



**University of Technology**

**Biomedical Engineering Department**

# **Computer Lab.**

**First Year**

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**(2017-1016)**

## **Laboratory Staff**

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**Microsoft  
Word 2013**

## 1. Overview

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Microsoft Word is one of the most popular word processing programs supported by PC platforms. Microsoft Word can be used to create documents, reports, brochures, leaflets, outlines, resumes, lists, and simple web pages.

## 2. CREATING A NEW DOCUMENT

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### Opening Microsoft Word on a Pc

1. Begin by opening Microsoft Word.

- To launch Microsoft Word, go to **Start > All Programs > Microsoft Office 2013 > Word 2013** (Figure 1).

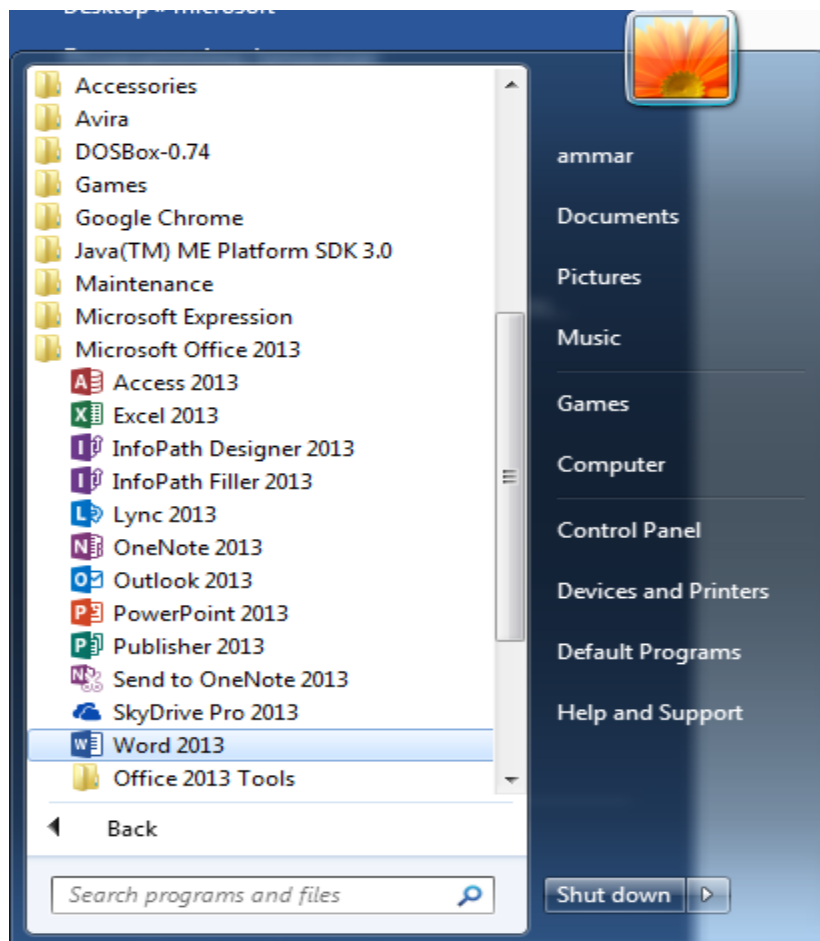


Figure 1. Navigation to Microsoft Word on a PC.

2. When opened a new Blank document will select and open. (Figure 2)

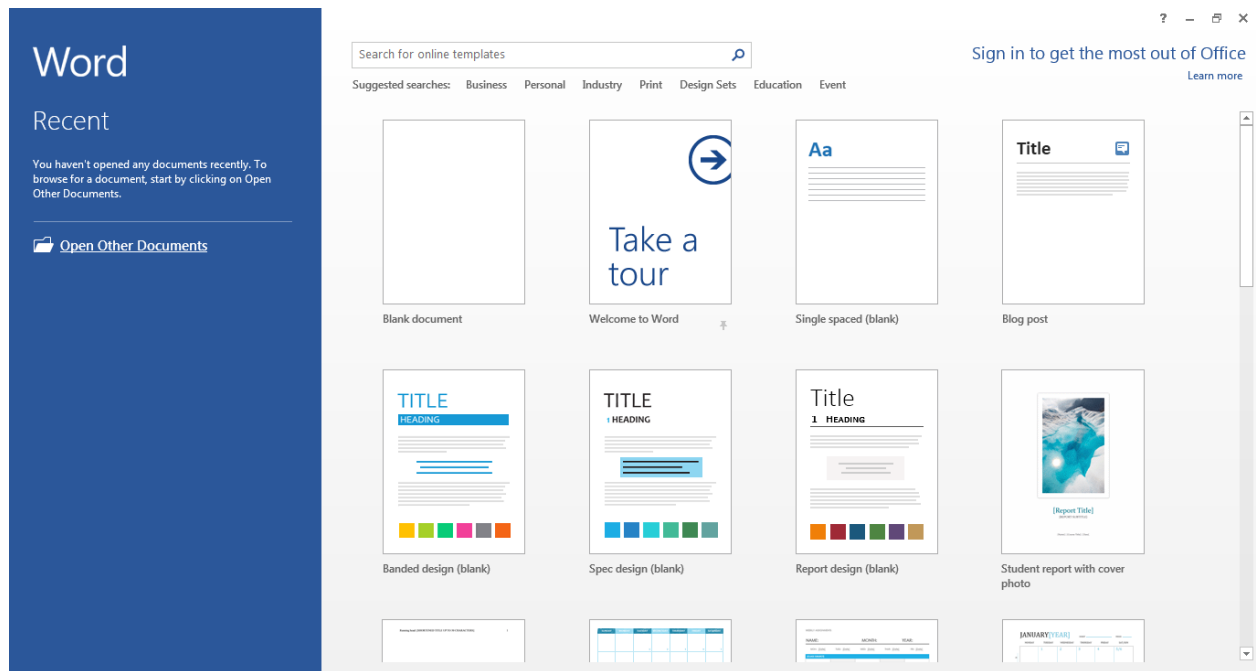



Figure 2. Opening a new document.

### 3. SAVING YOUR DOCUMENT

Computers crash and documents are lost all the time, so it is best to save often. It is also recommended that you save your document before you begin working on it.

- Click on the **File tab** > **Save As** or .
- Microsoft Word will open a dialog box where you will be prompted to select a save location for your file. If your desired location is not apparent in this box, press the **Browse** icon and a new window will appear allowing you to input the name of your document, where you want it saved, as well as the format of the document. (Figure 3)
- Once you have specified a name, place, and format for your new file, press the save button.

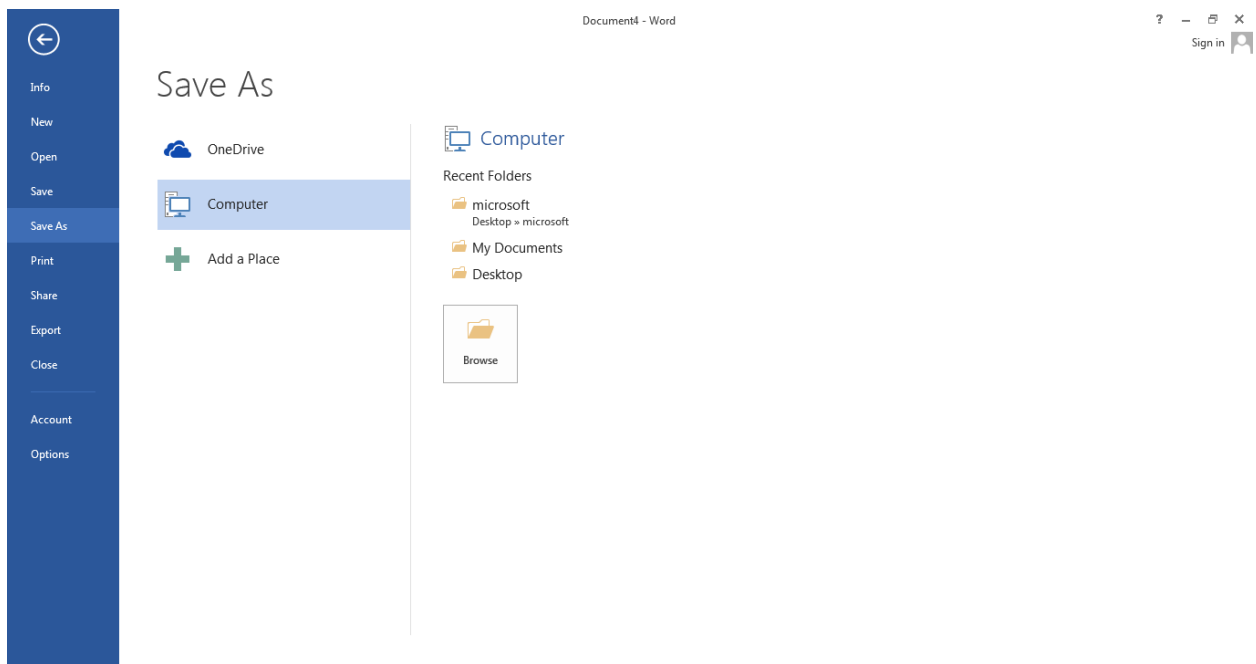


Figure 3. Saving dialog box.

## 4. TOOLBARS

The new Microsoft Word uses one main toolbar to allow you to modify your document. Within this toolbar, you can switch between tabs to determine what you would like to do.

The **Main Toolbar** contains all the options available to you in Microsoft Word. The **File tab** (see figure 3) allows you to **Save**, **Save As**, **Save as Adobe PDF**, **Open**, **Close**, **Print**, **Export**, and **Share**.

The **Home Tab** (Figure 4) is Microsoft Words standard view. This is the view most widely used and allows you to format text by **Font Style**, **Font Size**, **Bold**, **Italic**, **Underline**, **Alignment**, **Numbered List**, **Bulleted List**, **Indentation**, **Spacing**, and **Font Color**.

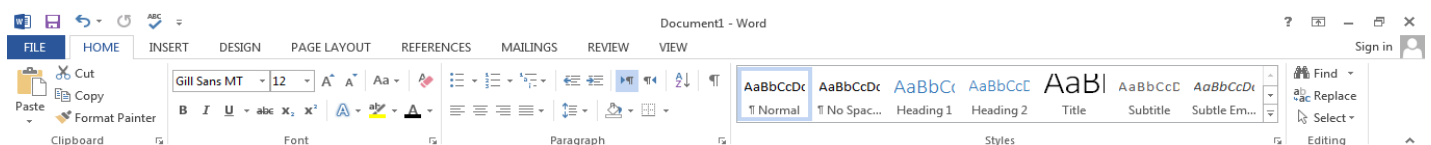


Figure 4. Home Tab

The **Insert Tab** (Figure 5) contains any additives you want to place in your document, including but not limited to: **Tables**, **Online Picture/Clip Art searches**, **Headers**, and **Footers**. These icons are convenient and will bring up a dialogue box to give you further options when clicked.

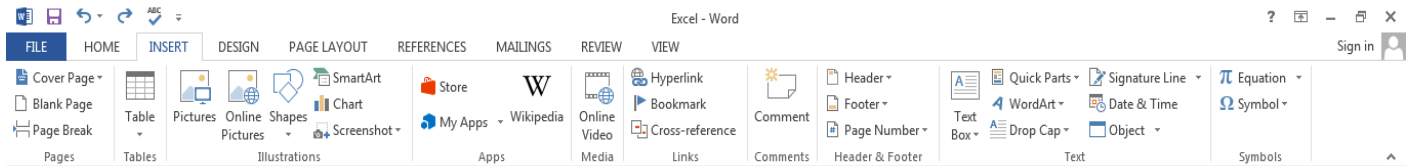


Figure 5. Insert Tab

## 5. FORMATTING

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### Cut, Copy, and Paste

You can use the **Cut**, **Copy** and **Paste** features of Excel to change the data within your spreadsheet, to move data from other spreadsheets into new spreadsheets, and to save yourself the time of re-entering information in a spreadsheet. **Cut** will actually remove the selection from the original location and allow it to be placed somewhere else. **Copy** allows you to leave the original selection where it is and insert a copy elsewhere. **Paste** is used to insert data that has been cut or copied.

1. Highlight the data or text by selecting the cells that they are held within.
2. Go to the **Home Tab** > **Copy** (CTRL + C) or **Home Tab** > **Cut** (CTRL + X).
3. Click the location where the information should be placed.
4. Go to **Home Tab** > **Paste** (CTRL + V) to be able to paste your information.

### Font format

To change the font theme, size, font background color, font color, font style (bold, italic or/and underline) go to **Home Tab**. (Figure 6)

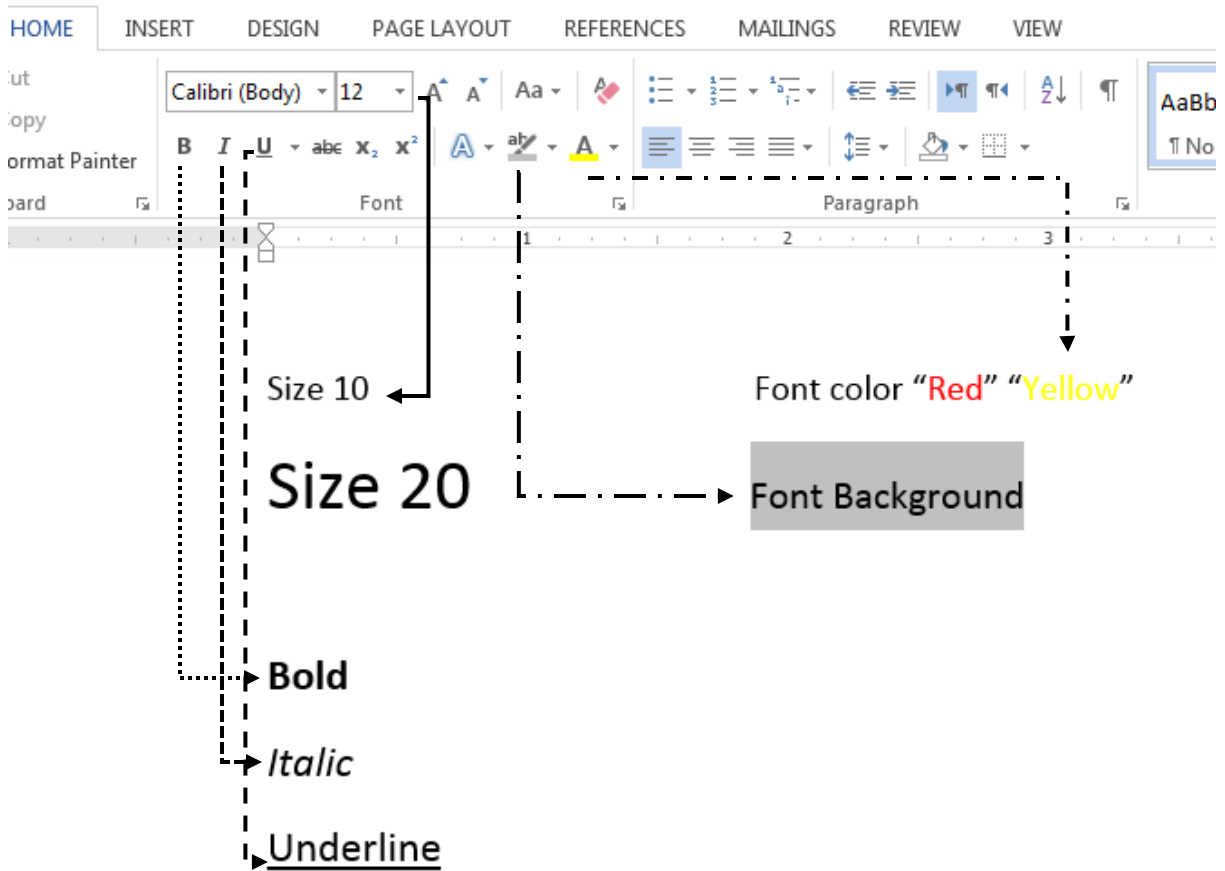


Figure 6. Font format

## Formatting Paragraphs

Go to **Home Tab** to format your paragraph (Figure 7), first highlight the paragraph you wish to format. To highlight more than one paragraph, click at the beginning of the paragraph and drag the mouse over the text. To apply changes to the entire document, select all by hitting **Ctrl + A**.

The **Alignment** option allows you to choose how you want your paragraph to look (i.e. justified, right, center, or left). The **Line Spacing** option allows you to set the desired spacing, such as single or double. The **Indentation** option allows you to tab/push the line(s) in your paragraph either left or right. **Numbered and Bulleted Lists** option allow you create a simple numbered or bulleted list, click on the Numbering or Bullet button on the Paragraph toolbar in the Home Tab. To have more control over the format of your list, click the down arrows beside each style of list.

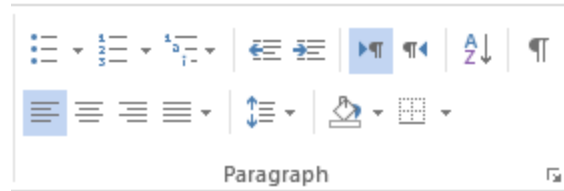


Figure 7. Paragraph Formatting

## 6. INSERTING AND ADDING OBJECTS

### Insert Picture:

Go to **Insert Tab** > **Illustrations box** > **Pictures**. A dialogue box will appear (Figure 8), find the location of picture you want to insert and the press insert.

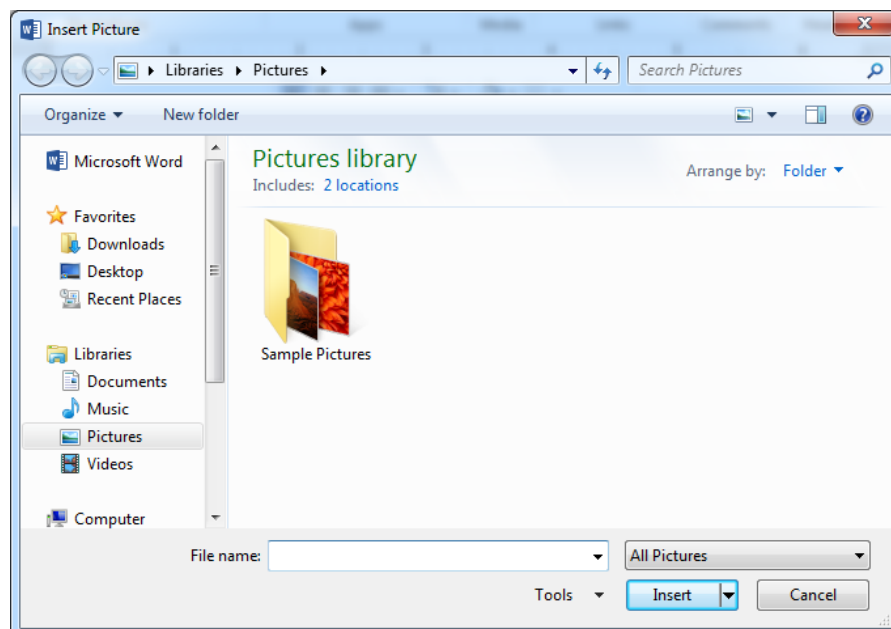
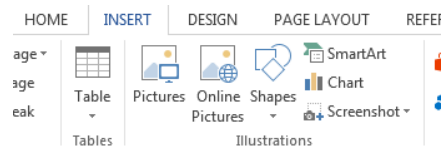


Figure 8. Dialogue box for picture location



## Creating a Table

To create a table within your document, go to **Insert Tab > Tables box > Table button**. Choose the desired table size and format by hovering over the boxes, and press Enter on the keyboard (Figure 9). The table will be inserted at the cursor's location within your document. To navigate within your table, use the arrow keys. To modify your table, when your table is selected, a **Design Tab** and **Layout Tab** will appear in the **Toolbar** (Figure 10). From here, you can add cells, columns or rows, merge or split cells, and further modify your table. To exit the table, click outside of it.

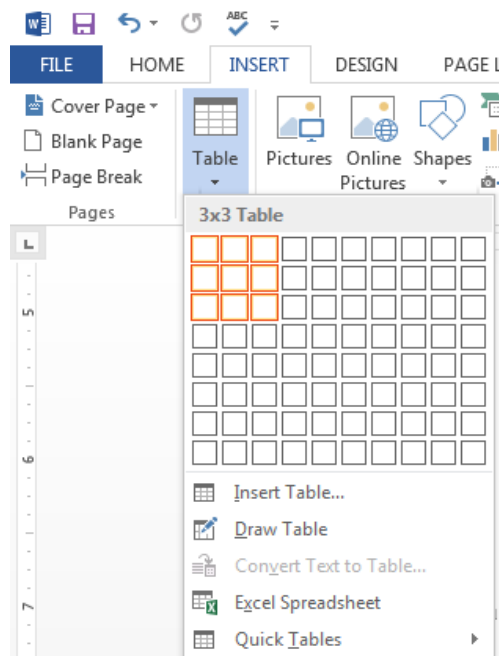


Figure 9. Insert Table

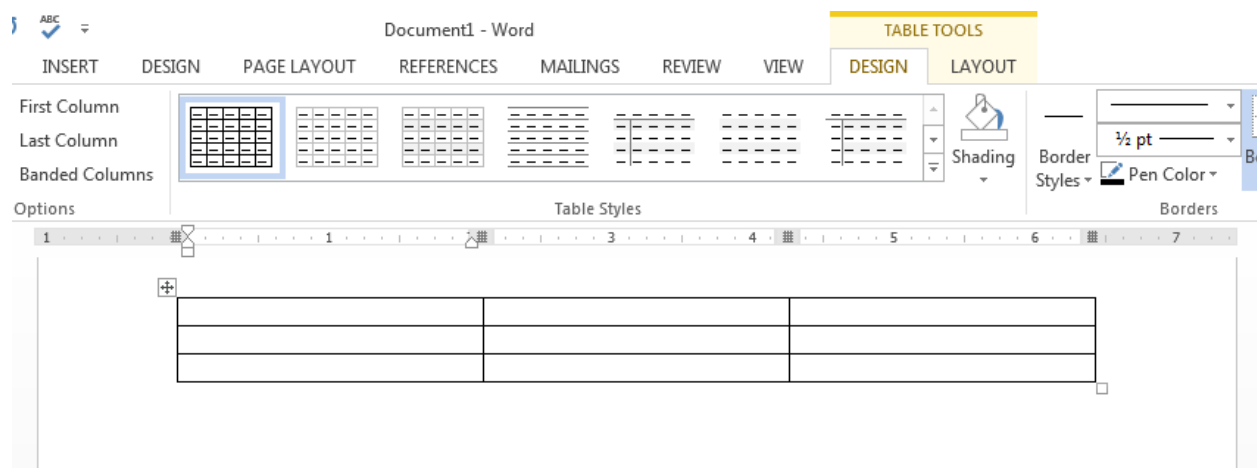


Figure 10. Table options from the Toolbar.

## Saving As A Pdf

Go to **File Tab** > **Save As Adobe PDF**. (Figure 11)

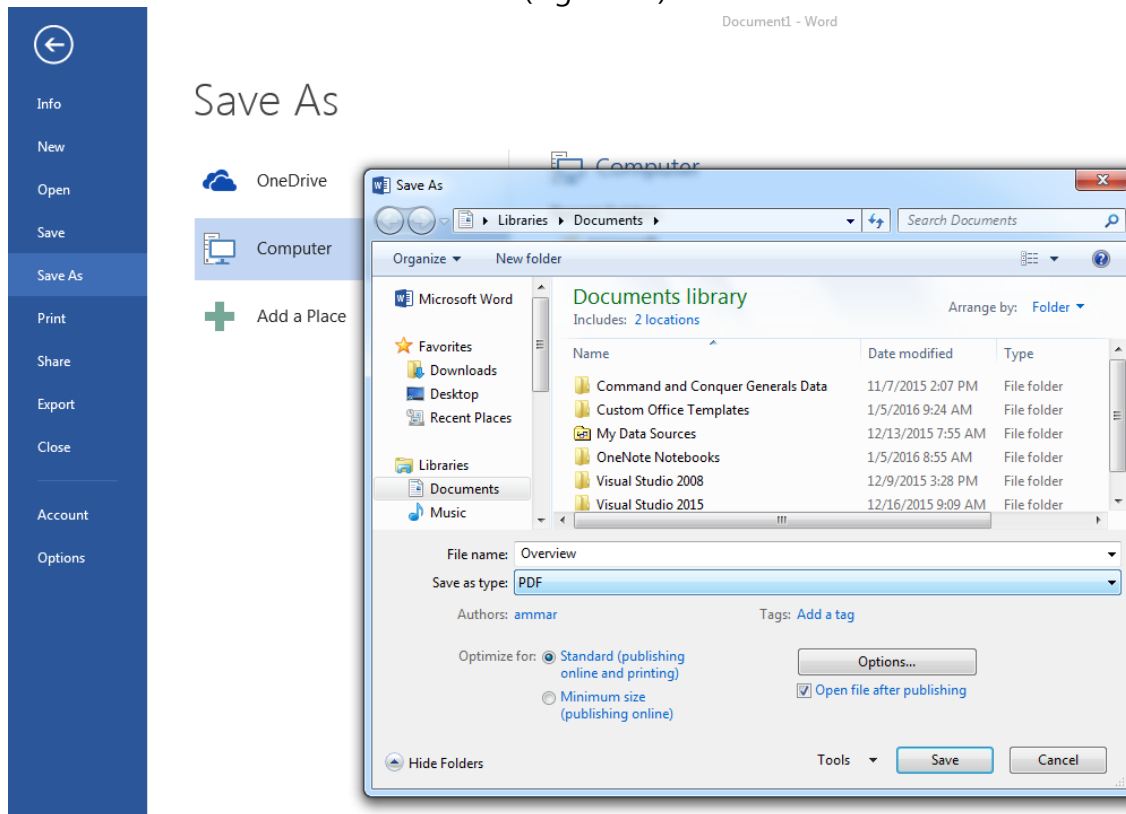


Figure 11. Saving as PDF type

## 7. Undo and Redo

The easiest way to undo an action is with the key commands Ctrl + Z and to redo an action with Ctrl + Y. It is important to note that not all actions are undoable, thus it is important to save before you make any major changes in your document so you can revert back to your saved document. There are also two icons (Figure 12) above the Main Toolbar near the Save Icon. The left icon is Undo and the right icon is Redo.

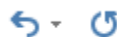


Figure 25: Undo and Redo

**Quitting: Before you quit, it's a good idea to save your document one final time and good idea to save as pdf format to avoid any change when you printout you work.**



**Microsoft  
Excel 2013**

## 1. Overview

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Microsoft Excel is one of the most popular spreadsheet applications that helps you manage data, create visually persuasive charts, and thought-provoking graphs. Excel is supported by both Mac and PC platforms. Microsoft Excel can also be used to balance a checkbook, create an expense report, build formulas, and edit them.

## 2. CREATING A NEW DOCUMENT

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### Opening Microsoft Excel on a PC

1. Begin by opening Microsoft Excel.

- On a PC, click **Start** > **All Programs** > **Microsoft Office 2013** > **Excel 2013**. (Figure 1)

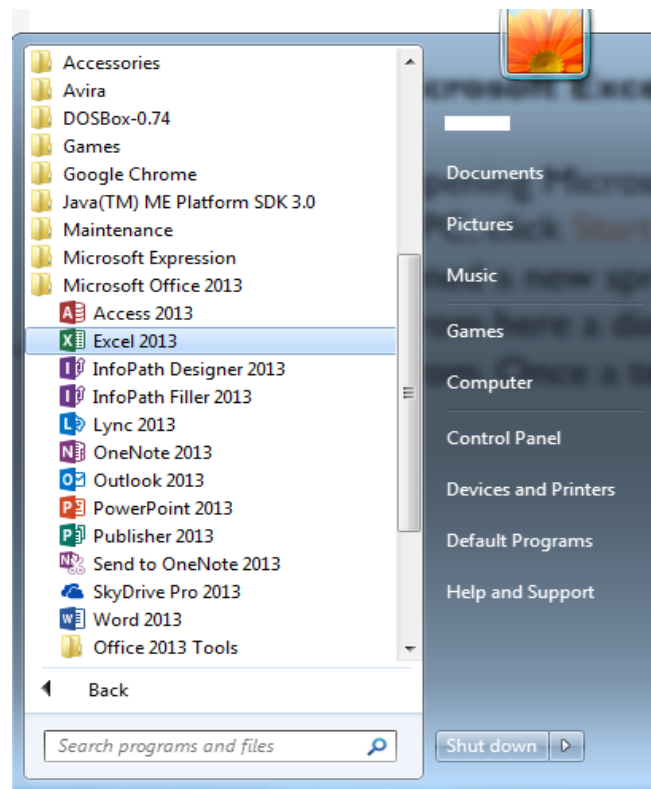


Figure 1. Navigation to Microsoft Excel on a PC.

2. When opened a new spreadsheet will pop up on the screen. If this does not happen click on the **File** tab > **New**. From here a dialog box with various different templates will

appear on the screen that you can choose from. Once a template is chosen, click **Create**. (Figure 2)

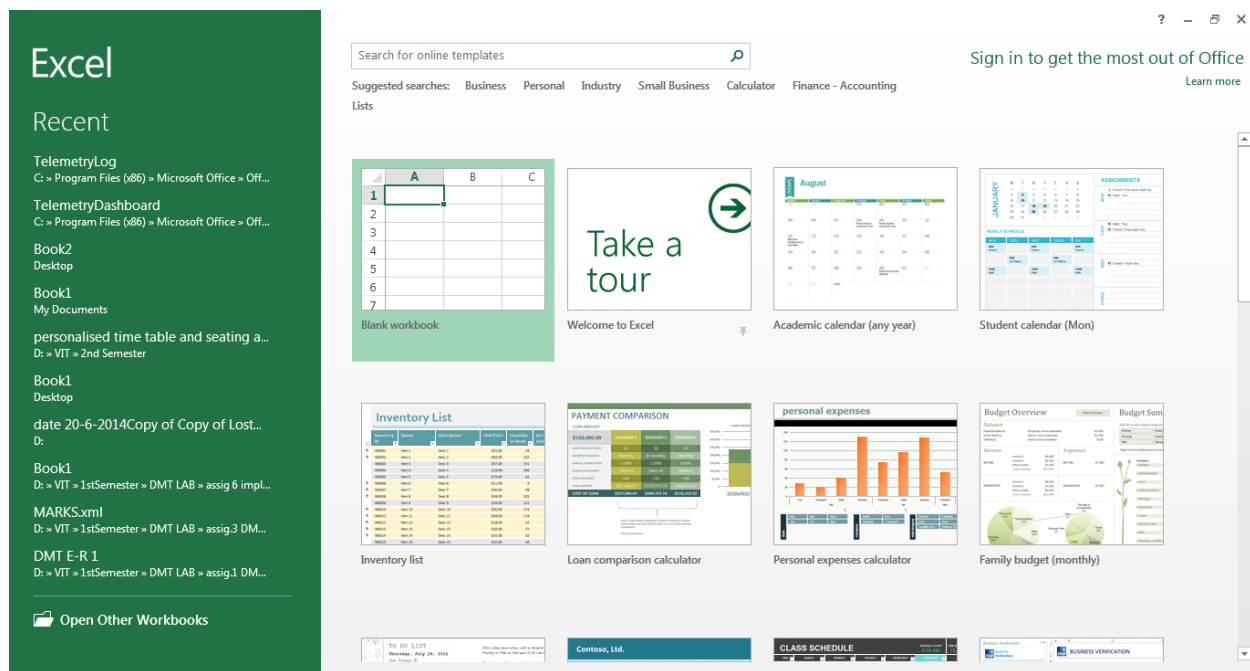



Figure 2. Opening a new workbook

### 3. SAVING YOUR DOCUMENT

Computers crash and documents are lost all the time, so it is best to save often. It is also recommended that you save your document before you begin working on it.

- Click on the **File tab > Save As** or .
- Microsoft Excel will open a dialog box where you will be prompted to select a save location for your file. If your desired location is not apparent in this box, press the **Browse** icon and a new window will appear allowing you to input the name of your document, where you want it saved, as well as the format of the document. (Figure 3)
- Once you have specified a name, place, and format for your new file, press the save button.

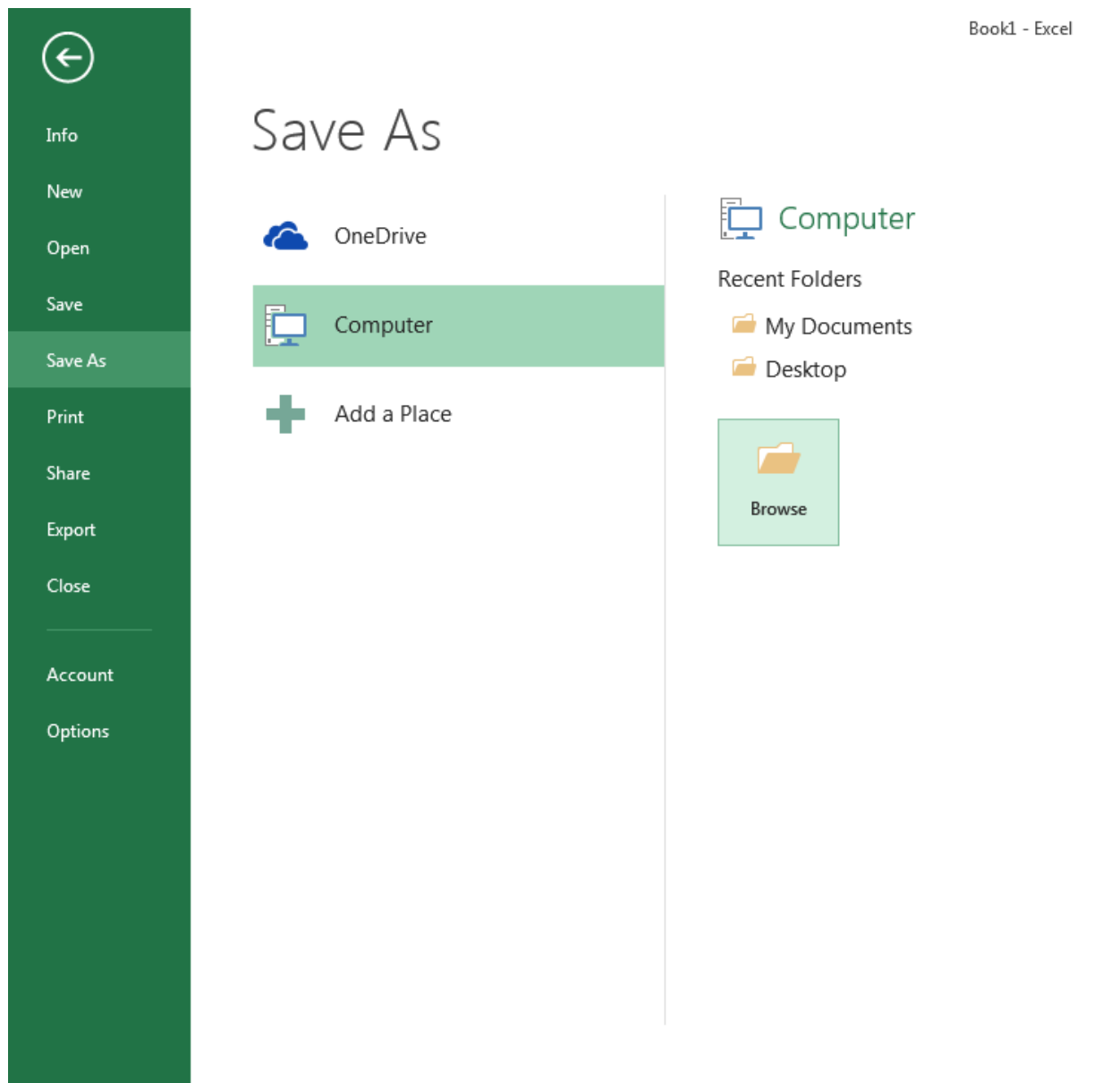


Figure 3. Saving dialog box.

## 4. TOOLBARS

In Microsoft Excel 2013 for a PC, the toolbars are automatically placed as tabs at the top of the screen. Within these tabs you will find all of your options to change text, data, page layout, and more. To be able access all of the certain toolbars you need to click on a certain tab that is located towards the top of the screen.

### Two Commonly Used Toolbars

- The **Home** Tab: This is one of the most common tabs used in Excel. You are able to format the text in your document, cut, copy, and paste information. Change the alignment of your data, insert, delete, and format cells. (Figure 4)

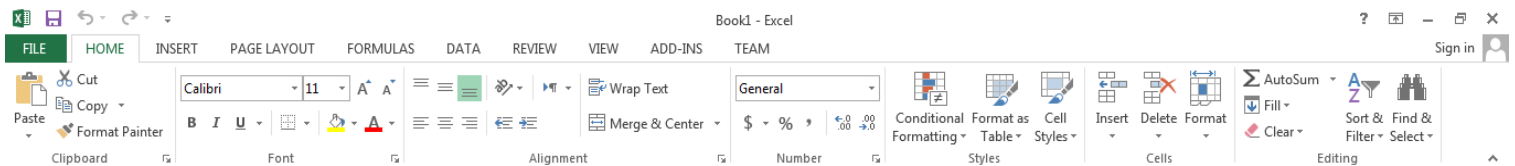


Figure 4. Home Tab.

- The **Insert** Tab: This tab is mainly used for inserting visuals and graphics into your document. There are various different things that can be inserted from this tab such as pictures, clip art, charts, links, headers and footers, and word art. (Figure 5)

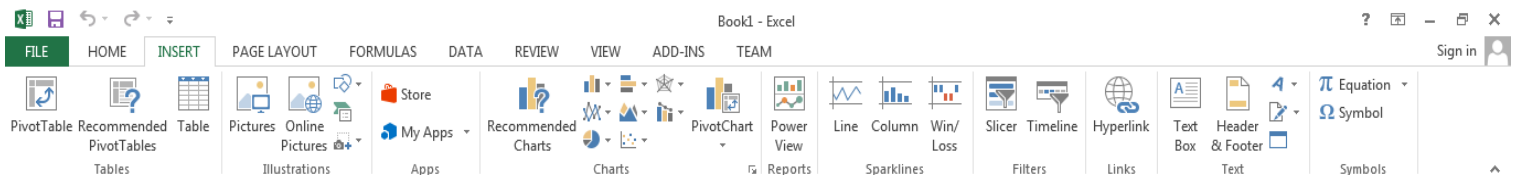


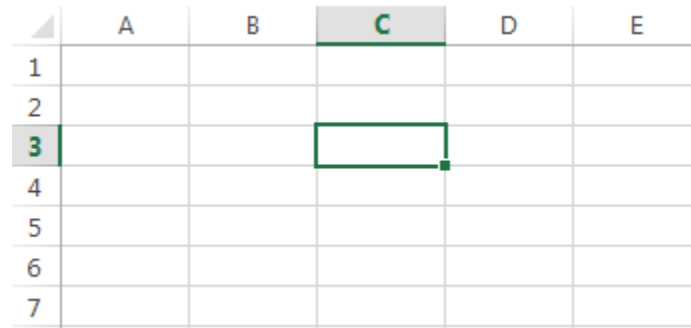
Figure 5. Insert Tab.

## 5. FORMATTING

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### Working with Cells

Cells are an important part of any project being used in **Microsoft Excel**. Cells hold all of the data that is being used to create the spreadsheet or workbook. To enter data into a cell you simply click once inside of the desired cell, a green border will appear around the cell. (Figure 6) This border indicates that it is a selected cell. You may then begin typing in the data for that cell.



	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					

Figure 6. Entering Data.

### Changing an Entry within a Cell

You may change an entry within a cell two different ways:

1. Click the cell one time and begin typing. The new information will replace any information that was previously entered.
2. Double click the cell and a cursor will appear inside. This allows you to edit certain pieces of information within the cells instead of replacing all of the data.

### Cut, Copy, and Paste

You can use the **Cut**, **Copy** and **Paste** features of Excel to change the data within your spreadsheet, to move data from other spreadsheets into new spreadsheets, and to save yourself the time of re-entering information in a spreadsheet. **Cut** will actually remove the selection from the original location and allow it to be placed somewhere else. **Copy** allows you to leave the original selection where it is and insert a copy elsewhere. **Paste** is used to insert data that has been cut or copied.

1. Highlight the data or text by selecting the cells that they are held within.
2. Go to the **Home Tab > Copy** (CTRL + C) or **Home Tab > Cut** (CTRL + X).
3. Click the location where the information should be placed.
4. Go to **Home Tab > Paste** (CTRL + V) to be able to paste your information.



## Font format

To change the font theme, size, cell background color, font color, font style (bold, italic or/and underline) go to **Home Tab**. (Figure 7)

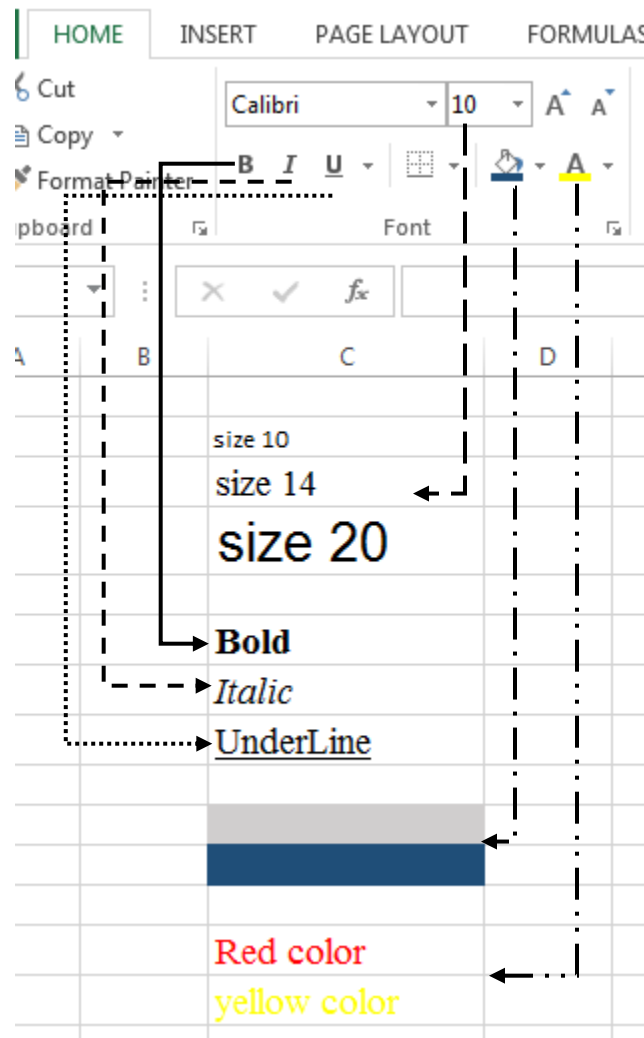


Figure 7. Font format

## Cells merge

1. Select the cells which will to be merged.
2. Go to **Home Tab > Merge & Center**. (Figure 8)

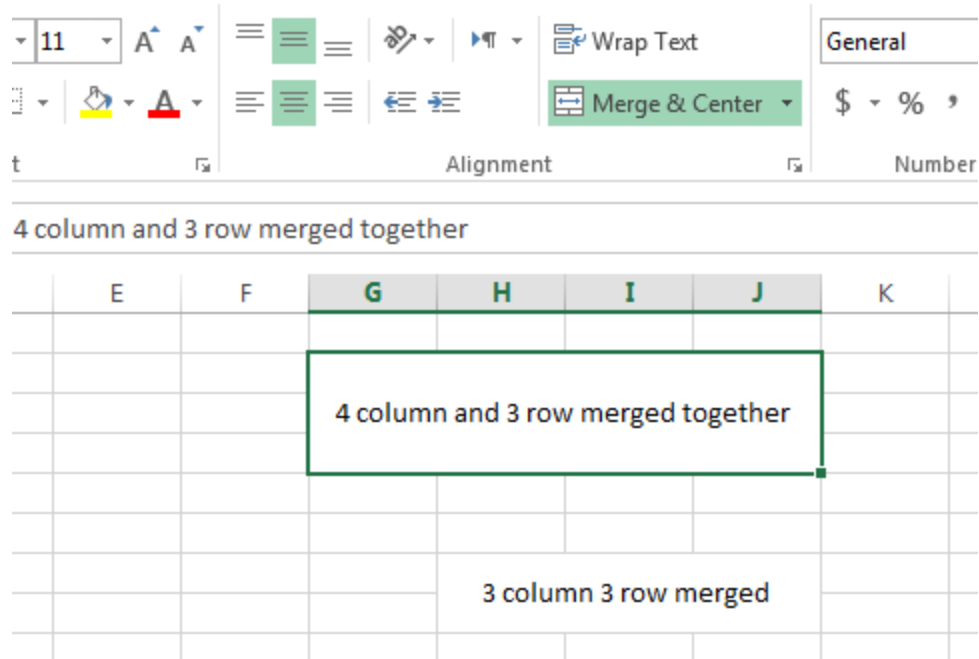


Figure 8. Cells Merge.

## Working with Charts

Charts are an important part of being able to create a visual for spreadsheet data.

1. In order to create a chart within Excel the data that is going to be used for it needs to be entered already into the spreadsheet document. Once the data is entered, the cells that are going to be used for the chart need to be highlighted (Figure 9) so that the software knows what to include. Next, click on the **Insert Tab** that is located at the top of the screen. (Figure 10)

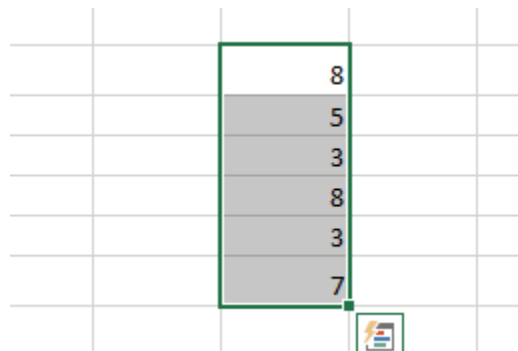


Figure 9. Select cell for create chart



## 6. Creating Functions

When creating a function in Excel you must first have the data that you wish to perform the function with selected.

1. Select the cell that you wish for the calculation to be entered in (i.e.: if I want to know the sum of B1:B5 I will highlight cell B6 for my sum to be entered into). (Figure 12)

	A	B	C
1		8	
2		5	
3		3	
4		8	
5		3	
6		=SUM(B1:B5)	
7			
8			
9			

Figure 12. Choosing calculation cell

2. Once you have done this you will need to select the **Formulas Tab** located at the top of the screen. (Figure 13)

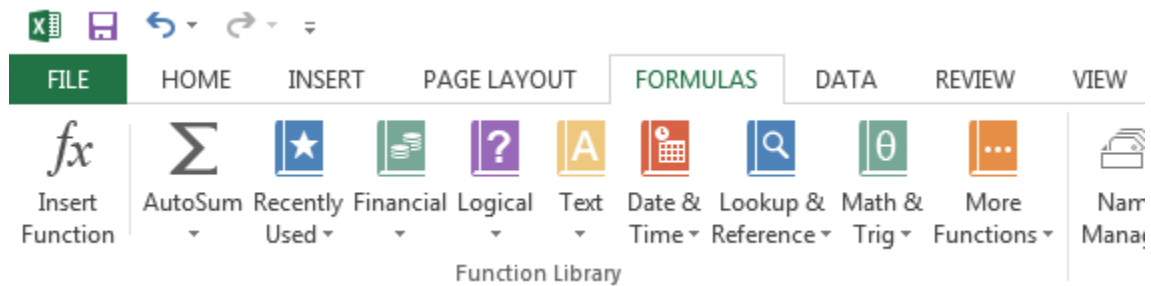


Figure 13. Formulas Tab

3. A list of Most Recently Used, Financial, Logical, Text, Date and Time, Math and Trig formulas will appear. To choose one of the formulas click the icon that holds the formula you are looking for.

4. Once you have clicked your formula this will display a dialog box on your screen. (Figure 14)

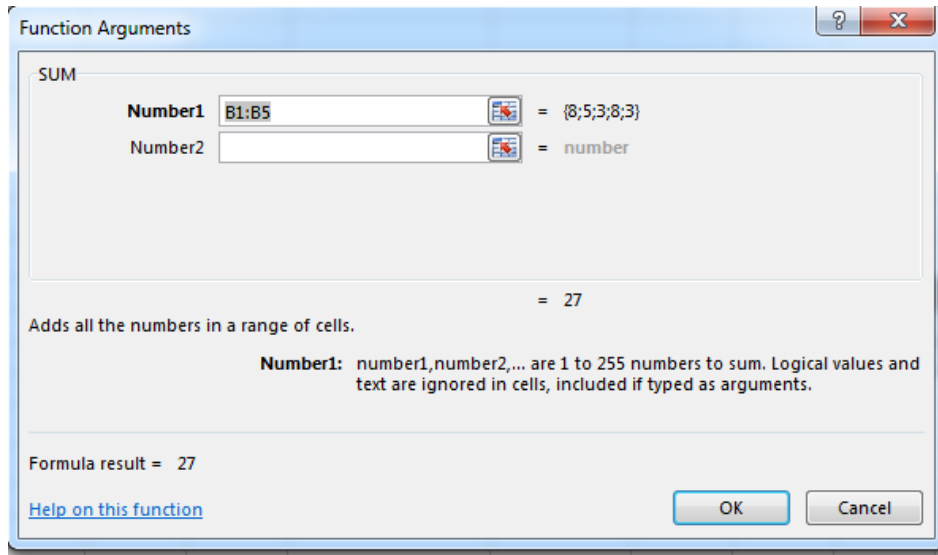


Figure 14. First calculation display

In this screen it lists the cells that are being calculated, the values within the cells, and the end result.

5. To accept that calculation you can press **OK** and the result will show up in the selected cell "B6".

## 7. Undo and Redo

In order to undo an action, you can click on the **blue arrow icon** that is pointing to the left at the top of the screen. To redo an action, you can click on the **blue arrow icon** pointing to the right. It is important to note that not all actions are undoable, thus it is important to save before you make any major changes in your document so you can revert back to your saved document. (Figure 15)



Figure 15. Undo/Redo buttons

**Quitting: Before you quit, it's a good idea to save your document one final time.**



Microsoft  
PowerPoint 2013

## 1. Overview

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Microsoft PowerPoint is one of the most popular presentation programs supported by PC platforms. Microsoft PowerPoint can be used to create interactive presentations for classroom, business, or personal use.

## 2. CREATING A NEW DOCUMENT

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### Opening Microsoft Word on a Pc

1. Begin by opening Microsoft PowerPoint.

- To launch Microsoft PowerPoint, go to **Start > All Programs > Microsoft Office 2013 > PowerPoint 2013** (Figure 1).

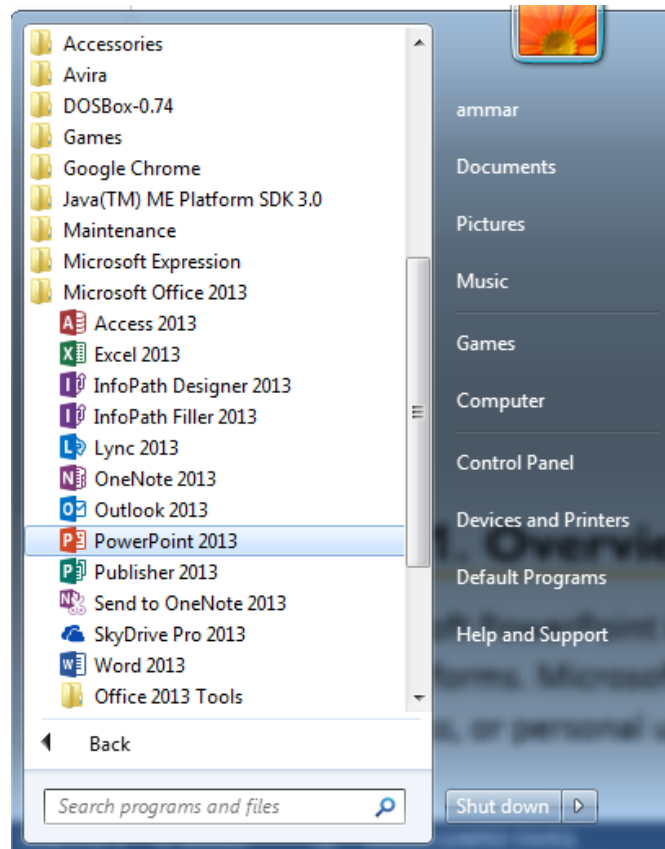


Figure 1. Navigation to Microsoft PowerPoint on a PC.

2. When opened a new Blank Presentation will select and open. (Figure 2 a & b)

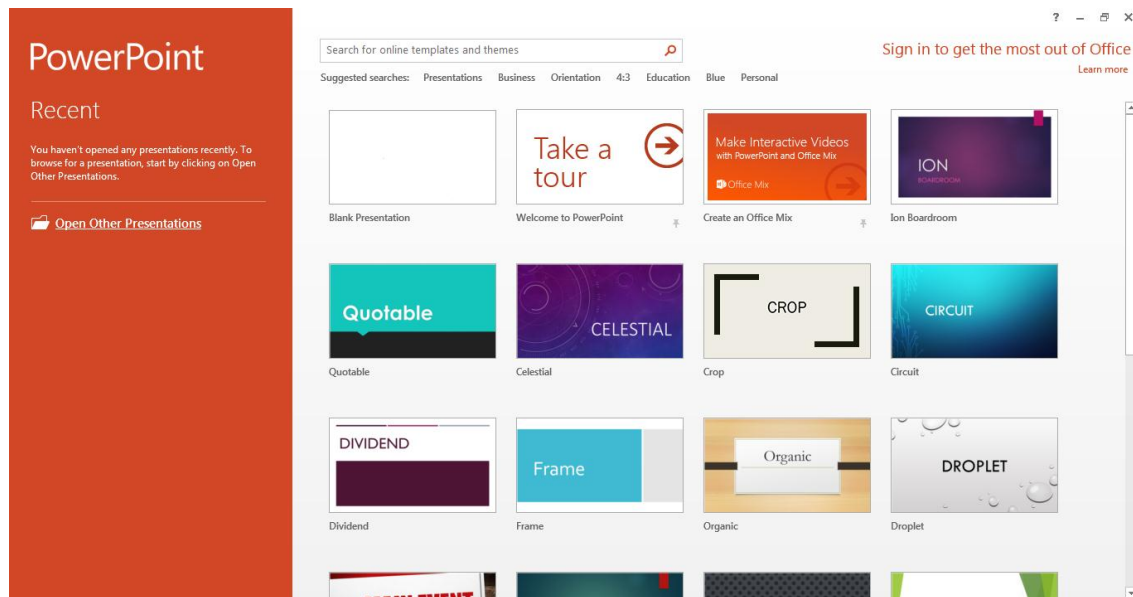


Figure 2a. Opening a new presentation.

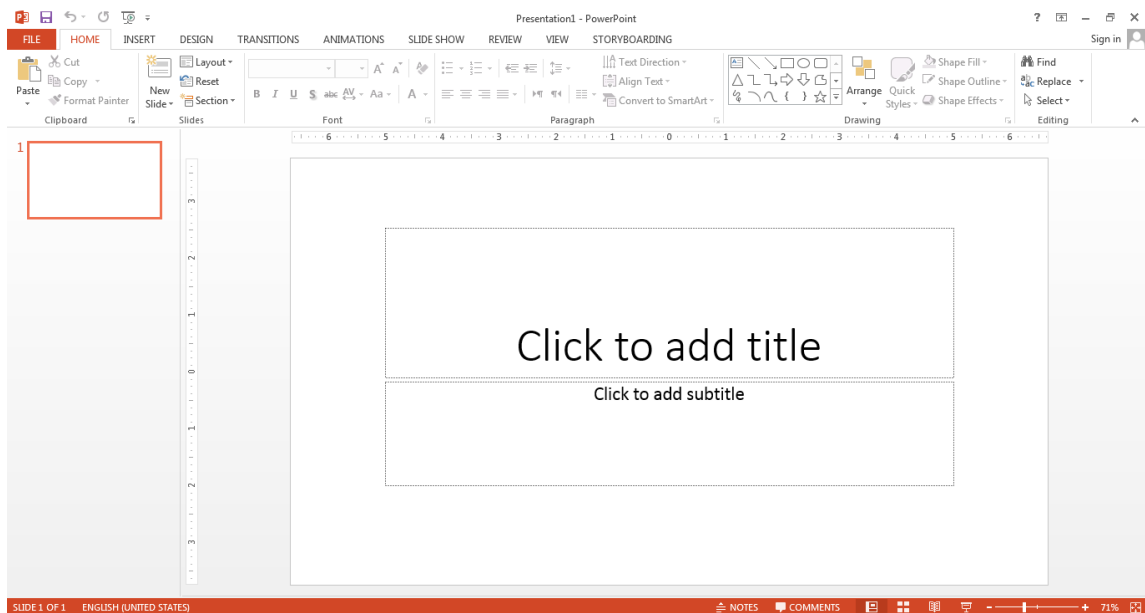



Figure 2b. Opening a new presentation.



### 3. SAVING YOUR PRESENTATION

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Computers crash and presentations are lost all the time, so it is best to save often. It is also recommended that you save your presentation before you begin working on it.

- Click on the **File tab** > **Save As** or .
- Microsoft PowerPoint will open a dialog box where you will be prompted to select a save location for your file. If your desired location is not apparent in this box, press the **Browse** icon and a new window will appear allowing you to input the name of your presentation, where you want it saved, as well as the format of the presentation. (Figure 3)
- Once you have specified a name, place, and format for your new file, press the save button.

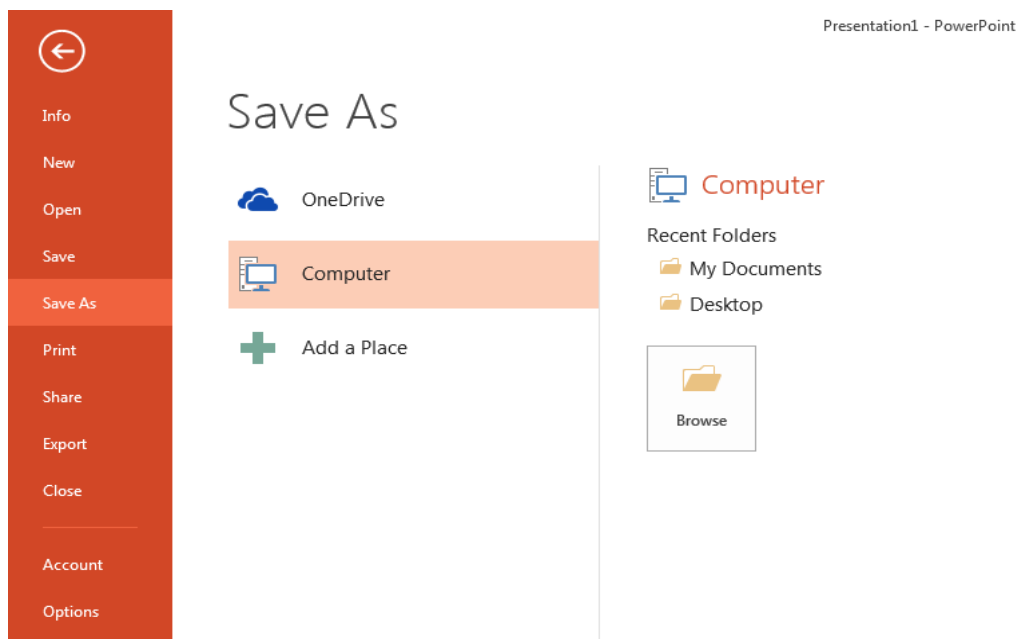


Figure 3. Saving dialog box.

### 4. TOOLBARS

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The **Design Ribbon** toolbar contains several categories for formatting the design and elements of your presentation. These include: **Home**, **Insert**, **Design**, **Transitions**, **Animations**, **Slide Show**, **Review** and **View**. These icons are convenient but will not bring up dialogue boxes that allow you to change the settings of these actions. You should use whichever method works the best for you.

- The **Home Tab**: This has features that allow you to edit **Slides**, **Fonts**, **Paragraph**, **Drawing** and **Editing**. (Figure 4)

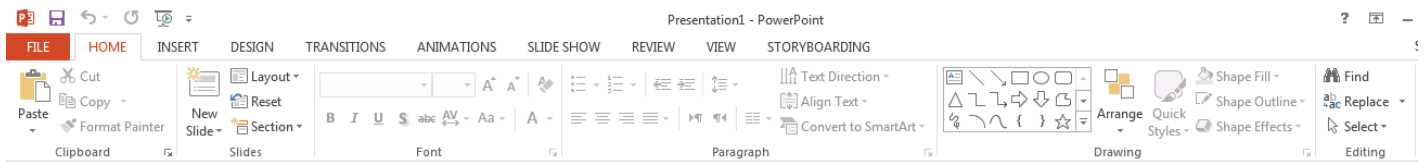


Figure 4. Home Tab

- The **Insert Tab**: This has features that allow you to add **Tables**, **Images**, **Illustrations**, **Links**, **WordArt**, and **Media Clips**. (Figure 5)

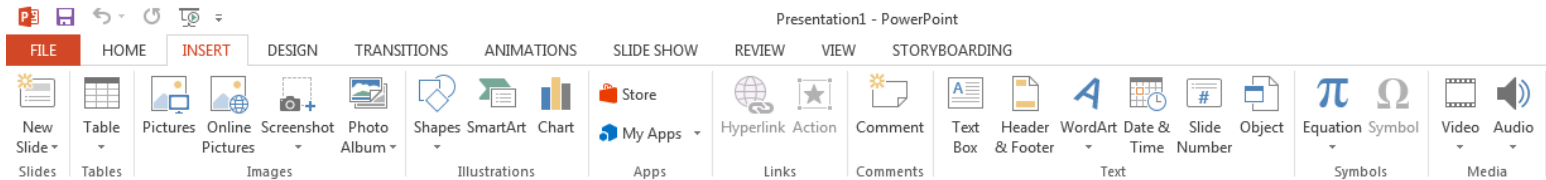


Figure 5. Insert Tab

- The **Design Tab**: This allows you to edit how your presentation will look. It includes features such as **Page Setup**, **Themes**, and **Background Styles**. (Figure 6)

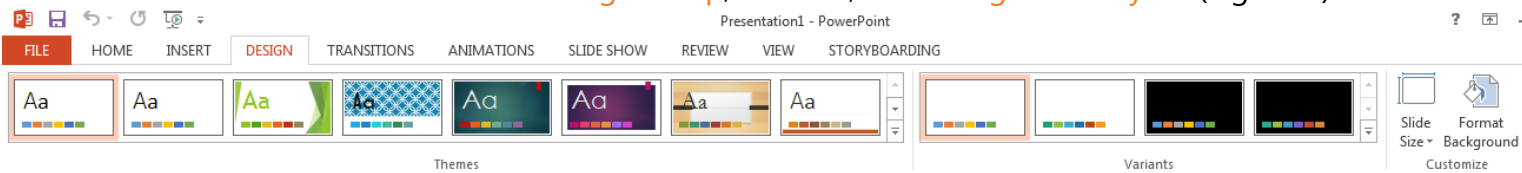


Figure 6. Design Tab

- The **Transitions Tab**: This allows you to add custom transition between slides. You can select from **Slide Transitions**, **Effects**, and **Transition Timing** box. (Figure 7)

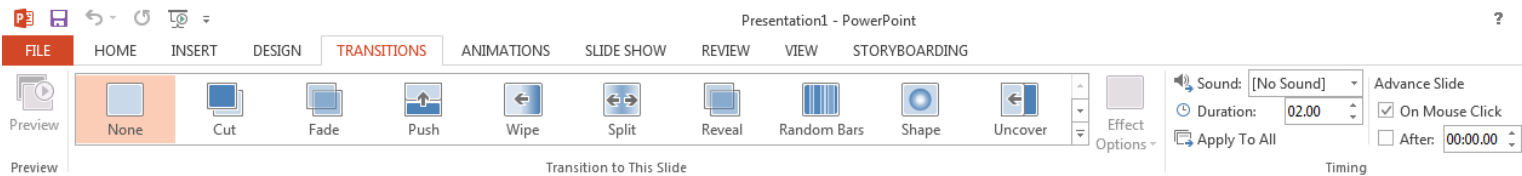


Figure 7. Transitions Tab

- The **Animations Tab**: This allow you to add custom animations to your presentation. You can select from **Preview**, **Animations**, **Advance Animation**, and **Animation Timing** box. (Figure 8)

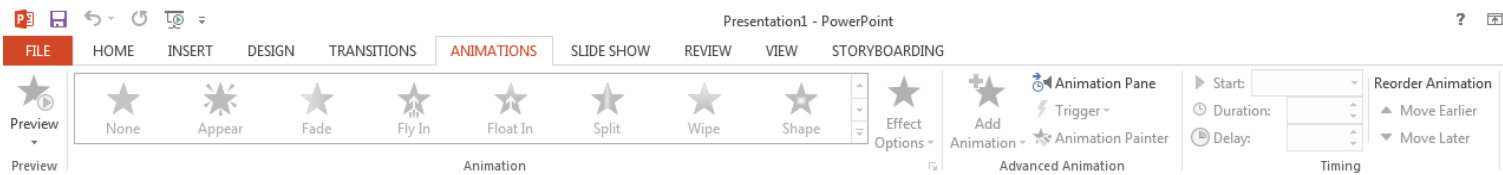


Figure 8. Animations Tab

- The **Slide Show Tab**: This has features that allow you to select how your presentation will be displayed. From here, you can **Start Slide Show**, **Set Up Slide Show**, and **Adjust Monitor Settings**. (Figure 9)

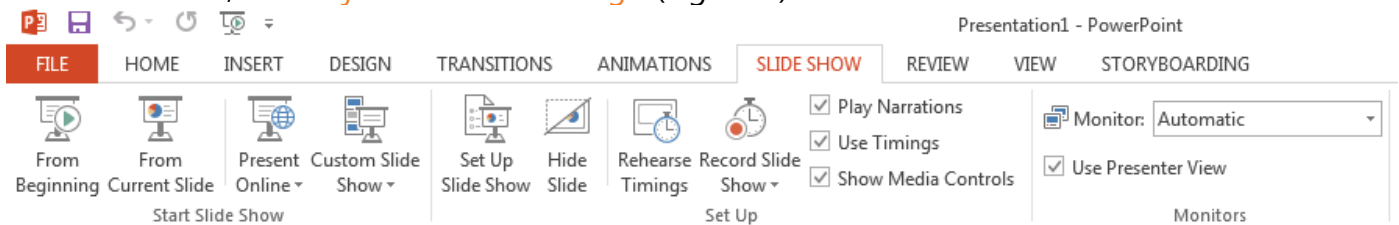


Figure 9. Slid Show Tab

- The **Review Tab**: This allows you to **Proofread**, **Translate Languages**, **Comment Slides**, and **Compare** your Presentation. (Figure 10)

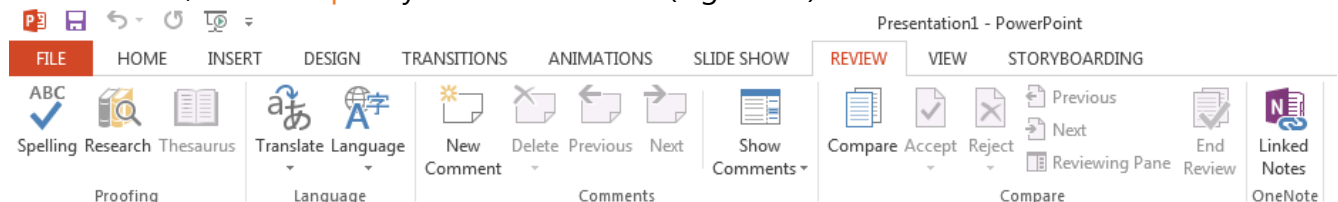


Figure 10. Review Tab

- The **View Tab**: This has features that allow you to set the **View of your Presentation**, **Create Master Views**, **Show/Hide Features**, **Zoom**, **Switch from Color to Grayscale**, **Adjust Windows**, and **Add Macros**. (Figure 11)

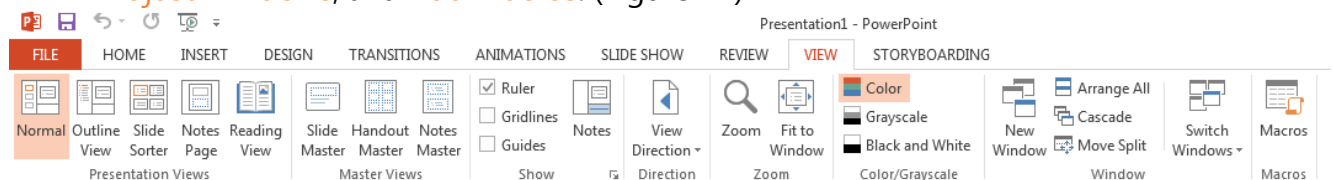


Figure 11. View Tab

## 5. FORMATTING

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### Formatting Your Presentation

- The default slide design for Microsoft PowerPoint documents is a blank slide. Therefore, if you want your slides to have a specific design, you must add one. To do this on a PC, go to the **Design Tab** (Figure 6). To change the theme of your presentation, click on the theme that you like and it will automatically apply to your slide.
- To apply a New Slide Layout, select the **Home Tab** > **Slides box** > **New Slide** or **Layout** (Figure 12). To customize the layout of your document. From here, you can specify how the content on your slide is displayed. To apply a layout to your slide click the layout button, and choose your preferred style.

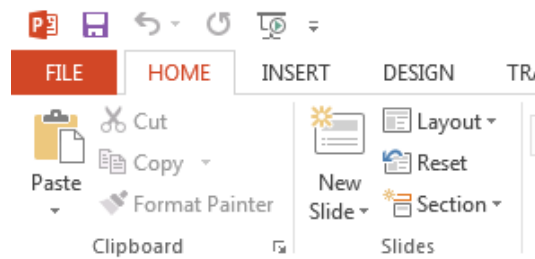


Figure 12. Add New Slide

## 6. INSERTING AND ADDING OBJECTS

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### Insert Picture:

Go to **Insert Tab** > **Images box** > **Pictures** (Figure 13). A dialogue box will appear (Figure 14), find the location of picture you want to insert and the press insert.

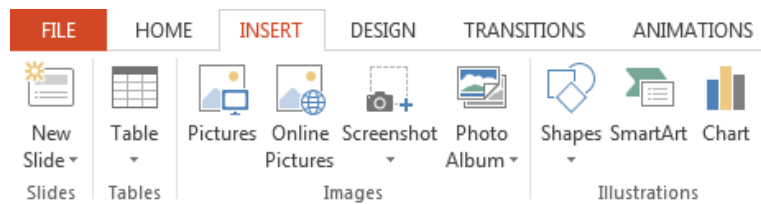


Figure 13. Add Objects

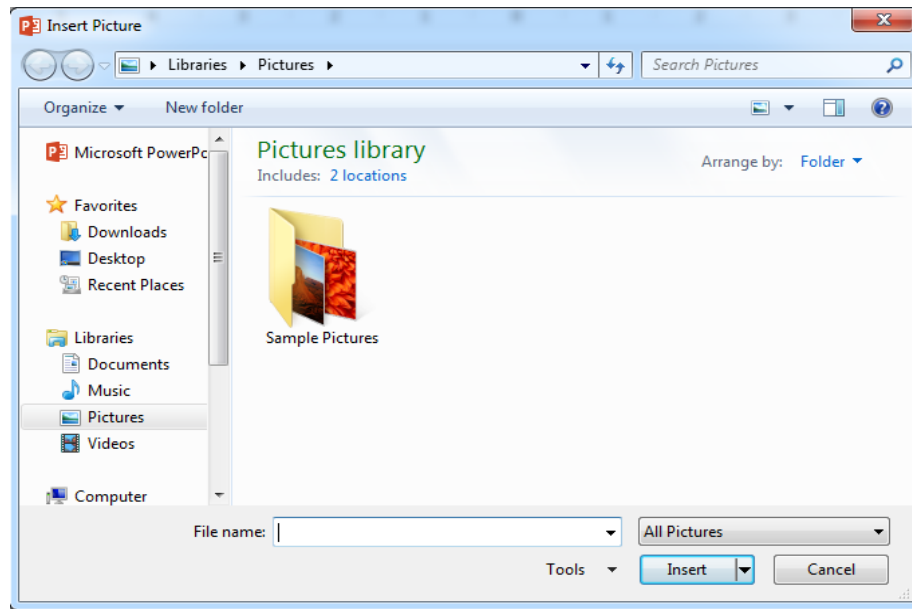


Figure 14. Dialogue box for picture location

## Creating a Table

To create a table within your document, go to **Insert Tab** > **Tables box** > **Table button**. Choose the desired table size and format by hovering over the boxes, and press Enter on the keyboard (Figure 15).

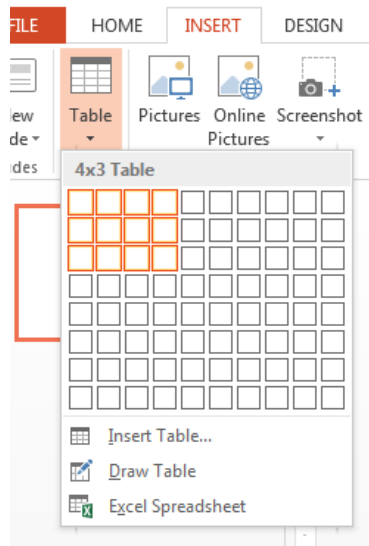


Figure 15. Insert Table

**Quitting: Before you quit, it's a good idea to save your document one final time.**