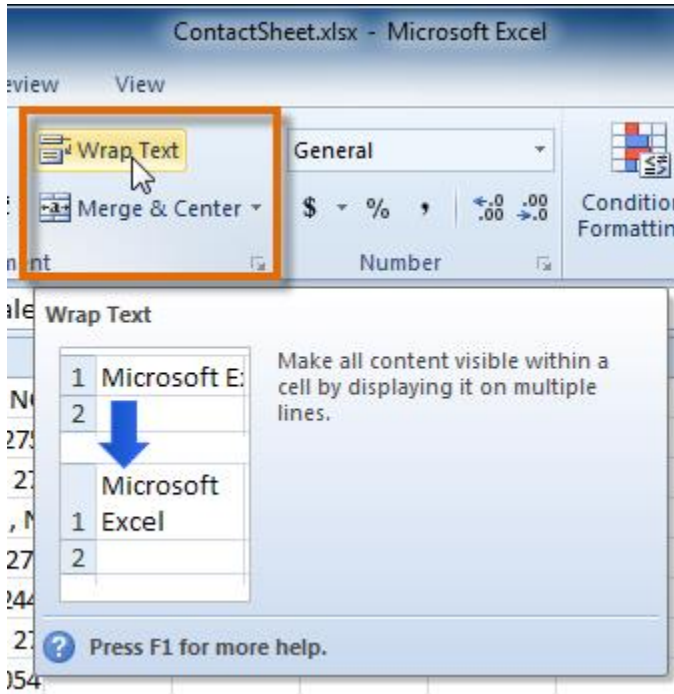
To wrap text:

1. Select the cells with text that you want to wrap.



	A	B	C	D	E
1	Ashberry, Jane	78-A Meadowview Lane Raleigh, NC 27589			
2	Davis, Garrett	29 North Luke Court Raleigh, NC 27576			
3	Eberhardt, Elizabeth	63-C Chapel Court Louisberg, NC 27079			
4	Everett, Carol	123 Garden Plow Way Chapel Hill, NC 27051			
5	Hepburn, Katie H.	127 South Pejulup Lane Cary, NC 27057			
6	Lovelace, Deb	124 Heuristic Way Newbern, NC 24484			
7	Manning, Christopher L.	2380 New Cove Road Raleigh, NC 27587			
8	McBride, Rebecca	131 W Clinton Street Cary, NC 27054			
9	Mixon, Daniel	9 Atlantic Boulevard Raleigh, NC 27086			
10	Stevens, Kevin	2520 Hopkins Road Durham, NC 27054			
11					
12					

2. Select the **Wrap Text** command on the **Home** tab.



3. The text in the selected cells will be wrapped in your worksheet.

B1		fx 78-A Meadowview Lane Raleigh, NC 27589			
	A	B	C	D	E
1	Ashberry, Jane	78-A Meadowview Lane Raleigh, NC 27589			
2	Davis, Garrett	29 North Luke Court Raleigh, NC 27576			
3	Eberhardt, Elizabeth	63-C Chapel Court Louisberg, NC 27079			
4	Everett, Carol	123 Garden Plow Way Chapel Hill, NC 27051			
5	Hepburn, Katie H.	127 South Pejulup Lane Cary, NC 27057			
6	Lovelace, Deb	124 Heuristic Way Newbern, NC 24484			
7	Manning, Christopher L.	2380 New Cove Road Raleigh, NC 27587			
8	McBride, Rebecca	131 W Clinton Street Cary, NC 27054			
9	Mixon, Daniel	9 Atlantic Boulevard Raleigh, NC 27086			
10	Stevens, Kevin	2520 Hopkins Road Durham, NC 27054			
11					
12					

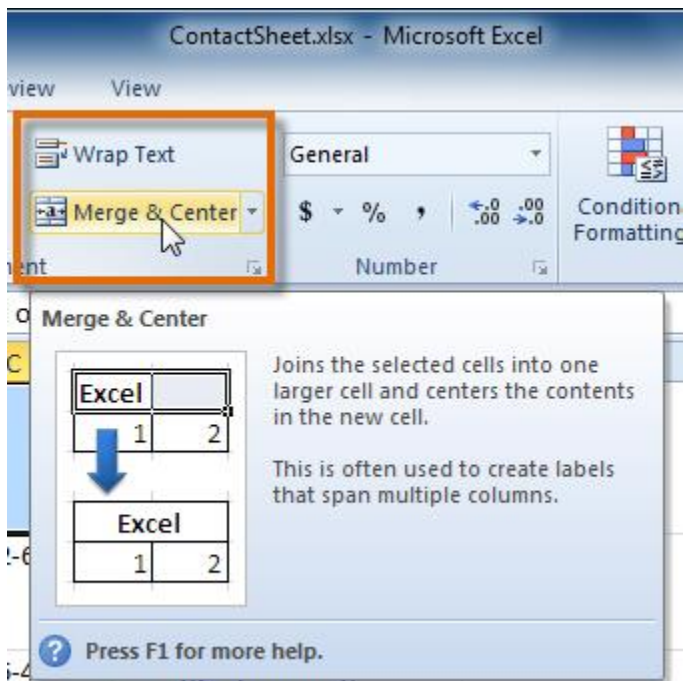
If you change your mind, relick the **Wrap Text** command to unwrap the text.

To merge cells using the Merge & Center command:

1. Select the cells you want to merge.

1R x 4C					HPAS North Carolina Board of Directors				
A		B		C		D			
HPAS North Carolina Board of Directors									
Ashberry, Jane		78-A Meadowview Lane Raleigh, NC 27589		919-882-6561		ashberryj@hpasnc.org			
Davis, Garrett		29 North Luke Court Raleigh, NC 27576		919-576-4562		davisg@hpasnc.org			
Eberhardt, Elizabeth		63-C Chapel Court Louisberg, NC 27079		252-985-3558		eberhardte@hpasnc.org			

2. Select the **Merge & Center** command on the **Home** tab.



3. The selected cells will be merged, and the text will be centered.

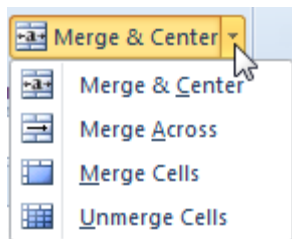
	A	B	C	D
1	HPAS North Carolina Board of Directors			
2	Ashberry, Jane	78-A Meadowview Lane Raleigh, NC 27589	919-882-6561	ashberryj@hpasnc.org
3	Davis, Garrett	29 North Luke Court Raleigh, NC 27576	919-576-4562	davisg@hpasnc.org
4	Eberhardt, Elizabeth	63-C Chapel Court Louisberg, NC 27079	252-985-3558	eberhardt@hpasnc.org

If you change your mind, relick the **Merge & Center** command to unmerge the cells.

To access more merge options:

Click the drop-down arrow next to the **Merge & Center** command on the Home tab.
The **merge** drop-down menu appears.

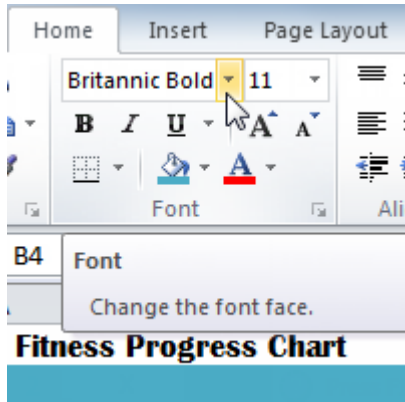
- **Merge & Center:** Merges selected cells into one cell and centers the text
- **Merge Across:** Merges each *row* of selected cells into larger cells; useful when merging content across multiple rows of cells rather than creating one large cell
- **Merge Cells:** Merges selected cells into one cell
- **Unmerge Cells:** Unmerges selected cells



Although merging cells can be useful, it can also cause problems with some spreadsheets. Watch the video below to learn about some of the problems with merging cells.

Formatting Cells

Introduction



Spreadsheets that have not been formatted can be difficult to read. Formatted text and cells can draw attention to specific parts of the spreadsheet and make the spreadsheet more visually appealing and easier to understand.

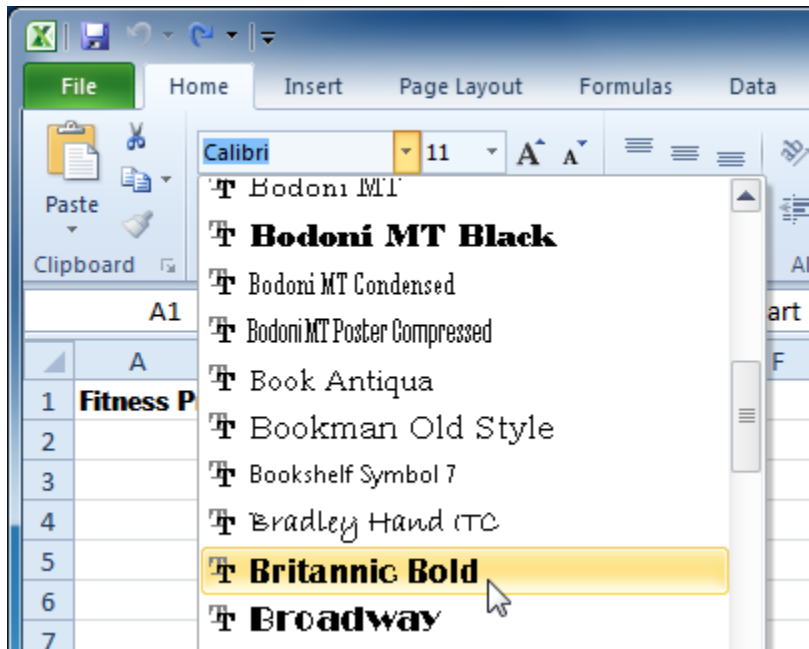
In Excel, there are many tools you can use to format text and cells. In this lesson, you will learn how to change the **color** and **style** of **text** and **cells**, **align text**, and apply special formatting to **numbers** and **dates**.

Formatting text

Many of the commands you will use to format text can be found in the Font, Alignment, and Number groups on the Ribbon. **Font** commands let you change the style, size, and color of text. You can also use them to add borders and fill colors to cells. **Alignment** commands let you format how text is displayed across cells both horizontally and vertically. **Number** commands let you change how selected cells display numbers and dates.

To change the font:

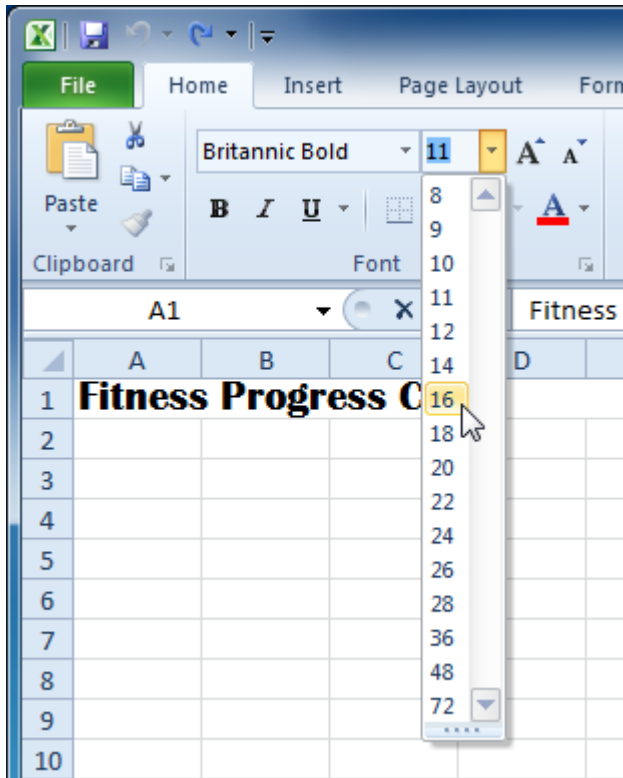
1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **Font** command on the Home tab. The font drop-down menu appears.
3. Move your mouse over the various fonts. A live preview of the font will appear in the worksheet.



4. Select the font you want to use.

To change the font size:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **font size** command on the Home tab. The font size drop-down menu appears.
3. Move your mouse over the various font sizes. A live preview of the font size will appear in the worksheet.



4. Select the font size you want to use.

You can also use the **Grow Font** and **Shrink Font** commands to change the size.



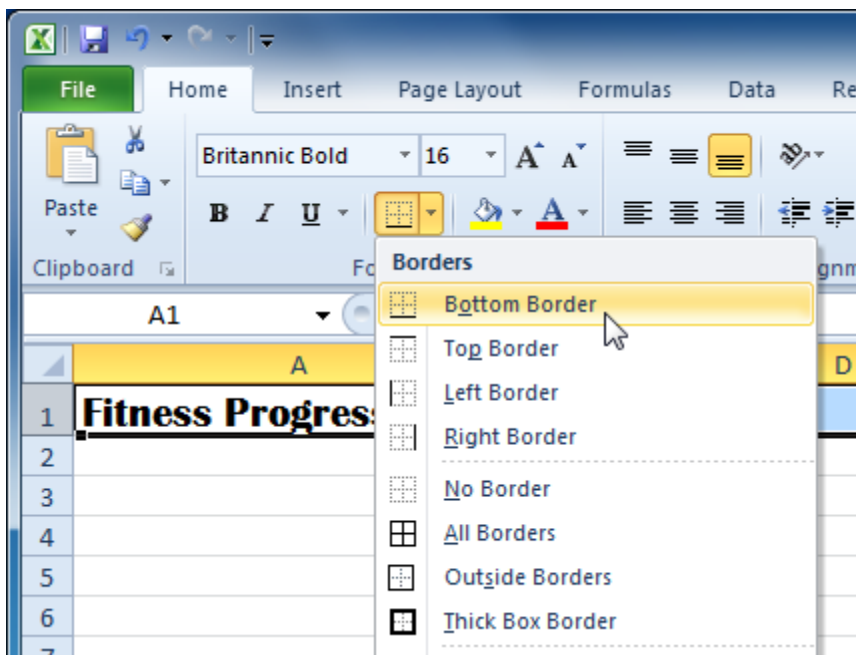
To use the bold, italic, and underline commands:

1. Select the cells you want to modify.
2. Click the **Bold**, *Italic*, or Underline command on the Home tab.



To add a border:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **Borders** command on the Home tab. The border drop-down menu appears.



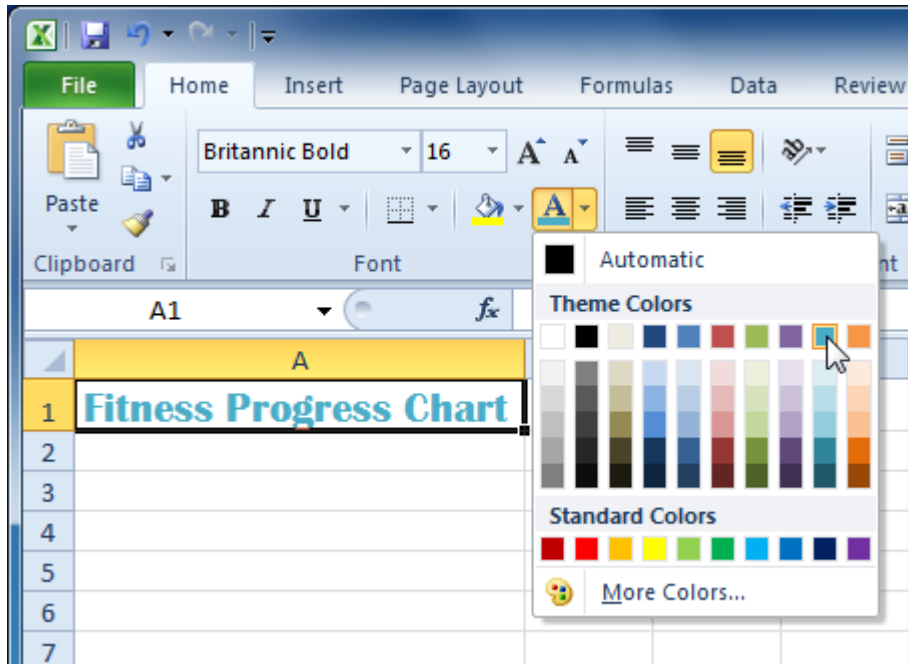
3. Select the border style you want to use.

You can draw borders and change the **line style** and **color** of borders with the **Draw Borders** tools at the bottom of the Borders drop-down menu.

To change font color:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **font color** command on the Home tab. The **color** menu appears.

3. Move your mouse over the various font colors. A live preview of the color will appear in the worksheet.

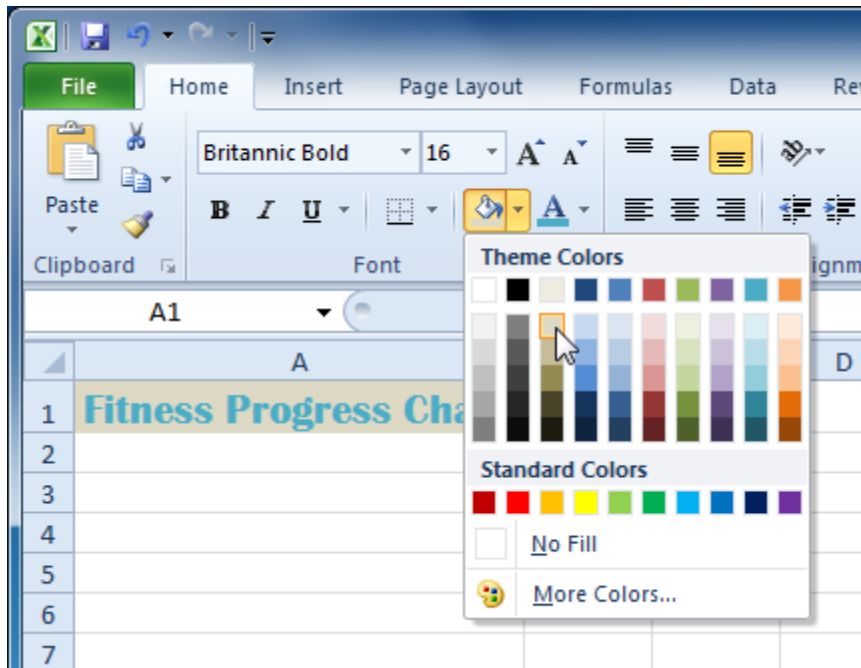


4. Select the font color you want to use.

Your color choices are not limited to the drop-down menu that appears. Select **More Colors** at the bottom of the menu to access additional color options.

To add a fill color:

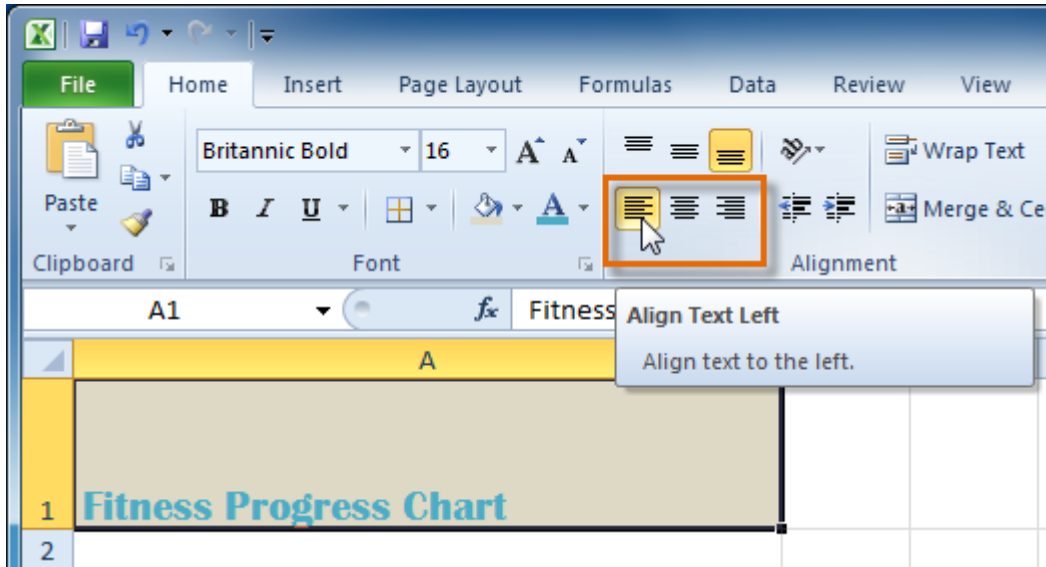
1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **fill color** command on the Home tab. The **color** menu appears.
3. Move your cursor over the various fill colors. A live preview of the color will appear in the worksheet.



4. Select the fill color you want to use.

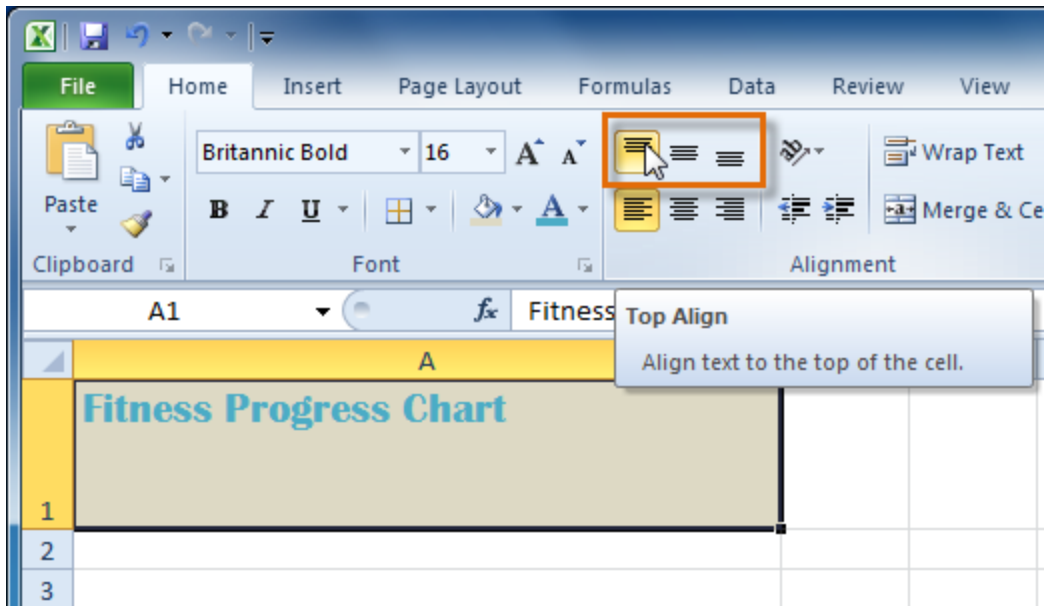
To change horizontal text alignment:

1. Select the cells you want to modify.
2. Select one of the three horizontal **Alignment** commands on the Home tab.
 - **Align Text Left:** Aligns text to the left of the cell
 - **Center:** Aligns text to the center of the cell
 - **Align Text Right:** Aligns text to the right of the cell



To change vertical text alignment:

1. Select the cells you want to modify.
2. Select one of the three vertical **Alignment** commands on the Home tab.
 - **Top Align:** Aligns text to the top of the cell
 - **Middle Align:** Aligns text to the middle of the cell
 - **Bottom Align:** Aligns text to the bottom of the cell



By default, numbers align to the bottom-right of cells, while words and letters align to the bottom-left of cells.

Using the Format Painter

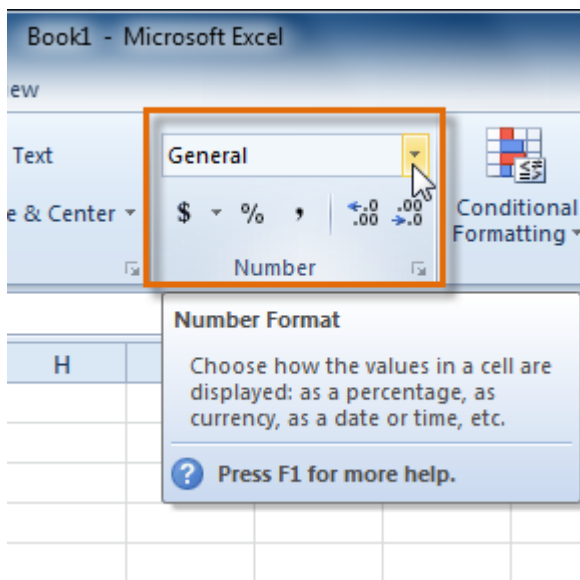
If you want to copy formatting from one cell to another, you can use the **Format Painter** command on the **Home** tab. When you click the Format Painter, it will copy all of the formatting from the selected cell. You can then **click and drag** over any cells you want to paste the formatting to.

Formatting numbers and dates

One of Excel's most useful features is its ability to format numbers and dates in a variety of ways. For example, you might need to format numbers with decimal places, currency symbols (\$), or percent symbols (%).

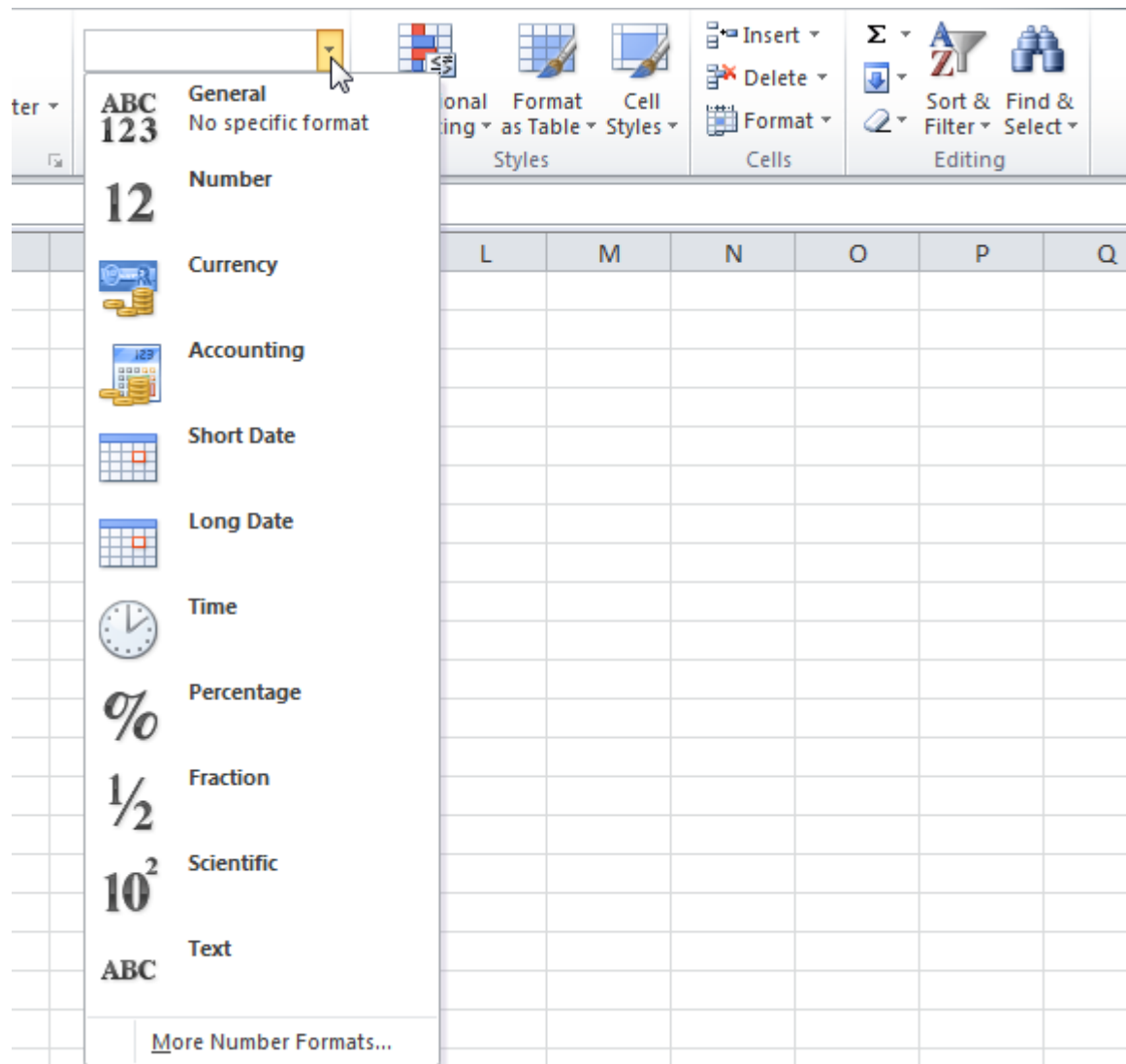
To format numbers and dates:

1. Select the cells you want to modify.
2. Click the **drop-down arrow** next to the **Number Format** command on the Home tab.



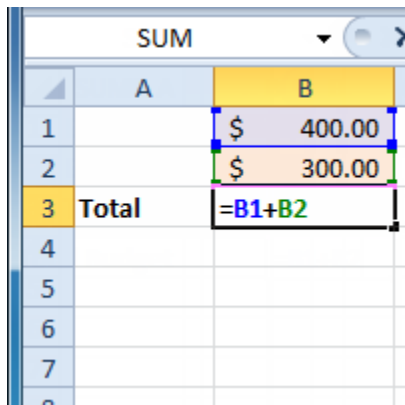
3. Select the number format you want. For some number formats, you can then use the **Increase Decimal** and **Decrease Decimal** commands (below the Number Format command) to change the number of decimal places that are displayed.

Click the buttons in the interactive below to learn about the different number formats.



1. Change the **fill color** of a group of cells. If you are using the example, add a fill color to row 3.
2. Try changing the vertical and horizontal **text alignment** for some cells.
3. Try changing the **formatting** of a number. If you are using the example, change the date format in column A.

Simple Formulas



	A	B
1		\$ 400.00
2		\$ 300.00
3	Total	=B1+B2
4		
5		
6		
7		
8		

Excel can be used to calculate numerical information. In this lesson, you will learn how to **create simple formulas** in Excel to add, subtract, multiply, and divide values in a workbook. You'll also learn the various ways you can use **cell references** to make working with formulas easier and more efficient.

Simple formulas

A **formula** is an equation that performs a calculation. Like a calculator, Excel can execute formulas that add, subtract, multiply, and divide.

One of Excel's most useful features is its ability to calculate using a cell address to represent the value in a cell. This is called using a cell reference.

To maximize the capabilities of Excel, it is important to understand how to **create simple formulas** and **use cell references**.

Creating simple formulas

Excel uses standard operators for equations, such as a **plus sign** for addition (+), **minus sign** for subtraction (-), **asterisk** for multiplication (*), **forward slash** for division (/), and **caret** (^) for exponents.

The key thing to remember when writing formulas for Excel is that all formulas must begin with an **equals sign** (=). This is because the cell contains—or is equal to—the formula and its value.

Addition	+	=5+5
Subtraction	-	=5-5
Multiplication	*	=5*5
Division	/	=5/5
Exponents	^	=5^5

To create a simple formula in Excel:

1. Select the cell where the answer will appear (**B4**, for example).

The screenshot shows an Excel spreadsheet with columns A, B, and C, and rows 1 through 5. The formula bar at the top shows 'B4' and the function icon 'fx'. The spreadsheet data is as follows:

	A	B	C
1	Estimated painting cost per square foot		
2	Total cost	\$75.00	
3	Square Feet	250	
4	Total/Sq Ft		
5			

2. Type the **equals sign (=)**.
3. Type in the formula you want Excel to calculate (**75/250**, for example).

The screenshot shows the same Excel spreadsheet as above, but now the formula bar shows '=75/250' and the formula is visible in cell B4. The spreadsheet data is as follows:

	A	B	C
1	Estimated painting cost per square foot		
2	Total cost	\$75.00	
3	Square Feet	250	
4	Total/Sq Ft	=75/250	
5			

4. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.

	A	B	C
1	Estimated painting cost per square foot		
2	Total cost	\$75.00	
3	Square Feet	250	
4	Total/Sq Ft	\$0.30	
5			

If the result of a formula is too large to be displayed in a cell, it may appear as **pound signs (#####)** instead of a value. This means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

Creating formulas with cell references

When a formula contains a cell address, it is called a **cell reference**. Creating a formula with cell references is useful because you can update data in your worksheet without having to rewrite the values in the formula.

To create a formula using cell references:

1. Select the cell where the answer will appear (**B3**, for example).

	A	B	C	D
1	Budget for June	\$ 400.00		
2	Budget for July	\$ 300.00		
3	Total Budget			
4				

2. Type the **equals sign (=)**.
3. Type the cell address that contains the first number in the equation (**B1**, for example).

	A	B	C	D
1	Budget for June	\$ 400.00		
2	Budget for July	\$ 300.00		
3	Total Budget	=B1		
4				

4. Type the operator you need for your formula. For example, type the **addition sign (+)**.
5. Type the cell address that contains the second number in the equation (**B2**, for example).

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D
1	Budget for June	\$ 400.00		
2	Budget for July	\$ 300.00		
3	Total Budget	=B1+B2		
4				

6. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.

The screenshot shows the same Excel spreadsheet after calculation. The formula bar now shows the calculated result:

	A	B	C	D
1	Budget for June	\$ 400.00		
2	Budget for July	\$ 300.00		
3	Total Budget	\$ 700.00		
4				

If you change a value in either B1 or B2, the total will automatically recalculate.

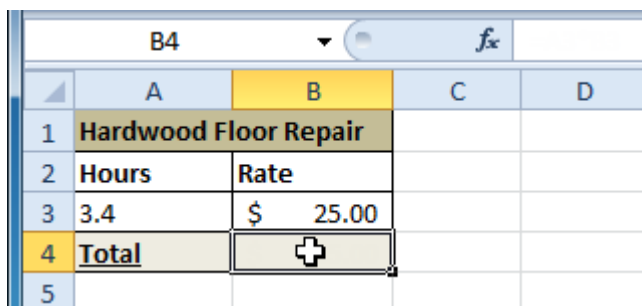
The screenshot shows the Excel spreadsheet after a change to B2. Two callout boxes explain the changes:

- Changed B2 value from \$300.00 to \$200.00
- Since B3 contains the formula =B1+B2, the value in B3 is automatically recalculated to equal \$600.00

	A	B	C	D	E	F	G
1	Budget for June	\$ 400.00					
2	Budget for July	\$ 200.00					
3	Total Budget	\$ 600.00					
4							
5							
6							
7							
8							
9							
10							
11							

To create a formula using the point-and-click method:

1. Select the cell where the answer will appear (**B4**, for example).

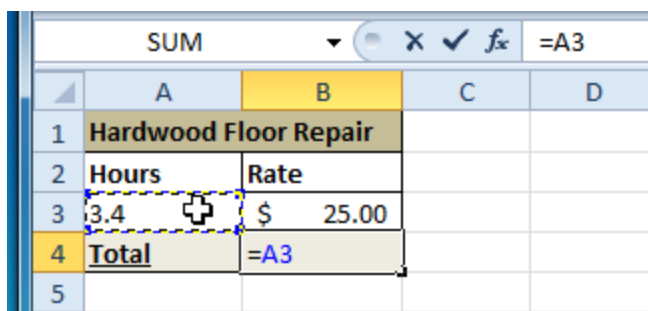


The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D
1	Hardwood Floor Repair			
2	Hours	Rate		
3	3.4	\$ 25.00		
4	Total			
5				

The formula bar at the top shows 'fx' and the active cell is B4.

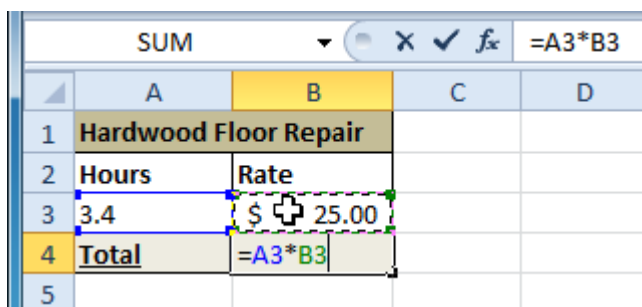
2. Type the **equals sign (=)**.
3. Click the **first cell** to be included in the formula (**A3**, for example).



The screenshot shows the same Excel spreadsheet as above. The formula bar now displays '=A3'. A dashed blue box highlights cell A3, indicating it is the first cell selected for the formula.

	A	B	C	D
1	Hardwood Floor Repair			
2	Hours	Rate		
3	3.4	\$ 25.00		
4	Total	=A3		
5				

4. Type the operator you need for the formula. For example, type the **multiplication sign (*)**.
5. Click the **next cell** in the formula (**B3**, for example).




The screenshot shows the same Excel spreadsheet. The formula bar now displays '=A3*B3'. A dashed blue box highlights cell B3, indicating it is the next cell selected for the formula.

	A	B	C	D
1	Hardwood Floor Repair			
2	Hours	Rate		
3	3.4	\$ 25.00		
4	Total	=A3*B3		
5				


6. Press **Enter**. The formula will be calculated, and the value will be displayed in the cell.

B4		fx		=A3*B3	
	A	B	C	D	
1	Hardwood Floor Repair				
2	Hours	Rate			
3	3.4	\$ 25.00			
4	Total	\$ 85.00			
5					

To edit a formula:

1. Click the cell you want to edit.
2. Insert the cursor in the **formula bar**, and edit the formula as desired. You can also **double-click the cell to view and edit the formula directly** from the cell.
3. When you're done, press **Enter** or select the **Enter** command .

D		E		F		G	
ling Wish List							
Cost		Budget for June		\$ 400.00			
		Budget for July		\$ 300.00			
		Total Budget		=F2+F4			

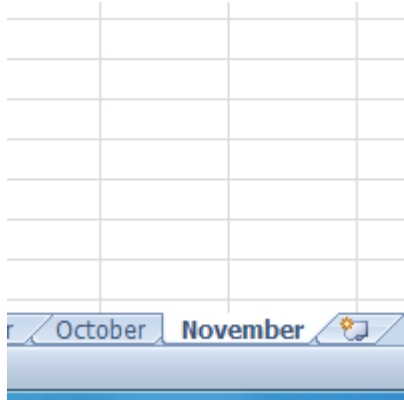


4. The new value will be displayed in the cell.

fx		E		F		G	
List							
		Budget for June		\$ 400.00			
		Budget for July		\$ 300.00			
		Total Budget		\$ 700.00			

Worksheet

Introduction



Every Excel **workbook** contains at least one or more **worksheets**. If you are working with a large amount of related data, you can use worksheets to help organize your data and make it easier to work with.

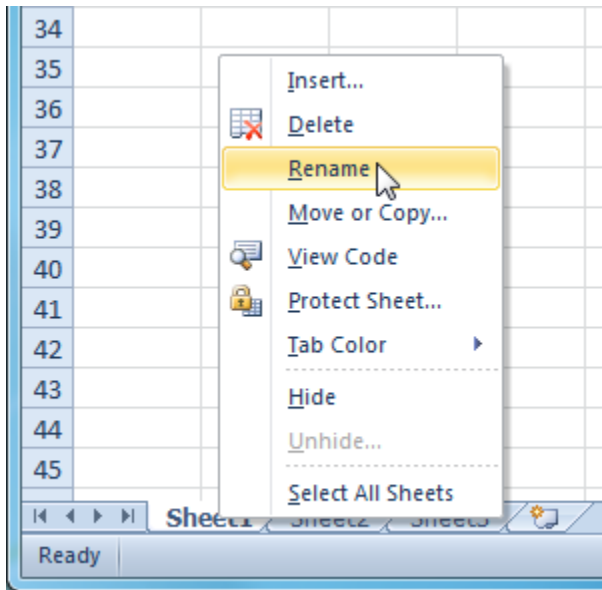
Here, you will learn how to **name** and **add color** to worksheet tabs, as well as how to **add**, **delete**, **copy**, and **move** worksheets. Additionally, you will learn how to **group** and **ungroup** worksheets and **freeze** columns and rows in worksheets so they remain visible even when you're scrolling.

Introduction to worksheets

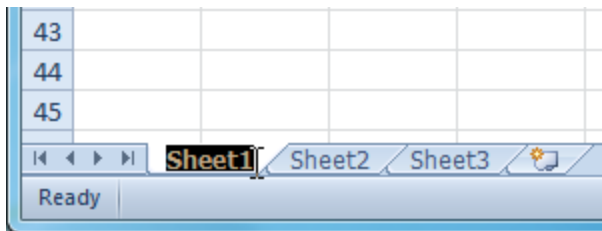
When you open an Excel workbook, there are **three worksheets** by default. The default names on the worksheet tabs are **Sheet1**, **Sheet2**, and **Sheet3**. To organize your workbook and make it easier to navigate, you can rename and even color code the worksheet tabs. Additionally, you can insert, delete, move, and copy worksheets.

To rename worksheets:

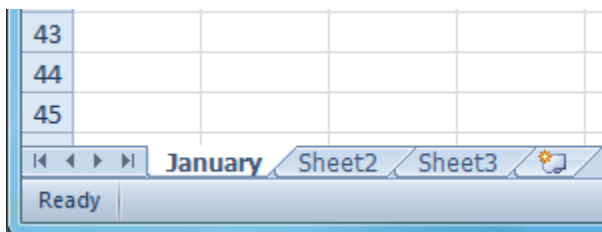
1. Right-click the **worksheet tab** you want to rename. The **worksheet** menu appears.
2. Select **Rename**.



3. The text is now highlighted by a black box. Type the name of your worksheet.

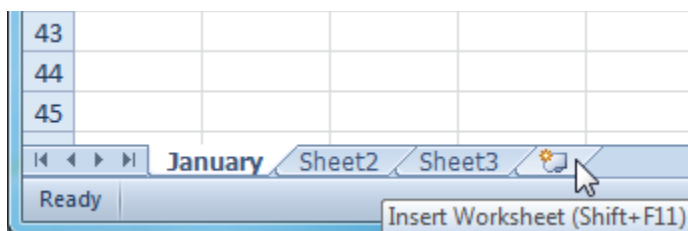


4. Click anywhere outside the tab. The worksheet is renamed.



To insert new worksheets:

Click the **Insert Worksheet** icon. A new worksheet will appear.

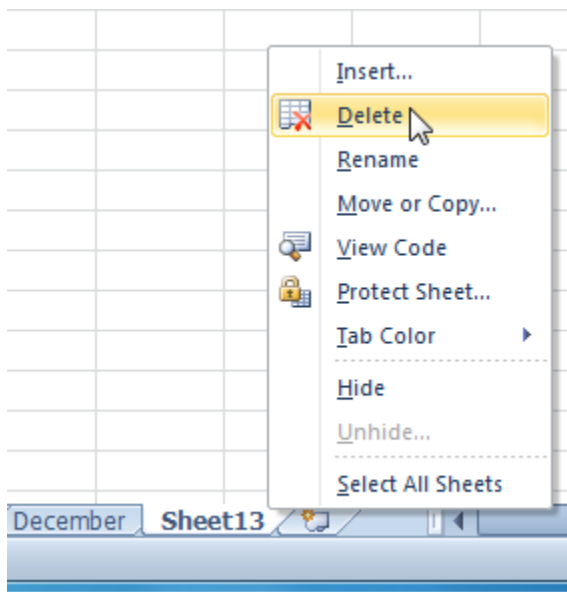


You can change the setting for the default number of worksheets that appear in Excel workbooks. To access this setting, go into **Backstage view** and click **Options**.

To delete worksheets:

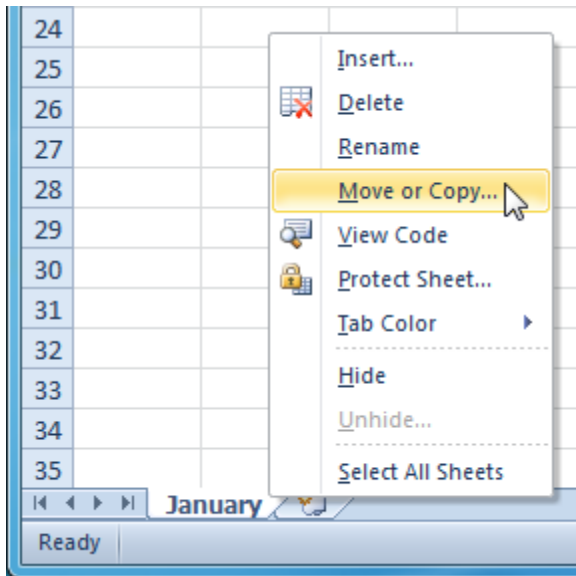
Worksheets can be deleted from a workbook, including those containing data.

1. Select the worksheets you want to delete.
2. Right-click one of the selected worksheets. The **worksheet** menu appears.
3. Select **Delete**. The selected worksheets will be deleted from your workbook.

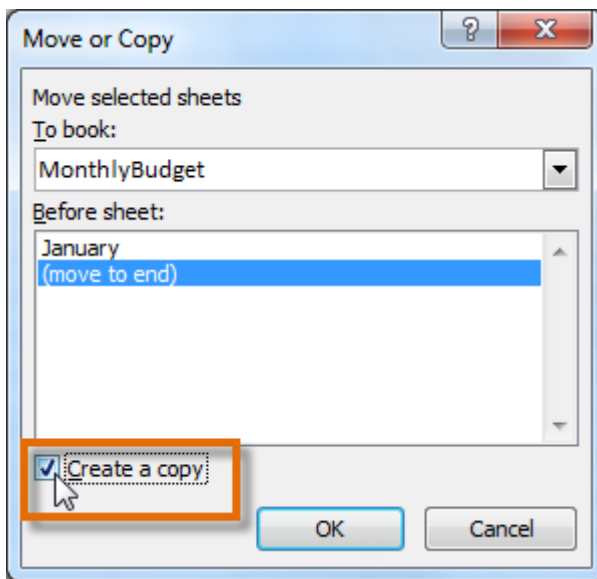


To copy a worksheet:

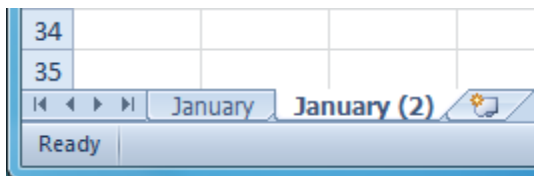
1. Right-click the worksheet you want to copy. The **worksheet** menu appears.
2. Select **Move or Copy**.





3. The **Move or Copy** dialog box appears. Check the **Create a copy** box.

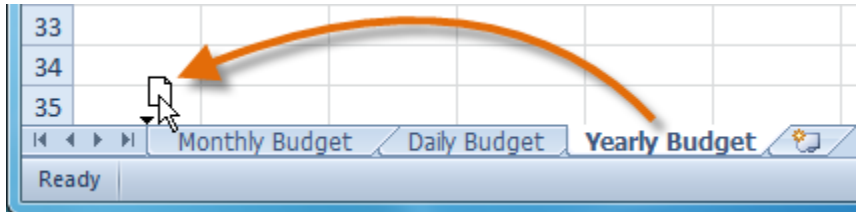


4. Click **OK**. Your worksheet is copied. It will have the same title as your original worksheet, but the title will include a version number, such as **January (2)**.

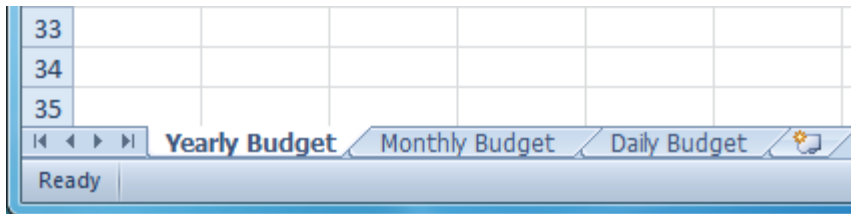


To move a worksheet:

1. Click the worksheet you want to move. The mouse will change to show a small worksheet icon .
2. Drag the worksheet icon until a small black arrow  appears where you want the worksheet to be moved.



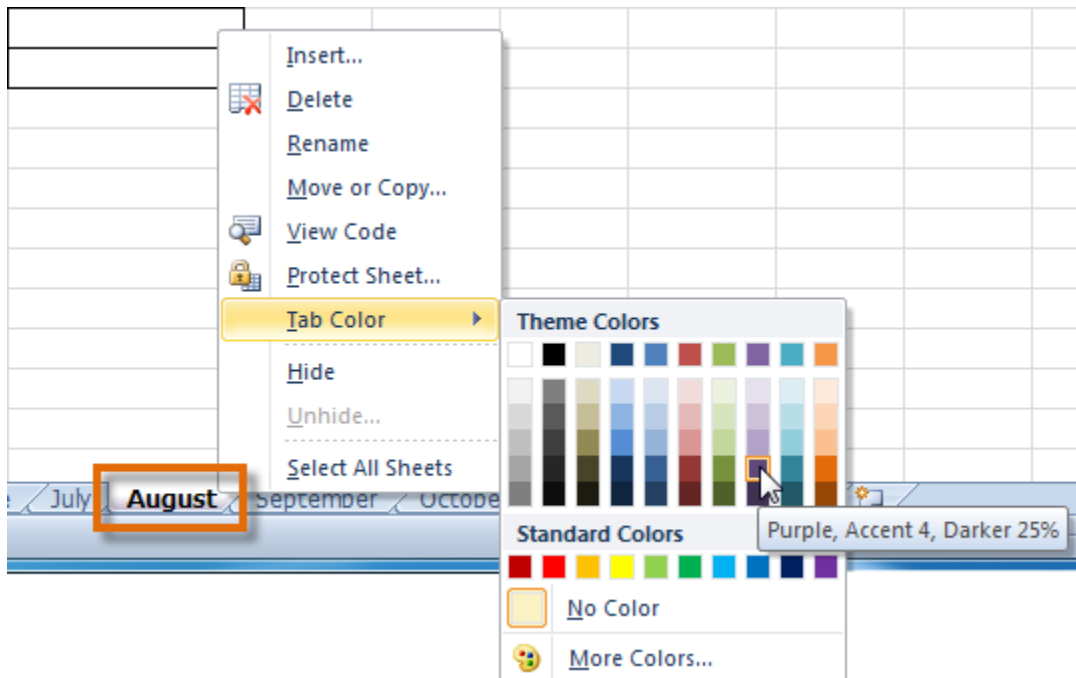
3. Release your mouse, and the worksheet will be moved.



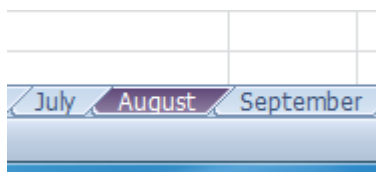
To color code worksheet tabs:

You can color worksheet tabs to help organize your worksheets and make your workbook easier to navigate.

1. Right-click the worksheet tab you want to color. The **worksheet** menu appears.
2. Select **Tab Color**. The **color** menu appears.
3. Select the color you want to change your tab.

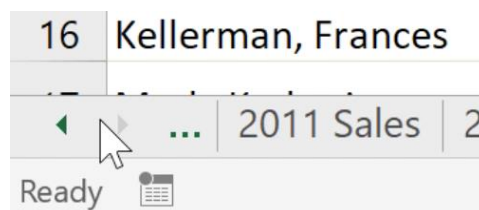


4. The tab color will change in the workbook. If your tab still appears white, it is because the worksheet is still selected. Select any other worksheet tab to see the color change.

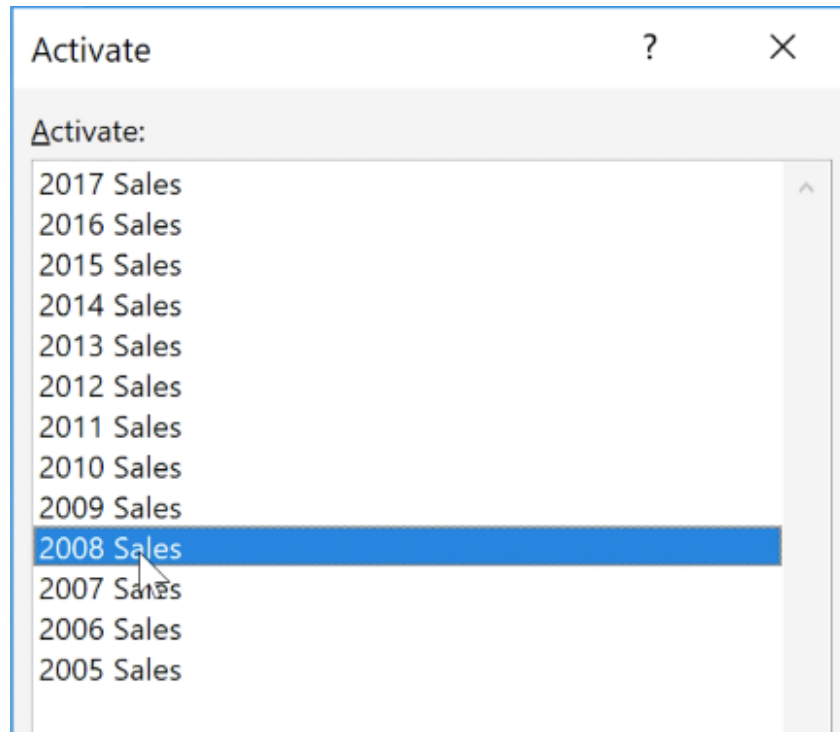


Switching between worksheets

If you want to view a different worksheet, you can simply **click the tab** to switch to that worksheet. However, with larger workbooks this can sometimes become tedious, as it may require scrolling through all of the tabs to find the one you want. Instead, you can simply **right-click** the scroll arrows in the lower-left corner, as shown below.



A dialog box will appear with a list of all of the sheets in your workbook. You can then **double-click** the sheet you want to jump to.

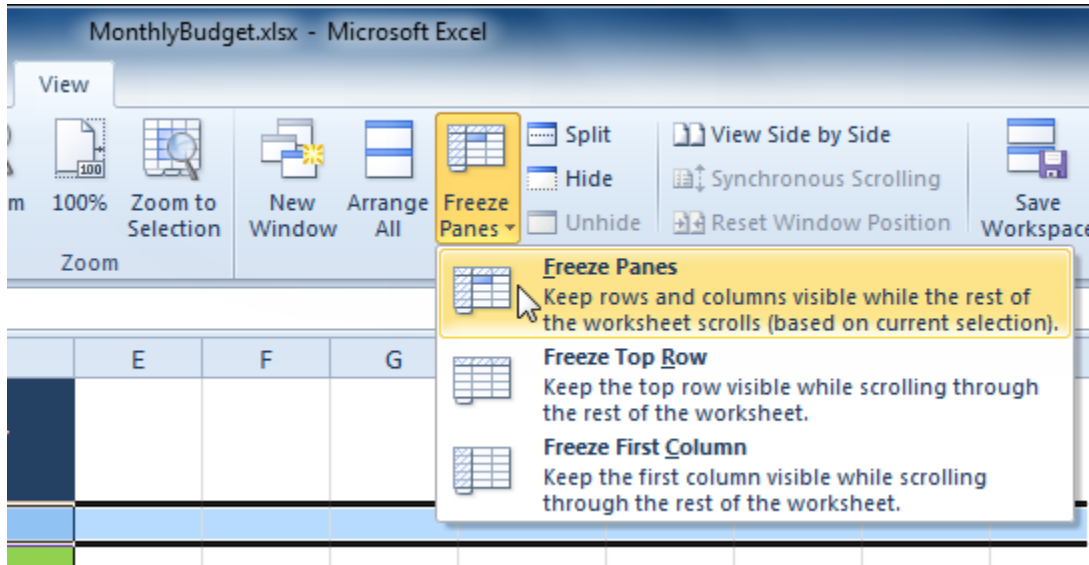


To freeze rows:

1. Select the row **below** the rows you want frozen. For example, if you want rows 1 and 2 to always appear at the top of the worksheet even as you scroll, then select row 3.

	A	B	C	D
1	Monthly Budget - January			
2	Bills	Payment	Date Due	Paid
3	Fixed Expenses			
4	Cable / Internet	\$ 89.99	15-Jan	Visa

2. Click the **View** tab.
3. Click the **Freeze Panes** command. A drop-down menu appears.
4. Select **Freeze Panes**.



5. A black line appears **below** the rows that are frozen in place. Scroll down in the worksheet to see the rows below the frozen rows.

	A	B	C	D	E	F	G
1	Monthly Budget - January						
2	Bills	Payment	Date Due	Paid			
12	Gas	\$ 160.00	6-Jan	Discover			
13	Pets	\$ 65.00	10-Jan	Visa			
14	Water	\$ 28.23	21-Jan	Visa			
15	Other						
16	Clothes	\$ 18.54	8-Jan	Store Credit Card			
17	Misc.	\$ 98.06	6-Jan	Discover			
18	Restaurants	\$ 156.71	6-Jan	Discover			
19							
20	Credit Payment						
21	Discover	\$ 1,108.31	6-Jan	Yes			

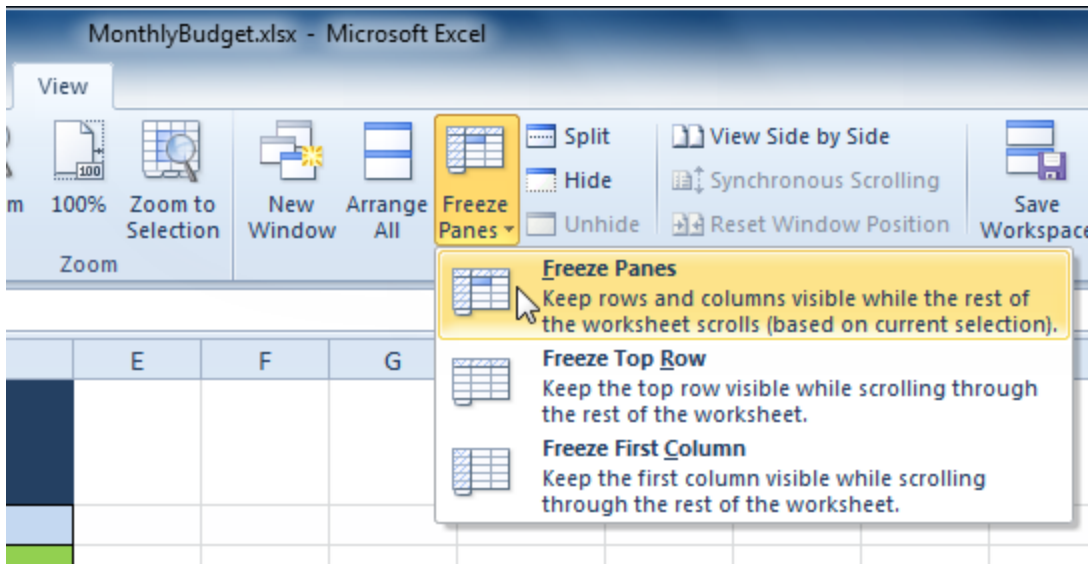
Rows 1 and 2 are frozen above this black line

To freeze columns:

1. Select the column to the **right** of the columns you want frozen. For example, if you want columns A and B to always appear to the left of the worksheet even as you scroll, select column C.

	A	B	C ↓	D	E	F
1				Va		
2	Variable Expenses	January	February	March	April	May
3						
4	Cell Phone	\$ 47.99	\$ 53.62	\$ 55.64	\$ 52.31	\$
5	Clothes	\$ 55.24	\$ 10.24	\$ -	\$ 157.44	\$
6	Gas	\$ 100.00	\$ 120.49	\$ 125.30	\$ 153.00	\$ 1
7	Groceries	\$ 230.23	\$ 203.50	\$ 189.35	\$ 125.00	\$ 2
8	Home Phone	\$ 30.50	\$ 32.68	\$ 31.67	\$ 32.55	\$
9	Power	\$ 57.22	\$ 68.65	\$ 52.65	\$ 55.98	\$
10	Restaurants	\$ 24.45	\$ 78.24	\$ 50.21	\$ 60.24	\$
11	Water	\$ 44.88	\$ 52.84	\$ 50.36	\$ 32.41	\$
12	Total	\$ 590.51	\$ 620.26	\$ 555.18	\$ 668.93	\$ 6
13	Total Year	\$ 590.51	\$ 1,210.77	\$1,765.95	\$ 2,434.88	\$ 3,1

2. Click the **View** tab.
3. Click the **Freeze Panes** command. A drop-down menu appears.
4. Select **Freeze Panes**.



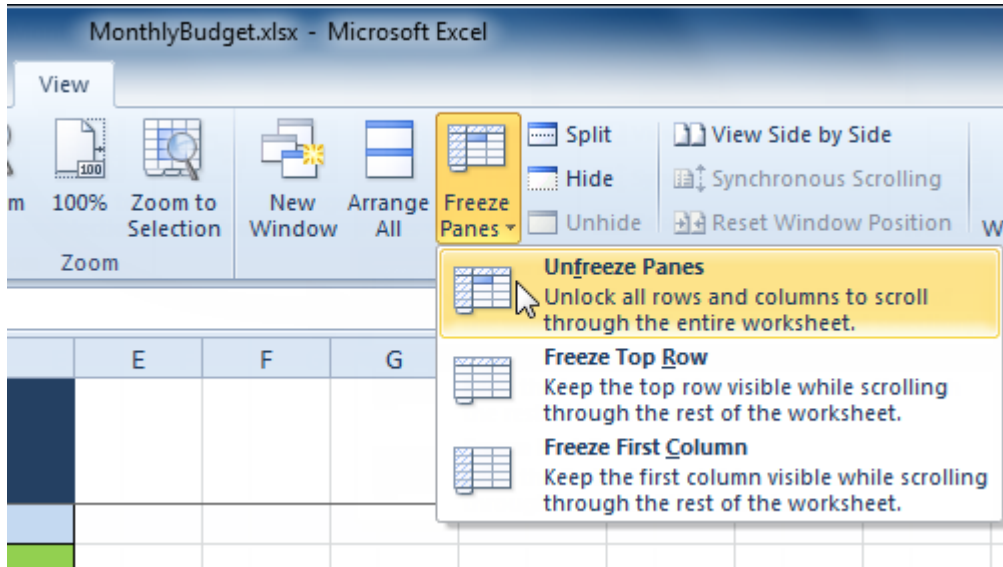
5. A black line appears to the **right** of the frozen area. Scroll across the worksheet to see the columns to the right of the frozen columns.

	A	B	F	G	H	I
1			<i>Variable Expenses</i>			
2	Variable Expenses	January	May	June	July	August
3						
4	Cell Phone	\$ 47.99	\$ 49.87	\$ 47.86	\$ 41.30	\$ 49.87
5	Clothes	\$ 55.24	\$ 24.25	\$ 46.42	\$ -	\$ 204.25
6	Gas	\$ 100.00	\$ 146.42	\$ 107.77	\$ 106.28	\$ 113.25
7	Groceries	\$ 230.23	\$ 220.78	\$ 208.45	\$ 256.38	\$ 245.25
8	Home Phone	\$ 30.50	\$ 39.87	\$ 43.55	\$ 55.60	\$ 36.25
9	Power	\$ 57.22	\$ 68.21	\$ 88.55	\$ 87.42	\$ 75.25
10	Restaurants	\$ 24.45	\$ 79.02	\$ 45.45	\$ 150.42	\$ 46.25
11	Water	\$ 44.88	\$ 41.26	\$ 31.43	\$ 56.86	\$ 48.25
12	Total	\$ 590.51	\$ 669.68	\$ 619.48	\$ 754.26	\$ 818.25
13	Total Year	\$ 590.51	\$ 3,104.56	\$ 3,724.04	\$ 4,478.30	\$ 5,296.25
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Columns A and B are frozen to the left of this black line

To unfreeze panes:

1. Click the **View** tab.
2. Click the **Freeze Panes** command. A drop-down menu appears.
3. Select **Unfreeze Panes**. The panes will be unfrozen, and the black line will disappear.



1.

COMPLEX FORMULAS

Creating complex formulas

	B	C
	0.055	
Price	Sales Tax	
U	\$9.95	=B4*\$B\$1
lit	\$24.50	\$1.35
wn	\$9.99	\$0.55
zer	\$49.99	\$2.75
	\$8.25	\$0.45

Excel is a spreadsheet application that can help you calculate and analyze numerical information for household budgets, company finances, inventory, and more. To do this, you need to understand **complex formulas**.

In this lesson, you'll learn how to write complex formulas in Excel following the order of operations. You will also learn about **relative** and **absolute cell references**, as well as how to **copy** and **fill formulas** containing cell references.

Complex formulas

Simple formulas have one mathematical operation, such as **5+5**. **Complex formulas** have more than one mathematical operation, such as **5+5-2**. When there is more than one operation in a formula, the **order of operations** tells us which operation to calculate first. To use Excel to calculate complex formulas, you'll need to understand the order of operations.

The order of operations

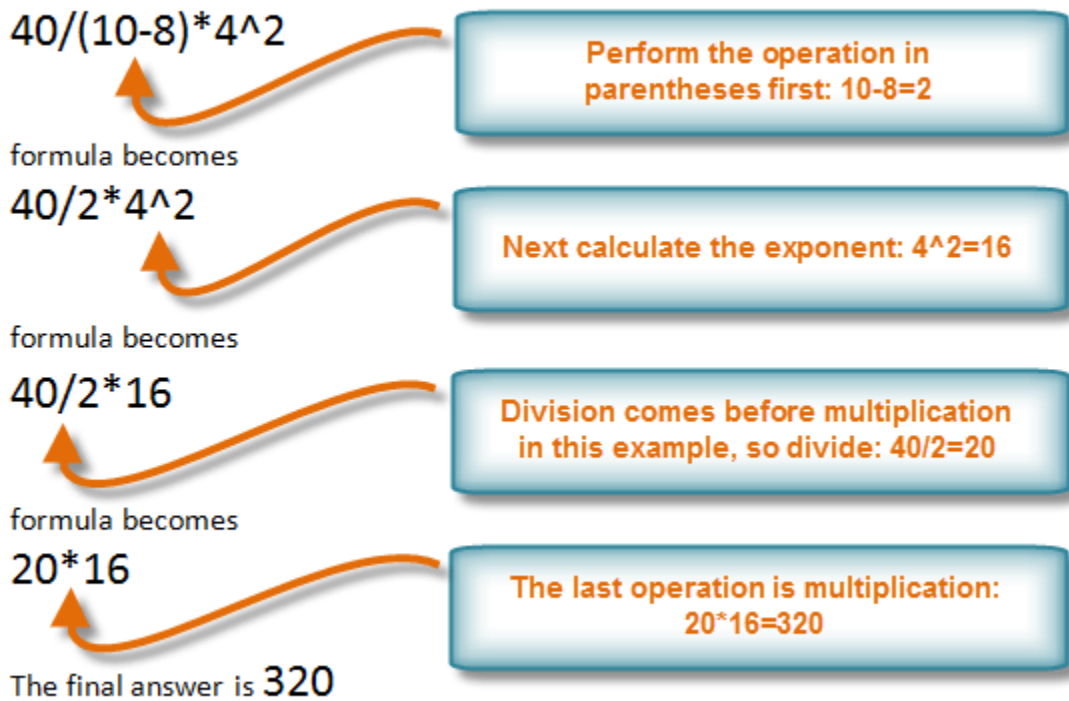
Excel calculates formulas based on the following **order of operations**:

1. Operations enclosed in **parentheses**
2. **Exponential** calculations (to the power of)
3. **Multiplication** and **division**, whichever comes first
4. **Addition** and **subtraction**, whichever comes first

A mnemonic that can help you remember the order is **Please Excuse My Dear Aunt Sally**.

Example 1

The following example demonstrates how to use the order of operations to calculate a formula:



Example 2

In this example, we'll review how Excel will calculate a complex formula using the order of operations. The selected cell will display the percent of total Pete Lily seeds sold that were white.

Seed Inventory	Packets Sold	Price	Percent of Total Sold
Pete Lily - Blue	14	\$1.99	42.42
Pete Lily - White	19	\$1.99	$= (19*1.99) / (33*1.99) * 100$
Total Pete Lily	33	\$1.99	


1. First, Excel will calculate the amount sold in parentheses: $(19*1.99)=37.81$ White Pete Lily seeds and $(33*1.99)=65.67$ Total Pete Lily seeds.
2. Second, it will divide the White Pete Lily seeds amount by the Total Pete Lily seeds amount: $37.81/65.67=.5758$.
3. Last, it will multiply the result by 100 to obtain the value as a percent: $.5758*100=57.58$.

Based on this complex formula, the result will show that **57.58%** of the total Pete Lily seeds sold were white. You can see from this example that it is important to enter complex formulas with the correct order of operations. Otherwise, Excel will not calculate the results accurately.

To create a complex formula using the order of operations:

In this example, we'll use **cell references** in addition to actual values to create a complex formula that will add tax to the nursery order.

1. Click the cell where you want the formula result to appear (**F11**, for example).
2. Type the **equals sign (=)**.
3. Type an **open parenthesis**, then click the cell that contains the first **value** you want in the formula (**F4**, for example).
4. Type the first **mathematical operator** (the addition sign, for example).
5. Click the cell that contains the second **value** you want in the formula (**F5**, for example), then type a **closed parenthesis**.
6. Type the next **mathematical operator** (the multiplication sign, for example).
7. Type the next **value** in the formula (**0.055** for **5.5% tax**, for example).

SUM						=(F4+F5)*0.055						
	A	B	C	D	E	F						
1												
2												
3		ITEM	ITEM #	Price	Quantity	Total						
4		LE Tomato Planter Bags	SG324	\$18.99	2	\$37.98						
5		M - Cord	AU396	\$0.12	5	\$0.60						
6												
7												
8												
9												
10												
11		Tax					=(F4+F5)*0.055					
12		Total					\$40.70					
13												

- Click **Enter** to calculate your formula. The results show that \$2.12 is the tax for the nursery order.

\$2.12

Working with cell references

In order to maintain accurate formulas, it is necessary to understand how cell references respond when you copy or fill them to new cells in the worksheet.

Excel will interpret cell references as either **relative** or **absolute**. By default, cell references are **relative references**. When copied or filled, they change based on the relative position of rows and columns. If you copy a formula (=A1+B1) into row 2, the formula will change to become (=A2+B2).

Absolute references, on the other hand, do not change when they are copied or filled and are used when you want the values to stay the same.

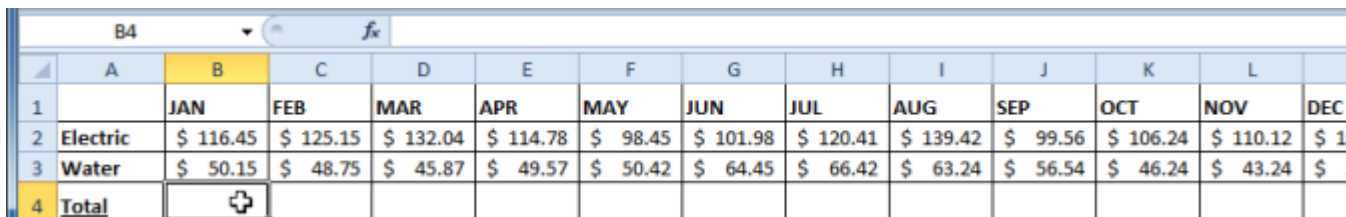
Relative references

Relative references can save you time when you're repeating the same type of calculation across multiple rows or columns.

In the following example, we're creating a formula with cell references in row 4 to calculate the total cost of the electric bill and water bill for each month ($B4=B2+B3$). For the upcoming months, we want to use the same formula with relative references ($C2+C3$, $D2+D3$, $E2+E3$, etc.). For convenience, we can copy the formula in B4 into the rest of row 4, and Excel will calculate the value of the bills for these months using relative references.

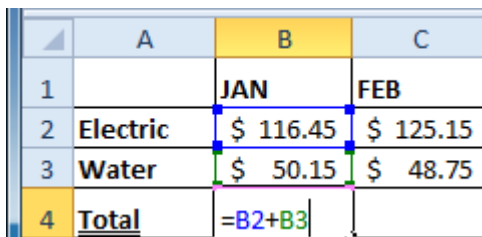
To create and copy a formula using relative references:

1. Select the first cell where you want to enter the formula (**B4**, for example).



	A	B	C	D	E	F	G	H	I	J	K	L	
1		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2	Electric	\$ 116.45	\$ 125.15	\$ 132.04	\$ 114.78	\$ 98.45	\$ 101.98	\$ 120.41	\$ 139.42	\$ 99.56	\$ 106.24	\$ 110.12	\$ 118.00
3	Water	\$ 50.15	\$ 48.75	\$ 45.87	\$ 49.57	\$ 50.42	\$ 64.45	\$ 66.42	\$ 63.24	\$ 56.54	\$ 46.24	\$ 43.24	\$ 40.24
4	Total												

2. Enter the formula to calculate the value you want (**B2+B3**, for example).



	A	B	C
1		JAN	FEB
2	Electric	\$ 116.45	\$ 125.15
3	Water	\$ 50.15	\$ 48.75
4	Total	=B2+B3	

3. Press **Enter**. The formula will be calculated.

\$ 166.60

4. Select the cell you want to copy (**B4**, for example), then click the **Copy** command from the **Home** tab.
5. Select the cells where you want to paste the formula, then click the **Paste** command from the **Home** tab. You can also drag the fill handle to fill cells.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2	Electric	\$ 116.45	\$ 125.15	\$ 132.04	\$ 114.78	\$ 98.45	\$ 101.98	\$ 120.41	\$ 139.42	\$ 99.56	\$ 106.24	\$ 110.12	\$ 118.01
3	Water	\$ 50.15	\$ 48.75	\$ 45.87	\$ 49.57	\$ 50.42	\$ 64.45	\$ 66.42	\$ 63.24	\$ 56.54	\$ 46.24	\$ 43.24	\$ 40.24
4	Total	\$ 166.60	\$ 173.90	\$ 177.91	\$ 164.35	\$ 148.87	\$ 166.43	\$ 186.83	\$ 202.66	\$ 156.10	\$ 152.48	\$ 153.36	\$ 154.24

6. Your formula is copied to the selected cells as a relative reference (C4=C2+C3, D4=D2+D3, E4=E2+E3, etc.), and the values are calculated.

Absolute references

There may be times when you do not want a cell reference to change when copying or filling cells. You can use an **absolute reference** to keep a row and/or column constant in the formula.

An absolute reference is designated in a formula by the addition of a **dollar sign (\$)** before the column and row. If it precedes the column or row (but not both), it's known as a **mixed reference**.

\$A\$2:	The column and the row do not change when copied.
A\$2:	The row does not change when copied.
\$A2:	The column does not change when copied.

In the below example, we want to calculate the sales tax for a list of products with varying prices. We'll use an absolute reference for the sales tax (\$B\$1) because we do not want it to change as we are copying the formula down the column of varying prices.

To create and copy a formula using an absolute reference:

1. Select the first cell where you want to enter the formula (**C4**, for example).

	A	B	C
1	5.5% Sales Tax	0.055	
2			
3	ITEM	Price	Sales Tax
4	7" Spanish Pot -	\$9.95	
5	LightWorks Garde	\$24.50	
6	Coneflower - Sur	\$9.99	
7	Four Way Soil An	\$49.99	
8	Ferti-Again	\$8.25	

2. Type an equals sign, and then click the cell that contains the first **value** you want in the formula (**B4**, for example).
3. Type the first **mathematical operator** (the multiplication sign, for example).
4. Type the **dollar sign (\$)**, then enter the **column letter** of the cell you are making an absolute reference to (**B**, for example).

	A	B	C
1	5.5% Sales Tax	0.055	
2			
3	ITEM	Price	Sales Tax
4	7" Spanish Pot - BLU	\$9.95	=B4*\$B
5	LightWorks Garden Kit	\$24.50	
6	Coneflower - Sundown	\$9.99	
7	Four Way Soil Analyzer	\$49.99	
8	Ferti-Again	\$8.25	

5. Type the **dollar sign (\$)**, then enter the **row number** of the same cell you are making an absolute reference to (**1**, for example).

	A	B	C
1	5.5% Sales Tax	0.055	
2			
3	ITEM	Price	Sales Tax
4	7" Spanish Pot - BLU	\$9.95	=B4*\$B\$1
5	LightWorks Garden Kit	\$24.50	
6	Coneflower - Sundown	\$9.99	
7	Four Way Soil Analyzer	\$49.99	
8	Ferti-Again	\$8.25	

6. Press **Enter** to calculate the formula.

\$0.55

7. Select the cell you want to copy (C4, for example), then click the **Copy** command from the **Home** tab.
8. Select the cells where you want to paste the formula, then click the **Paste** command from the **Home** tab. You can also drag the fill handle to fill cells.

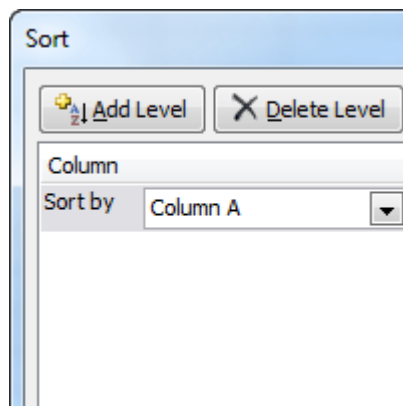
	A	B	C
1	5.5% Sales Tax	0.055	
2			
3	ITEM	Price	Sales Tax
4	7" Spanish Pot - BLU	\$9.95	\$0.55
5	LightWorks Garden Kit	\$24.50	\$1.35
6	Coneflower - Sundown	\$9.99	\$0.55
7	Four Way Soil Analyzer	\$49.99	\$2.75
8	Ferti-Again	\$8.25	\$0.45

9. Your formula is copied to the selected cells using the absolute reference (C5=B5*\$B\$1, C6=B6*\$B\$1, etc.), and your values are calculated.

When writing a formula, you can press the **F4** key on your keyboard to switch between relative and absolute cell references, as shown in the video below. This is an easy way to quickly insert an absolute reference.

SORTING DATA

Introduction



With more than 17 billion cells in a single worksheet, Excel 2010 gives you the ability to work with an **enormous amount of data**. Arranging your data alphabetically, from smallest to largest, or using other criteria can help you find the information you're looking for more quickly.

Here, you will learn how to **sort** data to better view and organize the contents of your spreadsheet.



Basic sorting

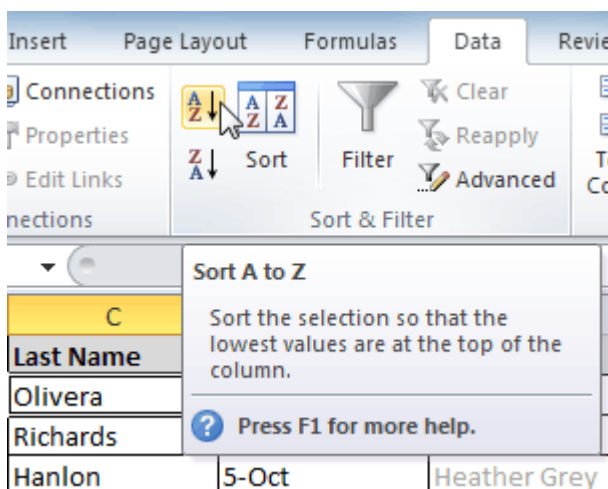
Sorting is a common task that allows you to change or customize the order of your spreadsheet data. For example, you could organize an office birthday list by employee, birthdate, or department, making it easier to find what you're looking for. Custom sorting takes it a step further, giving you the ability to sort multiple levels—such as department first, then birthdate—to group birthdates by department.

To sort in alphabetical order:

1. Select a cell in the column you want to sort by. In this example, we'll sort by **Last Name**.

	C	D	E
1	Last Name	Payment	T-Shirt Color
2	Olivera	1-Oct	White
3	Richards	4-Oct	Dark Red
4	Hanlon	5-Oct	Heather Grey
5	Means	5-Oct	Dark Red

2. Select the **Data** tab, then locate the **Sort and Filter** group.
3. Click the ascending command  to **Sort A to Z** or the descending command  to **Sort Z to A**.



4. The data in the spreadsheet will be organized alphabetically.



	C	D	E
1	Last Name	Payment	T-Shirt Color
2	Ackerman	1-Oct	Heather Grey
3	Albee	13-Oct	Heather Grey
4	Bell	11-Oct	Dark Red
5	Benson	11-Oct	White
6	Chen	5-Oct	Dark Red
7	Del Toro	13-Oct	White
8	Ellison	Pending	Dark Red
9	Flores	6-Oct	White
10	Hanlon	5-Oct	Heather Grey
11	Kelly	11-Oct	Dark Red
12	Kelly	11-Oct	Heather Grey
13	Lazar	14-Oct	White
14	MacDonald	Pending	Dark Red
15	Means	5-Oct	Dark Red
16	Naser	14-Oct	Dark Red
17	Nichols	6-Oct	Dark Red

Sorting options can also be found on the Home tab, condensed into the **Sort & Filter** command.

To sort in numerical order:

1. Select a cell in the column you want to sort by.

	A	B	C
1	Homeroom #	First Name	Last Name
2	110	Kris	Ackerman
3	105	Nathan	Albee
4	220-B	Samantha	Bell
5	110	Matt	Benson



2. From the **Data** tab, click the ascending command  to **Sort Smallest to Largest** or the descending command  to **Sort Largest to Smallest**.
3. The data in the spreadsheet will be organized numerically.

	A	B	C
1	Homeroom #	First Name	Last Name
2	105	Nathan	Albee
3	105	Christiana	Chen
4	105	Sidney	Kelly
5	105	Derek	MacDonald
6	105	Melissa	White
7	105	Esther	Yaron
8	110	Kris	Ackerman
9	110	Matt	Benson
10	110	Gabriel	Del Toro
11	110	Regina	Olivera
12	135	Anisa	Naser
13	135	James	Panarello
14	135	Lia	Richards
15	135	Jordan	Weller
16	135	Chantal	Weller
17	135	Alex	Yuen

To sort by date or time:

1. Select a cell in the column you want to sort by.

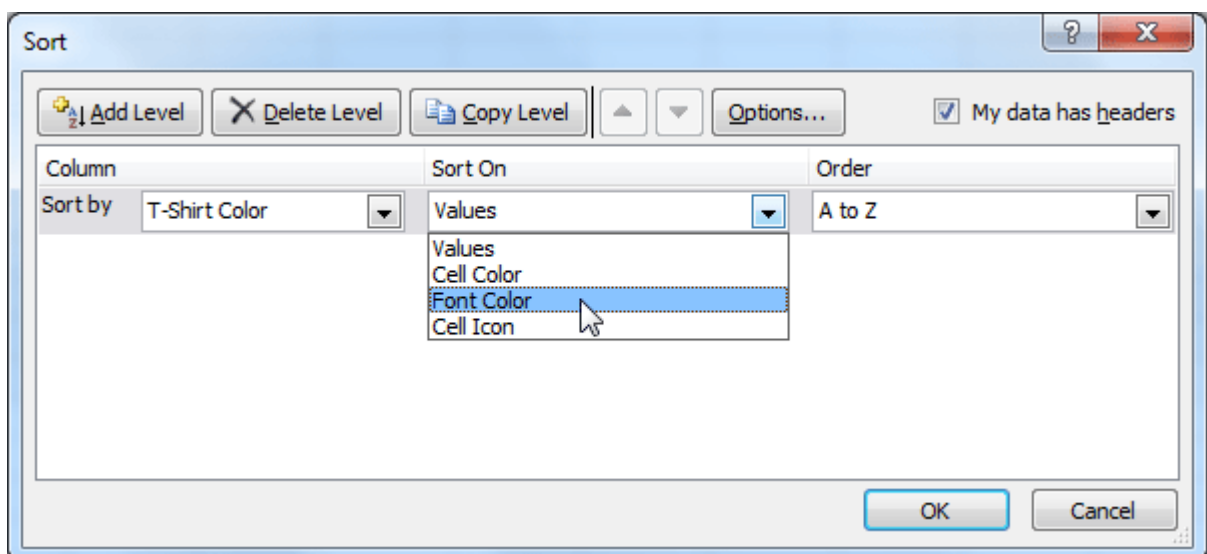
	D	E	F
1	Payment	T-Shirt Color	T-Shirt Size
2	13-Oct	Heather Grey	Medium
3	5-Oct	Dark Red	Medium
4	11-Oct	Dark Red	Medium
5	Pending	Dark Red	Large

2. From the **Data** tab, click the ascending command  to **Sort Oldest to Newest** or the descending command  to **Sort Newest to Oldest**.
3. The data in the spreadsheet will be organized by date or time.

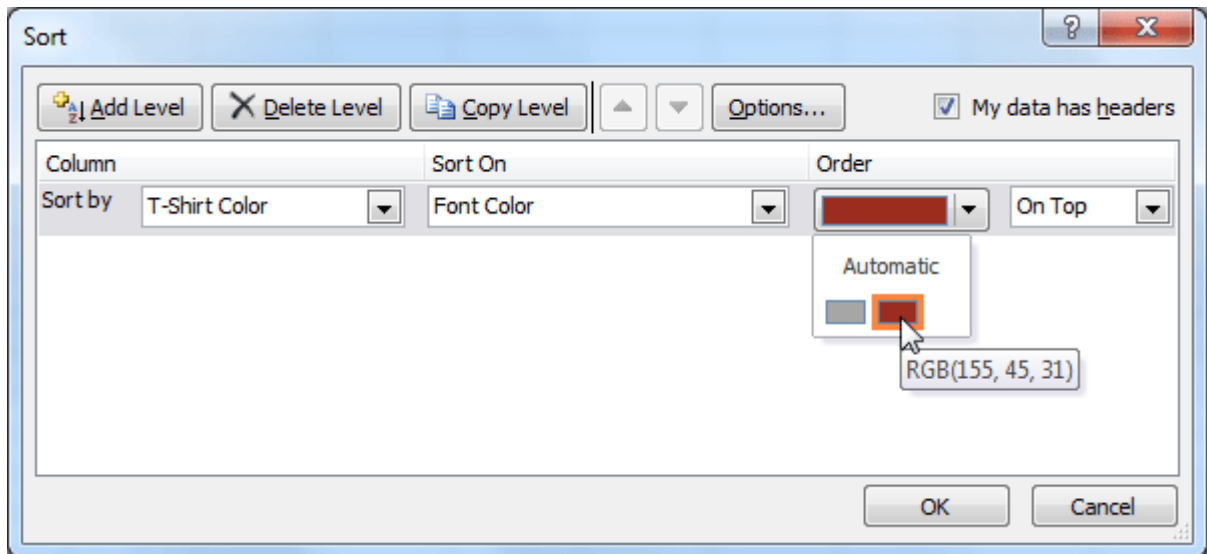
	D	E	F
1	Payment	T-Shirt Color	T-Shirt Size
2	1-Oct	Heather Grey	Large
3	1-Oct	White	Large
4	4-Oct	Dark Red	X-Large
5	5-Oct	Dark Red	Medium
6	5-Oct	Heather Grey	Large
7	5-Oct	Dark Red	Medium
8	5-Oct	Heather Grey	X-Large
9	6-Oct	White	X-Large
10	6-Oct	Dark Red	X-Large
11	7-Oct	Heather Grey	Small
12	7-Oct	Dark Red	Small
13	7-Oct	Heather Grey	Small
14	7-Oct	Heather Grey	Small
15	11-Oct	Dark Red	Medium
16	11-Oct	White	Medium
17	11-Oct	Dark Red	Medium

To sort by cell color, font color, or cell icon:

1. From the **Data** tab, click the **Sort** command to open the **Sort** dialog box.
2. Identify the column you want to **Sort by** by clicking the drop-down arrow in the **Column** field.
3. Choose whether you want to sort by Cell Color, Font Color, or Cell Icon in the **Sort On** field. In this example, we'll sort by **Font Color**.



4. In the **Order** field, click the drop-down arrow to choose a color, then decide whether you want it ordered **On Top** or **On Bottom**.



5. Click **OK**. The data is now sorted by attribute rather than text.

	C	D	E
1	Last Name	Payment	T-Shirt Color
2	Richards	4-Oct	Dark Red
3	Means	5-Oct	Dark Red
4	Chen	5-Oct	Dark Red
5	Nichols	6-Oct	Dark Red
6	Yaron	7-Oct	Dark Red
7	Bell	11-Oct	Dark Red
8	Kelly	11-Oct	Dark Red
9	Naser	14-Oct	Dark Red
10	Ellison	Pending	Dark Red
11	MacDonald	Pending	Dark Red
12	Ackerman	1-Oct	Heather Grey
13	Olivera	1-Oct	White

FILTERING DATA

Introduction

	A	B	
1	Equipment Log — Ragnar Te		
2	ID #	Type	Equipme
3	1011	Laptop	10" Saris
4	1012	Laptop	10" Saris
5	1021	Laptop	15" EDI S
6	1022	Laptop	15" EDI S
7	1023	Laptop	15" EDI S
8	1025	Laptop	15" EDI S
9	1031	Laptop	17" Saris

Filters can be used to narrow down the data in your worksheet and hide parts of it from view. While it may sound a little like grouping, filtering is different because it allows you to qualify and display only the data that interests you. For example, you could filter a list of survey participants to view only those who are between the ages of 25 and 34. You could also filter an inventory of paint colors to view anything that contains the word **blue**, such as **bluebell** or **robin's egg blue**.

here, you'll learn how to **filter** the data in your worksheet to display only the information you need.

Filtering data

Filters can be applied in different ways to improve the performance of your worksheet. You can filter text, dates, and numbers. You can even use more than one filter to further narrow your results.

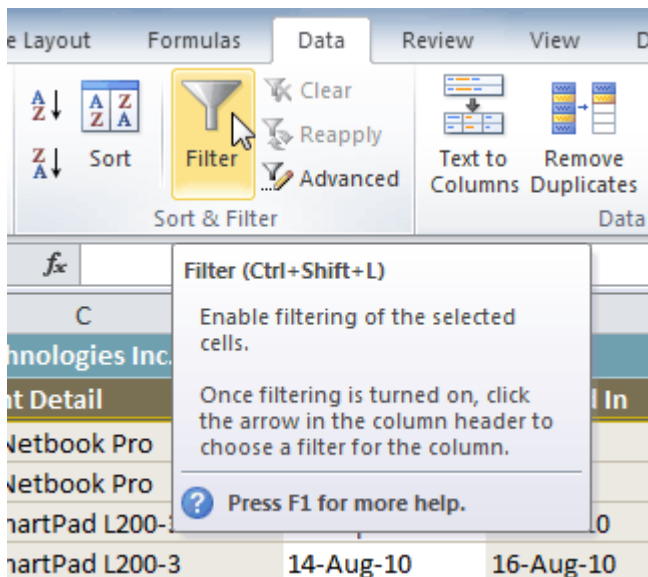
To filter data:

In this example, we'll filter the contents of an equipment log at a technology company. We'll display only the laptops and projectors that are available for checkout.

1. Begin with a worksheet that identifies each column using a header row.

	A	B	C	D
1	Equipment Log — Ragnar Technologies Inc.			
2	ID #	Type	Equipment Detail	Checked Out
3	1011	Laptop	10" Saris Netbook Pro	04-Oct-10
4	1012	Laptop	10" Saris Netbook Pro	29-Sep-10
5	1021	Laptop	15" EDI SmartPad L200-3	15-Sep-10
6	1022	Laptop	15" EDI SmartPad L200-3	14-Aug-10
7	1023	Laptop	15" EDI SmartPad L200-3	08-Aug-10
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-10
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-10
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-10
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-10
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-10
13	2050	Other	EDI SmartBoard L500-1	05-Oct-10
14	2051	Other	EDI SmartBoard L500-1	01-Oct-10
15	3000	Other	Saris Lumina Digital Camera	12-May-10

2. Select the **Data** tab, then locate the **Sort & Filter** group.
3. Click the **Filter** command.



4. Drop-down arrows will appear in the header of each column.
5. Click the **drop-down arrow** for the column you want to filter. In this example, we'll filter the Type column to view only certain types of equipment.

	A	B	C	D
1	Equipment Log — Ragnar Technologies Inc.			
2	ID #	Type	Equipment Detail	Checked Out
3	1011	Laptop	14" Core Netbook Pro	04-Oct-10
4	1012	Laptop	14" Core Netbook Pro	29-Sep-10
5	1021	Laptop	15" EDI SmartPad L200-3	15-Sep-10
6	1022	Laptop	15" EDI SmartPad L200-3	14-Aug-10
7	1023	Laptop	15" EDI SmartPad L200-3	08-Aug-10

- The **Filter** menu appears.
- Uncheck** the boxes next to the data you don't want to view, or uncheck the box next to **Select All** to quickly uncheck all.
- Check** the boxes next to the data you do want to view. In this example, we'll check Laptop and Projector to view only these types of equipment.

	A	B	C	D
1	Equipment Log — Ragnar Technologies Inc.			
2	ID #	Type	Equipment Detail	Checked Out
3	4905	Other	7N Heavy Rolling Laptop Case	04-Oct-10
4	5020	TV	32" Paragon 440 Plasma TV	11-Aug-10

	A	B	C	D
1	Equipment Log — Ragnar Technologies Inc.			
2	ID #	Type	Equipment Detail	Checked Out
3	4905	Other	7N Heavy Rolling Laptop Case	04-Oct-10
4	5020	TV	32" Paragon 440 Plasma TV	11-Aug-10

- Click **OK**. All other data will be filtered, or temporarily hidden. Only laptops and projectors will be visible.

	A	B	C	D
1	Equipment Log — Ragnar Technologies Inc.			
2	ID #	Type	Equipment Detail	Checked Out
3	1011	Laptop	10" Saris Netbook Pro	04-Oct-10
4	1012	Laptop	10" Saris Netbook Pro	29-Sep-10
5	1021	Laptop	15" EDI SmartPad L200-3	15-Sep-10
6	1022	Laptop	15" EDI SmartPad L200-3	14-Aug-10
7	1023	Laptop	15" EDI SmartPad L200-3	08-Aug-10
8	1025	Laptop	15" EDI SmartPad L200-4X	26-Sep-10
9	1031	Laptop	17" Saris X-10 Laptop	04-Oct-10
10	1032	Laptop	17" Saris X-10 Laptop	19-Sep-10
11	1033	Laptop	17" Saris X-10 Laptop	24-Sep-10
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-10
26	6100	Projector	Omega VisX 1.0	28-Sep-10
27	6101	Projector	Omega VisX 1.0	26-Sep-10
28	6102	Projector	Omega VisX 1.0	22-Aug-10

Filtering options can also be found on the Home tab, condensed into the **Sort & Filter** command.

To add another filter:

Filters are additive, meaning you can use as many as you need to narrow your results. In this example, we'll work with a spreadsheet that has already been filtered to display only laptops and projectors. Now we'll display only laptops and projectors that were checked out during the month of August.

1. Click the **drop-down arrow** where you want to add a filter. In this example, we'll add a filter to the Checked Out column to view information by date.
2. **Uncheck** the boxes next to the data you don't want to view. **Check** the boxes next to the data you do want to view. In this example, we'll check the box next to **August**.

	A	B	C	D	E
1	Equipment Log — Ragnar Technologies Inc.				
2	ID #	Type	Equipment Detail	Checked Out	Checked In
3	1011	Laptop	10" S	<div style="border: 1px solid gray; padding: 5px;"> Sort Oldest to Newest Sort Newest to Oldest Sort by Color ----- Clear Filter From "Checked Out" Filter by Color Date Filters Search (All) <input type="text"/> <input type="button" value="🔍"/> <input checked="" type="checkbox"/> (Select All) <input checked="" type="checkbox"/> 2010 <input checked="" type="checkbox"/> August <input type="checkbox"/> September <input type="checkbox"/> October <input type="button" value="OK"/> <input type="button" value="Cancel"/> </div>	
4	1012	Laptop	10" S		
5	1021	Laptop	15" E		01-Oct-10
6	1022	Laptop	15" E		16-Aug-10
7	1023	Laptop	15" E		15-Aug-10
8	1025	Laptop	15" E		04-Oct-10
9	1031	Laptop	17" S		
10	1032	Laptop	17" S		
11	1033	Laptop	17" S		26-Sep-10
12	1034	Laptop	17" S		27-Aug-10
26	6100	Projector	Ome		01-Oct-10
27	6101	Projector	Ome		27-Sep-10
28	6102	Projector	Ome		23-Aug-10
29	6200	Projector	Saris		04-Sep-10
30	6301	Projector	Saris		
31	6302	Projector	Saris		15-Sep-10
32					
33					
34					
35					

3. Click **OK**. In addition to the original filter, the new filter will be applied. The worksheet will be narrowed down even further.

	A	B	C	D	E
1	Equipment Log — Ragnar Technologies Inc.				
2	ID #	Type	Equipment Detail	Checked Out	Checked In
6	1022	Laptop	15" EDI SmartPad L200-3	14-Aug-10	16-Aug-10
7	1023	Laptop	15" EDI SmartPad L200-3	08-Aug-10	15-Aug-10
12	1034	Laptop	17" Saris X-10 Laptop	25-Aug-10	27-Aug-10
28	6102	Projector	Omega VisX 1.0	22-Aug-10	23-Aug-10
32					

To clear a filter:

1. Click the **drop-down arrow** in the column from which you want to clear the filter.
2. Choose **Clear Filter From**.

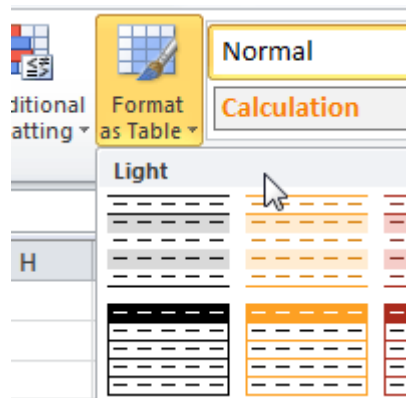
	A	B	C	D	E
1	Equipment Log — Ragnar Technologies Inc.				
2	ID #	Type	Equipment Detail	Checked Out	Checked In
6	1022	Laptop	15" E	Sort Oldest to Newest	16-Aug-10
7	1023	Laptop	15" E	Sort Newest to Oldest	15-Aug-10
12	1034	Laptop	17" S	Sort by Color	27-Aug-10
28	6102	Projector	Ome	Clear Filter From "Checked Out"	23-Aug-10
32					
33					
34					
35					
36					
37					
38					
39					
40					

- The filter will be cleared from the column. The data that was previously hidden will be on display once again.

To instantly clear all filters from your worksheet, click the **Filter** command on the Data tab.

FORMATTING TABLES

Introduction




Once you have entered information into a spreadsheet, you may want to format it. Formatting your spreadsheet can not only improve the look and feel of your spreadsheet, but it also can make it easier to use. In a previous lesson, we discussed many manual formatting options such as bold and italics. In this lesson, you'll learn how to **format as a table** to take advantage of the tools and predefined table styles available in Excel 2010.

Formatting tables

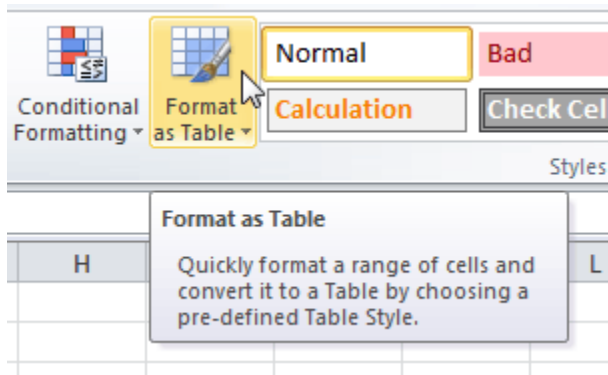
Just like regular formatting, tables can help to **organize** your content and make it easier for you locate the information you need. To use tables effectively, you'll need to know how to **format** information as a table, **modify** tables, and apply **table styles**.

To format information as a table:

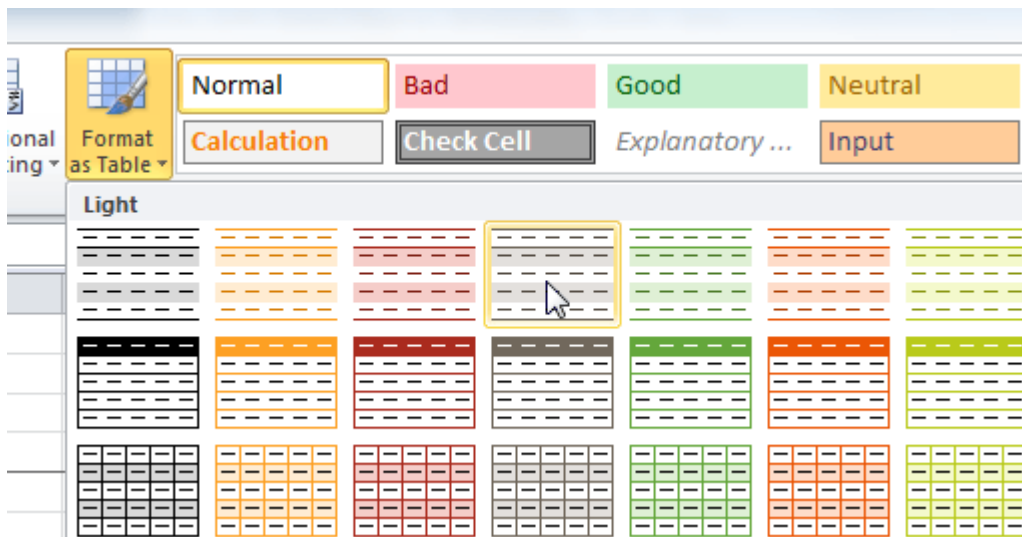
1. Select the cells you want to format as a table. In this example, an invoice, we'll format the cells containing the column headers and order details.

	A	B	C	D
1	 <i>Mongibello</i>		Date:	11/13/10
2	ARTISAN PASTA		Invoice #:	145-10
3	INVOICE		Customer:	Café Aurora
4	Quantity	Description	Unit Price	Line Total
5	5	Fettuccini, Black Bean Flavor	\$12.00	\$60.00
6	7	Fettuccini, Sundried Tomato Flavor	\$10.00	\$70.00
7	9	Fettuccini, Thai Basil Flavor	\$10.00	\$90.00
8	6	Penne, Roasted Red Pepper Flavor	\$14.00	\$84.00
9	3	Penne, Massaman Curry Flavor	\$14.00	\$42.00
10	4	Penne, Wild Mushroom Flavor	\$15.00	\$60.00
11				

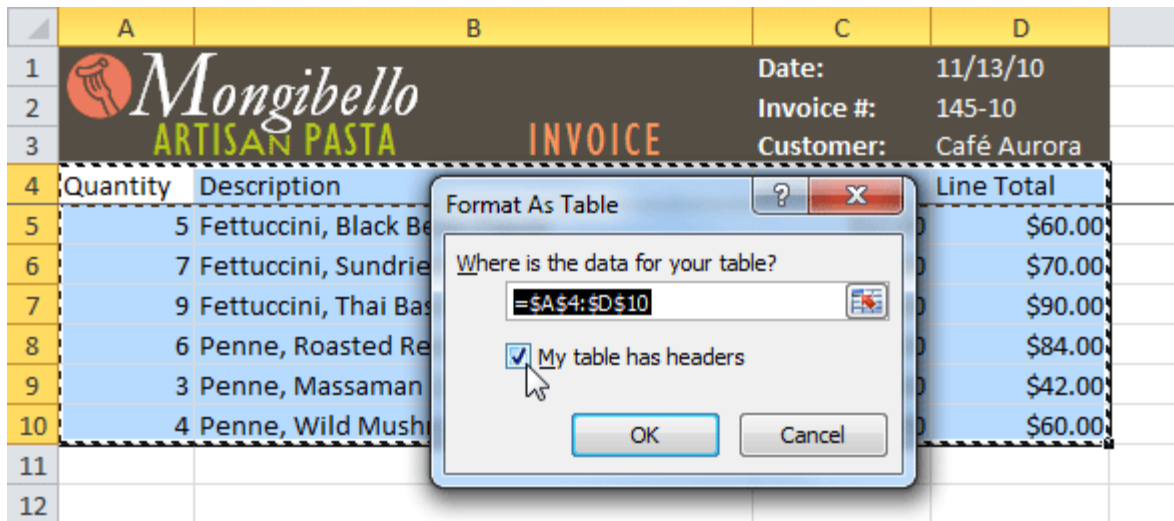
2. Click the **Format as Table** command in the **Styles** group on the Home tab.



3. A list of predefined **table styles** will appear. Click a table style to select it.



4. A dialog box will appear, confirming the **range** of cells you have selected for your table. The cells will appear selected in the spreadsheet, and the range will appear in the dialog box.
5. If necessary, **change** the range by selecting a new range of cells directly on your spreadsheet.
6. If your table has headers, check the box next to **My table has headers**.



7. Click **OK**. The data will be formatted as a table in the style you chose.

Quantity	Description	Unit Price	Line Total
5	5 Fettuccini, Black Bean Flavor	\$12.00	\$60.00
7	7 Fettuccini, Sundried Tomato Flavor	\$10.00	\$70.00
9	9 Fettuccini, Thai Basil Flavor	\$10.00	\$90.00
6	6 Penne, Roasted Red Pepper Flavor	\$14.00	\$84.00
3	3 Penne, Massaman Curry Flavor	\$14.00	\$42.00
4	4 Penne, Wild Mushroom Flavor	\$15.00	\$60.00

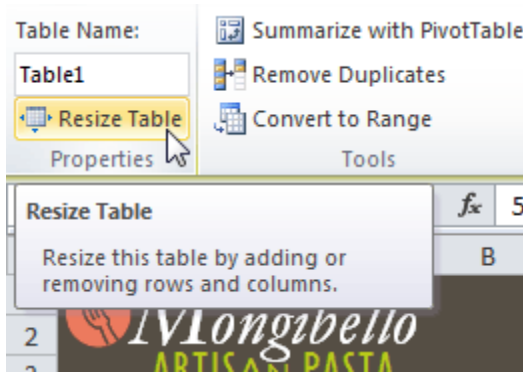
Tables include **filtering** by default. You can filter your data at any time using the **drop-down arrows** in the header..

To convert a table back into normal cells, click the **Convert to Range** command in the **Tools** group. The filters and Design tab will then disappear, but the cells will retain their data and formatting.

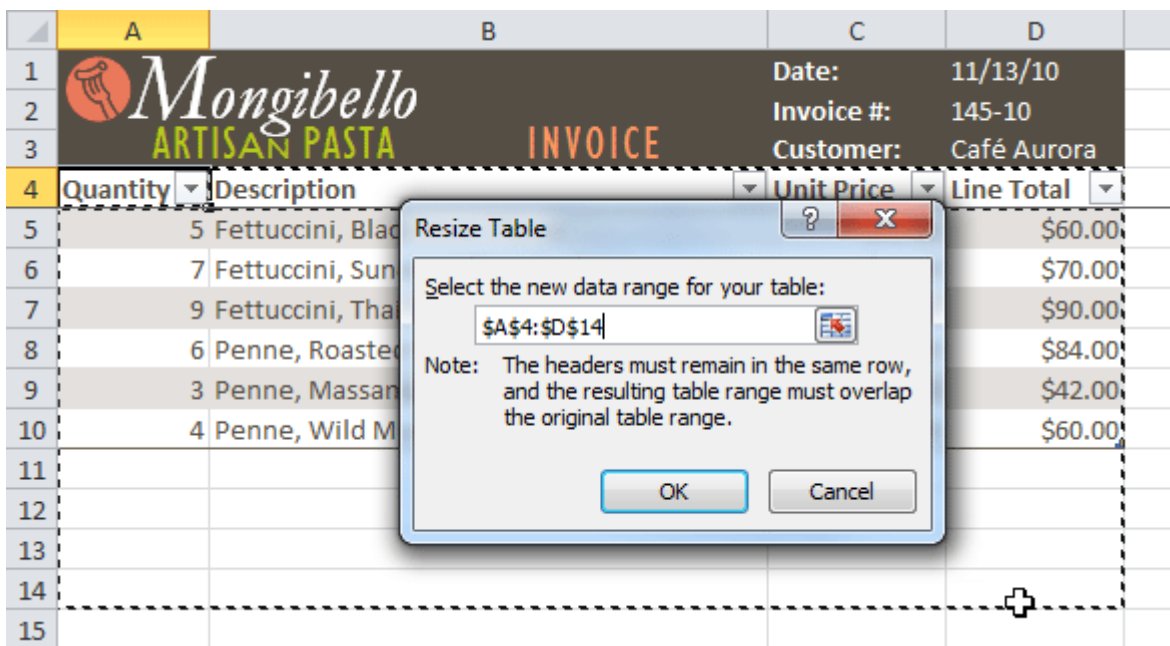
Modifying tables

To add rows or columns:


1. Select **any cell** in your table. The **Design** tab will appear on the Ribbon.
2. From the Design tab, click the **Resize Table** command.



3. Directly on your spreadsheet, select the new **range** of cells you want your table to cover. You must select your original table cells as well.

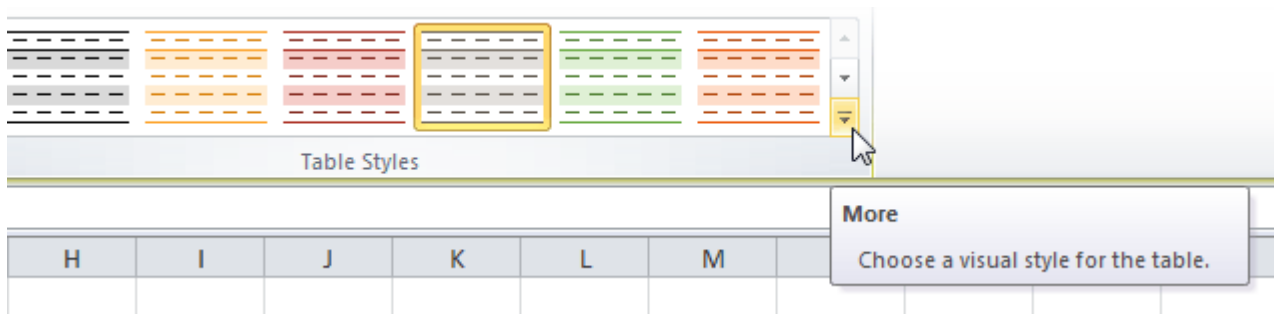


4. Click **OK**. The new rows and/or columns will be added to your table.


	A	B	C	D
1			Date:	11/13/10
2			Invoice #:	145-10
3			Customer:	Café Aurora
4	Quantity	Description	Unit Price	Line Total
5	5	Fettuccini, Black Bean Flavor	\$12.00	\$60.00
6	7	Fettuccini, Sundried Tomato Flavor	\$10.00	\$70.00
7	9	Fettuccini, Thai Basil Flavor	\$10.00	\$90.00
8	6	Penne, Roasted Red Pepper Flavor	\$14.00	\$84.00
9	3	Penne, Massaman Curry Flavor	\$14.00	\$42.00
10	4	Penne, Wild Mushroom Flavor	\$15.00	\$60.00
11				
12				
13				
14				
15				

To change the table style:

1. Select **any cell** in your table. The **Design** tab will appear.
2. Locate the **Table Styles** group. Click the **More** drop-down arrow to see all of the table styles.



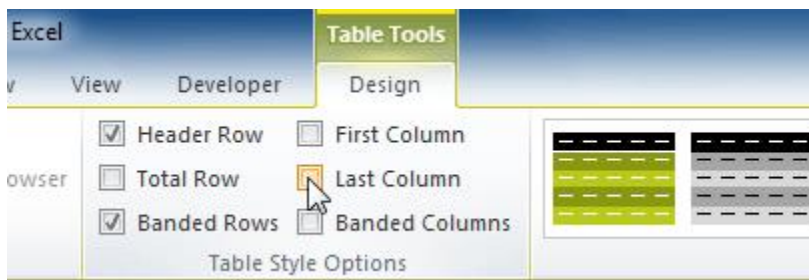
3. Hover the mouse over the various styles to see a live preview.
4. Select the desired style. The table style will appear in your worksheet.

	A	B	C	D
1			Date:	11/13/10
2			Invoice #:	145-10
3			Customer:	Café Aurora
4	Quantity	Description	Unit Price	Line Total
5		5 Fettuccini, Black Bean Flavor	\$12.00	\$60.00
6		7 Fettuccini, Sundried Tomato Flavor	\$10.00	\$70.00
7		9 Fettuccini, Thai Basil Flavor	\$10.00	\$90.00
8		6 Penne, Roasted Red Pepper Flavor	\$14.00	\$84.00
9		3 Penne, Massaman Curry Flavor	\$14.00	\$42.00
10		4 Penne, Wild Mushroom Flavor	\$15.00	\$60.00
11				

To change table style options:

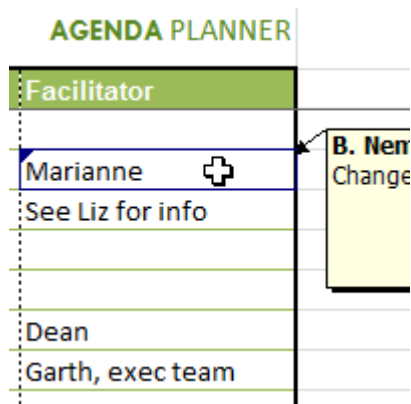
When using an Excel table, you can turn various options **on** or **off** to change its appearance. There are six options: **Header Row**, **Total Row**, **Banded Rows**, **First Column**, **Last Column**, and **Banded Columns**.

1. Select **any cell** in your table. The **Design** tab will appear.
2. From the **Design** tab, **check** or **uncheck** the desired options in the **Table Style Options** group.



Reviewing and Sharing Workbooks

Introduction



The screenshot shows a table titled "AGENDA PLANNER" with a green header row. The table has several rows, with the first row highlighted in green and labeled "Facilitator". The second row is highlighted in blue and labeled "Marianne" with a plus sign icon. The text "See Liz for info" is in the cell below "Marianne". A yellow callout box with a black border points to the "Marianne" cell, containing the text "B. New Change". Below "Marianne" are rows for "Dean" and "Garth, exec team".

AGENDA PLANNER
Facilitator
Marianne +
See Liz for info
Dean
Garth, exec team

Let's say someone asked you to proofread a worksheet. If you had a hard copy, you might use a red pen to cross out cell data, mark misspellings, or add comments in the margins. However, you could also do all of these things in Excel using the **Track Changes** and **Comments** features.

When you've finished reviewing the worksheet, the other person can choose to automatically **accept** all of your changes, or decide whether to **accept** or **reject** each change one by one. In this lesson, you'll learn how to **track changes**, add **comments**, and **compare** two versions of a worksheet. You'll also learn how to prepare a **final** version for sharing, including how to **check spelling**.

About Track Changes

When you turn on the **Track Changes** option, every change you make to the worksheet will be **highlighted** with a unique border and indicator. Hovering your mouse over a highlighted cell will display the details of the change. This allows the other person to see what changes have been made before making them permanent.

	Time	Item	Facilitator
AM	0:15	Break	
PM	1:45	Cady Falls hike (strategy game?)	Marianne, Liz
PM	1:00	Lunch (with strategy game team)	
PM	0:30	Strategy debrief	Marianne
PM	1:00	Get to know your team	Se
PM	1:00	Strengths exercise	
PM	0:15	Break	
PM	0:45	Redwoods hike	Dean
PM	1:00	Team building exercise	Garth, exec team
PM	2:00	Dinner	
	12:00		

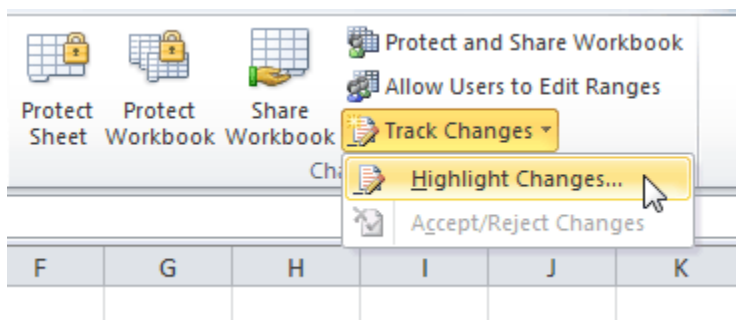
B. Nemeec, 10/12/2010 2:46 PM:
 Changed cell D14 from '?' to 'Get to know your team'.

The **color** of the highlights will vary depending on who's reviewing the document, so if there are multiple reviewers you'll be able to tell at a glance who made each change.

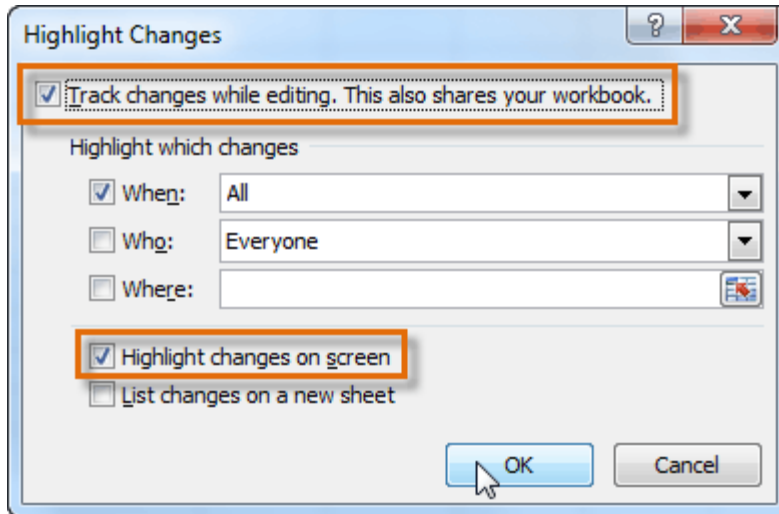
There are some changes that Excel **cannot** track. Familiarize yourself with [changes that Excel does not track or highlight](#).

To turn on Track Changes:


1. Go to the **Review** tab.
2. Click **Track Changes**, then select **Highlight Changes** from the drop-down menu.



3. The **Highlight Changes** dialog box will appear.
4. Check the box next to **Track changes while editing**.
5. Verify that the box is checked for **Highlight changes on screen**. This will highlight your changes while you work.
6. Click **OK**.



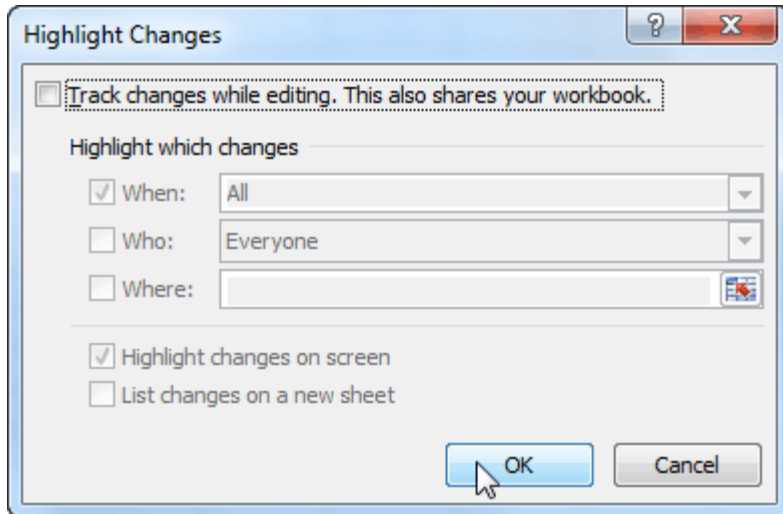
7. If prompted, click **OK** to allow Excel to save your workbook.
8. Change tracking is now active. Any changes you make to the worksheet will be **highlighted** with a unique border and indicator.

	A	B	C	D																									
1																													
2					<table border="1"> <tr> <td>Event:</td> <td>Team Building Retreat</td> </tr> <tr> <td>Location:</td> <td>Waverly Point Nature Preserve</td> </tr> <tr> <td>Date:</td> <td>Friday, November 12, 2010</td> </tr> </table>				Event:	Team Building Retreat	Location:	Waverly Point Nature Preserve	Date:	Friday, November 12, 2010															
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Location:									Waverly Point Nature Preserve																				
Date:									Friday, November 12, 2010																				
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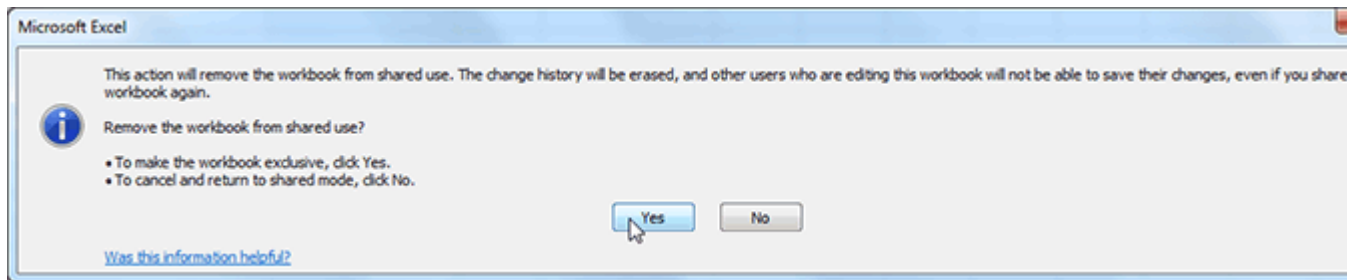
Your workbook will be shared automatically when you turn on Track Changes. Shared workbooks are designed to be stored where other users—such as users on the same network—can access and edit the workbook at the same time..

To turn off Track Changes:

1. From the **Review** tab, click **Track Changes**. Then select **Highlight Changes** from the drop-down menu.
2. Uncheck the box next to **Track changes while editing**.



3. Click **Yes** to confirm that you want to turn off Track Changes and stop sharing your workbook.



Turning off Track Changes will delete any tracking that has taken place in your workbook. You will not be able to view, accept, or reject changes; instead, they will be applied to your workbook automatically. Always review the changes in your worksheet before turning off Track Changes.

Adding and deleting comments

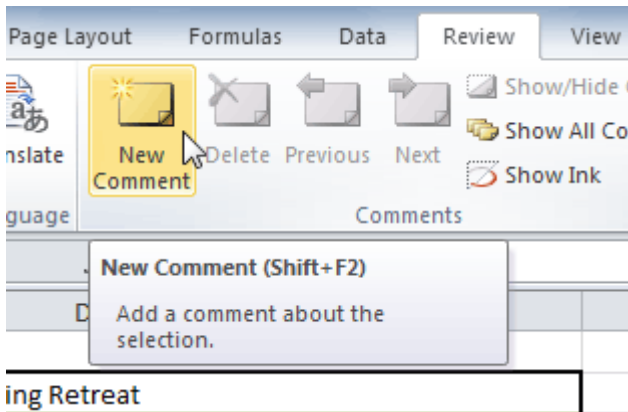
Sometimes you may want to add a **comment** to a worksheet to provide feedback for the author instead of changing the contents. Comments are highlighted by a unique indicator and can be read by the original author or by any other reviewers.

To add a comment:

1. Select the cell where you want the comment to appear.

6	Time	Item	Facilitator
9	1:00	Work relationships exercise	Garth, Dean, Liz
10	0:15	Break	
11	1:45	Cady Falls hike (strategy game?)	Marianne, Liz
12	1:00	Lunch (with strategy game team)	
13	0:30	Strategy debrief	Marianne
14	1:00	Get to know your team	See Liz for info
15	1:00	Strengths exercise	

- From the **Review** tab, click the **New Comment** command.



- Type your comment.

6	Time	Item	Facilitator
9	1:00	Work relationships exercise	Garth, Dean, Liz
10	0:15	Break	
11	1:45	Cady Falls hike (strategy game?)	Marianne, Liz
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14	1:00	Get to know your team	See Liz for info
15	1:00	Strengths exercise	

B. Nemec:
This would be a great time to do the strategy game.

- The red **indicator** in the upper-right corner shows that there is a comment in that cell.

6	Time	Item	Facilitator
9	1:00	Work relationships exercise	Garth, Dean, Liz
10	0:15	Break	
11	1:45	Cady Falls hike (strategy game?)	Marianne, Liz
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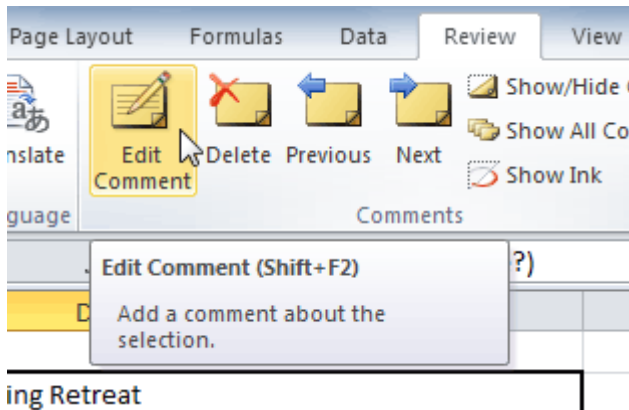
- Hover your mouse over the cell to **view** the comment.

6	Time	Item	Facilitator
9	1:00	Work relationships exercise	Garth, Dean, Liz
10	0:15	Break	
11	1:45	Cady Falls hike (strategy game?)	M
12	1:00	Lunch (with strategy game team)	M
13	0:30	Strategy debrief	M
14	1:00	Get to know your team	See Liz for info
15	1:00	Strengths exercise	

B. Nemec:
This would be a great time to do the strategy game.

To edit a comment:

1. Select the cell containing the comment you want to edit.
2. From the **Review** tab, click the **Edit Comment** command (where the New Comment command used to be).



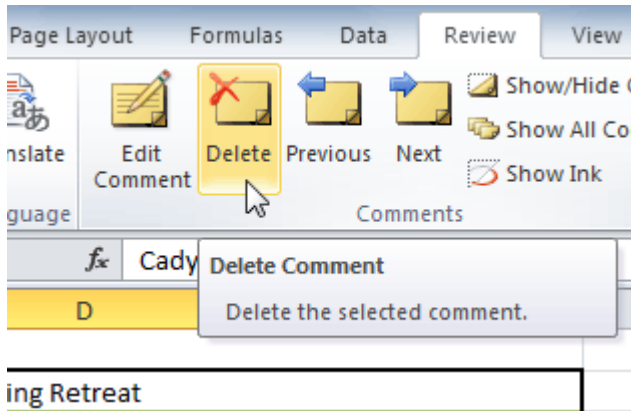
3. Edit your comment.

6	Time	Item	Facilitator
9	1:00	Work relationships exercise	Garth, Dean, Liz
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11	1:45	Cady Falls hike (strategy game?)	M
12	1:00	Lunch (with strategy game team)	M
13	0:30	Strategy debrief	M
14	1:00	Get to know your team	See Liz for info
15	1:00	Strengths exercise	

B. Nemec:
This would be a great time to do the strategy game. Liz has the materials.

To delete a comment:

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



3. The comment will be deleted.

Finalizing and protecting your workbook

Before you send your workbook, take a minute to prepare a final copy. Excel has tools that might save you from sharing a workbook that contains spelling errors or information about the workbook itself that you do not want recipients to see. Use the **Spelling** command to find and edit any **misspelled words**; use the **Document Inspector** to find and delete any **hidden data** or **personal information** that is stored in the workbook, such as hidden comments, invisible objects, and file paths; and consider your **Protect Workbook** options, which are designed to keep other users from making unwanted changes to your workbook.

To check spelling:

1. Select the cells you want to check.
2. Click the **Spelling** command on the Review tab.



3. The **Spelling** dialog box will open. From the Spelling dialog box, you can review and edit any misspelled words.

You can also check the spelling of every cell in an active worksheet by selecting any empty cell in the worksheet and clicking the **Spelling** command.

Ignoring spelling "errors"

There are times when Excel will say something is an error when it is not. This often happens with people's names, which may not be in the dictionary. Even if Excel says something is an error, you can choose not to change it. There are three options you can choose from:

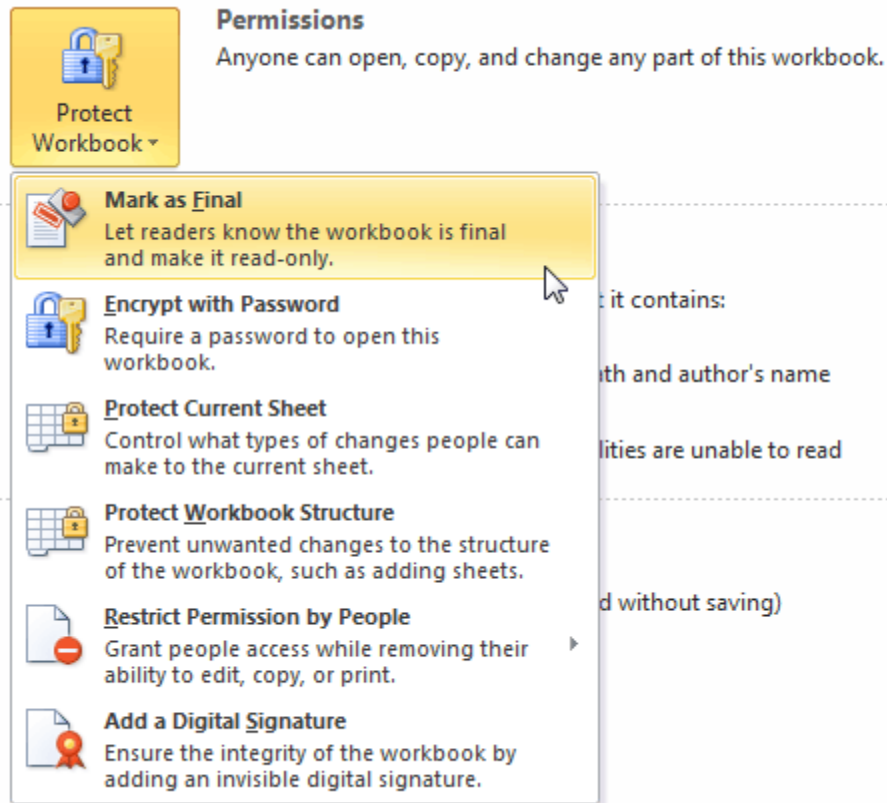
- **Ignore Once:** This will skip the word without changing it.
- **Ignore All:** This will skip the word without changing it, and it will also skip all other instances of this word in the worksheet.
- **Add to Dictionary:** This adds the word to the dictionary so it will never come up again as an error. Make sure the word is spelled correctly before choosing this option.

Protecting your workbook

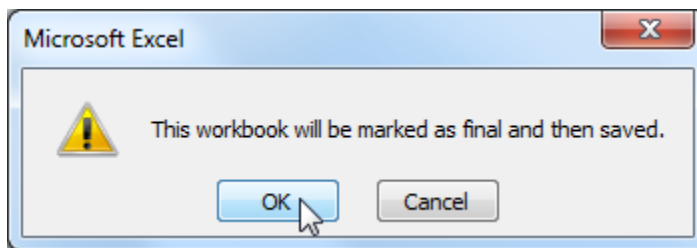
By default, anyone with access to your workbook will be able to open, copy, and change any part of it unless you protect it. There are many ways you can protect your workbook, depending on your needs. For example, you can mark your workbook as final, set it up with a password, put restrictions on who can make changes, or make it so only certain cells or features of the workbook are changeable.

To protect your workbook:

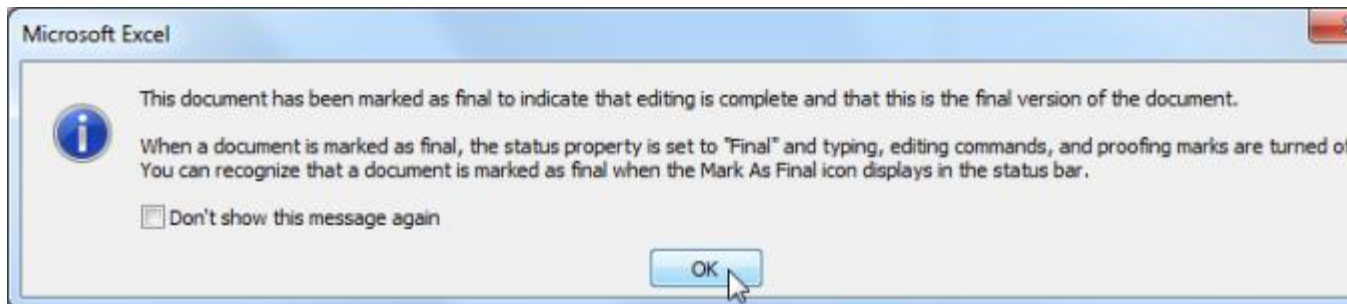
1. Click the **File** tab to access **Backstage view**.
2. From the **Info** pane, click the **Protect Workbook** command.
3. Choose the **option** that best suits your needs. In this example, we'll select **Mark as Final**. Marking your workbook as final is a way to discourage others from making changes to the workbook. It will alert whoever opens it that typing, editing, and proofreading commands are unavailable.



4. Click **OK**.

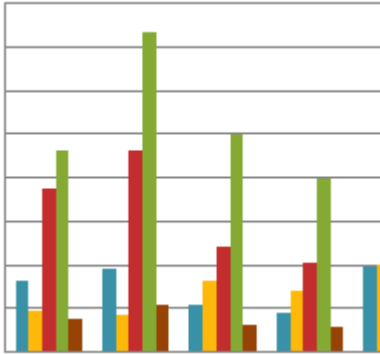


5. Another dialog box will appear. Click **OK** to confirm.



WORKING WITH CHARTS

Introduction



A **chart** is a tool you can use in Excel to **communicate data graphically**. Charts allow your audience to see the **meaning behind the numbers**, and they make showing **comparisons** and **trends** much easier. In this lesson, you'll learn how to **insert** charts and **modify** them so they communicate information effectively.

Charts

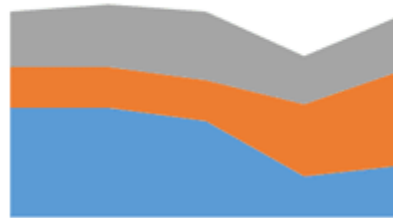
Excel workbooks can contain **a lot of data**, and this data can often be difficult to interpret. For example, where are the highest and lowest values? Are the numbers increasing or decreasing?

The answers to questions like these can become much clearer when data is represented as a **chart**. Excel has various types of charts, so you can choose one that most effectively represents your data.

Types of charts

Click the arrows in the slideshow below to view examples of some of the types of charts available in Excel.

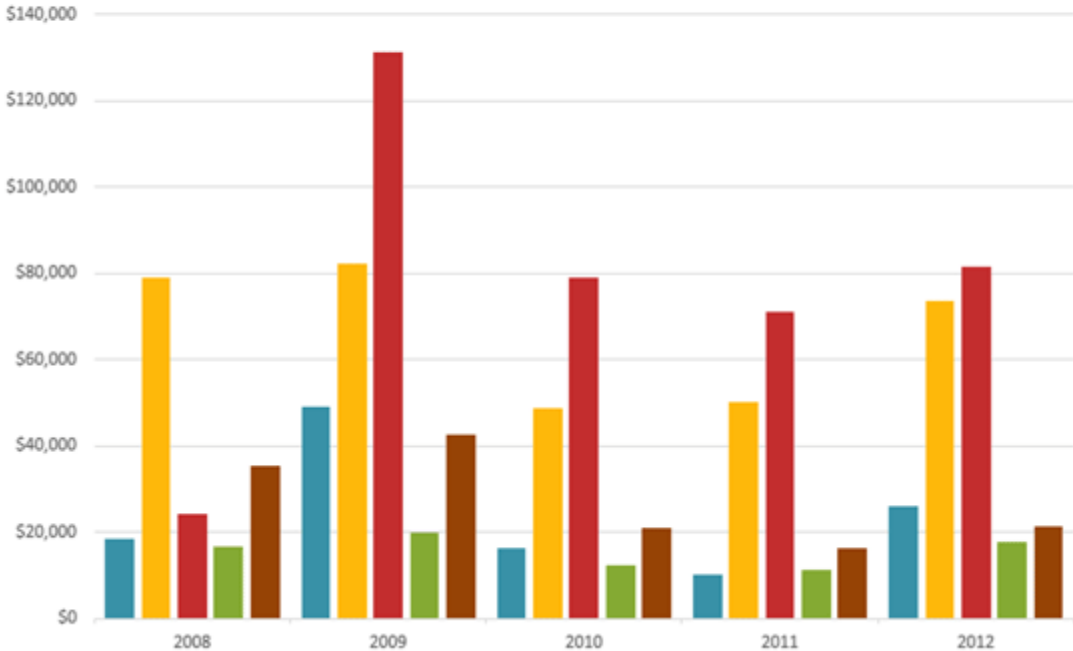
Types of Charts



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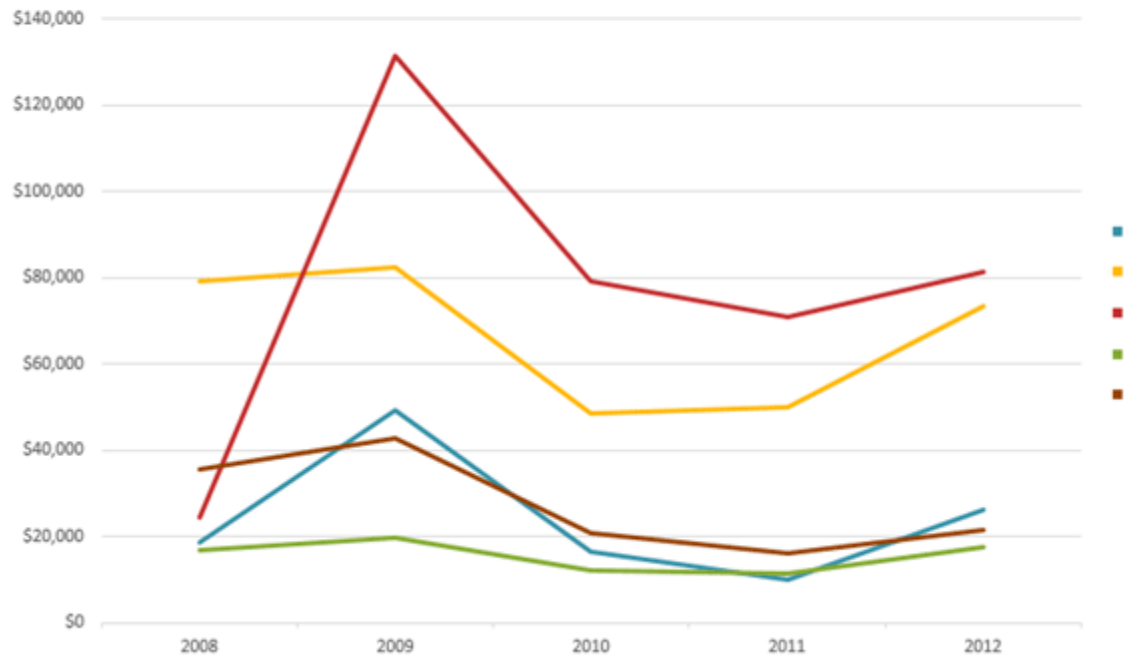
Excel has a variety of chart types, each with its own advantages. Click the arrows to see some of the different types of charts available in Excel.

Column



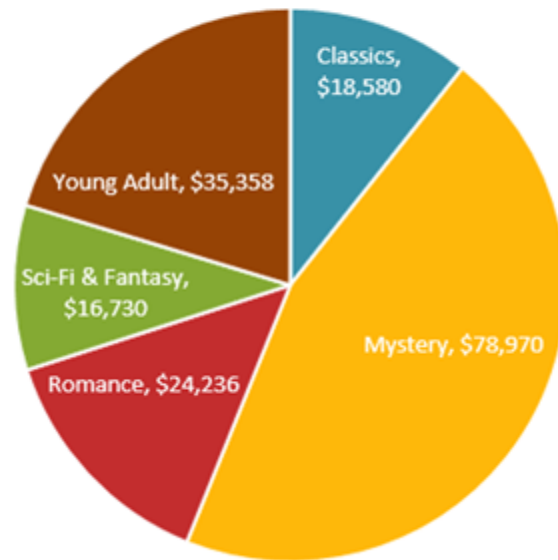
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Line



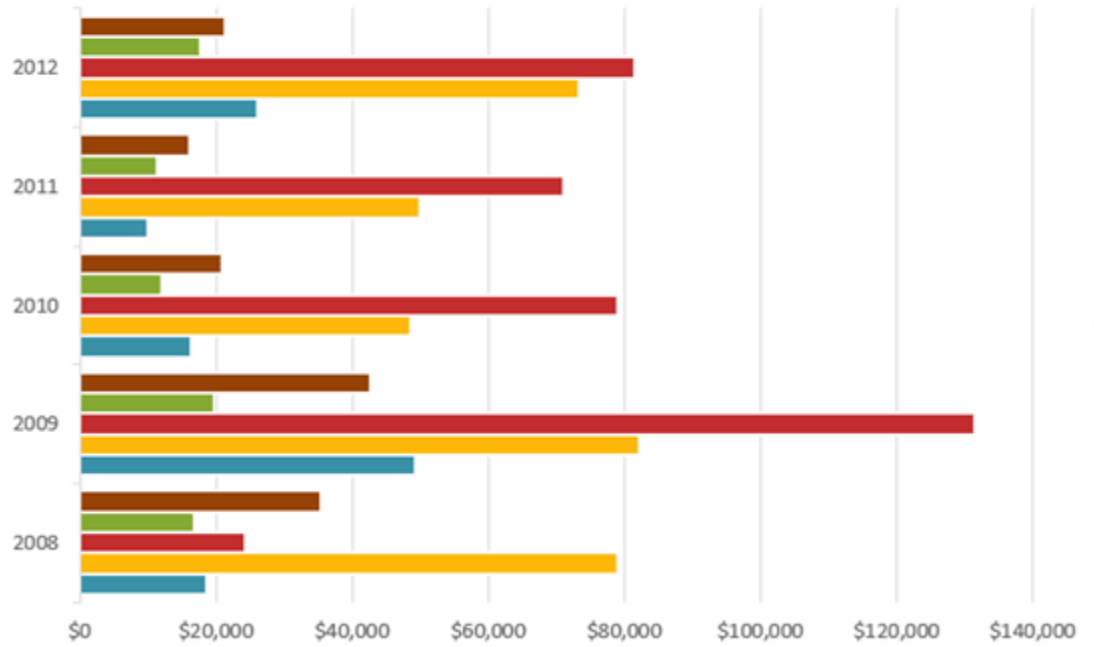
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Pie



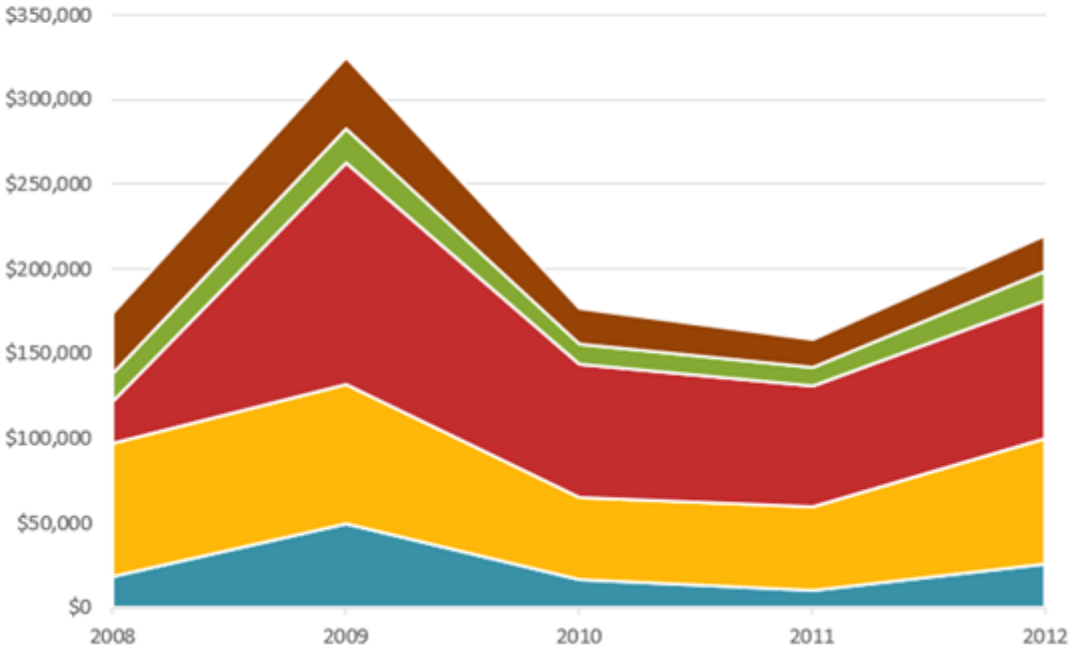
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Bar



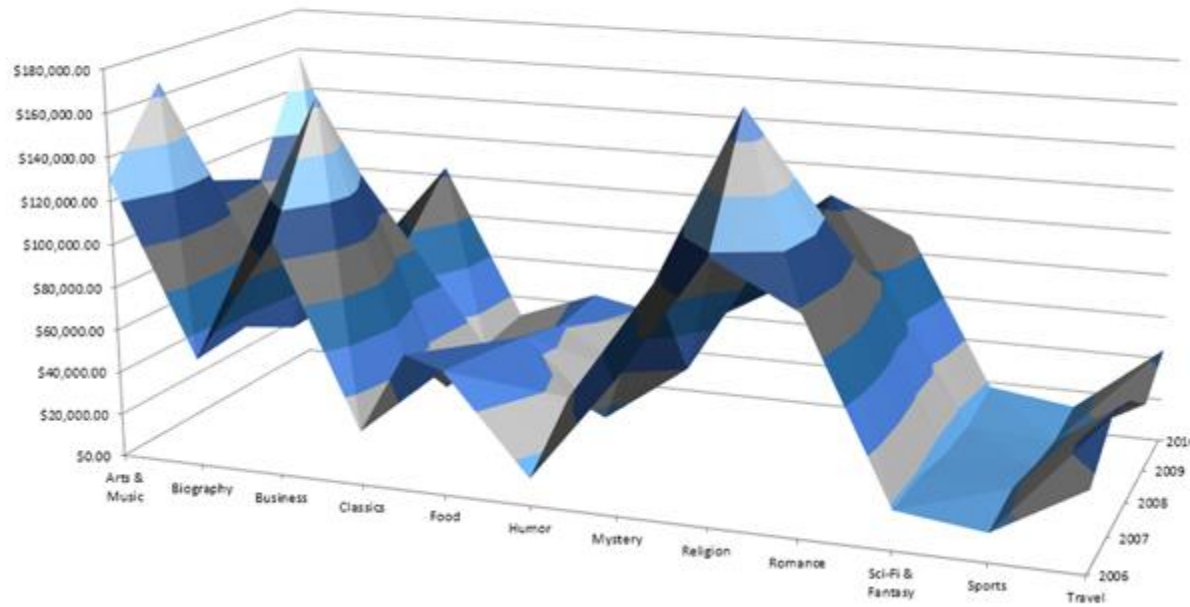
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Area



•

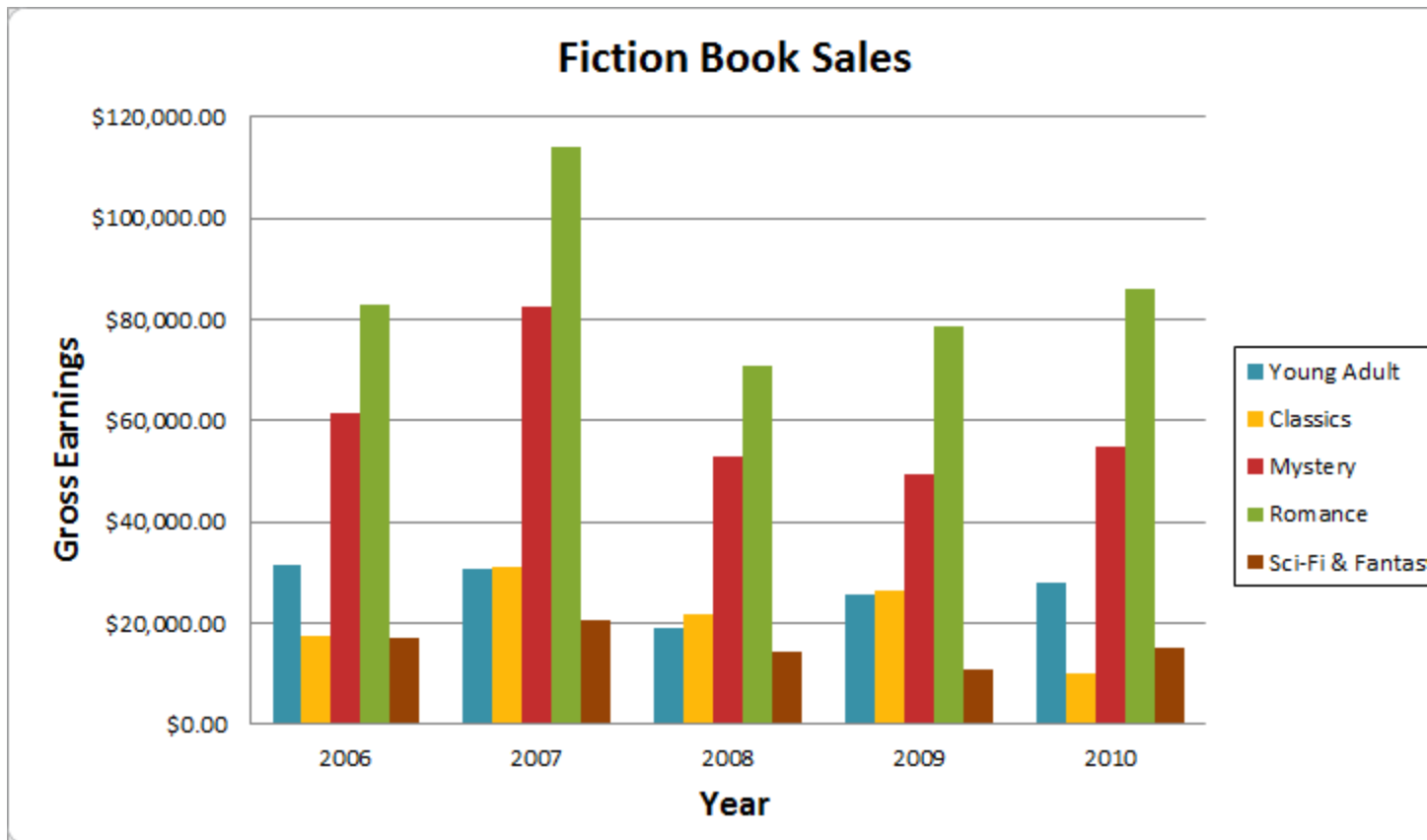
Surface



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- [2](#)
- [3](#)
- [4](#)
- [5](#)
- [6](#)
- [7](#)
- [8](#)
-

Identifying the parts of a chart

Click the buttons in the interactive below to learn about the different parts of a chart.

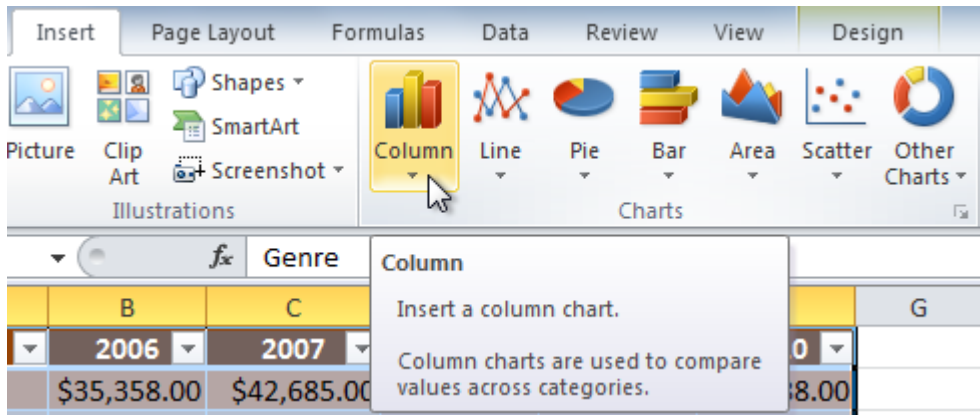


To create a chart:

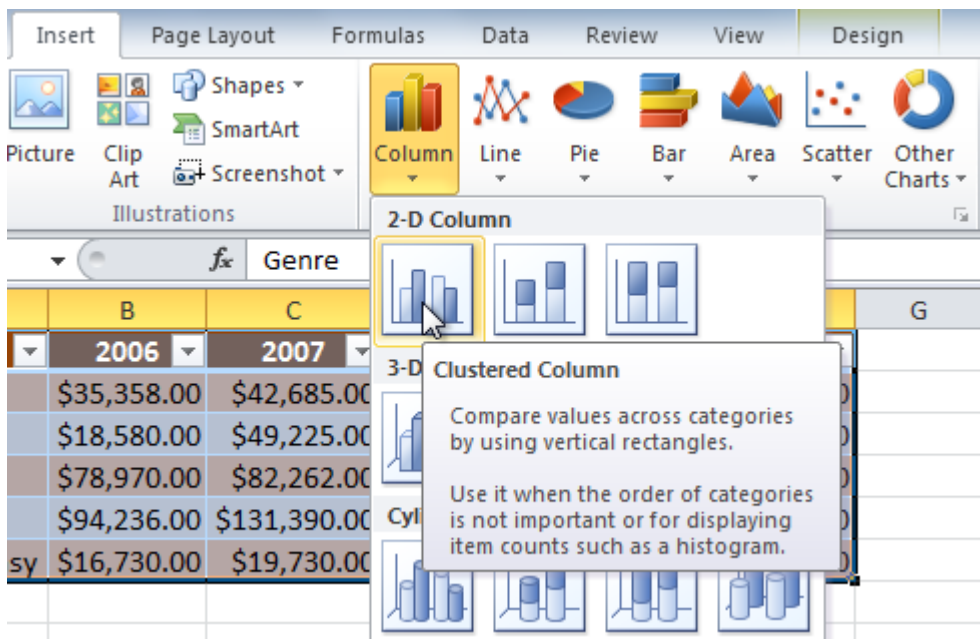
1. Select the **cells** you want to chart, including the **column titles** and **row labels**. These cells will be the **source data** for the chart.

	A	B	C	D	E	F
1	Genre	2006	2007	2008	2009	2010
2	Young Adult	\$35,358.00	\$42,685.00	\$20,893.00	\$16,065.00	\$21,388.00
3	Classics	\$18,580.00	\$49,225.00	\$16,326.00	\$10,017.00	\$26,134.00
4	Mystery	\$78,970.00	\$82,262.00	\$48,640.00	\$49,985.00	\$73,428.00
5	Romance	\$94,236.00	\$131,390.00	\$79,022.00	\$71,009.00	\$81,474.00
6	Sci-Fi & Fantasy	\$16,730.00	\$19,730.00	\$12,109.00	\$11,355.00	\$17,686.00
7						

2. Click the **Insert** tab.
3. In the **Charts** group, select the desired **chart category** (**Column**, for example).



4. Select the desired **chart type** from the drop-down menu (**Clustered Column**, for example).



5. The chart will appear in the worksheet.

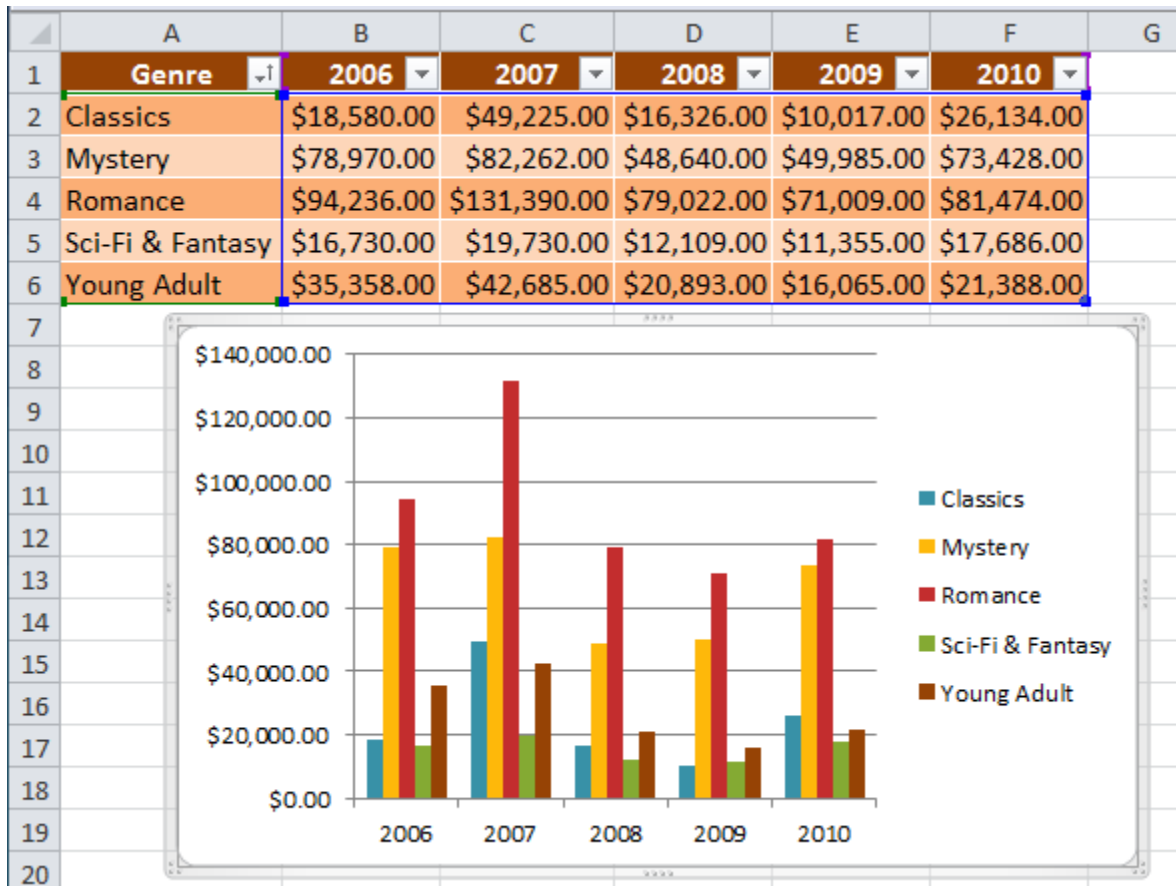
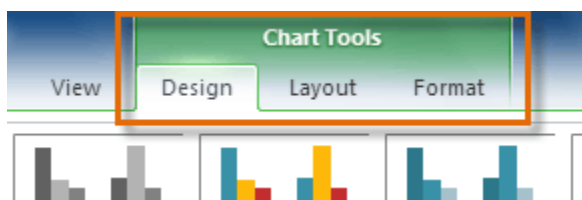


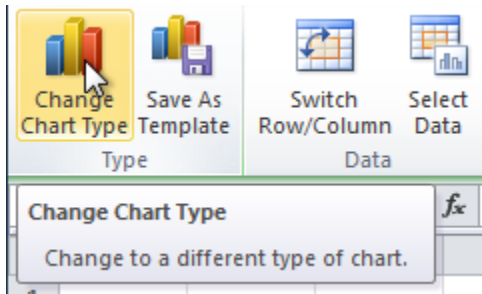
Chart tools

Once you insert a chart, a set of **chart tools** arranged into three tabs will appear on the Ribbon. These are only visible when the chart is selected. You can use these three tabs to **modify** your chart.

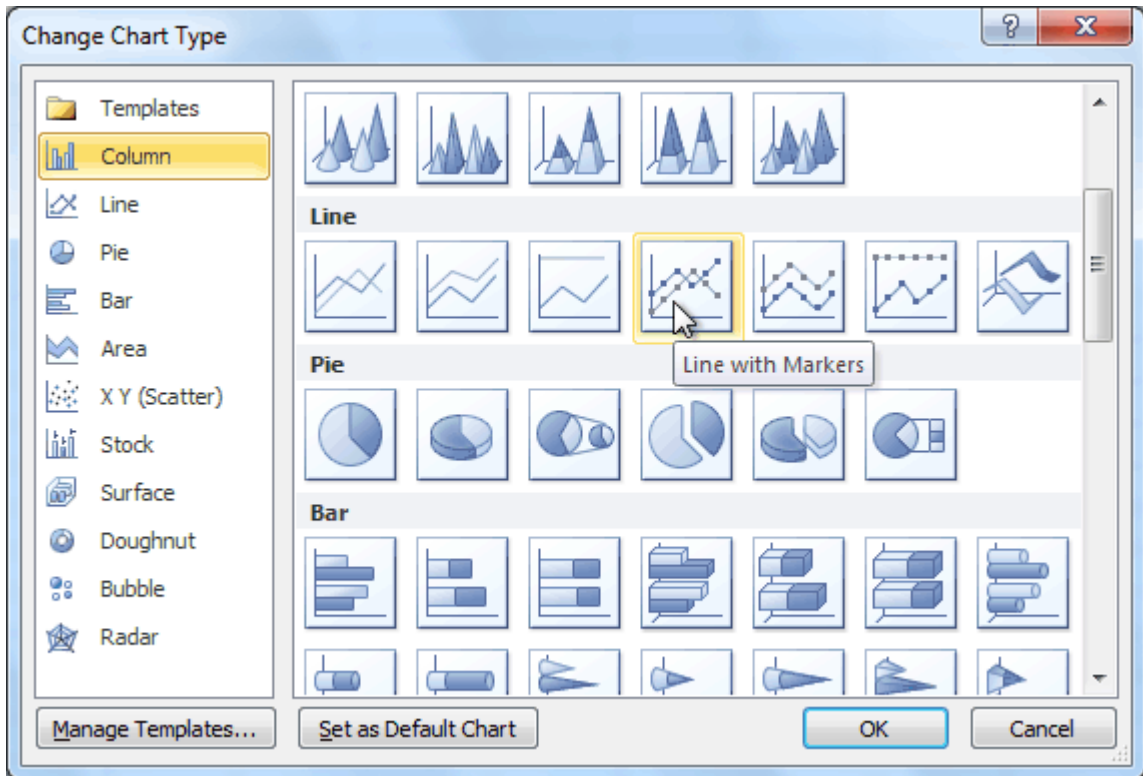


To change chart type:

1. From the **Design** tab, click the **Change Chart Type** command. A dialog box appears.



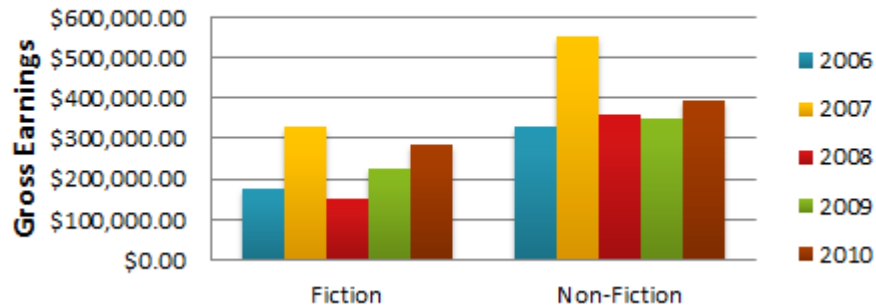
2. Select the desired **chart type**, then click **OK**.



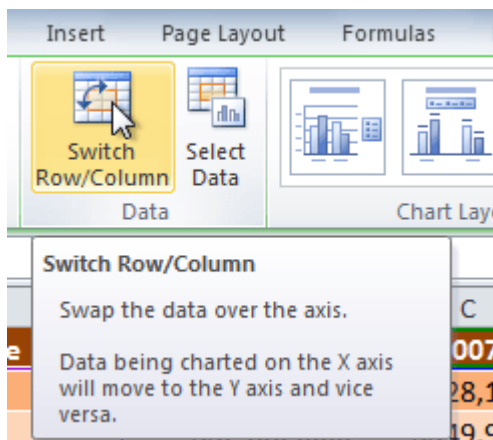
To switch row and column data:

Sometimes when you create a chart, the data may not be grouped the way you want. In the **clustered column chart** below, the Book Sales statistics are grouped **by Fiction and Non-Fiction**, with a column for each year. However, you can also **switch the row and column data** so the chart will group the statistics **by year**, with columns for Fiction and Non-Fiction. In both cases, the chart contains the **same data**—it's just organized differently.

Book Sales

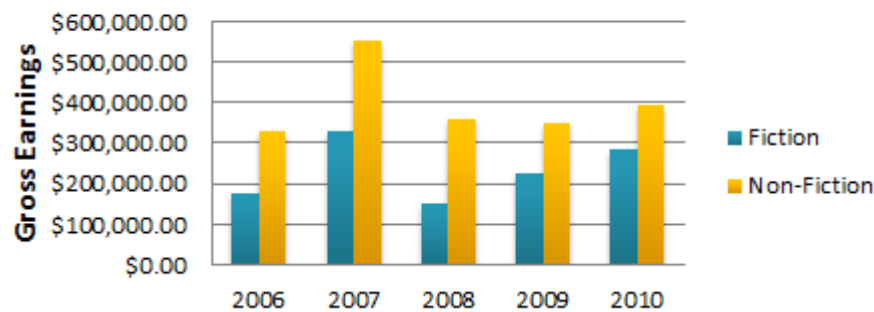


1. Select the **chart**.
2. From the **Design** tab, select the **Switch Row/Column** command.



3. The chart will readjust.

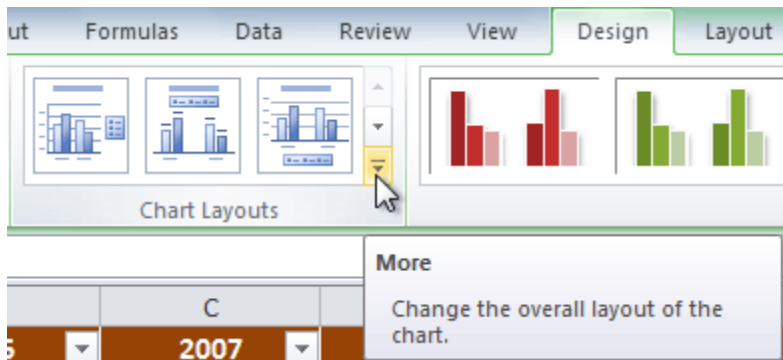
Book Sales



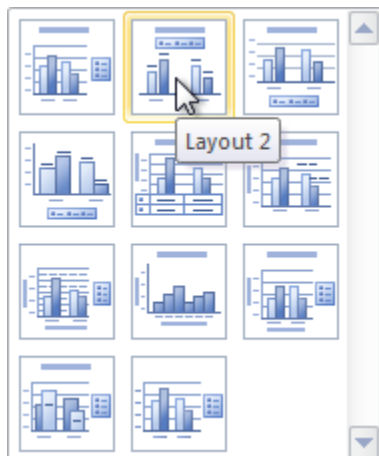
To change chart layout:

1. Select the **Design** tab.

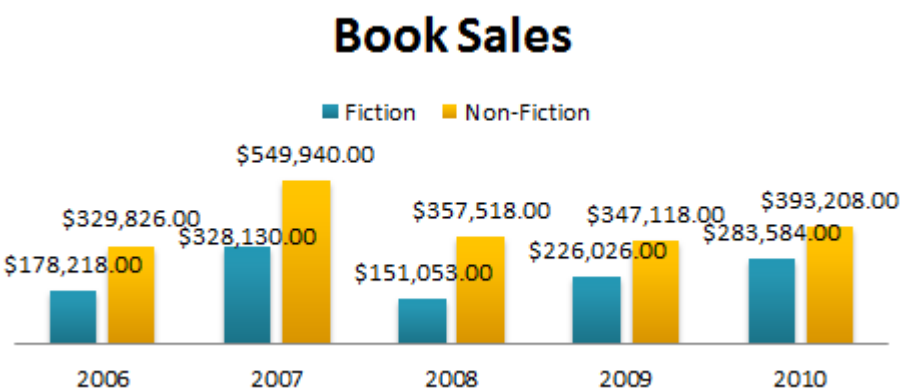
2. Click the **More** drop-down arrow in the **Chart Layouts** group to see all of the available layouts.



3. Select the desired layout.



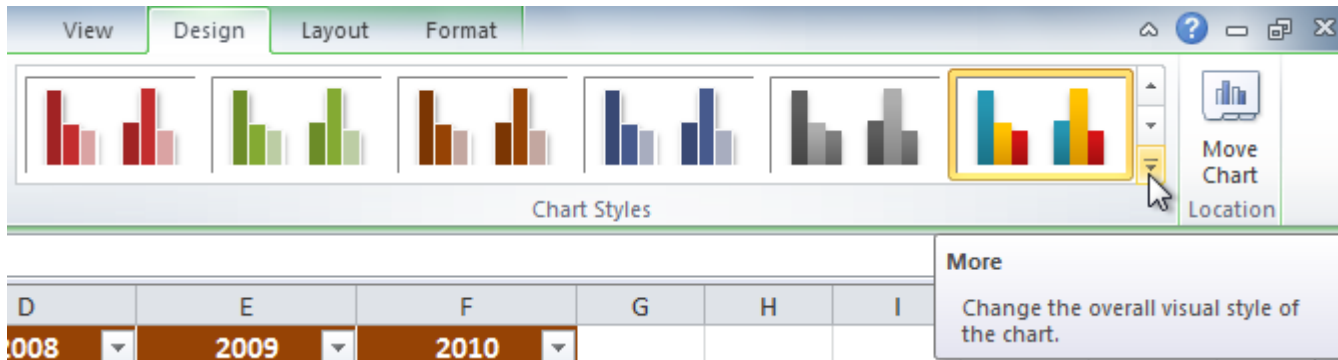
4. The chart will update to reflect the new layout.



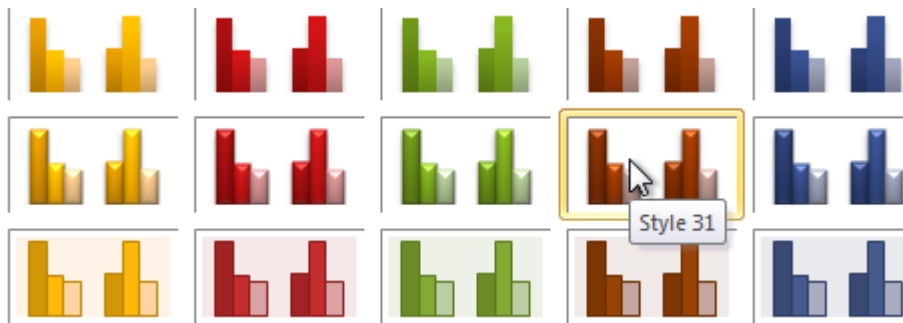
Some layouts include **chart titles**, **axes**, or **legend labels**. To change them, place the **insertion point** in the text and begin typing.

To change chart style:

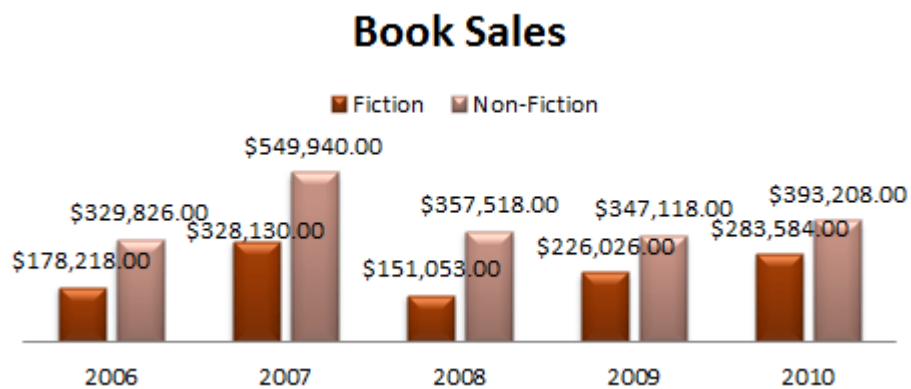
1. Select the **Design** tab.
2. Click the **More** drop-down arrow in the **Chart Styles** group to see all of the available styles.



3. Select the desired style.



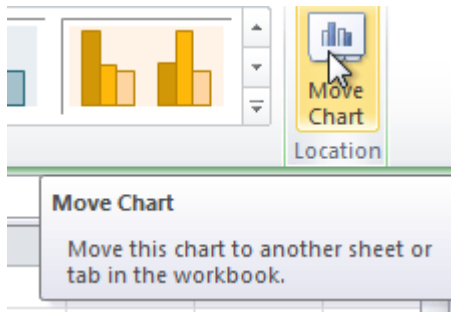
4. The chart will update to reflect the new style.



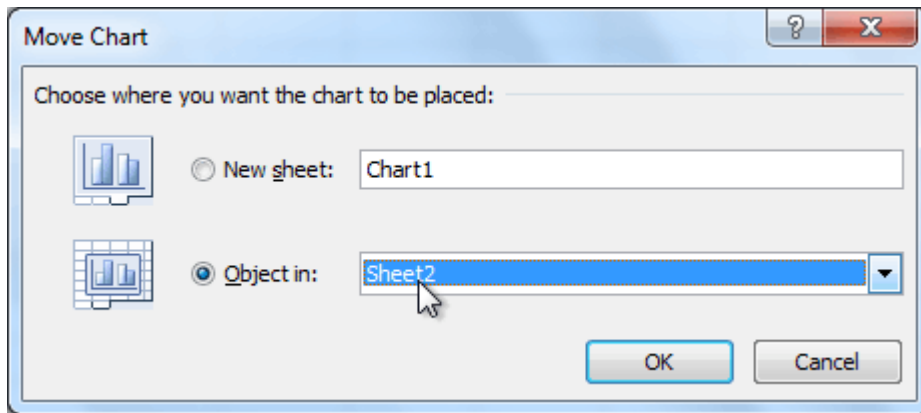
To move the chart to a different worksheet:

1. Select the **Design** tab.

2. Click the **Move Chart** command. A dialog box appears. The current location of the chart is selected.



3. Select the desired location for the chart (choose an existing worksheet, or select New Sheet and name it).



4. Click **OK**. The chart will appear in the new location.

- HTML stands for HyperText Markup Language.
- HTML is used to create web pages and web applications.
- HTML is widely used language on the web.
- We can create a static website by HTML only.
- Technically, HTML is a Markup language rather than a programming language.

HTML Example

1. `<!DOCTYPE>`
2. `<html>`
3. `<head>`
4. `<title>Web page title</title>`
5. `</head>`
6. `<body>`
7. `<h1>Write Your First Heading</h1>`
8. `<p>Write Your First Paragraph.</p>`
9. `</body>`
10. `</html>`

HTML Attribute

- HTML attributes are special words which provide additional information about the elements or attributes are the modifier of the HTML element.
 - Each element or tag can have attributes, which defines the behaviour of that element.
 - Attributes should always be applied with start tag.
 - The Attribute should always be applied with its name and value pair.
 - The Attributes name and values are case sensitive, and it is recommended by W3C that it should be written in Lowercase only.
 - You can add multiple attributes in one HTML element, but need to give space between two attributes.
-

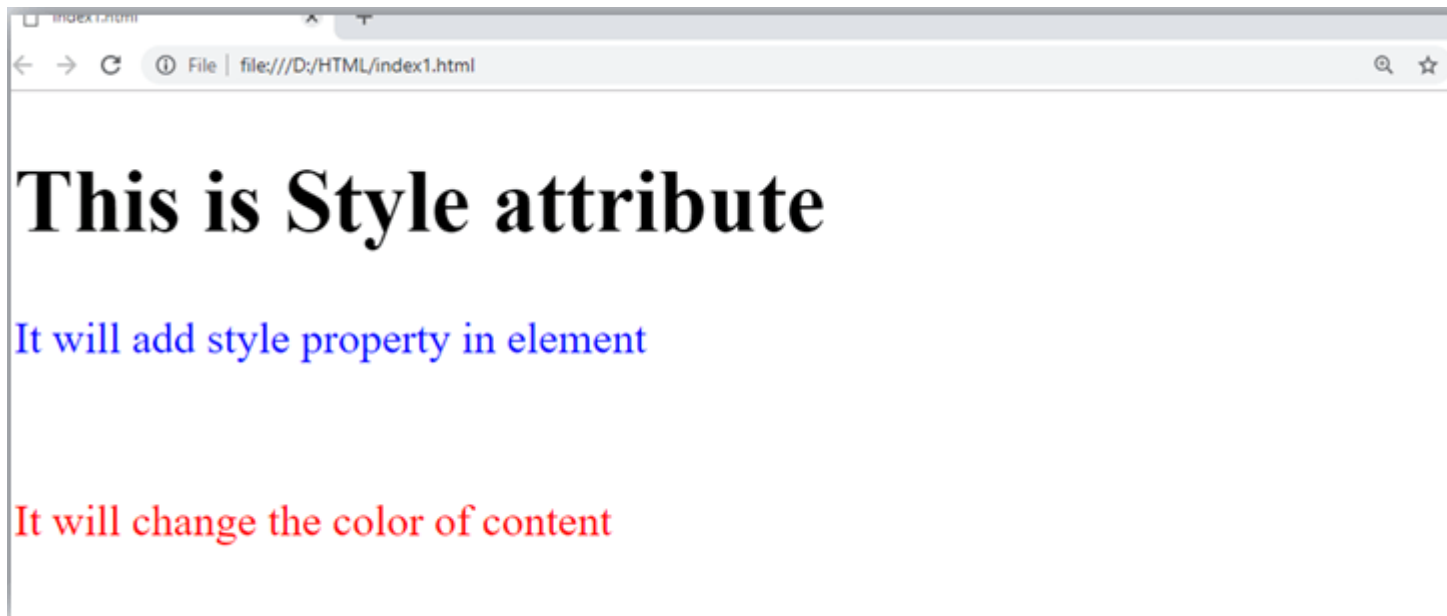
Syntax

1. `<element attribute_name="value">content</element>`
-

Example

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `</head>`
5. `<body>`
6. `<h1> This is Style attribute</h1>`
7. `<p style="height: 50px; color: blue">It will add style property in element</p>`
8. `<p style="color: red">It will change the color of content</p>`
9. `</body>`
10. `</html>`

Output:



Explanation of above example:

1. `<p style="height: 50px; color: blue">It will add style property in element</p>`

In the above statement, we have used paragraph tags in which we have applied style attribute. This attribute is used for applying CSS property on any HTML element. It provides height to paragraph element of 50px and turns its colour to blue.

1. `<p style="color: red">It will change the color of content</p>`

In the above statement we have again used style attribute in paragraph tag, which turns its colour red.

TITLE ATTRIBUTE

The title attribute is used as text tooltip in most of the browsers. It displays its text when the user moves the cursor over a link or any text. You can use it with any text or link to show the description about that link or text. In our example, we are taking this with paragraph tag and heading tag.

Example

With `<h1>` tag:

1. `<h1 title="This is heading tag">Example of title attribute</h1>`

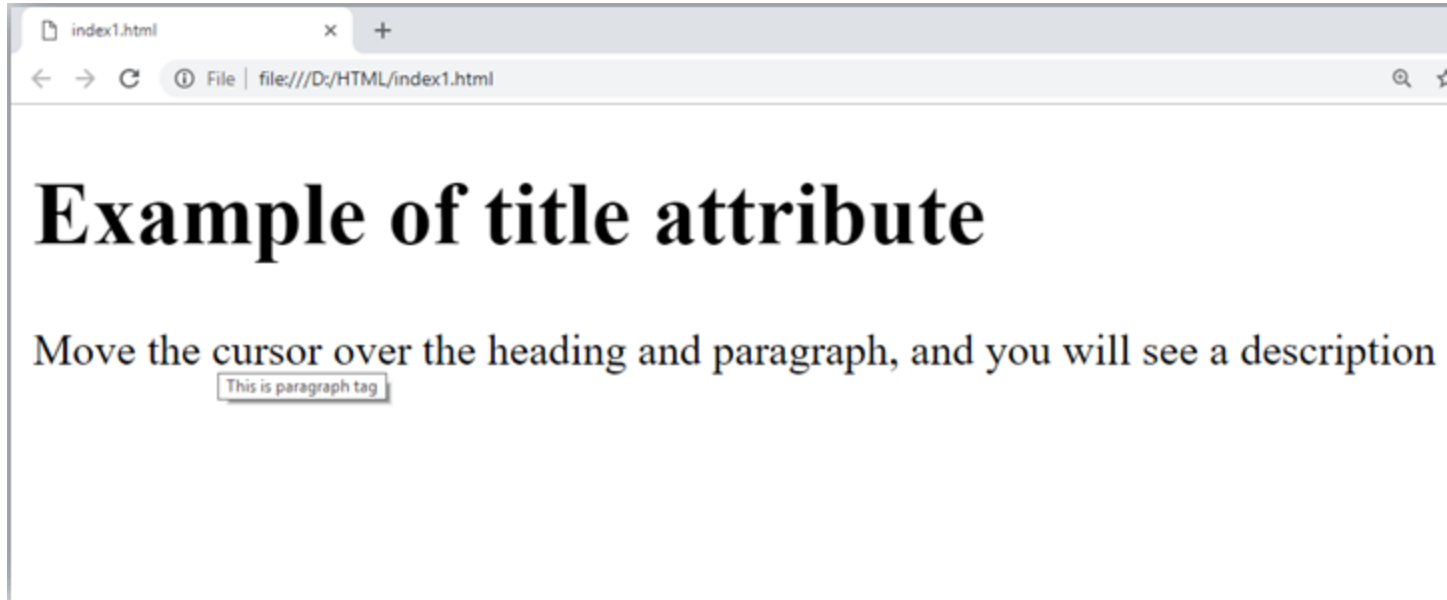
With `<p>` tag:

1. `<p title="This is paragraph tag">Move the cursor over the heading and paragraph, and you will see a description as a tooltip</p>`

Code:

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `</head>`
5. `<body>`
- 6.
7. `<h1 title="This is heading tag">Example of title attribute</h1>`
8. `<p title="This is paragraph tag">Move the cursor over the heading and paragraph, and you will see a description as a tooltip</p>`
- 9.
10. `</body>`
11. `</html>`

Output:



The href attribute

Description: The href attribute is the main attribute of <a> anchor tag. This attribute gives the link address which is specified in that link. **The href attribute provides the hyperlink, and if it is blank, then it will remain in same page.**

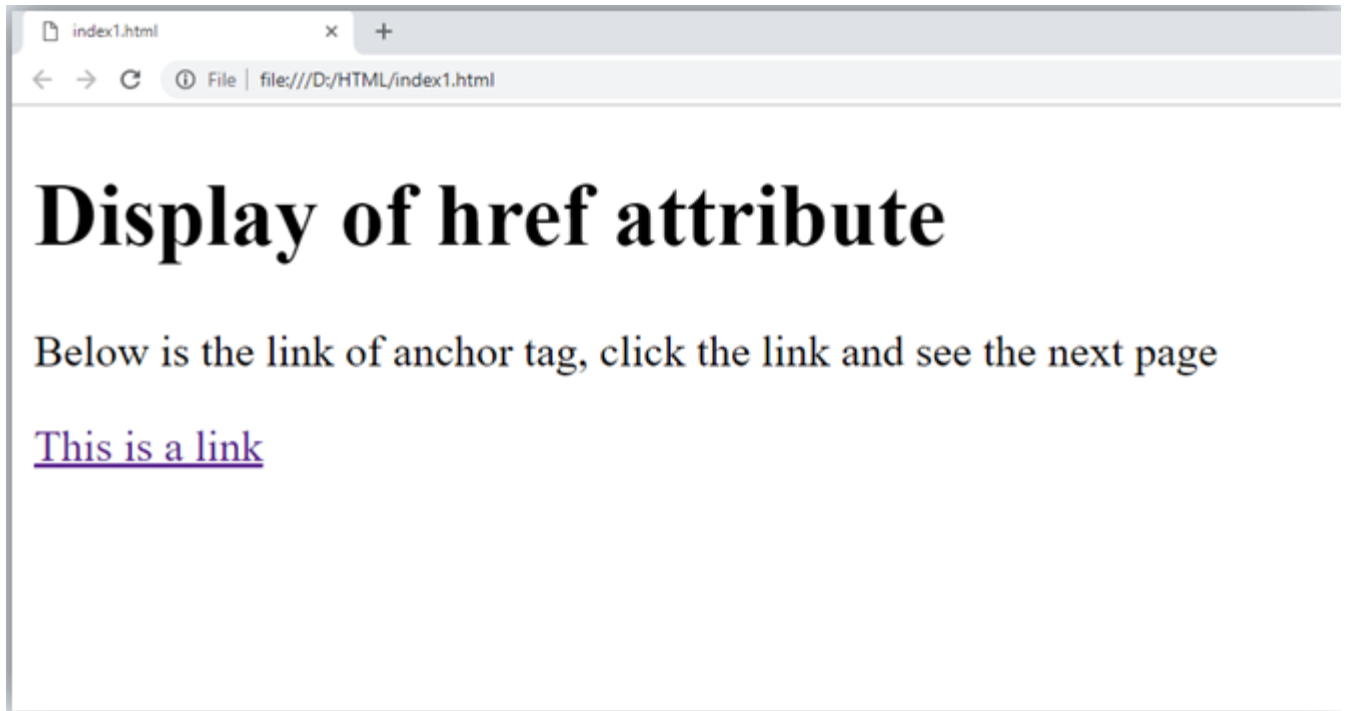
Example

With link address:

1. `This is a link`

Without link address:

1. `This is a link`



The src Attribute

The **src** attribute is one of the important and required attribute of **** element. It is source for the image which is required to display on browser. This attribute can contain image in same directory or another directory. The image name or source should be correct else browser will not display the image.

Example

1. ``

Output:

Example of src attribute

HTML images can be displayed with the help of image tag and its attribute src gives the source for that image



HTML ELEMENTS

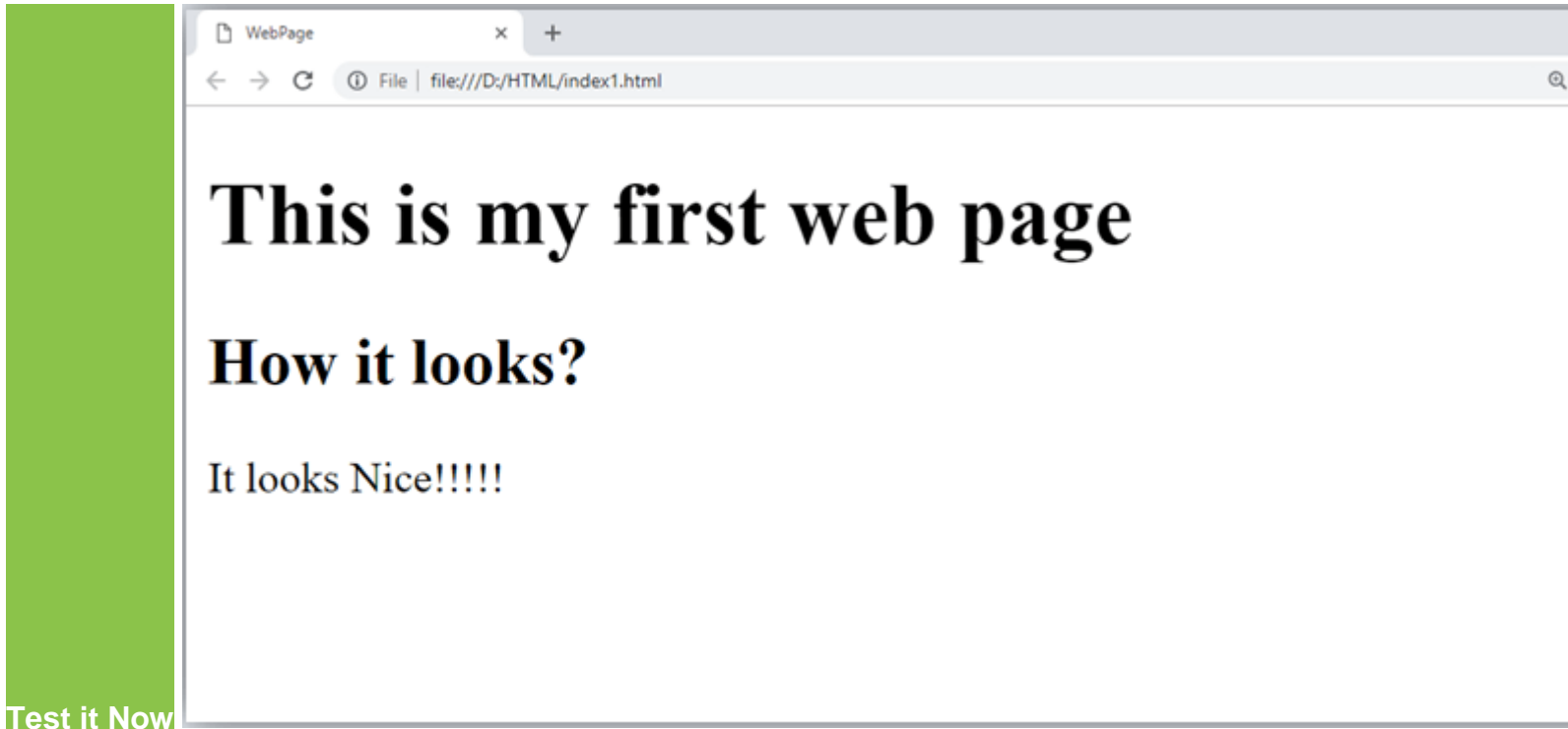
An HTML file is made of elements. These elements are responsible for creating web pages and define content in HTML. HTML usually consists of a start tag `<tag name>`, close tag `</tag name>` and content inserted between them. **Technical definition: A collection of start tag, attributes, end tag, content between them.**

Such as:

1. `<p> Hello world!!! </p>`

Example

```
1. <!DOCTYPE html>
2. <html>
3. <head>
4.   <title>WebPage</title>
5. </head>
6. <body>
7.   <h1>This is my first web page</h1>
8.   <h2> How it looks?</h2>
9.   <p>It looks Nice!!!!!!</p>
10.</body>
11.</html>
```

- All the content written between body elements are visible on web page.

Void element: All the elements in HTML do not require to have start tag and end tag, some elements does not h elements are known as Void elements or empty elements. **These elements are also called as unpaired tag.**

**Some Void elements are
 (represents a line break) , <hr>(represents a horizontal line), etc.**

Nested HTML Elements: HTML can be nested, which means an element can contain another element.

Block-level and Inline HTML elements

For the default display and styling purpose in HTML, all the elements are divided into two categories:

- Block-level element
- Inline element

Block-level element:

- These are the elements, which structure main part of web page, by dividing a page into coherent blocks.
- A block-level element always start with new line and takes the full width of web page, from left to right.
- These elements can contain block-level as well as inline elements.

Following are the block-level elements in HTML.

<address>, <article>, <aside>, <blockquote>, <canvas>, <dd>, <div>, <dl>, <dt>, <fieldset>, <figcaption>, <figure>, <h1>, <h2>, <h3>, <h4>, <h5>, <h6>, <header>, <hr>, , <main>, <nav>, <noscript>, , <output>, <p>, <pre>, <section>, <table>, <tfoot>, <thead>, <tbody>, <tr>, <td>, <th>, <thead>, <tbody>, <tr>, <td>, <th>

Note: All these elements are described in later chapters.

Example:

```

1. <!DOCTYPE html>
2. <html>
3.     <head>
4. </head>
5. <body>
6.     <div style="background-color: lightblue">This is first div</div>
7.     <div style="background-color: lightgreen">This is second div</div>
8.     <p style="background-color: pink">This is a block level element</p>
9. </body>
10.</html>

```

Test it Now

Output:



In the above example we have used

tag, which defines a section in a web page, and takes full width of page.

We have used style attribute which is used to styling the HTML content, and the background color are showing th

Inline elements:

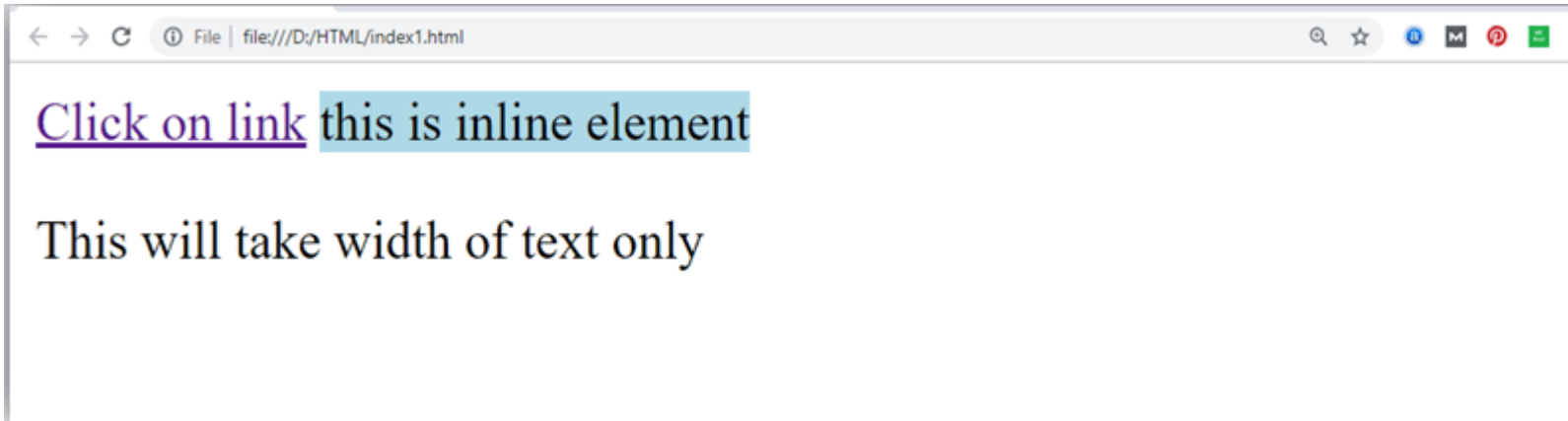
- Inline elements are those elements, which differentiate the part of a given text and provide it a particular fu
- These elements does not start with new line and take width as per requirement.
- The Inline elements are mostly used with other elements.

<a>, <abbr>, <acronym>, , <bdo>, <big>,
, <button>, <cite>, <code>, <dfn>, , <i>, , <input>, <object>, <q>, <samp>, <script>, <select>, <small>, , , <sub>, <sup>, <textarea>, <time>, <tt>,

Example:

```
1. <!DOCTYPE html>
2. <html>
3.   <head>
4.   </head>
5. <body>
6.   <a href="https://www.javatpoint.com/html-tutorial">Click on link</a>
7.   <span style="background-color: lightblue">this is inline element</span>
8.   <p>This will take width of text only</p>
9. </body>
10.</html>
```

Output:



Following is the list of the some main elements used in HTML:

Start tag	Content	End tag	Description
<h1> <h6>	These are headings of HTML	</h1>??..</h6>	These elements are used to provide a heading for the document.
<p>	This is the paragraph	</p>	This element is used to display a paragraph of text.
<div>	This is div section	</div>	This element is used to provide a container for other elements.
 			This element is used to provide a line break.
<hr>			This element is used to provide a horizontal line.

HTML FORMATTING

HTML Formatting is a process of formatting text for better look and feel. HTML provides us ability to format text without using CSS. There are many formatting tags in HTML. These tags are used to make text bold, italicized, or underlined. There are almost 14 options available that how text appears in HTML and XHTML.

In HTML the formatting tags are divided into two categories:

- Physical tag: These tags are used to provide the visual appearance to the text.

- Logical tag: These tags are used to add some logical or semantic value to the text.

NOTE: There are some physical and logical tags which may give same visual appearance, but they will be different in semantics.

Here, we are going to learn 14 HTML formatting tags. Following is the list of HTML formatting text.

Element name	Description
	This is a physical tag, which is used to bold the text written between it.
	This is a logical tag, which tells the browser that the text is important.
<i>	This is a physical tag which is used to make text italic.
	This is a logical tag which is used to display content in italic.
<mark>	This tag is used to highlight text.
<u>	This tag is used to underline text written between it.
<tt>	This tag is used to appear a text in teletype. (not supported in HTML5)
<strike>	This tag is used to draw a strikethrough on a section of text. (Not supported)
<sup>	It displays the content slightly above the normal line.
<sub>	It displays the content slightly below the normal line.
	This tag is used to display the deleted content.
<ins>	This tag displays the content which is added
<big>	This tag is used to increase the font size by one conventional unit.
<small>	This tag is used to decrease the font size by one unit from base font size.

Bold Text

HTML `` and `` formatting elements

The HTML `` element is a physical tag which display text in bold font, without any logical importance. If you write anything within `.....` element, is shown in bold letters.

See this example:

1. `<p> Write Your First Paragraph in bold text.</p>`

Output:

Write Your First Paragraph in bold text.

The HTML `` tag is a logical tag, which displays the content in bold font and informs the browser about its logical importance. If you write anything between `??????. `, is shown important text.

See this example:

1. `<p>This is an important content, and this is normal content</p>`

Output:

This is an important content, and this is normal content

Example

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `<title>formatting elements</title>`
5. `</head>`
6. `<body>`
7. `<h1>Explanation of formatting element</h1>`
8. `<p>This is an important content, and this is normal content</p>`
9. `</body>`
10. `</html>`

Italic Text

HTML `<i>` and `` formatting elements

The HTML `<i>` element is physical element, which display the enclosed content in italic font, without any added importance. If you write anything within `<i>.....</i>` element, is shown in italic letters.

See this example:

1. `<p> <i>Write Your First Paragraph in italic text.</i></p>`

Output:

Write Your First Paragraph in italic text.

The HTML `` tag is a logical element, which will display the enclosed content in italic font, with added semantics importance.

See this example:

1. `<p>This is an important content, which displayed in italic font.</p>`

Output:

This is an important content, which displayed in italic font.

1. `<!DOCTYPE html>`
 2. `<html>`
 3. `<head>`
 4. `<title>formatting elements</title>`
 5. `</head>`
 6. `<body>`
 7. `<h1>Explanation of italic formatting element</h1>`
 8. `<p>This is an important content, which displayed in italic font.</p>`
 9. `</body>`
 10. `</html>`
-

HTML Marked formatting

If you want to mark or highlight a text, you should write the content within `<mark>.....</mark>`.

See this example:

1. `<h2>` I want to put a `<mark>` Mark`</mark>` on your face`</h2>`

Output:

I want to put a Mark on your face

Underlined Text

If you write anything within `<u>.....</u>` element, is shown in underlined text.

See this example:

1. `<p>` `<u>`Write Your First Paragraph in underlined text.`</u></p>`

Output:

Write Your First Paragraph in underlined text.

Strike Text

Anything written within `<strike>.....</strike>` element is displayed with strikethrough. It is a thin line which cross the statement.

See this example:

1. `<p>` `<strike>`Write Your First Paragraph with strikethrough`</strike>`.`</p>`

Output:

~~Write Your First Paragraph with strikethrough.~~

Monospaced Font

If you want that each letter has the same width then you should write the content within `<tt>.....</tt>` element.

Note: We know that most of the fonts are known as variable-width fonts because different letters have different width. (for example: 'w' is wider than 'i'). Monospaced Font provides similar space among every letter.

See this example:

1. `<p>Hello <tt>Write Your First Paragraph in monospaced font.</tt></p>`

Output:

Hello Write Your First Paragraph in monospaced font.

Superscript Text

If you put the content within `^{.....}` element, is shown in superscript; means it is displayed half a character's height above the other characters.

See this example:

1. `<p>Hello ^{Write Your First Paragraph in superscript.}</p>`

Output:

Hello ^{Write Your First Paragraph in superscript.}

Subscript Text

If you put the content within `_{.....}` element, is shown in subscript ; means it is displayed half a character's height below the other characters.

See this example:

1. `<p>Hello _{Write Your First Paragraph in subscript.}</p>`

Output:

Hello Write Your First Paragraph in subscript.

Deleted Text

Anything that puts within `.....` is displayed as deleted text.

See this example

1. `<p>Hello Delete your first paragraph.</p>`

Output:

Hello

Inserted Text

Anything that puts within `<ins>.....</ins>` is displayed as inserted text.

See this example:

1. `<p> Delete your first paragraph.<ins>Write another paragraph.</ins></p>`

Output:

~~Delete your first paragraph.~~Write another paragraph.

Larger Text

If you want to put your font size larger than the rest of the text then put the content within `<big>.....</big>`. It increase one font size larger than the previous one.

See this example:

1. `<p>Hello <big>Write the paragraph in larger font.</big></p>`

Output:

Hello Write the paragraph in larger font.

Smaller Text

If you want to put your font size smaller than the rest of the text then put the content within `<small>.....</small>` tag. It reduces one font size than the previous one.

See this example:

1. `<p>Hello <small>Write the paragraph in smaller font.</small></p>`

HTML HEADING

A HTML heading or HTML h tag can be defined as a title or a subtitle which you want to display on the webpage. When you place the text within the heading tags `<h1>.....</h1>`, it is displayed on the browser in the bold format and size of the text depends on the number of heading.

There are six different HTML headings which are defined with the `<h1>` to `<h6>` tags, from highest level h1 (main heading) to the least level h6 (least important heading).

h1 is the largest heading tag and h6 is the smallest one. So h1 is used for most important heading and h6 is used for least important.

Headings in HTML helps the search engine to understand and index the structure of web page.

Note: The main keyword of the whole content of a webpage should be display by h1 heading tag.

See this example:

1. `<h1>Heading no. 1</h1>`
2. `<h2>Heading no. 2</h2>`
3. `<h3>Heading no. 3</h3>`
4. `<h4>Heading no. 4</h4>`
5. `<h5>Heading no. 5</h5>`
6. `<h6>Heading no. 6</h6>`

Output:

Heading no. 1

Heading no. 2

Heading no. 3

Heading no. 4

Heading no. 5

Heading no. 6

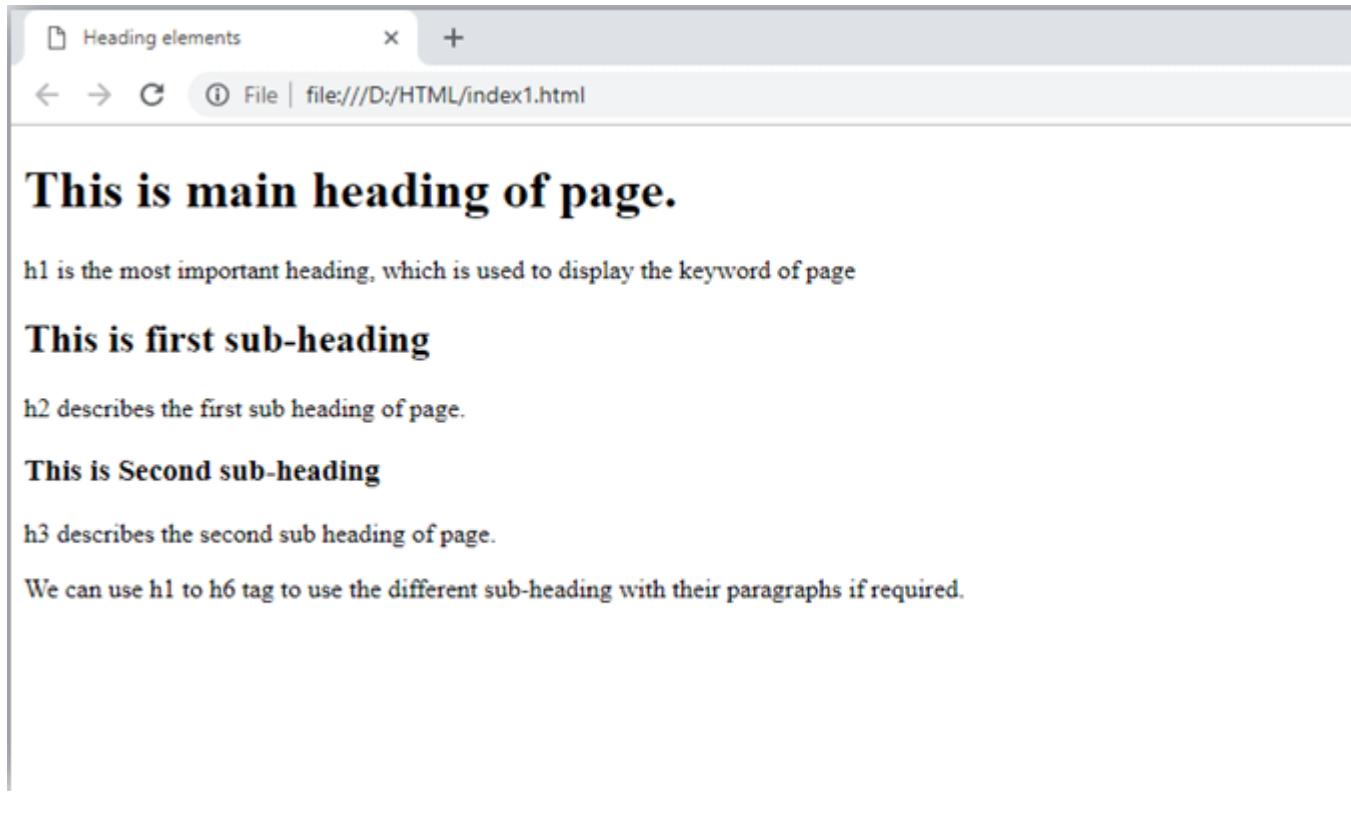
Heading elements (h1...h6) should be used for headings only. They should not be used just to make text bold or big.

- **HTML headings can also be used with nested elements. Following are different codes to display the way to use heading elements.**

Example:

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `<title>Heading elements</title>`
5. `</head>`
6. `<body>`
7. `<h1>This is main heading of page. </h1>`
8. `<p>h1 is the most important heading, which is used to display the keyword of page </p>`
9. `<h2>This is first sub-heading</h2>`
10. `<p>h2 describes the first sub heading of page. </p>`
11. `<h3>This is Second sub-heading</h3>`
12. `<p>h3 describes the second sub heading of page.</p>`
13. `<p>We can use h1 to h6 tag to use the different sub-heading with their paragraphs if`
14. `required.`
15. `</p>`
16. `</body>`
17. `</html>`

18. **Output:**



HTML PARAGRAPH

HTML paragraph or HTML p tag is used to define a paragraph in a webpage. Let's take a simple example to see how it work. It is a notable point that a browser itself add an empty line before and after a paragraph. An HTML <p> tag indicates starting of new paragraph.

Note: If we are using various <p> tags in one HTML file then browser automatically adds a single blank line between the two paragraphs.

See this example:

1. `<p>This is first paragraph.</p>`
2. `<p>This is second paragraph.</p>`
3. `<p>This is third paragraph.</p>`

Output:

This is first paragraph.

This is second paragraph.

This is third paragraph.

Space inside HTML Paragraph

If you put a lot of spaces inside the HTML p tag, browser removes extra spaces and extra line while displaying the page. The browser counts number of spaces and lines as a single one.

1. `<p>`
2. I am
3. going to provide
4. you a tutorial on HTML
5. and hope that it will
6. be very beneficial for you.
7. `</p>`
8. `<p>`
9. Look, I put here a lot
10. of spaces but I know, Browser will ignore it.
11. `</p>`
12. `<p>`
13. You cannot determine the display of HTML `</p>`
14. `<p>` because resized windows may create different result.
15. `</p>`

Output:

I am going to provide you a tutorial on HTML and hope that it will be very beneficial for you.

Look, I put here a lot of spaces but I know, Browser will ignore it.

You cannot determine the display of HTML

because resized windows may create different result.

As you can see, all the extra lines and unnecessary spaces are removed by the browser.

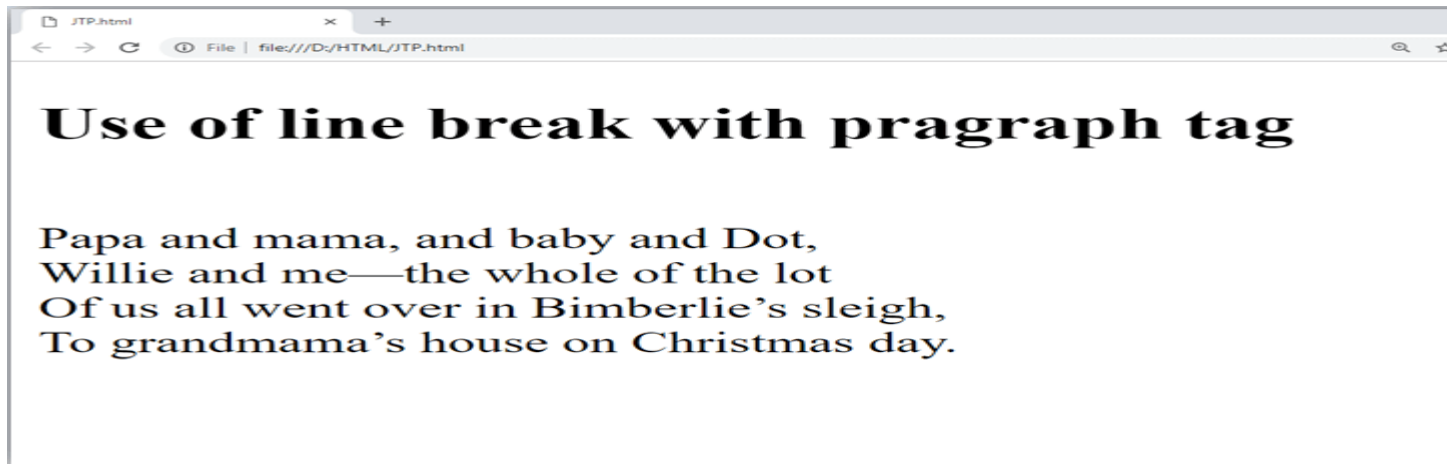
Use
 and <hr> tag with paragraph

An HTML
 tag is used for line break and it can be used with paragraph elements. Following is the example to show how to use
 with <p> element.

Example:

1. <!DOCTYPE html>
2. <html>
3. <head>
4. </head>
5. <body>
6. <h2> Use of line break with paragraph tag</h2>
7. <p>
Papa and mama, and baby and Dot,
8.
Willie and me?the whole of the lot
9.
Of us all went over in Bimberlie's sleigh,
10.
To grandmama's house on Christmas day.
11. </p>
12. </body>
13. </html>

Output:



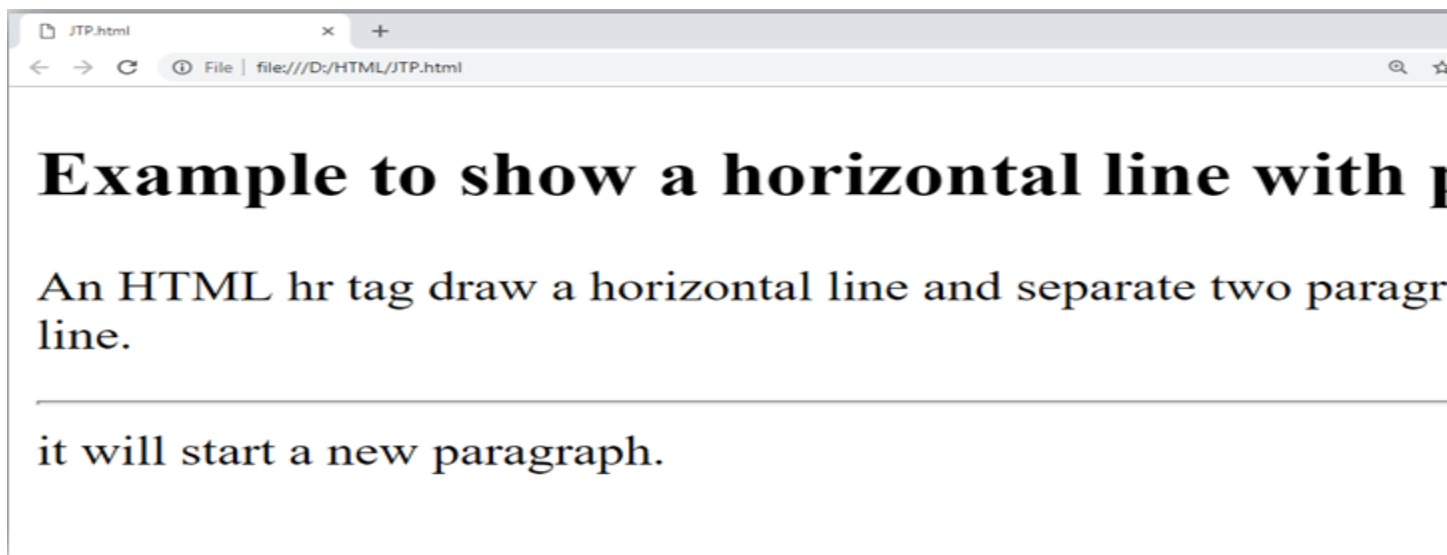
HORIZONTAL LINE TAG

An HTML `<hr>` tag is used to apply a horizontal line between two statements or two paragraphs. Following is the example which is showing use of `<hr>` tag with paragraph.

Example:

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `</head>`
5. `<body>`
6. `<h2>` Example to show a horizontal line with paragraphs `</h2>`
7. `<p>` An HTML hr tag draw a horizontal line and separate two paragraphs with that line. `<hr>` it will start a new paragraph.
8. `</p>`
9. `</body>`
10. `</html>`

Output:



HTML ANCHOR

The **HTML anchor tag** defines a *hyperlink that links one page to another page*. It can create hyperlink to other web page as well as files, location, or any URL. The "href" attribute is the most important attribute of the HTML a tag. and which links to destination page or URL.

href attribute of HTML anchor tag

The href attribute is used to define the address of the file to be linked. In other words, it points out the destination page.

The syntax of HTML anchor tag is given below.

```
<a href = "....."> Link Text </a>
```

Let's see an example of HTML anchor tag.

1. `Click for Second Page`
-

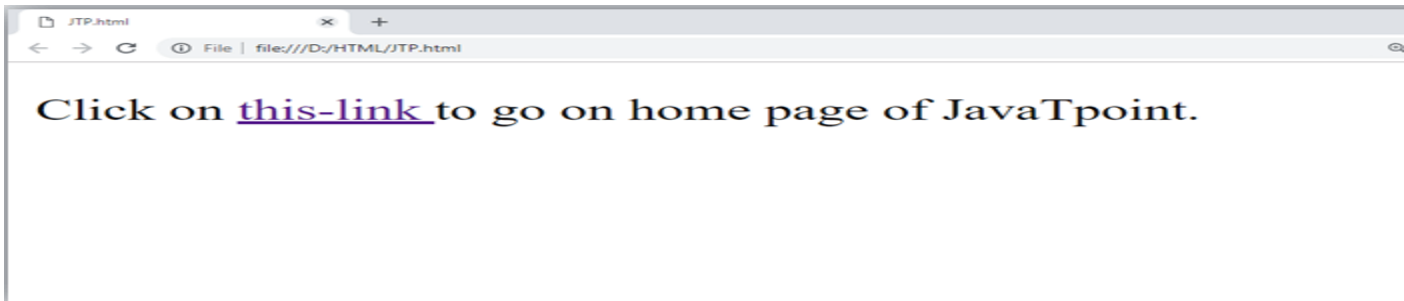
Specify a location for Link using target attribute

If we want to open that link to another page then we can use target attribute of <a> tag. With the help of this link will be open in next page.

Example:

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `<title></title>`
5. `</head>`
6. `<body>`
7. `<p>Click on this-link to go on home page of JavaTpoint.</p>`
8. `</body>`
9. `</html>`

Output:



Appearance of HTML anchor tag

An **unvisited link** is displayed underlined and blue.

A **visited link** displayed underlined and purple.

An **active link** is underlined and red.



Attributes of HTML img tag

The src and alt are important attributes of HTML img tag. All attributes of HTML image tag are given below.

1) src

It is a necessary attribute that describes the source or path of the image. It instructs the browser where to look for the image on the server.

The location of image may be on the same directory or another server.

2) alt

The alt attribute defines an alternate text for the image, if it can't be displayed. The value of the alt attribute describe the image in words. The alt attribute is considered good for SEO prospective.

3) width

It is an optional attribute which is used to specify the width to display the image. It is not recommended now. You should apply CSS in place of width attribute.

4) height

It h3 the height of the image. The HTML height attribute also supports iframe, image and object elements. It is not recommended now. You should apply CSS in place of height attribute.

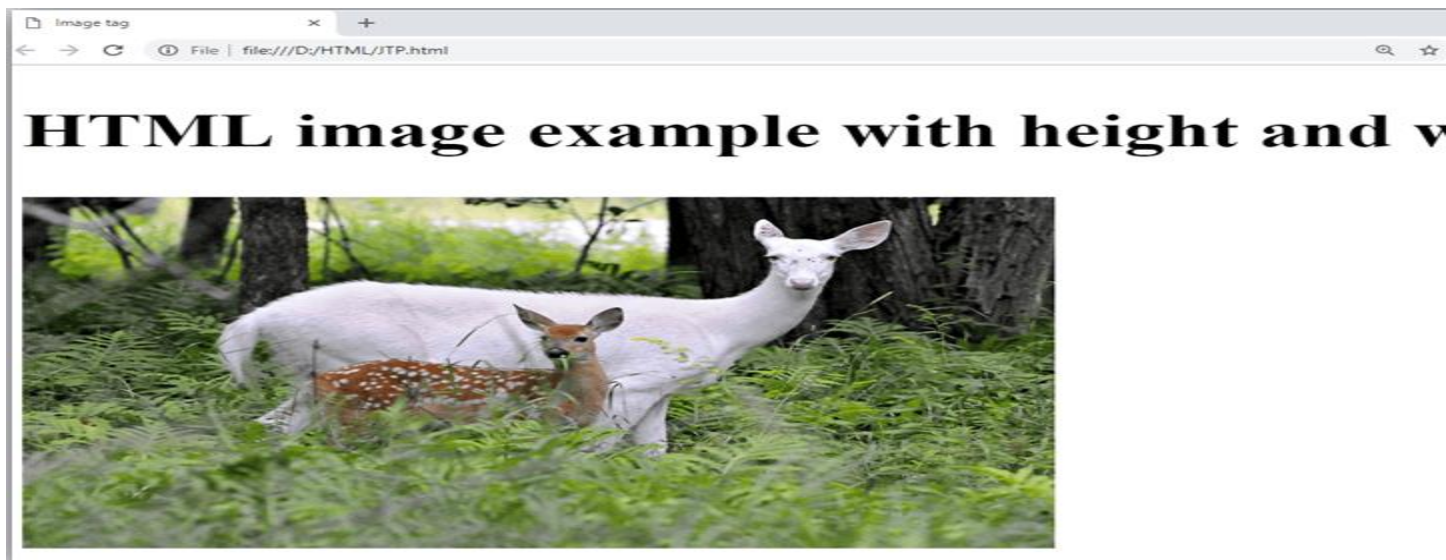
Use of height and width attribute with img tag

You have learnt about how to insert an image in your web page, now if we want to give some height and width to display image according to our requirement, then we can set it with height and width attributes of image.

Example:

1. ``

Output:



HTML TABLE

HTML table tag is used to display data in tabular form (row * column). There can be many columns in a row.

We can create a table to display data in tabular form, using `<table>` element, with the help of `<tr>`, `<td>`, and `<th>` elements.

In Each table, table row is defined by `<tr>` tag, table header is defined by `<th>`, and table data is defined by `<td>` tags.

HTML tables are used to manage the layout of the page e.g. header section, navigation bar, body content, footer section etc. But it is recommended to use `div` tag over `table` to manage the layout of the page .

HTML Table Tags

Tag	Description
<code><table></code>	It defines a table.
<code><tr></code>	It defines a row in a table.
<code><th></code>	It defines a header cell in a table.
<code><td></code>	It defines a cell in a table.
<code><caption></code>	It defines the table caption.
<code><colgroup></code>	It specifies a group of one or more columns in a table for formatting.
<code><col></code>	It is used with <code><colgroup></code> element to specify column properties for each column.
<code><tbody></code>	It is used to group the body content in a table.
<code><thead></code>	It is used to group the header content in a table.
<code><tfooter></code>	It is used to group the footer content in a table.

HTML Table Example

Let's see the example of HTML table tag. Its output is shown above.

1. `<table>`
2. `<tr><th>First_Name</th><th>Last_Name</th><th>Marks</th></tr>`
3. `<tr><td>Sonoo</td><td>Jaiswal</td><td>60</td></tr>`
4. `<tr><td>James</td><td>William</td><td>80</td></tr>`
5. `<tr><td>Swati</td><td>Sironi</td><td>82</td></tr>`
6. `<tr><td>Chetna</td><td>Singh</td><td>72</td></tr>`
7. `</table>`

Output:

	First_Name		Last_Name
	Sonoo		Jaiswal
	James		William
	Swati		Sironi
	Chetna		Singh

In the above HTML table, there are 5 rows and 3 columns = $5 * 3 = 15$ values.

HTML Table with Border

There are two ways to specify border for HTML tables.

1. By border attribute of table in HTML
2. By border property in CSS

1) HTML Border attribute

You can use border attribute of table tag in HTML to specify border. But it is not recommended now.

1. `<table border="1">`
2. `<tr><th>First_Name</th><th>Last_Name</th><th>Marks</th></tr>`
3. `<tr><td>Sonoo</td><td>Jaiswal</td><td>60</td></tr>`
4. `<tr><td>James</td><td>William</td><td>80</td></tr>`
5. `<tr><td>Swati</td><td>Sironi</td><td>82</td></tr>`

3. `<tr><td>Chetna</td><td>Singh</td><td>72</td></tr>`
7. `</table>`

Test it Now

Output:

First_Name	Last_Name
Sonoo	Jaiswal
James	William
Swati	Sironi
Chetna	Singh

HTML Table width:

We can specify the HTML table width using the **CSS width** property. It can be specify in pixels or p

We can adjust our table width as per our requirement. Following is the example to display table with

1. `table{`
2. `width: 100%;`
3. `}`

Example:

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `<title>table</title>`
5. `<style>`
6. `table{`
7. `border-collapse: collapse;`
8. `width: 100%;`
9. `}`
10. `th,td{`
11. `border: 2px solid green;`

```
12.     padding: 15px;
13. }
14.
15. </style>
16. </head>
17. <body>
18. <table>
19.   <tr>
20.     <th>1 header</th>
21.     <th>1 header</th>
22.     <th>1 header</th>
23.   </tr>
24.   <tr>
25.     <td>1 data</td>
26.     <td>1 data</td>
27.     <td>1 data</td>
28.   </tr>
29.   <tr>
30.     <td>2 data</td>
31.     <td>2 data</td>
32.     <td>2 data</td>
33.   </tr>
34.   <tr>
35.     <td>3 data</td>
36.     <td>3 data</td>
37.     <td>3 data</td>
38.   </tr>
39. </table>
40. </body>
41. </html>
```

1 header	1 header	
1 data	1 data	1 data
2 data	2 data	2 data
3 data	3 data	3 data

HTML Table with colspan

If you want to make a cell span more than one column, you can use the colspan attribute.

It will divide one cell/row into multiple columns, and the number of columns depend on the value of

Let's see the example that span two columns.

HTML code:

1. `<table style="width:100%">`
2. `<tr>`
3. `<th>Name</th>`
4. `<th colspan="2">Mobile No.</th>`
5. `</tr>`
3. `<tr>`
7. `<td>Ajeet Maurya</td>`
3. `<td>7503520801</td>`

9. `<td>9555879135</td>`
10. `</tr>`
11. `</table>`

Output:

Name	Mobile No.
Ajeet Maurya	7503520801

HTML Table with rowspan

If you want to make a cell span more than one row, you can use the rowspan attribute.

It will divide a cell into multiple rows. The number of divided rows will depend on rowspan values.

Let's see the example that span two rows.

HTML code:

1. `<table>`
2. `<tr><th>Name</th><td>Ajeet Maurya</td></tr>`
3. `<tr><th rowspan="2">Mobile No.</th><td>7503520801</td></tr>`
4. `<tr><td>9555879135</td></tr>`
5. `</table>`

Output:

Name	Ajeet Maurya
Mobile No.	7503520801
	9555879135

HTML table with caption

HTML caption is displayed above the table. It must be used after table tag only.

1. `<table>`
2. `<caption>Student Records</caption>`
3. `<tr><th>First_Name</th><th>Last_Name</th><th>Marks</th></tr>`
4. `<tr><td>Vimal</td><td>Jaiswal</td><td>70</td></tr>`
5. `<tr><td>Mike</td><td>Warn</td><td>60</td></tr>`
3. `<tr><td>Shane</td><td>Warn</td><td>42</td></tr>`
7. `<tr><td>Jai</td><td>Malhotra</td><td>62</td></tr>`
3. `</table>`

HTML LISTS

HTML Lists are used to specify lists of information. All lists may contain one or more list elements. There are three different types of HTML lists:

1. Ordered List or Numbered List (ol)
2. Unordered List or Bulleted List (ul)
3. Description List or Definition List (dl)

Note: We can create a list inside another list, which will be termed as nested List.

HTML Ordered List or Numbered List

In the ordered HTML lists, all the list items are marked with numbers by default. It is known as numbered list also. The ordered list starts with `` tag and the list items start with `` tag.

1. ``
2. `Aries`
3. `Bingo`
4. `Leo`
5. `Oracle`
6. ``

Output:

1. Aries
2. Bingo
3. Leo
4. Oracle

HTML Unordered List or Bulleted List

In HTML Unordered list, all the list items are marked with bullets. It is also known as bulleted list also. The Unordered list starts with `` tag and list items start with the `` tag.

1. ``
2. `Aries`
3. `Bingo`
4. `Leo`
5. `Oracle`
6. ``

Output:

- Aries
- Bingo
- Leo
- Oracle

HTML Description List or Definition List

HTML Description list is also a list style which is supported by HTML and XHTML. It is also known as definition list where entries are listed like a dictionary or encyclopedia.

The definition list is very appropriate when you want to present glossary, list of terms or other name-value list.

The HTML definition list contains following three tags:

1. **<dl> tag** defines the start of the list.
2. **<dt> tag** defines a term.
3. **<dd> tag** defines the term definition (description).

1. `<dl>`
2. `<dt>Aries</dt>`
3. `<dd>-One of the 12 horoscope sign.</dd>`
4. `<dt>Bingo</dt>`
5. `<dd>-One of my evening snacks</dd>`
6. `<dt>Leo</dt>`
7. `<dd>-It is also an one of the 12 horoscope sign.</dd>`
8. `<dt>Oracle</dt>`
9. `<dd>-It is a multinational technology corporation.</dd>`
10. `</dl>`

Output:

Aries
-One of the 12 horoscope sign.
Bingo
-One of my evening snacks
Leo
-It is also an one of the 12 horoscope sign.
Oracle
-It is a multinational technology corporation.

HTML Nested List

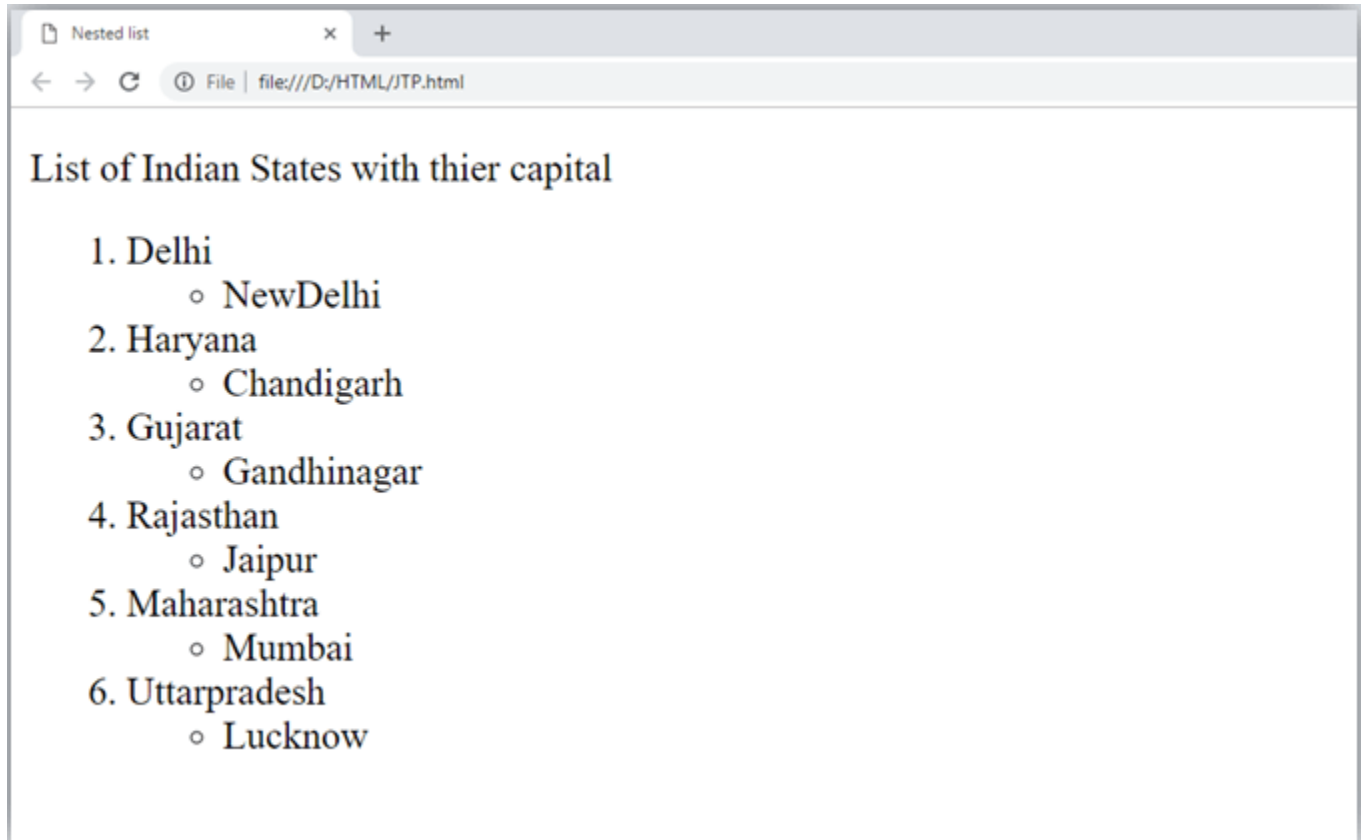
A list within another list is termed as nested list. If you want a bullet list inside a numbered list then such type of list will called as nested list.

Code:

```
1. <!DOCTYPE html>
2. <html>
3. <head>
4.   <title>Nested list</title>
5. </head>
6. <body>
7.   <p>List of Indian States with thier capital</p>
8.   <ol>
9.     <li>Delhi
10.      <ul>
11.        <li>NewDelhi</li>
12.      </ul>
13.    </li>
14.    <li>Haryana
15.      <ul>
16.        <li>Chandigarh</li>
17.      </ul>
18.    </li>
19.    <li>Gujarat
20.      <ul>
21.        <li>Gandhinagar</li>
22.      </ul>
23.    </li>
24.    <li>Rajasthan
25.      <ul>
26.        <li>Jaipur</li>
27.      </ul>
28.    </li>
29.    <li>Maharashtra
30.      <ul>
31.        <li>Mumbai</li>
32.      </ul>
33.    </li>
34.    <li>Uttarpradesh
```

```
35. <ul>
36. <li>Lucknow</li></ul>
37. </li>
38.</ol>
39.</body>
40.</html>
```

Output:



HTML Ordered List | HTML Numbered List

HTML Ordered List or Numbered List displays elements in numbered format. The HTML `ol` tag is used for ordered list. We can use ordered list to represent items either in numerical order format or alphabetical order format, or any format where an order is emphasized. There can be different types of numbered list:

- Numeric Number (1, 2, 3)
- Capital Roman Number (I II III)
- Small Romal Number (i ii iii)

- Capital Alphabet (A B C)
- Small Alphabet (a b c)

To represent different ordered lists, there are 5 types of attributes in tag.

Type	Description
Type "1"	This is the default type. In this type, the list items are numbered with numbers.
Type "I"	In this type, the list items are numbered with upper case roman numbers.
Type "i"	In this type, the list items are numbered with lower case roman numbers.
Type "A"	In this type, the list items are numbered with upper case letters.
Type "a"	In this type, the list items are numbered with lower case letters.

HTML Ordered List Example

Let's see the example of HTML ordered list that displays 4 topics in numbered list. Here we are not defining type="1" because it is the default type.

1.
2. HTML
3. Java
4. JavaScript
5. SQL
6.

Output:

1. HTML
 2. Java
 3. JavaScript
 4. SQL
-

ol type="I"

Let's see the example to display list in roman number uppercase.

1. `<ol type="I">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- I. HTML
 - II. Java
 - III. JavaScript
 - IV. SQL
-

ol type="i"

Let's see the example to display list in roman number lowercase.

1. `<ol type="i">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- i. HTML
 - ii. Java
 - iii. JavaScript
 - iv. SQL
-

ol type="A"

Let's see the example to display list in alphabet uppercase.

1. `<ol type="A">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- A. HTML
 - B. Java
 - C. JavaScript
 - D. SQL
-

ol type="a"

Let's see the example to display list in alphabet lowercase.

1. `<ol type="a">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- a. HTML
 - b. Java
 - c. JavaScript
 - d. SQL
-

start attribute

The start attribute is used with ol tag to specify from where to start the list items.

`<ol type="1" start="5">` : It will show numeric values starting with "5".

`<ol type="A" start="5">` : It will show capital alphabets starting with "E".

`<ol type="a" start="5">` : It will show lower case alphabets starting with "e".

`<ol type="I" start="5">` : It will show Roman upper case value starting with "V".

`<ol type="i" start="5">` : It will show Roman lower case value starting with "v".

1. `<ol type="i" start="5">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- v. HTML
- vi. Java
- vii. JavaScript
- viii. SQL

HTML Unordered List | HTML Bulleted List

HTML Unordered List or Bulleted List displays elements in bulleted format . We can use unordered list where we do not need to display items in any particular order. The HTML ul tag is used for the unordered list. There can be 4 types of bulleted list:

- disc
- circle
- square
- none

To represent different ordered lists, there are 4 types of attributes in tag.

Type	Description
Type "disc"	This is the default style. In this style, the list items are marked with bu
Type "circle"	In this style, the list items are marked with circles.
Type "square"	In this style, the list items are marked with squares.
Type "none"	In this style, the list items are not marked .

HTML Unordered List Example

1. ``
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- HTML
 - Java
 - JavaScript
 - SQL
-

ul type="circle"

1. `<ul type="circle">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- HTML

- Java
 - JavaScript
 - SQL
-

ul type="square"

1. `<ul type="square">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- HTML
 - Java
 - JavaScript
 - SQL
-

ul type="none"

1. `<ul type="none">`
2. `HTML`
3. `Java`
4. `JavaScript`
5. `SQL`
6. ``

Output:

- HTML
- Java
- JavaScript
- SQL
-

1. `<!DOCTYPE html>`
2. `<html>`
3. `<head>`
4. `</head>`
5. `<body>`
6. `<h2>The type attribute with CSS property</h2>`
7. `<ul style="list-style-type: square;">`
8. `HTML`
9. `Java`
10. `JavaScript`
11. `SQL`
12. ``
13. `</body>`
14. `</html>`

Output:



Tag	Description
<!--...-->	Describe a comment text in the source code
<!doctype>	Defines a document type
<a>	Specific a anchor (Hyperlink) Use for link in internal/external web documents.
<abbr>	Describes an abbreviation (acronyms)
<acronym>	Describes an acronyms
<address>	Describes an address information
<applet>	Embedding an applet in HTML document
<area>	Defines an area in an image map
<article>	Defines an article
<aside>	Describes contain set(or write) on aside place in page contain
<audio>	Specific audio content
	Specific text weight bold
<base>	Define a base URL for all the links with in a web page
<basefont>	Describes a default font color, size, face in a document
<bb>	Define browser command, that command invoke as per client action
<bdo>	Specific direction of text display
<big>	Defines a big text
<blockquote>	Specifies a long quotation
<body>	Defines a main section(body) part in HTML document
 	Specific a single line break
<button>	Specifies a press/push button
<canvas>	Specifies the display graphics on HTML web documment

<caption>	Define a table caption
<center>	Specifies a text is display in center align
<cite>	Specifies a text citation
<code>	Specifies computer code text
<col>	Specifies a each column within a <colgroup> element in table
<colgroup>	Defines a group of one or more columns inside table
<command>	Define a command button, invoke as per user action
<datagrid>	Define a represent data in datagrid either list wise or tree wise
<datalist>	Define a list of pre-defined options surrounding <input> tag
<dd>	Defines a definition description in a definition list
	Specific text deleted in web document
<details>	Define a additional details hide or show as per user action
<dfn>	Define a definition team
<dialog>	Define a chat conversation between one or more person
<dir>	Define a directory list
<div>	Define a division part
<dl>	Define a definition list
<dt>	Define a definition team
	Define a text is emphasize format
<embed>	Define a embedding external application using a relative plug-in
<eventsource>	Defines a source of event generates to remote server
<fieldset>	Defines a grouping of related form elements
<figcaption>	Represents a caption text corresponding with a figure element
<figure>	Represents self-contained content corresponding with a <figcaption> element

	Defines a font size, font face and font color for its text
<footer>	Defines a footer section containing details about the author, copyright, contact information or links to related documents.
<form>	Defines a form section that having interactive input controls to submit form information to a server.
<frame>	Defines frame window.
<frameset>	Used to holds one or more <frame> elements.
<h1> to <h6>	Defines a Headings level from 1 to 6 different sizes.
<head>	Defines header section of HTML document.
<header>	Defines as a container that hold introductory content or navigation links.
<hgroup>	Defines the heading of a section that hold the h1 to h6 tags.
<hr />	Represent a thematic break between paragraph-level tags. It is typically drawn as a horizontal line.
<html>	Define a document is a HTML markup language
<i>	Defines a italic format text
<iframe>	Defines a inline frame that embedded external content into current web document.
	Used to insert image into a web document.
<input>	Define a get information in selected input
<ins>	Used to indicate text that is inserted into a page and indicates changes to a document.
<isindex>	Used to create a single line search prompt for querying the contents of the document.
<kbd>	Used to identify text that are represents keyboard input.
<keygen>	Used to generate signed certificate, which is used to authenticate to services.
<label>	Used to caption a text label with a form <input> element.
<legend>	Used to add a caption (title) to a group of related form elements that are grouped into the <fieldset> tag.
	Define a list item either ordered list or unordered list.

<code><link></code>	Used to load an external stylesheets into HTML document.
<code><map></code>	Defines an clickable image map.
<code><mark></code>	Used to highlighted (marked) specific text.
<code><menu></code>	Used to display a unordered list of items/menu of commands.
<code><meta></code>	Used to provide structured metadata about a web page.
<code><meter></code>	Used to measure data within a given range.
<code><nav></code>	Used to defines group of navigation links.
<code><noframes></code>	Used to provide a fallback content to the browser that does not support the <code><frameset></code> element.
<code><noscript></code>	Used to provide an fall-back content to the browser that does not support the <code><script></code> element.
<code><object></code>	Used to embedded objects such as images, audio, videos, Java applets, and animations.
<code></code>	Defines an ordered list of items.
<code><optgroup></code>	Used to create a grouping of options, the related options are grouped under headings.
<code><option></code>	Represents option items within a <code><select></code> , <code><optgroup></code> or <code><datalist></code> element.
<code><output></code>	Used for representing the result of a calculation.
<code><p></code>	Used to represents a paragraph text.
<code><param></code>	Provides parameters for embedded object element.
<code><pre></code>	Used to represents preformatted text.
<code><progress></code>	Represents the progress of a task.
<code><q></code>	Represents the short quotation.
<code><rp></code>	Used to provide parentheses around fall-back content to the browser that does not support the ruby annotations.
<code><rt></code>	Specifies the ruby text of ruby annotation.
<code><ruby></code>	Used to represents a ruby annotation.

<s>	Text display in strikethrough style.
<samp>	Represents text that should be interpreted as sample output from a computer.
<script>	Defines client-side JavaScript.
<section>	Used to divide a document into number of different generic section.
<select>	Used to create a drop-down list.
<small>	Used to makes the text one size smaller.
<source>	Used to specifies multiple media resources.
	Used to grouping and applying styles to inline elements.
<strike>	Represents strikethrough text.
	Represents strong emphasis greater important text.
<style>	Used to add CSS style to an HTML document.
<sub>	Represents inline subscript text.
<sup>	Represents inline superscript text.
<table>	Used to defines a table in an HTML document.
<tbody>	Used for grouping table rows.
<td>	Used for creates standard data cell in HTML table.
<textarea>	Create multi-line text input.
<tfoot>	Used to adding a footer to a table that containing summary of the table data.
<th>	Used for creates header of a group of cell in HTML table.
<thead>	Used to adding a header to a table that containing header information of the table.
<time>	Represents the date and/or time in an HTML document.
<title>	Represents title to an HTML document.
<tr>	Defines a row of cells in a table.
<track>	Represents text tracks for both the <audio> and <video> tags.

<code><tt></code>	Represents teletype text.
<code><u></code>	Represents underlined text.
<code></code>	Defines an unordered list of items.
<code><var></code>	Represents a variable in a computer program or mathematical equation.
<code><video></code>	Used to embed video content.
<code><wbr></code>	Defines a word break opportunity in a long string of text.