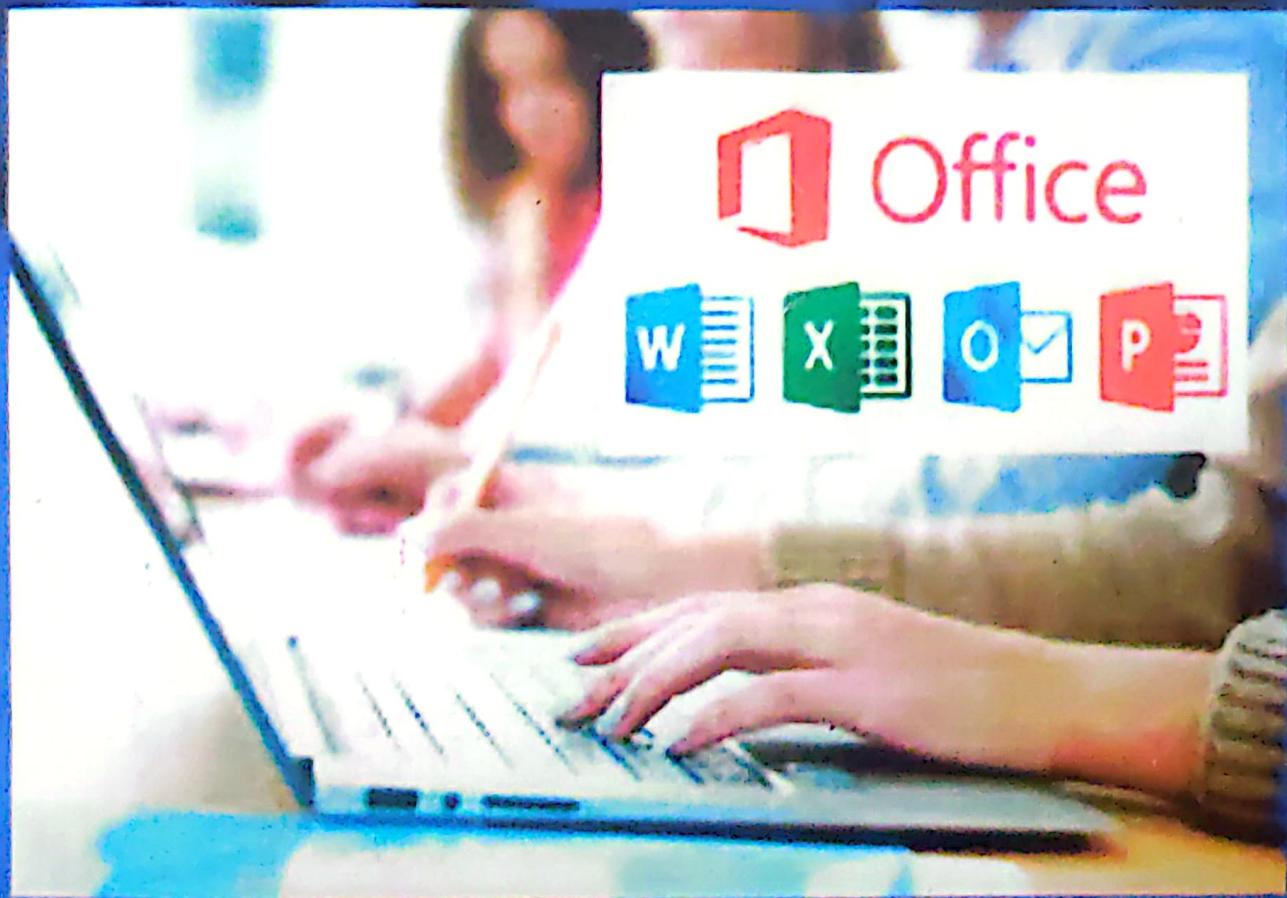


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INTRODUCTION TO BASIC COMPUTER APPLICATIONS

(Microsoft Word, Excel, PowerPoint 2019)



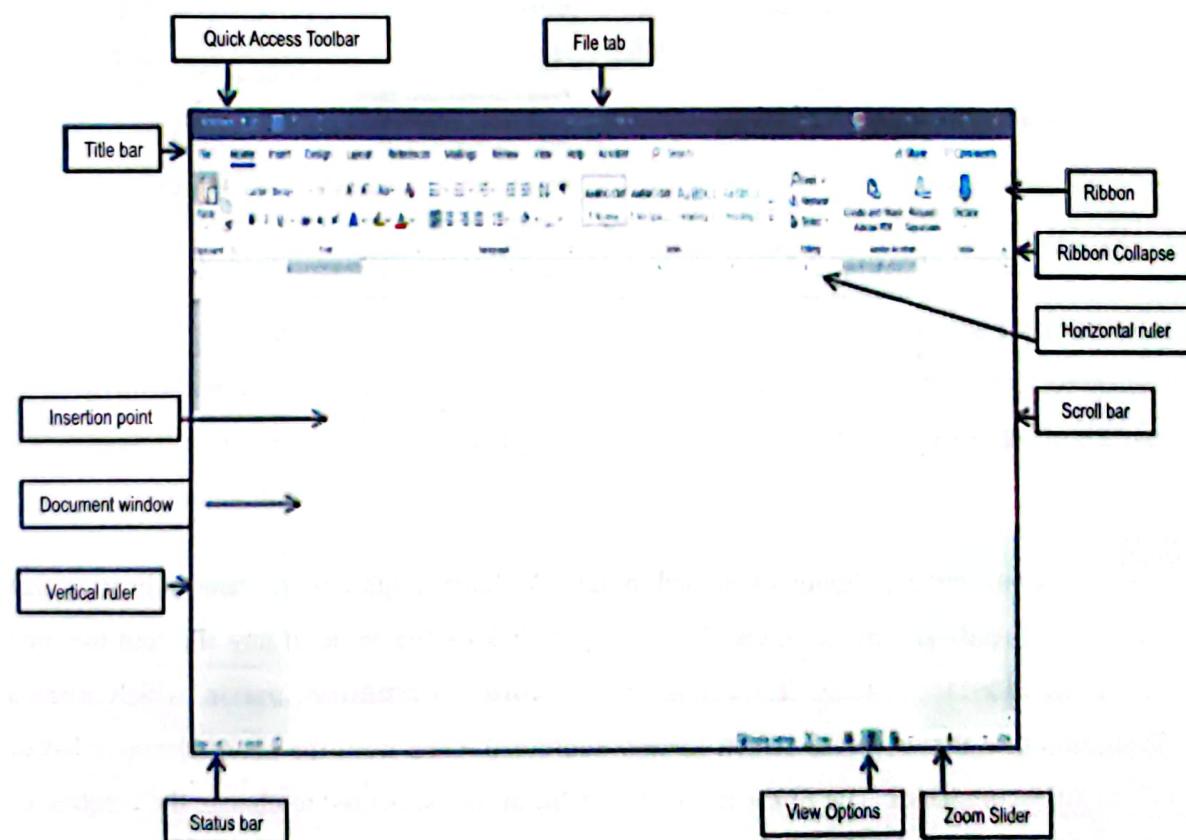
Laboratory Manual and Log Book

MODULE 1: MICROSOFT WORD

Microsoft Word 2019 is included in Microsoft's latest office desktop productivity suite, Microsoft Office 2019. Microsoft Word is a word processing program that can be used to write letters, resumes, reports, and more. Anything one can create with a typewriter can be created with Word. Documents can be made more appealing and easier to read by applying formatting to text.

To start Microsoft Word 2019, click on the **Office Start button**, and then select **Microsoft Word 2019** from the options panel.

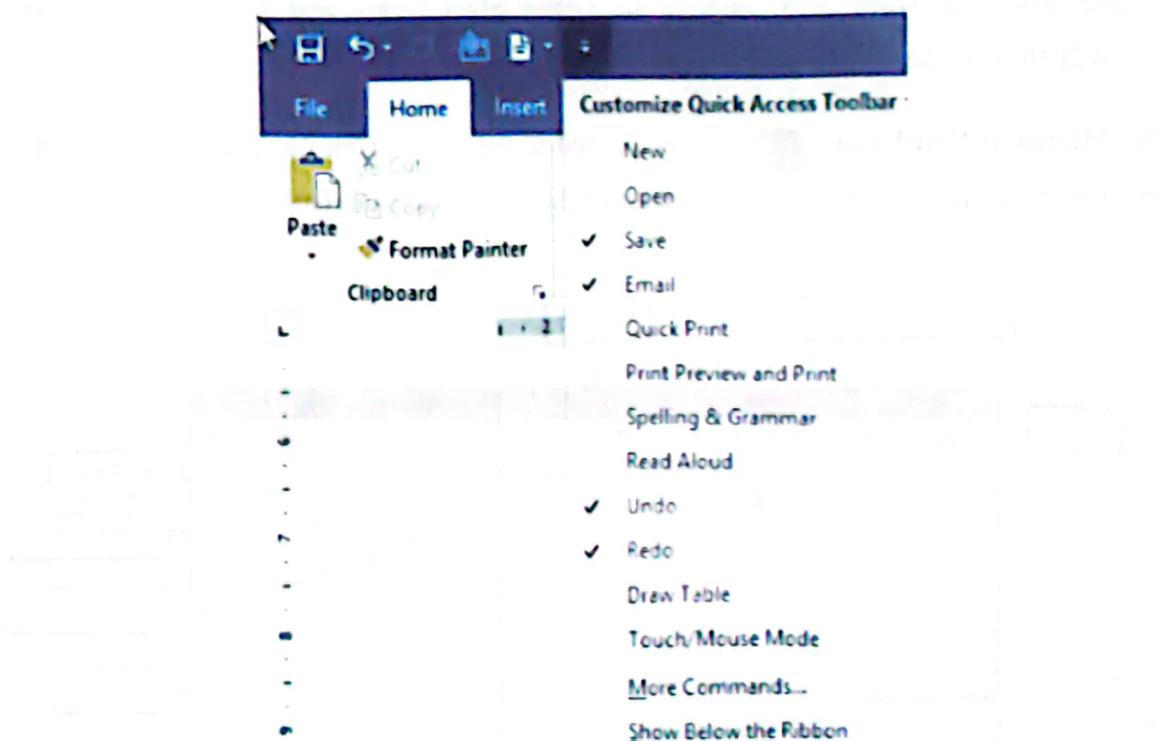
The **Microsoft Word Icon**  can be pinned to the start bar for quick access. The screen shot below displays the primary components of the Word 2019 interface.



Title Bar – This is the horizontal bar at the top of an active document. This bar displays the name of the document and application. At the right end of the Title Bar is the Minimize, Maximize and Close buttons. When Microsoft Word is launched, the blank page displayed is

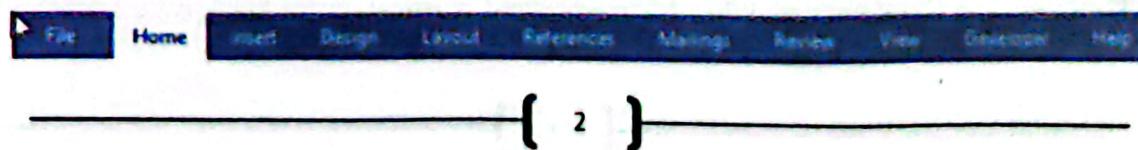
titled **Document**, meaning that the elements that have been added to the document are not yet saved.

Quick Access Toolbar (QAT) – This is a customizable toolbar at the top of an active document. By default, the Quick Access Toolbar contains the Save, Undo, and Redo icons and is used for easy access to frequently used commands. To customize this toolbar, click on the dropdown arrow at the rightmost end of the QAT and select the commands you want to add. This is illustrated below:



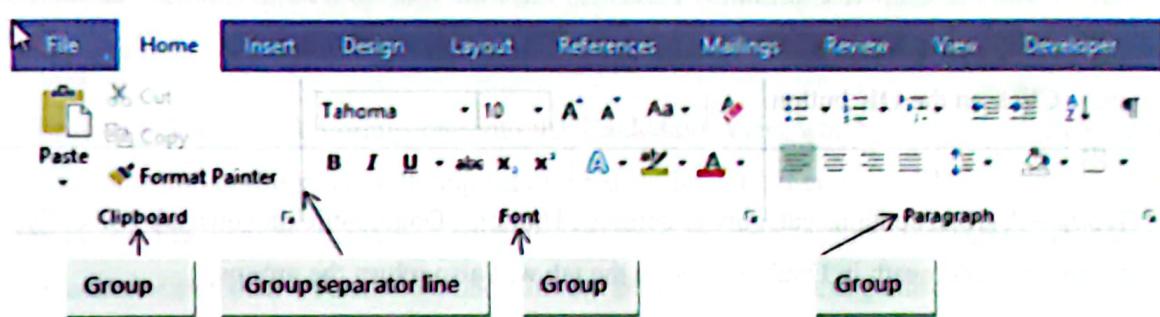
TIP The icons that are already contained in the QAT have a tick next to them indicating that the icon is already an option on the QAT. Simply click on the name of any shortcut that you want to be added to the QAT. You can select the **More Commands..**option, which opens a dialog box that allows you to search for any additional icons from the comprehensive list of Office 2019 commands. The **Show Below the Ribbon** option is used to change the location of the QAT to display it below the ribbon (just above the ruler bar).

Tabs - An area on the Ribbon that contains buttons that are organized in groups. The default tabs are Home, Insert, Design, Layout, References, Mailings, Review, View and Developer.

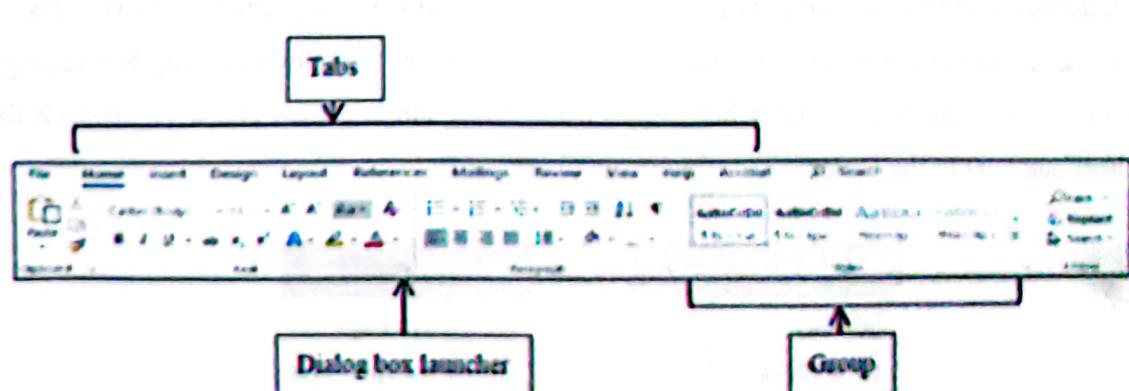


Microsoft Word 2019 uses **Tabs** instead of menus to organize various functions. The tabs are located just underneath the title bar and span the Office 2019 environment from left to right. These are similar to the file divider tabs that you would use in an office. There are quicker ways to complete simple tasks, either by right-clicking your mouse button or using shortcut keys, but you will always find more comprehensive options when using the tabs. Simply click on a tab with your mouse pointer to make it active, and then use the icons it offers. Familiarize yourself with the contents of each of the tabs. Knowing exactly where to go to perform a certain action in the program is of the utmost importance.

You will find that when selecting a tab with a mouse click, various groups are defined on the ribbon and each group is distinguished by light separation lines.



Ribbon - An area across the top of the screen that makes almost all the capabilities of Word available in a single area. It displays groups of related commands within tabs. Command buttons have been placed in a **Group** within the Ribbon. The **Dialog Box Launcher** in a group shows additional options.



The Ribbon can be accessed using **shortcut keys**. Pressing the **Alt** key on the keyboard grants one access to the shortcut keys available for each of the tabs. For instance, the shortcut key for the **Insert Tab** is "N." If one presses the **N** key on the keyboard, further shortcut keys will show up for each of the options available under that specific ribbon. These shortcuts allow one to quickly access the various tabs and options without using the mouse.

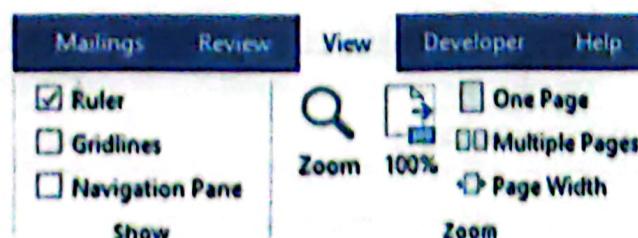
The Ribbon can be easily customized to suit your needs by creating new tabs and filling them with the commands you use the most. To customize the Ribbon:

-
- i. Click on the **File tab**, and then select **Options** and the Word Options window will appear
 - ii. Click on the **Customize Ribbon** option
 - iii. From the **Choose commands from** list, click on your desired ribbon option, and then click on the **Add** button to place it in the **Customize the Ribbon** list.
 - iv. Click on the **OK** button.
-

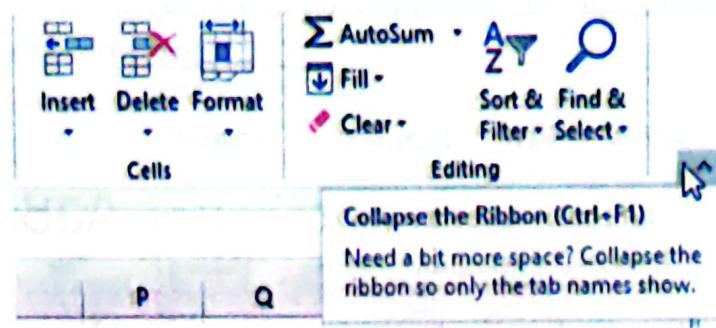
Group – A group contains category of command buttons. Double-clicking on a tab will collapse the groups underneath it. Double-click on the tab will also return the groups.

Dialog Box Launcher (DBL)- Most of the group sets in Office 2019 have a show dialog box arrow, where one can access more options relating to a group of related icons. That arrow in the corner of a group that launches a dialog box containing all the options within that group is called DBL.

Rulers – In Microsoft Word 2019 the rulers (vertical and horizontal) are used to measure and set the distance between tabs, margins, the page layout, and the header and footer distances. The ruler settings can be adjusted using the mouse pointer or the relevant dialog box settings. To remove or display the ruler bar, click on the **View tab** and then check or uncheck the checkbox next to the **Ruler**:

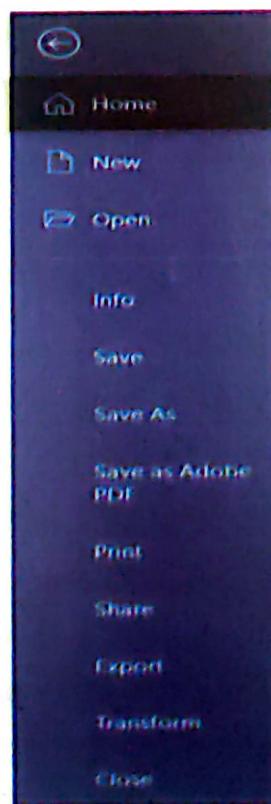


Ribbon Collapse – This is the tiny upward arrow at the right of the Ribbon use to hide everything on the ribbon, except the tabs, to allow more space to work with documents. If one clicks on a tab, it will unfold the ribbon options for that particular tab.

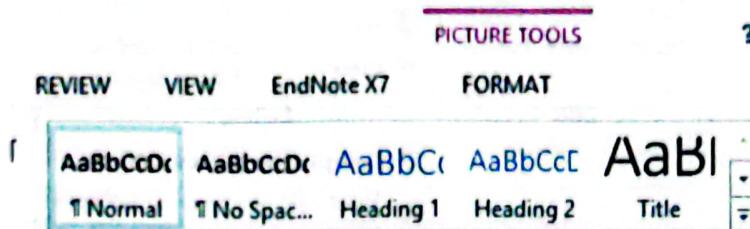


After selecting the desired options from the tab, click on the document and the ribbon will fold away again.

File Tab – The File Tab brings one into the **Backstage View** which provides information to documents and options that will help setup window defaults. It is where files and information about the files can be managed; creating, opening, printing, saving, inspecting for hidden metadata or personal information, and setting options. The Backstage also contains standard commands such as Open, Save, Save As, New, Print, etc. The File Tab is illustrated thus:



Conceptual Tabs – These tabs are designed to appear on the Ribbon when certain objects or commands are selected. They provide easy access to options specific to the selected object or command. For example, the commands for editing a picture will not be available until the picture is selected, at which time the **Picture Tools** tab will appear.



Status Bar – This is the horizontal bar at the bottom of an active Microsoft Word 2019 active window that gives details about the document. It displays information about the current file one is working on and provides quick access to some tasks. Right-clicking on the status bar provides one with a shortcut menu to make changes to it. Items can be added or removed from the status bar.



View Options – This can otherwise be called View Toolbar. It enables the adjustments and displays of different views of a document. To display different views:

- Click the View tab
- Click on the desired view OR
- Click the View button on the View Toolbar in the lower right corner of the Status Bar



The following view options are available:

- ✓ **Read Mode:** Displays as much of the content of the document as will fit in the screen.
- ✓ **Print Layout View:** Shows a document as it appears on a printed page.
- ✓ **Web Layout View:** Shows a document as it appears in a web browser.
- ✓ **Outline View:** Shows the structure of a document, which consist of heading and body text.
- ✓ **Draft View:** Displays the content of a document with a basic layout.

Zoom Slider – This slider magnifies or reduces the contents in the document window.

Creating a New Document in Microsoft Word 2019

- Click the **File Tab** above the ribbon
 - Select **New** in the left sidebar.
 - Click **Blank Document**.
- OR
- Click the **New Document** icon on the **Quick Access Toolbar** 



A blank document in Microsoft Word 2019 is a template with predefined fonts and attributes, as well as margins and page orientation settings. There are two blank document templates available: the single-spaced blank and the blank document options. The only difference between the blank document template and the single-spaced blank template in Word 2019 is in the line spacing and paragraph spacing settings. Both documents are empty and have no texts or objects added to them.

Templates

Templates are preformatted documents. When a template is opened, text that one can type over will be seen. Word has templates for many kinds of documents including resumes, brochures, award certificates, and letters. To download and open a template:

- x Choose the **File** tab above the ribbon and select **New** in the left sidebar.
- x Click on one of the listed templates and then click **Create**. OR
- x Search for a template in the search bar

The table below highlights the introductory steps to work with documents in Office 2019 applications:

Skill	Interface Navigation
Creating a new document	File New Blank document
Saving a document	File Save OR File Save As (or press Ctrl + S on the keyboard): <ul style="list-style-type: none"> • Navigate to the drive, location, or folder that your file resides in • Click on OK to save the document
Closing a document	File Close
Creating a new document from a template	File New, then select a template from the list provided, or search for templates online using the search box provided. Click to open the selected template.
Saving a document as a template	File Save As Browse, then select document template (*.dotx) from the Save as type: option. The folder will automatically update to the application template default. Click on OK to accept.
Opening saved documents	<ul style="list-style-type: none"> • File Open • Navigate to the drive, location, or folder that your file resides in • Double-click to open the document
Closing a document	File Close or click on the x located at the top right of the interface
Switch between open documents	Go to View Switch Windows
Open a recent document	File Open Recent, then select the recent file from the list provided

Typing and Inserting Text

Start typing to enter text. The text will appear where the **blinking cursor** is located. Move the cursor by using the arrow buttons on the keyboard or positioning the mouse and clicking the left button. Hold the **Shift** key if you want to type a capital letter. Pressing the **Enter** key (also

called a hard return) will add a line break to your document. Pressing the Tab key will move your cursor forward about 10-15 spaces. You can use this to easily indent the first line of a new paragraph.

Navigating through a Document

The table below lists the ways one can navigate through a document using the keyboard to move the insertion point in an active document:

To move the insertion point	Press....
Left one character	Left Arrow
Right one character	Right Arrow
Down one line	Down Arrow
Up one line	Up Arrow
Left one word	CTRL + Left Arrow
Right one word	CTRL + Right Arrow
To the beginning of the current line	Home
To the end of the current line	End
To the beginning of the document	CTRL + Home
To the end of the document	CTRL + End
To the beginning of the previous page	CTRL + Page Up
To the beginning of the next page	CTRL + Page Down
Up one screen	Page Up
Down one screen	Page Down

Selecting Text

Text selection is an important aspect of Microsoft Word that should be mastered because text must be selected before one can change the format of the text. To change any attribute of your document, you must highlight it first. Select the text by dragging the mouse over the desired text while keeping the left mouse button depressed, or hold down the Shift key on the keyboard while using the arrow icons to highlight the text. Deselect the text by clicking anywhere outside of the selection or press an arrow key on the keyboard. A quick way to highlight is to double click to highlight a word, or to triple click to highlight a section (such as a paragraph).

Note that when you highlight text, you will see a box appear near the text. If you place your arrow on this box, you can use the formatting icons.

The mouse can be used to select text in a variety of ways as explained in the table below:

Select	Action
Any text	Click at the beginning of the area and press the Shift key as you click at the end of the area. You can also drag across the text you want to select.
A word	Double click on the word.
A line	Place the mouse pointer in the left margin. Position the mouse pointer next to the desired line and click once
Multiple lines	Place the mouse pointer in the left margin next to the first desired line and click once. Then press the Ctrl key and click additional lines to select them.
A sentence	Press the Ctrl key and click anywhere in the sentence
A paragraph	Place the mouse pointer in the left margin and double click next to any line in the paragraph
Multiple paragraphs	Click at the beginning of the first paragraph then hold the mouse button down while dragging through your desired paragraphs.
Entire document	Press the Ctrl key then place the mouse pointer anywhere in the left margin and click once.

Deleting Text

Use the Backspace and Delete keys on the keyboard to delete text. Backspace will delete text to the left of the cursor and Delete will erase text to the right. To delete a large selection of text, highlight and press either of the keys

Cutting, Copying and Pasting Text

Often times you will need to move text from one location in a document to another, or to a different application. In this case you will perform a **Cut and Paste**. To reproduce a specific part of a document and place it elsewhere, you will perform a **Copy and Paste**. Copying allows you to move text elsewhere while keeping it in its original place.

To Cut Text :

- ✓ Select the text you want to move

- ✓ Click on the Cut icon located on the Home tab in the Clipboard group

To Copy Text :

- ✓ Select the text you want to copy
- ✓ Click on the Copy icon located on the Home tab in the Clipboard group



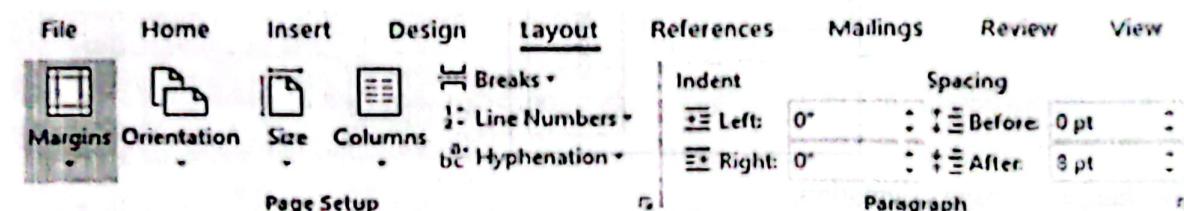
To Paste Text :

- ✓ Click in the area of the document where you want to paste your text
- ✓ Click on the Paste icon located on the Home tab in the Clipboard group



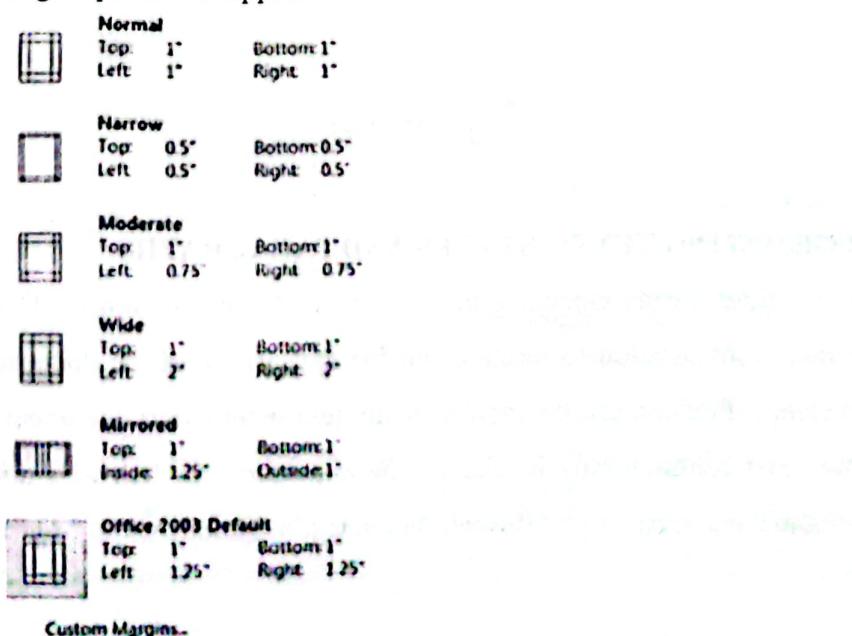
Setting the Margins

Microsoft Word 2019 margins are defaulted to 1 inch for the top and bottom, and 1 inch for the left and right. To change your margins, use the Margin button found on the Layout ribbon.



To create margins:

- ✓ Select the entire document text, by pressing the **Ctrl** key, then place the mouse pointer anywhere on the left margin, and then click once on the right mouse button.
- ✓ Select the **Layout** tab.
- ✓ In the **Page Setup** group, click on the **Margins** button.
- ✓ The predesigned margins panel will appear

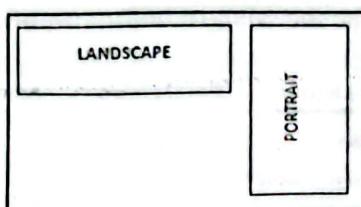


- ✓ Change the margins by selecting the top margin button (top and bottom 0.5" ; Left and Right 0.5").

If you prefer a margin not listed, then click on **Custom Margins** at the bottom of the panel to customize your margin. The **Page Setup** window will appear, and then make your desired margin choices from the window options.

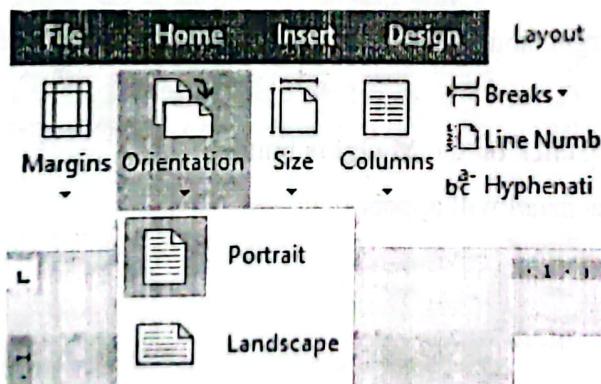
Changing the Page Orientation

There are two types of page orientation; **Landscape** and **Portrait**. When you create a new document, the page orientation is set to **Portrait** by default. The **Landscape** option is often used to accommodate large tables in Word documents or Excel reports with numerous columns:



To change the page orientation:

1. Click on the **Layout** tab in Microsoft Word 2019
2. Choose **Orientation**, then select the desired layout



FORMATTING TEXTS, STYLES AND PARAGRAPHS

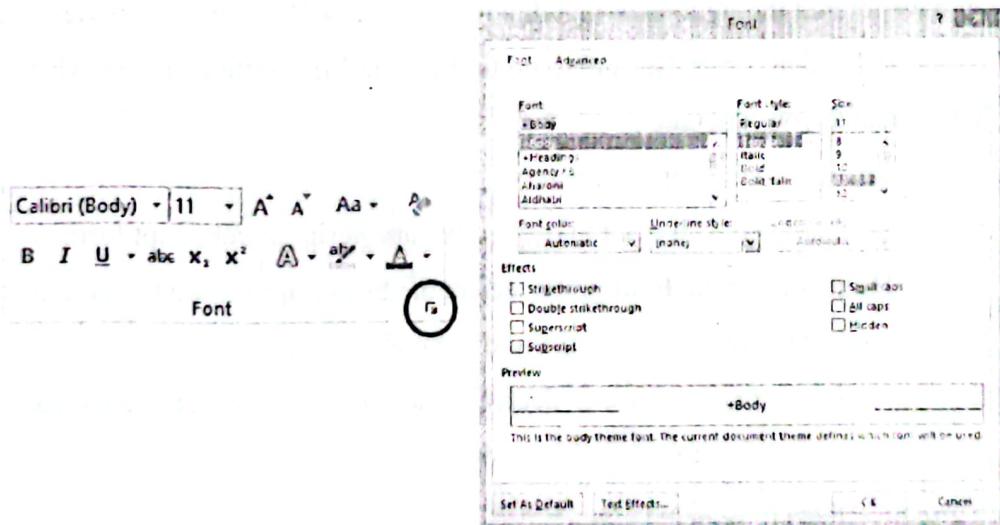
Formatting means changing the way your document looks. Documents contain text that conveys information to readers, but the appearance of the document content also conveys a message. Formats can be applied to any text within your document. The formatting styles are the most common way to change the appearance of text in a document. You can provide structure and meaning by formatting the text in various ways. Microsoft Word 2019 provides a

variety of simple-to-use tools that you can use to apply sophisticated formatting and create a navigational structure.

Changing the Font

Font is the text type. Word allows text to be edited by font style, size, and color. To change the font:

- i. Select the text you want to apply changes to the font
- ii. Click the dropdown arrow next to the **Font Name** box in the **Home** tab to select a different font style.
- iii. Click the dropdown arrow next to the **Font Size** box in the **Home** tab to select a different font size.
- iv. Click the dropdown arrow next to the **Font Color** icon in the **Home** tab to select a different color. OR
- v. Click the arrow in the lower right corner of the **Font** section of the **Home** tab for a dialog box launcher that will allow you to make all of the changes at the same time



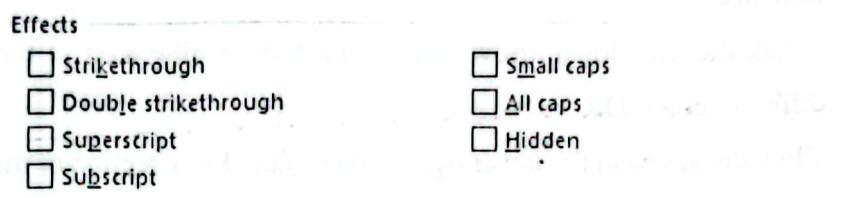
- vi. To increase the font size in set increments, select the **Increase Font Size** button or press **Ctrl + >**.
- vii. To decrease the font size in set increments, select the **Decrease Font Size** button or press **Ctrl + <**.

You can also use the **Mini Toolbar** to change the font of your document. The Mini Toolbar is activated when you select text to be formatted. This toolbar is miniature and semi-transparent to help you work with fonts, font styles, font sizing, alignment, text color, indent levels, and bullet features.

Often times a database will have more than one table. For example, one table might contain information about each individual customer and another table might hold information about which items they ordered.

Some character formats are not available through the toolbar icons. You will have to use the **Font** dialog box to access them:

- ✓ Select the text you want to format.
- ✓ Go to **Home | Font**, then click on the attributes below the **Effects** heading that you would like to add to the selected text:



Once you have altered the options in this dialog box, you will be able to preview the changes at the bottom of the dialog box. Be sure to go to the underlined options to see what options are available to enhance your document.

To display superscript or subscript characters:

- ✓ Select the characters you want to display in superscript or subscript form.
- ✓ On the **Home** tab, in the **Font** group, select the **Subscript** button to decrease the size of the selected characters and shift them to the bottom of the line.
- ✓ Select the **Superscript** button to decrease the size of the selected characters and shift them to the top of the line.

To apply artistic effects to selected text:

- ✓ On the Home tab, in the Font group, select the Text Effects and Typography button
- ✓ In the Text Effects and Typography gallery, select the preformatted effect combination that you want to apply.
- ✓ On the Text Effects and Typography menu, select Outline, Shadow, Reflection, Glow, Number Styles, Ligatures, or Stylistic Sets.
- ✓ Then make selections on the submenus to apply and modify those effects.

Bolding, Underlining or Italicizing Text

- ▶ Click the **Bold**, **Italics**, or **Underline** icons on the **Home** tab and begin typing. OR
- ▶ Select the text and click on the **Bold**, **Italics**, or **Underline** icons **B I U**.

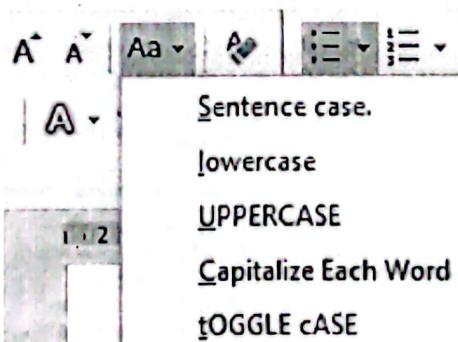
To format selected text as bold, italic, or underlined

- ▶ On the Mini Toolbar, select the Bold, Italic, or Underline button.
- ▶ On the Home tab, in the Font group, select the Bold, Italic, or Underline button.
- ▶ Press **Ctrl + B** to format the text as bold.
- ▶ Press **Ctrl + I** to format the text as italic.
- ▶ Press **Ctrl + U** to underline the text.

Changing Text Case

Microsoft Word specifically provides an icon to change between different text case options. This icon is located under the **Home** tab, to the right of the increase and decrease font size icons:

- i. Select some text or a paragraph.
- ii. From the **Home** tab, select the change case icon:



- iii. Select the case you would like to apply to the selected text or paragraph.
- iv. You can also use a shortcut key to cycle through the change case options. After selecting the text that you want to change to another case type, press the **Shift** key on your keyboard and hold it down while you press the **F3** function key.

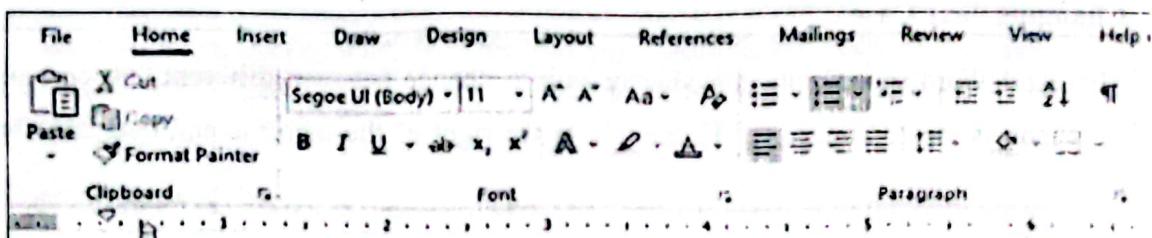
Formatting a Paragraph

A paragraph is a selected group of text that can have its own formatting characteristics, such as alignment, spacing and styles. You create a paragraph by entering text and then pressing the **Enter** key. A paragraph can contain one word, one sentence, or multiple sentences. Every

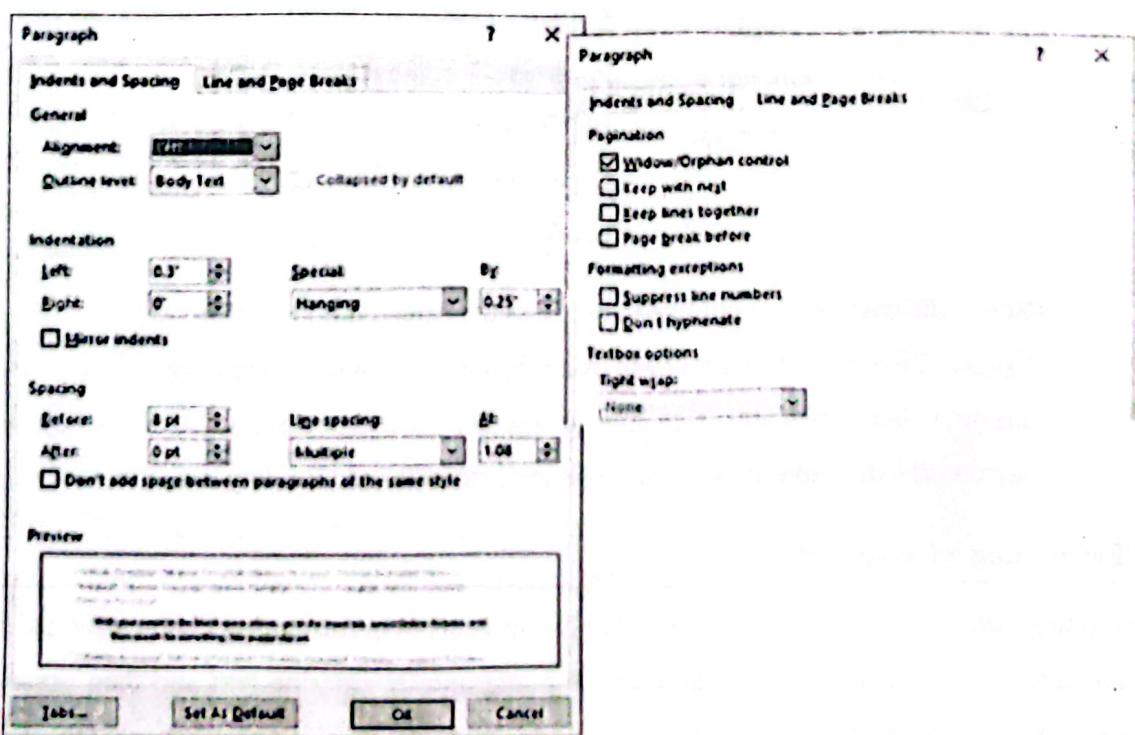
paragraph ends with a paragraph mark, which looks like a backward P (¶). Paragraph marks and other structural characters (such as spaces, line breaks, and tabs) are usually hidden, but you can display them. Sometimes displaying these hidden characters makes it easier to accomplish a task or understand a structural problem.

You can change the look of a paragraph by changing its indentation, alignment, and line spacing, in addition to the space before and after it. You can also put borders around it and shade its background. Collectively, the settings you use to vary the look of a paragraph are called **paragraph formatting**.

You can modify a paragraph's left and right edge alignment and vertical spacing by using tools on the Home tab of the ribbon, and its left and right indents from the Home tab, the Layout tab, or the ruler.

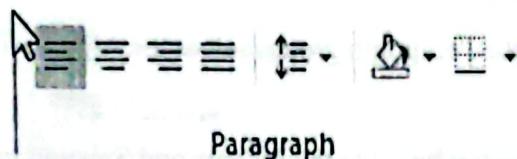


Format the alignment, spacing, and indentation of a paragraph by placing the cursor within the paragraph and clicking on the arrow in the bottom right hand corner of the paragraph group of the **Home** tab to launch the paragraph dialog box:



Text Alignment

The alignment settings control the horizontal position of the paragraph text between the page margins. Microsoft Word 2019 aligns paragraphs four different ways relative to the left and right margins and each type of alignment is located under the **Home** tab on the paragraph group:



- i. **Align Left** - This is the default paragraph alignment. It sets the left end of each line of the paragraph at the left page margin or left indent. It results in a straight left edge and a ragged right edge.
- ii. **Align Right** - This option sets the right end of each line of the paragraph at the right page margin or right indent. It results in a straight right edge and a ragged left edge.
- iii. **Center** - This option centers each line of the paragraph between the left and right page margins or indents. It results in ragged left and right edges.
- iv. **Justify** - This option adjusts the spacing between words so that the left end of each line of the paragraph is at the left page margin or indent, and the right end of each line of the paragraph (other than the last line) is at the right margin or indent. It results in straight left and right edges.

The result of each of the alignment types is demonstrated thus:

Left Alignment: Words are lined up neatly only on the left-hand side	Safest Solutions Group employed Employee Name as a veterinary nurse during 2018. During the year of employ she managed the front office, the delivery of our monthly workshops, our internal newsletter to clients and assisted me during consultations.
Right Alignment: Words are lined up neatly only on the right-hand	Employee Name is an intelligent and very motivated individual with a definite love for her furpets. She is more than capable of managing all administrative duties independently and also managed two other interns who joined our surgery for six months.
Center Alignment: Words centred between the two-page margins	Her delivery skills as a workshop coordinator are superior and she has excellent command of the English language with an added bonus of a little conversational Italian and Spanish. She is an intelligent and motivated individual. She produced a high-quality newsletter every two weeks and never missed a single deadline. Employee
Justify: Words line up neatly on the left- and right-hand side margin	Name's computational skills are top class with knowledge of all veterinary software and I can adapt to any version updates. Her knowledge of Excel, Word, and PowerPoint is at an advanced level and she also managed her Outlook calendar, tasks and contact information with meticulousness.

The justify option is very useful when you want to create professional documents to meet any legal formatting requirements.

To set paragraph alignment:

Position the cursor anywhere in the paragraph, or select all the paragraphs you want to adjust.

Then do either of the following:

- ¾ On the Home tab, in the Paragraph group, select the Align Left, Center, Align Right, or Justify button.
- ¾ Open the Paragraph dialog box. On the Indents and Spacing tab, in the General area, select Left, Centered, Right, or Justified in the Alignment list.

Configuring Vertical Spacing

Paragraphs have two types of vertical spacing:

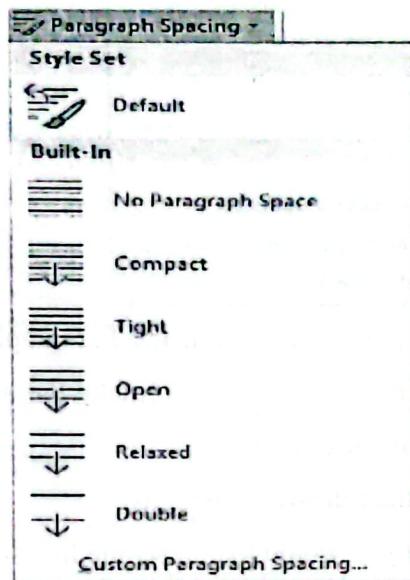
- i. **Paragraph Spacing** This is the space between paragraphs, defined by setting the space before and after each paragraph. This space is usually measured in points.
- ii. **Line Spacing** This is the space between the lines within a paragraph, defined by setting the height of the lines either in relation to the height of the text (single, double, or a specific number of lines) or by specifying a minimum or exact point measurement. The default line spacing for documents created in Word 2019 is 1.08 lines. Changing the line spacing alters the appearance and readability of the text in the paragraph and the amount of space it occupies on the page.

The following table describes the effect of each Paragraph Spacing option on the paragraph and line spacing settings:

Paragraph Spacing Option	Before Paragraph	After Paragraph	Line Spacing
Default	Controlled by Style Set	Controlled by Style Set	Controlled by Style Set
No Paragraph Spacing	0 Points	0 Points	1 Line
Compact	0 Points	4 Points	1 Line
Tight	0 Points	6 Points	1.15 Lines
Open	0 Points	10 Points	1.15 Lines
Relaxed	0 Points	6 Points	1.5 Lines
Double	0 Points	8 Points	2 Lines

To quickly adjust the vertical spacing before, after, and within all paragraphs in a document :

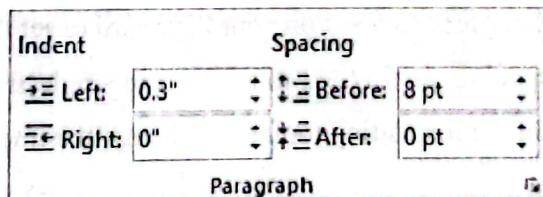
- i. On the Design tab, in the Document Formatting group, select Paragraph Spacing to display the Paragraph Spacing menu:



- ii. Select the option you want to apply to all the paragraphs in the document

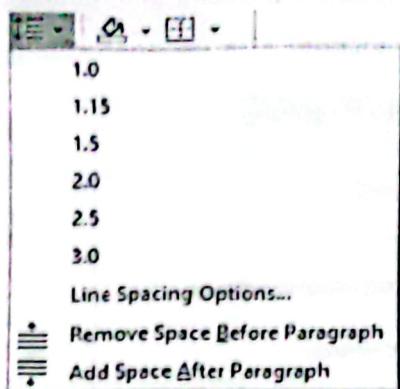
To adjust the spacing between paragraphs:

- ✓ Select all the paragraphs you want to adjust.
- ✓ On the Layout tab, in the Paragraph group, adjust the Spacing Before and Spacing After settings.



To adjust spacing between the lines of paragraphs:

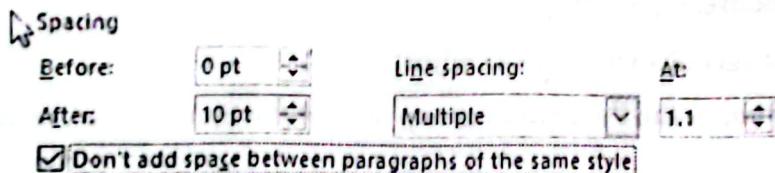
- Position the cursor anywhere in the paragraph, or select all the paragraphs you want to adjust.
- To make a quick adjustment to the selected paragraphs, on the Home tab, in the Paragraph group, select the Line and Paragraph Spacing button, and then select any of the line spacing commands on the menu.



- To make a more-specific adjustment, open the Paragraph dialog box. Then, on the Indents and Spacing tab, in the Spacing area, make the adjustments you want to the paragraph spacing, and then click on OK.

To set the line spacing, try one of the following methods:

- Click on the paragraph that you would like to set the line spacing for
- Click on the Paragraph dialog launcher to the right of the Paragraph group
- Locate the Line Spacing drop-down list to select the desired spacing:



Alternatively, you can either press **Ctrl + 5** on your keyboard to set the line spacing to 1.5 lines, **Ctrl + 2** for double-line spacing, or **Ctrl + 1** to return it to single-line spacing. You could also use the line spacing icon in the formatting toolbar to change the line spacing.

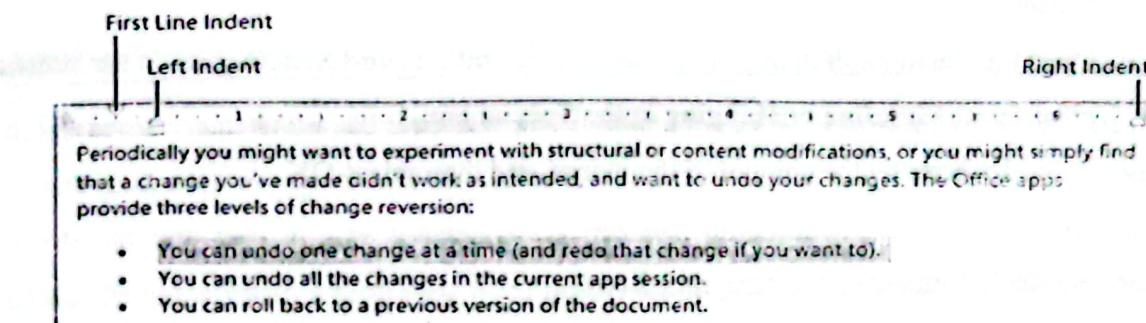
Indenting Paragraphs

In Microsoft Word, you do not define the width of paragraphs and the length of pages by defining the area occupied by the text. Instead, you define the size of the white space (the left, right, top, and bottom margins) around the text.

Although the left and right margins are set for a whole document or for a section of a document, you can vary the position of a paragraph between the margins by indenting the left or right edge of the paragraph.

A paragraph indent is the space from the page margin to the text. You can change the left indent by selecting buttons on the Home tab, or you can set the indents directly on the ruler. Three indent markers are always present on the ruler:

- ✓ **Left Indent** This defines the outermost left edge of each line of the paragraph.
- ✓ **Right Indent** This defines the outermost right edge of each line of the paragraph.
- ✓ **First Line Indent** This defines the starting point of the first line of the paragraph.



The ruler indicates the space between the left and right page margins in a lighter color than the space outside of the page margins.

The default setting for the Left Indent and First Line Indent markers is 0.0", which aligns with the left page margin. The default setting for the Right Indent marker is the distance from the left margin to the right margin. For example, if the page size is set to 8.5 inches wide and the left and right margins are set to 1.0 inch, the default Right Indent marker is at 6.5 inches.

You can arrange the Left Indent and First Line Indent markers to create a hanging indent or a first line indent. Hanging indents are most commonly used for bulleted and numbered lists, in which the bullet or number is indented less than the main text (essentially, it is *outdented*). First line indents are frequently used to distinguish the beginning of each subsequent paragraph in documents that consist of many consecutive paragraphs of text. Both types of indents are set by using the First Line Indent marker on the ruler.

To display the ruler:

- 9 On the View tab, in the Show group, select the **Ruler** check box.

To indent or outdent the left edge of a paragraph:

- i. Position the cursor anywhere in the paragraph or select all the paragraphs you want to adjust.
- ii. On the Home tab, in the Paragraph group, select the **Increase Indent** or **Decrease Indent** button to move the left edge of the paragraph in 0.25-inch increments.
- iii. Open the **Paragraph** dialog box. Then, on the **Indents and Spacing** tab, in the **Indentation** area, set the indent in the **Left** box, and then select **OK**.
- iv. On the ruler, drag the **Left Indent** marker to the ruler measurement at which you want to position the left edge of the body of the paragraph

To create a hanging indent or first line indent:

- ✓ Position the cursor anywhere in the paragraph or select all the paragraphs you want to adjust.
- ✓ Open the **Paragraph** dialog box. Then, on the **Indents and Spacing** tab, in the **Indents** area, select **First line** or **Hanging** in the **Special** box.
- ✓ In the **By** box, set the amount of the indent, and then select **OK**.

Or

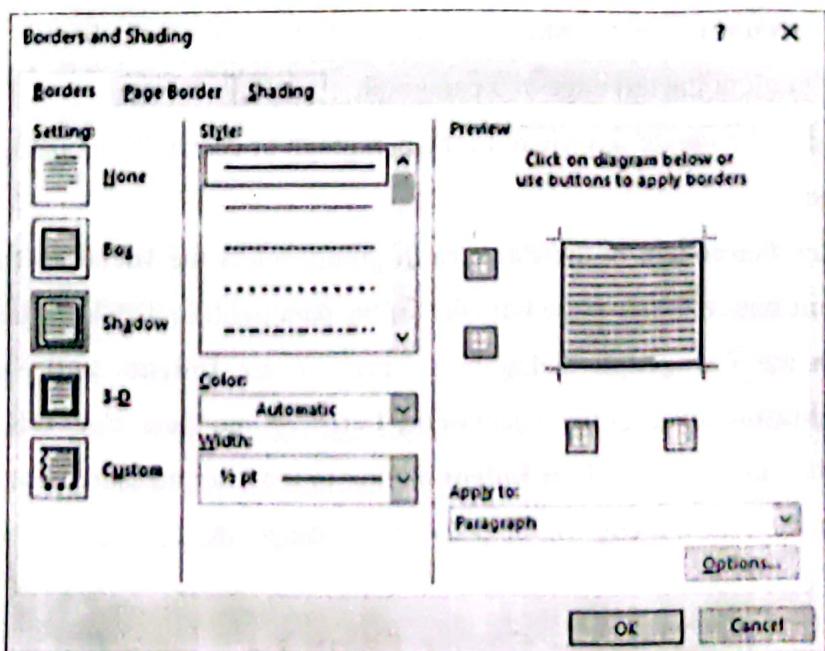
- ✓ Set the left indent of the paragraph body.
- ✓ On the ruler, drag the **First Line Indent** marker to the ruler measurement at which you want to begin the first line of the paragraph.

To indent or outdent the right edge of a paragraph:

- ✓ Position the cursor anywhere in the paragraph or select all the paragraphs you want to adjust.
- ✓ On the ruler, drag the **Right Indent** marker to the ruler measurement at which you want to set the maximum right edge of the paragraph.
- ✓ Open the **Paragraph** dialog box and on the **Indents and Spacing** tab, in the **Indentation** area, set the right indent in the **Right** box, and then click **OK**.

Paragraph Borders and Shading

To make a paragraph really stand out, you might want to put a border around it or shade its background. You can select a predefined border from the Borders menu or design a custom border in the Borders and Shading dialog box.



After you have selected the style, color, width, and location of the border, you can select options to specify its distance from the text.

Applying Drop Cap

Many books, magazines, and reports begin the first paragraph of a section or chapter by using an enlarged, decorative capital letter, called a dropped capital, or simply a drop cap. This effect can be an easy way to give a document a finished, professional look. When you format a paragraph to start with a drop cap, Word inserts the first letter of the paragraph in a text box and formats its height and font in accordance with the Drop Cap options. By default, a drop-cap letter is the height of three lines of text as illustrated below:

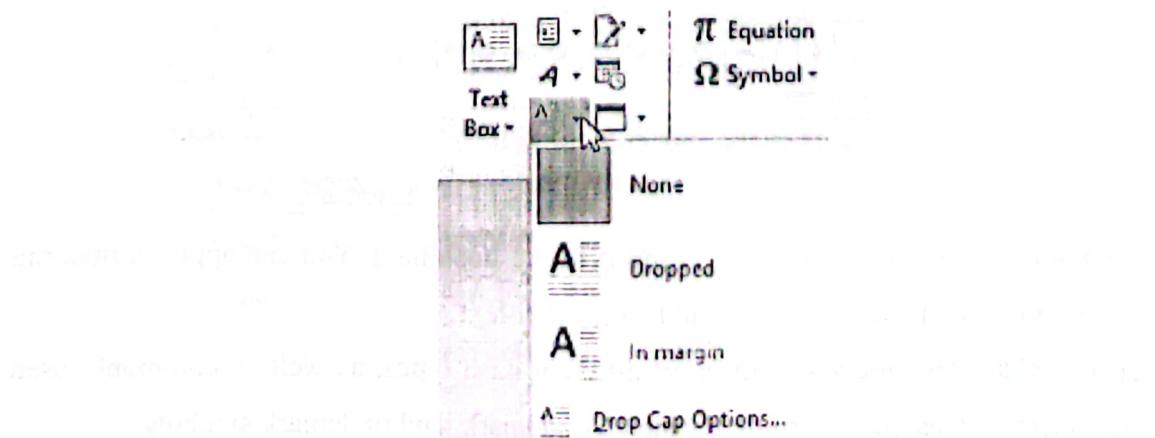
With the Room Planner, you'll never make a design mistake again. Created by acclaimed interior designers to simplify the redecorating process, this planning tool incorporates elements of color, dimension, and style to guide your project. It includes a furniture location guide; room grid; drawing tools; and miniature furniture, rugs, accessories, and color swatches that match our large in-store selection. Here's how to use the planner to create the room of your dreams!

Microsoft Word 2019 has two basic drop-cap styles:

- Dropped:** The letter is embedded in the original paragraph.
- In margin:** The letter occupies its own column, and the remaining paragraph text is moved to the right.

To format the first letter of a paragraph as a drop cap:

- ✓ Click anywhere in the paragraph.
- ✓ On the **Insert** tab, in the **Text** group, select the **Add a Drop Cap** button and then select the drop-cap style you want to apply



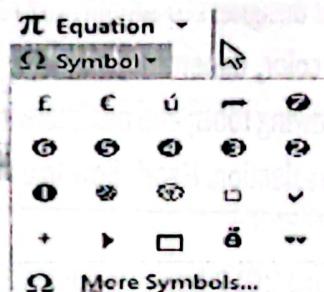
To change the font, height, or distance between the drop cap and the paragraph text, select Drop Cap Options on the Drop Cap menu, and then select the options you want in the Drop Cap dialog box.

If you want to apply the drop-cap format to more than the first letter of the paragraph, add the drop cap to the paragraph, click to the right of the letter in the text box, and enter the rest of the word or text that you want to make stand out. If you do this, don't forget to delete the word from the beginning of the paragraph.

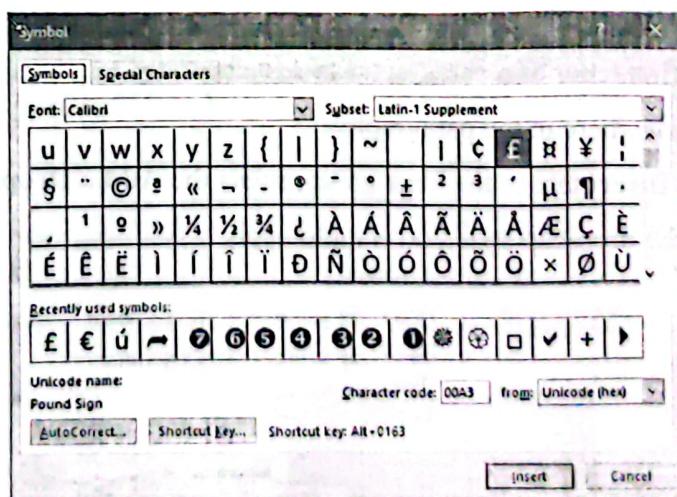
Inserting Special Characters and Symbols

To insert any special character or symbol, follow these steps:

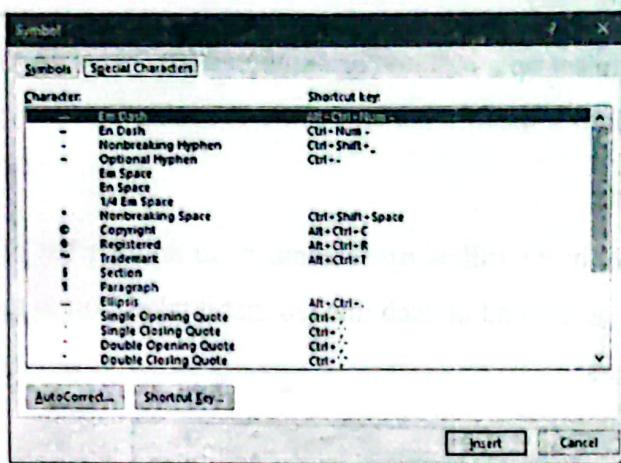
- i. Click at the end of a word or anywhere in a document where you need to place a symbol.
- ii. Click on the **Insert** tab, locate the **Symbol** group at the end of the **Insert** ribbon, then click on the drop-down arrow next to **Symbol**:



- iii. Your recently used symbols are listed in this list. To access more symbols, click on **More Symbols...** to populate the dialog box with a range of symbols:



- iv. Click on a symbol that you wish to insert to the document. You can apply formatting options to symbols just as you would to any other text.
- v. Special characters allow you to insert different dash types, as well as commonly used characters such as the copyright, registered trademark, and trademark symbols:



You can also use your keyboard to insert symbols to a Word document:

- 9 To insert the copyright symbol, type (c) and you will get the © symbol.
 - 9 To insert the trademark symbol, type (tm) and you will get the ™ symbol.
 - 9 To insert the registered trademark, type (r) and you will get the ® symbol

CREATING AND MODIFYING LISTS

Lists are paragraphs that start with a character, usually a number or bullet, and are formatted with a hanging indent so the character stands out on the left end of each list item. Fortunately, Microsoft Word takes care of the formatting of lists for you. You simply indicate the type of list you want to create.

When the order of items is not important, for example, a list of people or supplies, a bulleted list is the best choice. When the order is important, for example, the steps in a procedure, you should create a numbered list.

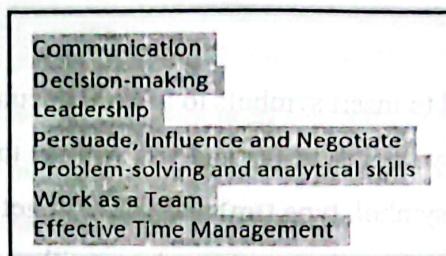
You can format an existing set of paragraphs as a list or create the list as you enter text into the document. After you create a list, you can modify, format, and customize the list as follows:

- ¾ You can move items around in a list, insert new items, or delete unwanted items. If the list is numbered, Word automatically updates the numbers.
 - ¾ You can modify the indentation of the list. You can change both the overall indentation of the list and the relationship of the first line to the other lines.
 - ¾ For a bulleted list, you can sort list items alphabetically in ascending or descending order, change the bullet symbol, or define a custom bullet (even a picture bullet).
 - ¾ For a numbered list, you can change the number style to use different punctuation, roman numerals, or letters, or define a custom style, and you can specify the starting number.

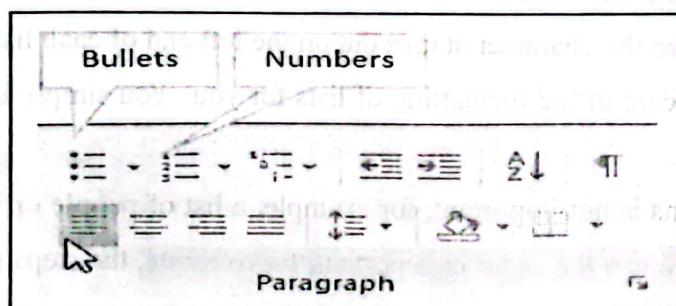
Constructing a List Manually

There are various ways to set up a bulleted or numbered list, either by typing the text first and then converting the list into a specific list type or by choosing the list type first and then begin typing:

- i. Type the list shown in the following screenshot (or another list of your choice), making sure to press *Enter* at the end of each line (so that it takes you to the next line). Select the typed list, as follows:



- ii. Choose the type of list to apply to the text by selecting the relevant icon from the **Paragraph group**, located on the **Home** tab, as illustrated in the following screenshot:

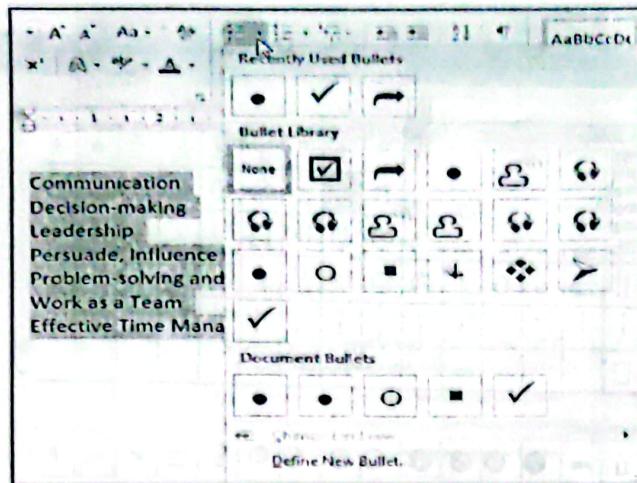


- iii. Once you have finished typing a numbered or bulleted list and would like to continue typing normally, just press the *Enter* key twice on the keyboard, and the numbering will discontinue.

Modifying a Bulleted or Numbered List

It is possible to customize a list by selecting different bullet styles and number sequences, and even adjusting list font types and sizes, by doing the following:

- i. Select the typed list or position the mouse pointer onto the document.
- ii. Right-click with the mouse pointer over the selected list and choose the bulleted or numbered icon from the mini toolbar or navigate to the ribbon to locate either the bulleted or numbered icon from the **Paragraph group**, as illustrated in the following screenshot:

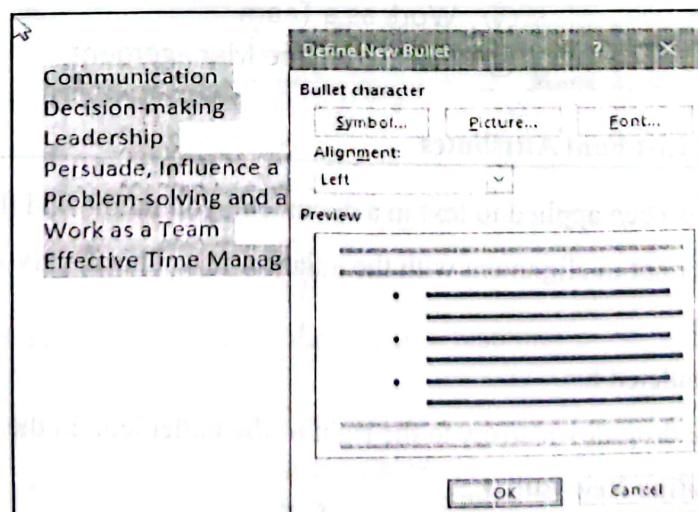


- iii. Depending on the type of list you would like to create, select the tiny arrow to the right of the relevant icon to access the options available.
- iv. You can choose a bulleted or numbered list from the recently used list, the library, or the bullets used throughout the current document, or you can define a completely new bulleted or numbered list.

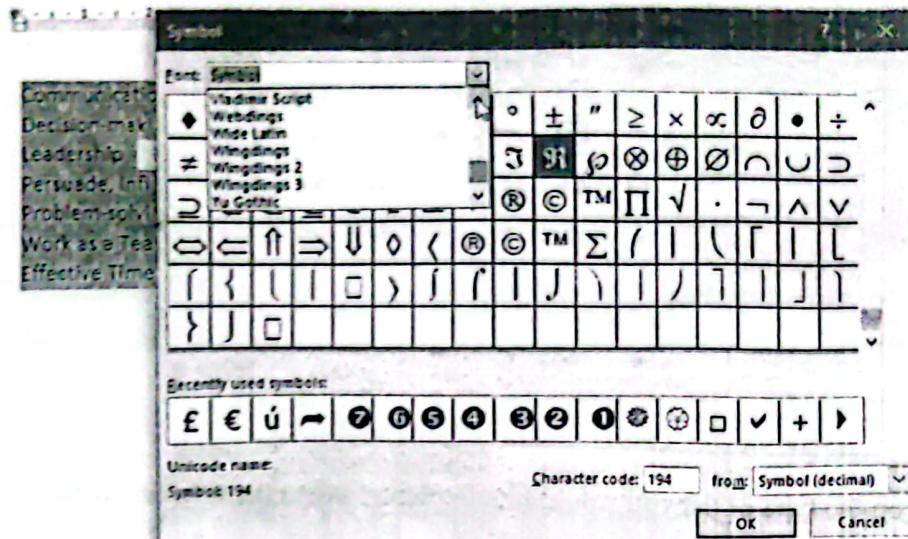
Defining a New Bullet Symbol

The appearance of a bullet can be changed as follows:

- i. At the bottom of the bullet drop-down list, select **Define New Bullet...**.
- ii. In the **Define New Bullet** dialog box, select the **Symbol...** button under the **Bullet character** heading. This is illustrated below:



- iii. Scroll through the **Font** drop-down list to select a font face as shown:



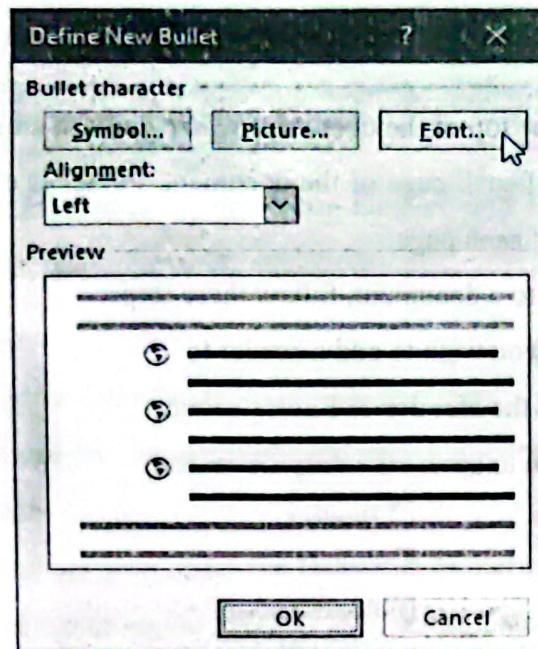
- iv. Browse the symbols, and choose an appropriate symbol to insert as your bulleted list icon.
- v. Click on the **OK** button to commit the changes, and return to the Define New Bullet dialog box.
- vi. Click on the **OK** button again to apply the selection to the bulleted list, which should then look like this:

- Communication
- Decision-making
- Leadership
- Persuade, Influence and Negotiate
- Problem-solving and analytical skills
- Work as a Team
- Effective Time Management

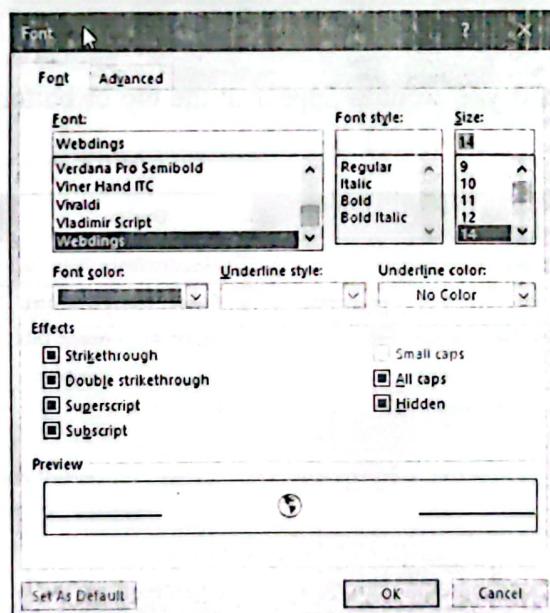
Editing Bulleted List Font Attributes

After a symbol has been applied to text in a document, you might find that the symbol is too small to be seen or not in alignment with the adjacent text. This is very easy to adjust using the font attributes:

- i. Select the bulleted list.
- ii. Click on the drop-down arrow to the right of the bullet icon in the Home tab.
- iii. Click on **Define New Bullet...**.
- iv. Click on the **Font...** button, as illustrated in the following screenshot:



- v. Use the **Font** dialog box to alter the font color, size, and other attributes to suit your bulleted list.



- vi. Click on the **OK** button to commit the changes, resulting in the following bulleted list:

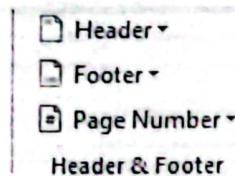
- ⌚ Communication
- ⌚ Decision-making
- ⌚ Leadership
- ⌚ Persuade, Influence and Negotiate
- ⌚ Problem-solving and analytical skills
- ⌚ Work as a Team
- ⌚ Effective Time Management

Headers and Footers

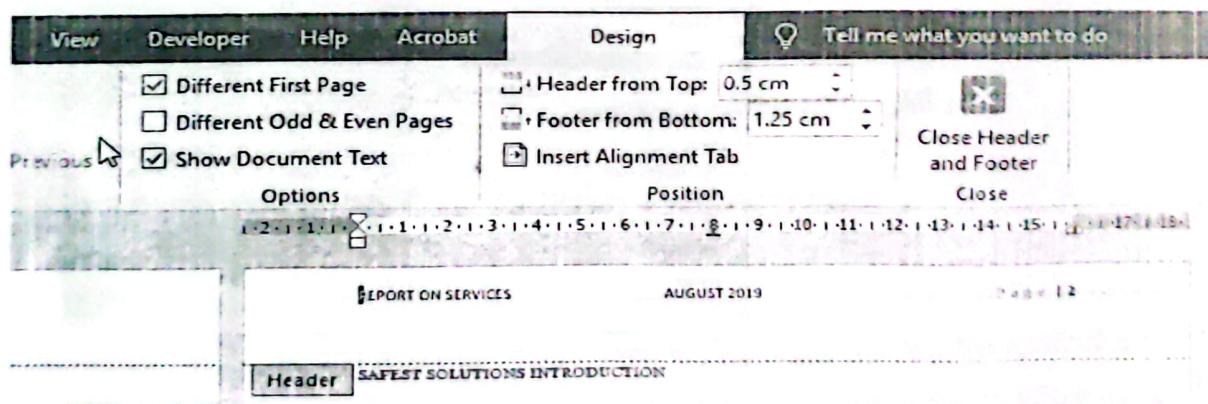
A page header is an area at the top of the document where you can add text, page numbers, or logos that repeat at the top of each page of the document. Footer is exactly the same, except that it resides at the bottom of each page.

To insert a header and footer to a document, follow these steps:

- a. Open the document that you wish to add a header to
- b. On the **Insert** tab, locate the **Header & Footer** group.
- c. Click on the **Header** icon to access the drop-down list:



- d. Choose a *built-in style* to suit your document.
- e. Notice that the list contains different types of headers and footers such as odd and even page headers and styles.
- f. Type in the text you want to appear at the top or bottom of each page in the placeholder provided



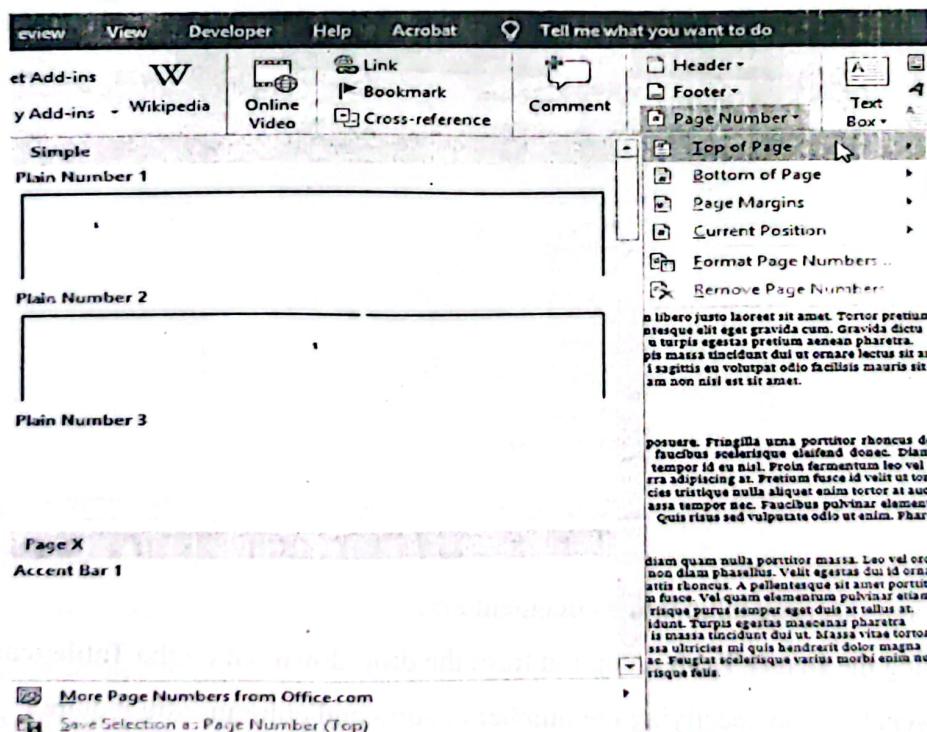
- g. The footer area is also available to edit.
- h. Use the scrollbar to move to the bottom of a page or click the **Go to Footer** icon on the **Design** ribbon.
- i. Using the keyboard, type the text you wish to appear on the left of the footer. If you want to place text in the center or to the right of the page, simply press Tab on your keyboard to get there
- j. Press the Tab key to navigate the center of the footer.
- k. Click on the **Date & Time** icon on the **Header & Footer Tools Design** ribbon.

- i. Select the *date/time format* you require from the dialog box. If you would like the footer date to update automatically each time you open the document, make sure that **Update Automatically** is selected.
- m. To exit your header area, click on the **Close Header and Footer** icon or double-click outside of your header, onto a page in your document

Inserting Page Numbers

The following steps should be followed to insert page numbers:

- i. Open the document that you would like to add page numbers to.
- ii. Click on the Insert tab.
- iii. Choose the Page Number icon under the Header & Footer group (alternatively, double-click in the header or footer region to edit it, then select Page Number from the Header & Footer group):



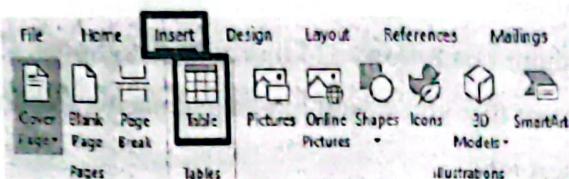
- iv. Choose where you would like to insert the page number (top, bottom, or current position) and choose a style from the drop-down list that appears. The current position is the position of the mouse pointer when you clicked there.
- v. After inserting the page number in the footer, the page number will appear in all the pages of the document.

Inserting Table into a Document

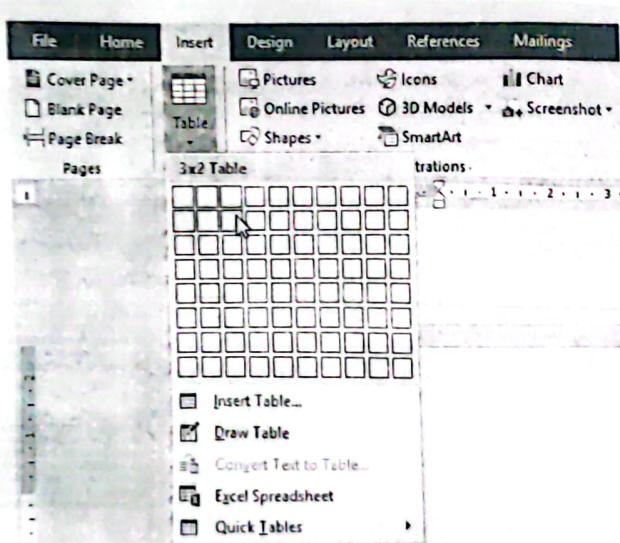
Tables offer a convenient way to display information that might otherwise be confusing and cluttered. Text is neatly formatted in a table without setting tab stops.

To create a table in Microsoft Word, you should follow the steps below:

- i. Click on the **Insert** ribbon and then click on the **Table** button. The Table button is the only option in the **Tables** group.



- ii. The Table panel will appear for you to select the number of columns and rows for your table. In the illustration below, 3 columns and 2 rows are selected by clicking and dragging the mouse pointer over the rows and columns you desire.

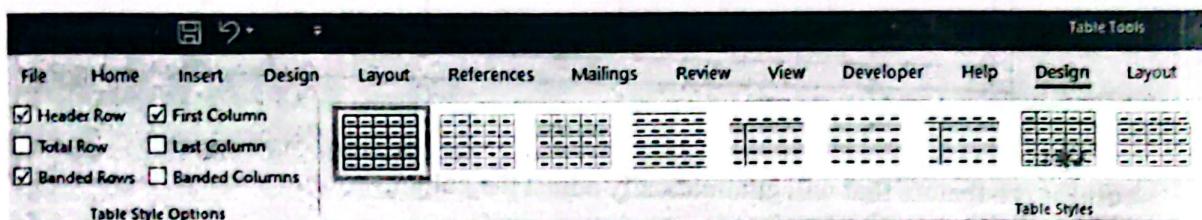


Other ways of inserting table into a document are:

- ✓ Using the **Insert Table...** option from the drop-down list on the **Table** icon from the **Insert** tab, and specifying the number of rows and columns you require.
 - ✓ Using the **Draw Table** option.
 - ✓ Inserting a quick table. A gallery of table formats will appear, from which to choose styles. Thereafter adjusting the content as necessary.
- iii. Type the necessary information into the first cell of the table. That is where the insertion point appears. Use the **Tab** key on the keyboard to move from one cell to the next.

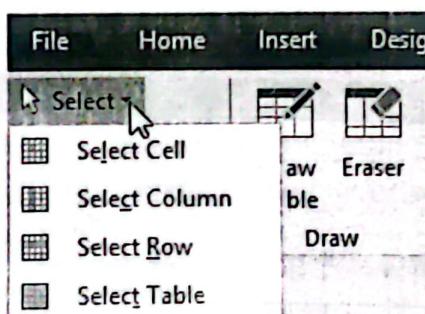
- iv. After typing information in the last cell, press the **Tab** key. Microsoft Word automatically inserts a new blank row

For some formatting and editing tasks, various parts of a table need to be selected. Selecting parts of a table can be done via the **Table Tools Layout** menu which appears when a table is selected as seen in the screenshot below



or can simply be done by just selecting with your mouse following the steps below:

- a. Position the mouse pointer onto the table.
- b. This will activate the **Table Tools** contextual menu.
- c. Click on the **Select** icon located to the extreme left of the ribbon, as illustrated in the following screenshot:



Adjusting Column Width in a Table

Columns in a new table are always of the same width and height. It is often necessary to change the width of one or more columns in the table, so that text or data can be seen. You can easily change the width and height of a table row or column by dragging the lines around the border of the cells. Position the mouse pointer on the column boundary. The mouse pointer appears as a double vertical line with left and right arrows. Depress the mouse and keep it depressed, and drag the line to a new location to resize the row or column. An example of a table containing rows and columns of a different width is shown in the following screenshot:

Staff Member	Amount Paid	Contract	Contribution	Leave Taken
Dunborar, S	35000	Temporary	2%	6.5
Kourkova, A	49000	Full Time	3%	15
Pittner, B	4567	Part Time	2%	12
Barryline, D	120678	Permanent	5%	27

AutoFit is a feature that will automatically adjust the column width to accommodate the widest text entry in the column. To **AutoFit** the entire table, place the mouse pointer at the left most column boundary, when the mouse pointer appears as a double vertical line with left and right arrows, then double click on the left mouse button.

Alternatively, to adjust the column width and height proceed as follows:

- ✓ Select the row/column to resize.
- ✓ Click on the **Layout** tab under the **Table Tools** option and adjust the width and/or height accordingly, as illustrated in the following screenshot:

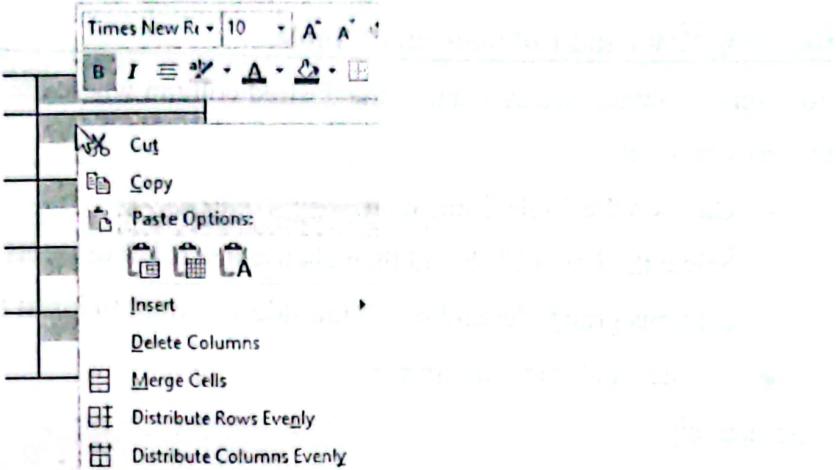
Staff Member	Amount Paid	Cont	Taken	
Dunborar, S	35000	Temporary	2%	6.5
Kourkova, A	49000	Full Time	3%	15
Pittner, B	4567	Part Time	2%	12
Barryline, D	120678	Permanent	5%	27

Merging and Splitting Cells

Often, you need to combine cells together so that you can type some text across a range of cells.

This is called merging. To achieve this, do the following:

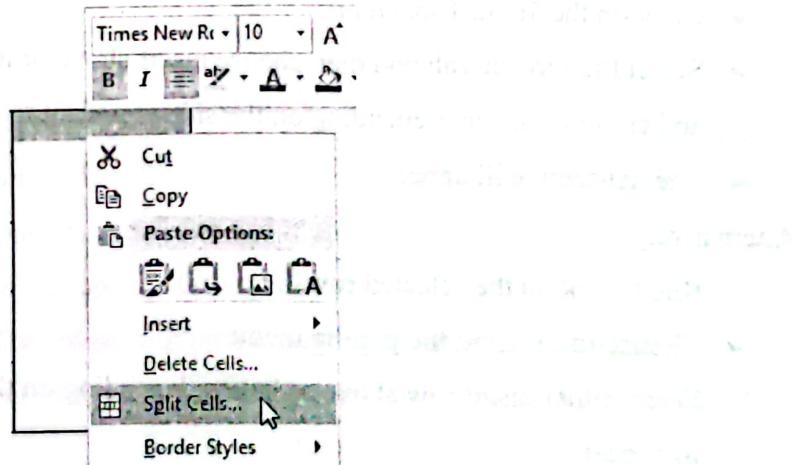
- i. Select (highlight) the cells you would like to merge.
- ii. Right-click with the mouse over the highlighted area.
- iii. Choose **Merge Cells**, as illustrated in the following screenshot



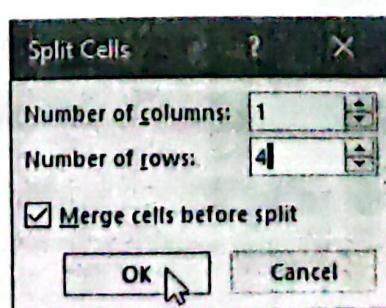
You can also use the **Merge** icon located on the **Table Tools** ribbon

Once you have merged cells, you might want to split them again:

- i. Right-click on the merged cells.
- ii. Choose **Split Cells...** from the shortcut menu provided, as illustrated in the following screenshot:



- iii. Select the number of rows and columns from the dialog box to split the cell into



- iv. Click on OK button to commit the changes and split the cell.

Inserting Rows and Columns into a Table

To insert a column, select a cell in the desired column where the new column will be inserted to the right or left:

- ✓ Click on the Table Tools icon
- ✓ Select the Layout Tab and then choose insert left or insert right, located in the rows and columns group, depending on the side you want to insert the new column.
- ✓ The new column will appear.

Alternatively,

- ✓ Right click on the selected column
- ✓ Choose Insert from the pop-up menu
- ✓ Select either insert column to the right or left depending on the side you want the new column to appear.

To insert a row, select a cell in the desired row where the new row will be inserted to the right or left:

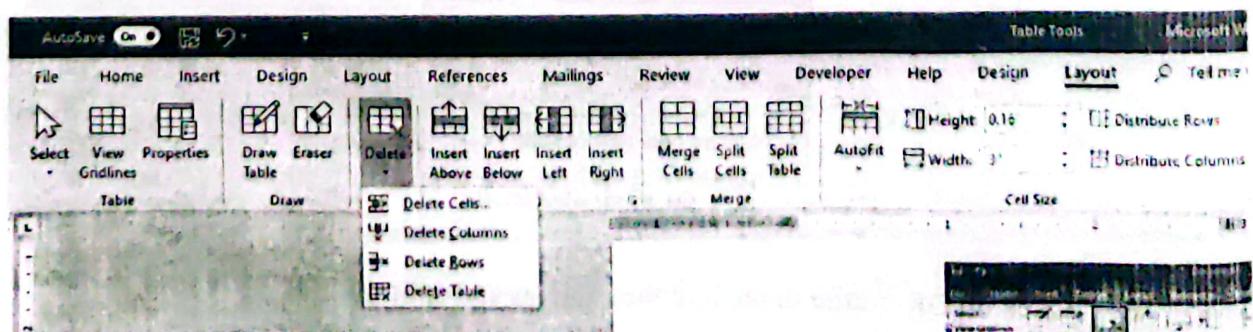
- ✓ Click on the Table Tools icon
- ✓ Select the Layout Tab and then choose insert above or insert below, located in the rows and columns group, depending on the side you want to insert the new row.
- ✓ The new row will appear.

Alternatively,

- ✓ Right click on the selected row
- ✓ Choose Insert from the pop-up menu
- ✓ Select either insert row above or below depending on the side you want the new row to appear

Deleting Rows, Columns, Cells and Tables

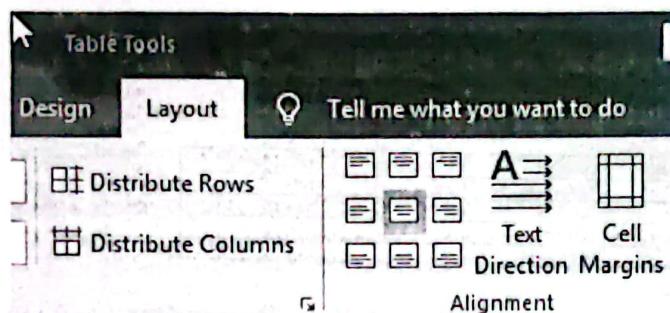
To delete a Cell, Row, Column or Table, select cell/s to be deleted, then on the Table Tools ribbon, click on the Layout tab located in the Row & Columns group, and then click on the Delete button. The delete options will appear for you to select your appropriate action.



Alternatively, you can delete row or column by simply right-clicking on a selected row or column, and choose **Delete** from the shortcut menu.

Aligning Cells in Tables

- i. Aligning cells in tables is fairly straightforward, as illustrated in these steps:
- ii. Use the Layout tab under Table Tools to change the alignment of text within a table.
- iii. Select the area of the table to change the alignment.
- iv. Choose from the list of alignment options available as shown in the screenshot:



Some of the different alignment options are Top Right, Top Left, Bottom Centre, Centre Left, Bottom Right, Centre etc.

Changing Text Direction in Tables

Changing the text direction in a table cell might be the only thing you need to give you more space in a table to fit all the contents across the width of a page. This is done by:

- i. Selecting the cell or cells to change the text direction.
- ii. Clicking on the **Text Direction** icon on the **Layout** tab under **Table Tools**
- iii. Different text direction options are available by clicking the Text Direction icon multiple times.

Applying Borders and Shading

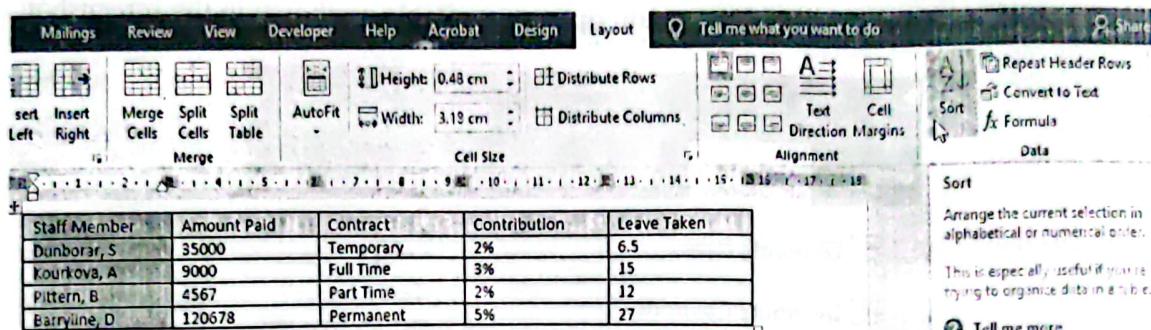
Borders and shading formatting styles can be applied to a table using the following steps:

- i. Select the table.
- ii. Right-click over the highlighted area of the table and choose either **Border Styles** or **Table Properties** to access the options available.
- iii. To select the table styles, shading, border styles, or border options, visit the **Design** tab of the **Table Tools** contextual menu
- iv. Experiment with the options available while the table is selected.

Sorting Tables Content

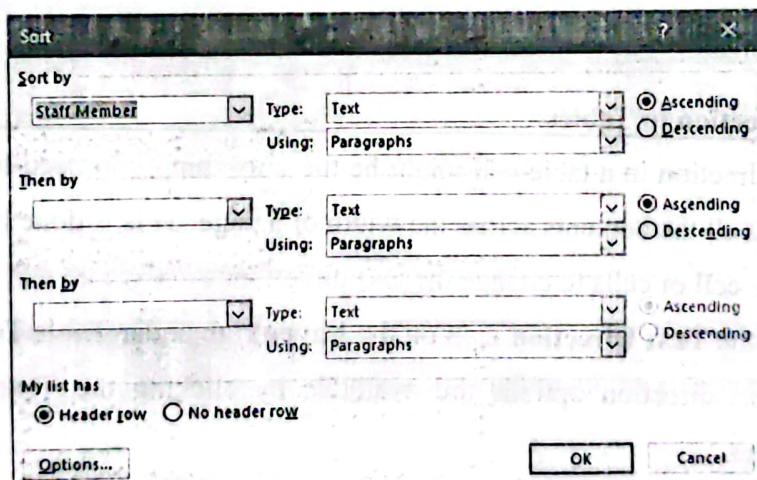
Sorting is used to organize the content of a table in a specific order (ascending, descending, numerical or alphabetical). To sort a particular column in a table, follow these steps:

- i. Select the column you would like to sort
- ii. Click on the Layout tab under Table Tools.
- iii. Choose Sort, as illustrated in the following screenshot



Staff Member	Amount Paid	Contract	Contribution	Leave Taken
Dunborar, S	35000	Temporary	2%	6.5
Kourkova, A	9000	Full Time	3%	15
Pittern, B	4567	Part Time	2%	12
Barryline, D	120678	Permanent	5%	27

- iv. Choose whether to sort Ascending (A-Z) or Descending (Z-A) using the options available



- v. Click on OK

Saving and Closing a New Document

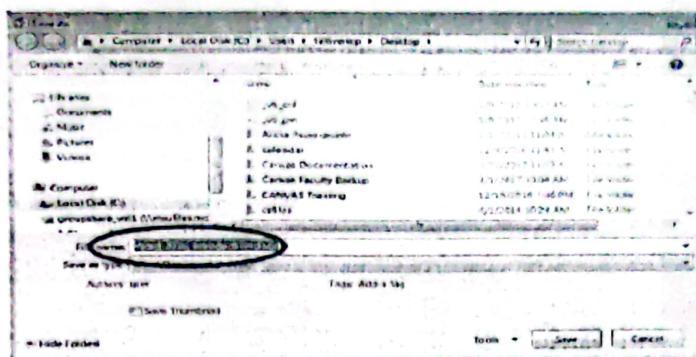
To save a new document:

- i. On the Quick Access Toolbar, click the Save button



OR

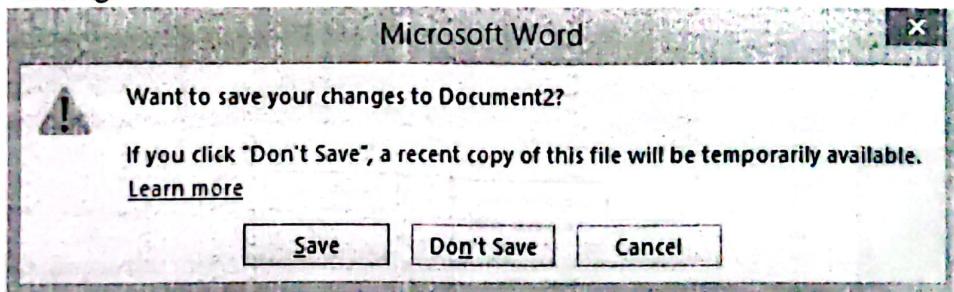
- ii. Click the **File** tab
- iii. Click **Save As**
- iv. Select the location where the document should be saved to The Save As dialog box will appear



- v. In the **File Name** field, type a name for the document
- vi. Click **Save**

To Close a Document:

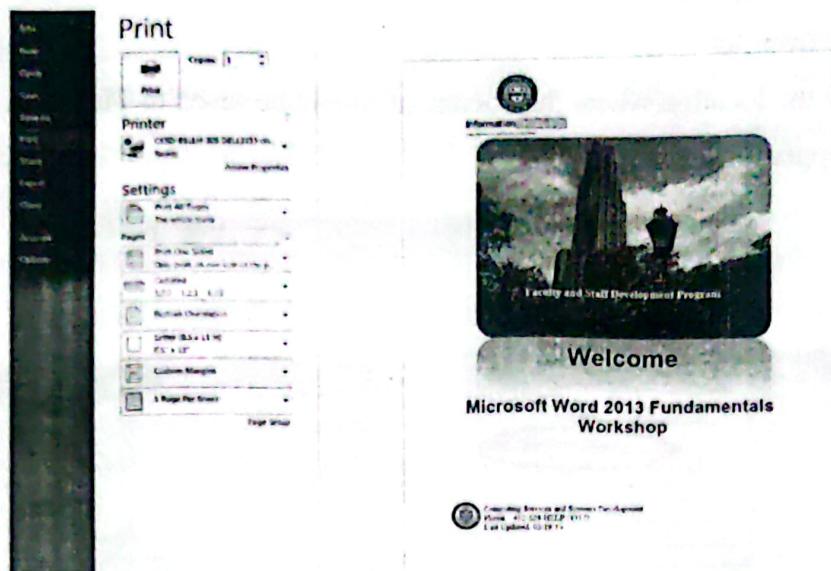
- 1) Click the **File** tab, and then click **Close**
- 2) If a Microsoft Office Word dialog box appears displaying a "*Do you want to save...?*" message:



- 3) Click **Save** to save, **Don't Save** to discard changes, or **Cancel** to close the dialog box.

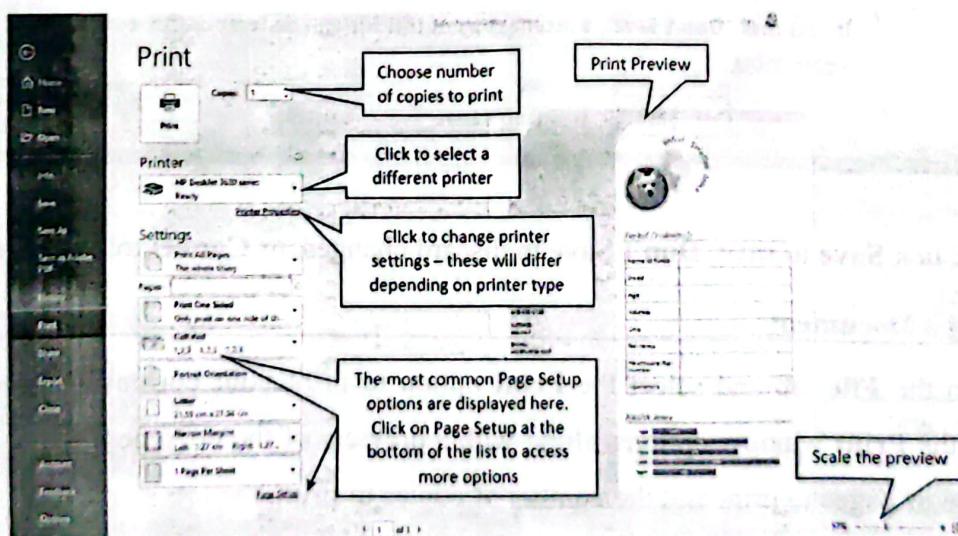
Printing a Document

Click on the **File** tab and select the **Print** option to print your current document. This will display the **Print** window options, along with a preview of the document to the right, such as the range of pages to print and the number of copies to print.



The default printer is the printer that your applications will use unless you specify otherwise. To change printers, click on the drop-down arrow next to **Printer Name**. This will display a list of installed printers and allow you to select another printer.

Before printing a document, you should check the print options in **Print Layout** view to see whether the page layout, margins, and document content looks professional. The screenshot below explains some of the print options:



After selecting the desired options in the print window, you click on the print button  to print your document.

Some Keyboard Shortcuts	
Action	Keystrokes
Create a new document	CTRL+N
Save a document	CTRL+S
Open an existing document	CTRL+O
Print a document	CTRL+P
Close a document	CTRL+W
Select an entire document	CTRL+A
Highlight a Word	Double-click within the word
Highlight a Paragraph	Triple-click within the paragraph
Highlight a Sentence	CTRL + click anywhere within the sentence
Copy text	CTRL+C
Cut text	CTRL+X
Paste text	CTRL+V
Undo	CTRL+Z
Redo	CTRL+Y
Bold	CTRL+B
Italics	CTRL+I
Underline	CTRL+U
Align Left	CTRL+L
Center	CTRL+E
Align Right	CTRL+R
Justify	CTRL+J

EXERCISE ONE

1. Write down the steps you will follow to answer questions a to e in relation to the write up below:

There are different types of computer systems nowadays for different purpose according to the user needs. However we can classify them into different groups based on different aspects. We can find four different type of computers based on size. These are large computers that are most powerful. They can complete tasks very soon and are optimized to complete given tasks quickly. Mainframe Computers. These are the largest computers and can support hundreds of users simultaneously. These are powerful computers and optimized to run maximum number of applications at one time. These are medium sized computers –smaller than mainframe but much larger than personal computers. They can be the best solution for medium scale organizations. Micro Computers. Micro computers are the smallest when size is concerned. They range from Desktop, Laptop up to the palm top and even smaller ones. Because micro computers are developed to support single person, they are often called personal computers (PCs).

- a. Divide the above text into 4 paragraphs and justify the alignment

- b. Drop cap the first letter of the second paragraph

- c. Give the third paragraph 1.5" line spacing

- d. Change the font size of the last paragraph to 17 points

- e. Set up the page layout on landscape and let the margins be 1.05"right and 1.50" left

2. Using the table below, write out the steps to perform questions a – e

Day	Period 1	Period 2	Period 4	Period 5
Sunday	Mathematics	Science	English	Computer
Monday	Science	Computer	Mathematics	English
Tuesday	English	Mathematics	Computer	Science
Wednesday	Computer	Science	Mathematics	English
Friday	Mathematics	Science	English	Computer

- a. Shade the first row of the table

- b. Insert a row below Wednesday and Type Thursday in the first column

- c. Insert Watermark with your name on the on the table

- d. Insert a new column after Period 2 and type Period 3 in the first row

- e. Change the table font to Tahoma with size 14"

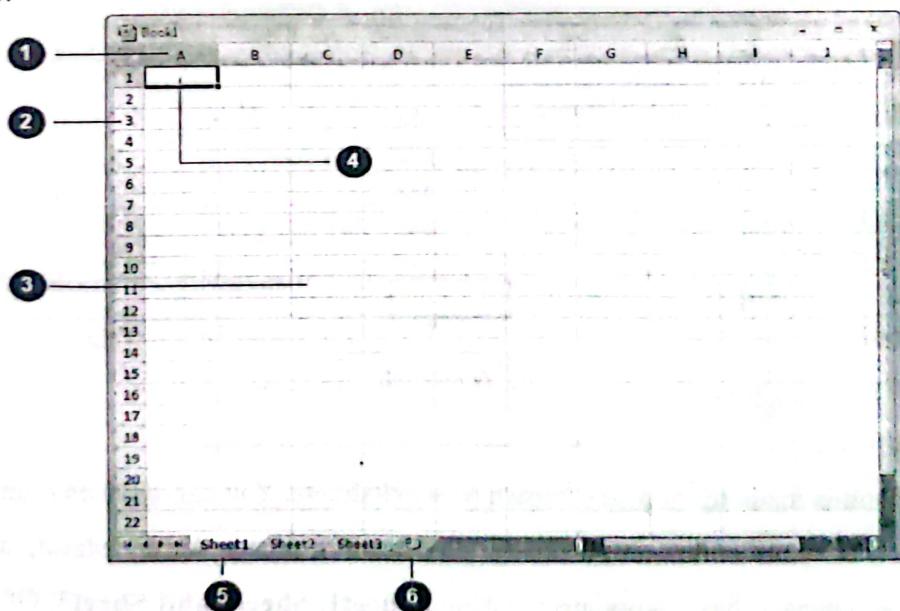
MODULE 2: MICROSOFT EXCEL

Microsoft Excel is a powerful electronic spreadsheet program you can use to automate accounting work, organize data, and perform a wide variety of tasks. Other types of spreadsheets are Calc from OpenOffice, and Sheets from Google Docs. Excel is designed to perform calculations, analyze information, and visualize data in a spreadsheet. You can process, summarize, sort, extract, analyze, and store information using a spreadsheet.

Understanding Workbooks and Worksheets

Another name for an Excel document is a **workbook**. In Microsoft Excel the data you enter, whether it consists of numbers, text, or formulas, is stored in a file known as a workbook. A workbook consists of a number of **sheets**, called **worksheets**, which have been ruled into columns and rows. The default number of worksheets visible when you open Excel is 1 (Sheet1). You can add a new sheet at any time or set the default option to display more sheets upon opening each workbook. Another name for a worksheet is a spreadsheet.

Before using Excel it is good to know what the various parts and elements that make up a workbook are:



- 1) A **worksheet** contains 16,384 **columns** that are labeled using letters of the alphabet. The first column in a **worksheet** is labeled **A**, while the last is labeled **XFD**
- 2) A **worksheet** contains 1,048,576 **rows** that are labeled using numbers from 1 to 1,048,576.
- 3) A **cell** is a position on the **worksheet** where a **column** and **row** intersect. Data are entered into the **cells**. Cells are referred to by their **column** and **row** labels. For example, in the

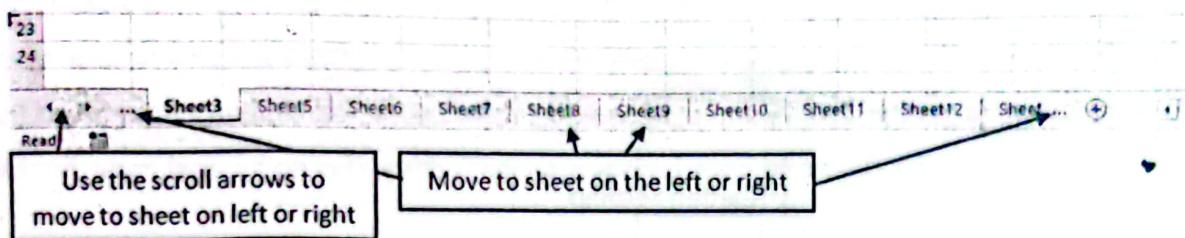
screen above the cell we are pointing to is **C1** – this reference is known as the **cell address** and is most important as it is frequently used in commands and formulas.

- 4) When you start typing something, you want it to appear somewhere in the worksheet. As a consequence when the Status Bar shows **Ready** mode, at least one cell in the worksheet will be highlighted – this is known as the **active cell**. An active cell contains a thick border. The border indicates the place on the worksheet where the mouse pointer currently resides and is ready for data input. Texts are aligned to the left, and values are aligned to the right when entered. In the screen above, the active cell is cell **A1** – notice that the column label and the row label also appears coloured to indicate the active cell. You can have more than one active cell – when this occurs you have what is known as a **range**. Once data is typed into a cell, press the **Enter** key on the keyboard to confirm the entry, and the cursor will move down one cell. Alternatively, click on another cell using the mouse pointer, directly after typing the data, or press an arrow key on the keyboard to move the cursor, as illustrated in this screenshot:

The screenshot shows a Microsoft Excel spreadsheet with a grid of cells from A1 to F10. Cell C7 is highlighted with a thick black border, indicating it is the active cell. A callout box labeled "Active Cell" points to this highlighted cell. The formula bar at the top shows "C7". The status bar at the bottom of the screen displays "Ready".

	A	B	C	D	E	F
1						
2		Cell Reference		55		
3				678		
4				432		
5				345		
6				44		
7						
8						
9						
10						

- 5) A workbook is made up of pages known as **worksheets**. You can have as many sheets in a workbook as your computer resources can accommodate. As a default, a new blank workbook normally has 3 worksheets labeled **Sheet1**, **Sheet2** and **Sheet3**. Of course these labels are pretty boring and meaningless and can be changed to something more relevant. To move from sheet to sheet, you would either use the sheet tab scrolls, click on the sheet tabs individually, use the ... navigation icon to move to the right or left one sheet at a time, or right-click over the sheet tab scrolls and select the sheet name to navigate to, as illustrated in the screenshot below:



- 6) The **Insert Worksheet** button here will insert another worksheet into the current workbook should you need it

Navigating Around a Spreadsheet

The following table provides various methods to navigate around a spreadsheet.

Action	Description
Mouse Pointer	Use the mouse pointer to select a cell.
Scroll Bars	Use the horizontal and vertical scroll bars to move around the spreadsheet to view columns and rows not currently visible. Click the mouse pointer once the desired cell is visible.
Arrow Keys	Use the left, right, up and down arrows to move accordingly among cells
Enter	Press the Enter key to move down one cell at a time.
Tab	Press the Tab key to move one cell to the right.
Ctrl + Home	Moves the cursor to cell A1.
Ctrl + End	Moves the cursor to the last cell of used space on the worksheet, which is the cell at the intersection of the right-most used column and the bottom-most used row (in the lower-right corner).
Ctrl + Arrow Key	Moves the cursor to the next or last cell in the current column or row which contains information.

Entering Data into a Worksheet

To input data into Excel, simply click on a cell and start typing. When you are done, press the Enter key on the keyboard. Generally when you start a new spreadsheet project, the first task is to enter some headings into rows and columns. To type anything into a worksheet you need to make the cell into which you wish to enter the data active:

Illustration: Before you begin ensure you have a blank workbook on your screen

- i. Click in cell A3 to make this the active cell, type **Garden Settings** and press the Enter Key.

	A	B	C	D
1				
2				
3	Garden Settings			
4				
5				
6				
7				

- ii. Type Pool Covers in the next Active Cell and press the Enter Key

	A	B	C	D
1				
2				
3	Garden Settings			
4	Pool Covers			
5				
6				
7				
8				
9				

- iii. Enter Fountains, Large Tubs and Fencing in cells A5, A6 and A7 respectively.

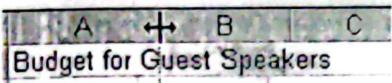
	A	B	C	D	E
1					
2					
3	Garden Settings				
4	Pool Covers				
5	Fountains				
6	Large Tubs				
7	Fencing				
8					
9					

- iv. Enter UK in cell B2 and press the Tab Key. The pointer moves to cell C2. Enter AUS, NZ and SPAIN in cells C2, D2 and E2 respectively.

	A	B	C	D	E	F
1						
2		UK	AUS	NZ	SPAIN	
3	Garden Settings					
4	Pool Covers					
5	Fountains					
6	Large Tubs					
7	Fencing					
8						

Adjusting Column Width

At first, all columns have the same width in a spreadsheet. Often you will need to make columns wider or narrower. For example, a long text entry in one cell will be cut off/truncated when the cell to its right contains any information. Likewise, numbers will appear as pound symbols ##### when larger than cell width. There are several ways to modify column width:

Method	Description
Dragging	Move the cursor up to the column heading area and point to the vertical line to the right of the column that you want to adjust. When the cursor becomes a "plus sign" with horizontal arrows, press the mouse button and drag in either direction to resize the column. Release the mouse button to accept the new size. 
Double Click to Auto Fit	Move the cursor up to the column heading area and point to the vertical line to the right of the column that you want to adjust. When the cursor becomes a "plus sign" with horizontal arrows, double click to AutoFit this one column.
AutoFit a Range	Use the mouse to select the range of cells that needs to be adjusted and on the Home ribbon in the Cells group , choose Format , and the select the AutoFit Column Width option.

Aligning Text and Number

Microsoft Excel aligns data in a cell in three ways; left, center, and right. The default text alignment is left, and the default number alignment is right. Alignment can be changed by using the alignment icons  on the **Home ribbon** in the **Paragraph group**. Select a range before changing alignment to more than one cell at a time.

To align text horizontally, follow these steps:

- i. Select the cell that contains the text to be aligned. Locate the **Alignment group** on the **Home tab**.
- ii. Select the left, center, or right horizontal alignment icon.
- iii. The text moves to a new position in the cell.

Illustration is shown in the screenshot below:

	Name	January	Left aligned cell contents					
7	Jannes Alice	110	175	140	145	140	160	140
8	Olson, Geoff	200	210	240	240	240	240	240
9	Stem, Tom	300	180	295	260	295	230	295
10	Umbrile, Angela	220	195	185	185	185	185	185
11								

To make the cell contents more presentable, vertical alignment is possible, as follows:

- Select the cell that contains the text. Click on the Alignment group on the Home tab.
- Select the left, center, or right vertical alignment icon.
- The cell contents move to the new vertical position, as illustrated in the following screenshot:

5	East Side						
6							
7	+ Name	January	February	March	April	May	
8	Jannes Alice	110	175	140	145	140	

Inserting and Deleting Rows and Columns

Rows and columns can be inserted to a worksheet to add information between existing rows or columns. The procedures to add or delete rows or columns are described in the table below:

Procedure	Description
Add Row	Select any cell in the row where you desire to add a new row above. On the Home ribbon in the Cell group, click on the Insert button, and then select Insert Sheet Rows. A new row will appear above your selected cell row.
Add Column	Select any cell in the column where you desire to add a new column to the left. On the Home ribbon in the Cell group, click on the Insert button, and then select Insert Sheet Columns. A new column will appear to the left of your selected column.
Delete Row or Column	Select any cell where you desire to delete a row or column. On the Home ribbon in the Cell group, click on the Delete button, and then select Delete Sheet Rows or Delete Sheet Columns. The row or column where the cell was selected will be deleted.

Entering Dates and Times

- 9 To enter the current date into the worksheet, press down the **Ctrl** key and then press the semicolon (;) key.
- 9 To enter the current time into the worksheet, press down the **Ctrl and Shift** keys and then press the semicolon (;) key.

To insert a date and time that updates automatically every time the workbook is opened, do the following:

- 9 Type, **=today()** into a cell to return the current date.
- 9 Type, **=now()** into a cell to return the current date and time format.

Copying Data using AutoFill

The AutoFill handle allows you to copy information to an adjacent range of cells. When you place your mouse pointer over the **fill handle** (the little black square located at the bottom right-hand corner of an active cell), your mouse changes to a small black cross. While holding down your left mouse button, drag the fill handle to a new position on the worksheet to copy the data. Any text typed into a cell with a number before or after it will be incremented when using AutoFill. Simply drag the fill handle to any position, and the number will be incremented as illustrated in the following screenshot.

	A	B	C	D
1				
2	Project 1			
3			Project 3	
4				

A **series** can also be filled. A series refers to a sequence of ordered entries in adjacent cells, such as the days of the week or months of the year. The **fill** technique can be used to create series in a worksheet, thereby reducing the amount of time taken for data entry, and ensuring that the spelling is correct. Excel provides days and months as special built-in **series** that you can access.

Illustration:

- i. Click on cell A4 and type Jan
- ii. Move the mouse pointer to the fill handle until the mouse pointer appears as a thin, black cross. Drag the fill handle to column F. Excel will fill the range with the first six months of the year

- iii. Click on cell A5 and type January. Drag the fill handle to cell A10 to create the series of months with their full names.
- iv. The series created is shown in the screenshot below:

A	B	C	D	E	F
1					
2					
3					
4	Jan	Feb	Mar	Apr	May
5	January				
6	February				
7	March				
8	April				
9	May				
10	June				
11					

Incrementing Values

Entering a number, for example, 15 into a cell, and then holding down the *Ctrl* key while dragging the fill handle will create an incremented series. Notice that when holding down the *Ctrl* key, a second + is shown above the existing + fill handle. This indicates that you will increment values as you drag using the mouse. Instead of typing 1, 2, 3... into separate cells, simply type 1 into a cell, then hold down the *Ctrl* key and drag the AutoFill icon to increment the values, as illustrated in the following screenshot:

B	C	D	E
	15		
	16		
	17		
	18		

A context menu is open over cell C18, showing options: Copy Cells, Fill Series (selected), Fill Formatting Only, Fill Without Formatting, and Flash Fill. The 'Fill Series' option is highlighted with a blue border.

Applying Number Formats

It is possible to change the appearance of values in a cell without affecting the actual value itself. Number formats are applied to values after the number has been entered into the cell. For instance, if I enter an amount of \$4500.00 into a cell, I will not include the \$ symbol to indicate Dollar.

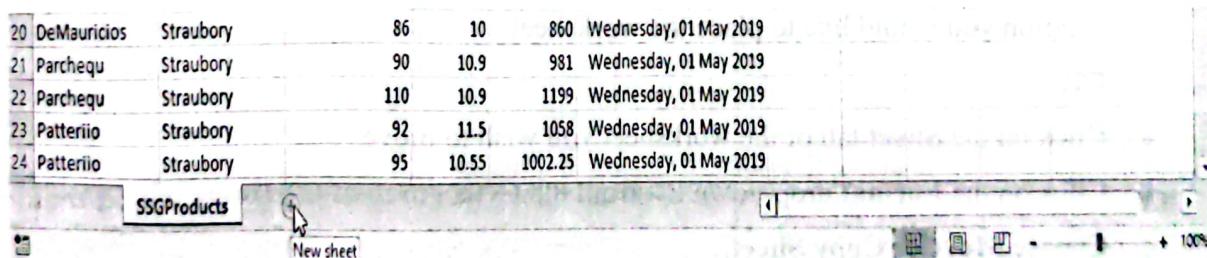
The \$ currency number format is applied to the cells afterward. This is extremely important if you are going to be calculating in Excel or constructing any formula, as Excel will not know how to calculate values if a letter is included in front of the value.

There are numerous options available to format data in Excel, some of which are located on the **Number** group of the **Home** tab. For more options, use the dialog box launcher to visit the **Number Format** dialog box.

- i. Select the cells to apply a number format.
- ii. Locate the **Number** group on the **Home** tab.
- iii. Click on the drop-down list to the right of **General**.
- iv. Choose a format such as **Currency**. A preview of each type is displayed under each format. For access to more options, click on **More Number Formats...** at the bottom of the list to launch the dialog box.
- v. Once the number format has been applied, you may notice ##### instead of values in a cell—this is because the column is not wide enough to accommodate the values.
- vi. To fix this, simply widen the column to display the values.

Inserting Worksheets

There are numerous methods to insert worksheets in Excel. The most efficient way is to click on the **New Sheet** icon at the bottom of the workbook, located to the right of any existing worksheets in the workbook. The worksheet will be inserted after any existing worksheets.

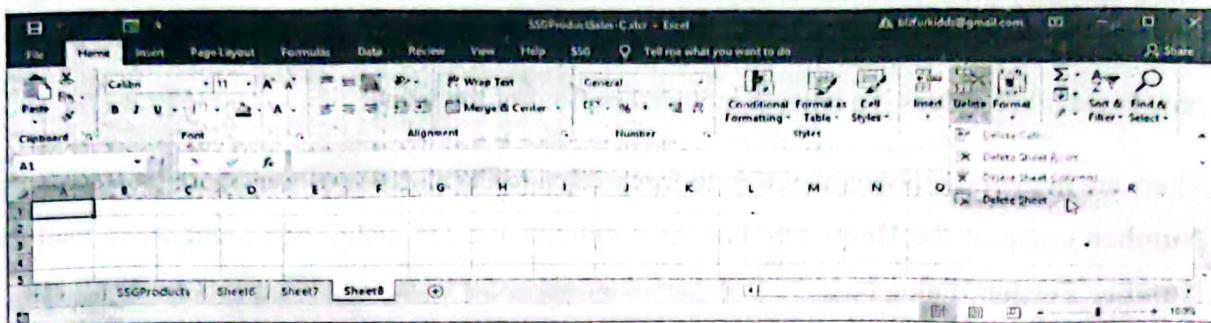


20	DeMauricios	Straubory	86	10	860	Wednesday, 01 May 2019
21	Parchequ	Straubory	90	10.9	981	Wednesday, 01 May 2019
22	Parchequ	Straubory	110	10.9	1199	Wednesday, 01 May 2019
23	Patterlio	Straubory	92	11.5	1058	Wednesday, 01 May 2019
24	Patterlio	Straubory	95	10.55	1002.25	Wednesday, 01 May 2019

Deleting Worksheets

Make sure when deleting worksheets, make sure the correct sheet is selected. You cannot undo the operation once a worksheet is deleted. Follow the following steps to delete a worksheet.

- i. On the **Home** tab, locate the **Cells** group.
- ii. Click on the drop-down arrow below the **Delete** icon.
- iii. Click to select **Delete Sheet**. A dialog box will appear, asking if you are absolutely sure you wish to delete the sheet.



- iv. Click on **Delete** to remove the sheet from the workbook.

Another method is to:

- a. Right-click on the tab of the sheet you no longer need.
- b. From the shortcut menu that appears, click on **Delete**.
- c. A dialog box will appear, asking if you are absolutely sure you want to delete the sheet.

Moving or Copying a Worksheet

There are a few ways to arrange worksheets in a workbook. Often when inserting worksheets, they are not in the correct order and as such one needs to move them. To move a worksheet:

- 9 Click on the sheet tab of the worksheet you wish to move
- 9 Hold down the left mouse button on the **Sheet** tab and drag it to another location. A page icon will appear above the mouse pointer, and, as you drag, a little black pointed-down arrow will guide you as you move along the sheets. Let go of the mouse at the location you would like to place the worksheet
OR
 - a. Click on the **Sheet** tab of the worksheet you wish to move.
 - b. Click on the **Format** drop-down list from the **Cells** group of the **Home** tab.
 - c. Choose **Move or Copy Sheet...**
 - d. Click on a worksheet name to place your sheet before it.
 - e. Click on **OK** to confirm. The sheet moves to the new location
OR
 - i. Right-click on the **Sheet** tab of the worksheet you would like to move.
 - ii. Click on **Move or Copy...** from the shortcut menu. Click on a sheet name to place your sheet before it.
 - iii. Click on **OK** to confirm. The sheet moves to the new location.

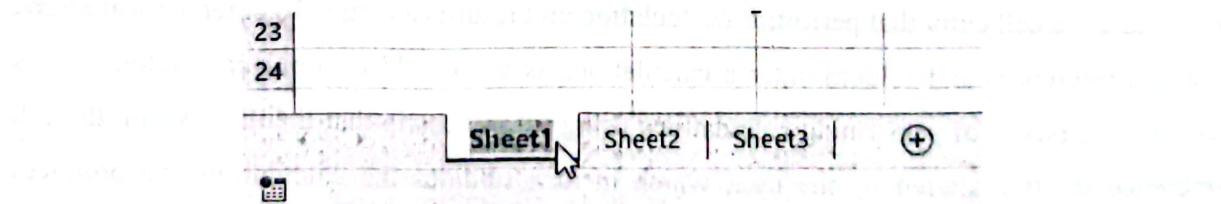
To copy worksheets, follow these steps:

- a. Click on the **Sheet** tab of the worksheet you wish to copy and move to another location within the worksheet.
- b. Hold down the **Ctrl** key on your keyboard.
- c. Click on the **Sheet** tab and, while keeping the left mouse button depressed, drag the sheet to another location.
- d. A page icon will appear above the mouse pointer with a + sign while you are dragging—this indicates that you are copying the sheet.
- e. As you drag, a little black pointed-down arrow will guide you as you move along the sheets
- f. Let go of the mouse at the location you would like to place the worksheet
- g. You will notice that the worksheet name is the same as the sheet you have copied, except that it has a bracket enclosing the number 2, indicating that it is the worksheet copy.

Renaming Worksheets

Worksheets are named Sheet1, Sheet2, Sheet3, and so on, by default. To make the workbook more meaningful (especially if you are collaborating with others), it is a good idea to give your sheets a name appropriate to the data contained within them.

- i. Double-click on the sheet tab you wish to rename.
- ii. The existing name will be highlighted (selected), as illustrated in this screenshot:



- iii. While the sheet name is selected, start typing a new name for the sheet
- iv. Click off the sheet tab onto a cell in the worksheet

Alternatively,

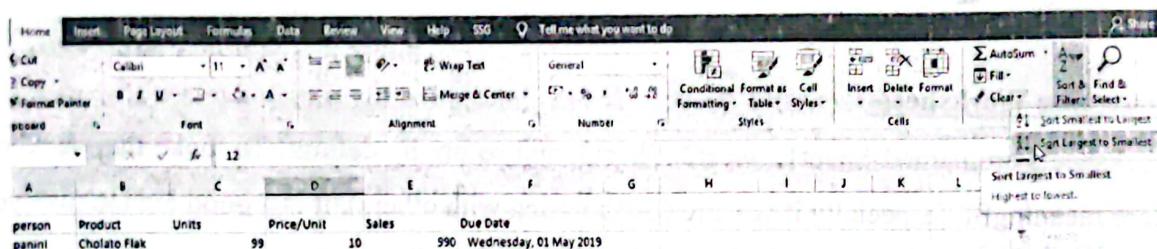
- a. right-click on the sheet tab you wish to rename.
- b. Choose **Rename**. The existing sheet name becomes highlighted
- c. Type a new name for the sheet, and then click off the sheet tab onto a cell in the worksheet

Or

- i. Click on the sheet you would like to rename.
- ii. From the Editing group of the Home tab, select the Format icon dropdown arrow from the Cells group.
- iii. Select Rename Sheet from the Organize Sheets heading.
- iv. The existing sheet name becomes highlighted
- v. Type a new name for the sheet, and then click off the sheet tab onto a cell in the worksheet.

Sorting Ascending or Descending

1. Click on the column you would like to sort.
2. Click on the Sort & Filter icon in the Editing group of the Home Tab
3. From the drop-down list, choose Sort Largest to Smallest or Sort Largest to Smallest (this depends on what you want)



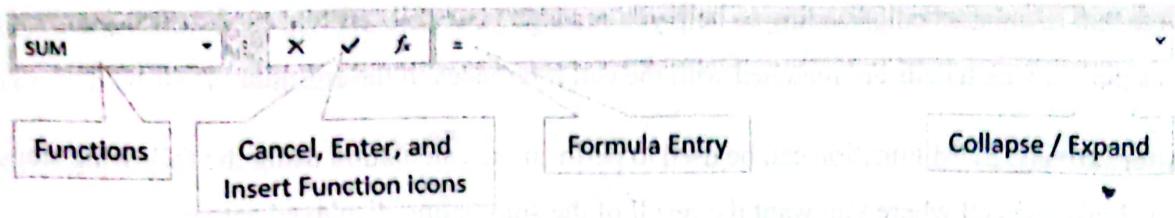
4. The data in the worksheet is sorted

Basic Formula Operations

A formula is a cell entry that performs a calculation and returns a result. To enter a formula, we use cell references and seldom enter a calculation, as we would do on a calculator. This is because the power of performing calculations using references is that the data within the cell reference is often altered by the user, which in turn updates the calculation and produces different results, depending on data input and workflow.

When you enter a formula into a cell, it always starts with an equality (=) sign. Once the = sign is typed into a cell on a worksheet, the Formula Bar will become active, with the formula icons changing color and becoming ready for input.

The Formula Bar is located just above the worksheet column headers and consists of three parts as illustrated in the screenshot below:



To the left of the Formula Bar, is a list of commonly used functions and a drop down arrow to access **More Functions...** Note that this part is active while the Formula Bar is active, after which it is referred to as the Name Box.

The middle section of the Formula Bar is where you will find the icon to cancel inputted formula, to enter a formula, and to access the Insert Function dialog box used to search for more functions.

The main part of the Formula Bar is the formula entry area where one can enter, copy, or edit calculations created in Excel. It can be expanded or collapsed.

Illustration: The Excel sheet below contains sales data for sales representatives. We want to sum the January sales of the four representatives and place the results in cell C12.

		C11			
		A	B	C	D
5 EAST SIDE					
7	Name	SalesCode	January	February	March
8	Jannes Alice		£ 110.00	£ 175.00	£ 140.00
9	Olson, Geoff		£ 200.00	£ 210.00	£ 240.00
10	Stem, Tom		£ 300.00	£ 180.00	£ 295.00
11	Umbrie, Angela		£ 220.00	£ 195.00	£ 185.00
12	TOTAL:		=C8+C9+C10+C11		
13	AVERAGE:				
14	HIGH:				

Steps:

- i. Enter the = sign in cell C12 of the worksheet
- ii. Select the cell reference for the first sales rep by clicking on cell C8 and type the + operator. Click on the cell reference of the second sales rep (C9) and type the + operator and so on
- iii. Once all the cell references are selected, press the Enter Key or the green tick on the formula bar
- iv. The result of the summation will be displayed in cell C12.

Note that Excel uses color-coding to help you manage your cell references. Just at a glance, you can see which cells are matched with the cell references in the formula.

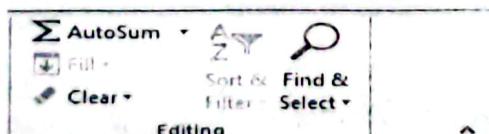
Alternatively, SUM Function can be used to perform the calculation using the following steps:

- i. Make the cell where you want the result of the summation displayed active.
- ii. Type =SUM(the cell range to be added) and press the Enter Key
- iii. The result will appear in the cell
- iv. Click the cell with the result and notice that the formula you typed appears in the Formula Bar, while the result of the calculation appears in the worksheet.
- v. Illustration is shown below:

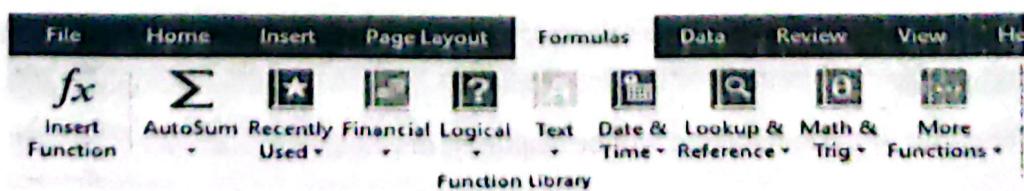
C8			f _x	=SUM(C3:C7)
A	B	C	D	E
1				
2	UK	AUS	NZ	SPAIN
3	Garden Setti	17200	17850	18100
4	Pool Covers	21412	25942	24944
5	Fountains	20824	31288	37456
6	Large Tubs	20722	29782	35963
7	Fencing	49254	64750	125811
8	129412	169612		75863
9				

AutoSum icon can also be used to add up values. This is quicker but is not the most effective, error-free way of adding values:

- 9 . Click on the cell in which you would like to place your total
- 9 Click on the AutoSum icon in the Editing group of the Home tab,



- 9 Excel automatically inserts the range to sum (always check that it has assumed the range correctly).
- 9 Press the Enter Key to complete the formula.
- 9 AutoSum icon can also be found in the Function Library group on the Formulas tab



There is a strict order of operation to be adhered to when constructing formulas and functions.

The basic order is as follows:

1. Brackets ()
2. Percentage (%)
3. Exponent (^)
4. Division (/)
5. Multiplication (*)
6. Addition (+)
7. Subtraction (-)

Operator precedence is applied when you have different operators in a formula.

Excel Functions

Functions provide an automated method for creating formulas in the different categories: financial, date and time, mathematics and trigonometry, statistical, lookup and reference, database, text, logical and information. For example, specific functions are available to calculate a sum, an average, a loan payment, logarithms and random numbers. Functions can be typed, if you know the syntax, or can be inserted by clicking on the **Function** button located left of the formula bar.

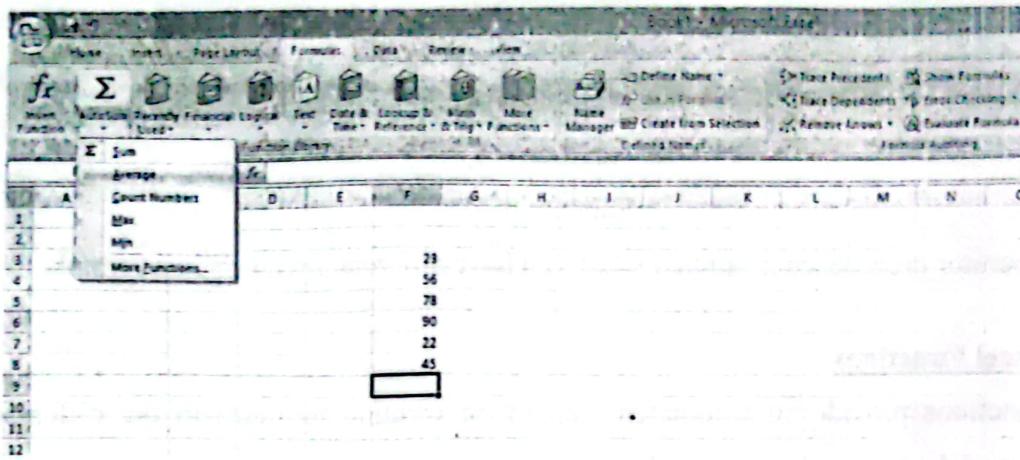
All functions are formatted in a similar manner, for example: =*function name (parameters)*. The parameters vary depending on the function. Functions and cell addresses may be typed in upper case or lower case.

Microsoft Excel 2019 has 479 functions. Some of the basic functions and their descriptions are shown in the table below:

Type of Function	Function	Description
Sum	=sum(range)	Adds all values in a selected range
Average	=average(range)	Finds the arithmetic mean
Minimum	=min(range)	Finds the lowest value in a list
Maximum	=max(range)	Finds the highest value in a list
Count	=count(range)	Counts the number of values in a list
CountA	=counta(range)	Counts the number of names (text) in a list
CountBlank	=countblank(range)	Counts the number of blank cells in a range

Illustrations:

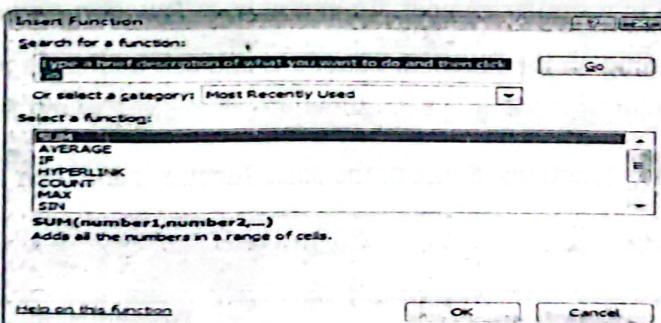
- i. Inserted values in cells F3 to F8 of a worksheet
- ii. Click on the cell you want the results of your calculations to be
- iii. Click on the drop down arrow on the AutoSum icon
- iv. Choose Average from the drop down list



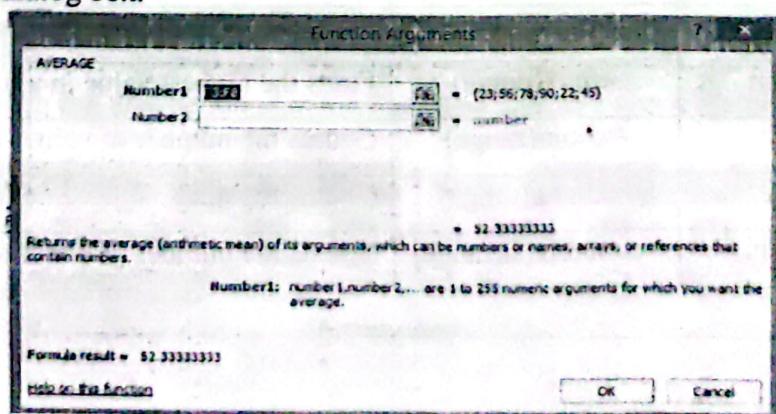
- v. Excel automatically selects the range. Check the range for correctness and then press the Enter Key.

We can also use the Insert Function Tool to find the Average:

- a. Click on the Insert Function tool to display the Insert Function dialog box



- b. Select Average under select a function and then click on OK to display the function argument dialog box.



- c. Click on the range selector tool for Number 1 to roll up the wizard, then hold down the Ctrl key and select the desired ranges
- d. Press the Enter Key to complete the range specifications, then click on OK to complete the process.

The above illustrated methods can also be used to find the **Max** and **Min** values in a range of values.

Relative Versus Absolute Referencing

When you refer to cell references when constructing formula, you have two options. You can refer to cells using relative references or you can use absolute references. The type of reference used is only relevant when you copy the formulas to other cells. As the name suggests, *relative* references will change. Thus, they refer to cells relative to the cell containing the formula. In other words, when you copy a formula down a column, the cell references used in the formula move down the column too.

Absolute references will always refer to the same cells. Sometimes, cell references need to remain the same when copied or when you use the **AutoFill** command. I always refer to *absolute* as cementing the cell reference so that it cannot be moved when calculating. You can press the **F4** function key to make a cell *absolute* (fixed/constant), or add dollar signs (\$) to cell references to make a column and/or a row constant (fixed).

Example: Let us use the screenshot below as an illustration

	F	G	H	I	J	K	L	M
5								
6								
7	May	June	July	August	Total	VAT	% of Total	
8	£ 140.00	£ 160.00	£ 140.00	£ 150.00	£ 1160.00	£ 278.40		
9	£ 240.00	£ 240.00	£ 240.00	£ 240.00	£ 1850.00	#VALUE!		
10	£ 295.00	£ 230.00	£ 295.00	£ 270.00	£ 2125.00	#VALUE!		
11	£ 185.00	£ 185.00	£ 185.00	£ 185.00	£ 1525.00	#VALUE!		
12								
13								

1. In cell K8, we have entered the formula to calculate VAT on Total sales. We have entered the formula as =J8*K6,
2. K6 is the cell that contains the percentage VAT (entered as a decimal). This is the cell in which all the Product Totals will be multiplied.

- After entering the formula, we copied the formula using the AutoFill handle down to fill the formula to the rest of the cells in the VAT column. When we had finished copying the formula, the errors appeared in column K.
- On investigation, we noticed that the formula in cell K8 is correct, but the other cells are incorrect due to the formula referencing cell K6 as relative. This means that when copied down the column, K6 moves too! The formula in cell K9 has a #VALUE! error. This means that text has been included in the formula in error. If we look at the formula in K9, we will see that the formula is referencing cell K7, which contains the text VAT, which is what is causing the error in the cell.
- To fix all these errors, we simply need to change the formula in cell K8. Double-click on cell K8.

			K	L	M
			0.24		
	August	Total	VAT	% of Total	
£	150.00	£1 160.00	=J8*K6		
£	240.00	£1 850.00	#VALUE!		
£	270.00	£2 125.00	#####		
£	185.00	£1 525.00	#VALUE!		

- Select K6 by highlighting it with the mouse, then press the F4 function key on the keyboard to make the cell reference absolute. Note in the following screenshot that dollar signs are added before and after the K

			K	L	M
			0.24		
	August	Total	VAT	% of Total	
£	150.00	£1 160.00	=J8*\$K\$6		
£	240.00	£1 850.00	#VALUE!		
£	270.00	£2 125.00	#####		
£	185.00	£1 525.00	#VALUE!		

- Press Enter, and then copy the formula down the column using the AutoFill handle. Your formulas are now all correct.

Formula Error Messages

Microsoft Excel has some in-built messages that can assist you when something goes wrong with a formula. These messages appear in the cell that contains the formula, and sometimes

also other formula cells that depend upon it. The messages are always prefixed with a hash sign (#) and appear with a code. The more common error messages are listed below>

- i. **A Line of Hash (#) Signs** – A line of hash signs usually occurs because a column is not wide enough to display the numbers in the cell or result of a formula. Widening the column will correct this problem
- ii. **#DIV/0!** – This message means you are trying to divide a value by zero – this is mathematically impossible.
- iii. **#VALUE!** – This error means that there is an incorrect operator or text included in the formula and as such a calculation cannot be performed.
- iv. **#NAME?** - This message appears when text is found in a formula that can't be matched to either a legitimate function or range name.
- v. **#ref!** – This message indicates that an invalid cell reference is included in the formula.
- vi. **#NULL!** – This means a space is incorrectly included in the formula to separate cell references
- vii. **#NUM!** – This refers to a number incorrectly used in the formula
- viii. **#n/a** – This means that the value is not available

CHARTS

Microsoft Excel can display data graphically in a chart. Charts provide a way of seeing trends in the data in your worksheet. Excel displays values from worksheet cells as bars, lines, columns, pie slices, or other shapes in a chart. When you create a chart, the values from the worksheet are automatically represented in the chart. Presenting data in a chart can make it easier to read and more interesting to interpret. Charts can also help you evaluate your data and make comparisons between different values.

Inserting Charts

- ▶ The first step when creating a chart is to select the data from the worksheet that you want to chart. It is important to remember that the selected range (which can be either contiguous or non-contiguous), should include *headings* (e.g. names of months, countries, departments, etc). These become *labels* on the chart.
- ▶ Secondly, the selected range should not (normally) include totals as these are inserted automatically when a chart is created.
- ▶ The second step is to create a chart using the **INSERT** tab on the ribbon. You can choose a **Recommended Chart** where Excel analyses the selected data and suggests several possible chart layouts.

- ▶ Alternatively you can create the chart yourself from scratch by choosing one of the **Insert** commands in the **Charts** group.
- ▶ Charts that you create in Excel can be either *embedded* into a worksheet, or they can exist on their own sheets, known as **chart sheets**.

Embedded Charts

Charts that appear within a worksheet are known as embedded charts. A chart is really an object that sits on top of the worksheet – unlike numbers and letters, charts are not actually placed into worksheet cells. An example of an embedded chart is shown below:

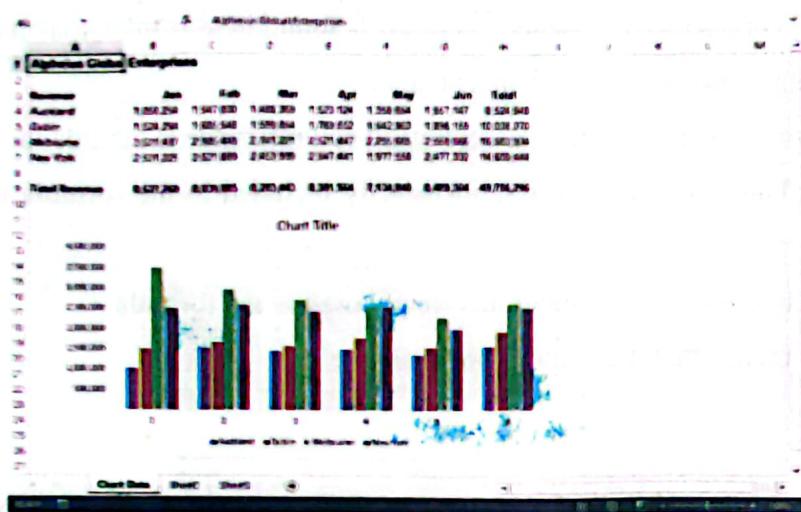
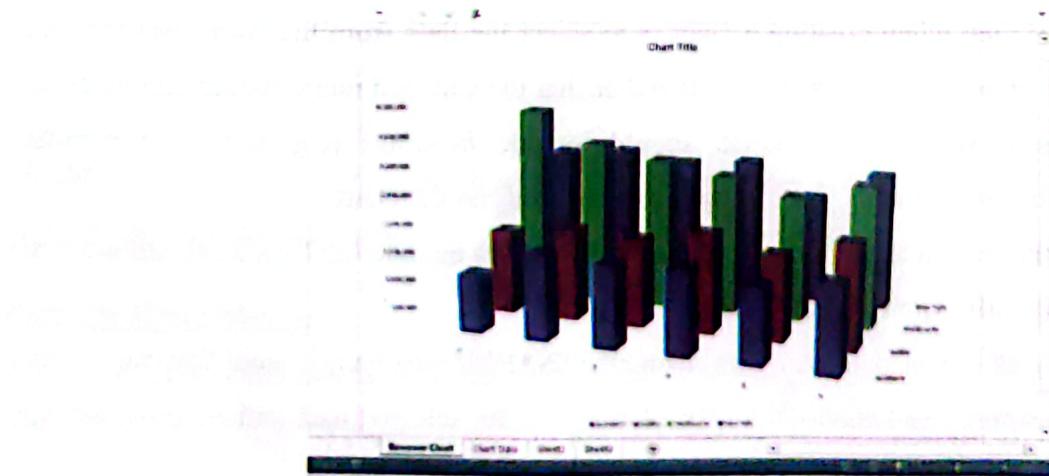


Chart Sheets

If you want to keep your chart separate from the data you can move the chart to its own sheet. Chart sheets make it easier and more convenient to work with your chart because you will see more of it on the screen – since the data is not there. An example of chart sheets is shown below:



Choosing the Right Chart

A chart is far more effective at communicating results, outcomes or trends than a table of figures displaying the same information. Different types of charts have been created to communicate different types of information. Some charts show simple relationships between values, while others are designed for quite technical purposes. Here is a summary of the use of different chart types:

- i. **Column and Bar Charts** – These chart types, either in 2D or 3D, are used to compare values across categories. For example, they could compare the populations of different countries.
- ii. **Line and Area Charts** – Lines in 2D or 3D are useful for showing trends such as sales or employment figures. An area chart is a line chart with the area below the line filled in.
- iii. **Surface Chart** - The surface chart plots trends in two dimensions. You could use this to plot departmental sales figures over time. The chart then shows you the trends between departments, as well as the sales trends over time.
- iv. **Stock Chart** -The stock chart type has been designed to show the stock figures for a day and the trend over time. At its simplest, you can plot the high, low and close figures, and at its most complex, the volume, open, high, low, and close. It can be adapted to show the relationships between any five sets of values.
- v. **XY (Scatter) Diagram** – Scatter diagrams are used to display the relationship between two variables. For example, you could research the age and price of a series of cars, and plot the values you find. You could also investigate the height and weight relationship of a group of people.
- vi. **Radar Diagram** – A radar diagram is designed to show the change in values from a central point. For example, it can be used to show mobile telephone coverage, including multiple networks and multiple measurements.

Example of Creating a Chart

- i. Enter data into a worksheet as shown

	A	B	C	D	E	F
1		FY2016	FY2017	FY2018	FY2019	
2	Equipment	8500	6750	7100	9200	
3	Furniture	1200	1400	800	1500	
4	Office Supplies	2450	2390	2400	2275	
5	Travels	12500	11750	8000	5500	
6						

- ii. To create a chart, select the cells that contain the data and text that you want appear in the chart.
- iii. Select the **Insert** tab, then in the **Charts** group, click on the **Chart** button of your choose

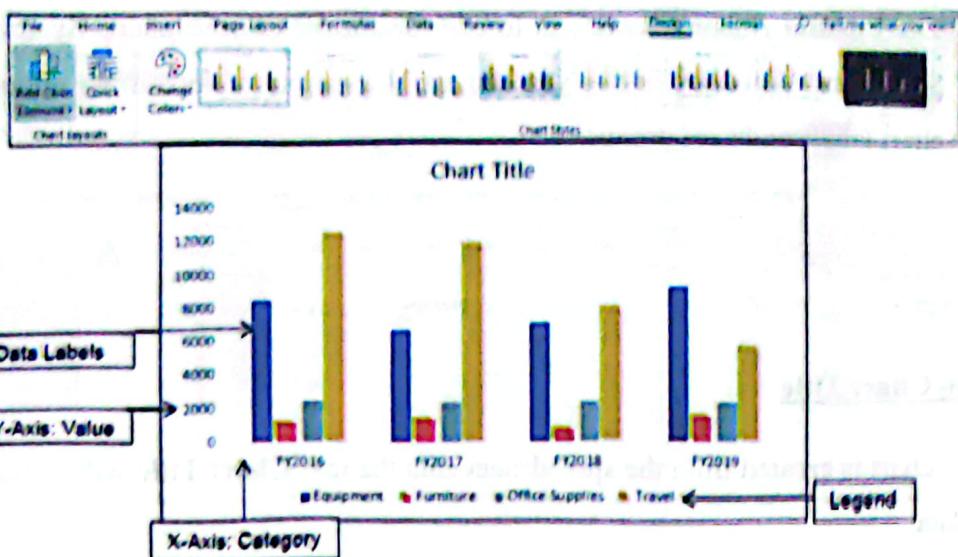
A screenshot of a Microsoft Excel spreadsheet. The ribbon at the top shows the Home, Insert, Page Layout, Formulas, Data, Review, and View tabs. The Insert tab is selected, displaying icons for PivotTable, Table, Picture, Clip Art, Shapes, SmartArt, Column, Line, Pie, Bar, Area, Scatter, and Other Charts. Below the ribbon is a table with data for the years FY2016 through FY2019. The columns are labeled A1 through E1, and the rows are numbered 1 through 5. The data includes categories like Equipment, Furniture, Office Supplies, and Travels, with corresponding values for each year.

	A1	B1	C1	D1	E1	F1	G1	H1
1		FY2016	FY2017	FY2018	FY2019			
2	Equipment	8500	6750	7100	9200			
3	Furniture	1200	1400	800	1500			
4	Office Supplies	2450	2390	2400	2275			
5	Travels	12500	11750	8000	5500			

- iv. The chart sub-types will appear which will provide you with more chart options to select from. To view all chart types, click on the dialog box on the **Charts** group. The **Insert Chart** window will appear with all chart types.



- v. Select the **All Charts** tab.
- vi. Click on the **Column** button on the Window
- vii. Select the desired column chart
- viii. Click on OK.



- ¾ When the chart appears on the spreadsheet it will have a selection border around it. Charts are similar to graphical images which can be moved and resized.
- ¾ Click any cell in the spreadsheet to deselect the chart. Single click anywhere inside the chart border to select the chart area.
- ¾ With the chart object selected, point inside of the object border. Click and drag to move the chart to a new location (the mouse pointer changes to a four-way arrow).
- ¾ With the chart object selected, position the mouse pointer on any handle and drag in the direction indicated by the double arrow pointer to resize the chart

Chart Tools

Microsoft Excel provides many editing options for your chart. When your chart is selected, the **Chart Tools** tab will appear on the Ribbon. This enables you to edit your chart with a variety of designs, layouts, and formats.

- ✓ The **Design** ribbon allows you to change your chart type, layout, and style. By selecting the appropriate ribbon button, you can change your chart **Layout**, **Style**, and **Type**.

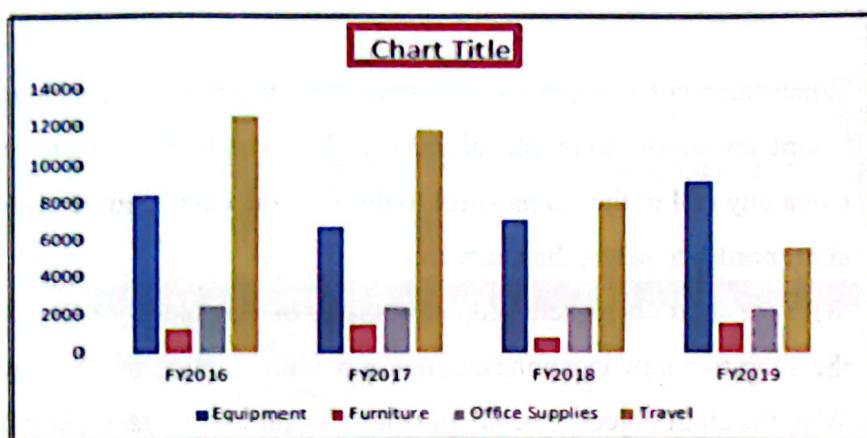


- The Format ribbon allows you to edit the format of your chart. By selecting Shape Styles and WordArt Styles you can apply a variety of formatting options within the chart labels and axes groups.



Adding Chart Title

When a chart is created from the spreadsheet data the text **Chart Title** will appear above your chart data



- Click on the **Chart Title** text box.
- Select or delete text.
- Type your desired title. For this class exercise, type **Fiscal Year Comparisons**

Changing Data Values

Charts are linked to the worksheet data and are updated when you change the worksheet data.

- Click in cell D5 of the data used for our example
- Change the Travel expense to 1000, and press the Enter key.
- Review the change on your chart.

Creating a Pie Chart

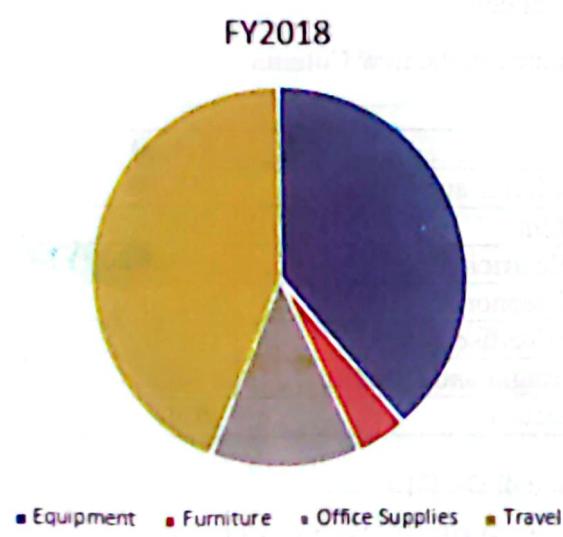
Noncontiguous cell ranges can be selected from your spreadsheet to view specific data groupings

- Select A1:A5, then hold down the Ctrl key, and select D1:D5.
- Click on the Insert tab, click on the Pie button located in the Chart group, and then select the first 2-D Pie button from the options panel.

Screenshot of Microsoft Excel showing a table of financial data for FY2018. The table has columns for Year (FY2016, FY2017, FY2018) and rows for categories (Equipment, Furniture, Office Supplies, Travel). The 'Travel' row is highlighted with a red border.

	FY2016	FY2017	FY2018	FY2019
Equipment	8500	6750	7000	9200
Furniture	1200	1400	850	1500
Office Supplies	2400	2100	2400	2275
Travel	12500	11750	10500	5500

iii. The created Pie chart will appear on the spreadsheet



EXERCISE TWO

Use the data in the table below to answer questions a to n. Write out the steps you will follow to get the answers

Expenses for the Month of January vs. Budget	
	Budget
Salaries and Wages	156675.00
Rent	4300.00
Electricity	1000.00
Telephone	200.00
Advertisements	20000.00
Freight and clearing	15650.00
Security	3800.00

- a. Insert a new column between Budget and Saving
- b. Enter the title "Actual" in cell C3
- c. Enter the following Figures in the new Column

	Actual
Salaries and Wages	145200
Rent	4300
Electricity	1207
Telephone	142
Advertisements	18550
Freight and Clearing	13400
Security	3800

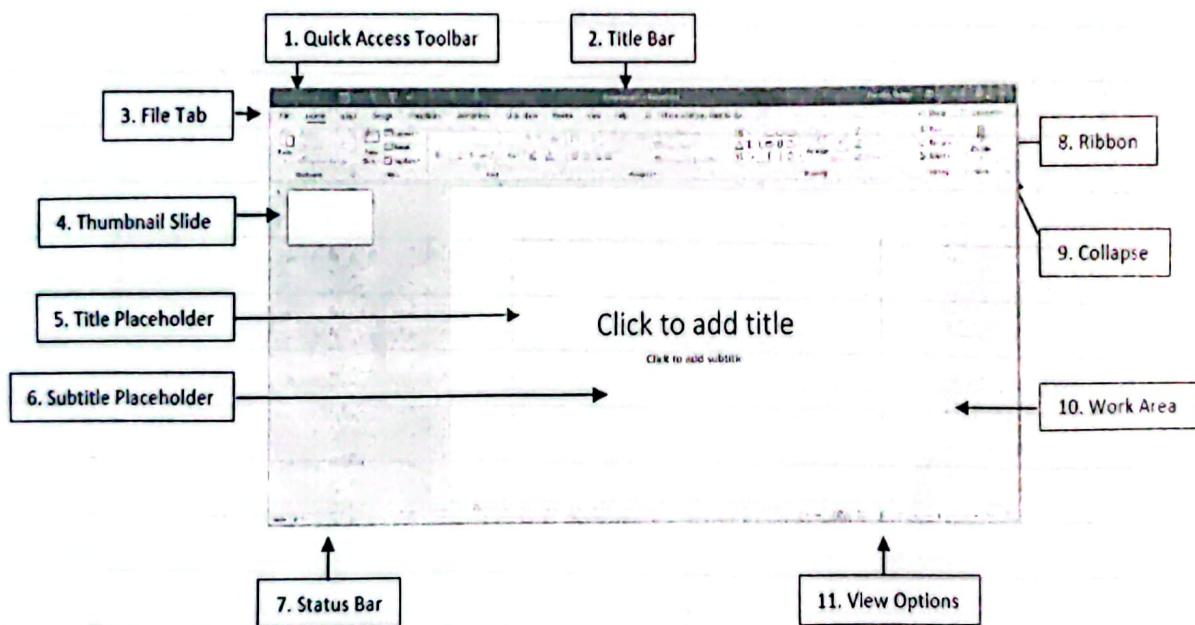
- d. Calculate the savings in cell D4:D10
- e. Format the sheet title to Arial Black, size 14 and Bold
- f. Save the file as Audit
- g. Format the range B4:B10 to two decimal places
- h. Adjust column C so that all the values are displayed
- i. Add the title **Savings %** in cell E3 and calculate the savings as a percentage of the budget
- j. Format the range E4:E10 as a percentage
- k. Enter the row titled **Total** in cell A12 and obtain totals for Budget, Actual and Savings column
- l. Copy the formula in E10 to E12
- m. Format the new heading to match the existing headings and align the heading to right

n. Save the worksheet in your laptop and send a copy to the email:
edwardudo@uniuyo.edu.ng

MODULE 3: MICROSOFT POWERPOINT

Microsoft PowerPoint 2019 is a presentation application that enables an individual from any technical level to create a dynamic and professional-looking presentation combining text, graphics, and predesigned backgrounds.

When you launched the Microsoft PowerPoint from your laptop, PowerPoint Windows will appear first. Understanding the Windows features will enable the user to perform routine tasks related to the Microsoft applications. All Office applications share a common appearance and similar features. Windows Features provide a quick means to execute commands. Below are some pertinent PowerPoint features:



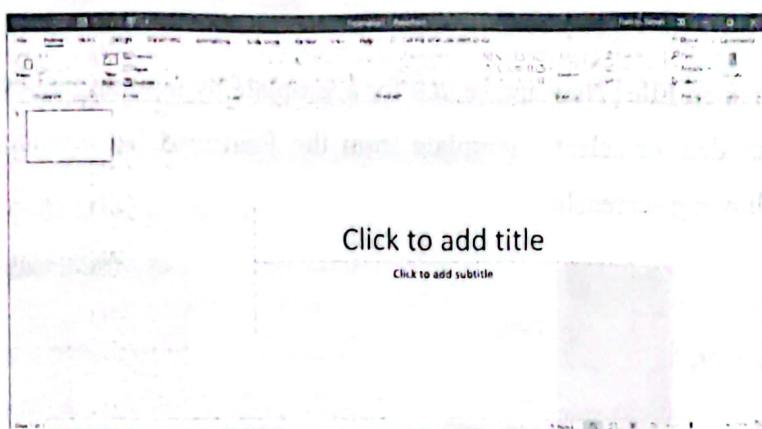
A brief description of the features is presented in the table below:

S/N	Feature	Description
1	Quick Access Toolbar	Displays quick access to commonly used commands.
2	Title Bar	Displays the name of the open file.
3	File Tab	The File tab has replaced the Office 2007 button. It helps you to manage the Microsoft application and provides access to options such as Open, New, Save As, Print, etc.
4	Thumbnail Slide	Displays a snapshot of each slide.
5	Title Placeholder	This is the section where text is entered.
6	Sub-title Placeholder	This is the section where text and/or graphics are entered.

7	Status Bar	Displays information about the slide presentation, such as page numbers
8	Ribbon	Displays groups of related commands within tabs. Each tab provides buttons for commands
9	Collapse	Collapses the ribbon so that only the tab names show
10	Work Area	Each slide has an area where text and graphics are entered for a presentation. There are various slide layouts to work from
11	View Option	Displays several View modes for slides

Creating Slide Presentation

When PowerPoint starts, it opens by default in **Normal view**. In **Normal view**, the application window includes the following areas:



- ✓ **Slides Tab** - A pane in the left pane with thumbnail previews of your slides. You can click and drag the thumbnails to rearrange slides.
- ✓ **Slide Pane** - Displays the slide that is currently selected in the Slides tab.
- ✓ **Notes Pane** - Displays speaker notes for the slide currently active in the Slide pane.

When creating a new presentation, you have choices about how to proceed. PowerPoint gives you a range of ways with which to start creating a presentation. You can start your presentation with:

- ✓ **Blank:** Slides that are unformatted and have no color scheme.
- ✓ **Design:** Slide Themes that have design concepts, fonts, and color schemes.
- ✓ **Template on Microsoft.com:** Microsoft Office Templates and Theme Gallery which are arranged according to type (click on the File tab, select the New option, and then

click on PowerPoint presentations and slides from the Available Templates and Themes).

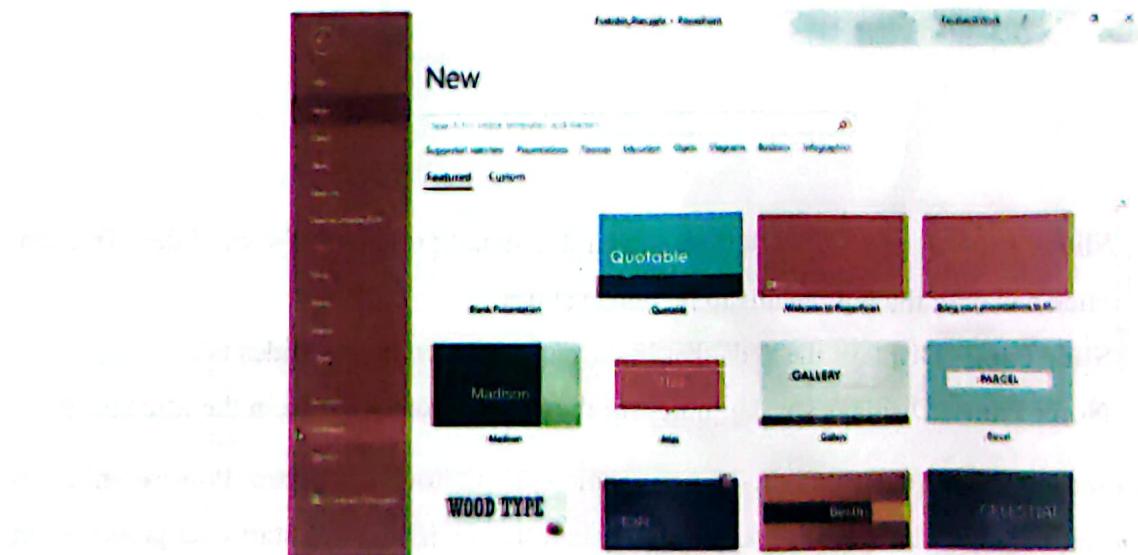
Creating Presentation Templates

A template is a presentation with a predefined look and contains default text, layouts, and even animations. Templates are often used as a basis for presentations, especially in the 2019 version, as there are many professional animated effects available. They are created to suit the needs of the user and are often a quick way to get things done.

Office 2019 has a huge range of templates within the PowerPoint environment, as well as the ability to search and download templates online from within the application. Categories are available just below the search bar and guide the user when searching online.

To search for templates online, you must first have an internet connection. Then, proceed as follows:

- a. Click on **File | New** and search for a template by inputting a keyword into the text area provided, or select a template from the **Featured** list provided, as illustrated in the following screenshot



- b. Once you have decided on a template, click on the template to view details about it. You are able to scroll through all the templates using the arrow to the right of the preview.
- c. Click on **Create** to open the template in PowerPoint and you then add content.

Design Theme

A Theme gives your slides a consistent appearance throughout your presentation. Themes contain color schemes with custom formatting, styled fonts, and layouts. When you apply a design template to your presentation, the slide master and color scheme of the template replaces the original blank slide. The following steps should be followed:

- i. Select the **Design** tab, then on the **Theme** group, click on the drop-down arrow next to the last Theme.
- ii. All themes window will appear with available presentation Themes.



- iii. Hover the mouse pointer over a Theme to preview it.
- iv. Click on a Theme of your choice.

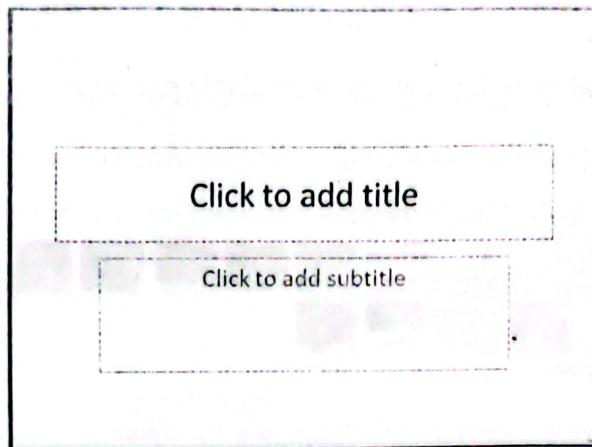
Note that the theme can be changed during or after the creation of your PowerPoint file. Hovering the mouse pointer over the Theme will allow you the options of **Apply to All Slides** or **Apply to Selected Slide**.

You have the option to change the Theme color, font, and background on your slides. Use the **Design** ribbon to modify your presentation Theme:

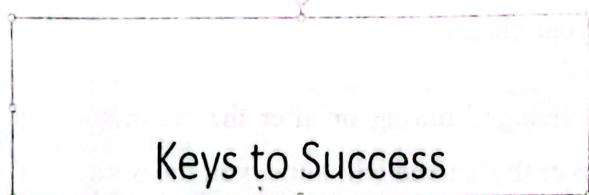
- a. To change your slide **Theme color scheme**, click on the drop-down arrow next to the **Color** button, located in the **Themes** group, and then select your desired color scheme.
- b. To change your slide **Font**, click on the drop-down arrow next to the **Fonts** button, located in the **Themes** group, and then select your desired Font options.
- c. To change your slide **Background Color**, click on the drop-down arrow next to the **Background Style** button, located in the **Background** group, and then select your desired background categories. (To remove a slide background graphic, select the **Hide Background Graphics** box.)

Adding Text to Design Theme

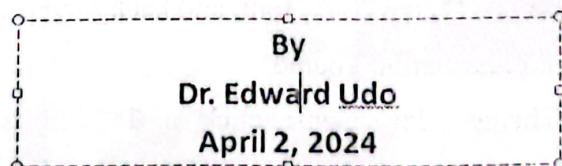
The template for the design Theme you selected will determine the font type and text alignment. PowerPoint places all information (text and graphics) contained on a slide in separate **Placeholders**. Placeholders are designated by dotted lines; they appear on a slide as guides, but they will not appear on the finished presentation. In order to edit text, click once inside of the **Text Placeholder** and the insertion point will appear; then begin to type your text.



- i. Click in the title placeholder and type your text. For example:



- ii. Click in subtitle placeholder and type your text. For example:



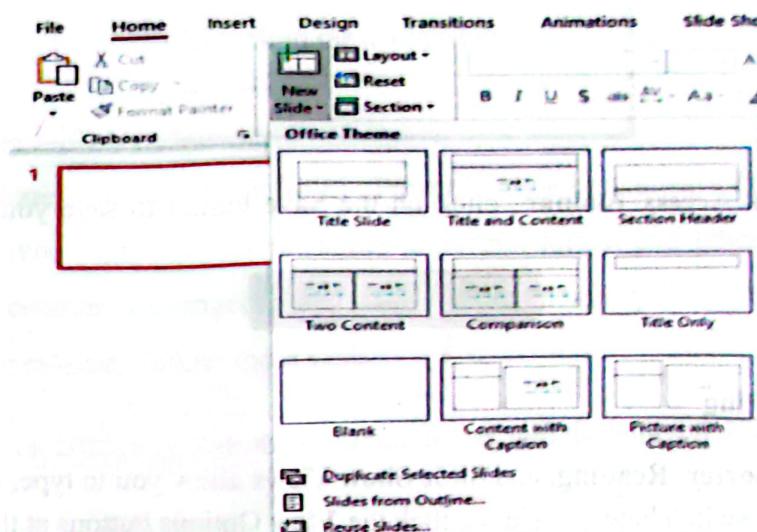
- iii. Click on the **File** tab and then click on **Save As**. The **Save As** window will open. In the **File name** box, type **Keys to Success** for the presentation name. Indicate where to save the file and click on the **Save** button.

Adding New Slide

A slide layout defines the placement of text, pictures, tables, and graphs. If you change the layout of a slide, the text and graphics remain intact. You can resize text and graphic boxes to conform to the new layout.

To add new slide:

- a. On the Home ribbon, located in the Slides group, click on the New Slide drop-down arrow. The Office Theme panel will appear with multiple slide layouts. Select your desired slide layout.
- b. For this exercise, click on the second Layout (Title and Content) in the first row

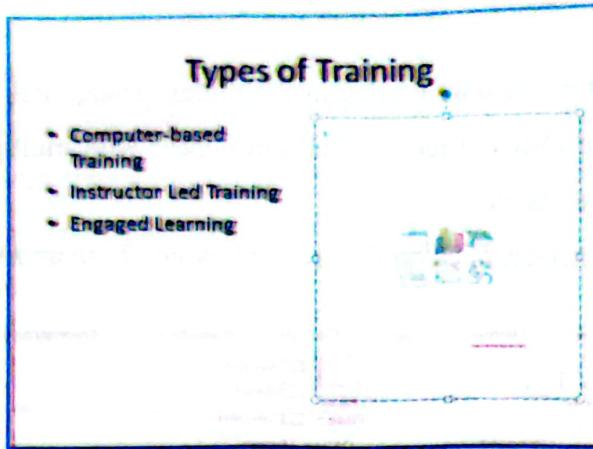


- c. In the title placeholder, type the text Agenda.
- d. In the subtitle placeholder, type the bulleted text as seen below (you will need to press the Enter Key after each line of text.).

Agenda

- Training
- Resources
- Commitment
- Need for Training

- e. To add another slide, on the Home ribbon, click on the New Slide drop-down arrow and then select the Two Content slide layout (This slide contains a title, text, and clip art placeholders.).
- f. Click inside the Title and Text Placeholders and type the following text:



- g. On the **Quick Access Toolbar**, click on the **Save** button to save your presentation changes.



View Modes for Editing

The **Normal**, **Slide Sorter**, **Reading**, and **Slide Show** Views allow you to type, edit, and view your presentation. To switch between views, click the **View Options** buttons at the lower right-hand side of the PowerPoint window.



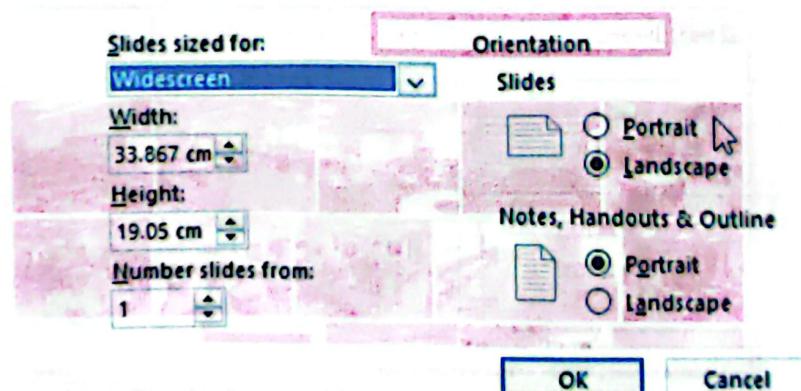
View Mode	Description
Normal	Normal View is the main editing view, which you use to write and design your presentation. The View has three working areas: on the left, tabs that alternate between an outline of your slide text (Outline tab), and your slides displayed as thumbnails (Slides tab); on the right, the slide pane, which displays a large view of the current slide; and on the bottom, the notes pane.
Slide Sorter	Slide Sorter View is an exclusive view of your slides in thumbnail form. When you have finished creating and editing your presentation, Slide Sorter gives you an overall picture of it; making it easy to reorder, add, or delete slides, and preview your transition and animation effects.
Reading	Reading View is new in PowerPoint 2019. It is similar to Slide Show View. The difference between the two Views is that while Slide Show View takes over the whole screen, the slide in Reading View is shown in full screen, but you will see the PowerPoint title band at the top.

	the top of the screen. The PowerPoint status bar and the Windows task bar are also displayed at the bottom of the screen.
Slide Show	Slide Show View takes up the full computer screen, like an actual slide show presentation. In this full-screen View, you see your presentation the way your audience will. You can see how your graphics, timings, movies, transition effects, and animation elements will look in the actual show.

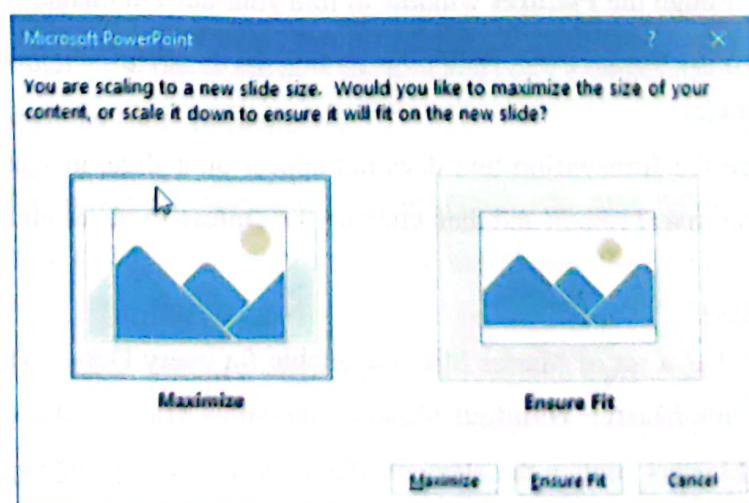
Changing the Slide Orientation

Slide layouts are landscape by default in PowerPoint and are always the same throughout the presentation. You cannot have some slides in portrait format and others in landscape format. When the orientation is changed, the entire presentation will update to the new orientation. To change the orientation, follow these steps:

- i. Click on Design | Customize | Orientation, and the following options will appear



- ii. Choose **Portrait** from the **Orientation** options, after which you will be asked to select a scaling option



- iii. If you have graphical objects on the slide and you change the slide orientation, you may find that the objects shift around. Try switching between **Maximize** and **Ensure Fit** to alleviate too much change, but it may be necessary to reposition objects after changing the orientation.

Adding Pictures to a Slide

Online Pictures are any type of computerized images such as artwork and photos. You can make your presentation more eye-catching and entertaining by adding Pictures. To add pictures:

- i. Confirm you are on the slide you want to add a picture
- ii. Click on the **Online Pictures** button in the **Illustration** box, located in the **Text Placeholder**



- iii. The **Bing Image Search** window will appear



- iv. In the **Search** box, type the word Classroom or any other word, and then press the **Search** icon. A variety of online images associated with your search will appear
- v. Scroll through the **Pictures** window to find your desired image.
- vi. To insert the image, place the mouse pointer on the image and then click on the left mouse button twice

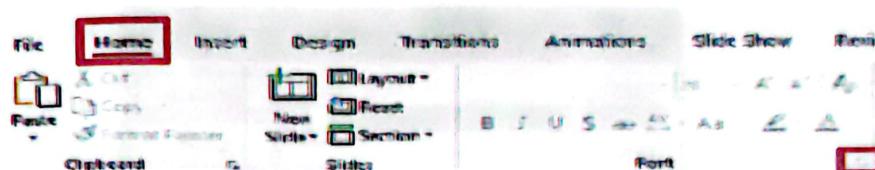
Note: When the **Illustration** box does not appear on a slide, images can still be inserted by selecting the **Insert** ribbon and then click on the **Online Pictures** button.

Slide Masters

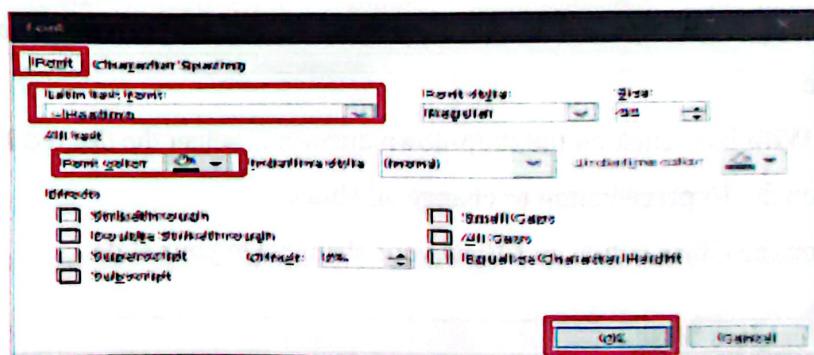
PowerPoint has a set of Master Slides available for every Design Theme. The three Masters include a **Slide Master**, **Handout Master**, and **Notes Master**. Masters correspond directly to the slides. Masters contain the elements that appear on every slide and control the format for all slides in a presentation, which provides a consistent appearance for each slide.

To modify a **Slide Master** which will affect your entire presentation, use the following steps:

- i. Change to **Slide Master View** by selecting the **View ribbon**. Click on the **Slide Master** button located in the **Master View group**
- ii. Click on the **Master Title Style** placeholder border. This will activate the entire title area.
- iii. Select the **Home tab** and then click on the **Font** show dialog box.



- iv. The Font Window will appear as shown below:



- v. Confirm that the **Font** tab is active.
- vi. In the Latin text font box, change to a different Font type.
- vii. In the Font color box, change to a different color.
- viii. Click on the **OK** button.
- ix. Select the **View ribbon tab** and then click on the **Normal** button in the **Presentation Views group**.
- x. Scroll through the slides to see how the font and color changes made in the **Slide Master** have affected the entire presentation

You can change the format appearance of text and slides in the **Slide View** as well. Formatting can be applied to all slides at the same time as in the **Master View** or only on an individual slide.

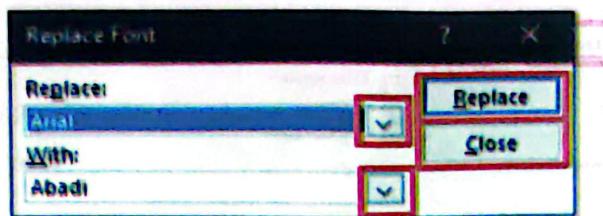
The **Replace command** is used to change the font throughout a presentation as follows:

- ✓ Go to the slide following the first slide; the first slide is usually the title page
- ✓ Click on the Text Placeholder Border

- On the Home ribbon, click on the drop-down arrow next to the Replace button, located in the Editing group, and then select the Replace Font option.



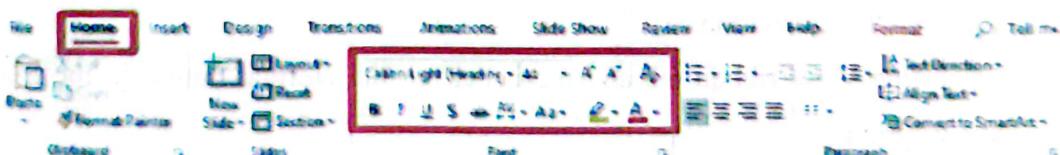
- The Replace Font window will appear.



- In the Replace box, click on the drop-down arrow and select the Font you want to replace.
- In the With box, click on the drop-down arrow and select the desired Font
- Click on the Replace button to change all slides.
- Click on the Close button and View your change. On your slide

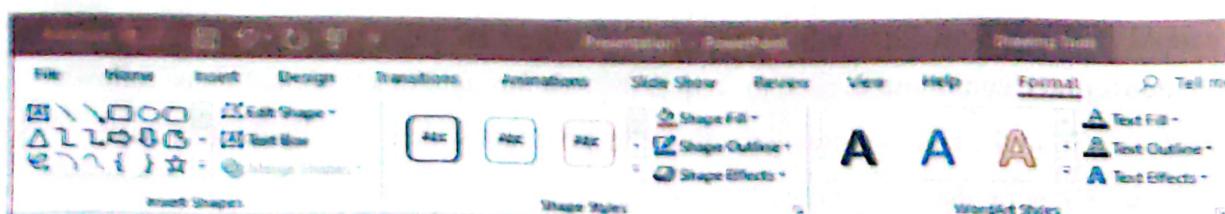
Formatting Text in a Slide

Text appears on each slide in a format consistent with the template. You can add or change any text attribute such as bold or italics on any given slide by making the change on the slide. The **Font** button commands are located on the Home ribbon in the **Font** group



You can change the Font size and colour in any slide as you desire.

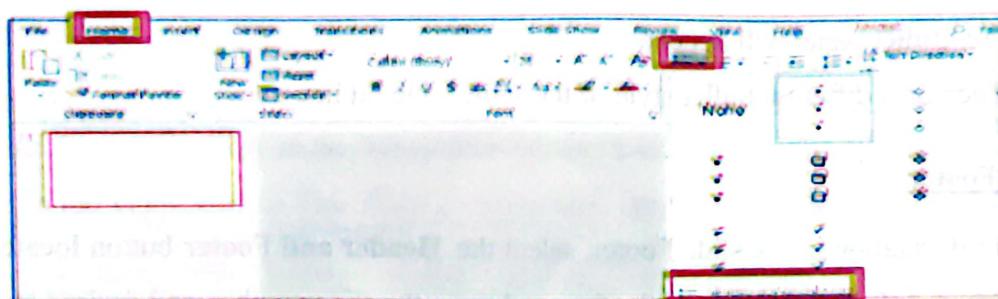
You can resize or add color and lines to a placeholder, as well as changing the text to a different style and color. On the Drawing Tools ribbon, click on the Format tab. View the different formatting options within the groups



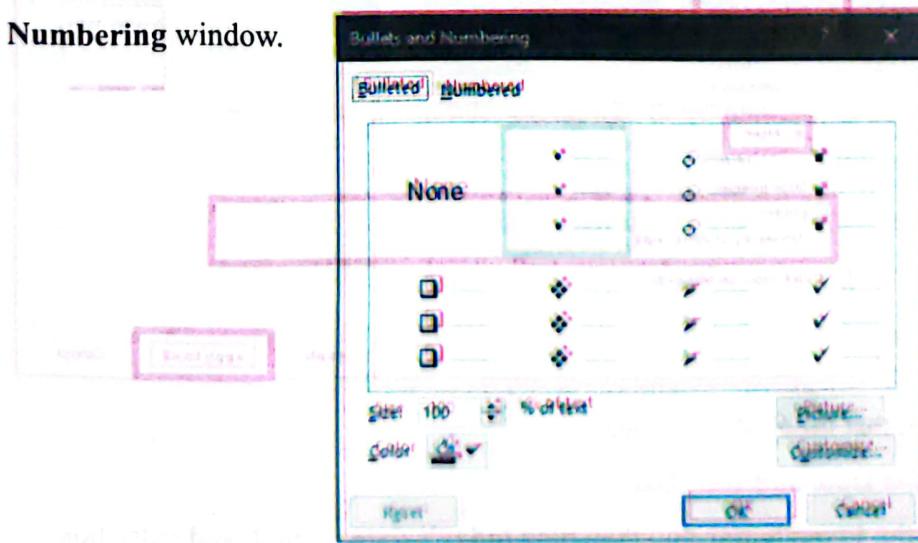
Changing Bullets - PowerPoint allows you to change the style, color, and size of bullets. You can apply the new bullet style to a single bullet, a bulleted list, or for an entire presentation. To change a single bullet, click the cursor anywhere in the line corresponding to the desired bullet. To change multiple bullets/lines, use the mouse to select the bulleted items you want to change, or select the Text Placeholder to change all bullets within the placeholder.

For example, we can change the bullet of our previous example:

- ✓ Click anywhere in the first line of Computer-based training (CBT).
- ✓ Select the Home tab, click on the drop-down arrow next to the Bullets button.
- ✓ The Bullets panel will appear and then you have the option to select one of the bullet styles that appear.

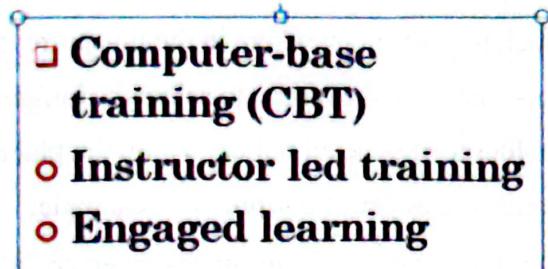


- ✓ More bullet options are available by clicking on the **Bullets and Numbering** option, located at the bottom right-hand side of the window (On the **Bullets and Numbering** window, you have **Bulleted** and **Numbered** tab choices.).
- ✓ The **Picture** and **Customize** buttons will appear on the bottom of the **Bullets and Numbering** window.



- ✓ Clicking on the **Picture** button provides an array of picture bullets to select. Clicking on the **Customize** button will allow you to choose a variety of **Symbol** windows with each window having multiple symbols to select as bullet options.

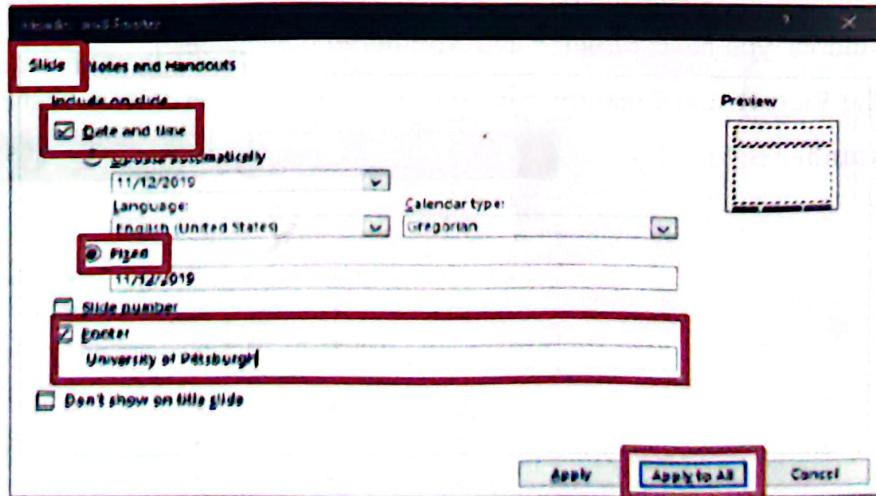
- ✓ In our exercise you will select a square-shaped bullet style and then click **OK**.
- ✓ Notice that the bullet is changed only in one line



- ✓ Change the bullet style for the remaining lines of text by selecting the desired indented lines of text.
- ✓ Select the **Home** tab, click on the drop-down arrow next to the **Bullet** button.
- ✓ The **Bullet** panel will appear.
- ✓ Click on a different bullet style or the same style on line one

Adding Footer

To insert information in the slide Footer, select the **Header and Footer** button located on the **Insert** ribbon. Information such as the date and time, the slide number, and desired text can be inserted on the Footer of the slides. The screenshot of the Header and Footer window is shown here:



- ✓ Confirm that the **Slide** tab is active.
- ✓ Select the **Date and time** box.
- ✓ Select the **Fixed** button and then type **today's date** in the **Fixed** entry box.
- ✓ Select the **Footer** box and then type **University of Pittsburgh** in the **Footer** entry box.

- ✓ Click on the **Apply to All** button. This will enable all slides to have the new information

Note: Once you select Date and time, you must select either the **Update automatically** or **Fixed Box**

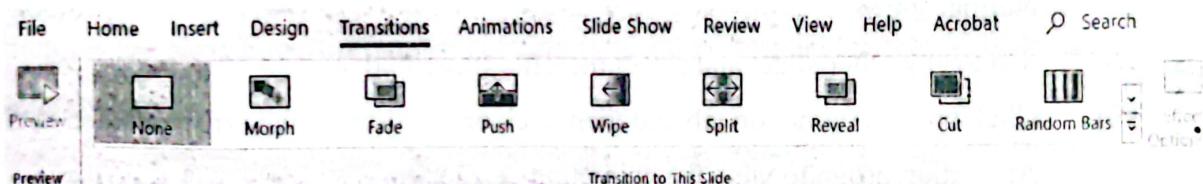
Transition and Animation

PowerPoint allows you to apply special effects by using slide transition and text/graphical animation to make your presentation more visually appealing.

Slide Transition - Transitions are visual special effects that you see when you move from one slide to the next. Working in Normal or Slide Sorter Views allows you to set transitions for a slide. The Transition ribbon allows you to apply slide transitions.

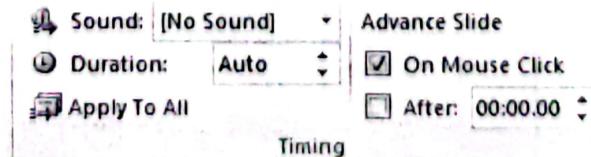
To apply slide transition:

- i. Go to the first slide, Click on the **Transition** tab and then click on the drop-down arrow located in the **Transition to This Slide** group to view the transition categories.



- ii. In the **Exciting** section, select any of the transitions. The active slide will demonstrate this effect as you make your choice. Click on the **Preview** button located on the **Transition** ribbon to demo the effect again.
- iii. To apply your selection to all slides, click on the **Apply to All** button, located in the **Timing** group.
- iv. Notice the **transition indicator icon** on the left-hand side of the thumb print slide in Normal View.

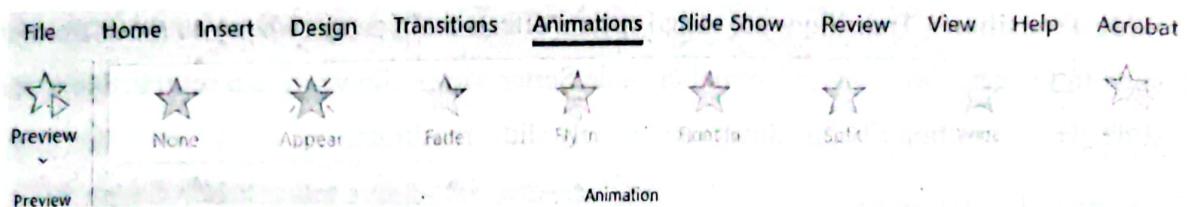
Note: You can also apply sound and timing speed to the selected transition from the **Timing** group located on the **Transition** ribbon. Click on the drop-down arrow in the **Sound** box to choose a sound. Click on the up or down arrow in the **Duration** box to set the timing on the transition.



Text Animation - Bulleted text animation refers to the progressive display of bulleted items. Bulleted items, by default, appear at the same time on a slide. When text animation is applied,

bulleted list items can appear on the slide one at a time or can have motion as they display on the screen. Select the Animation ribbon to apply animation to slide text. The steps to apply text animation are:

- i. Confirm that you are in Normal View (View, Normal).
- ii. Go to the second slide.
- iii. Click inside the Text Placeholder and select the text area.
- iv. Click on the Animation tab and then click on the drop-down arrow located in the Animation group to view the animation categories.

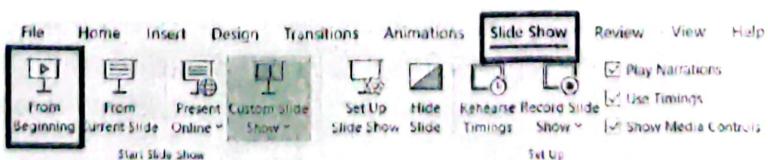


- v. In the Entrance section, click on any of the effects.
- vi. Notice the animation indicator icon on the left-hand side of the thumb print slide in Normal View.
- vii. Go to any other slide, and select the Title Placeholder.
- viii. Click on the Animation tab and then click on the drop-down arrow located in the Animation group to view the animation categories.
- ix. In the Entrance section, click on an animation of your choice

Note: You can apply timing to or delay the speed of the selected animation from the Timing group located on the Animation ribbon. Click on the up or down arrow in the Duration or Delay box to set the timing or delay on the transition.

Slide Show

Once you have finished adding text, graphics, and formatting to a presentation, then you can run the Slide Show. PowerPoint allows you to preview, rehearse, or show your presentation electronically to an audience. Display the presentation on-screen by selecting the **Slide Show** ribbon and then click on the **From Beginning** button. The Slide Show will begin with the first slide



Note: The Slide Show button on the Option Views bar will start the slide show beginning with the current slide.

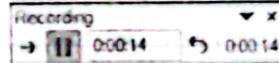
Navigating the Slide Show - When running your slide show, advance to the next slide by clicking with your mouse, pressing the right arrow on the keyboard, or pressing the Enter key. To return to the previous slide, press the left arrow on the keyboard. To end the presentation, press the Esc key on the keyboard.

Setting Automatic Timing - You can set timing for each of your slides in a presentation, so that you do not have to manually advance to the next slide by using the mouse button or arrow keys. Follow these steps:

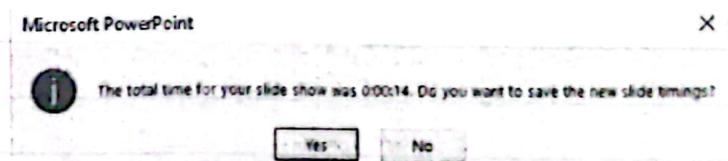
- i. Select the Slide Show ribbon and then click on the Rehearse Timing button to set slide timing.



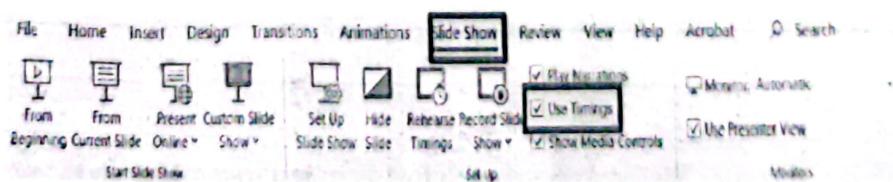
- ii. A Recording window will appear, so that you can track the time on each slide while rehearsing.



- iii. Click on the Next button on the Recording window when you are ready to advance to the next slide.
- iv. When you reach the end of the slide show the Microsoft PowerPoint window will appear.



- v. Click on the Yes button to accept the timings or No button to try again.
- vi. Once the Recording is set for your presentation, it will show on-screen automatically every time you launch your slide show.
- vii. If you choose to show your presentation without timing, select the Slide Show ribbon and then deselect the Use Timings box.



EXERCISE THREE:

3. Study the Ribbon of Microsoft PowerPoint 2019 and answer the following questions:

- a. How many tabs are there? 14
- b. How many groups are there on the View tab? 7

- c. Which tab contains the most commonly used groups and commands? *Home Tab*
- d. What is another name for the File tab?

4. On what tab are the following groups found:

- a. Timing _____
- b. Set Up _____
- c. Zoom _____
- d. Advanced Animation *Animation* _____
- e. Background _____

5. How will you create a presentation in Microsoft PowerPoint 2019 using a template

6. How can you add your passport photograph that is stored in a folder on the desktop of your laptop to slide 5 of your presentation:

7. Create a PowerPoint Presentation on the topic "The Role of ICT in Technological Development." Your presentation should not be more than 7 slides. Adopt any formatting styles, including slide transition and animation, of your choice. Save the presentation in your laptop and forward same to this email address: edwardudo@uniuyo.edu.ng

Write down the steps you followed to create the presentation:



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DESIGN + PRINT

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