

# Inside Microsoft Office

## ► Session 01

Getting Started with  
Windows 10



For Aptech Centre Use Only

# Objectives

- Explain Windows 10 and its editions
- Describe the features of Windows 10 operating system

# Introduction

- Windows 10 is Microsoft's personal computer Operating System (OS) released to consumers on 29 July 2015.
  
- This latest version of Windows OS system introduced 'universal apps', apps that are developed to work on smartphones, personal computers, video game consoles, and HoloLens.



# Features in Windows 10

- ▶ Windows 10 OS provides features that are useful in several ways:

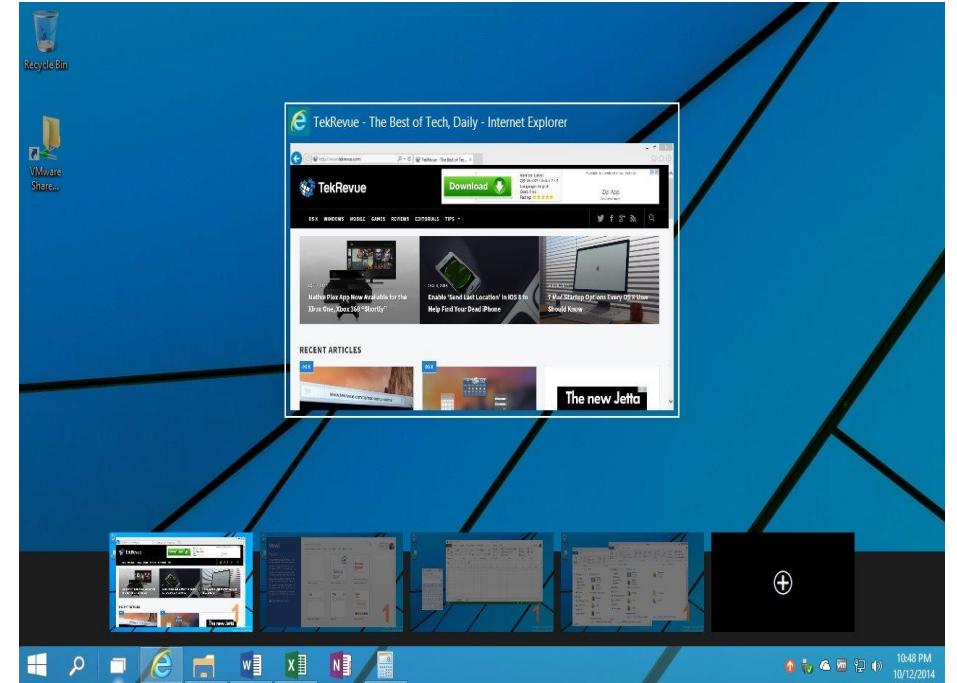
A touch-optimized interface Windows Assistant

All notifications in one location

Improved Windows Explorer

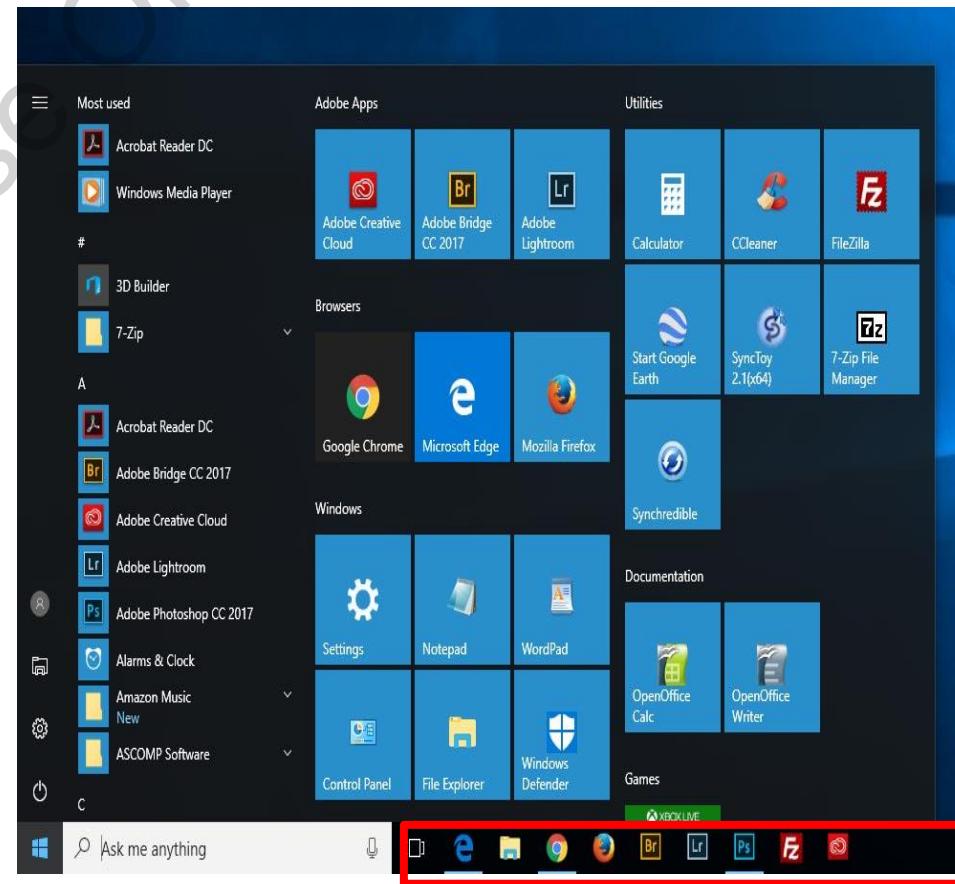
Phone Addition

Multitasking and so on



# Windows 10 - Taskbar

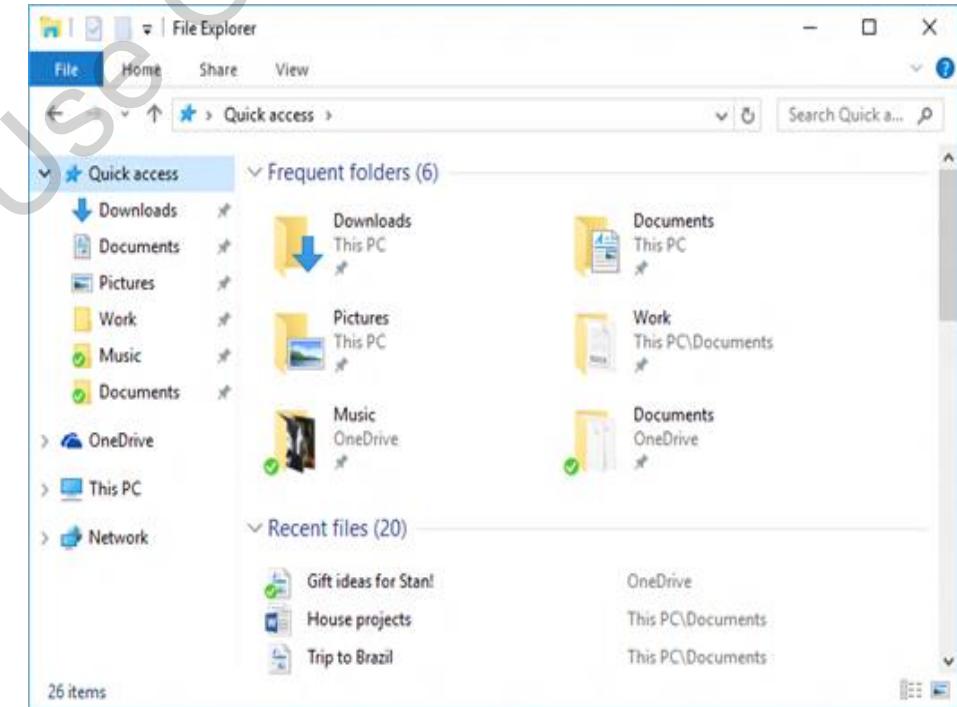
- ▶ Taskbar lists frequently accessed applications and notification area.
- ▶ Desktop displays icons of various applications, documents, and other programs.
- ▶ These icons allow quick access to the application they represent.



Taskbar

# Windows 10 - File Explorer

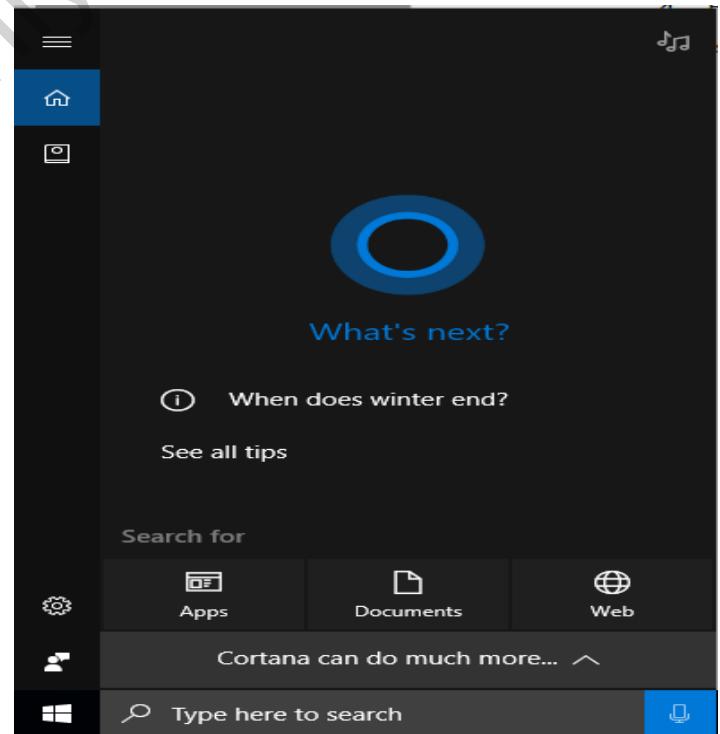
- ▶ File Explorer is a file management application.
- ▶ It allows the user to navigate to all other folders and documents stored in the computer.
- ▶ File Explorer lists three menus, Home, Share, and View.



File Explorer

# Windows 10 - Cortana

- ▶ Cortana is Microsoft's personal productivity assistant that helps you save time and improve focus.
- ▶ To use Cortana, either type a question in the search box in the Taskbar or click Microphone icon to provide sound input to Cortana.



Cortana

# User Management

User accounts are of two types:

## **Administrator account:**

- Is specifically used in an organizational setup.

## **General user account:**

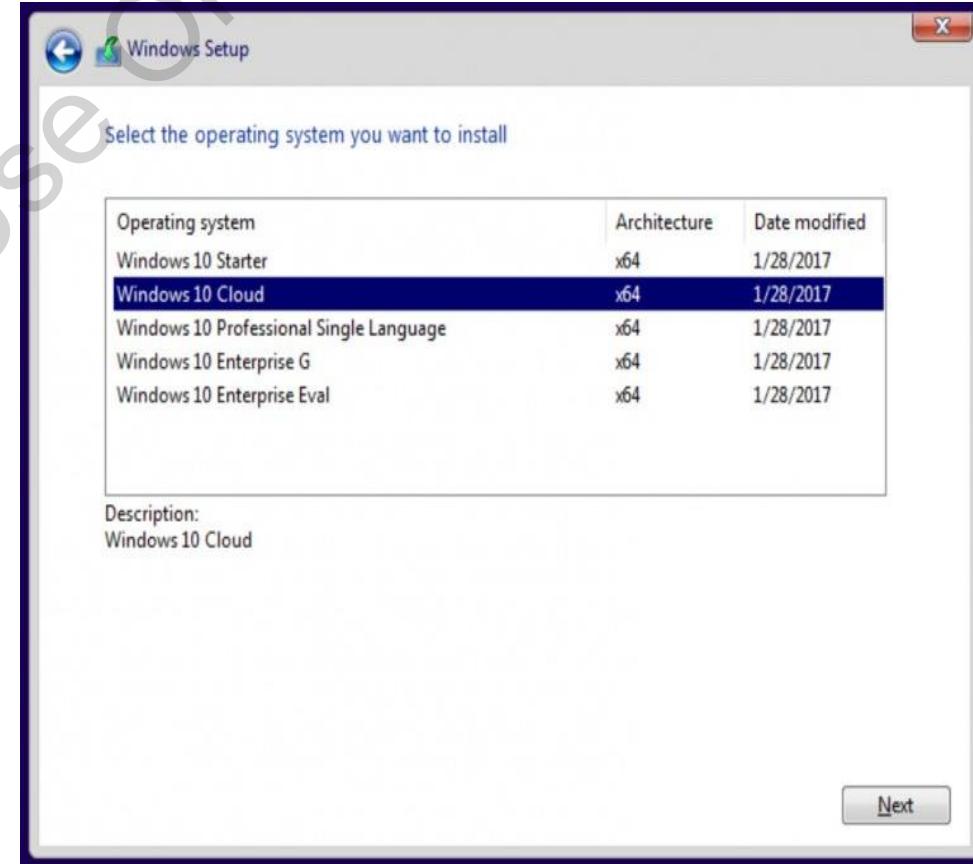
- Refers to any user whose account is created by the system administrator to log in to the PC.



**Windows 10 Desktop with Admin User Account**

# Windows Cloud

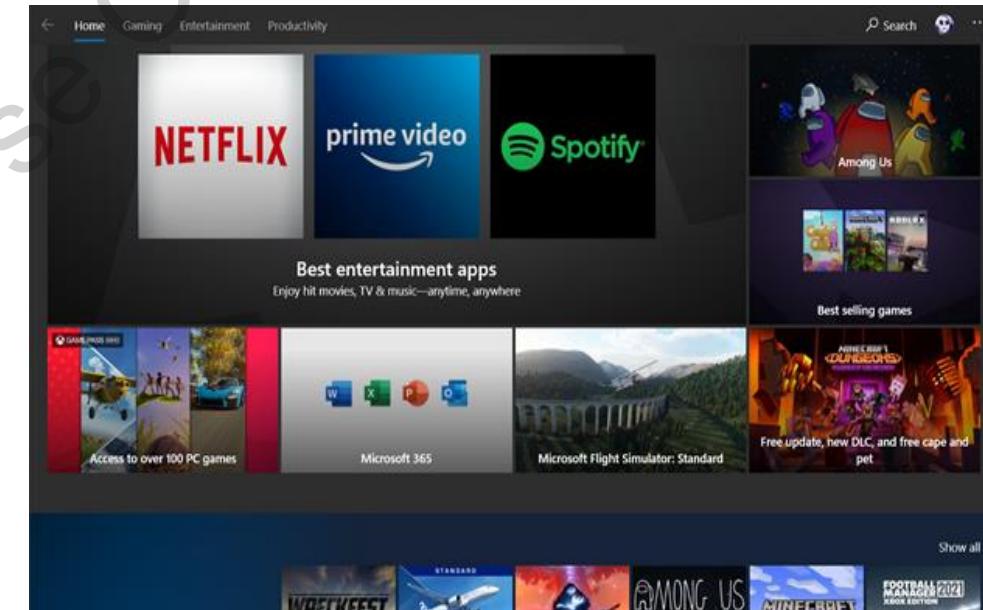
- ▶ Allows only authenticated users to gain access and use resources provided by them.
- ▶ Provides total security of users details such as password, data/file sharing, or any kind of activity performed by the user. Integrity and reliability are also taken care of.



**Windows 10 Cloud**

# Universal Apps

- ▶ Universal apps were made available and applicable across all Microsoft platforms.
- ▶ Users can access Windows or Microsoft store by clicking the Window Store icon on the Taskbar.



**Universal Windows Apps**

# Web Browsing

- ▶ With Windows 10, Microsoft launched its new Web browser, called Edge.
- ▶ Users can access Microsoft Edge by clicking the e icon on the Taskbar or through the Start menu.



**Microsoft Edge in Start menu**

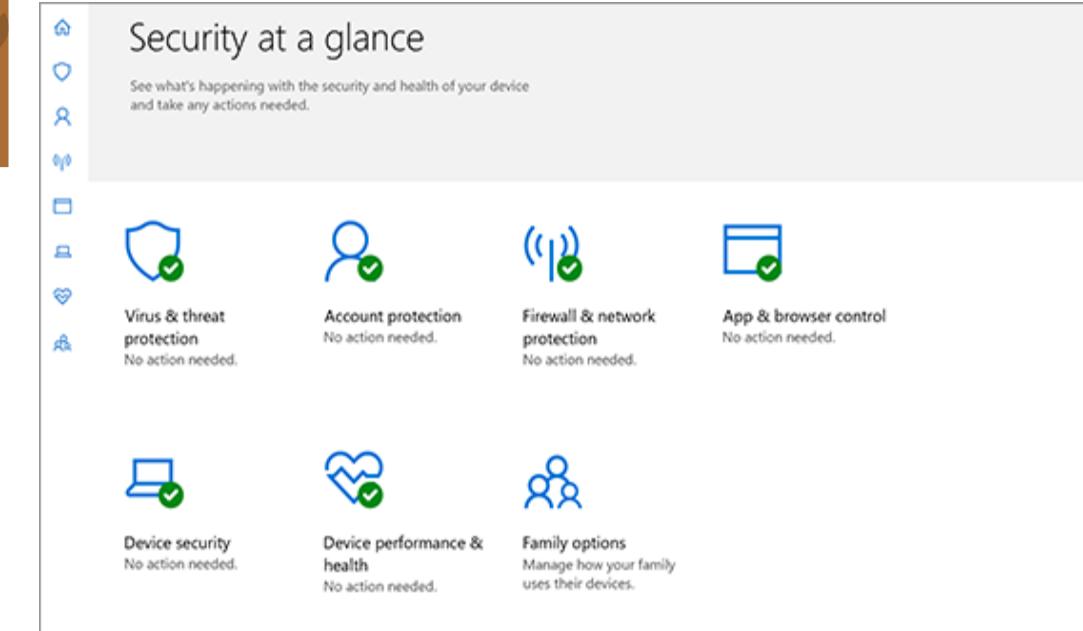
# Security

- ▶ Windows 10 uses following three security tools:

1. User account control

2. Windows firewall

3. Windows defender



**Security for Windows 10**

- ▶ Windows 10 is Microsoft's personal computer operating system and is a part of the Windows NT operating system family.
- ▶ Microsoft made Windows 10 available free-of-cost to registered users of Windows 7 and Windows 8.1 operating systems.
- ▶ Windows 10 operating system is available in 12 editions, with each edition has a specific set of features, and can be installed on a specific device.
- ▶ Editions of Windows 10 operating system are classified as Baseline edition, Organizational edition, and Device-specific edition
- ▶ The Start menu has two panes, left pane is the traditional menu from Windows 7 and the right pane is the tiled menu taken from Windows 8 operating system. The tiled menu of the right lists frequently used applications along with some live updates, such as location, weather, social media updates, day and date, to name a few.
- ▶ Prominent features of Windows 10 in addition to the all-encompassing Start menu are namely, Multi-tasking, Windows assistant (Cortana), ACTION CENTER, Improved Windows Explorer, and Phone set up with PC.

- ▶ Cortana is Microsoft's intelligent personal assistant tool. This tool is available on the PC running Windows 10, Windows phone or Xbox.
- ▶ Microsoft allows its legitimate or registered users to access storage on cloud. If the Microsoft users have a Microsoft account, they can use it to access Microsoft Cloud storage called One Drive.
- ▶ To make the Microsoft apps universal, Microsoft launched the Universal Windows Platform (UWP) and modified the Windows app store to serve as a single store for all Microsoft apps.
- ▶ With Windows 10, Microsoft launched its new Web browser, called Edge. Users can access Edge by clicking the e icon on the Taskbar.

# Inside Microsoft Office

## ► Session 02

### Introducing Microsoft Office 2019



For Aptech Centre Use Only

# Objectives

- List and explain components of Office 2019
- Describe the new features of Office 2019

# Getting Started with Office 2019 [1-2]

## ► Microsoft Office:

- Group of client software, server software, and services developed by Microsoft.
- Collection of office-related applications.
- Latest version is Microsoft Office 2019.

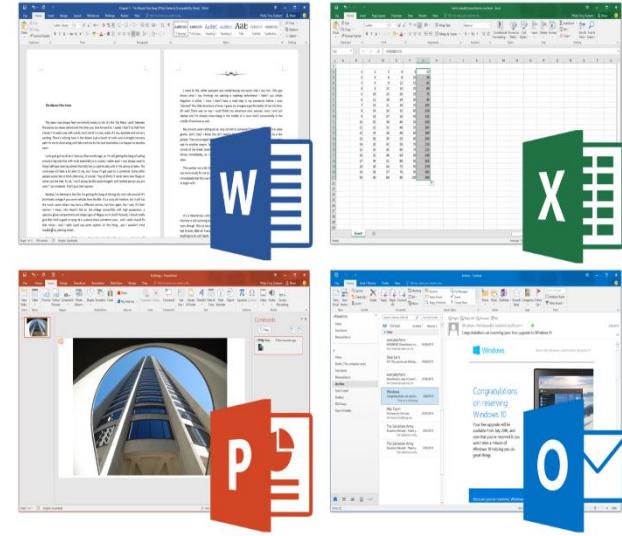
## ► Office 2019 editions allows the use of Microsoft Office application, such as Microsoft Word, Microsoft Excel, and many more, on following systems:

- Mac operating system
- iOS
- Android
- Windows 10



# Getting Started with Office 2019 [2-2]

- ▶ Office 2019 is sold as a one-time purchase.
- ▶ Office 2019 plans include full versions of:
  - Word
  - Excel
  - PowerPoint
  - Outlook
- ▶ Office 2019 includes full support for the cloud hence, users will have access to their documents stored in the cloud any time anywhere they want to access them.



According to Microsoft,  
over a billion people  
use their Office  
products all over the  
world.



# Office 365

- ▶ Is Cloud-based version of Microsoft Office.
- ▶ Is offered as an online Software as a Service (SaaS) product.
- ▶ Is based on a subscription model.
- ▶ Contains the same core applications as on-premises versions of Office, including Word, Excel, PowerPoint, Outlook, OneNote, and depending on the plan purchased, may also comprise other apps and services.



# Exploring Microsoft Office

[1-2]

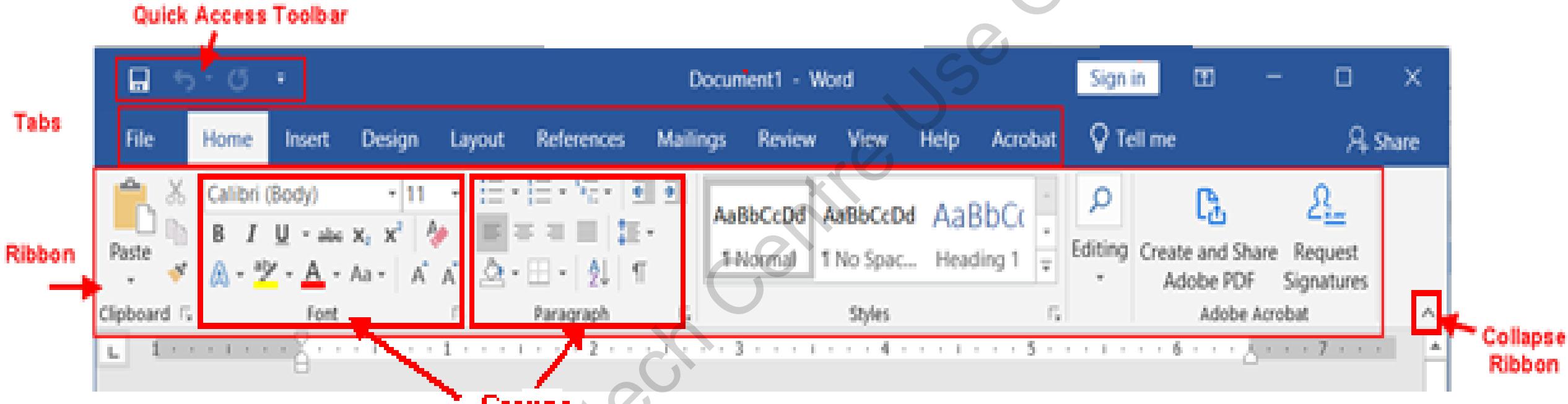
- ▶ A Ribbon helps users identify, locate, understand, and use commands efficiently and directly with least number of clicks.
- ▶ A Ribbon is a command bar and organizes a program's features into a series of tabs at the top of a window.
- ▶ Each tab on a Ribbon is composed of groups, which in turn are a labeled set of closely related commands.
- ▶ In addition to tabs and groups, other components on a Ribbon include:

<b>Quick Access Toolbar</b>	Comprise frequently used commands.
<b>Core tabs</b>	Are tabs that are always displayed.
<b>Contextual tabs</b>	Are tabs displayed only when a specific object type is selected.
<b>Dialog box launchers</b>	Are buttons at the bottom of some groups that open dialog boxes containing features related to the group.

# Exploring Microsoft Office

[2-2]

## Ribbon



# What is New in Office 2019?

Add visual impact

Break the language barrier

LaTeX equation support

Add motion with Morph

Zoom for PowerPoint

Slide Shows with Digital Pen

Draw and write with ink in Office 2019

Write, draw, or highlight text

Accessibility Checker

Use Office Sounds

# Understanding Office 2019 Editions

[1-2]



# Understanding Office 2019 Editions

[2-2]

## **Office Home & Business 2019**

One-time purchase for one PC or Mac  
Classic 2019 versions of Word, Excel, PowerPoint, and Outlook  
Microsoft support included for 60 days at no extra cost  
Licensed for home and commercial use  
  
All languages included.  
Compatible with Windows 10 or macOS\*

## **Office Home & Student 2019**

- One-time purchase for one PC or Mac
- Classic 2019 versions of Word, Excel, and PowerPoint
- Microsoft support included for 60 days at no extra cost
- Licensed for home use

All languages included.  
Compatible with Windows 10 or macOS\*

## **Office Professional 2019**

One-time purchase for one PC  
Classic 2019 versions of Word, Excel, PowerPoint, and Outlook, plus Publisher and Access  
Microsoft support included for 60 days at no extra cost  
Licensed for home and commercial use

All languages included.  
Compatible with Windows 10\*

# Summary

- ▶ Microsoft Office 2019 is a collection of various applications and professional services, such as Microsoft Word, Microsoft Excel, Microsoft PowerPoint, and Microsoft Outlook.
- ▶ Microsoft Translator is useful to translate words, phrases, and other text selections to another languages.
- ▶ Morph feature of PowerPoint achieves smooth animations, transitions, and object movements across your slides.
- ▶ Inking options are used to ink shapes, write out complex math problems, and highlight text.
- ▶ Accessibility checker now supports international standards and display handy recommendations.
- ▶ You can now create math equations in Office 2019 using LaTeX syntax.
- ▶ Microsoft Office 2019 is offered in three major editions namely, Office Home & Business 2019, Office Home & Student 2019, and Office Professional 2019.

# Inside Microsoft Office

## ►Session 03

### Working with Microsoft Word – Part 1



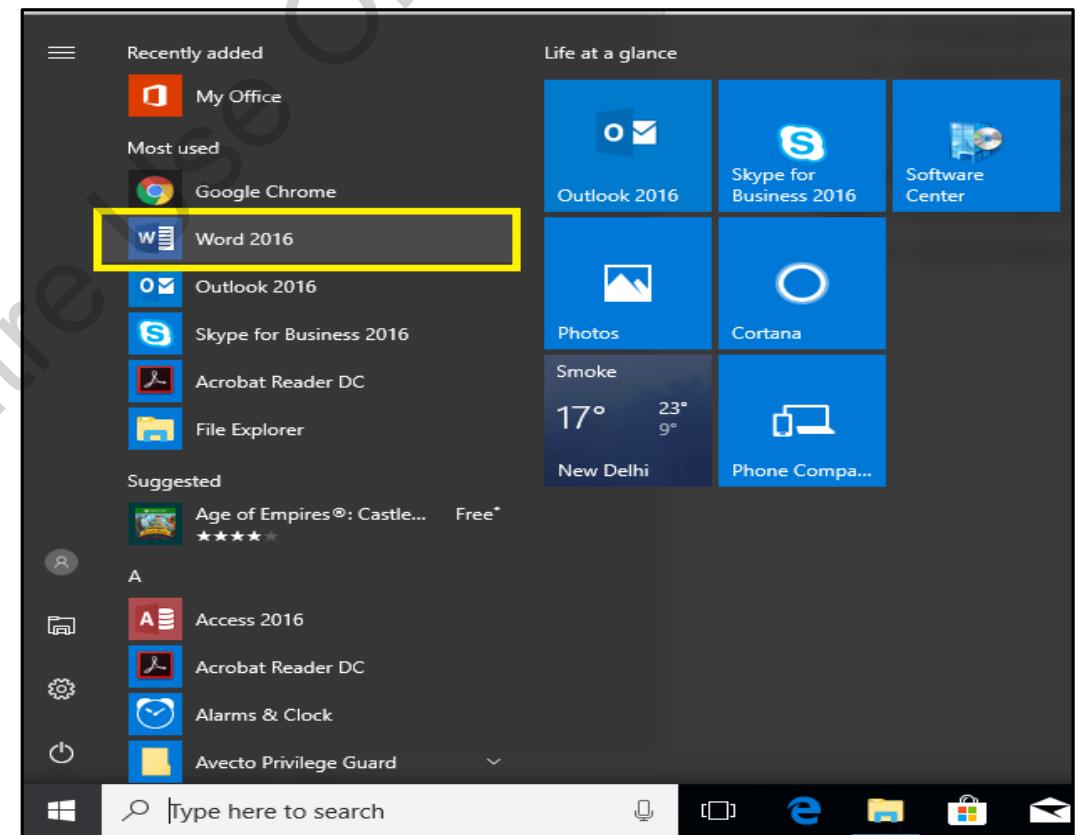
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# Objectives

- ▶ Explain MS Word 2019 interface
- ▶ Describe how to create professional documents in Word
- ▶ Explain how to work with lists and tables in Word

# Getting Started with Word 2019 [1-2]

- ▶ Microsoft Word is a document editor and is widely used application for creating and editing documents.
- ▶ It is a component of Microsoft suite and comes along with Microsoft Office suite.

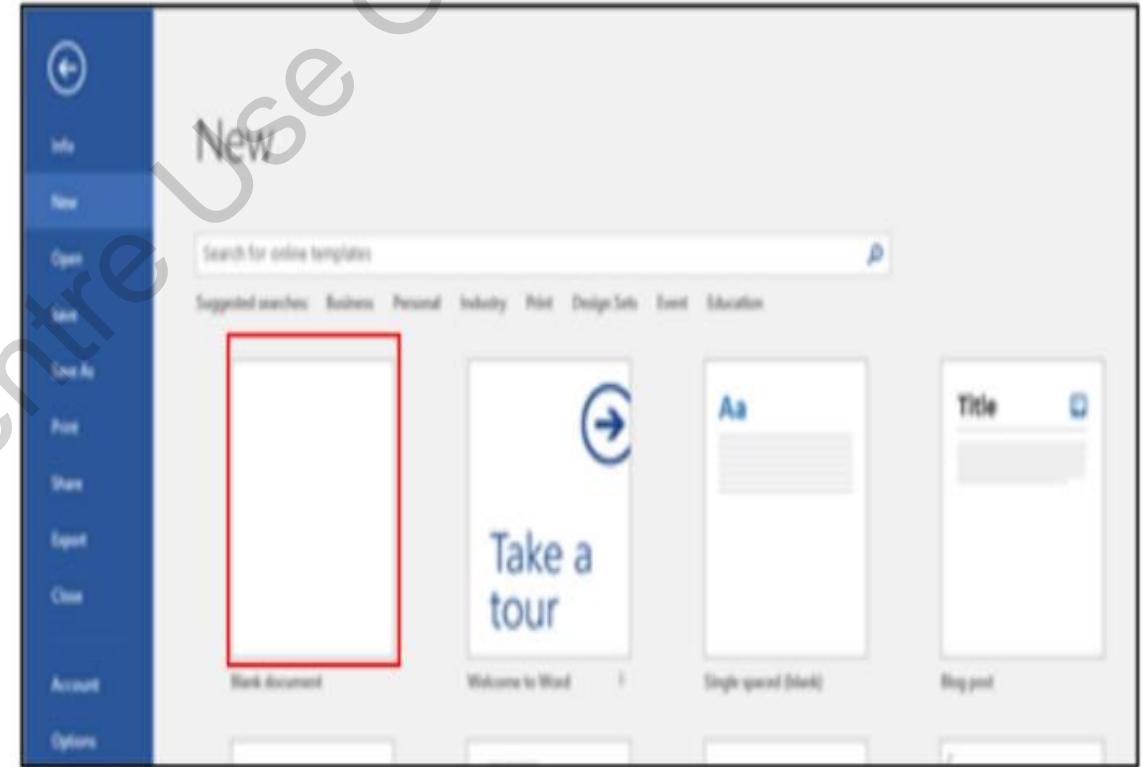


Microsoft Word

# Getting Started with Word 2019 [2-2]

## ► Word 2019 helps you:

- To create and format documents using themes
- Review work with Track changes
- Polish your words with proofing tools similar to Editor
- Save to OneDrive, so that you can access documents from Desktop/Tab
- Share your work to chat, comment, and collaborate with others.



MS Word 2019 Interface

# Understanding the Word 2019 Interface [1-2]

- It is important to understand the basic features of MS Word 2019 in order to create and work with the document.

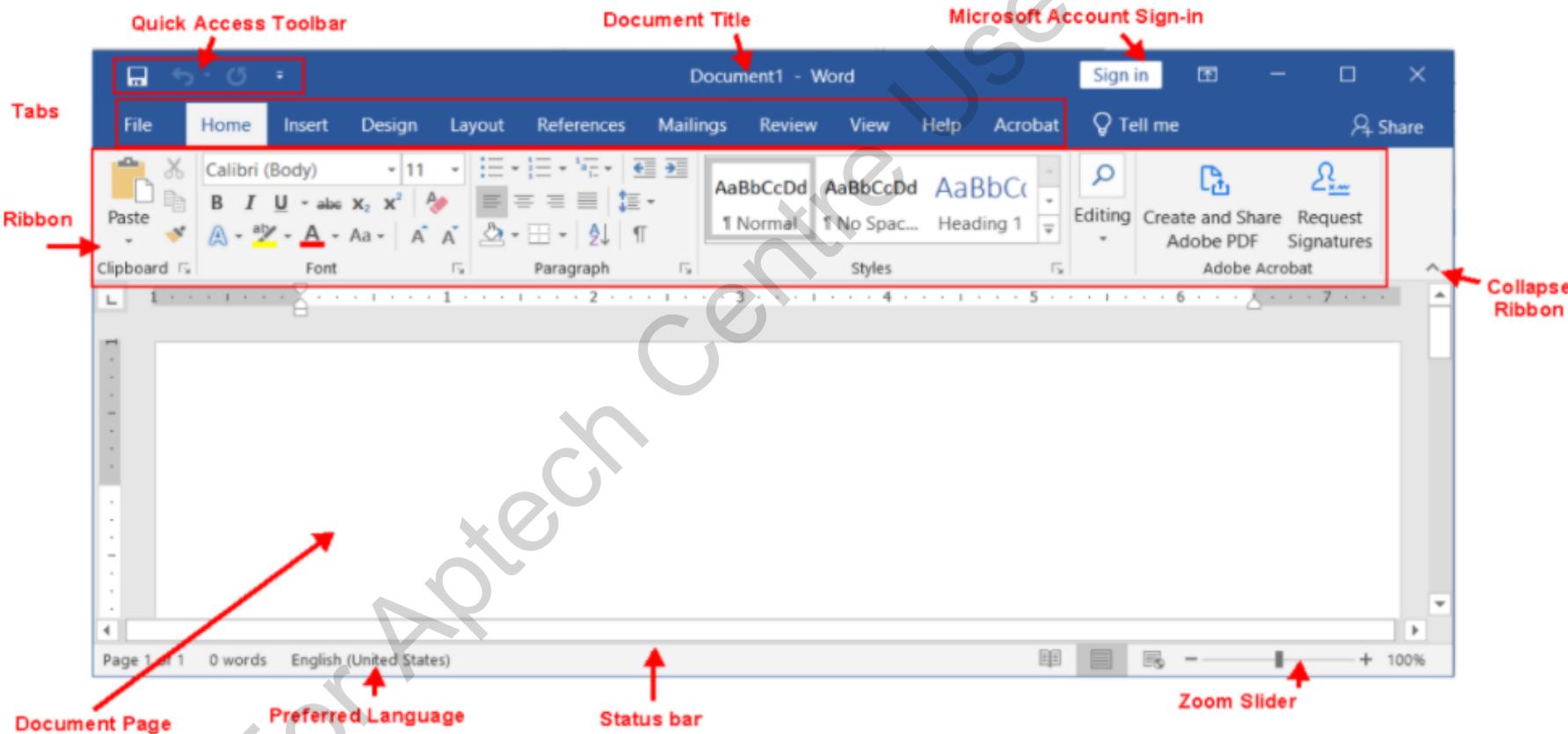


Figure 3.3: Adding Text

# Understanding the Word 2019 Interface [2-2]

- ▶ Key elements of MS Word Interface:

Ribbon

Quick Access  
Toolbar

Document  
Title

Share

Tell me what  
you want to  
do

Status Bar

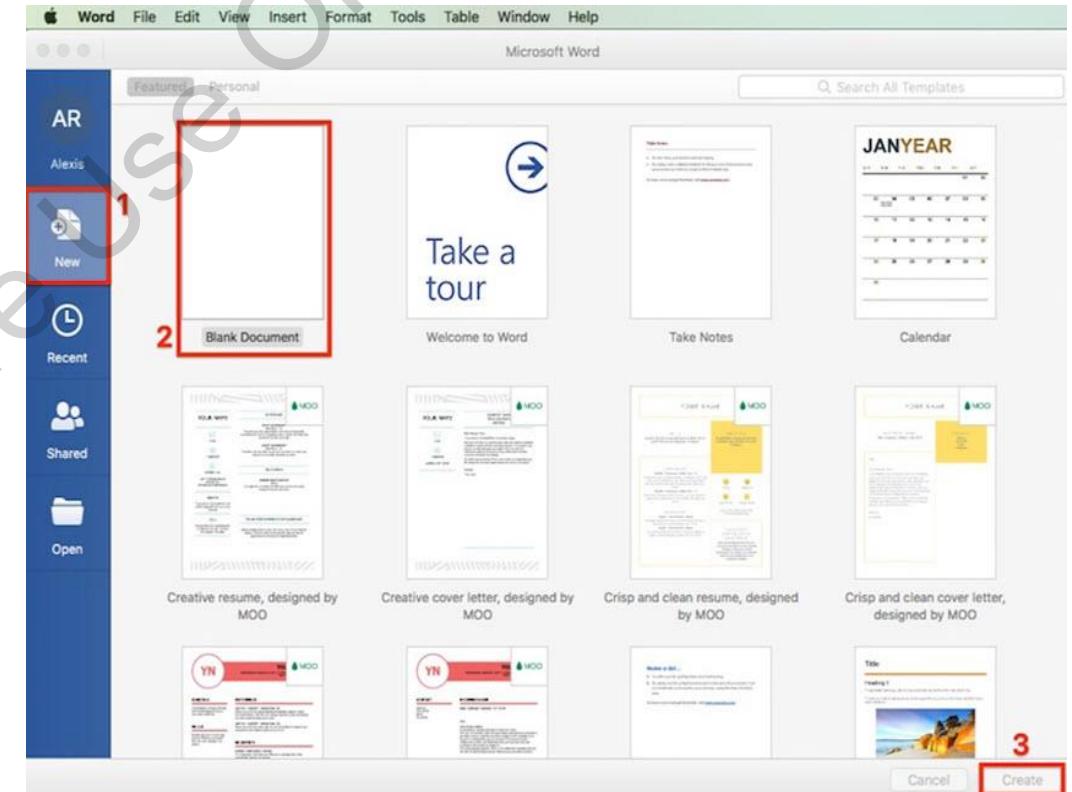
Zoom  
Controls

Document  
Area

Scales

# Creating Professional Documents

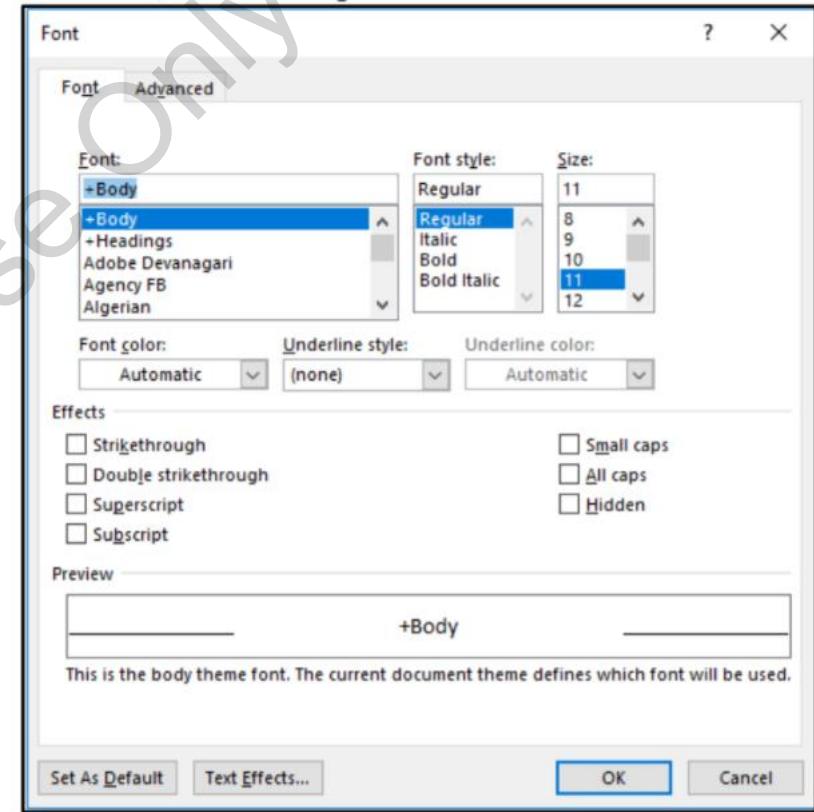
- ▶ A user can easily learn to create professional looking documents that may be required for school work or any other important tasks.
- ▶ After launching MS Office, user is presented with in-built templates to choose from along with an option to create a blank document.



Work templates

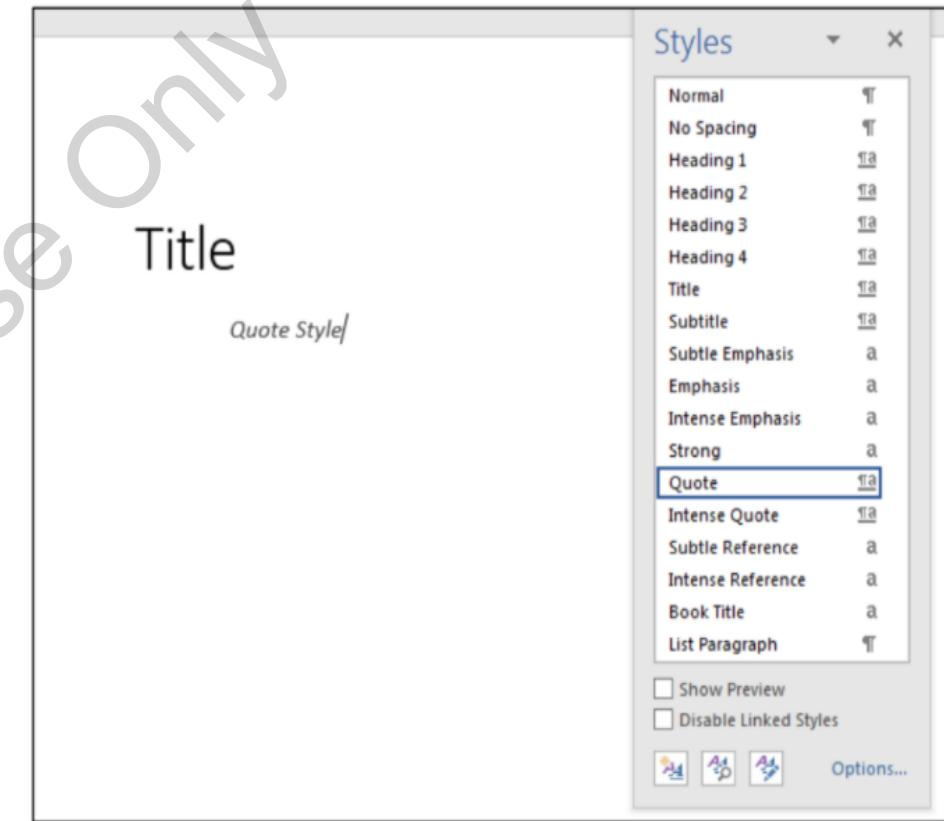
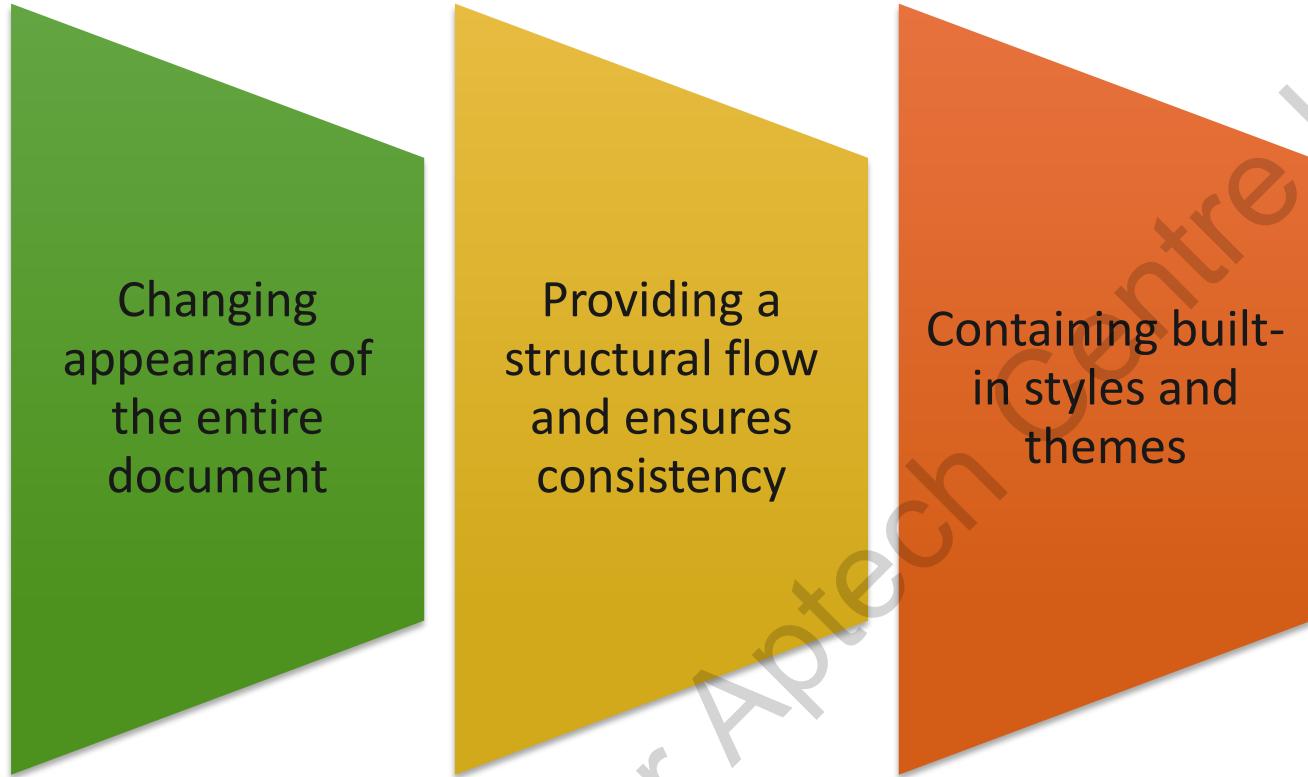
# Working with Text

- ▶ **Text box command** - Inserts a text box and adds text into it.
- ▶ It includes the following:
  - Replace text
  - Format text
  - Copy formatting
  - Applying fonts



**Working with text**

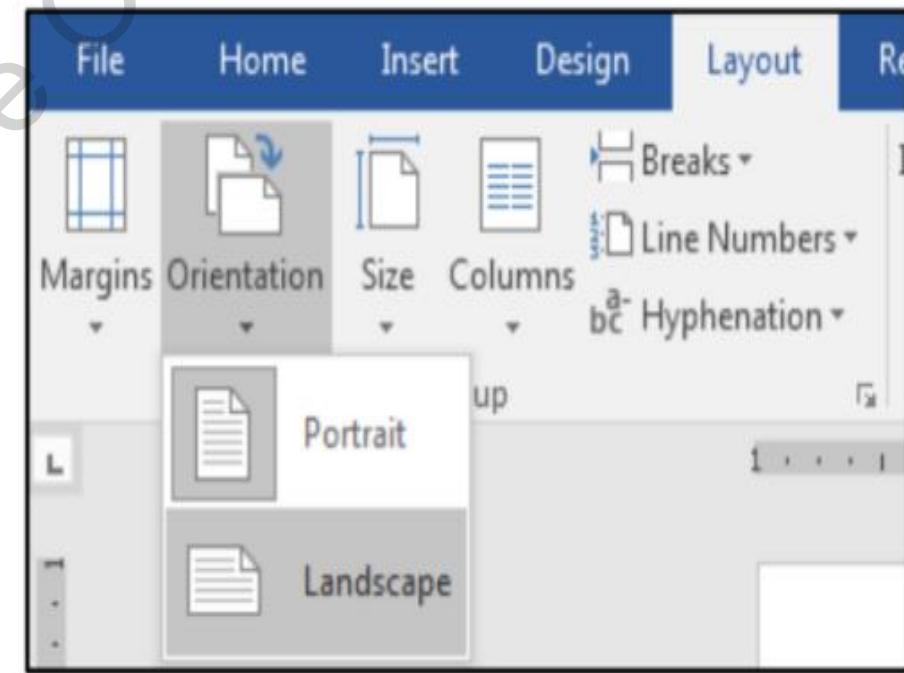
# Working with Styles



**Styles and formatting example**

# Applying Page Layouts

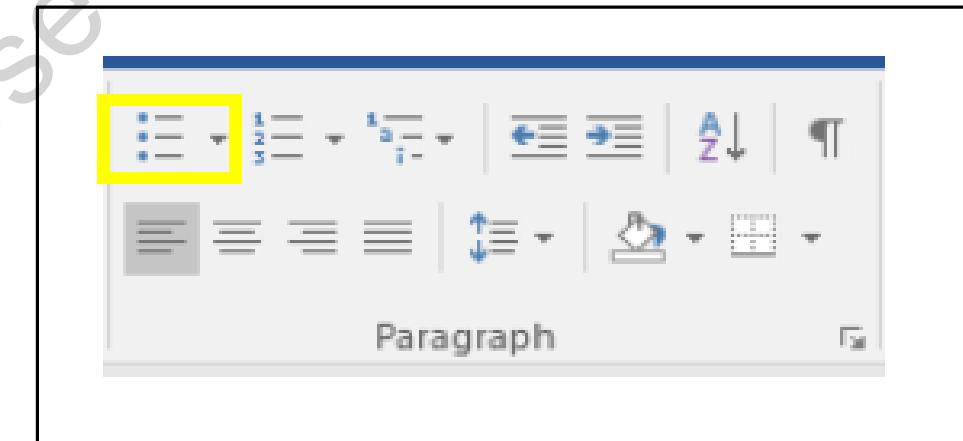
- ▶ Page Layout helps in defining orientation with respect to the following:
  - Document Themes
  - Line Numbers
  - Document Margins
  - Indenting Paragraphs
- ▶ Page layout also helps in adjusting line spacing, watermarks.



**Orientation command**

# Creating Lists

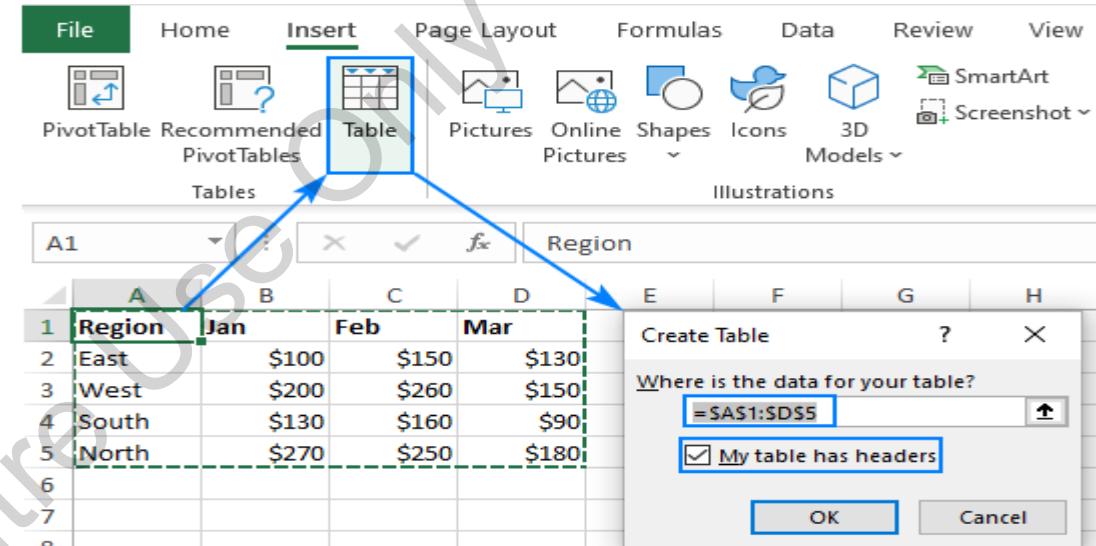
- ▶ Microsoft allows users to understand the meaning of how to create lists and its various forms in which the lists can be created and used.
  
- ▶ **Bulleted list** and **Numbered list** are the two important types of list.
  - The symbol used for Bulleted list is a small dot and that for the Numbered is in sequential numeric format.



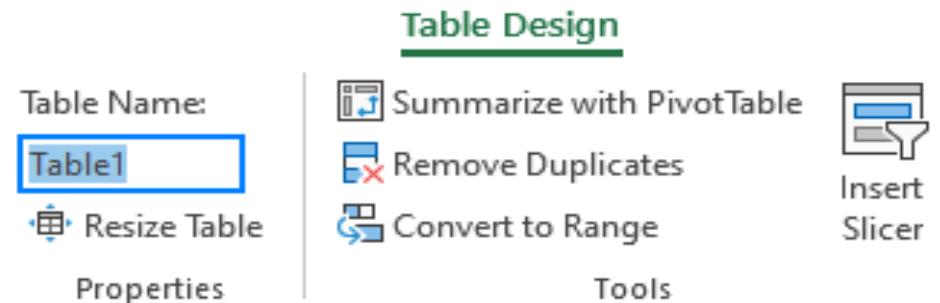
**Bullet and Numbered lists**

# Creating Tables [1-2]

- ▶ Creation of table includes the following operations such as Insert, Delete, or change a table.
- ▶ A **table** is made up of rows and columns. The intersection of a row and column is called a cell.
- ▶ **Tables** are often used to organize and present information, but they have a variety of other uses as well.
- ▶ You can use **tables** to align numbers in columns and then sort and perform calculations on them.



Creating Tables



Designing a table

# Creating Tables [2-2]



Table Dialog box

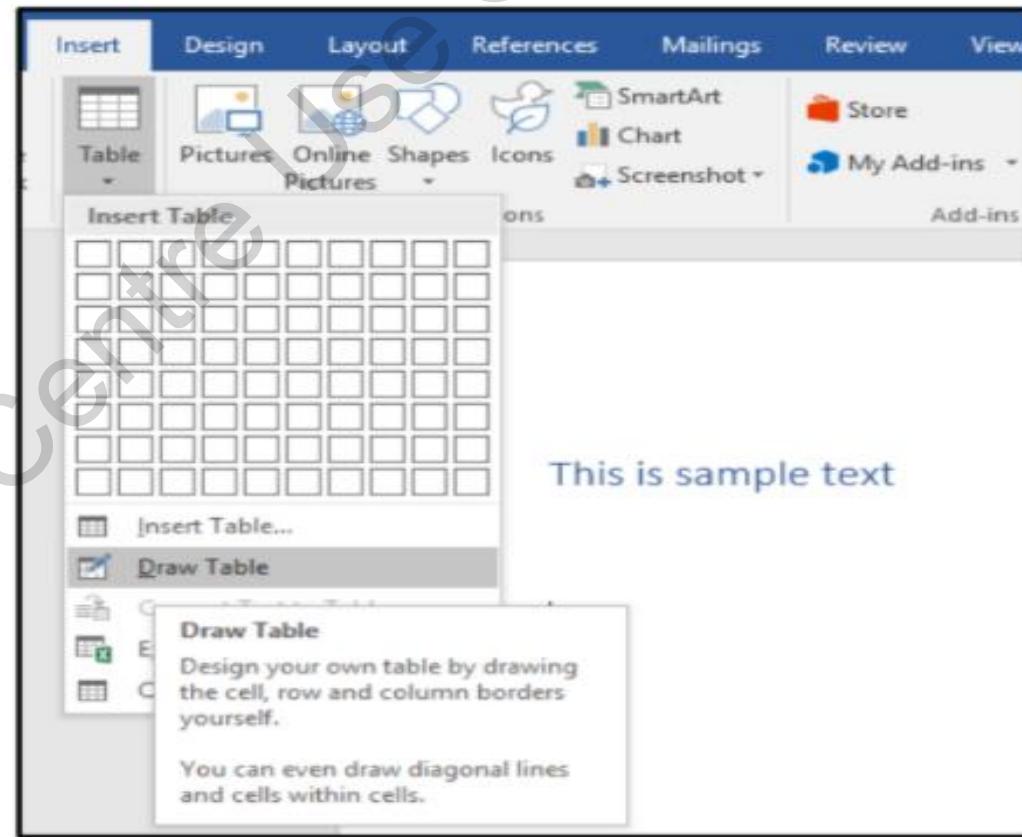


Table Command

# Summary

- Microsoft Word is a document editor and is widely used application for creating and editing documents.
- Microsoft Word is designed in such a way that user can easily start creating a document either through a template or by simply typing in a blank document.
- Various commands available in Microsoft Word are categorized into groups and each group consists of a set of specific commands. The groups are displayed in the Ribbon, which appears at the top of the document area in the new Word document window.
- Styles are typically used to provide a structural flow of a document and ensure consistency across the document for heading, sub-headings, and text.
- Page layout defines the orientation of a page, the layouts are of two types: Portrait or Landscape.
- Microsoft Word allows users to include lists, both numbered and non-numbered or bullet lists in a document.
- A table contains horizontal rows and columns and the details are stored in the cells. Cells are the units that are formed when rows and columns intersect.
- Tables are an extremely useful and easy way to organize and display information in a document.

# Inside Microsoft Office

## ► Session 04

### Working with Microsoft Word – Part II



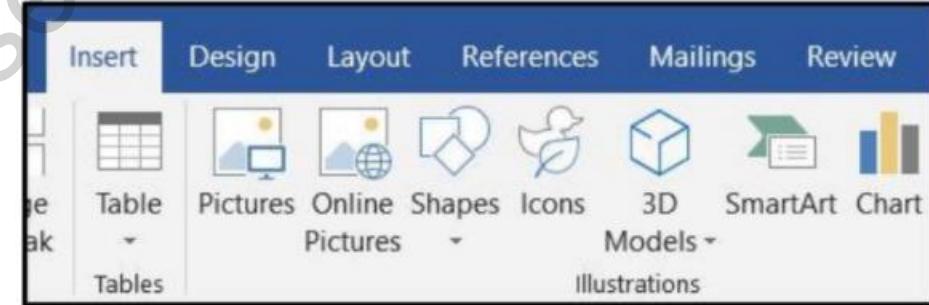
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# Objectives

- ▶ Explain how to add pictures and shapes to documents
- ▶ Describe review process

# Adding Pictures and Shapes to Word Documents [1-2]

- ▶ Microsoft Word has a whole range of features which helps in working with documents.
- ▶ Adding pictures and shapes enhances overall look of the document.
- ▶ MS Word options are categorized into groups.



**Illustrations Group on Ribbon**

# Adding Pictures and Shapes to Word Documents [2-2]

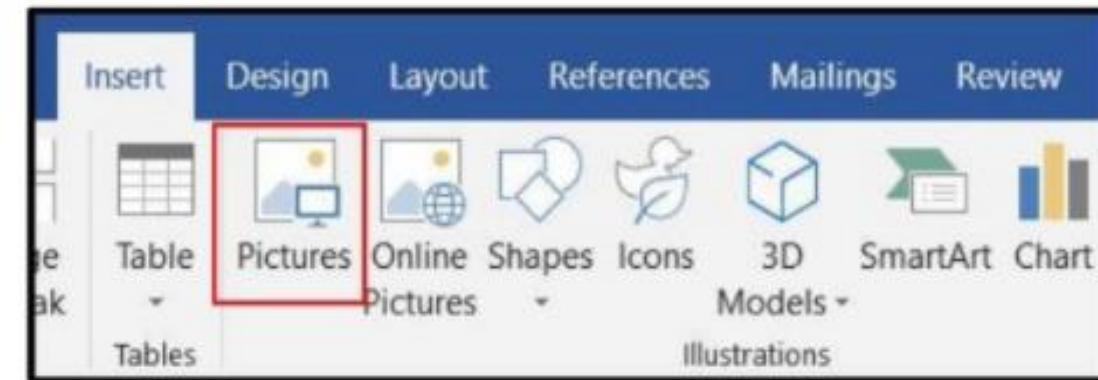
## Illustrations Group options

Pictures	Allows users to insert pictures from computer or from another connected computer.
Online Pictures	Allows users to find and insert pictures from the Web.
Shapes	Allows users to insert shapes, such as arrows, squares, circles, and rectangles.
Icons	Allows users to select and replace words with icons.
3D Models	Allows users to insert 3D models from a local file or from the Web.
SmartArt	Allows users to include process diagrams and complex visual graphics. SmartArts are typically used to illustrate process or hierarchy.
Chart	Allows users to include a chart to represent data in a pictorial view.
Screenshot	Allows users to add a snapshot of any open window on computer.

# Adding Pictures [1-2]

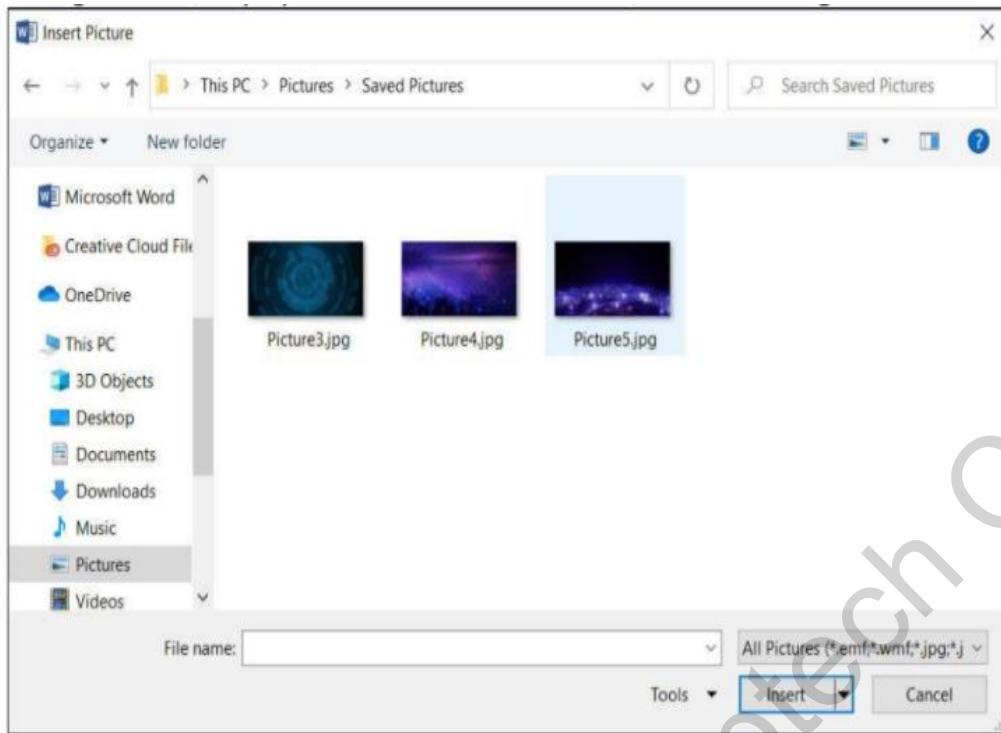
► MS Word provides the following to its users:

- Inserting a picture which enhances documents readability
- Helps readers to understand through pictorial representation
- Pictures can be inserted from the Web
- Insertion of picture is similar to opening a file

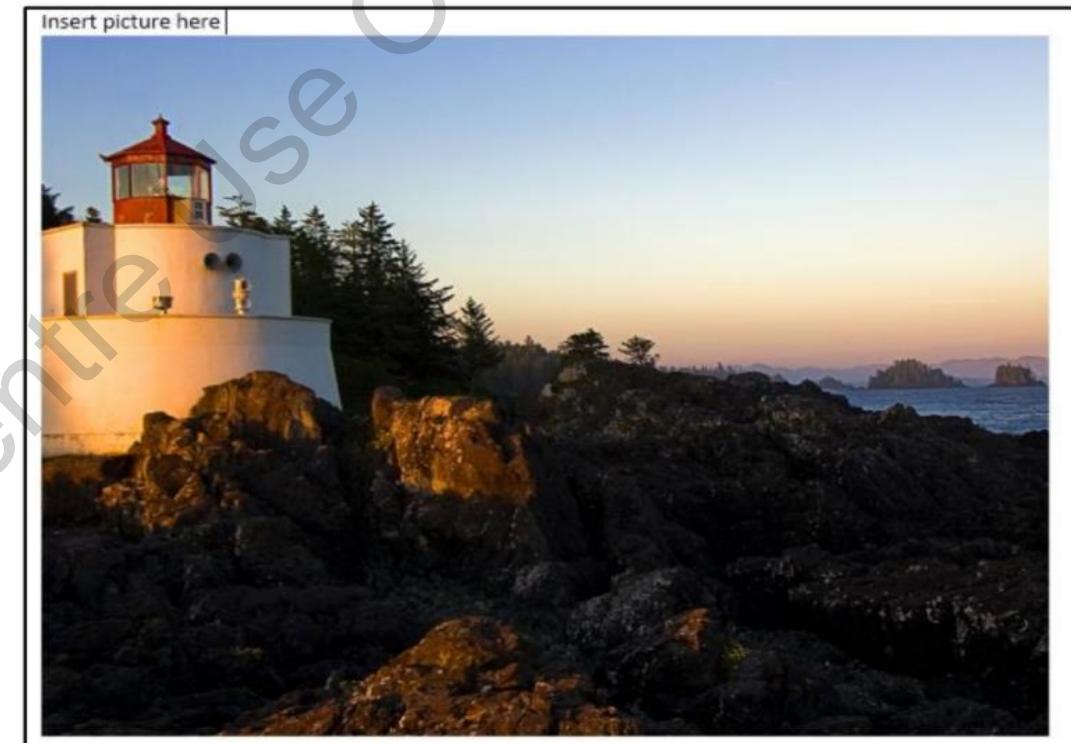


Insert Pictures options

# Adding Pictures [2-2]



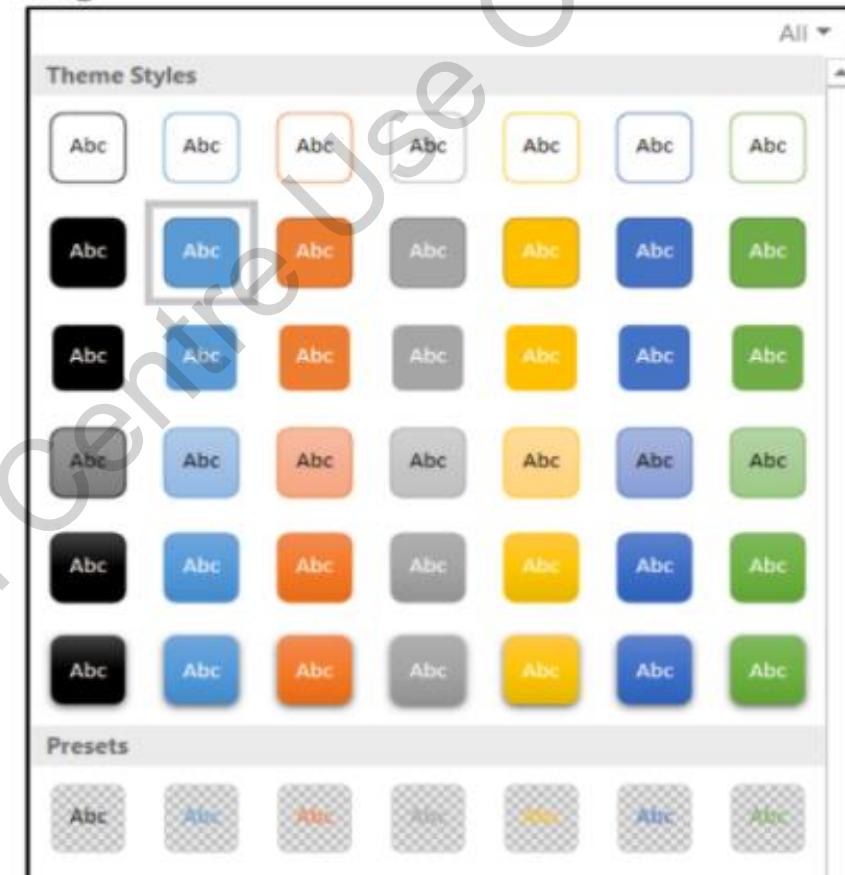
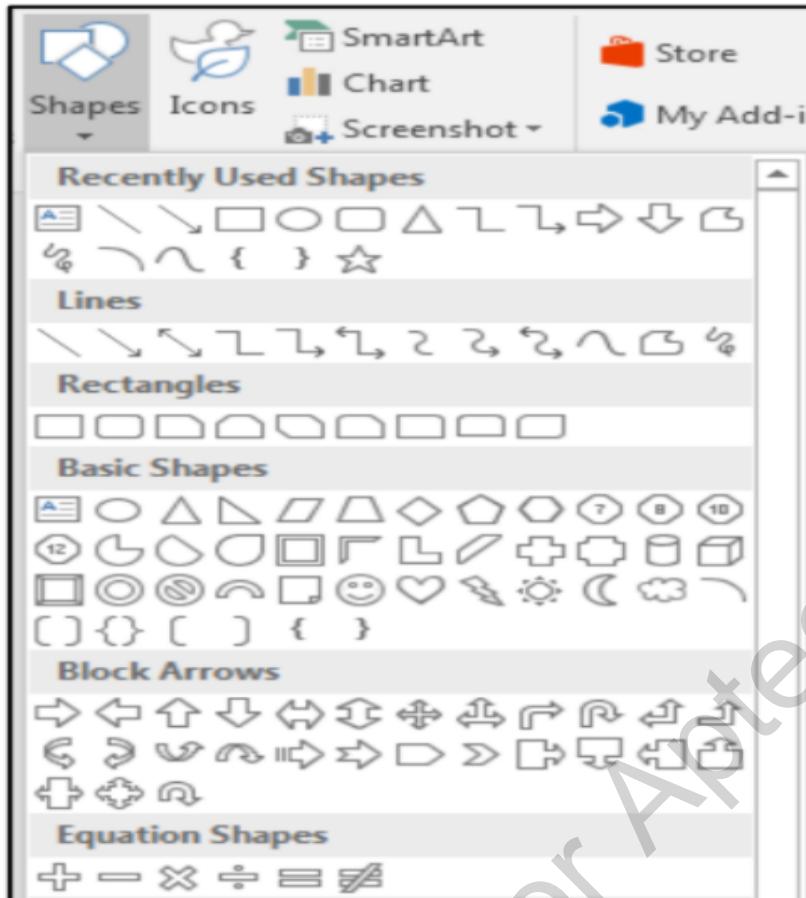
Picture Window



Picture inserted in a document

# Adding Shapes

- Word allows users to add shapes as per users' requirements.



# Picture Tools [1-2]

## Adjust

Allows user to remove background and make corrections such as sharpness/softness, compress the picture, or include artistic effects.

## Picture Styles

Allows user to choose from a variety of frames for the picture, select different colored border, and apply effects or layout.

## Arrange

Allows user to position the picture via rotating, aligning, or bringing forward or backward in comparison of the text or other picture.

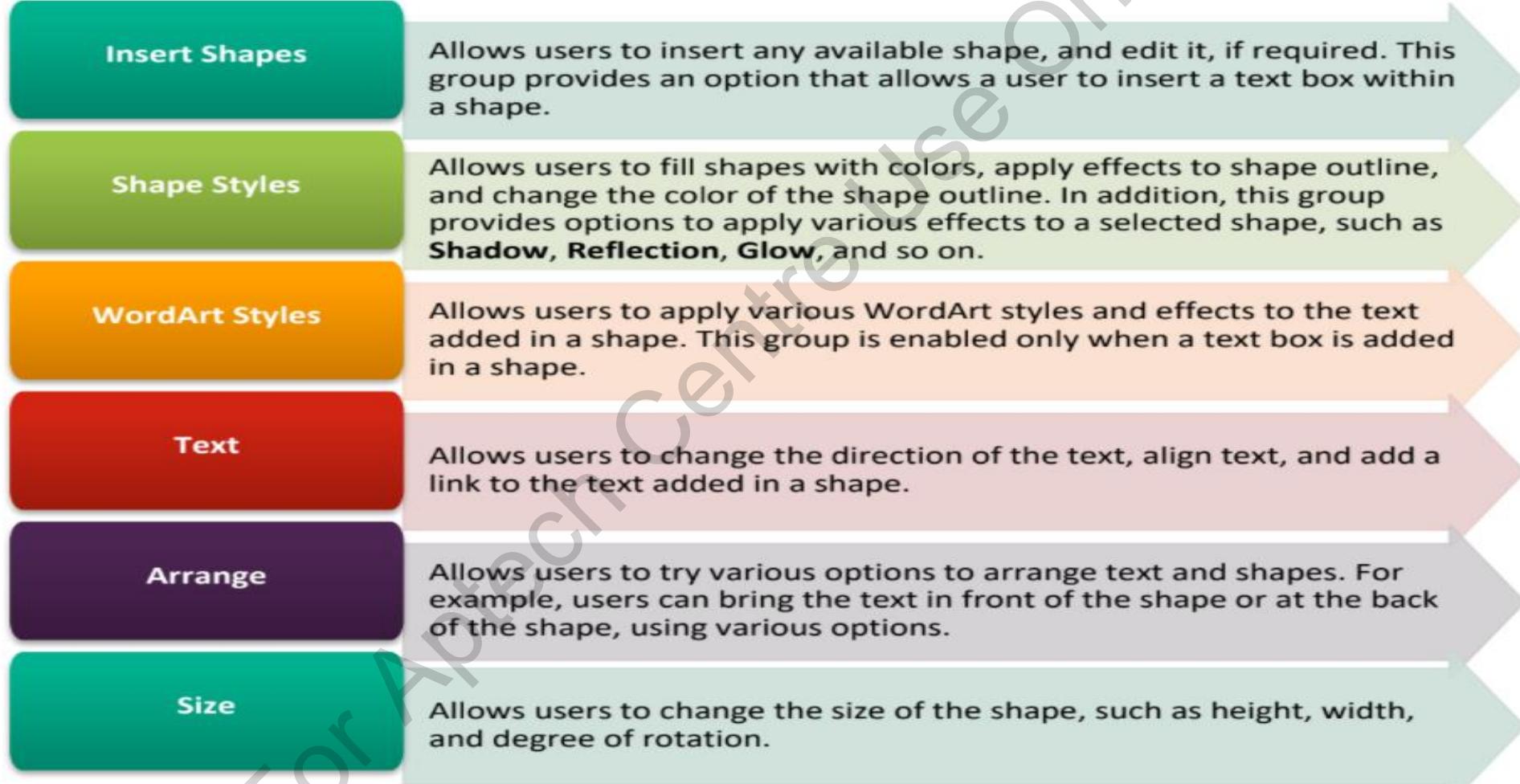
## Size

Allows user to change the height or width of the picture. In addition, this group consists of options that allow the users to crop picture, if required.

### Picture Style Group

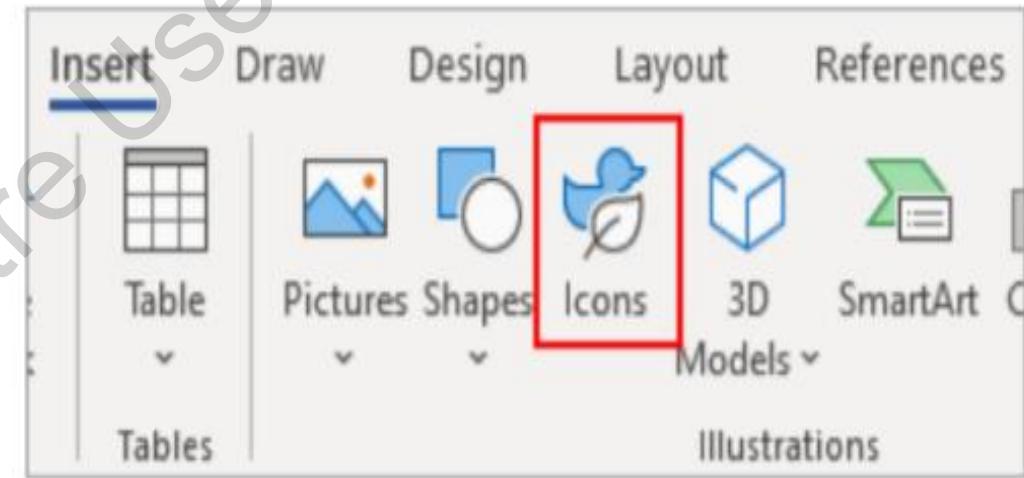
# Picture Tools [2-2]

For shapes, the Format menu consists of the following:



# Inserting Icons and Scalable Vector Graphic (SVG) Images

- ▶ Word has introduced new kinds of icons in Microsoft Office 2019. These icons are scalable with vector graphics.
- ▶ The color and size of each component of these icons could be customized based on the user's requirements.

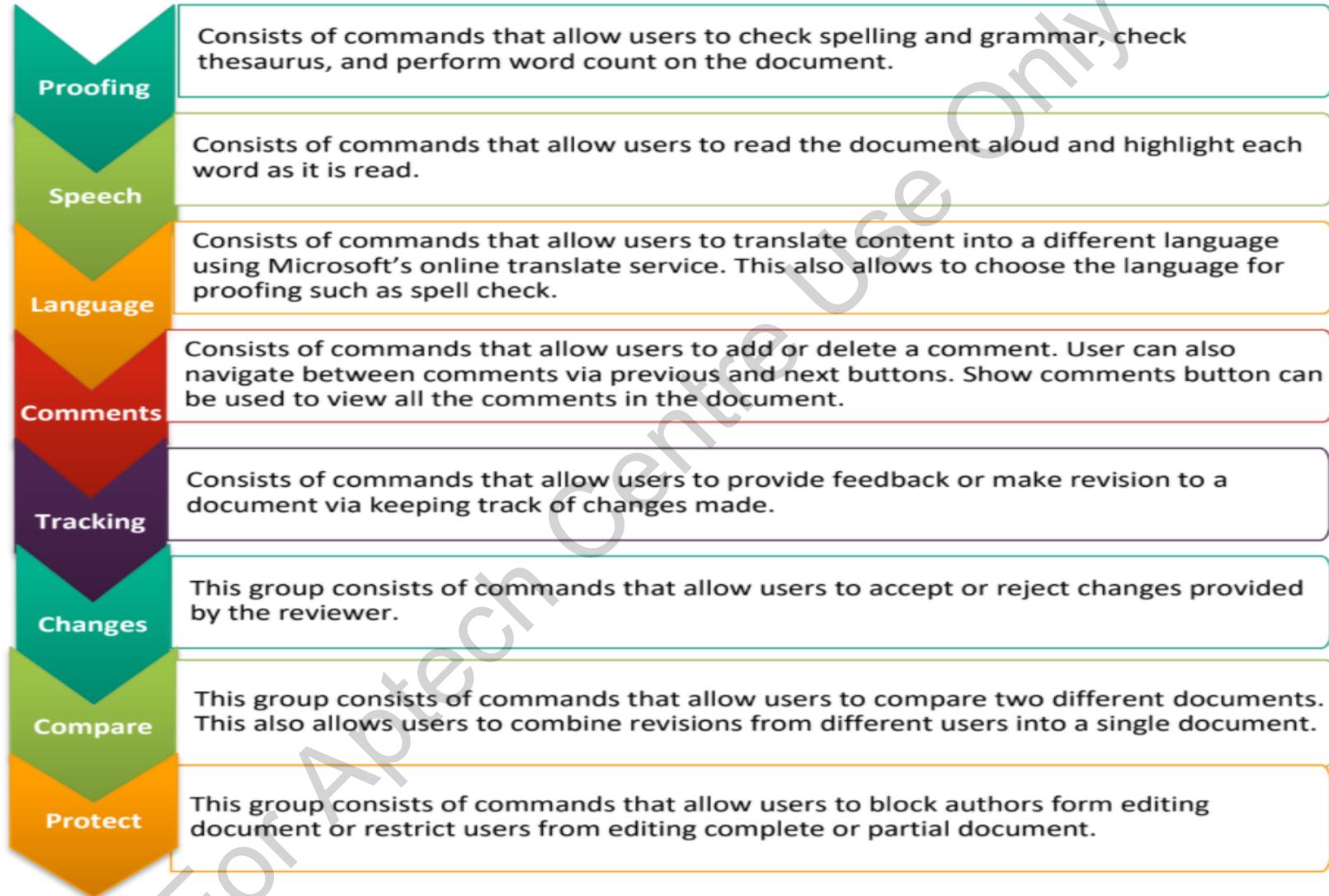


**Inserting Icons**

## Reviewing Documents [1-2]

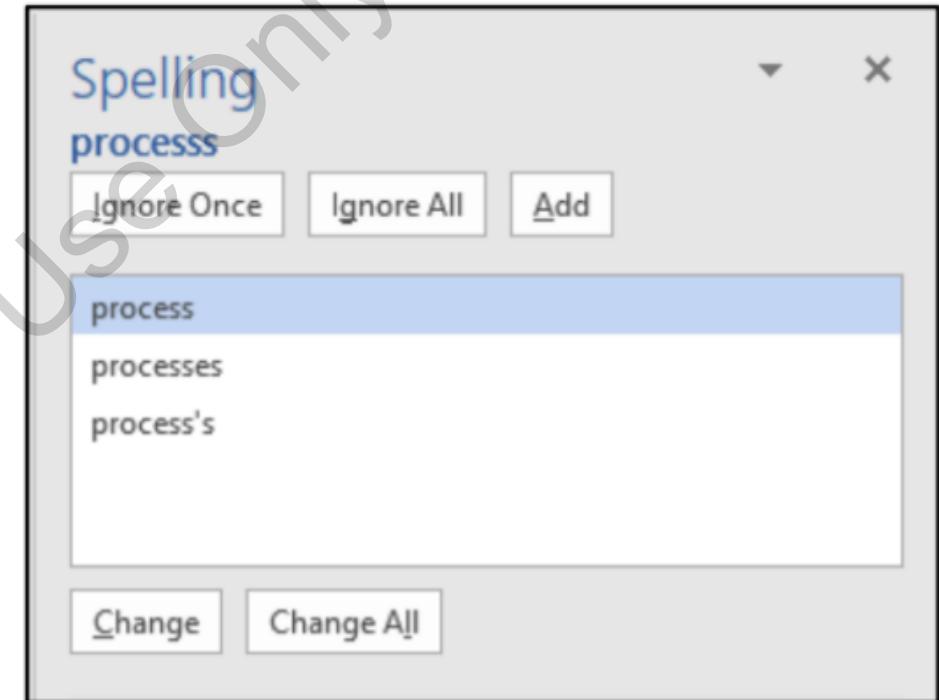
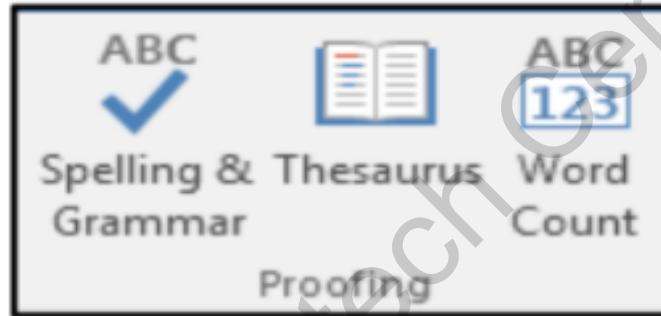
- ▶ Reviewing a document is a key requirement to ensure quality.
- ▶ It helps in the following:
  - Track the work and avoid discrepancies
  - Helps to review incorrect spellings, grammar, and sentences
  - Improves the quality of the document
  - Tracks the changes such as insertion, deletion, formatting, and so on

# Reviewing Documents [2-2]



# Proofing

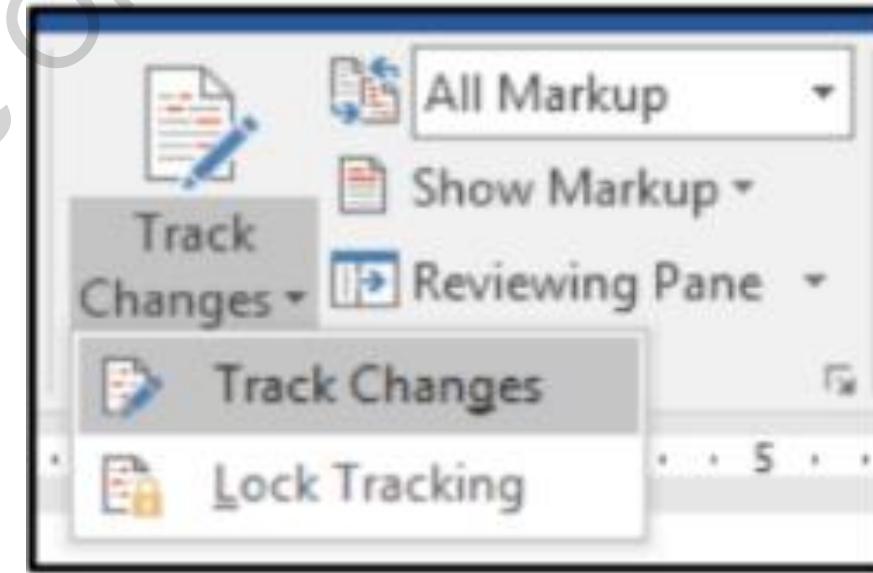
- ▶ Proofing ensures that spelling and grammar is correct in a document. Users can check the word count of a document and check the meaning of a word.
- ▶ Spelling and Grammar is performed to check on the document.



**Spelling Box**

# Applying Track Changes

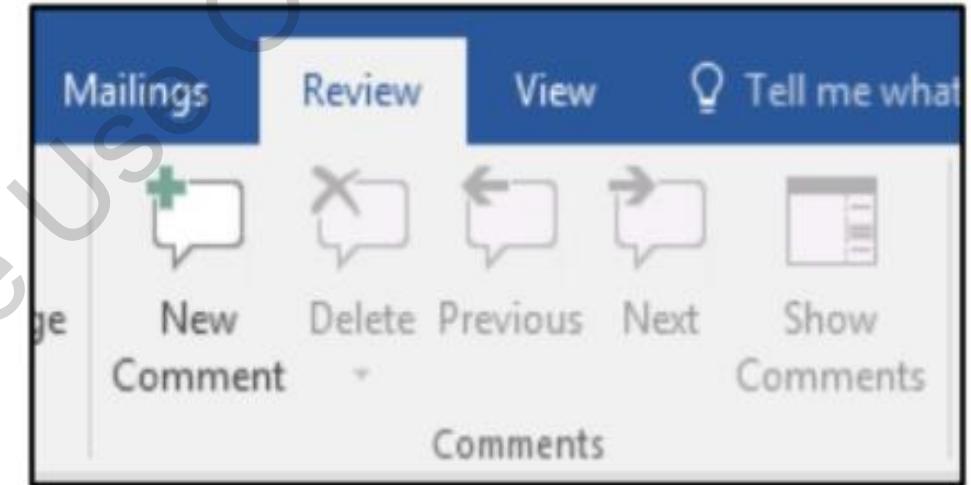
- ▶ Users can track who has made what changes to a document with the Track Changes feature.
- ▶ This feature is typically useful when a document has to be reviewed.
- ▶ To understand and track what was originally written and what changes were made by the reviewer, the Track Changes feature is extremely useful.



Track Changes command

# Adding Comments

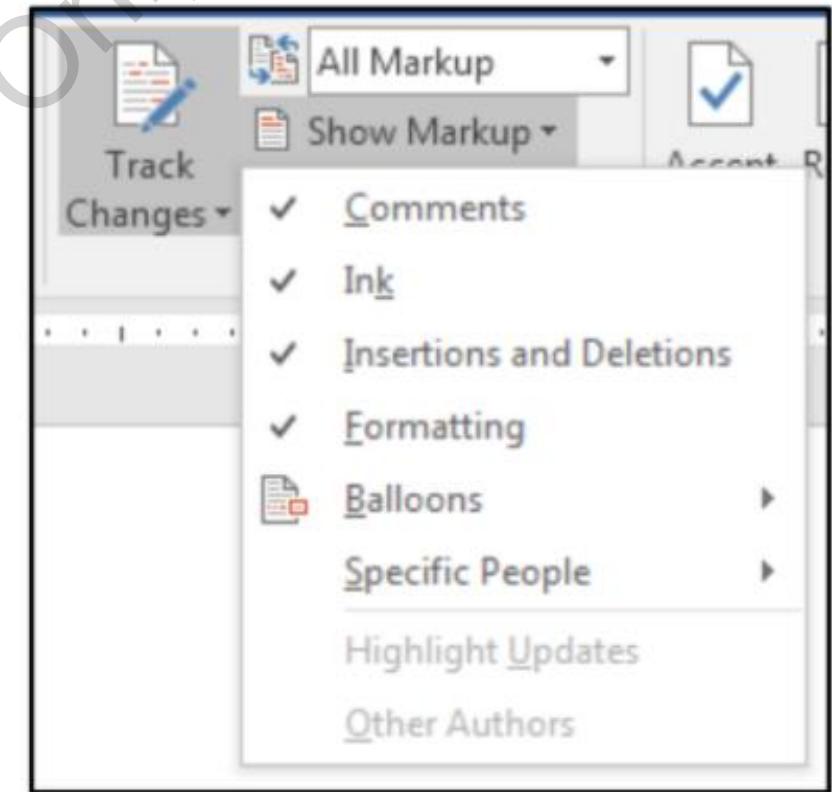
- ▶ User can comment on a text, paragraph, or a picture by using the Comments group of commands provided by Microsoft Word.
- ▶ Comments are added by a reviewer for a suggestion, correction, or question, to the author of the document.



**New Comment Command**

# Using Comments and Markup Pane

- ▶ When a comment is added to a document, markup area appears on right.
- ▶ The markup area is an easy way to view changes made to the document by other users, basis specific criteria, such as – comments, ink, insertions, and deletions, and formatting.
- ▶ The Show Markup command displays the drop-down list.



Show Mark-up drop down list

# Summary

- Microsoft Word enables you to work not only with text but also with pictures, shapes, and more to enhance a document.
- When you insert a shape in a document, Word offers Shape Styles using which you can change the shape fill color, effects, and so on.
- When you insert a picture in a document, Word offers Picture Tools via the Format tab using which you can format the picture.
- Word facilitates easy creation of flowcharts through Shapes, which includes various flowchart symbols.
- Track changes can be turned ON in order to track any changes made to the document.
- Users can perform spelling and grammar check from the Proofing group in Review tab.
- Adding a comment to the document is useful when the reviewer has to express thoughts in addition to track changes.
- Markup pane is a useful way to view comments, insertion, and deletion while reviewing document.

# Inside Microsoft Office

## ► Session 05

**Working with  
Microsoft Word –  
Part III**



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# Objectives

- ▶ Describe Templates and Forms
- ▶ Explain the process of Mail Merge

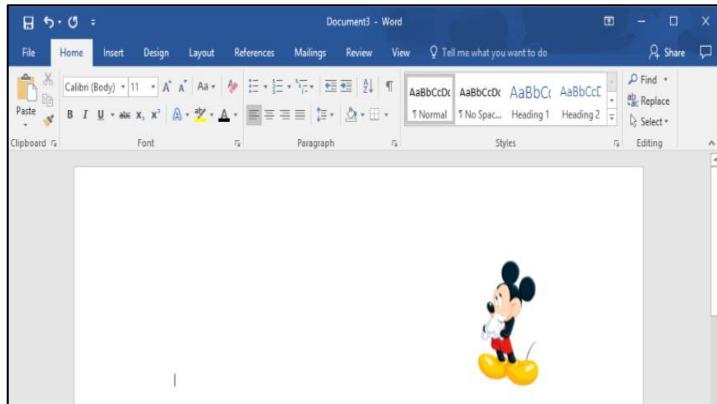
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# Working with Templates and Forms

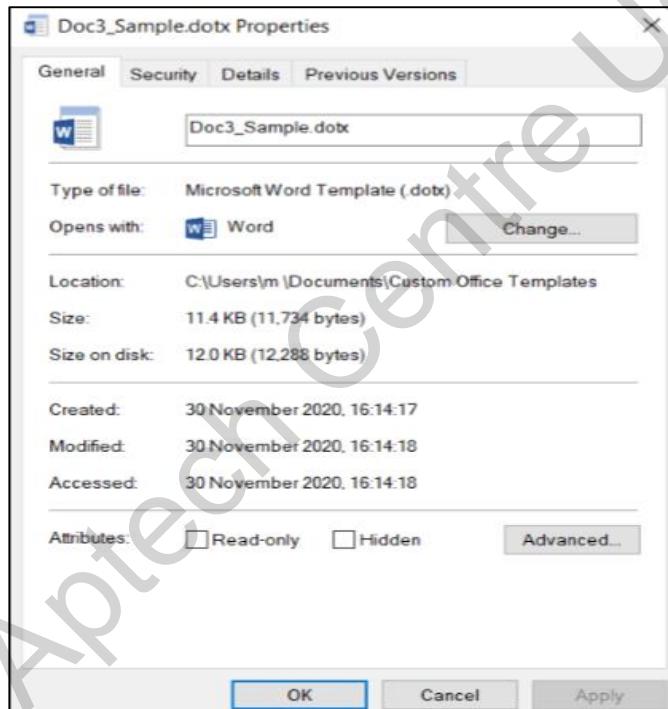
- ▶ Microsoft Word is one of the most widely used document editor applications because of the user-friendly yet powerful features it provides.
- ▶ Microsoft Word allows users to create documents for both personal and professional purposes.
- ▶ Users can create business letters, party invitations, and status reports, festival greeting letters, and many more.
- ▶ One of the most powerful features of Microsoft Word is that it allows users to create templates and forms.
- ▶ Another important feature of Microsoft Word is forms. Forms are documents that are structured and designed to capture user data, such as names, address, date of birth, and so on and save this data for future references.

# Creating Templates [1-2]

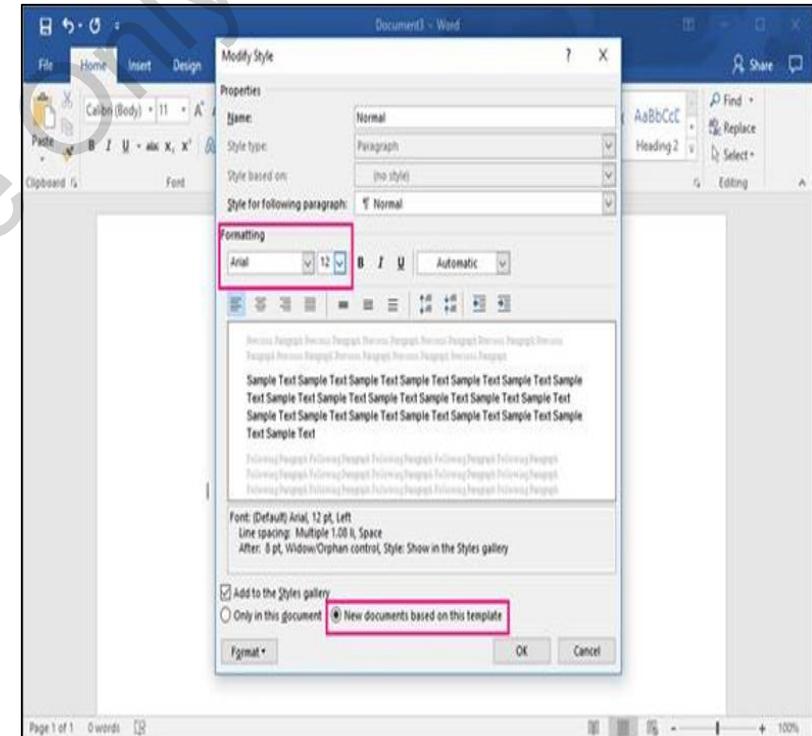
- ▶ Creating templates in Microsoft Word is a simple task.
- ▶ After a template is created, users can apply it to create any number of Word documents.



New Word Document with Image

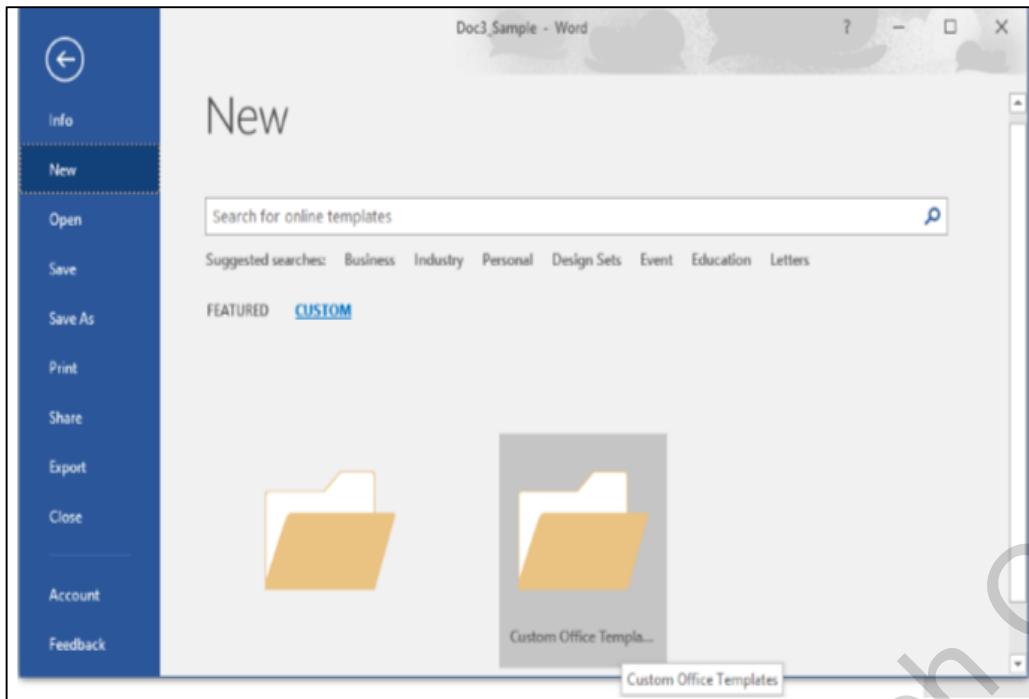


Properties Dialog Box

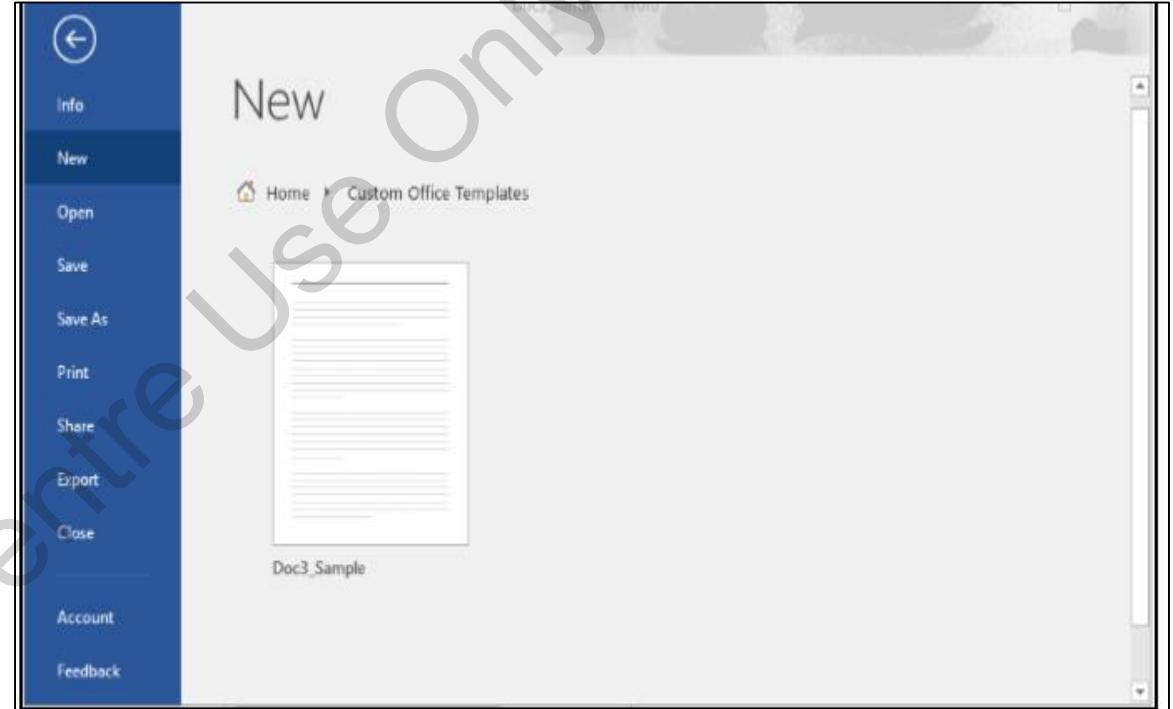


Modify Style Dialog Box – Modified Font Options

# Creating Templates [2-2]



New Dialog Box-Custom Tab



Custom Tab with the User-Defined Template

# Creating Forms [1-2]

- ▶ Form is an extremely useful feature provided by Microsoft Word.
- ▶ To create a form, users must create a template and then, add content controls.

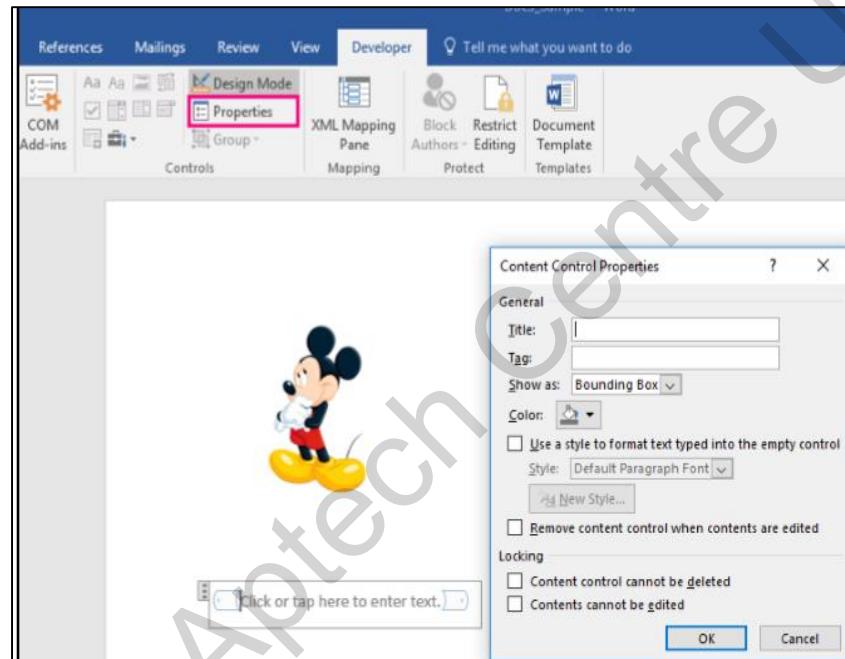
Check boxes

Text boxes

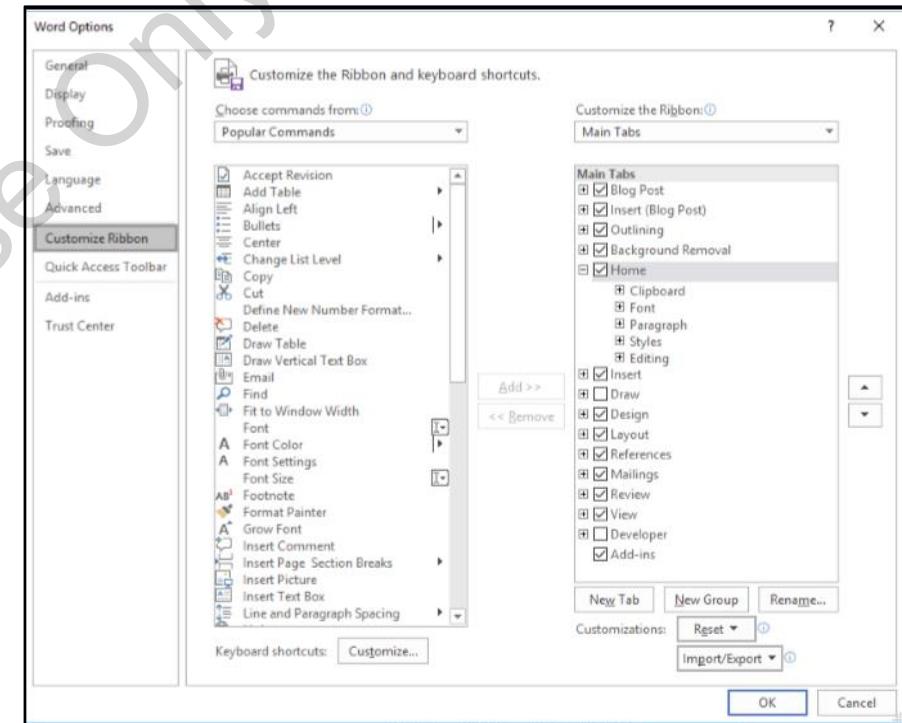
Radio buttons

Date pickers

Drop-down lists

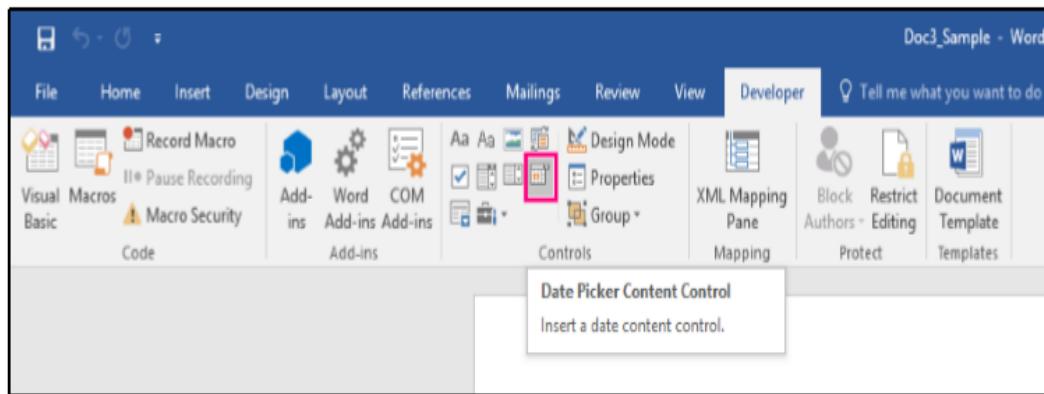


Content Control Properties Dialog Box

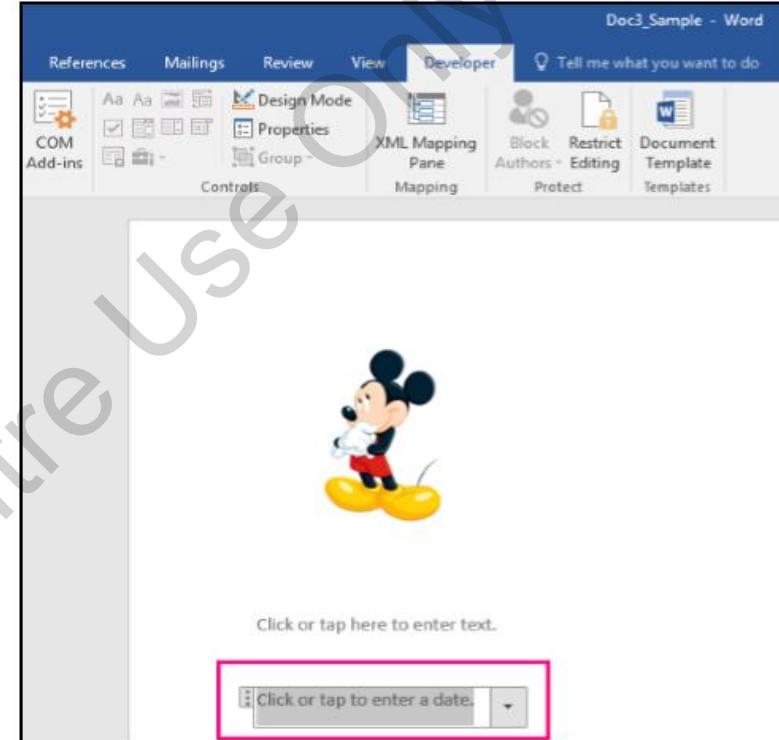
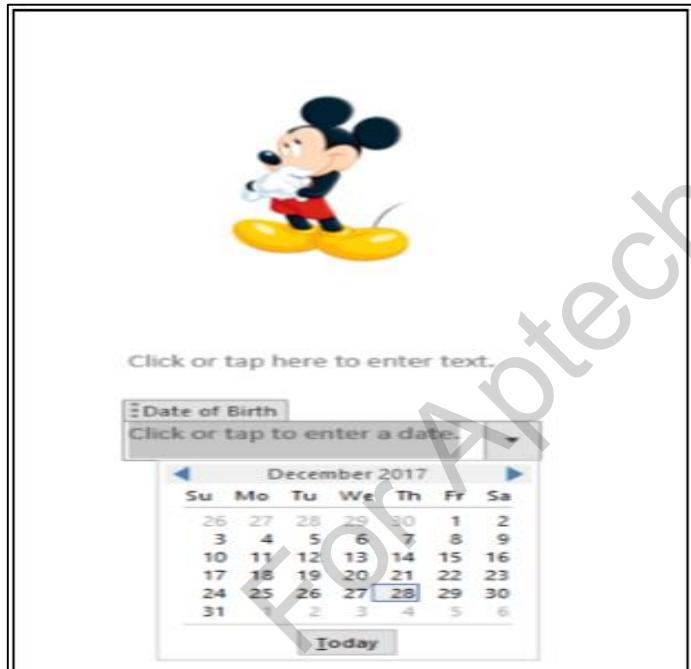


Word Options Dialog Box

# Creating Forms [2-2]

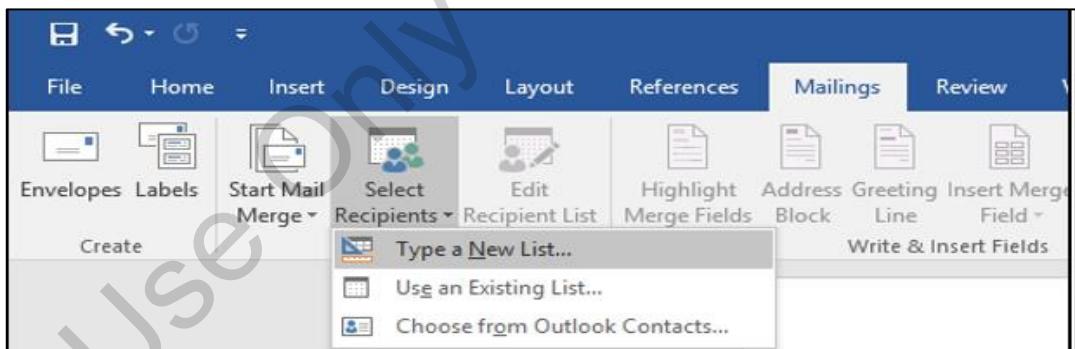


Date Picker Content Control Command



# Using Mail Merge

- Mail merge is a powerful feature of Microsoft Word that allows users to create one document and then, create several personalized versions of this document.
- Mail merge functionality is used when the content of an email or letter remains the same and only the receiver's name and address must change.



The screenshot shows the 'New Address List' dialog box. It contains a table with one entry: Ms Gail Erikson, AdventureWorks, 9539 Glenside Dr. Below the table are buttons for 'New Entry', 'Find...', 'Delete Entry', 'Customize Columns...', 'OK', and 'Cancel'. A secondary window titled 'Specify address elements' is overlaid on the dialog, showing options for inserting recipient's name, company name, postal address, and country/region. The 'Insert recipient's name in this format' checkbox is checked, and the 'Mr. Joshua Randall Jr.' option is selected. The 'Insert postal address' checkbox is checked, and the 'Only include the country/region if different than:' radio button is selected, with 'United States' chosen. The 'Format address according to the destination country/re' checkbox is checked.

Ms Gail Erikson  
AdventureWorks,  
9539 Glenside Dr,  
Bothell - 98011, Minnesota  
Dear Ms Erikson,  
  
This is to inform you that the annual residents welfare meeting has been postponed to the last Sunday of this month. We look forward to your participation and continued support towards all activities planned for the coming months.  
  
Sincerely,  
Apartment Director,  
Michael Sullivan

Final Outcome After Merging

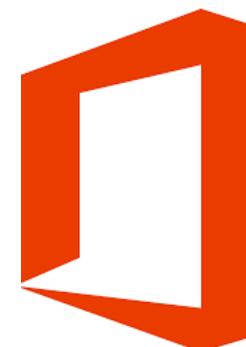
# Summary

- Microsoft Word allows users to create documents for both personal and professional purposes, such as business letters, party invitations, status reports, festival greeting letters, and many more.
- Templates are defined as Word documents that include pre-defined styles and formats and are used to create similar documents on a regular frequency.
- Microsoft Word enables users to create forms, which are documents designed to capture user data, such as names, address, date of birth, and so on and save this data for future references.
- Templates are Word documents that already have font and formatting styles included and these templates can be used to create any number of Word documents.
- Word templates are usually stored in the Custom Office Templates folder.
- Mail merge functionality is used when the content of an email or letter remains the same and only the receiver's name and address must change.
- Mail merge allows reusability of documents that must be used repeatedly; users just require to create the document one time and reuse this document as many times as required.

# Inside Microsoft Office

## ► Session 06

### Introduction to Microsoft Excel 2019



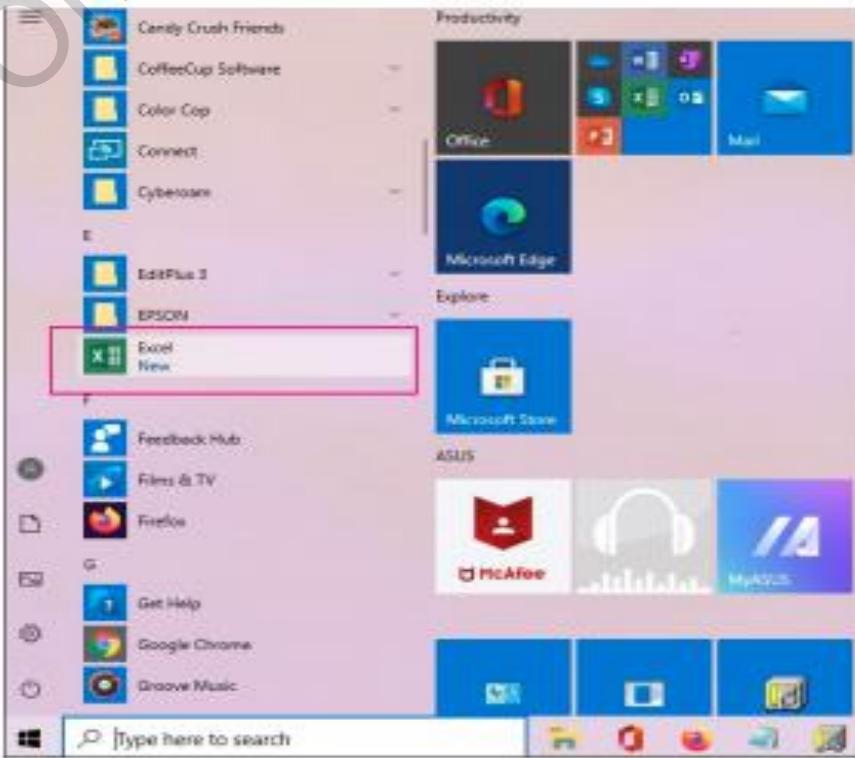
For Aptech Centre Use Only

# Objectives

- ▶ Explain the process to create, find, and share Excel files
- ▶ Explain how to format Excel sheets

# Getting Started with MS Excel [1-3]

- ▶ Microsoft Excel is a part of Microsoft Office suite, which includes other programs, such as Word, PowerPoint, Outlook, OneNote, and so on.
  
- ▶ Excel can help to organize, calculate, analyze, revise, update, and present data in ways that will help to take forecasting decisions.

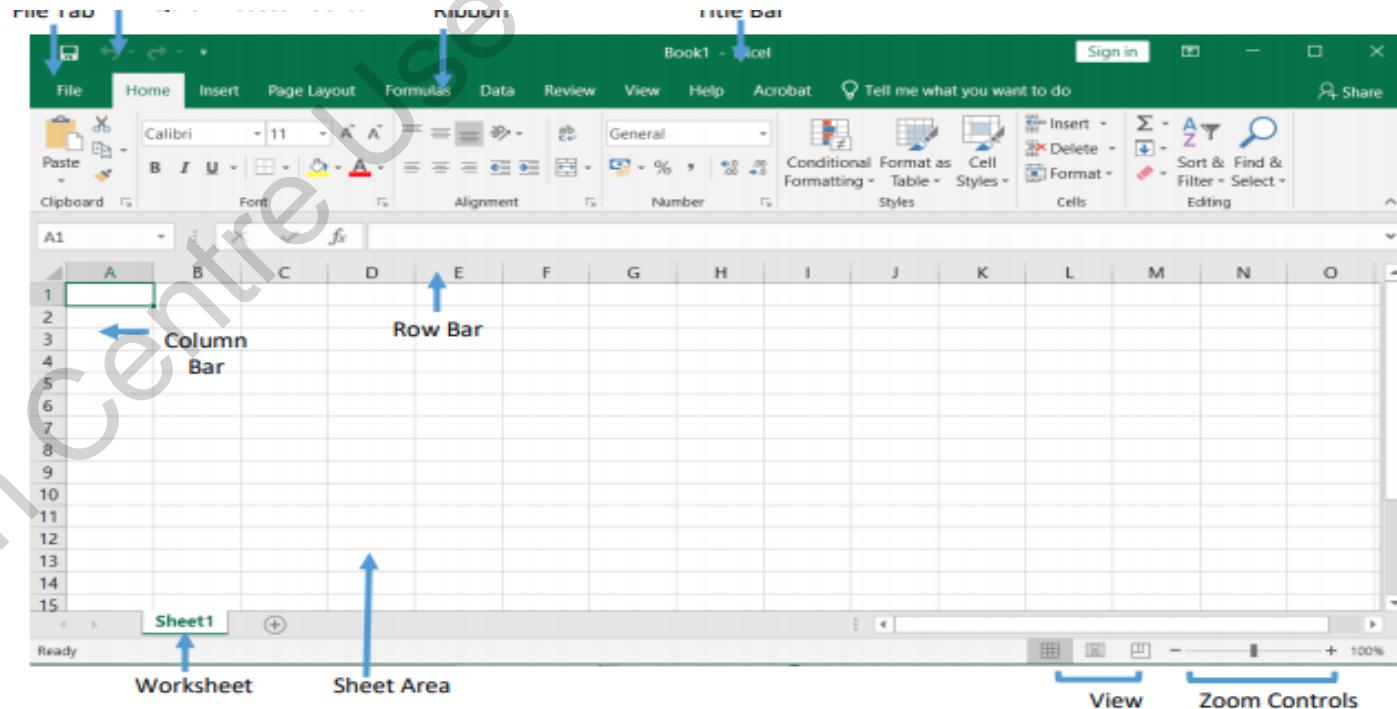


**Windows 10 Startup Menu with Microsoft Excel**

# Getting Started with MS Excel [2-3]

► Main components of MS Excel spreadsheet include:

- File Tab
- Quick Access Toolbar
- Ribbon
- Title Bar
- Row Bar
- Column Bar
- Worksheet
- Sheet Area
- Zoom Controls
- View Buttons
- Backstage View



**Microsoft Excel Spreadsheet**

# Getting Started with MS Excel [3-3]

## Ribbon:

- ▶ It contains commands organized under three components:

Tabs

They appear across the top of the Ribbon and contain groups of related commands. The **Home**, **Insert**, and **Page Layout** tabs are examples of Ribbon.

Groups

They organize related commands; each group name appears below the group on the Ribbon. For example, group of commands related to fonts or group of commands related to alignment and so on.

Commands

Commands perform various actions, such as formatting text and adding Tables, appear within each group.

# Create, Find, and Share Excel Files

- Following are basic operations to get started with MS Excel:

Create  
File

Find an  
Excel File

Share  
File

# Formatting Excel Sheets [1-2]

- ▶ When an Excel workbook is saved, it automatically gets saved in .xlsx format.
- ▶ Excel 2019 supports saving in other formats, but whenever user saves a workbook in another file format, some of its formatting, data, and features might not be saved.



**Categorization of File formats**

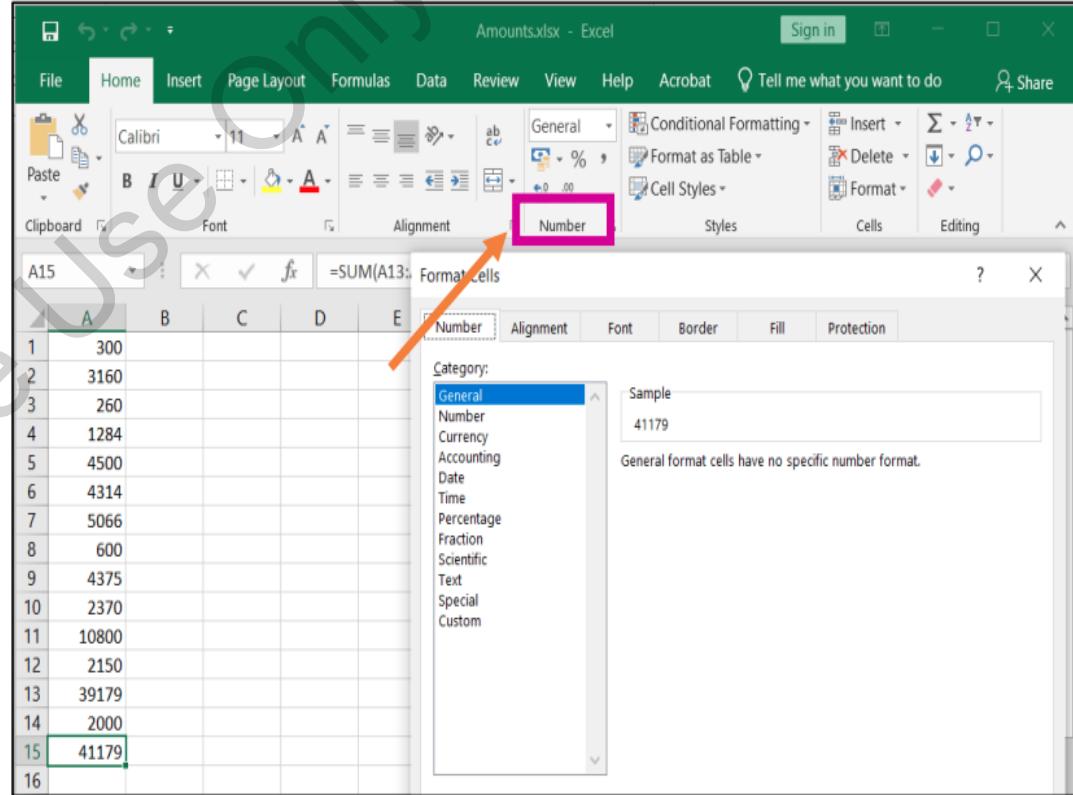
# Formatting Excel Sheets [2-2]

Format	Extension	Description
Excel Workbook	.xlsx	The default XML-based file format for Excel 2007-2013. Cannot store Microsoft Visual Basic for Applications (VBA) macro code or Microsoft Office Excel 4.0 macro sheets (.xlm).
Excel Workbook (code)	.xlsm	The XML-based and macro-enabled file format for Excel 2007-2013. Stores VBA macro code or Excel 4.0 macro sheets (.xlm).
Strict Open XML Spreadsheet	.xlsx	An ISO strict version of the Excel Workbook file format (.xlsx).
Excel Binary Workbook	.xlsb	The binary file format (BIFF12) for Excel 2007-2013.
Excel Add-in	.xlam	The XML-based and macro-enabled Add-In format for Excel 2007-2013. An Add-In is a supplemental program that is designed to run additional code. Supports the use of VBA projects and Excel 4.0 macro sheets (.xlm).
CSV (comma delimited)	.csv	Saves a workbook as a comma-delimited text file for use on another Windows operating system and ensures that tab characters, line breaks, and other characters are interpreted correctly. Saves only the active sheet.
DIF	.dif	Data Interchange Format. Saves only the active sheet.

**Excel File Formats**

# Page Formatting

- ▶ Formatting a worksheet includes changing display and representation of data.
- ▶ One can apply fonts, change alignments, apply borders, use colors, and much more.
- ▶ MS Excel holds data in a box called cell, which can hold different data types, such as Numbers, Currency, Dates, Text, and so on.
- ▶ Cells in a page can be formatted using any of the options, based on requirements.



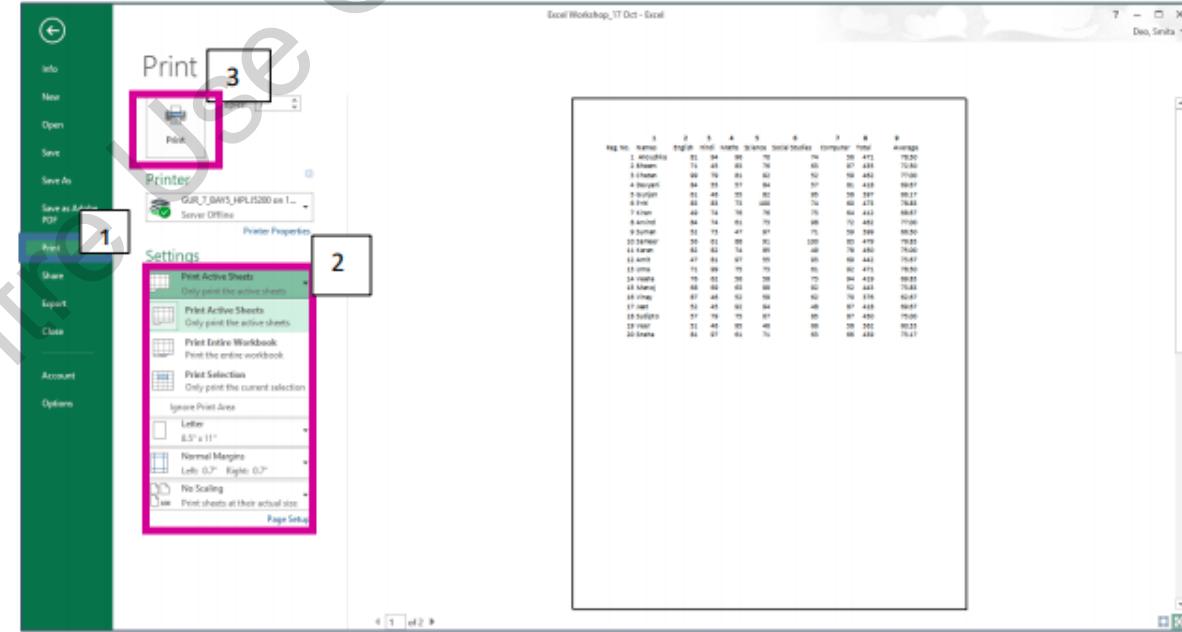
**Number Tab on Dialog box**

# Print Formatting

► An entire worksheet or a part of worksheet can be printed.

► Following are steps for printing:

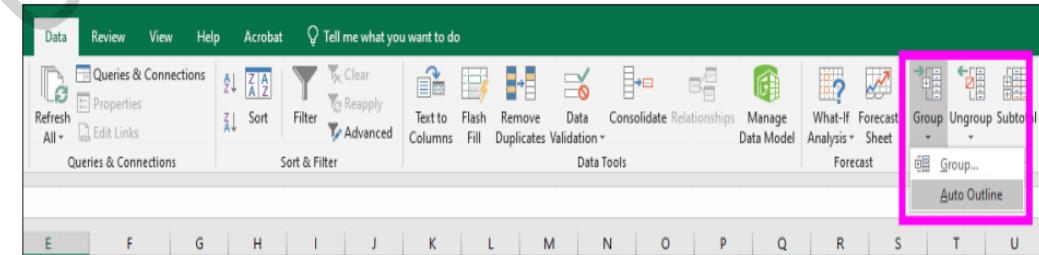
- Print one or several worksheets
- Print one or part of a worksheet
- Print an Excel Table



Print Window in MS Excel

# Name Groups of Data [1-2]

- ▶ Excel can help to organize data into Groups, allowing to easily show or hide different sections of a worksheet.
- ▶ If there is a list of data that needs to be grouped or summarized, an outline of up to eight levels can be created, one under each group.
- ▶ An outline is used to quickly display the summary rows or columns or to reveal the detail data for each group.



**Auto online Group**

# Name Groups of Data [2-2]

Region	Month	Sales
East	March	\$876
East	March	\$1,672
East	March	\$2,387
East	March	\$2,309
East	March	\$1,209
East	March	\$230
East	March Total	\$8,683
East	April	\$4,528
East	April	\$3,210
East	April	\$2,300
East	April Total	\$10,038
East Total		\$18,721

Formation of Group

Region	Month	Sales
East	March Total	\$8,683
East	April Total	\$10,038
East Total		\$18,721

Group of Data

# Summary

- A file created and saved in Excel is called a Workbook. It contains a collection of worksheets and might look similar to a ledger and helps perform multiple calculations and other tasks automatically.
- A new file created for the first time in Excel is named by default as Book1.xlsx. Subsequent files have default names as Book2.xlsx, Book3.xlsx, and so on.
- Ribbon contains commands organized in three components: Tabs, Groups, and Commands.
- Excel holds data in a box called a cell, which can hold different data types, such as Numbers, Dates, Text, and so on.
- The Backstage view in Excel helps in creating new sheets, saving and opening sheets, printing and sharing sheets, and so on.
- Templates in Excel can help users in saving time and improving productivity.
- Data in cells can be formatted based on the content type and their font and alignment can be changed using various options in Excel.
- You can print an entire worksheet or even a part of your worksheet by selecting the print area.

# Inside Microsoft Office

## ► Session 07

**Formulas, Functions,  
Charts, and Additional  
Features in Excel 2019**



For Academic Use Only

# Objectives

- ▶ Describe functions and formulas in Excel 2019
- ▶ Explain charts in Excel 2019
- ▶ List other new features and enhancements in Excel 2019

# Formulas and Functions in Excel

- ▶ Most worksheets are created to provide solutions to specific questions.
- ▶ All Excel formulas have the same basic structure: An '=' sign followed by one or more 'operands' which can be values, ranges, or cell references separated by one or more 'operators'.
- ▶ Operators can be Addition (+), Subtraction (-), Division (/), Multiplication (\*), and so on.

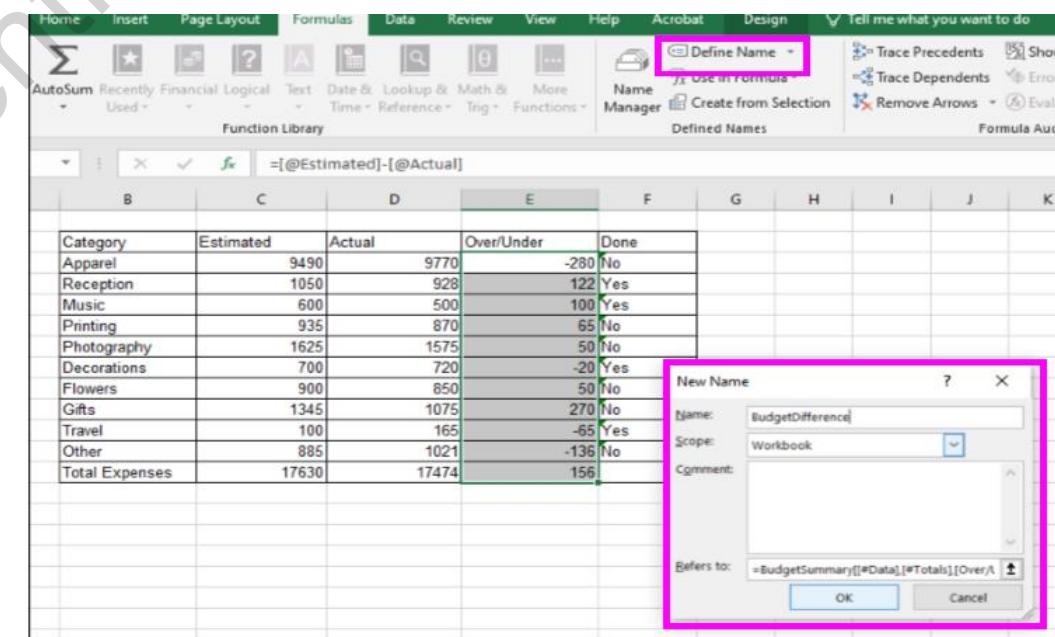
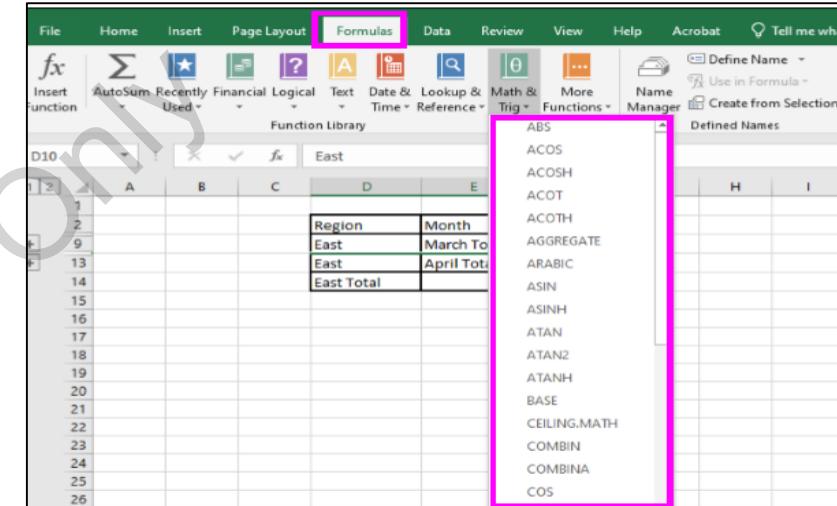
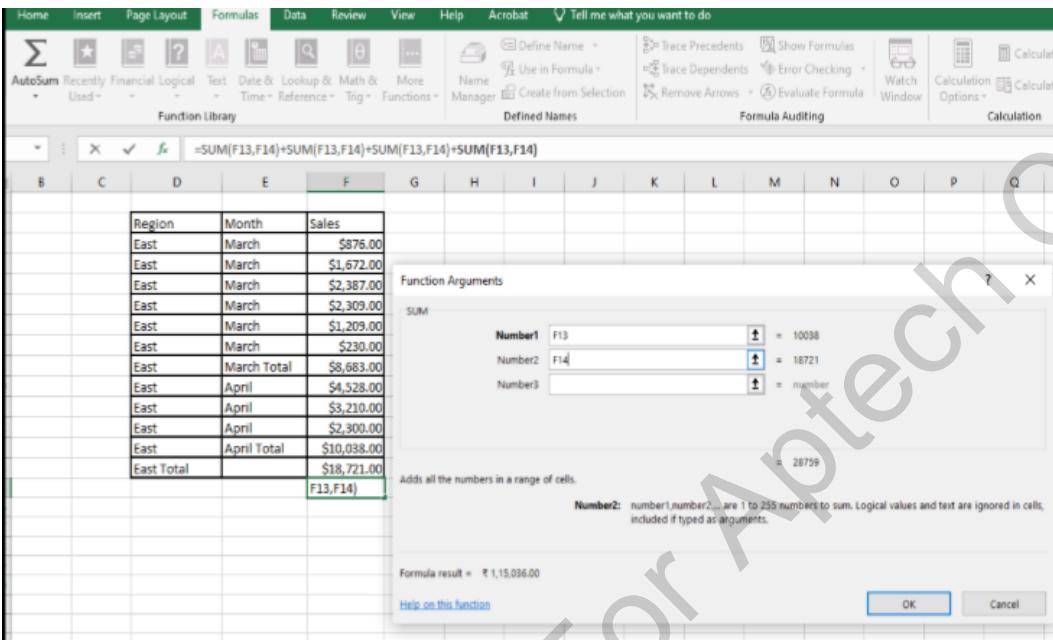
# Entering Formulas

Entering a new formula in the Excel sheet includes the following steps:

- ▶ Step 1 – Select the cell in which the formula needs to be entered.
- ▶ Step 2 – Type an '=' sign to let Excel know that a formula is about to be entered.
- ▶ Step 3 – Type the formula's operands and operators.
- ▶ Step 4 – Press Enter to confirm the formula.
- ▶ Step 5 – After the formula has been entered, if any changes are required to be done, press F2 or double-click the formula cell.

# Using Range Names

- One way to use range names in a formula is to type the name in the Formula bar.
- MS Excel has several features to enable the user to select the name from the list and paste it right into the formula.



# Building Basic Formula [1-2]

- ▶ When in Point mode, Excel may use any of the standard range selection techniques.
- ▶ Excel returns to Enter mode as soon as an operator or any character is typed.
- ▶ Upon pressing F2, Excel enters the Edit mode, which enables to make changes in the formula.

**Using Arithmetic Formulas:** Arithmetic formulas are the simplest formulas that can combine numbers, cell addresses, and result in mathematical calculations.

Operator	Name	Example	Result
+	Addition	=10+5	15
-	Subtraction	=10-5	5
/	Division	=10/5	2
*	Multiplication	=10*5	50
%	Percentage	=10%	0.1

**Using Comparison Formulas:** A comparison formula compares two or more numbers, text strings, cell contents, or function results.

Operator	Name	Example	Result
=	Equal to	=10=5	FALSE
>	Greater than	=10>5	TRUE
<	Less than	=10<5	FALSE
>=	Greater than or Equal to	=10>=10	TRUE
<=	Less than or Equal to	=10<=9	FALSE

# Building Basic Formula [2-2]

**Using Text Formulas:** A text formula returns text as the value or result. Text formulas use the & operator to work with text cells, or text strings within 'quotations', or text function results.

D3	A	B	C	D
1				
2				
3	Information	Technology	=B3&C3	Information Technology
4				

**Using Reference Formulas:** References formulas combine two cell references to create a joint reference.

Operator	Name	Description
:	Range	This produces a range from two cell references
(space)	Intersection	This produces a range that is an intersection of two ranges
,	Union	This produces a range that is the union of two ranges

# Creating Advanced Formulas [1-2]

- Advanced features of Microsoft Excel 2019 are designed to impart skills necessary to audit and analyze worksheet data, utilize data tools, collaborate with others, and create and manage macros.
- This includes several aspects of Excel such as creating Pivot Tables, converting text and validation of data, import and export data, and so on.

**Converting Numbers:** Numbers that are stored as text can cause unexpected problems. Numbers that are left-aligned are actually text.

The screenshot shows a Microsoft Excel spreadsheet. Cell D7 contains the value '98.75'. A small orange warning icon is visible next to the cell's value. A tooltip at the bottom of the cell area states: "The number in this cell is formatted as text or preceded by an apostrophe." The cell has a green border, indicating it is selected. The column header 'D' is also highlighted in green.

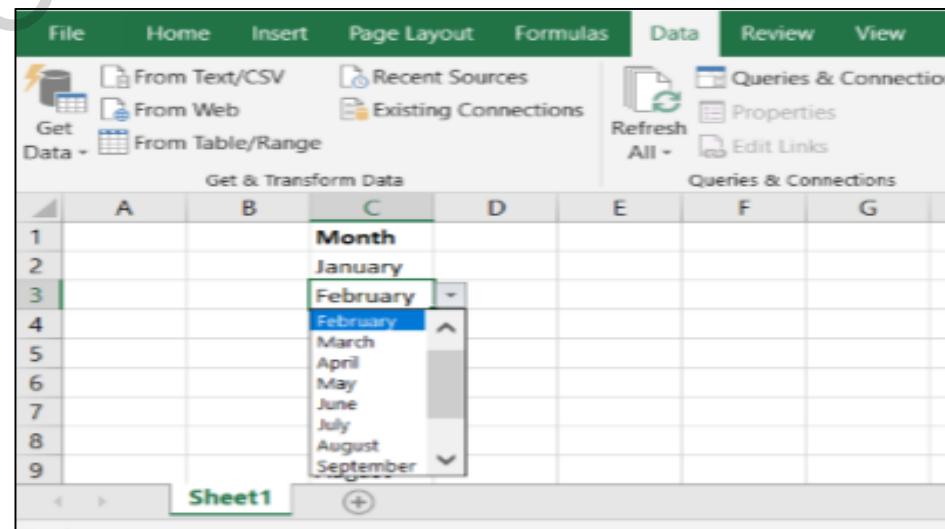
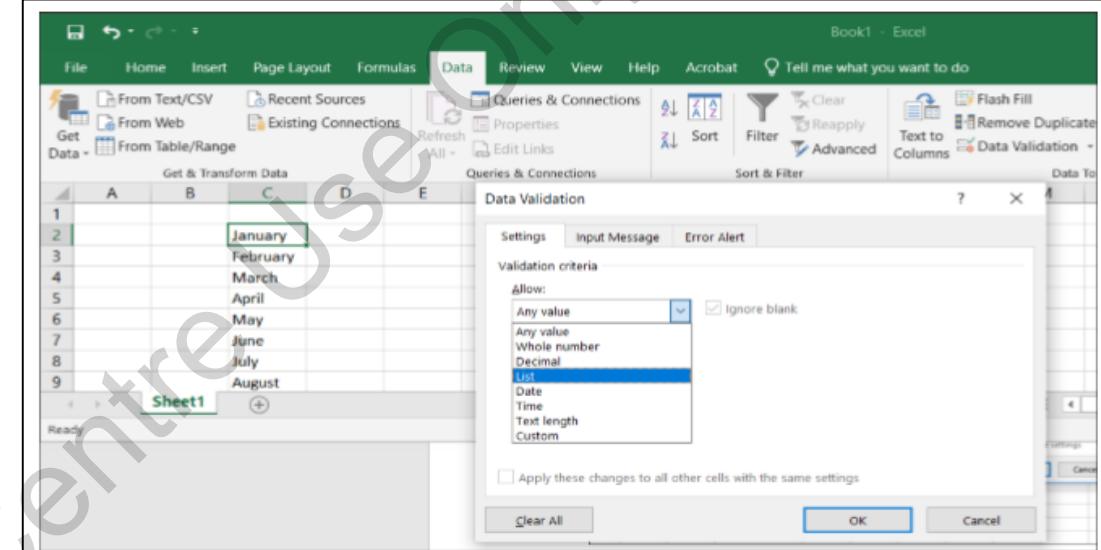
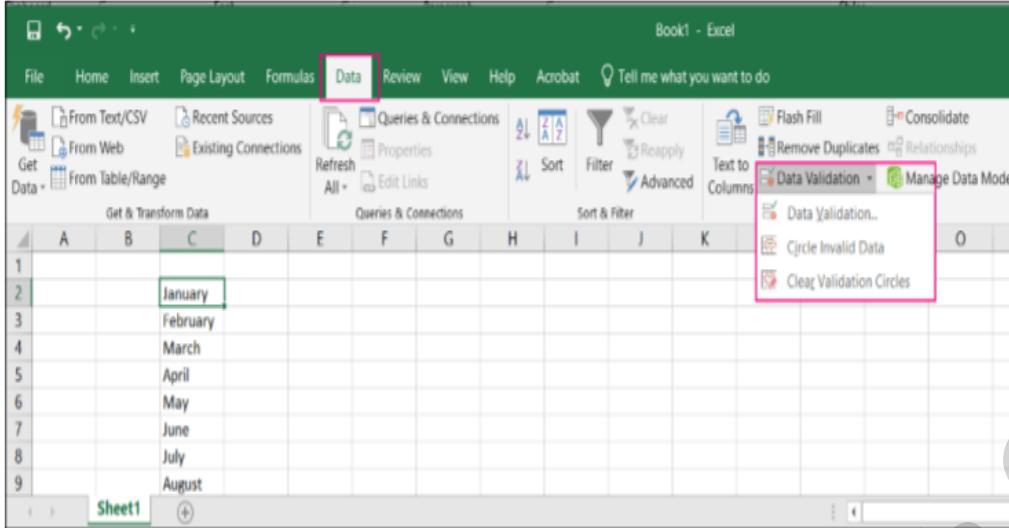
The screenshot shows a Microsoft Excel spreadsheet with a formula bar at the top displaying '=SUM(D4:D8)'. Below the formula bar, a selection range is shown as a blue vertical bar spanning from cell D4 down to D8. The cells D4 through D8 contain the values 110, 700, 255, 98.75, and 3219 respectively. The cell D8 is currently active, indicated by a green border.

The screenshot shows the same Microsoft Excel spreadsheet as the previous one, but now all the numerical values in cells D4 through D8 are right-aligned. This indicates that the cells have been converted from text format to numerical format.

*The numbers get right-aligned*

# Creating Advanced Formulas [2-2]

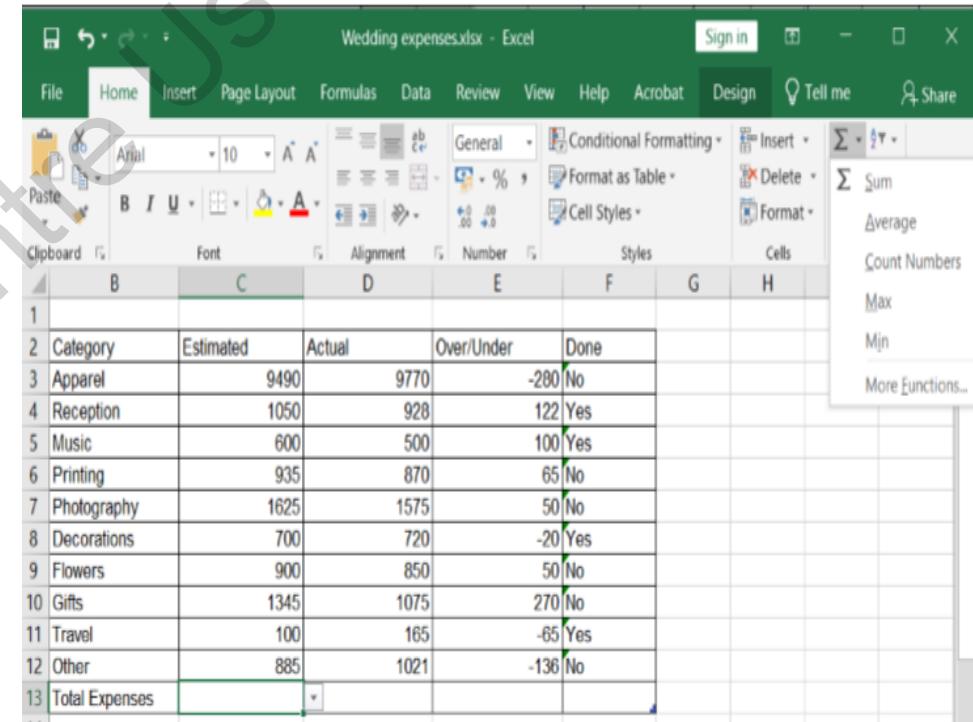
**Validation of Data:** Data validation is used to restrict the type of data or the values that the user enters into a cell. One of the most common data validation users is to create a drop-down list.



# Using Functions

- ▶ A function is a pre-defined formula.
- ▶ MS Excel includes many pre-defined functions that can be used to quickly find out the sum, average, count, maximum value, and minimum value and so on for a range of cells.

SUM	AVERAGE	COUNT	MAX	MIN
Adds all values of cells in argument (cells to be used for adding)	Determines average of values of the cells in argument	Counts number of cells with numerical data or can be used to count the items in a range	Determines highest cell value out of all the cells included in the argument	Determines the smallest cell value out of all the cells included in the argument



# New Functions in Excel 2019 [1-2]

Function	Description	Syntax	Example
IFS	Tests conditions in the order specified. If passed, the result is returned. IFS can take the place of multiple nested IF statements, and is much easier to read with multiple conditions.	<p>IFS(logical_test1, value_if_true1, [logical_test2, value_if_true2], [logical_test3, value_if_true3],...)</p> <p>Where,</p> <ul style="list-style-type: none"> <li>logical_test1 (required): Condition that evaluates to TRUE or FALSE.</li> <li>value_if_true1 (required): Result to be returned if logical_test1 evaluates to TRUE. Can be empty.</li> <li>logical_test2...logical_test127 (optional): Condition that evaluates to TRUE or FALSE.</li> <li>value_if_true2...value_if_true127 (optional): Result to be returned if logical_testN evaluates to TRUE. Each value_if_trueN corresponds with a condition logical_testN. Can be empty.</li> </ul> <p>IFS function allows you to test up to 127 different conditions hence, the variables can be named up to 127.</p>	=IFS(A2>75,"Distinction", A2>60,"First Class", A2>35,"Second",A2=35,"Pass")
MAXIFS	Returns largest number in a range, that meets a single or multiple criteria.	<p>MAXIFS(max_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)</p> <p>Where,</p> <ul style="list-style-type: none"> <li>max_range (required): Actual range of cells in which maximum will be determined.</li> <li>criteria_range1 (required): Is the set of cells to evaluate with the criteria.</li> <li>criteria1 (required): Is the criteria in the form of a number, expression, or text that defines which cells will be evaluated as maximum.</li> <li>criteria_range2,</li> <li>criteria2, ... (optional): Additional ranges and their associated criteria. You can enter up to 126 range/criteria pairs.</li> </ul>	=MAXIFS(G2:G5,B3:B6,"a")
MINIFS	Returns the smallest number in a range, that meets a single or multiple criteria.	<p>MINIFS(min_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)</p> <p>Where,</p> <ul style="list-style-type: none"> <li>min_range (required): Actual range of cells in which the minimum value will be determined.</li> <li>criteria_range1 (required): Is the set of cells to evaluate with the criteria.</li> <li>criteria1 (required): Is the criteria in the form of a number, expression, or text that defines which cells will be evaluated as minimum.</li> <li>criteria_range2,</li> <li>criteria2, ... (optional): Additional ranges and their associated criteria. You can enter up to 126 range/criteria pairs.</li> </ul>	=MINIFS(G2:G7,B2:B7,1)

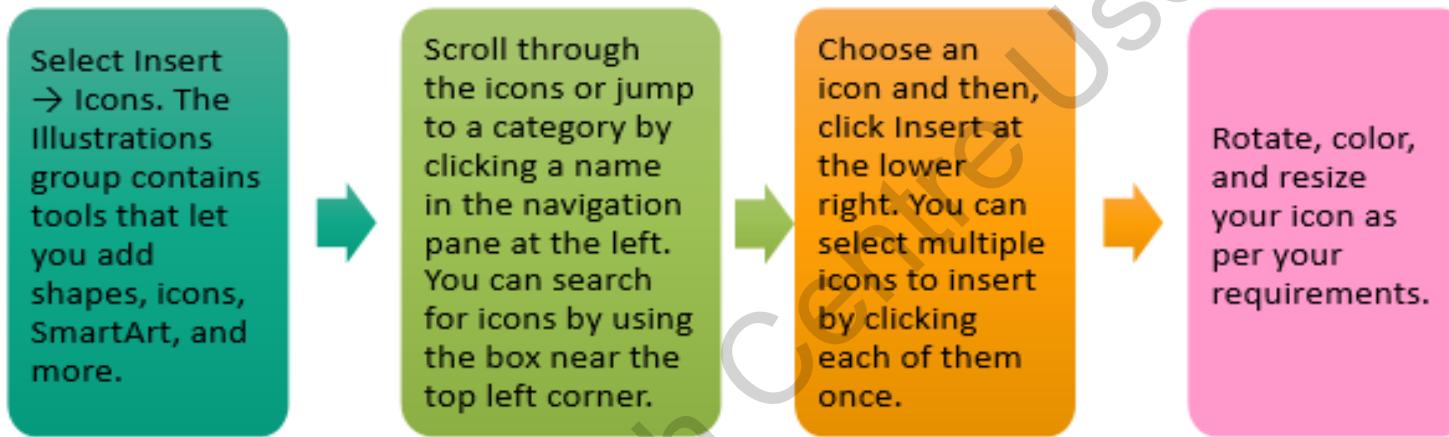
# New Functions in Excel 2019 [2-2]

Function	Description	Syntax	Example
SWITCH	Evaluates an expression against a list of values in order and returns the first matching result. If no results match, the 'else' is returned.	SWITCH(Value to switch, Value to match1...[2-126], Value to return if match found 1...[2-126], Value to return if there's no match)	=SWITCH(H5,1,"Sunday",2,"Monday",3,"Tuesday")
CONCAT	Combines text from multiple ranges and/or strings, but it does not provide delimiter or IgnoreEmpty arguments.	CONCAT(text1, [text2],...)  Where, text1: Text item to be joined. A string, or array of strings, such as a range of cells. [text2, ...]: (optional) Additional text items to be joined. There can be a maximum of 253 text arguments for the text items. Each can be a string or array of strings, such as a range of cells.	=CONCAT(B4," & ", C4)  If cells B4 and C4 contain "James Rockwell" and "Partners" respectively, the output of the function will be James Rockwell & Partners

# Inserting Icons and Charts in Excel 2019 [1-2]

- Using Excel 2019, you can insert 'free to use' icons and Scalable Vector Graphics (SVG) files into your workbooks, and manipulate them (such as rotating, coloring, and resizing them).

## Inserting Icons



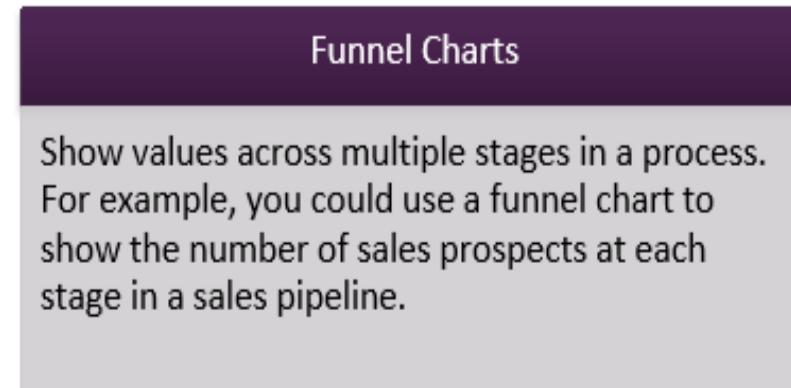
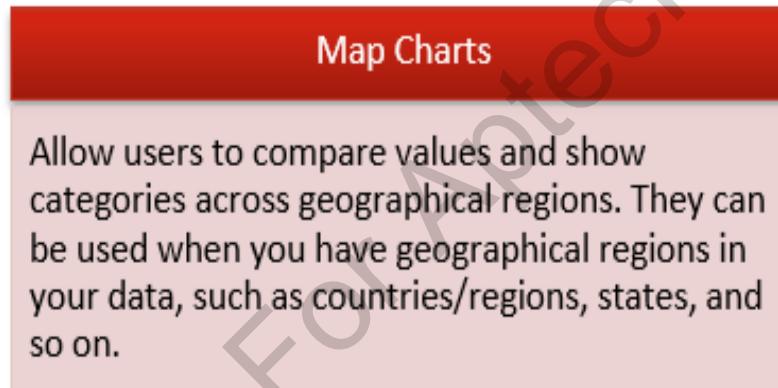
**Inserting SVG Files:** To insert an SVG file, drag and drop the file from File Explorer into your worksheet.

**Inserting Charts:** Charts provide visual aids to the data present in tables. They make data entries more comprehensible and clear.

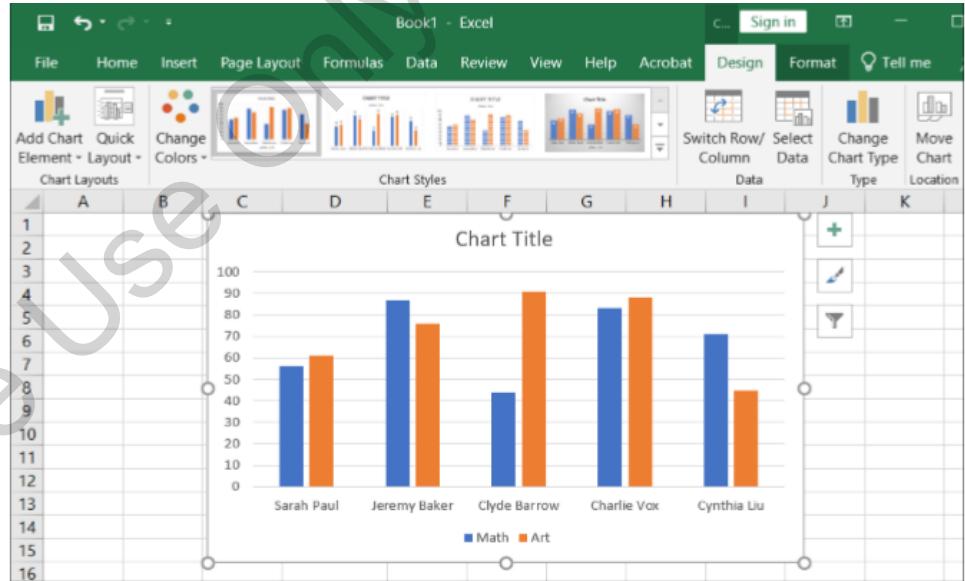
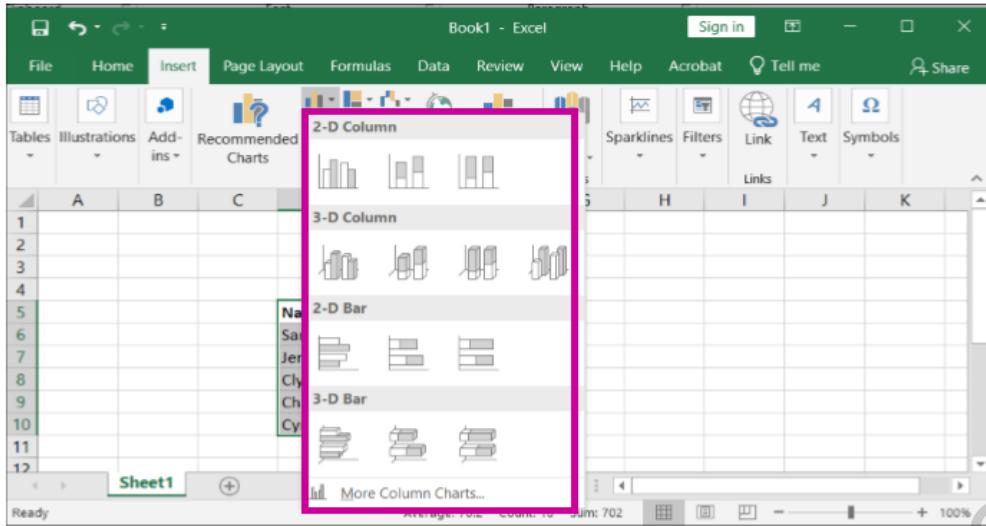
# Inserting Icons and Charts in Excel 2019 [2-2]

Chart Type	Description
Column	Compares the values across categories.
Line	Displays the graph over a period.
Pie	Displays the contribution of each value to the total. Pie charts are used only when there is one data series and all the values are positive.
Bar	Compares multiple values.
Area	Highlights the differences between numerous sets of data over a period.
Scatter	Compares pair of values. These charts are also known as XY charts.
Stock	Displays trends of the stock market.
Surface	Shows trends in values across two dimensions in a continuous curve.
Radar	Displays values relative to a center point.

In addition to these charts, there are newly introduced chart types in Excel 2019:



# Creating and Modifying Charts



Element	Description
Axis Titles	Provides name to horizontal and vertical axis of the chart and enables to select its position.
Chart Title	Specifies a title to the chart generated and enables to select its position.
Data Labels	Displays details of each data series on the chart and enables to select the position of the values.
Data Table	Provide details of each data series below the chart.
Legend	States what each of the data series stands for. The placing of the legend needs to be chosen from the Legend option in Chart Labels.

# Other New Features and Enhancements in Excel 2019

Feature/Enhancements	Description
Improved accessibility features with Accessibility Checker	Accessibility Checker helps you check Accessibility, so that users of your worksheet who may have disabilities will not encounter any difficulty while viewing or working with it. It identifies most accessibility issues and explains why each might be a potential problem for users with a disability. It also offers suggestions on how to fix/resolve each issue.
Audio cues with sound effects	Accessibility can also be improved via sound effects for audio cues, such as emitting sounds when options on the current screen change.
Add links to recently used files	Using Excel 2019, you can easily add hyperlinks to recent cloud-based files or Websites and create meaningful display names for people using screen readers.
View and restore changes in workbooks that are shared	When several users share and collaborate on worksheets, it is helpful to be able to view and if required, restore changes made by others. This can be done in Excel 2019.
Quickly save to recent folders	By saving files quickly, you can improve productivity. Excel 2019 helps to save your work to the most recently used folders.
Use the Deselect Tool to unselect selected cells	Deselect Tool helps to unselect the selected cells.
Improved autocomplete	With the improved autocomplete, it is not necessary to remember exact spellings of functions. Autocomplete will intuitively search for words having similar spelling and locate the function you may require.
No warnings when saving a CSV file	Earlier, Excel used to display a warning, 'This file may contain features that are not compatible with CSV...' when saving a Comma Separated Values (CSV) file but in Excel 2019, this will not happen anymore.

# Summary

- Excel formulas have the same basic structure: An '=' sign followed by one or more 'operands' which can be values, ranges, or cell references separated by one or more 'operators'.
- Advanced formulas in Excel may involve converting text and validation of data, import and export data, and so on.
- MS Excel includes many pre-defined functions that can be used to quickly find out the sum, average, count, maximum value, minimum value and so on, for a range of cells.
- IFS, MAXIFS, MINIFS, SWITCH, and CONCAT are some of the newly introduced functions in Excel 2019.
- Data validation is used to restrict the type of data or the values that the user enters into a cell.
- You can insert icons and Scalable Vector Graphics (SVG) files and charts into your workbooks and manipulate them.
- Excel supports several chart types including two new types, map charts and funnel charts.

# Inside Microsoft Office

## ► Session 08

Data Analysis and  
Security of Data in  
Microsoft Excel 2019



For Aptech Centre Use Only

# Objectives

- ▶ Explain analyzing data using tools
- ▶ Describe protection and security in an Excel file
- ▶ Explain levels of protection

# Data Analysis [1-2]

- ▶ MS Excel is a powerful tool which performs calculations, applies formulas, stores data, and also helps in analyzing the data
- ▶ Data Analysis helps in business planning and taking critical business decisions
- ▶ Several methods can be used to analyze data. Few of these methods include:

Sort

Filter

Conditional Formatting

Charts

PivotTables

What-if Analysis

Analysis ToolPak

# Data Analysis [2-2]

- ▶ Data in an Excel spreadsheet can be sorted to understand it better.
- ▶ Data can be sorted in ascending or descending order or in alphabetical order

A	B	C	D
1 Last Name	Sales	Country	Quarter
2 Smith	\$34,587	UK	Qtr 1
3 Johnson	\$3,765	USA	Qtr 3
4 Williams	\$12,987	UK	Qtr 2
5 Jones	\$56,789	USA	Qtr 1
6 Brown	\$56,230	USA	Qtr 2
7 Smith	\$98,076	UK	Qtr 3
8 Johnson	\$23,987	USA	Qtr 2
9 Jones	\$67,834	USA	Qtr 2
10 Williams	\$23,097	UK	Qtr 1
11 Brown	\$78,604	USA	Qtr 1
12 Smith	\$65,412	UK	Qtr 2
13 Johnson	\$76,026	USA	Qtr 1
14 Williams	\$87,650	UK	Qtr 3
15 Jones	\$45,987	USA	Qtr 3
16 Brown	\$34,987	USA	Qtr 3
17			
18			

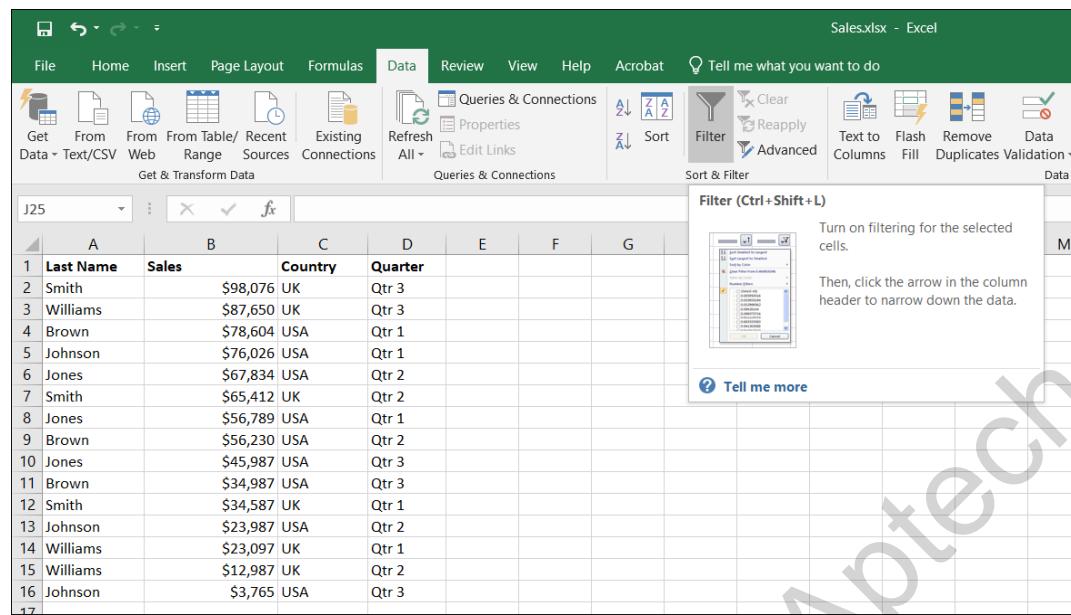
A	B	C	D
1 Last Name	Sales	Country	Quarter
2 Brown	\$56,230	USA	Qtr 2
3 Brown	\$78,604	USA	Qtr 1
4 Brown	\$34,987	USA	Qtr 3
5 Johnson	\$3,765	USA	Qtr 3
6 Johnson	\$23,987	USA	Qtr 2
7 Johnson	\$76,026	USA	Qtr 1
8 Jones	\$56,789	USA	Qtr 1
9 Jones	\$67,834	USA	Qtr 2
10 Jones	\$45,987	USA	Qtr 3
11 Smith	\$34,587	UK	Qtr 1
12 Smith	\$98,076	UK	Qtr 3
13 Smith	\$65,412	UK	Qtr 2
14 Williams	\$12,987	UK	Qtr 2
15 Williams	\$23,097	UK	Qtr 1
16 Williams	\$87,650	UK	Qtr 3
17			
18			

Data before and after sorting

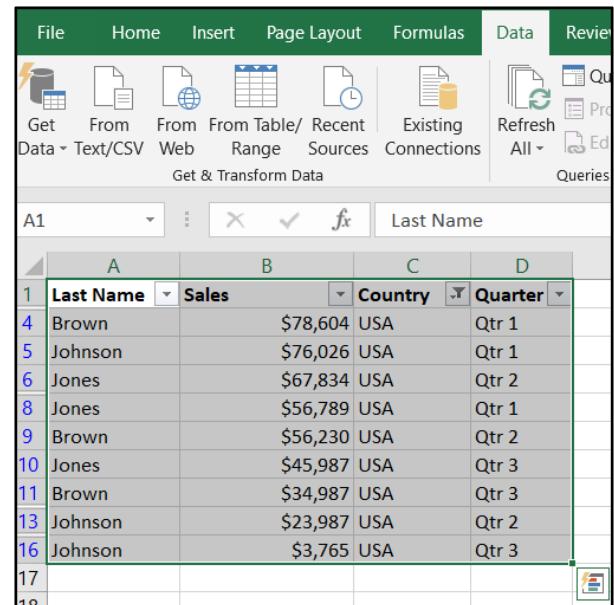
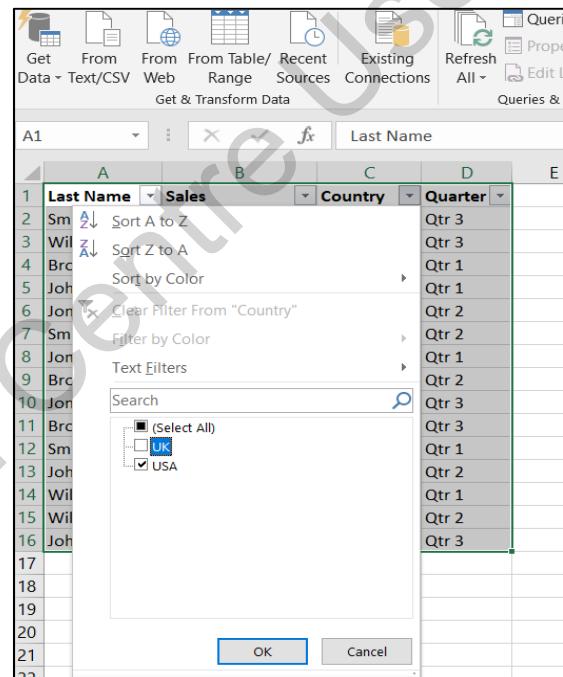
# Filtering

- ▶ Filter is applied to a data set if one wants to set criteria and then display the result. This is another effective tool to analyze data.

Data before and after filtering



A	B	C	D	E	F	G
Last Name	Sales	Country	Quarter			
Smith	\$98,076	UK	Qtr 3			
Williams	\$87,650	UK	Qtr 3			
Brown	\$78,604	USA	Qtr 1			
Johnson	\$76,026	USA	Qtr 1			
Jones	\$67,834	USA	Qtr 2			
Smith	\$65,412	UK	Qtr 2			
Jones	\$56,789	USA	Qtr 1			
Brown	\$56,230	USA	Qtr 2			
Jones	\$45,987	USA	Qtr 3			
Brown	\$34,987	USA	Qtr 3			
Smith	\$34,587	UK	Qtr 1			
Johnson	\$23,987	USA	Qtr 2			
Williams	\$23,097	UK	Qtr 1			
Williams	\$12,987	UK	Qtr 2			
Johnson	\$3,765	USA	Qtr 3			



A	B	C	D
Last Name	Sales	Country	Quarter
Brown	\$78,604	USA	Qtr 1
Johnson	\$76,026	USA	Qtr 1
Jones	\$67,834	USA	Qtr 2
Jones	\$56,789	USA	Qtr 1
Brown	\$56,230	USA	Qtr 2
Jones	\$45,987	USA	Qtr 3
Brown	\$34,987	USA	Qtr 3
Johnson	\$23,987	USA	Qtr 2
Johnson	\$3,765	USA	Qtr 3

# Conditional Formatting

- ▶ Conditional formatting is used to format a large data set as per the requirements of multiple users. For example, an organization's data set can be the names and details of its employees.

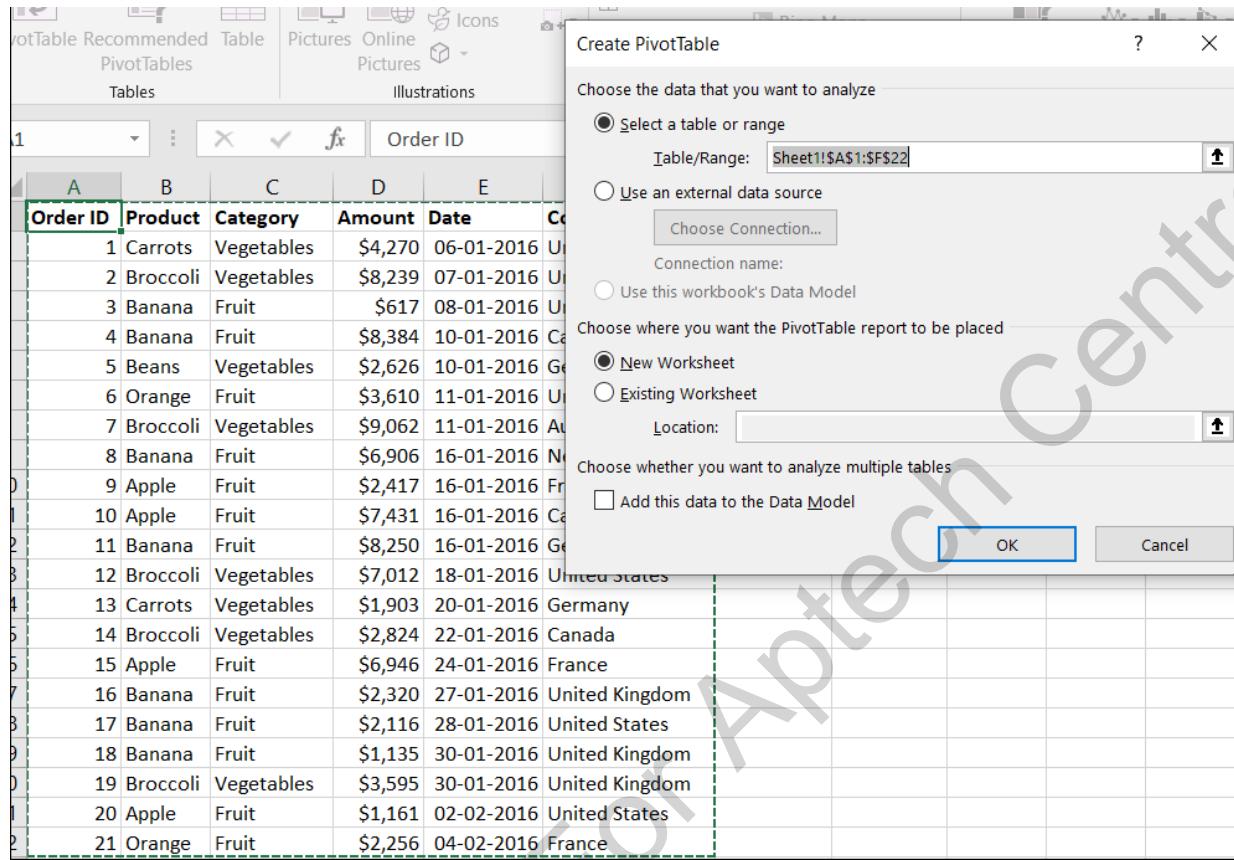
The screenshot shows the Microsoft Excel ribbon with the Home tab selected. In the Styles group, the 'Conditional Formatting' button is highlighted. A 'Conditional Formatting' dialog box is open over the worksheet area. The dialog box title is 'Conditional Formatting' and it contains the sub-instruction: 'Easily spot trends and patterns in your data using bars, colors, and icons to visually highlight important values.' Below this, there is a preview section showing a color scale from green to red with numerical markers (6, 4, 9, 7, 3). At the bottom of the dialog box is a 'Tell me more' link.

The screenshot shows the same Microsoft Excel interface after applying conditional formatting. The data in column A (cells A1 to A10) has been formatted using a rule that highlights values greater than 50 in red. The values 87 and 78 are now displayed in red, while the others (14, 9, 39, 25, 16, 48, 55) remain in black. The rest of the worksheet is visible, including the ribbon and other toolbars.

**Results of Conditional Formatting**

# PivotTables

- PivotTables are one of the most powerful tools of MS Excel. It allows the user to interpret data from a large and detailed data set.



The screenshot shows a PivotTable report in Excel. The PivotTable structure is as follows:

	Row Labels	Sum of Amount
1	Country (All)	
2		
3	Row Labels	Sum of Amount
4	Apple	191257
5	Banana	340295
6	Beans	57281
7	Broccoli	142439
8	Carrots	136945
9	Mango	57079
10	Orange	104438
11	Grand Total	1029734
12		

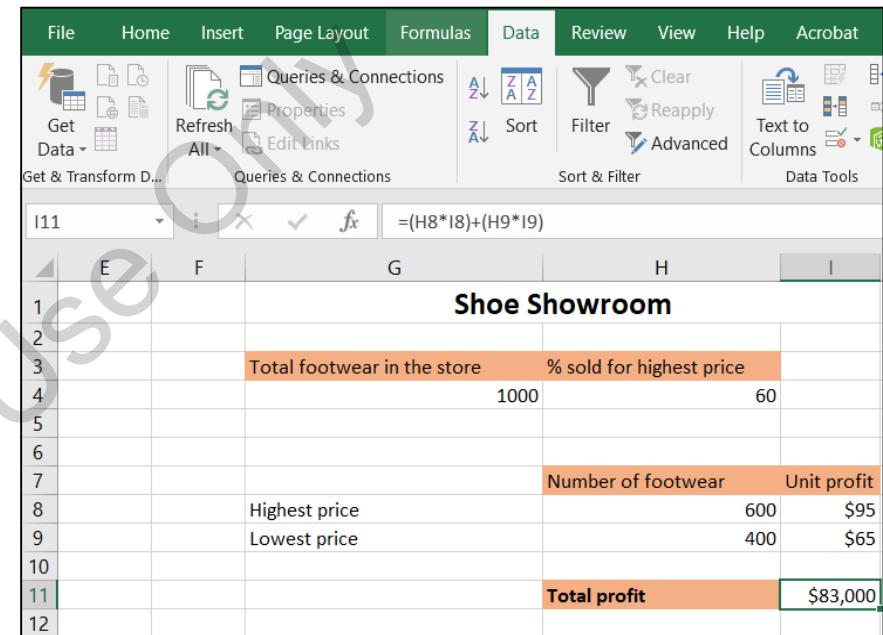
# Tables

- ▶ Tables allow user to analyze data in Excel quickly and easily as compared to manual methods or using a calculator.
- ▶ Tables also enable better organization of data, which improves readability and understanding of data.

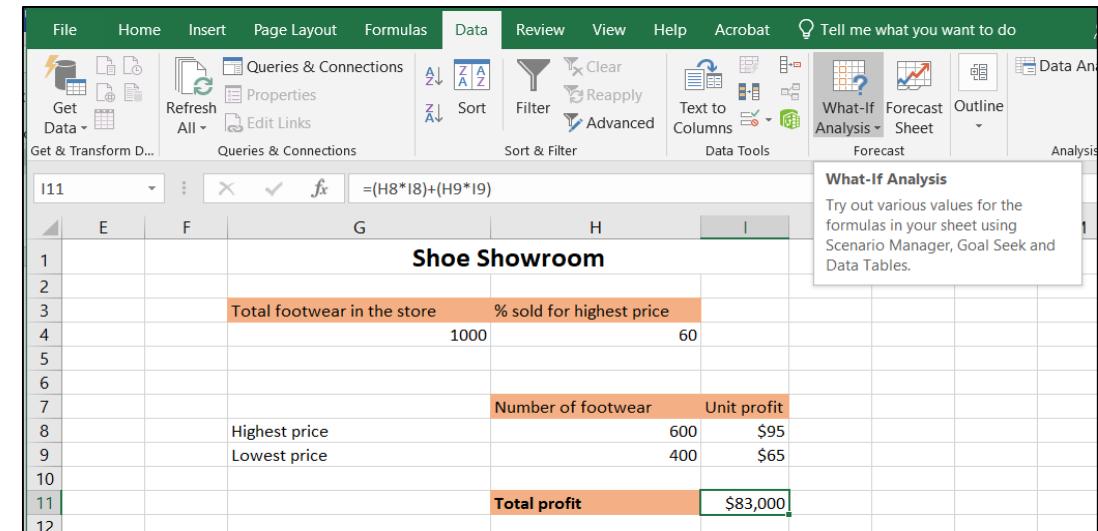
A	B	C	D	E
1	Last Name	Sales	Country	Quarter
2	Smith	\$98,076	UK	Qtr 3
3	Williams	\$87,650	UK	Qtr 3
4	Brown	\$78,604	USA	Qtr 1
5	Johnson	\$76,026	USA	Qtr 1
6	Jones	\$67,834	USA	Qtr 2
7	Smith	\$65,412	UK	Qtr 2
8	Jones	\$56,789	USA	Qtr 1
9	Brown	\$56,230	USA	Qtr 2
10	Jones	\$45,987	USA	Qtr 3
11	Brown	\$34,987	USA	Qtr 3
12	Smith	\$34,587	UK	Qtr 1
13	Johnson	\$23,987	USA	Qtr 2
14	Johnson	\$23,765	USA	Qtr 3
15	Williams	\$23,097	UK	Qtr 1
16	Williams	\$12,987	UK	Qtr 2
17				
18				

# What-if Analysis [1-3]

- ▶ What-if Analysis in MS Excel allows the user to try out different values for formulas
- ▶ What-if method is used to analyze the results or outcomes in varying scenarios with the same set of data
- ▶ Let us understand this with the help of an example. Consider a footwear showroom. It has 1,000 footwear in storage.
- ▶ A certain percentage is sold at the highest price of \$95 and a certain percentage is sold at the lowest price of \$65.
- ▶ A worksheet is created to represent this data in Excel as shown in Figure 8.32. The formula in cell H8 is G4\*H4/100 and in cell H9 is G4-H8. The calculation for total profit will use the formula (H8\*I8)+(H9\*I9) in cell I11.



		E	F	G	H	I
1						
2						
3			Total footwear in the store	% sold for highest price		
4			1000	60		
5						
6						
7					Number of footwear	Unit profit
8					600	\$95
9			Highest price		400	\$65
10			Lowest price			
11					Total profit	\$83,000
12						



		E	F	G	H	I
1						
2						
3			Total footwear in the store	% sold for highest price		
4			1000	60		
5						
6						
7					Number of footwear	Unit profit
8			Highest price		600	\$95
9			Lowest price		400	\$65
10						
11					Total profit	\$83,000
12						

# What-if Analysis [2-3]

## Scenario Manager Option

Sales.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View Help Acrobat Tell me what you want to do

Get & Transform Data Queries & Connections Refresh All Edit Links Properties Sort & Filter Advanced Text to Columns Data Tools

P11 C D E F G

**Shoe Showroom**

	Total footwear in the store	% sold for highest price
	1000	60
	Number of footwear	Unit profit
Highest price	600	\$95
Lowest price	400	\$65
Total profit		\$83,000

Scenario Manager

Scenarios:

- 60% highest price
- 70% highest price
- 75% highest price
- 85% highest price

Changing cells: \$H\$4

Comment: Created by m on 04-12-2020

Show Close

File Home Insert Page Layout Formulas Data Review View Help Acrobat Tell me what you want to do

From Text/CSV From Web From Table/Range Get & Transform Data Refresh All Edit Links Properties Sort & Filter Advanced Text to Columns Data Tools

Queries & Connections Existing Connections Refresh All Edit Links Properties Sort & Filter Advanced Text to Columns Data Tools

**Shoe Showroom**

	Total footwear in the store	% sold for highest price
	1000	60

	Number of footwear	Unit profit
Highest price	600	\$95
Lowest price	400	\$65

	Total profit
	\$83,000

Edit Scenario

Scenario name: 60% highest price

Changing cells: \$H\$4

Comment: Created by m on 04-12-2020

Protection

Prevent changes

Hide

OK Cancel

Several Scenarios Created Using Scenario Manager

# What-if Analysis [3-3]

The screenshot shows a Microsoft Excel spreadsheet titled "Shoe Showroom". The worksheet contains data about footwear sales and profit. A formula  $=(H8*I8)+(H9*I9)$  is entered in cell I11. The "Data" tab is selected, showing the "What-If Analysis" group. The "Scenario Manager" dialog box is open, listing four scenarios: "60% highest price", "70% highest price", "75% highest price", and "85% highest price". The "85% highest price" scenario is currently selected. The "Changing cells:" field is set to \$H\$4, and the "Comment:" field indicates it was created by m on 04-12-2020.

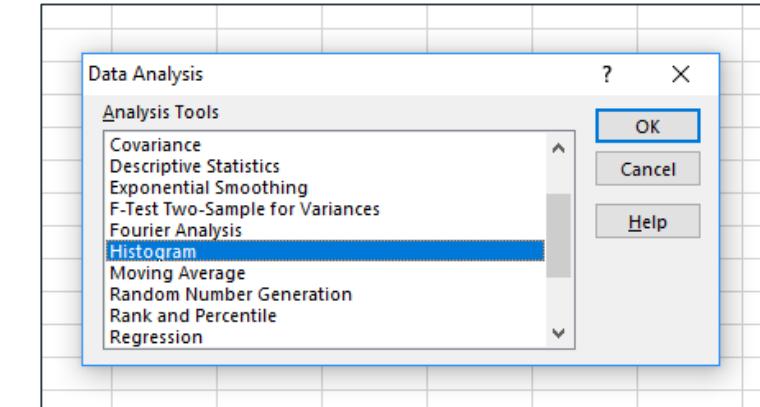
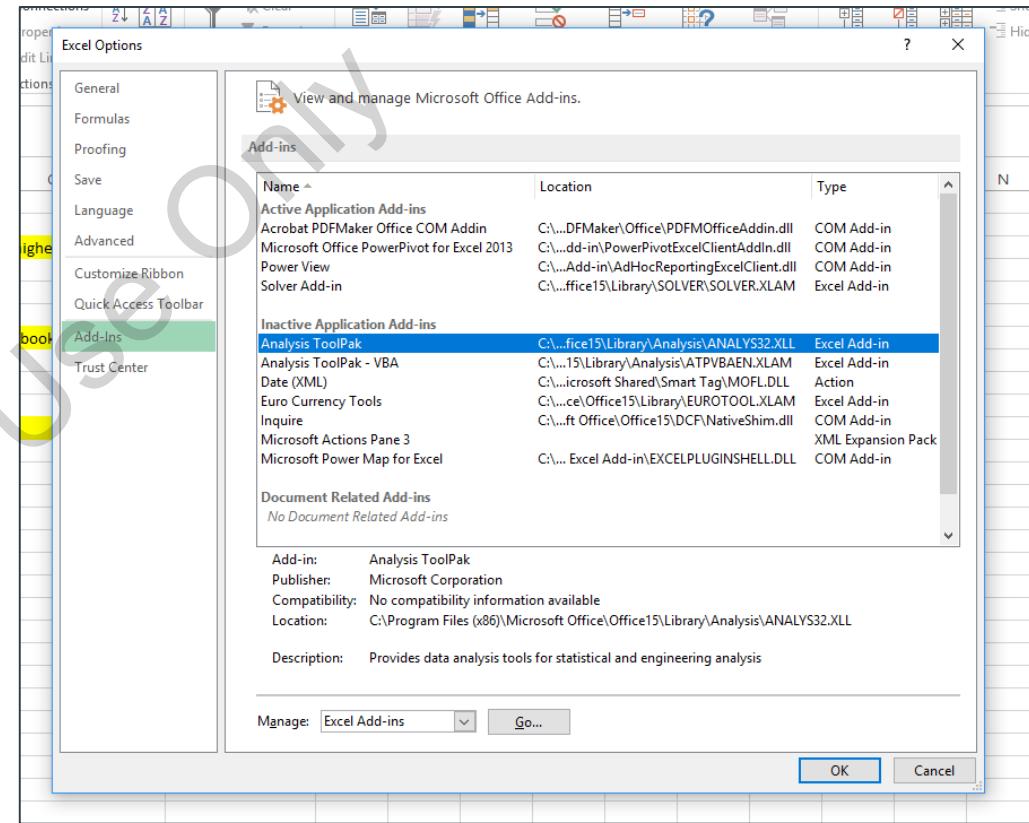
Checking the Result of Each Scenario

A	B	C	D	E	F	G	H
<b>Scenario Summary</b>							
Current Values: 60% highest price 70% highest price 75% highest price 85% highest price							
<b>Changing Cells:</b>	\$H\$4	85	60	70	75	85	
<b>Result Cells:</b>	\$I\$11	\$90,500	\$83,000	\$86,000	\$87,500	\$90,500	
Notes: Current Values column represents values of changing cells at time Scenario Summary Report was created. Changing cells for each scenario are highlighted in gray.							

Scenario Summary

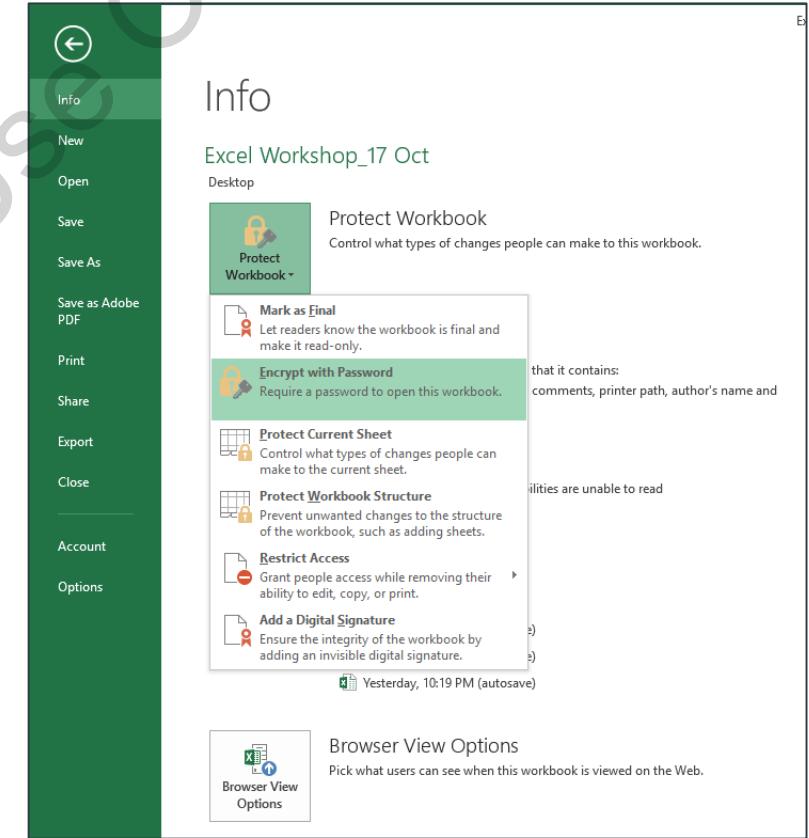
# Analysis ToolPak

- ▶ The Analysis ToolPak is an MS Excel add-in program that provides data analysis tools for financial, statistical, and engineering data analysis.
- ▶ MS Excel displays several options for data analysis in the **Data Analysis** dialog box. The **Analysis Tools** section displays a list of analysis tools, such as **Histogram** and **Moving Average**. Select any of the analysis tool as per your requirements.



# Protection and Security in Excel [1-4]

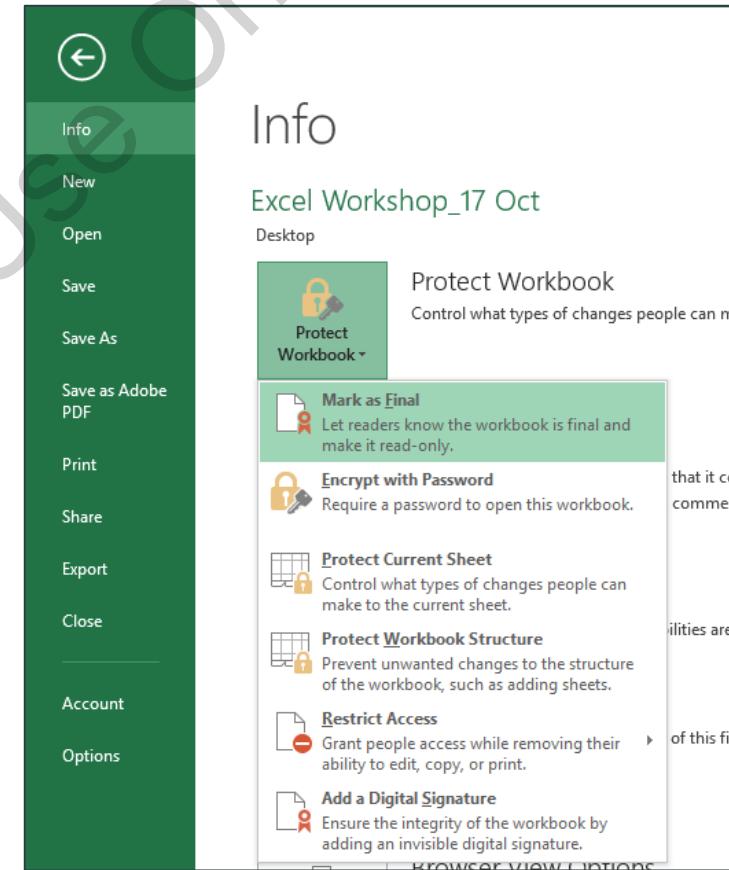
- ▶ MS Excel file may have data which is confidential or which can be made available to people to view the details but they would not have any rights to edit the worksheets
- ▶ Protection of Excel data involves different methods and varying level of protection:
  - ▶ File level protection
  - ▶ Workbook level protection
  - ▶ Worksheet level protection



Encrypt with Password Option

# Protection and Security in Excel [2-4]

- ▶ Two passwords can be set on a file – one to open and view as read-only file and the other to open and modify
- ▶ ‘Mark as Final’ option is used if the Excel file needs to be marked as final version and any further changes by other users can be prevented
- ▶ If an organization has permissions to set up using Information Rights Management (IRM), the user may apply any of the available IRM permissions to the document



Mark as Final Option

# Protection and Security in Excel [3-4]

- ▶ The structure of a workbook can be locked by specifying a password
- ▶ Locking the workbook structure prevents other users from adding, moving, deleting, hiding, and renaming worksheets

The screenshot shows the Microsoft Excel ribbon with the 'Review' tab selected. In the 'Changes' group, the 'Protect Workbook' button is highlighted. A context menu titled 'Protect Workbook' is open, containing the following text:  
Keep others from making structural changes to your workbook, such as moving, deleting or adding sheets.  
[Tell me more](#)

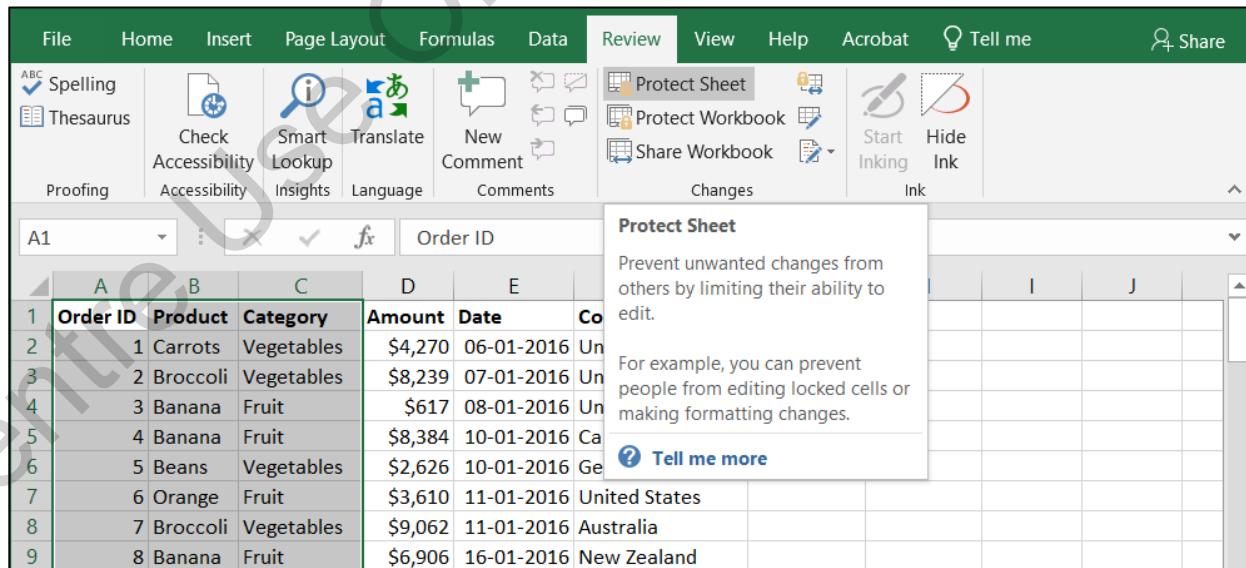
The main worksheet area displays a table for a 'Shoe Showroom'. The table includes columns for 'Total footwear in the store', '% sold for highest price', 'Number of footwear', and 'Unit profit'. Row 11 contains the formula  $=H8*I8)+(H9*I9)$  in cell I11, which calculates the total profit of \$83,000.

	E	F	G	H	I	J
1					Shoe Showroom	
2						
3			Total footwear in the store	% sold for highest price		
4			1000	60		
5						
6						
7				Number of footwear	Unit profit	
8			Highest price		600	\$95
9			Lowest price		400	\$65
10						
11				Total profit	\$83,000	
12						
13						

Protect Workbook

# Protection and Security in Excel [4-4]

- ▶ With worksheet protection, the user can control how someone else can work within worksheets
- ▶ What exactly a user can do within a sheet can be specified, thereby making sure that none of the important data in the worksheet gets affected by changes made by someone else



Applying Worksheet Level Protection

# Levels of Protection

- To control the level of access for users on an MS Excel file, file-level protection is used

**If others should not be able to open the file**

The Excel file can be encrypted, which is the most common technique used. This means it is locked with a password and nobody except the team can open it.

**If others can Read-only or editing access to different users have to be restricted**

If the managers in the team should have the access to edit the weekly status report, but team members should only have Read-only access, then the Excel file can be protected by specifying two passwords: one to open and the other to modify. This can later be shared appropriately with the team depending on the access they should be given.

# Summary

- Data Analysis is a process of inspecting, cleaning, transforming and modeling (preparing charts, graphs or using the data in other tools such as Power BI and Tableau) data with the goal of discovering useful information, suggesting conclusions and supporting decision-making.
- Data in an Excel spreadsheet can be sorted to understand it better. Data can be sorted in ascending or descending order or in alphabetical order.
- Conditional formatting helps in highlighting the cells with a specific color depending on the value of the cell.
- Pivot tables are one of the most powerful tools of MS Excel. It allows the user to interpret data from a large and detailed data set.
- The Analysis ToolPak is an MS Excel add-in program that provides data analysis tools for financial, Statistical and Engineering data analysis.
- When an MS Excel file is encrypted, nobody has access to the file. The encryption is done with the help of a password. This is the most recommended and common technique to secure an Excel file.
- Digital signatures authenticate digital information such as documents, email messages, and macros (a single instruction that expands into a set of instructions to perform a particular task) by using computer cryptology (practice or study of techniques to secure communication).
- The structure of a workbook can be locked by specifying a password. Locking the workbook structure prevents other users from adding, moving, deleting, hiding, and renaming worksheets. Let us see how we can apply a workbook level protection.
- Worksheet level protection, one can control how a user can work within worksheets. One can specify what exactly a user can do within a sheet, thereby making sure that none of the important data in the worksheet gets affected.

# Inside Microsoft Office

## ► Session 09

Pivot Table and Pivot  
Charts in Microsoft  
Excel 2019



For Aptech Centre Use Only

# Objectives

- ▶ Explain data using PivotTable
- ▶ Describe PivotTable
- ▶ Explain PivotCharts
- ▶ List the differences between PivotCharts and PivotTables

# Analyzing Data Using PivotTable [1-3]

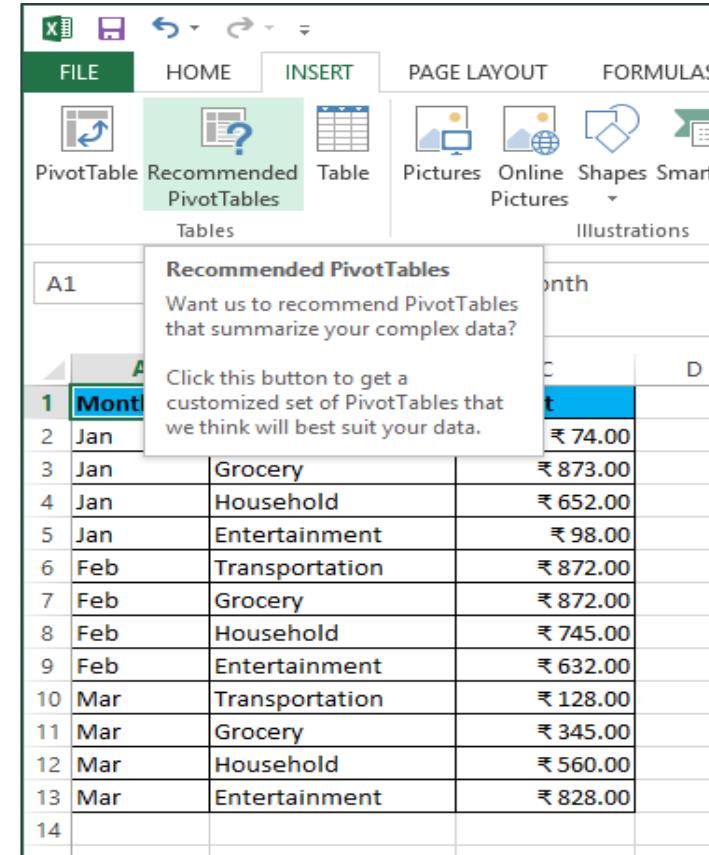
- ▶ A pivot table allows the user to extract significance from a large and detailed data set
- ▶ A pivot table can be used to summarize, analyze, explore, and present summary data
- ▶ Pivot table can analyze numerical data and is especially designed for presenting concise, attractive, and annotated (adding comments or notes) online or printed reports
- ▶ PivotCharts complement PivotTables by adding visualization to the summary data in PivotTables.

A	B	C	D	E	F	G	H
Month	Category	Amount				Row Labels	Sum of Amount
1 Jan	Transportation	\$74				Jan	1697
2 Jan	Grocery	\$873				Entertainment	98
3 Jan	Household	\$652				Grocery	873
4 Jan	Entertainment	\$98				Household	652
5 Feb	Transportation	\$872				Transportation	74
6 Feb	Grocery	\$872				Feb	3121
7 Feb	Household	\$745				Entertainment	632
8 Feb	Entertainment	\$632				Grocery	872
9 Mar	Transportation	\$128				Household	745
10 Mar	Grocery	\$345				Transportation	872
11 Mar	Household	\$560				Mar	1861
12 Mar	Entertainment	\$828				Entertainment	828
13						Grocery	345
14						Household	560
15						Transportation	128
16						Grand Total	6679
17							

Sample Data Set and Sample PivotTable

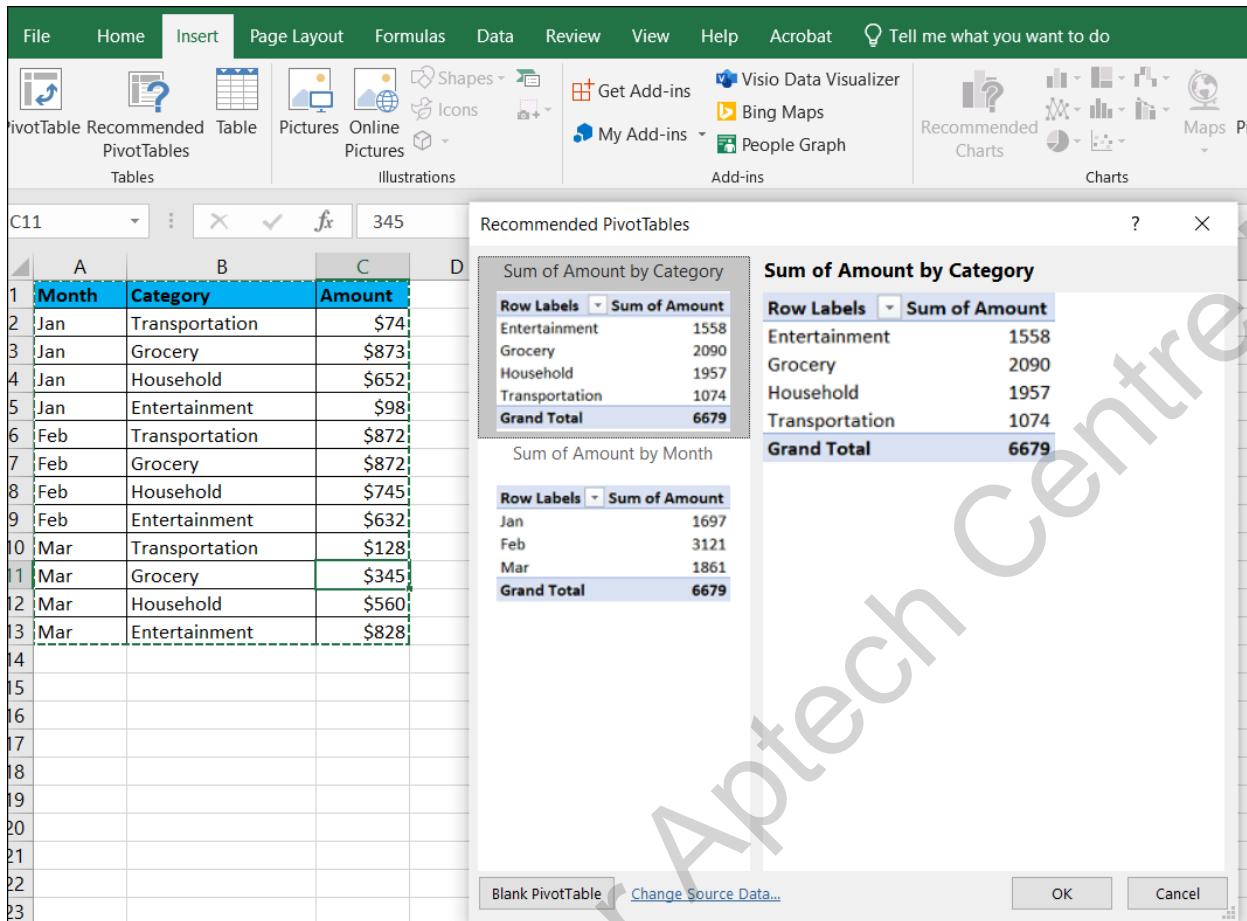
# Analyzing Data Using PivotTable [2-3]

- ▶ MS Excel can help by recommending and then, automatically creating **PivotTables**, which are a great way to summarize, analyze, explore, and present the data set
- ▶ The **Recommended PivotTable** option appears under the **Insert** tab
- ▶ Series of steps to create a PivotTable using this option:
  - Make sure the data set has column headings or table headers and that there are no blank rows.
  - Click any cell in the range of cells or table.
  - Click **Insert → Recommended PivotTables**
  - In **Recommended PivotTables** dialog box, click any PivotTable layout, which is **Sum of Amount by Category** layout, to get a preview in the right pane of the **Recommended PivotTables** dialog box.
  - Pick the one that shows the data as per your requirement, and click **OK** to close the **Recommended PivotTables** dialog box.



Recommended PivotTables Option

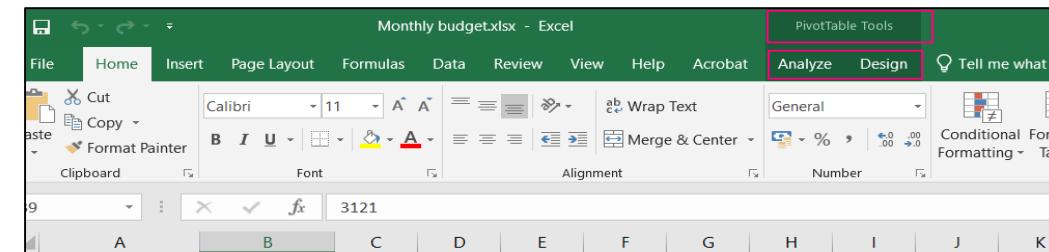
# Analyzing Data Using PivotTable [3-3]



Selecting from the Recommended PivotTables

Row Labels	Sum of Amount
Entertainment	1558
Grocery	2090
Household	1957
Transportation	1074
<b>Grand Total</b>	<b>6679</b>

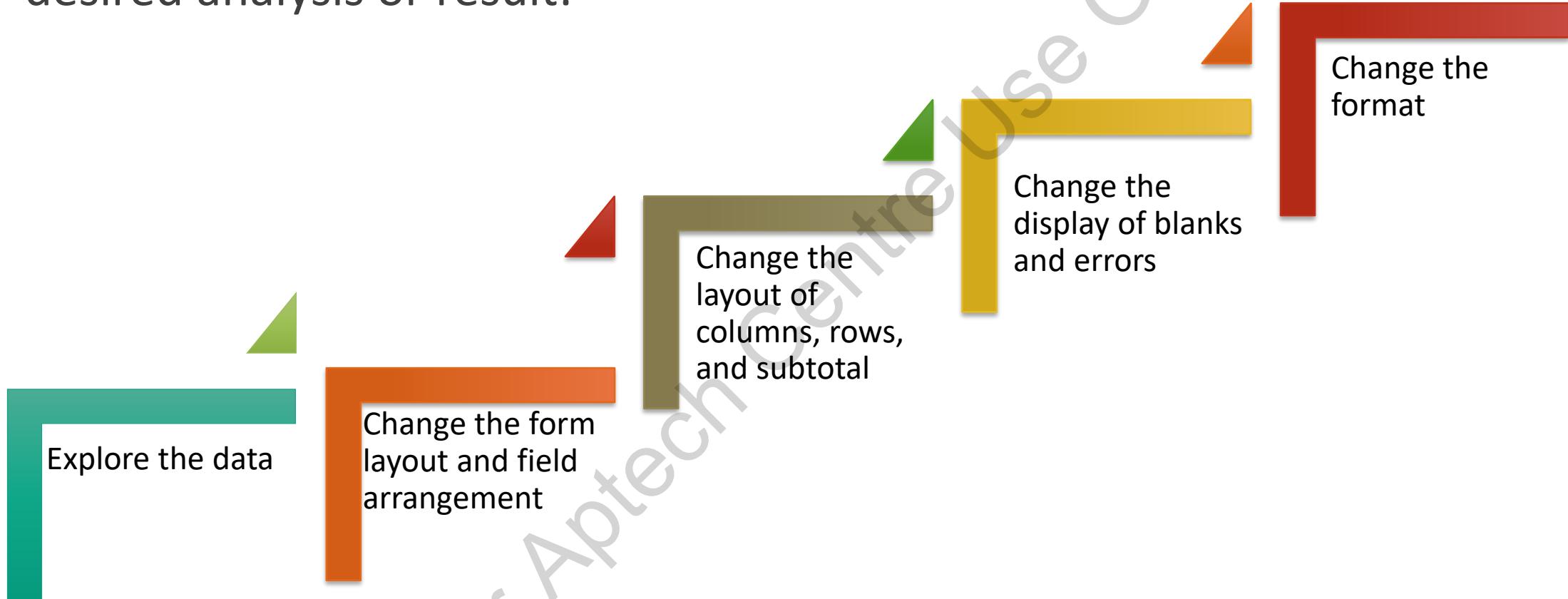
Resulting PivotTable



PivotTable Tools

# Understanding the PivotTable

- There are a few tasks that can be performed with a PivotTable to arrive at desired analysis or result:



# Exploring the Data

- ▶ Data can be explored by expanding and collapsing the data
- ▶ Underlying details that pertain to values can be seen, after expanding or collapsing the data set
- ▶ Other methods of exploring the table include sorting or applying filter to the table

A	B
Month	Jan
Row Labels	Sum of Amount
Entertainment	98
Grocery	873
Household	652
Transportation	74
<b>Grand Total</b>	<b>1697</b>

Expanded PivotTable

Row Labels	Sum of Amount
Entertainment	1558
Grocery	2090
Household	1957
Transportation	1074
<b>Grand Total</b>	<b>6679</b>

Collapsed PivotTable

# Changing the Form Layout and Field Arrangement [1-3]

- The PivotTable form layout and field arrangement can be changed by doing the following:

Change the table format form:  
Compact, Outline, or Tabular

Add, rearrange, and remove data fields

Change the order of fields or items

# Changing the Form Layout and Field Arrangement [2-3]



Compact form

Displays items from different row area fields in one column. Also, uses indentation to distinguish between the items from different fields. Row labels consume less space in Compact form, which leaves more space for numeric data.

Expand and Collapse buttons are displayed so that you can display or hide the details in Compact form. Compact table form as the name suggests, saves space and makes the PivotTable more readable and is hence, specified as the default layout form for PivotTables.



Outline form

Can display subtotals at the top of each group because items in the next column are displayed one level (row) below the current item.



Tabular form

Displays one column per field and provides room for field headers.

# Changing the Form Layout and Field Arrangement [3-3]

- Re-arranging of data fields can be done by selecting the check box next to each field name in the **Field** section.
- The field is placed in a default area of the layout section, but the user can rearrange the fields if required.
- To add a field name or change the order, you can click and hold a field name and then, drag the field between the field section and an area in the layout section.

PivotTable	Description	PivotChart	Description
Values	Used to display summary numeric data	Values	Used to display summary numeric data
Row Labels	Used to display fields as rows on the side of the report. A row lower in position is nested within another row immediately above it	Axis Field (Categories)	Used to display fields as an axis in the chart
Column Labels	Used to display fields as columns at the top of the report. A column lower in position is nested within another row immediately above it	Legend Fields (Series) Labels	Used to display fields in the legend of the chart
Report Filter	Used to filter the entire report based on the selected item in the report filter	Report Filter	Used to filter the entire report based on the selected item in the report filter

## PivotTable and PivotChart Fields

# Change the Layout of Columns, Rows, and Subtotals [1-2]

- ▶ To further refine the layout of a PivotTable, the user can make changes that affect the layout of columns, rows, and subtotals, such as displaying subtotals above the rows or turning column headers OFF
- ▶ One can also rearrange individual items within a row or column
- ▶ The layout of columns, rows, and subtotals can be changed by doing the following:

Turn the column or row field headers ON or OFF or display or hide blank lines

Display subtotals above or below their rows

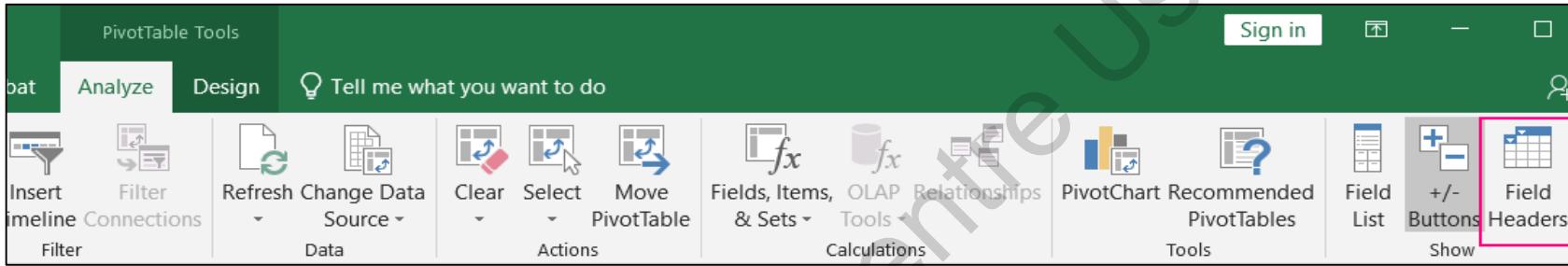
Adjust column widths on refresh

Move a column field to the row area or a row field to the column area

Merge or unmerge cells for outer row and column items

# Change the Layout of Columns, Rows, and Subtotals [2-2]

- To switch between showing and hiding field headers, click **Field Headers** under **Show** group of **Analyze** tab



Hiding and Showing Field Headers

# Change the Display of Blanks and Errors

- The display of blanks and errors can be changed by doing the following:

Change how errors and empty cells are displayed

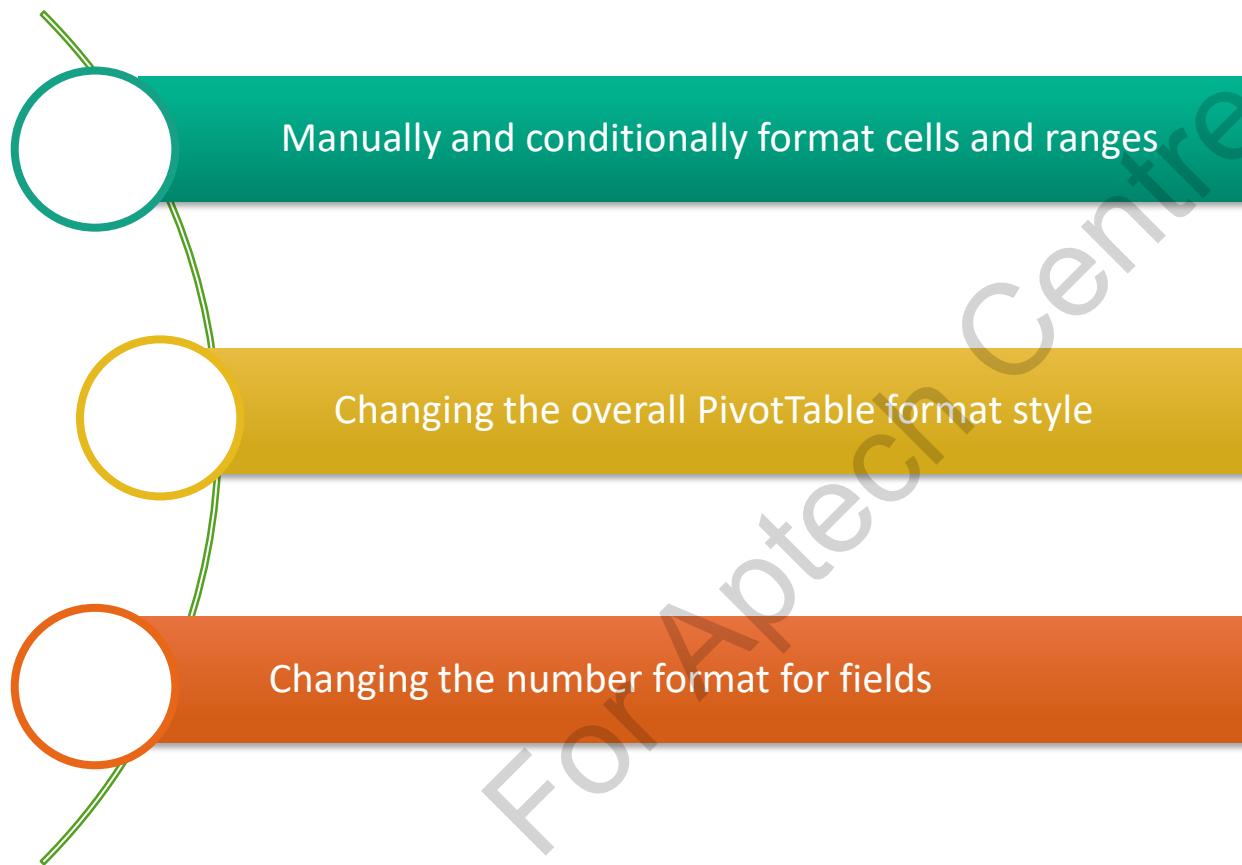
Change how items and labels without data are shown

Display or hide blank rows

- When a row in the PivotTable is selected, the **PivotTable Tools** tab gets displayed on the Ribbon. Blank rows can be inserted or removed from the **Design** tab in the **Layout** group.

# Changing the Format of the PivotTable

- ▶ One can choose from a wide variety of PivotTable styles in the gallery
- ▶ The user can control the banding (applying a shade) behavior of a report
- ▶ The format of the PivotTable may be changed by doing the following:



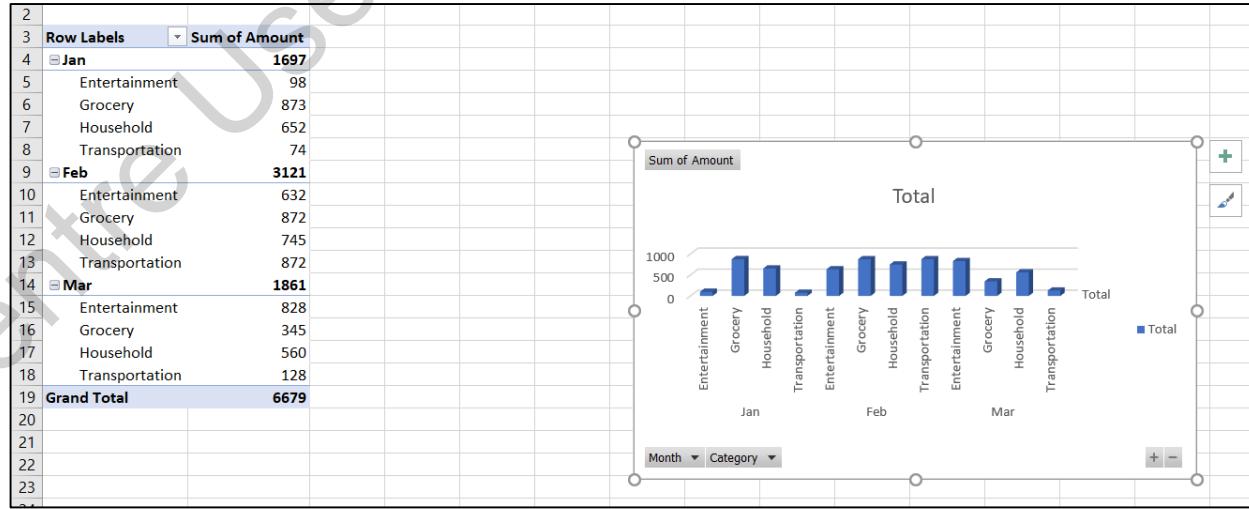
# Understanding the Difference Between PivotChart and Standard Charts [1-5]

## Creating PivotCharts with a PivotTable

Click anywhere in the PivotTable and then click **Insert → PivotChart → PivotChart**

There are various types of charts shown in the **Insert Chart** dialog box. Choose any one, such as 3-D column chart

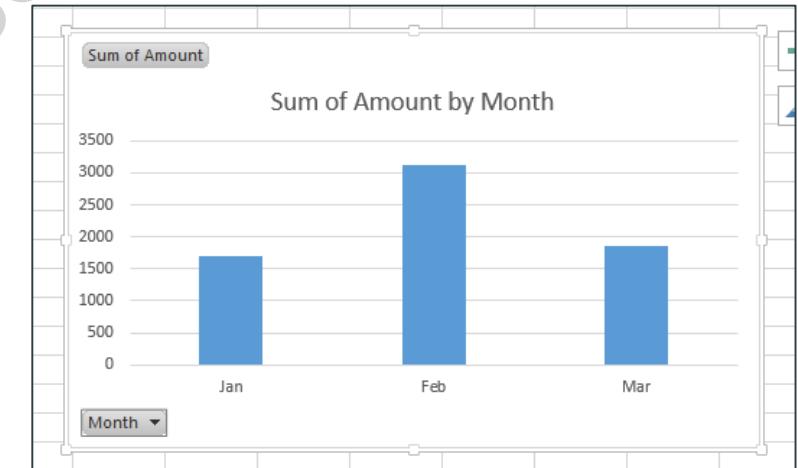
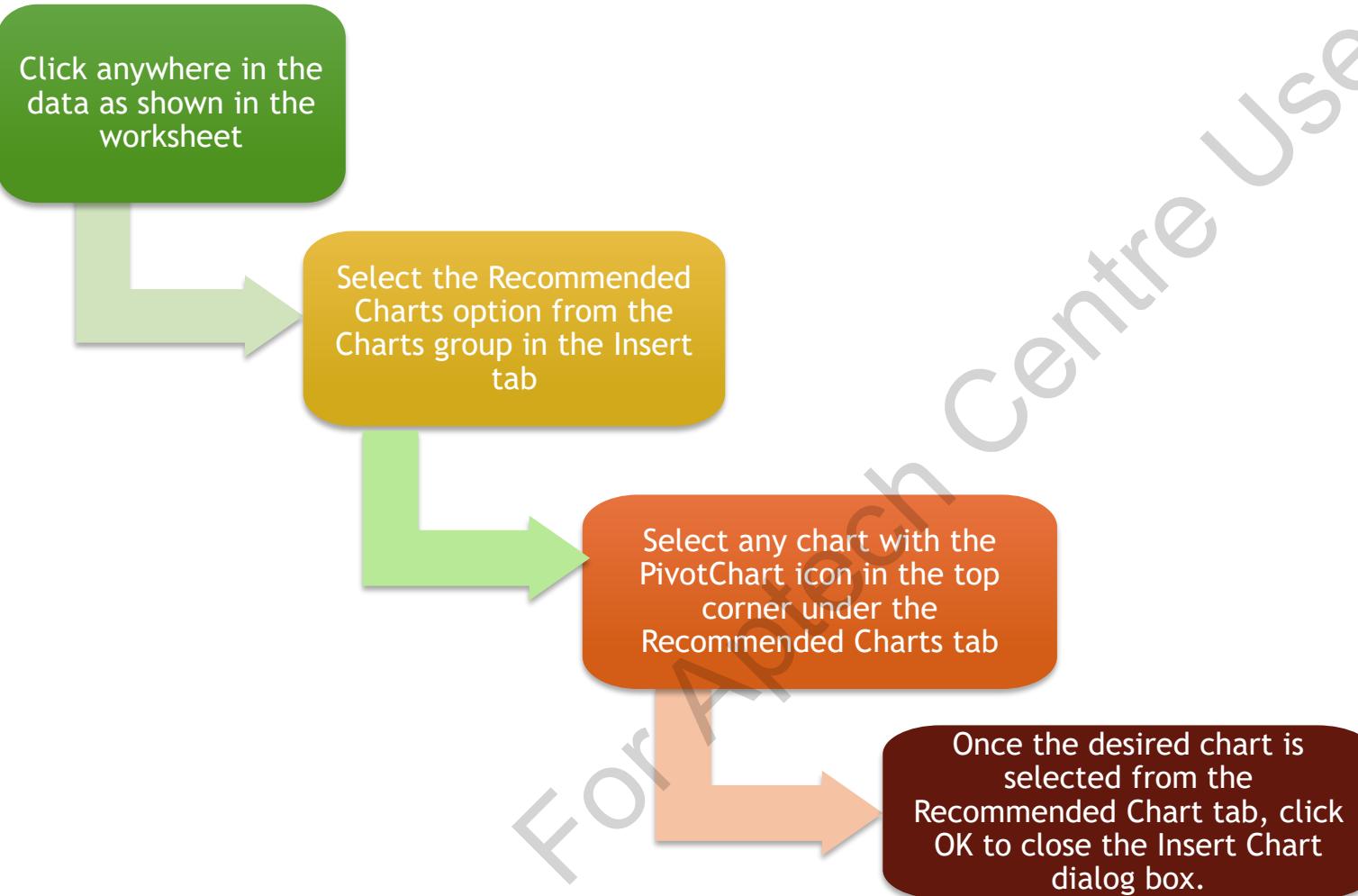
Excel creates and inserts a 3-D column chart in the worksheet



PivotChart Created

# Understanding the Difference Between PivotChart and Standard Charts [2-5]

## Creating PivotChart without using a PivotTable



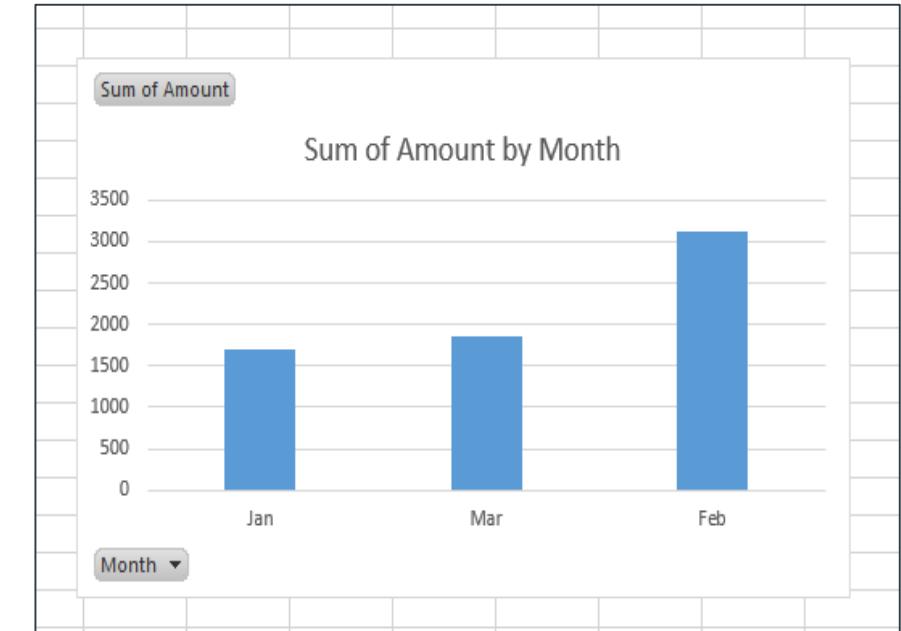
PivotChart Created

# Understanding the Difference Between PivotChart and Standard Charts [3-5]

## Sorting a PivotChart

**Step 1** – From the PivotChart that appears, select any interactive field, such as **Jan/Feb/Mar**, as shown in Figure 9.23 and right-click to select the **Sort** option from the pop-up menu.

**Step 2** - Select either **Sort Smallest to Largest** or **Sort Largest to Smallest** option to sort and display the data in PivotChart in a specific order



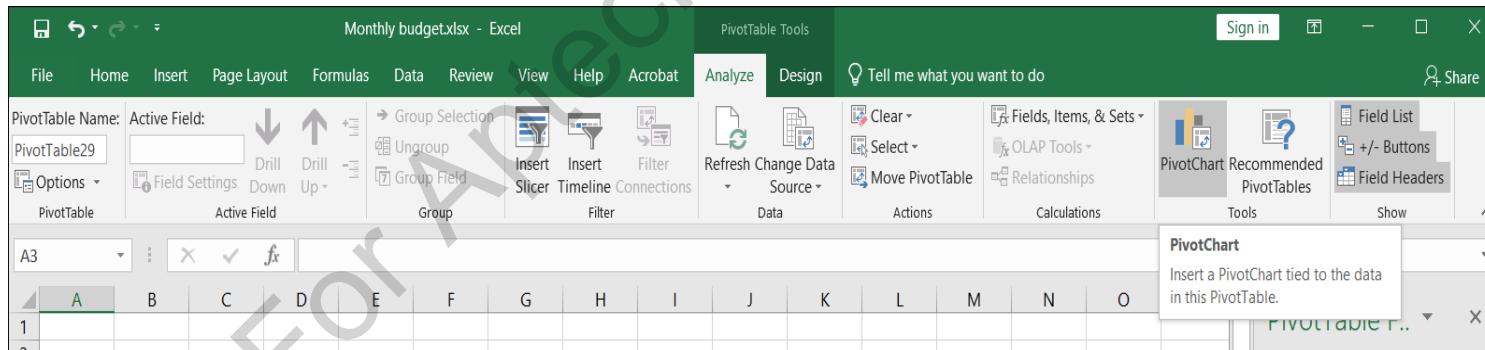
PivotChart Sorted in Ascending Order

# Understanding the Difference Between PivotChart and Standard Charts [4-5]

- PivotCharts can also be created using the **Analyze** tab of Pivot Tools when you have an existing PivotTable.

**Step 1** – Click anywhere in the PivotTable to show the **PivotTable Tools** on the Ribbon with **Analyze** and **Design** tabs. The tools shown are **PivotChart** and **Recommended PivotTables**.

**Step 2** – Select the **Analyze** → **PivotChart** option on the Ribbon



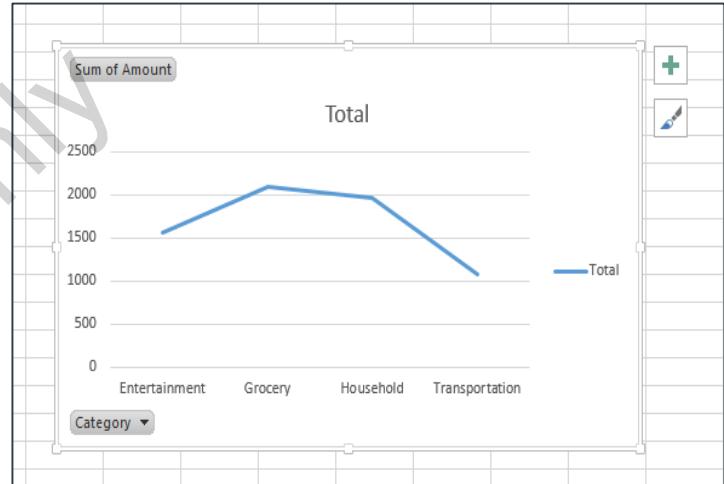
## Understanding the Difference Between PivotChart and Standard Charts [5-5]

- ▶ Unlike a standard chart, one cannot switch the row/column orientation of a PivotChart by using the **Select Data Source** dialog box
- ▶ Standard charts are linked directly to worksheet cells, while PivotChart are based on their associated PivotTable's data source
- ▶ Most formatting including chart elements that the user adds, layout, and style is preserved when the user refreshes a PivotChart

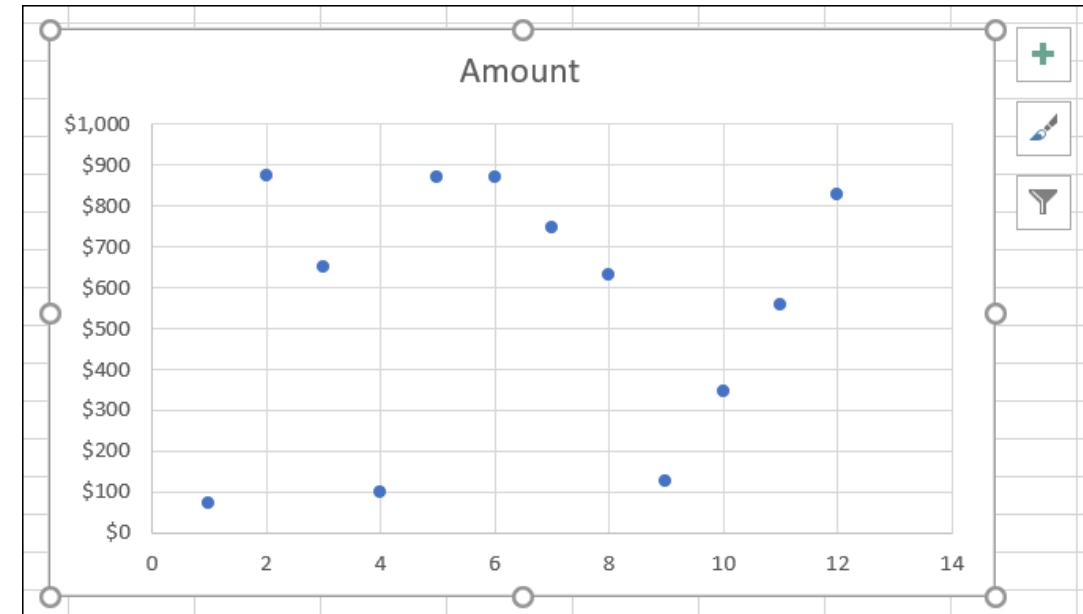
# Available Chart Types in PivotChart

► Chart types provided by MS Office are:

- Column Chart
- Line Charts
- Pie and Doughnut Chart
- Bar Chart
- Area Chart
- XY (Scatter) Chart
- Stock Chart
- Surface Chart
- Radar Chart
- Combo Chart



Sample Line Chart



Sample XY (Scatter) Chart

# Change a Chart Type

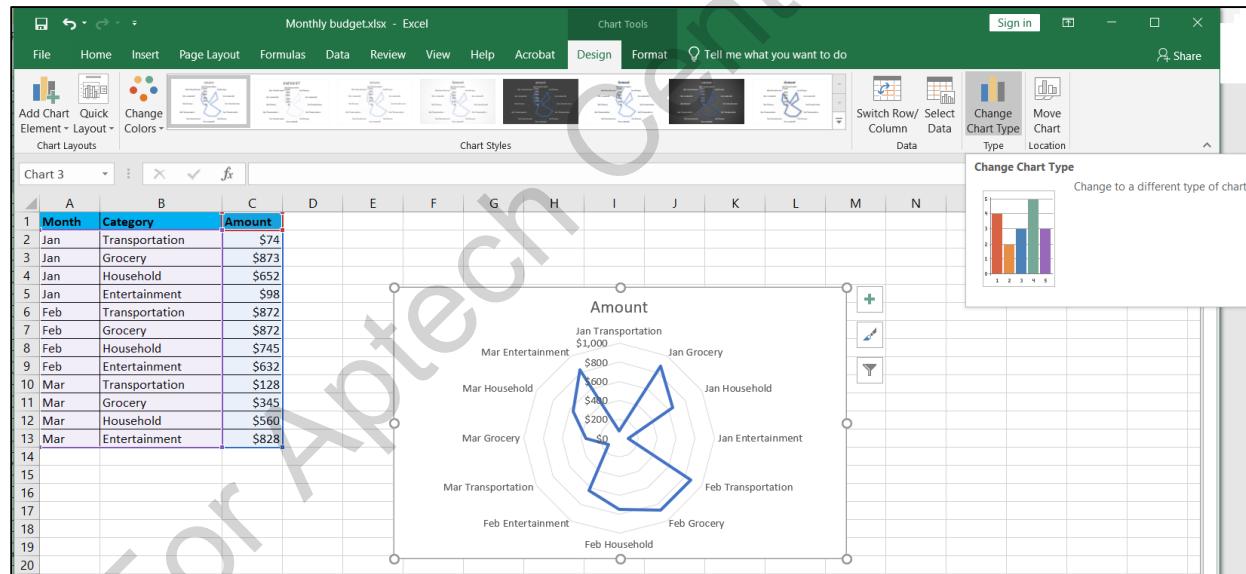
- If a chart type has already been selected, but the user wants to change the chart type to depict the data in some other format, it can be done in two simple steps:

## Step 1

- Select the chart and then, select the **Change Chart Type** option under the **Design** tab on the Ribbon

## Step 2

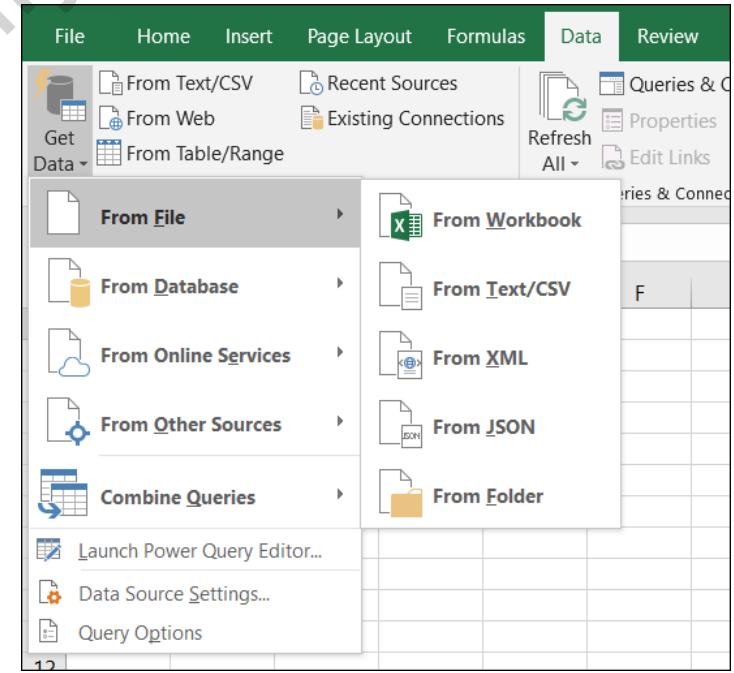
- Choose the new chart type from the available options and click **OK**. For example, a radar chart can be changed to a line chart



Change Chart Type

# Power Query [1-2]

- ▶ Power Query is a business intelligence tool available in Excel in the form of an Excel add-in
- ▶ It allows you to import data from many different sources and then clean, transform, and reshape your data as required.
- ▶ This tool enables you to leverage Business Intelligence in Excel by simplifying data discovery, access, and collaboration.
- ▶ It allows you to set up a query once and then reuse it with a simple refresh.
- ▶ Power Query enables you to import and manipulate millions of rows into a data model for further analysis.
- ▶ Various options are available to import data into the current worksheet



**Various Sources for Getting Data**

# Power Query [2-2]

- ▶ Different ways in which you can get data are as follows:

Get data from a **file** such as an Excel workbook, Text or CSV file, XML and JSON files. One can also import multiple files from a given folder.

Get data from **databases** such as SQL Server, Microsoft Access, Analysis Services, SQL Server Analysis Server, and so on.

Get data from **Microsoft Azure**.

Get data from **online services** such as SharePoint, Microsoft Exchange, Dynamics 365, Facebook, and Salesforce.

Get data from **other sources** such as a table or range inside the current workbook, from the Web, a Microsoft Query, Hadoop, OData feed, ODBC, and OLEDB.

**Merge two queries together** similar to joining two queries in SQL.

**Append a query to another query**, similar to a union of two queries in SQL.

# Areas of the Query Editor

The Query Editor Ribbon	Query List	Data Preview	Formula Bar	Properties	Applied Steps
Organizes data transformation commands and other power query options into five main tabs.	Lists all the queries in the current workbook. You can navigate to any query from this area to begin editing it.	Displays a preview of the data with all transformation steps currently applied.	Allows you to see and edit the M code of the current transformation step. Each transformation made on your data is recorded and appears as a step in the applied steps area.	Allows you to name your query. When you close and load the query to an Excel table, power query will create a table with the same name as its source query if the table name is not already taken.	Is a chronological list of all transformation steps that have been applied to the data. Move through the steps here and view the changes in the data preview area. You can also delete, modify, or reorder any steps in the query here.

# Summary

- Tables allow users to analyze data in Excel quickly and easily as compared to manual methods or using a calculator.
- PivotTables are a great way to summarize, analyze, explore, and present a data set.
- Data in a PivotTable can be explored by expanding and collapsing row labels.
- For worksheet data, a PivotChart can be created with or without using a PivotTable.
- MS Excel supports several chart types such as Column Chart, Line Charts, Area Chart, Radar Chart, and so on.
- A column chart in Excel typically displays categories along the horizontal (category) axis and values along the vertical (value) axis.
- Area charts can be used to plot change over time and draw attention to the total value across a trend.
- Power Query enables users to apply BI to data in a worksheet after importing it from different sources.

# Inside Microsoft Office

## ► Session 10

### Understanding Microsoft PowerPoint 2019



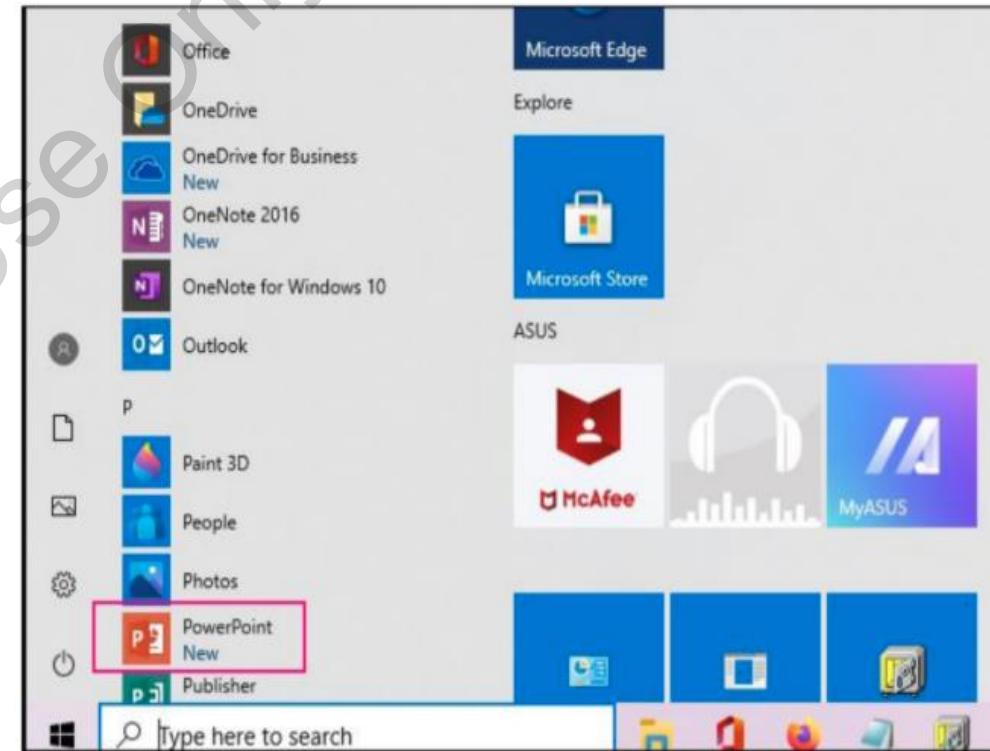
For Aptech Centre Use Only

# Objectives

- ▶ Explain about MS PowerPoint 2019
- ▶ Understand the features of MS PowerPoint 2019
- ▶ Describe how to create a PowerPoint Presentation

# Introducing Microsoft PowerPoint [1-2]

- ▶ An effective tool to present or share information, processes, business outcomes, trends, infographics, or knowledge in the form of dynamic slide presentations
  
- ▶ Primarily called as presentation software

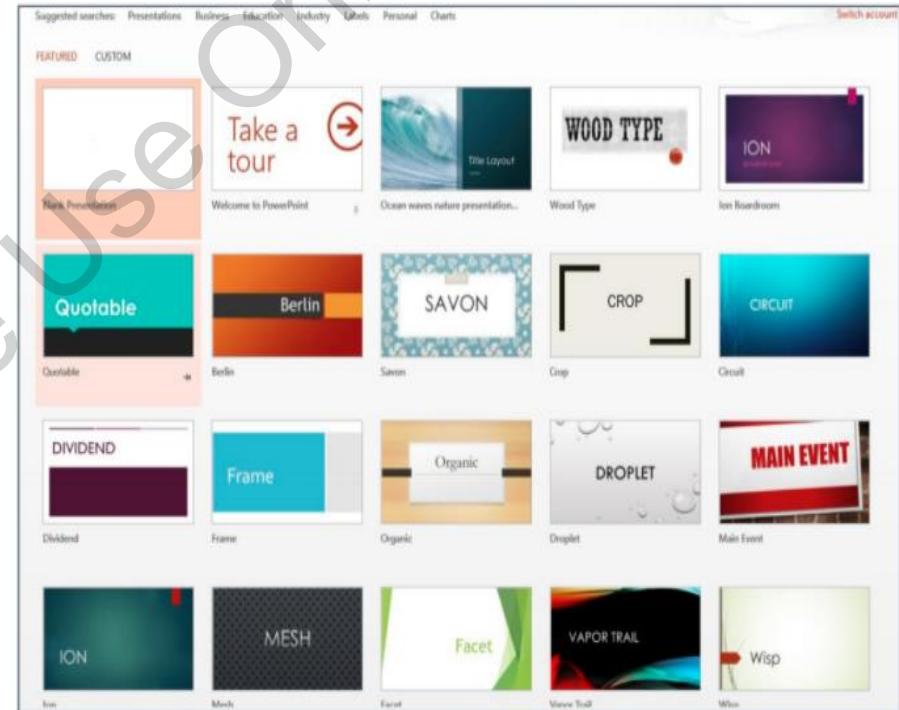


Selecting PowerPoint 2019

# Introducing Microsoft PowerPoint [2-2]

► Steps to get started with MS PowerPoint are as follows:

- Click **Start** button and select PowerPoint 2019
- Select template (Available templates are displayed to the user)
- Selected template displays various color options to choose
- Layout is displayed to the user



Templates in PowerPoint

# Features of MS PowerPoint

Ruler,  
Guides, and  
Gridlines

Zoom and  
other View  
Options

Backstage  
View

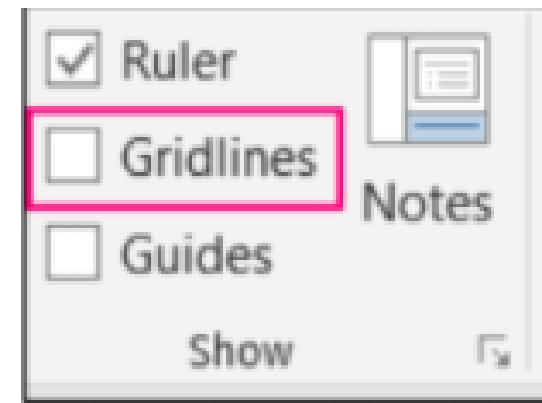
Themes

Transitions

Slides and  
Slide  
Layouts

# Ruler, Guides, and Gridlines

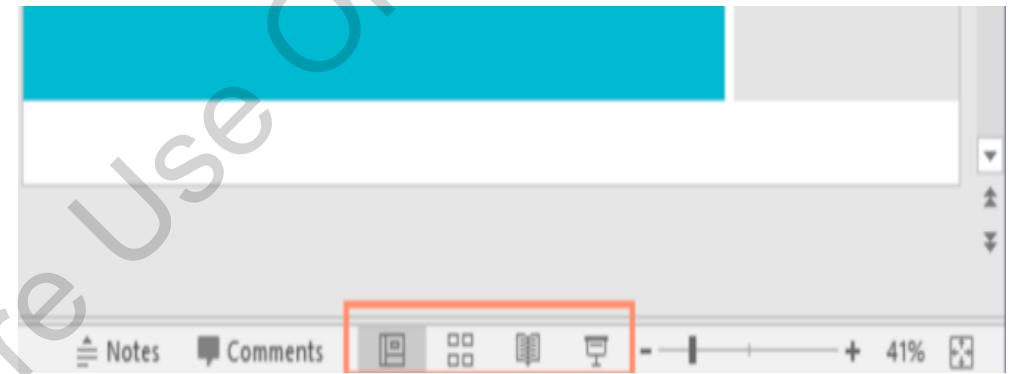
- ▶ MS PowerPoint includes several tools to help organize and arrange content on the slides
- ▶ These include Ruler, Guides, and Gridlines
- ▶ These tools make it easier to align objects on the slides while creating presentations



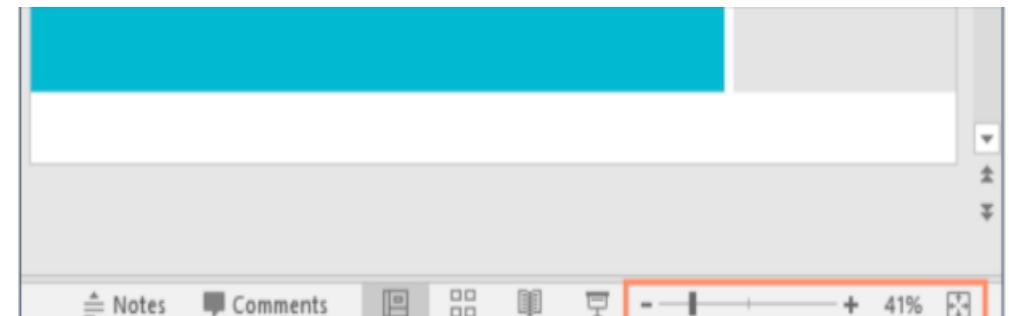
**Gridlines on View Tab**

# Zoom and Other View Options

- ▶ MS PowerPoint has a variety of viewing options that change how a presentation is displayed
- ▶ The user can choose to view the presentation in Normal view, Slide Sorter view, Reading view, or Slide Show view



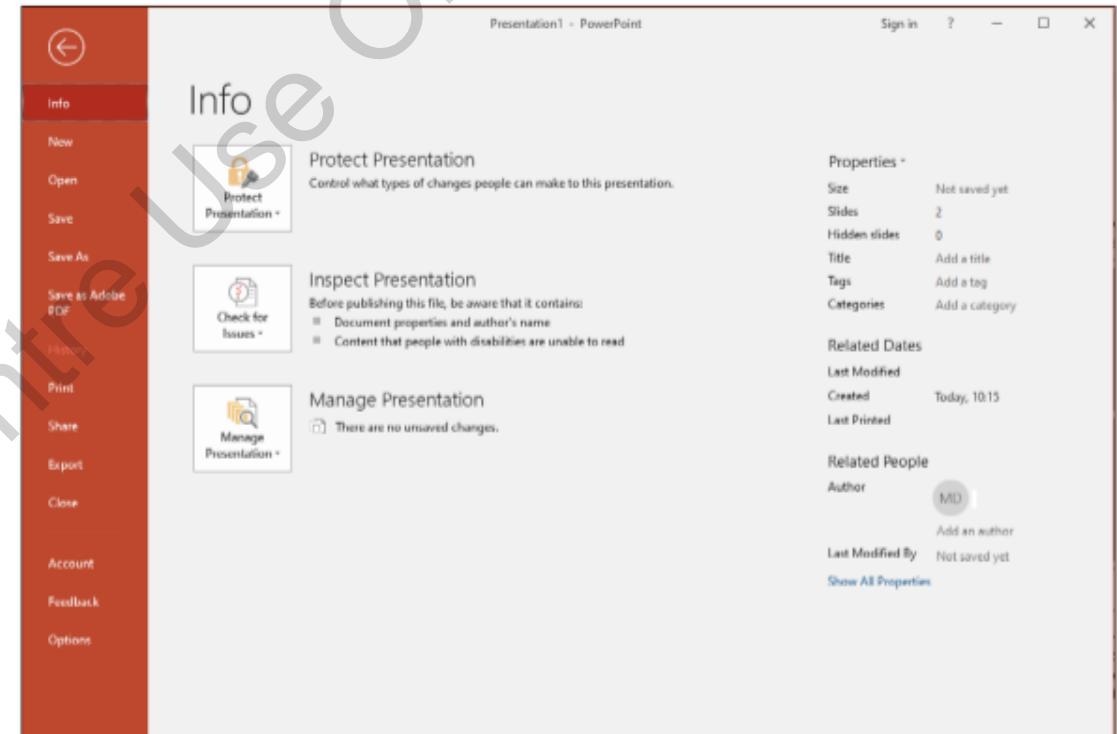
**Slide Views**



**Zoom Slider**

# Backstage View

- ▶ The Backstage view provides the user various options to save, open, print, or share the current presentation
  
- ▶ To access the Backstage view, the user should click the **File** tab on the Ribbon



**Backstage View**

# Applying Themes [1-2]

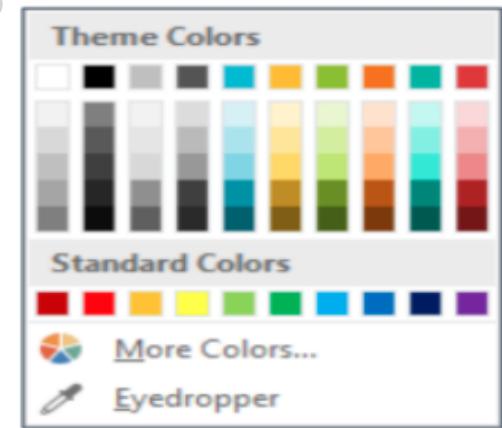
- ▶ A theme is a pre-defined combination of colors, fonts, and effects
- ▶ This provides the presentation a consistent and professional look
- ▶ Themes control:
  - Primary color palette
  - Basic fonts
  - Slide layout
  - Other important elements



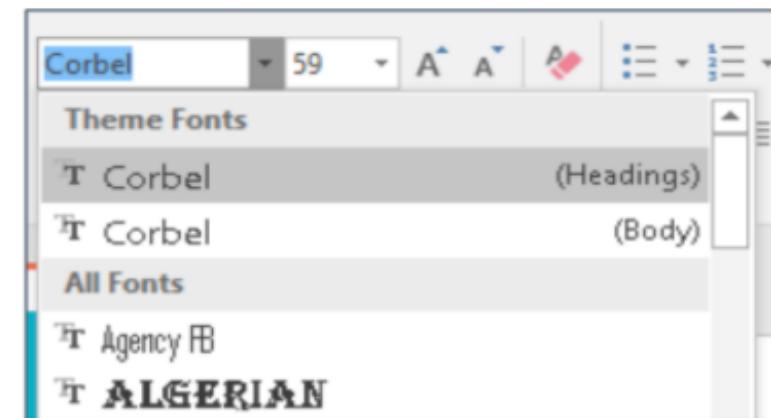
**Organic Theme**

# Applying Themes [2-2]

- ▶ Each MS PowerPoint has its own theme element:
  - **Theme Colors:** There are 10 theme colors, along with darker and lighter variations, available from each color menu
  - **Theme Fonts:** To change fonts, click the down arrow in the Variants gallery, and then click Fonts



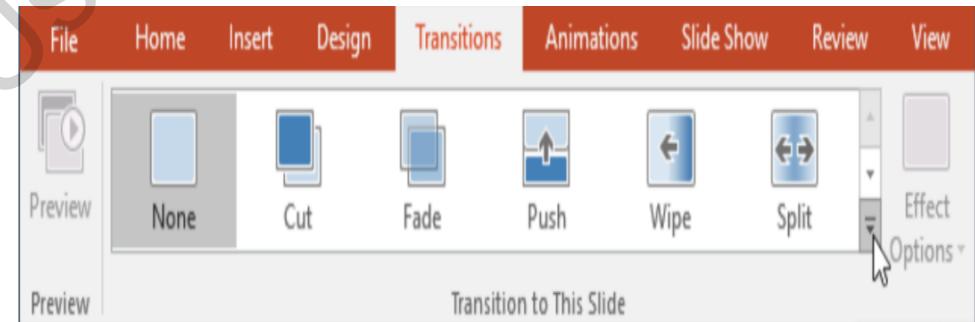
Theme Colors



Theme Fonts

# Applying Transitions [1-2]

- ▶ A transition is one such special effect applied to contents of a slide or an entire presentation
- ▶ A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect, and can be applied to text, pictures, graphics, and videos

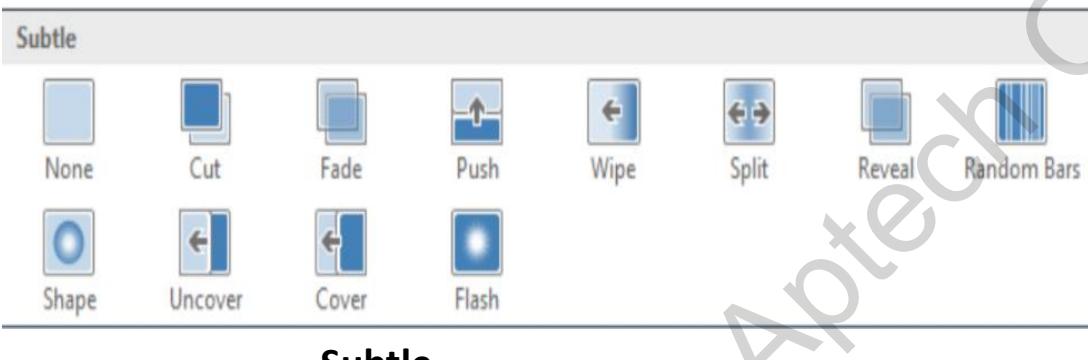


**Transition Tab**

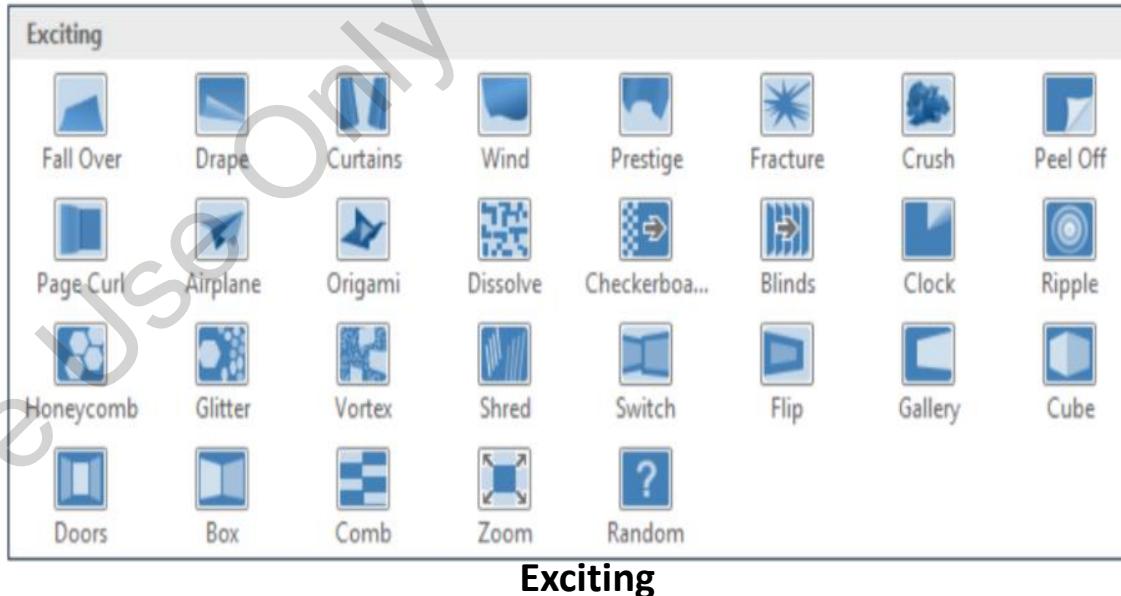
# Applying Transitions [2-2]

Transition categories are as follows:

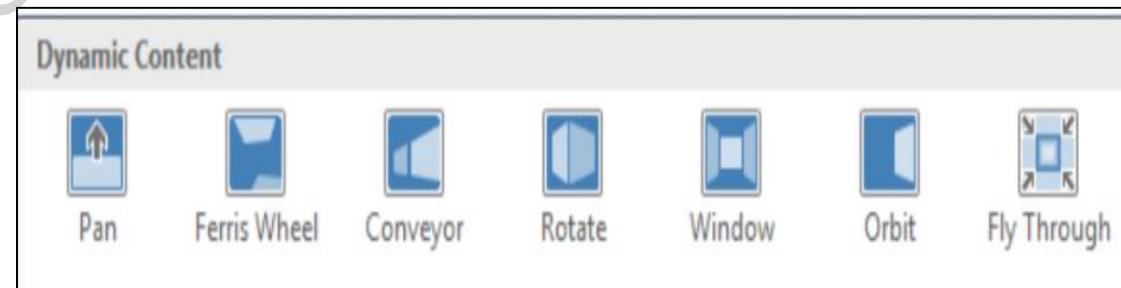
- Subtle
- Exciting
- Dynamic Content



**Subtle**



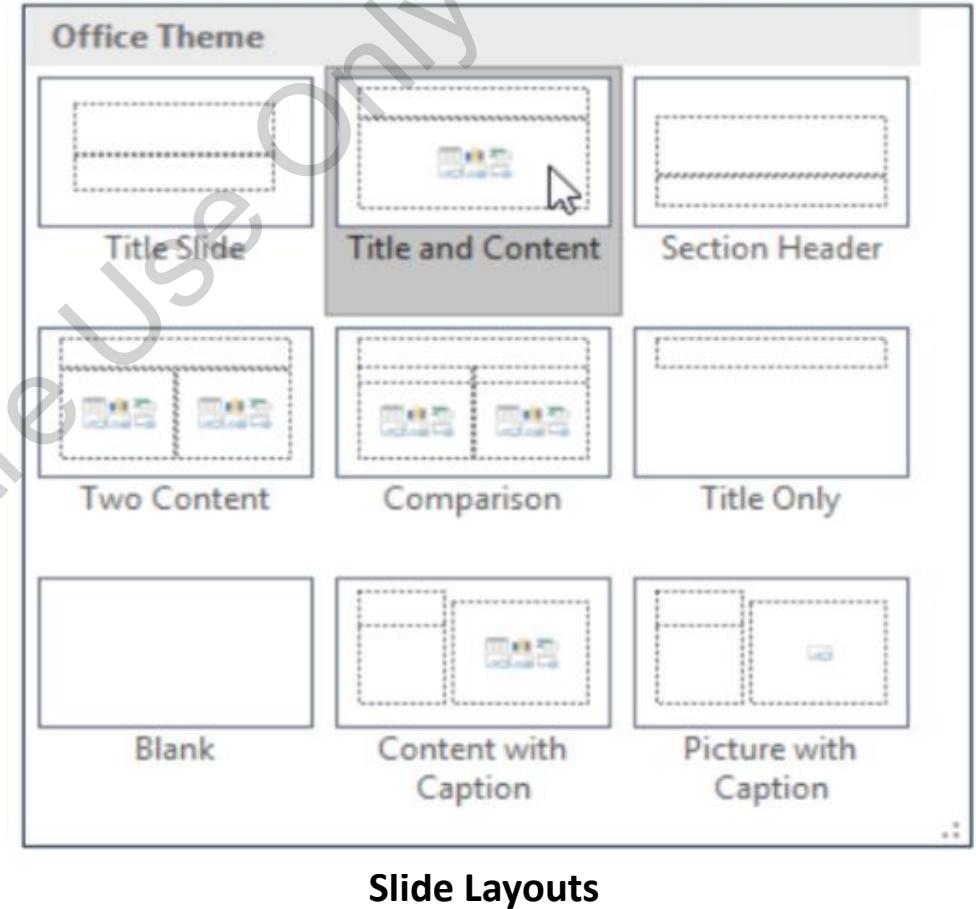
**Exciting**



**Dynamic Content**

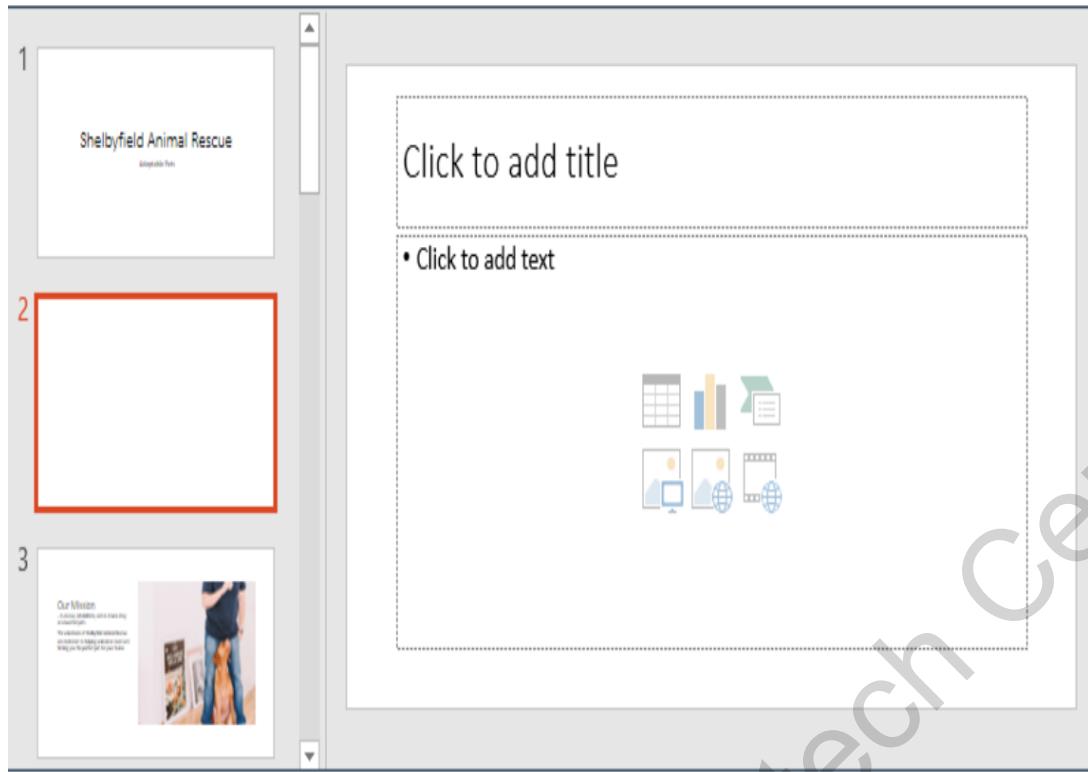
# Slides and Slide Layouts [1-2]

- ▶ Slides have different layouts for placeholders depending on the type of information a user plans to include
- ▶ Whenever a new slide is created, a layout needs to be selected to present the content

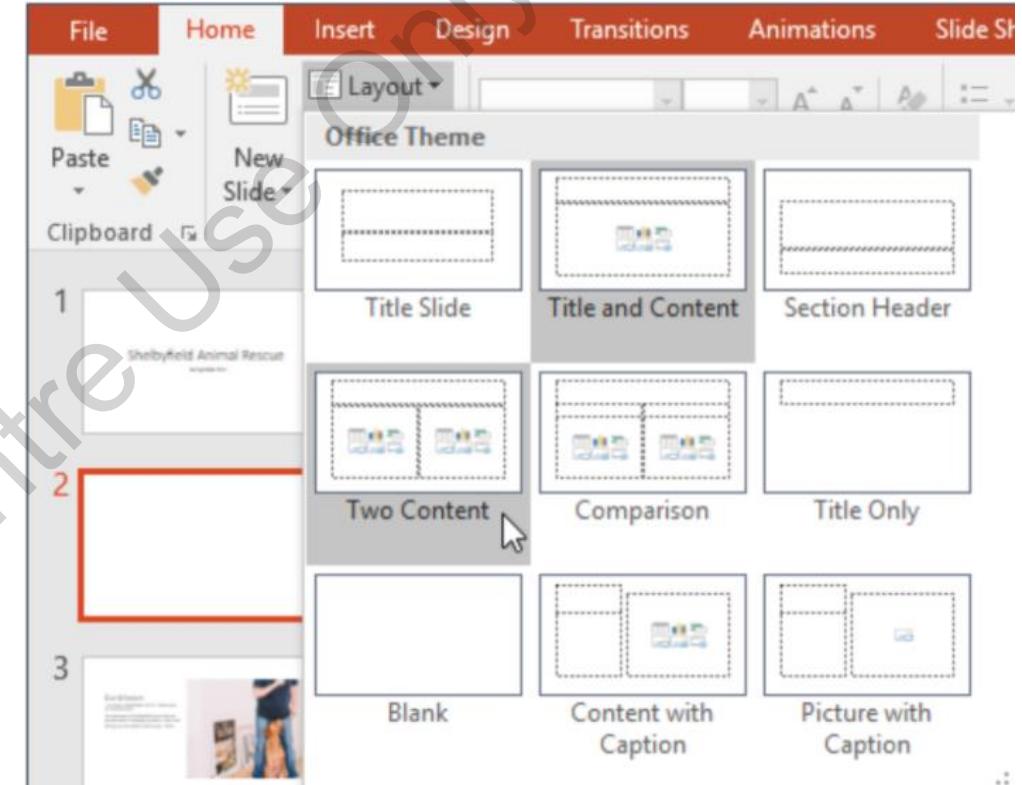


**Slide Layouts**

# Slides and Slide Layouts [2-2]



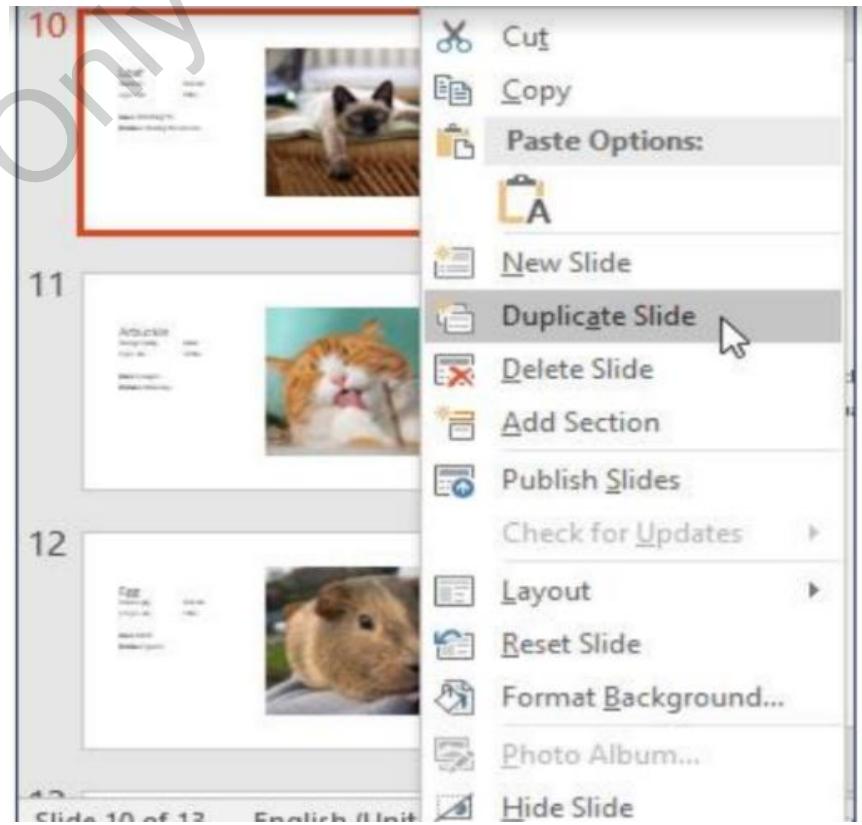
Slide created using a Layout



Layout Command

# Organizing Slides [1-2]

- ▶ MS PowerPoint presentations can contain as many slides as required
- ▶ The Slide Navigation pane on the left side of the screen makes it easy to organize the slides
- ▶ The user can duplicate, rearrange, and delete slides in the presentation from this pane

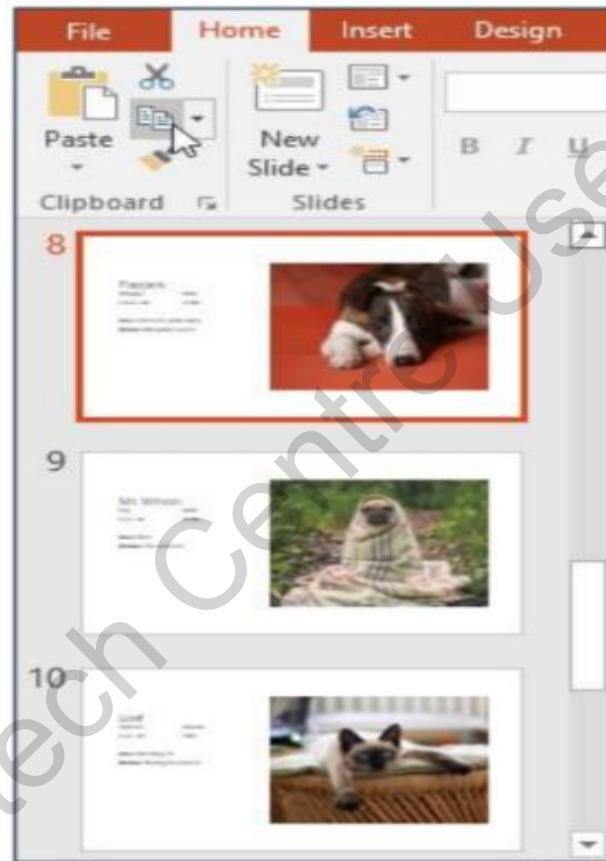


**Duplicate Slide Option**

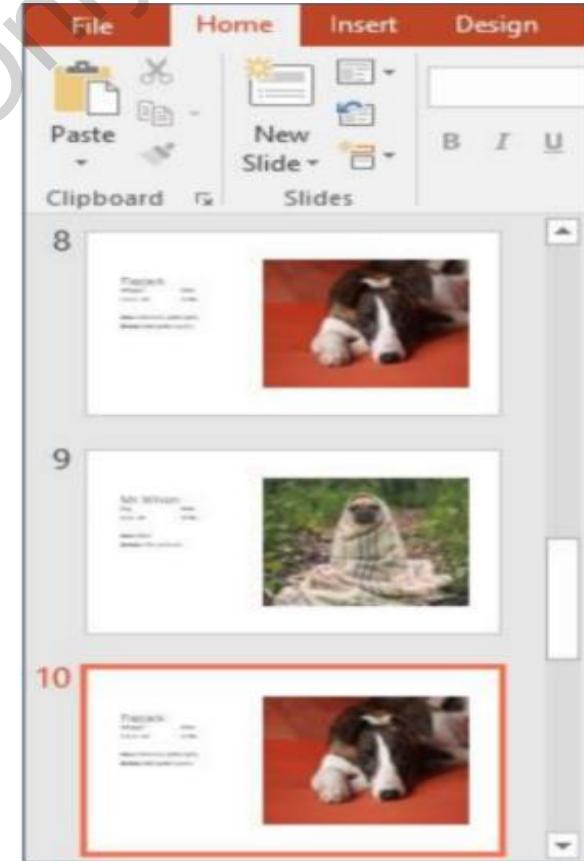
# Organizing Slides [2-2]



**Moving Slide**



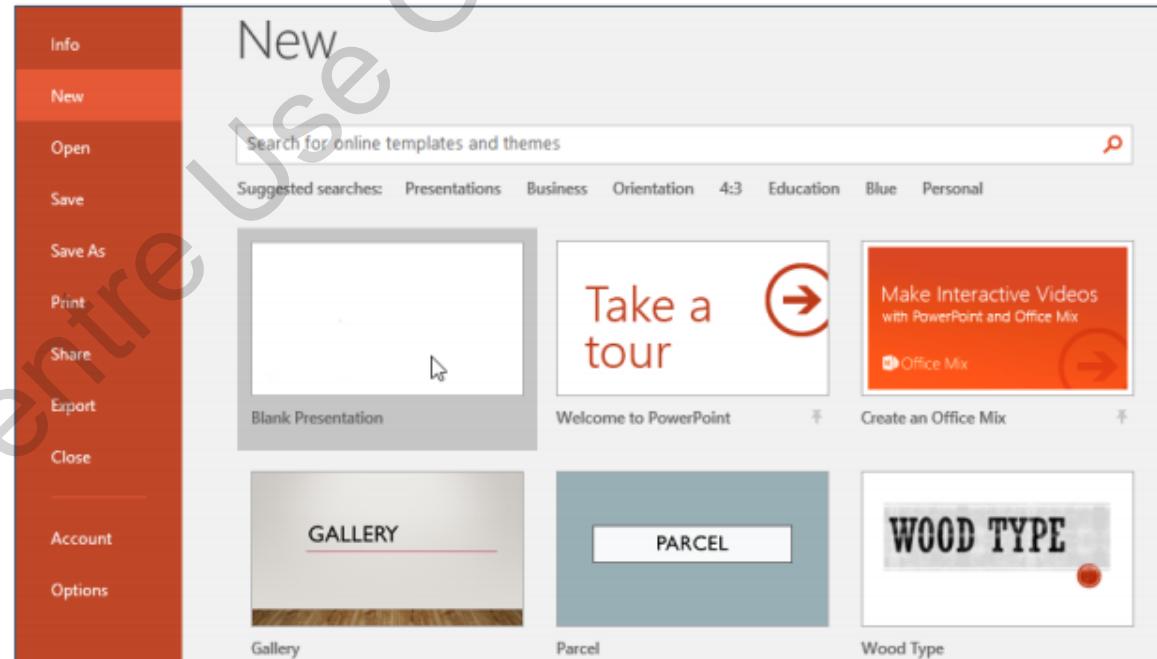
**Copy Slide Command**



**Pasting the Copied Slide**

# Creating PowerPoint Slides

- ▶ When a new PowerPoint presentation is created, it is generally started with a new blank presentation
- ▶ Creating a new PowerPoint is simple



**Selecting Blank Presentation**

# Summary

- Microsoft PowerPoint is an effective tool to present or share information, process, business outcomes, trends, infographics, or knowledge in the form of dynamic slide presentations.
- The Ribbon contains multiple tabs which perform different functions and each tab has several groups of commands.
- MS PowerPoint includes several tools to help organize and arrange content on slides, such as Ruler, Guides, and Gridlines. These tools make it easier to align objects on slides while creating presentations.
- A Theme is a pre-defined combination of colors, fonts, and effects.
- In a PowerPoint presentation, the user can insert special effects between slides which form a part of slide transitions. A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect.
- The Slide Navigation pane on the left of the screen can be used to organize slides. From there, one can duplicate, rearrange, and delete slides in the presentation.
- Slides can be moved to change the order of slides in a presentation using the Slide Navigation pane.

# Inside Microsoft Office

## ► Session 11

**Understanding  
Microsoft PowerPoint  
2019 - II**



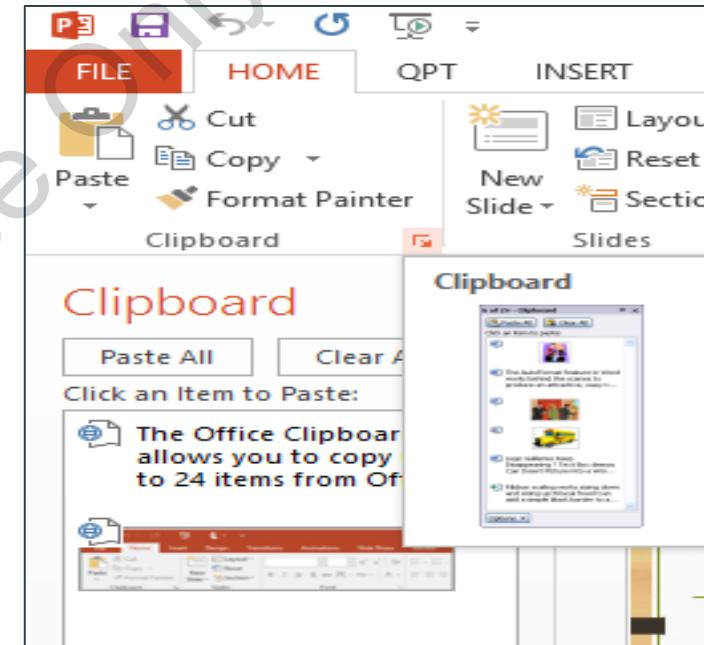
For Aptech Centre Use Only

# Objectives

- ▶ Describe Home, Insert, and Design Tabs
- ▶ Understand Transitions and Animations
- ▶ Explain Review and View
- ▶ Describe how to use Zoom capabilities for ordering of slides within presentations
- ▶ Explain the Morph transition feature
- ▶ Outline the steps to insert and manage Icons, SVG, and 3D models

# Exploring Home, Insert, and Design Tabs [1-3]

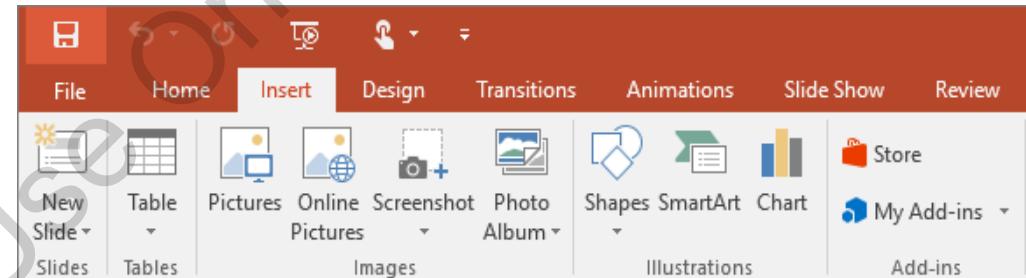
- ▶ When an MS PowerPoint is opened, a ribbon appears as a row of labels, also called as tabs
- ▶ In MS PowerPoint, the Home tab is the default tab
- ▶ The Office Clipboard allows to copy up to 24 items from Office documents or other programs and paste them into another Office document



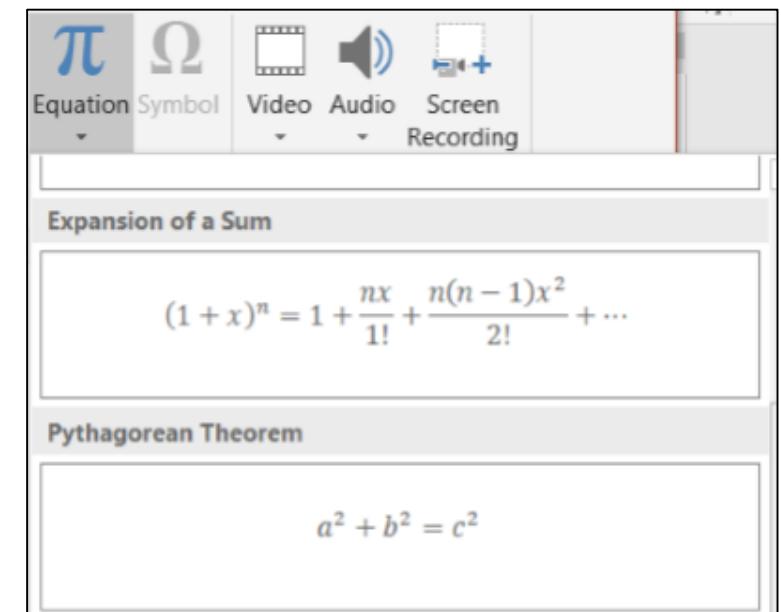
Clipboard Dialog Box Launcher

# Exploring Home, Insert, and Design Tabs [2-3]

- ▶ The Insert tab is used to insert or add something to the slide
- ▶ This includes pictures, shapes, charts, videos, and more
- ▶ When a user wants to make the PowerPoint presentation more interesting, insert pictures, photos, ClipArt, or other images to the slide show from the computer or from the Internet



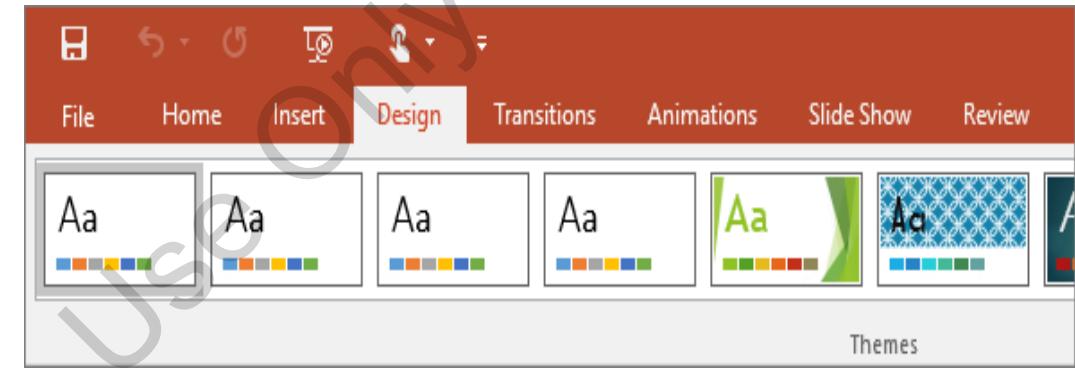
Insert Tab



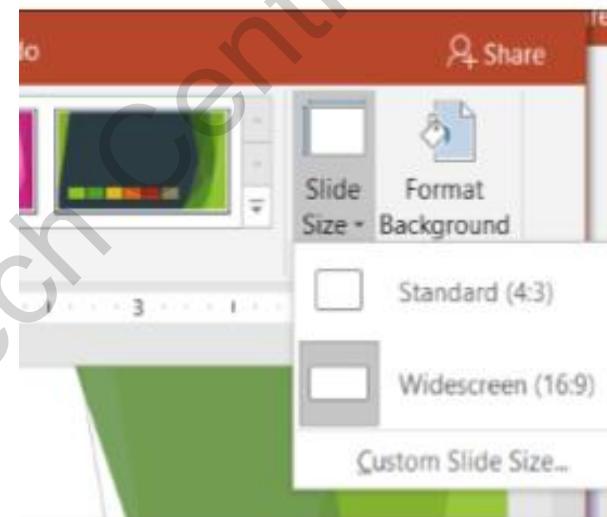
Inserting Equations

# Exploring Home, Insert, and Design Tabs [3-3]

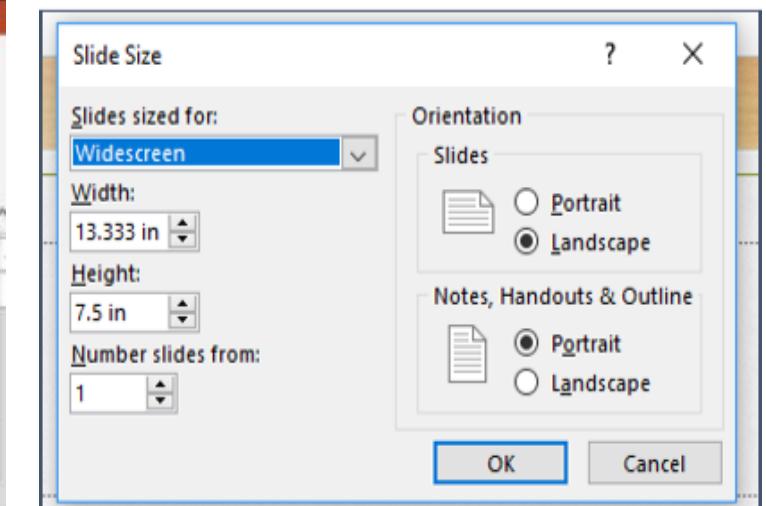
- ▶ On the Design tab, one can add a theme or color scheme, or format the slide background
- ▶ Themes group appears on the Design tab
- ▶ Themes can be used in PowerPoint to simplify the process of creating professional-looking presentations



Design Tab



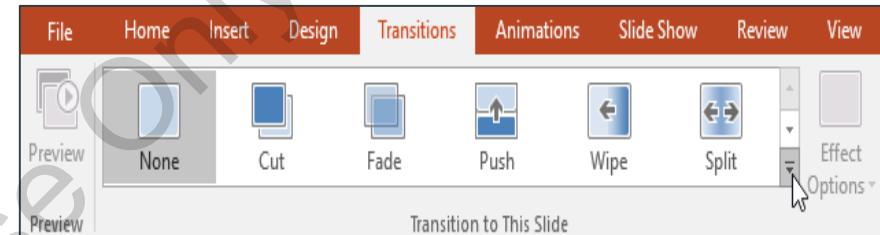
Customize Slide Size



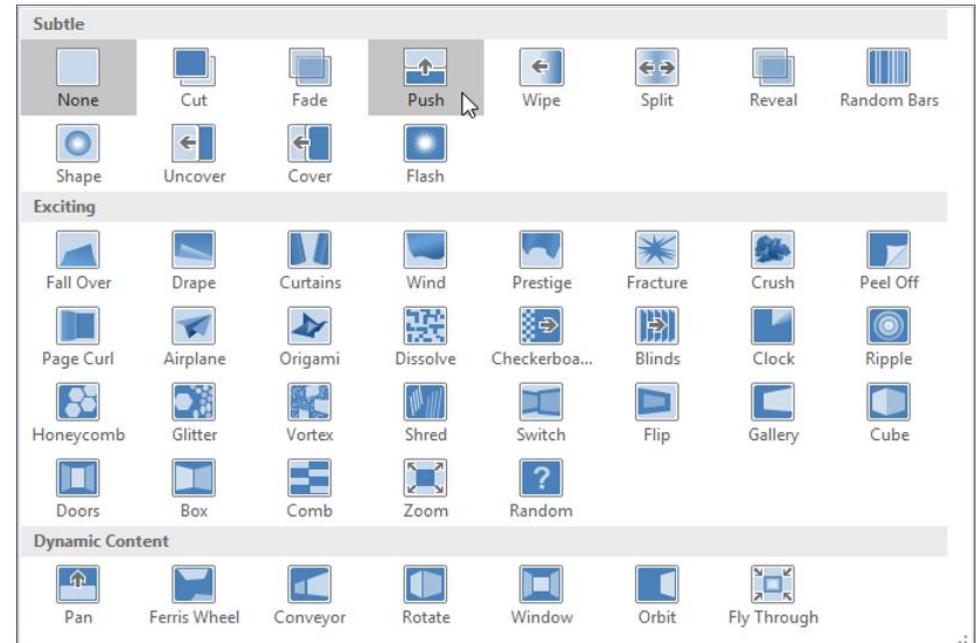
Slide Size Dialog Box

# Using Transitions and Animations

- ▶ A PowerPoint presentation that had special effects between each slide can be considered to exhibit slide transitions
- ▶ A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect
- ▶ The transition categories are:
  - Subtle
  - Exciting
  - Dynamic



Transitions Tab



Select a Transition

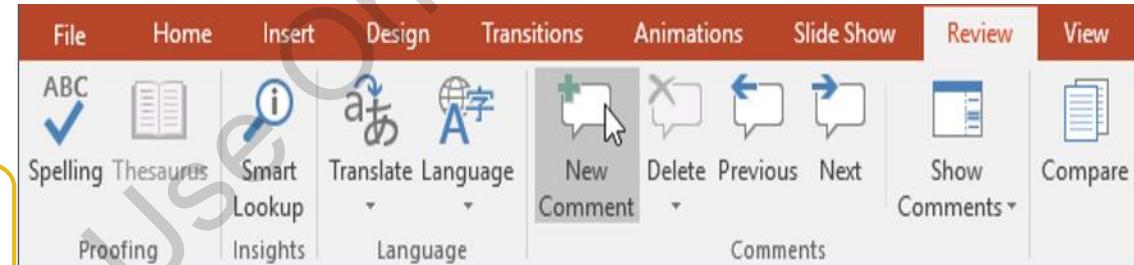
# Reviewing and Viewing Presentations

- ▶ If the PowerPoint presentation needs to be delivered or presented in front of a group of people, reviewing it to gather feedback can make the presentation look more robust and error free
- ▶ Reviewing can be done in PowerPoint using the Comments and Compare features

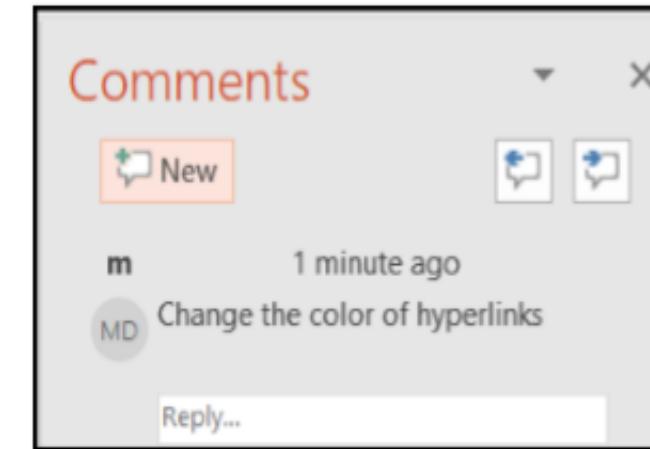
# Adding a Review Comment

On the slide where a comment has to be added, do the following:

- Step 1     • Select the text or object to add a comment on a slide.
- Step 2     • Click anywhere on the slide to add a general comment about a slide.
- Step 3     • Click the New Comment option in the Comments group on the Review tab.



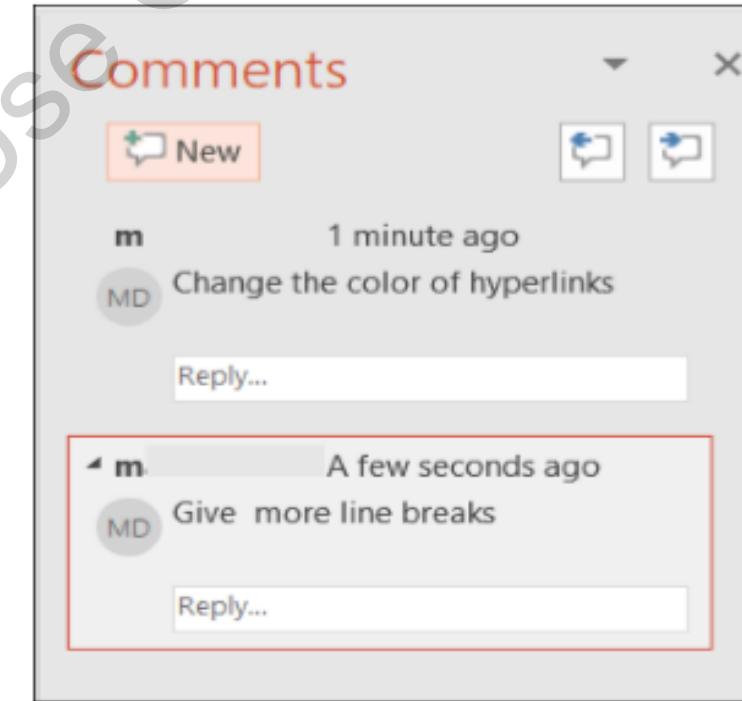
Adding New Comment



Typing Comment

# Viewing Comments

- ▶ One can view or reply to any comment-including other reviewers' comments-by returning to the Comments pane.
- ▶ Simply click a comment icon on the slide or click the Show Comments command on the Review tab



Viewing Comments

# Editing Comment

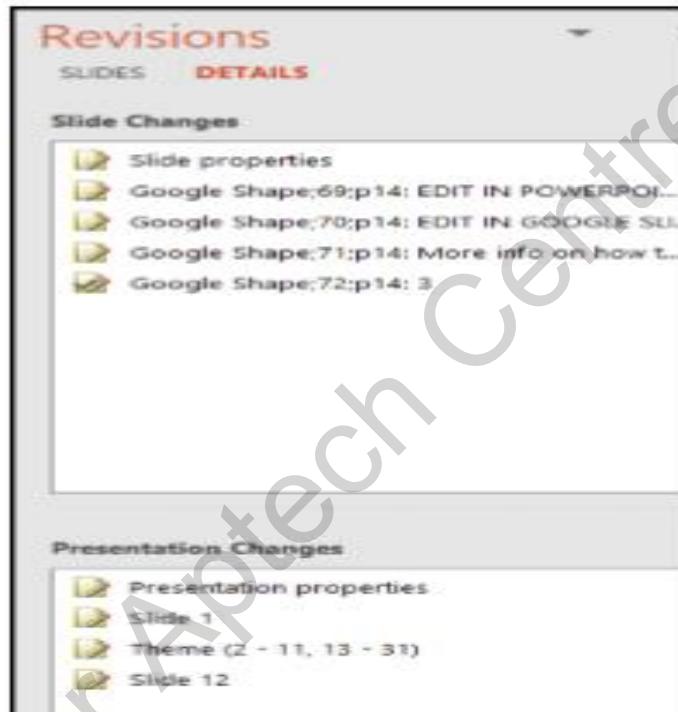
A comment can be edited after being saved. A new comment box is not required to edit the comments.

Step 1 – Select the comment to be edited in the Comments pane.

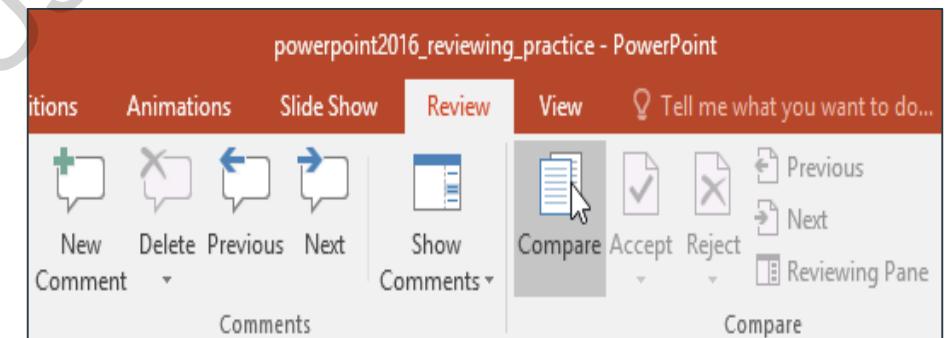
Step 2 – Type the desired changes, then press Enter or click anywhere outside the comment box. The changes will be applied.

# Comparing Presentations

- ▶ Two presentations can be compared to review and differentiate, if there are versions of similar presentations or the same presentation has been received from various sources
- ▶ The Revisions pane is displayed, allowing the user to compare the two presentations

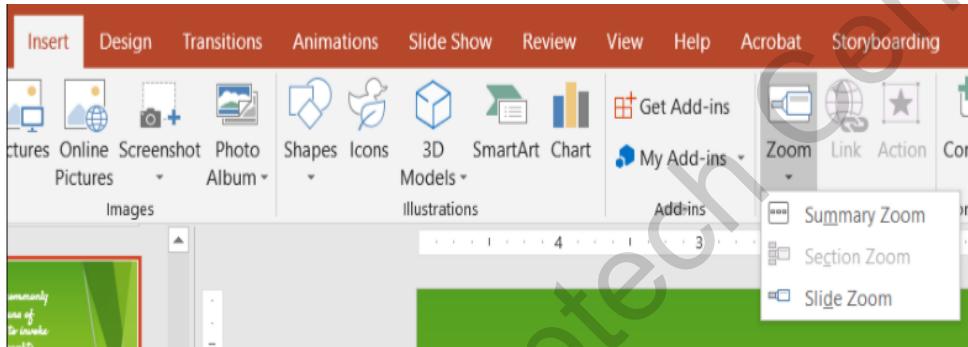


Reviewing Pane Showing Comparison Notes

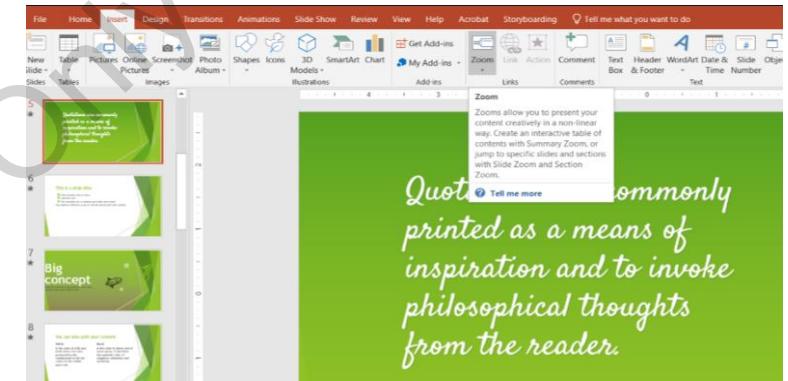


# Zoom Capabilities for Ordering of Slides within Presentations

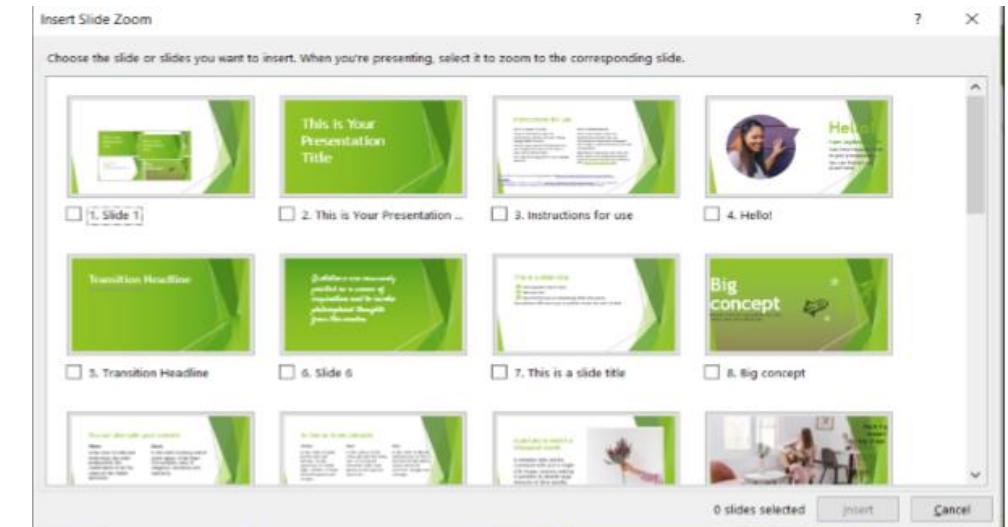
- ▶ With PowerPoint 2019, displaying becomes easier.
- ▶ You can also create ‘sections’ of slides or indicate a specific slide to navigate to.
- ▶ These activities are now clubbed under the new Zoom feature for PowerPoint.



Types of Zoom



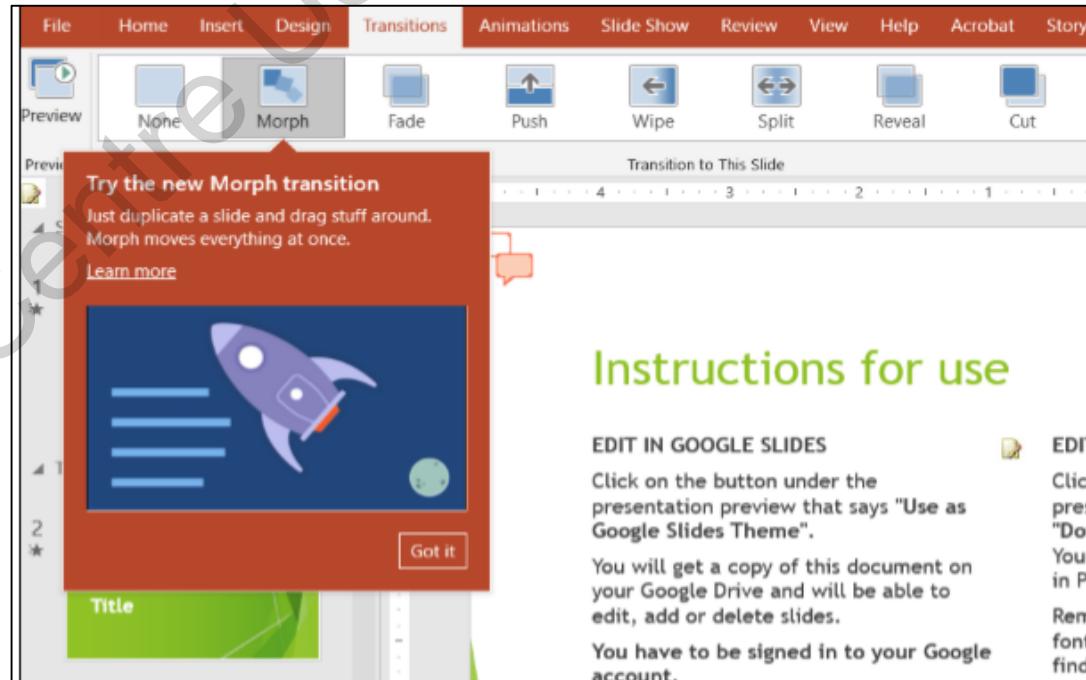
Insert Zoom Feature



Insert Slide Zoom

# Morph Transition Feature

- ▶ Morph enables you to animate smooth movement from one slide to the next.
- ▶ You can apply wide range of elements such as text, shapes, pictures, SmartArt graphics, and WordArt.

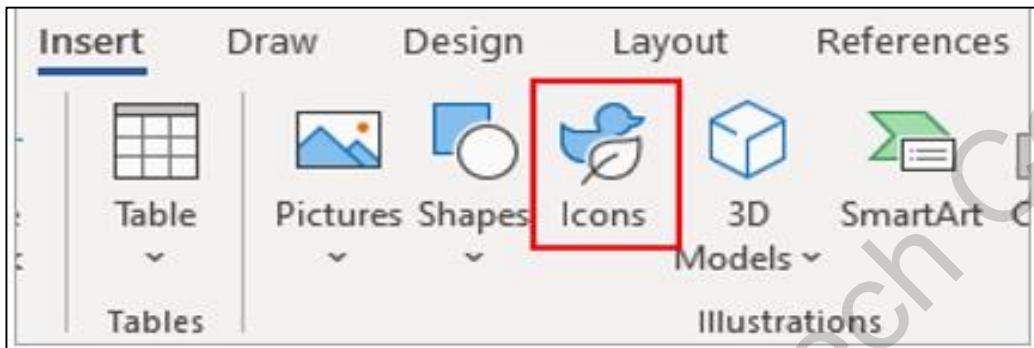


Morph Transition

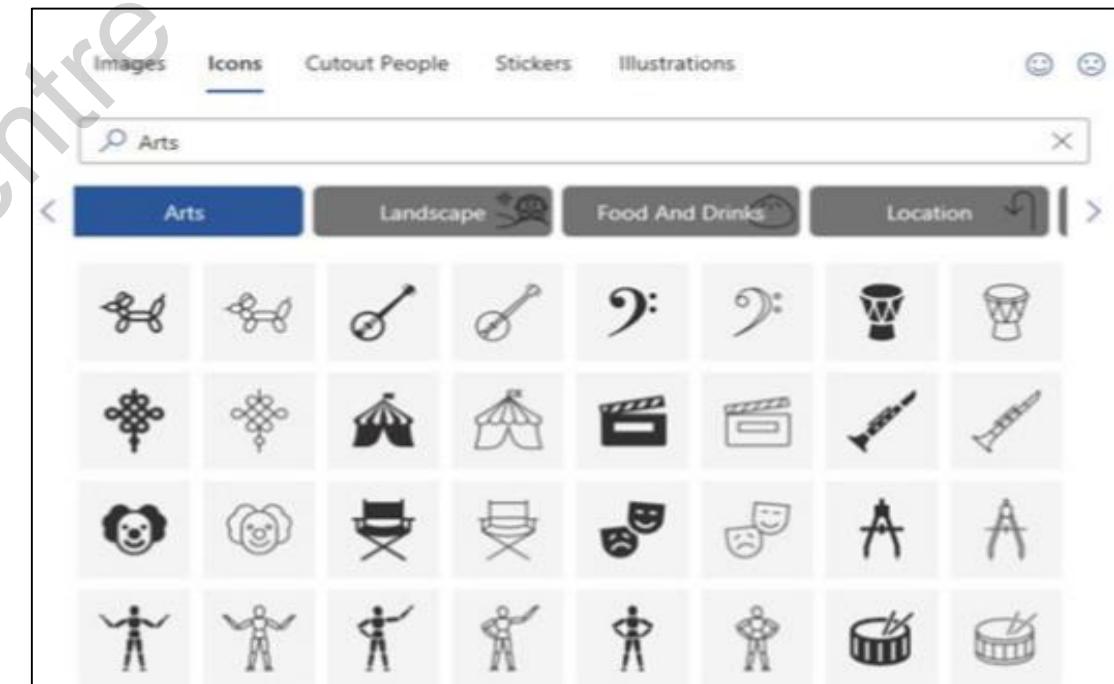
# Inserting Icons, SVG, and 3D models

# Inserting Icons and SVG Images

- ▶ PowerPoint has introduced new kinds of icons in Microsoft Office 2019.
  - ▶ These icons are scalable with vector graphics.
  - ▶ The color and size of each component of these icons can be customized based on the user's requirements.



## Inserting Icons



## Selecting Icon Category

# Summary

- The Office Clipboard allows to copy up to 24 items from Office documents or other programs and paste them into another Office document.
- Slides group in the Home tab has the option to add a new slide to a presentation or select a specific layout for the slides.
- Users can make a PowerPoint presentation more interesting by inserting pictures, photos, ClipArt, or other images to the slide show from the computer or from the Internet.
- Audio, video, and screen recording can be inserted using Media group on the Insert tab.
- Dynamic transitions can help unify slides with similar layouts and add a further level of polish to the presentation.
- Exit animations control how the object exits the slide. For example, with the Fade animation the object on which the transition is applied simply fades away.
- One can view or reply to any comment through the Comments pane.
- Zoom for PowerPoint and Morph Transition are some of the new features in PowerPoint 2019.

# Inside Microsoft Office

## ► Session 12

### Understanding Microsoft OneNote 2019



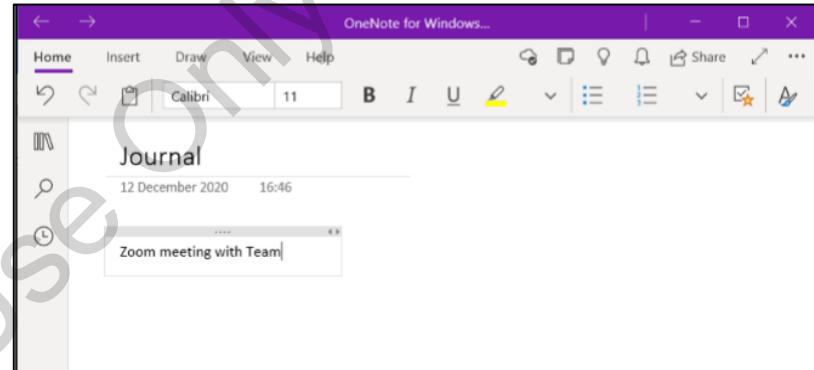
For Aptech Centre Use Only

# Objectives

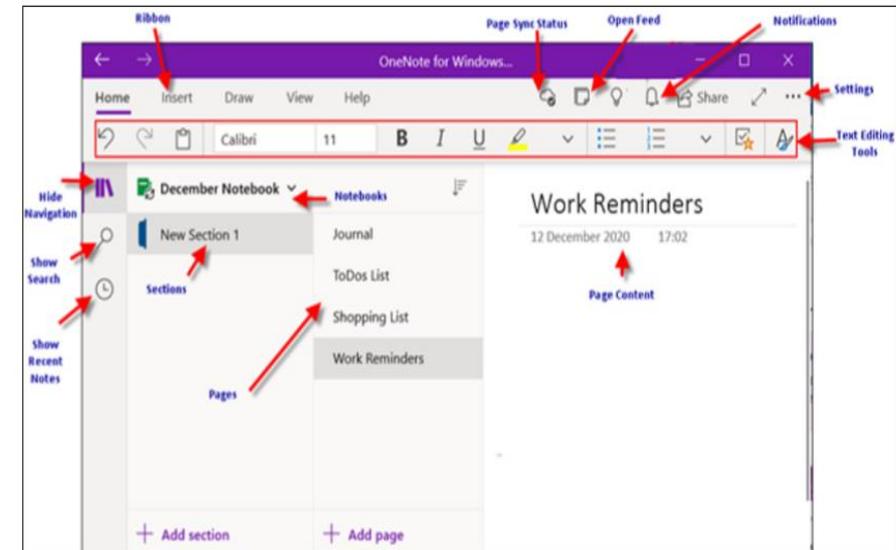
- ▶ Explain the basics of Microsoft OneNote 2019
- ▶ Explain use of OneNote Tools
- ▶ Describe various new features in OneNote

# Getting Started with OneNote [1-2]

- ▶ Online notebooks can be made available anytime without the hassle of maintaining physical notes.
- ▶ OneNote makes notebooks available by signing in with a free Microsoft account.
- ▶ OneNote automatically saves all the changes simultaneously along with the data in the notebook.



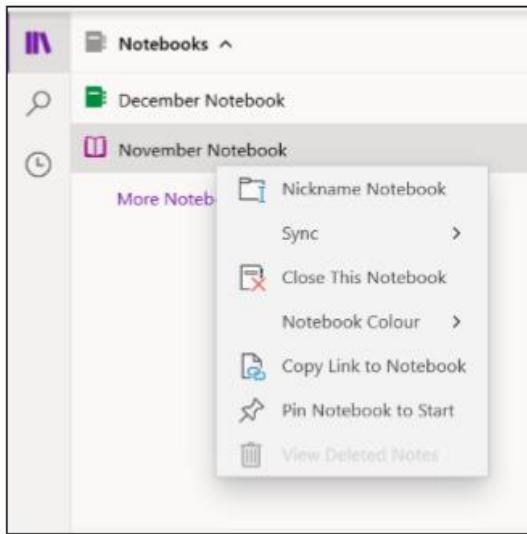
OneNote View



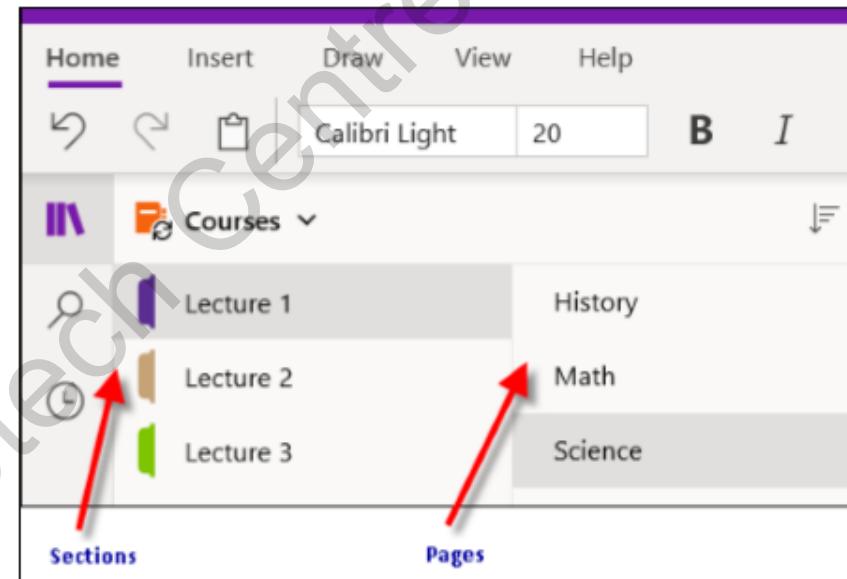
OneNote Basics

# Getting Started with OneNote [2-2]

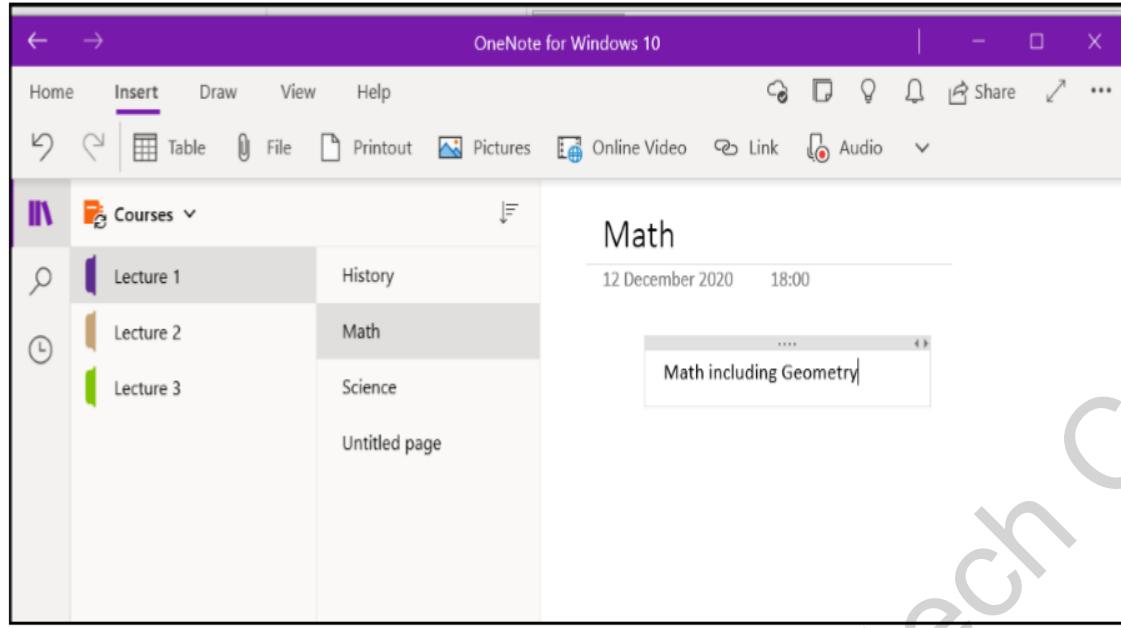
- When OneNote is first launched, a default notebook is created for the user, but the user can easily create any number of additional notebooks as per the requirements, by clicking any one Notebook and then, clicking Add Notebook.



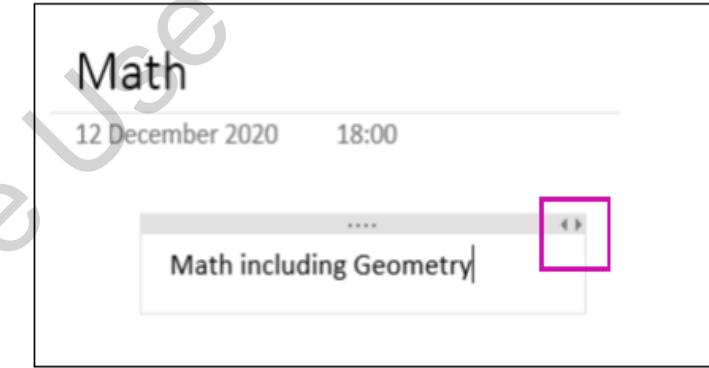
Opening an Existing Notebook



# Adding Text

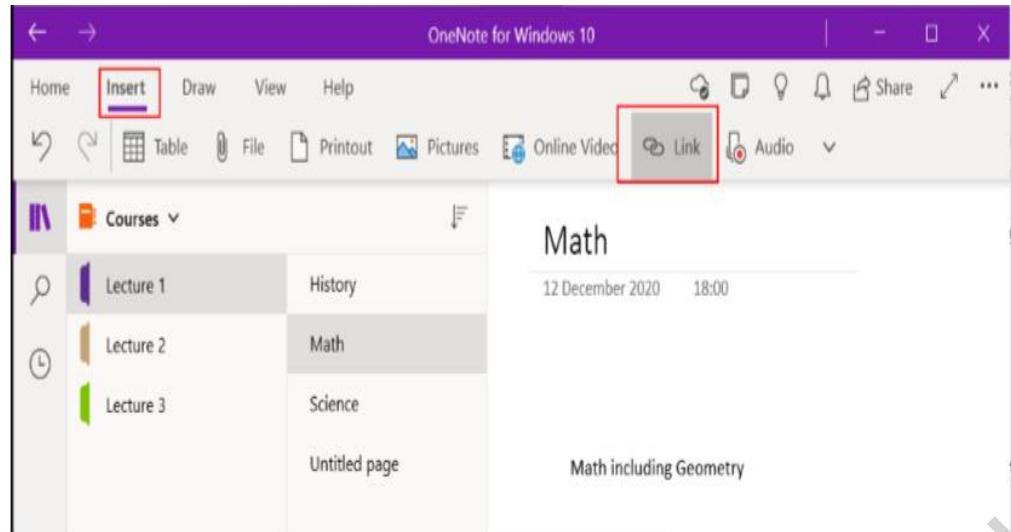


Text Window

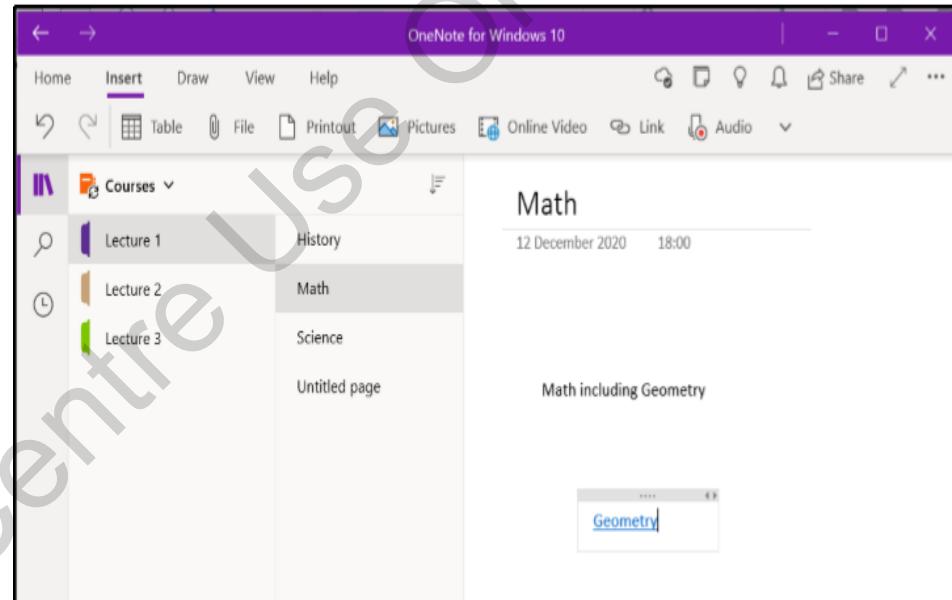


Text Window row

# Adding Links



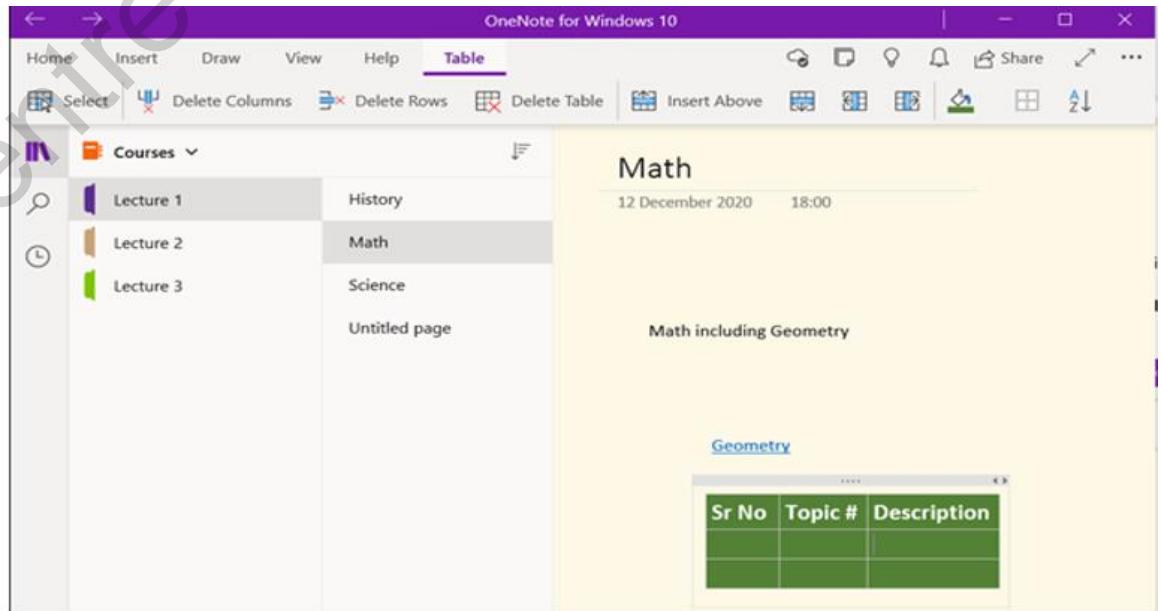
Text Window with Link option



Link Inserted in a Page

# Adding Tables

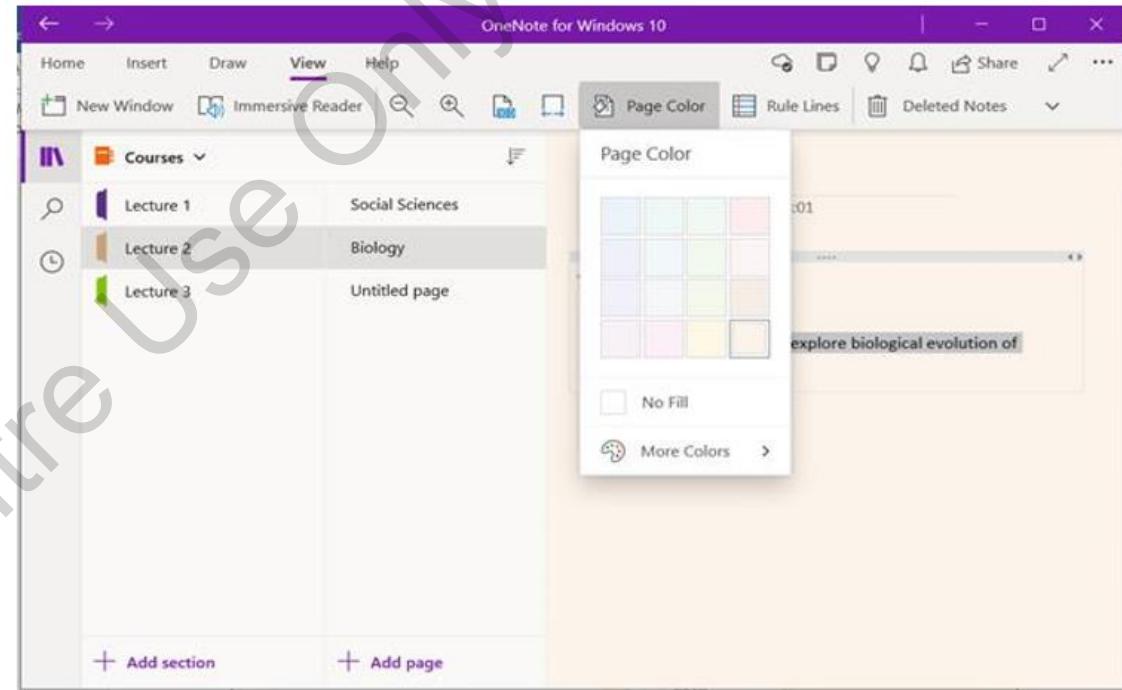
- ▶ You can add tables to a page through **Insert** tab and **Table** option.
- ▶ Once you create a table, you can use table-related commands on the Ribbon to format the table, insert or delete rows and columns, and sort the table data.



Inserting Tables

# Adding Designs to New Pages

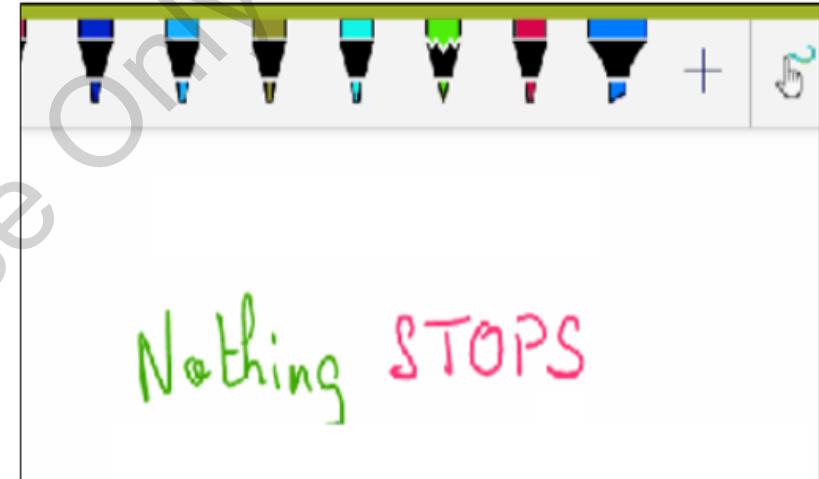
- A OneNote 2019 template is a page design that the user can apply to new pages in the notebook to give them an appealing background, a more uniform appearance, or a consistent layout.



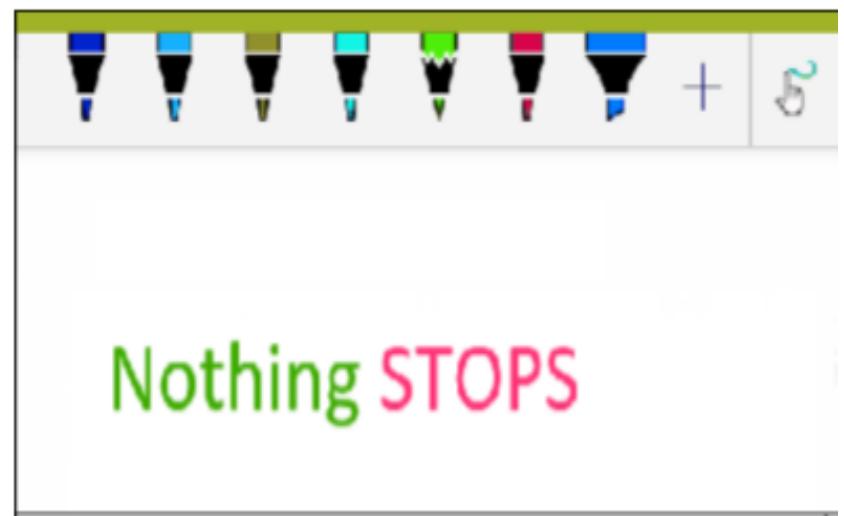
Changing Page Color

# Adding Guides for Handwriting and Drawing

- ▶ If the computer has a touch screen, one can use OneNote 2019 to handwrite notes instead of typing them.
- ▶ This is useful if one can write better or faster than he/she can type and it is great for meetings or interviews where the sound of typing away on a keyboard might be considered inappropriate.



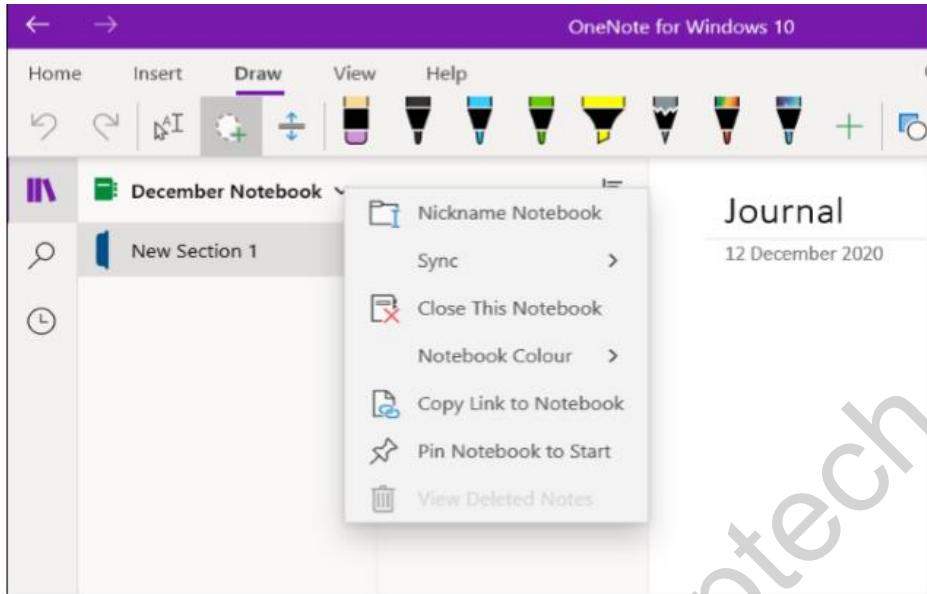
Handwritten Text



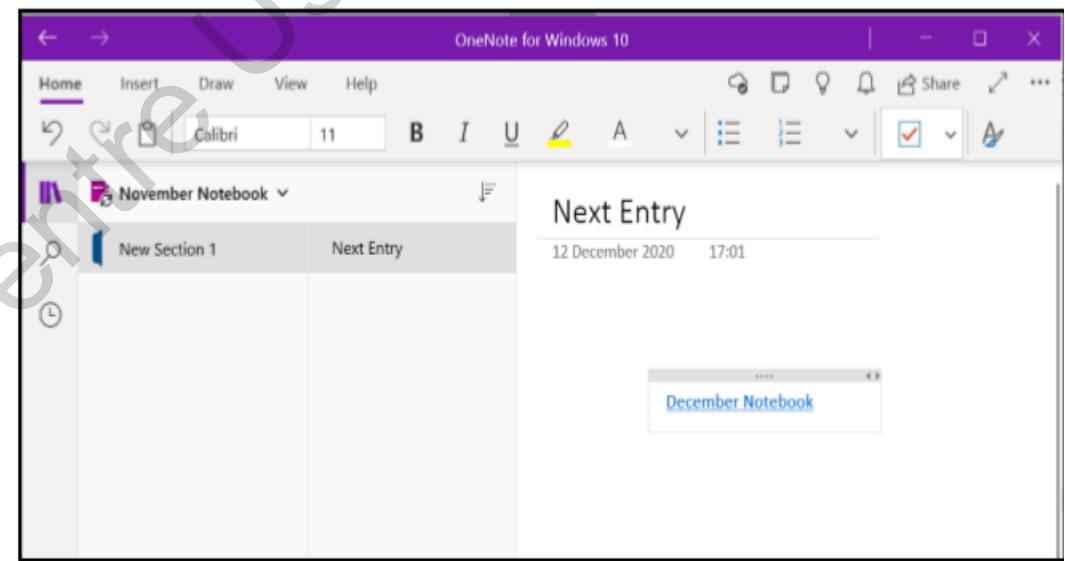
Ink to Text

# Creating Links to Notebooks

- ▶ It is easy to create a quick table of contents to other areas in your notes.
- ▶ One can create links to notebooks, sections, pages, and even specific paragraphs.



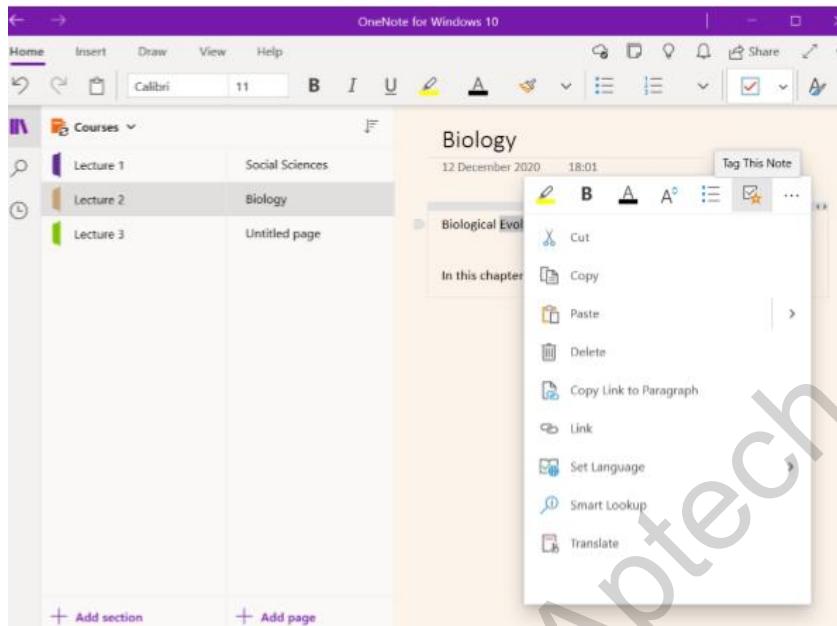
Copying Link to Notebook



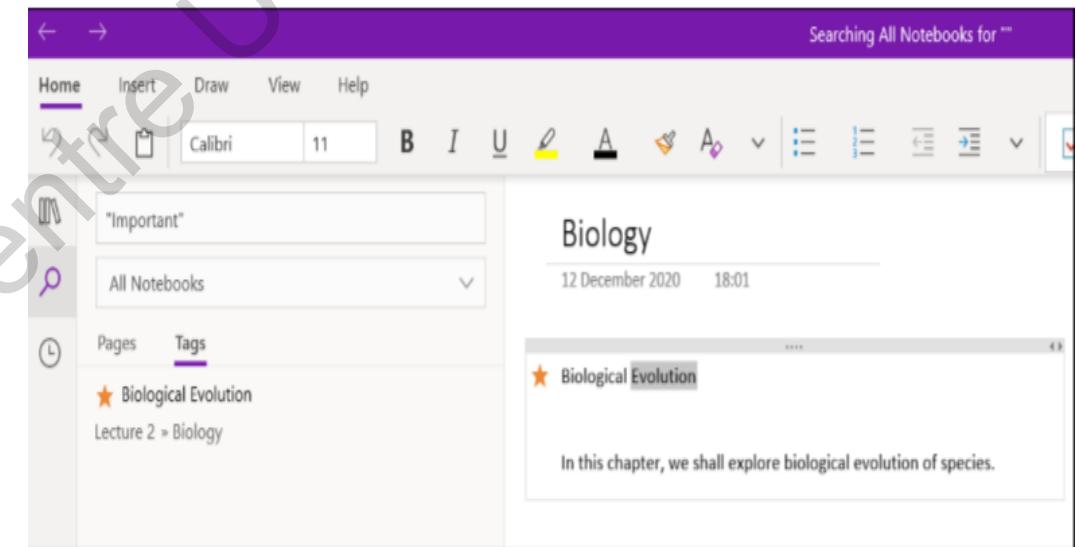
Pasting Link to Notebook

# Tagging Notes

- ▶ Tags are a way to categorize and prioritize notes in OneNote.
- ▶ With tags, user can quickly return to important items, set a reminder about action items, or filter on notes that he/she would want to share with others.



Tagging a Note



Search for Tagged Notes

# Performing Calculations

- Math equations can be jotted during a meeting, conference or class, and OneNote can instantly calculate the results

Following tips should be considered while performing calculations:

- Don't use spaces in the equation. Type the numbers, operators, and functions as one single, continuous string of text
- Function codes are not case-sensitive. For example, `SQRT(3)=`, `sqrt(3)=` or `Sqrt(3)=` will calculate the same answer
- To create a new line after the answer, press Enter (instead of Spacebar) after the equal sign

Operator	Meaning	Example
<code>+</code> (plus sign)	Addition	$3+3$
<code>-</code> (minus sign)	Subtraction	$3-1-1$
<code>*</code> (asterisk)	Multiplication	$3*3$
<code>X</code> (Upper or lower case)	Multiplication	$3X3$
<code>/</code> (forward slash)	Division	$3/3$
<code>%</code> (percent sign)	Percent	$20\%$
<code>^</code> (caret sign)	Exponential	$3^2$
<code>!</code> (Exclamation sign)	Factorial computation	$5!$

Supported Arithmetic Operators

# New Features in OneNote for Windows 10

## View a feed of all your notes

You can display a chronological list that combines all the notes taken in different apps such as OneNote, Sticky Notes, and so on through the OneNote feed. Click the Open Feed button in the upper right corner of the OneNote app window to view this.

## Use Dark Mode

You can switch OneNote's interface elements from light to dark using the Dark Mode. This mode improves readability of your notes in low light environments, increases legibility of the user interface, provides better contrast, and reduces eye strain.

## Improved printouts of Office files

You can insert Word documents, Excel spreadsheets, or PowerPoint presentations as a virtual printout to include their pages as images inside your notes. Click **Insert → File**, choose any Office file to insert, and then click **Insert as printout**. You can then manipulate the printout images, for example, moving, resizing, and so on.

## Improved Print to OneNote

Open Settings in Windows 10, select 'OneNote' as your default printer and then, print files from any app or browser on your PC. The printout is then sent to OneNote instead of a real printer. This lets you choose where to add the page - in any section of your open notebook or in any other notebook that you choose.

## Search for text phrases

You can now enclose any search phrase within quotation marks to find those exact words anywhere in your notes. Click **Search**, enter your phrase into the Search box, and then press **Enter**.

## Easily Upload and insert cloud files

When you choose to insert a file into your notes, OneNote now displays an option 'Upload to OneDrive and insert link'. Storing your file attachments in the cloud instead of your notebook keeps your notes more manageable and lets you collaborate with others more easily.

## Edit and save embedded file attachments

After you have inserted a file attachment into OneNote, you can double-click it to open and edit the file. Any changes made will be saved to the original attachment without having to re-insert the file.

# Summary

- Notebooks now can be made available anytime without the hassle of maintaining physical notes through the Microsoft tool called OneNote.
- OneNote's organization works from left to right. The list of notebooks is presented in the left pane of the program. The sections, which contain the pages of your notebook, are viewed as tabs in the main body of OneNote. When viewing a section, its relative pages are listed on the right side of the program
- You can sync page content with the cloud.
- OneNote tools can be used to tag important information or organize information in tables. Wiki style hyperlinks can be created or pictures can be copied using these tools.
- Tags are a way to categorize and prioritize notes in OneNote.
- Users can change page color and format text and other elements to make them more visually appealing.
- Viewing a feed of all your notes, using Dark Mode, improved printouts of Office files, and improved printing to OneNote are some of the new features in OneNote for Windows 10.

# Inside Microsoft Office

## ► Session 13

### Using Microsoft Outlook 2019



For Aptech Centre Use Only

# Objectives

- ▶ Explain the functions of Microsoft Outlook
- ▶ Describe how to organize emails, create categories, and use calendar
- ▶ List and describe the new features in Outlook 2019

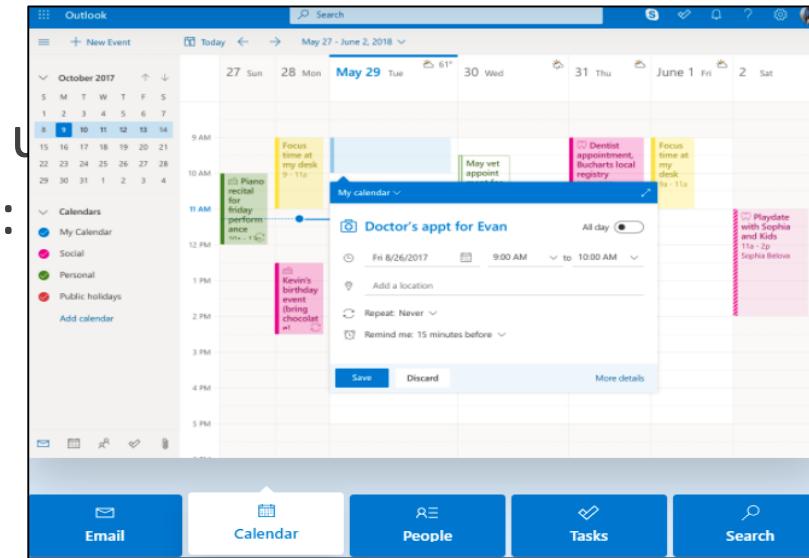
# Getting Started with Microsoft Outlook

- ▶ Primarily an email client application
- ▶ A part of Microsoft Office suite of applications that helps us to manage our day-to-day functions. It provides services for sending and receiving emails:

Manage  
calendars and  
meetings

Maintain  
contacts

Set reminders  
for tasks



**Microsoft Outlook**

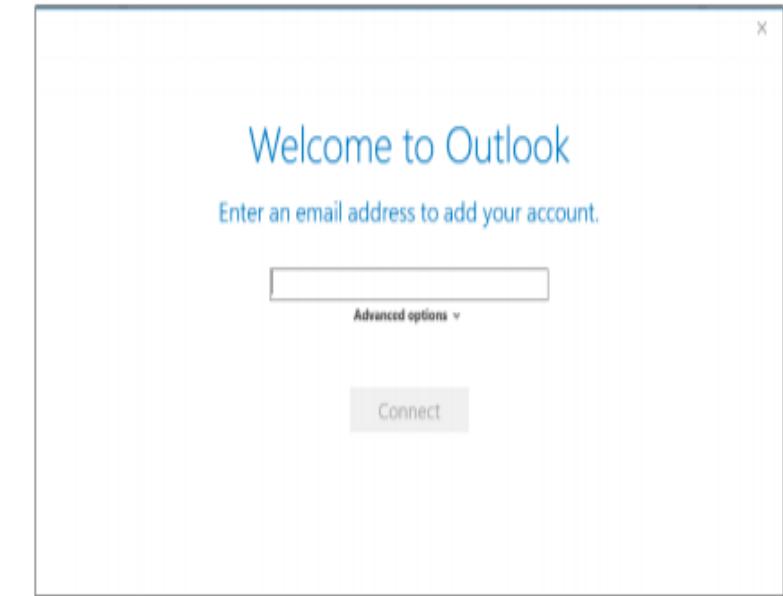
# Organizing Emails [1-2]

► Primary and main function of Microsoft Outlook is to:

- Send emails
- Receive emails
- Manage emails

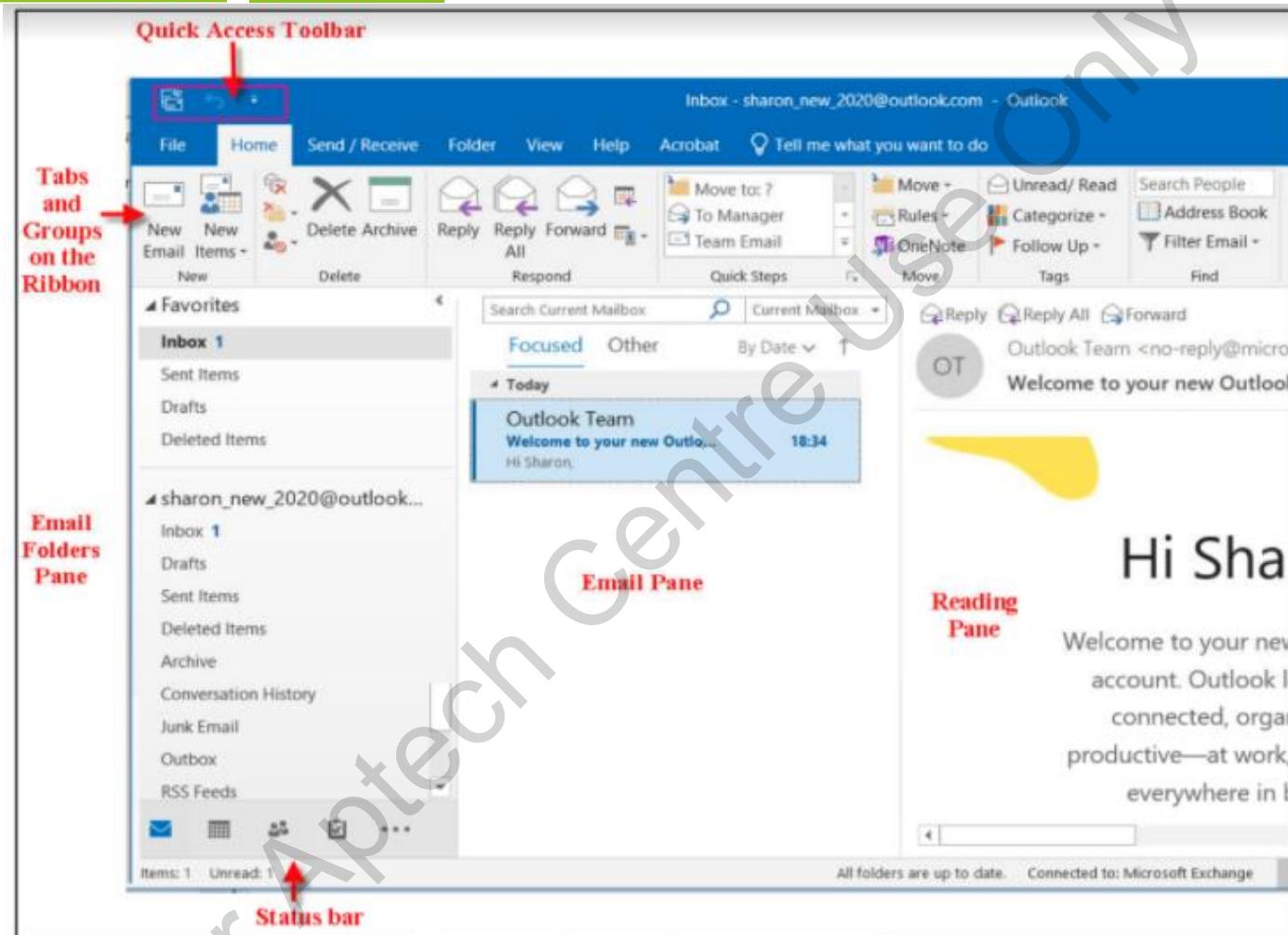


Outlook in the Start menu



Outlook 2019 Window

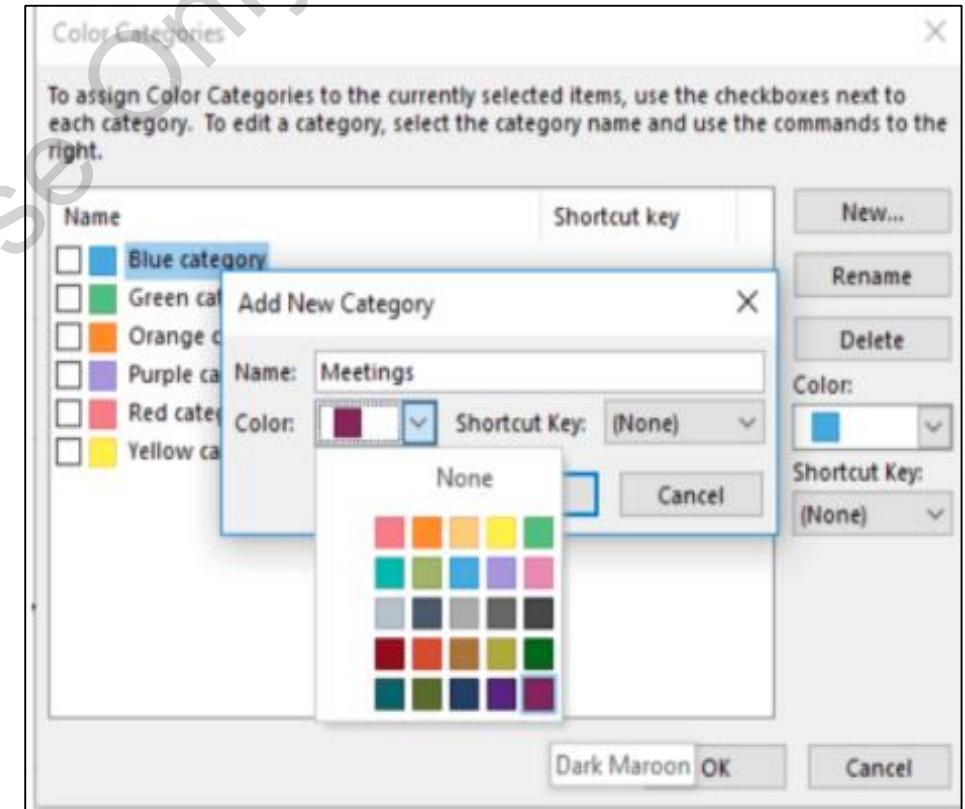
# Organizing Emails [2-2]



Outlook 2019 User Interface

# Using Categories

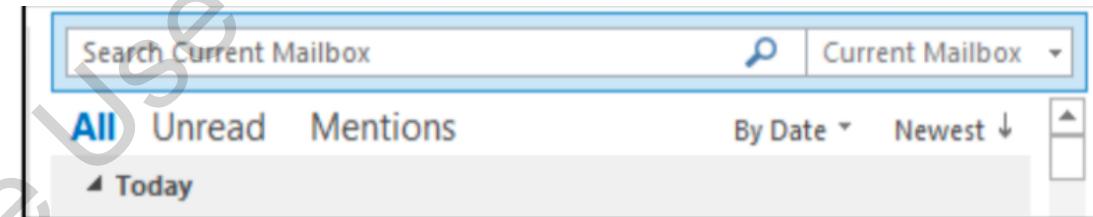
- ▶ Categories are used to organize emails so that they are easier to find, when required
- ▶ Microsoft Outlook provides six categories by default, that can be renamed
- ▶ These six categories are named according to their colors
- ▶ Users can also create new categories and choose different colors for various categories



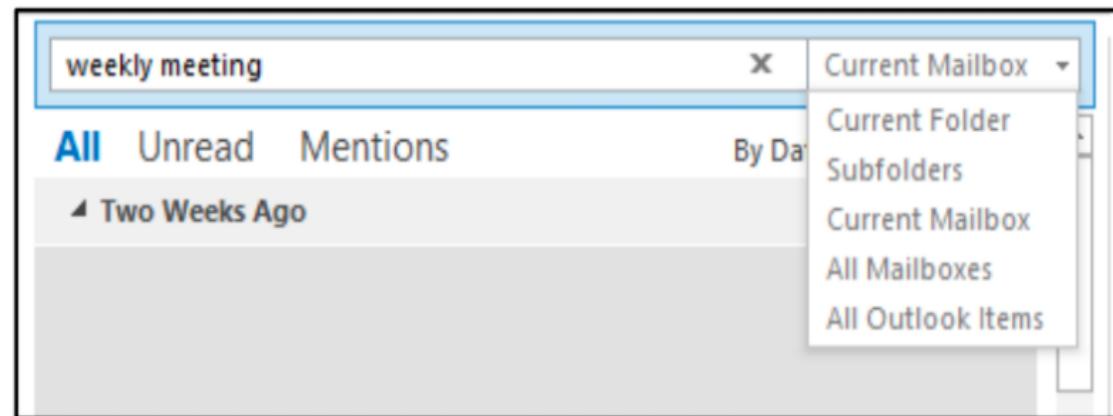
**Category Dialog Box**

# Searching Emails

- ▶ Microsoft Outlook allows users to search emails in the default folders as well as other folders and sub-folders
- ▶ Outlook also enables users to specify the search parameters to find emails quickly



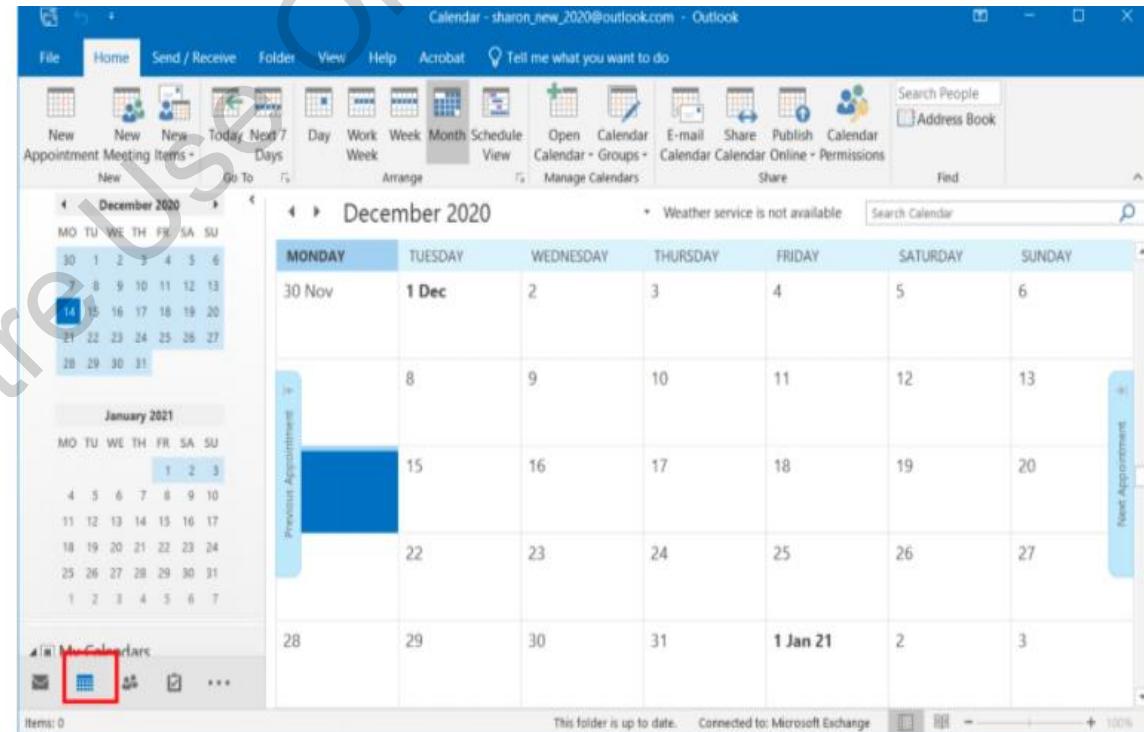
**Search Current Mailbox Text Box**



**Current Mailbox Drop-down list**

# Using the Calendar [1-2]

- ▶ Microsoft Outlook provides powerful scheduling features using the Calendar functionality
- ▶ The Calendar functionality allows users to create appointments and schedule meetings, and helps them to manage their office time

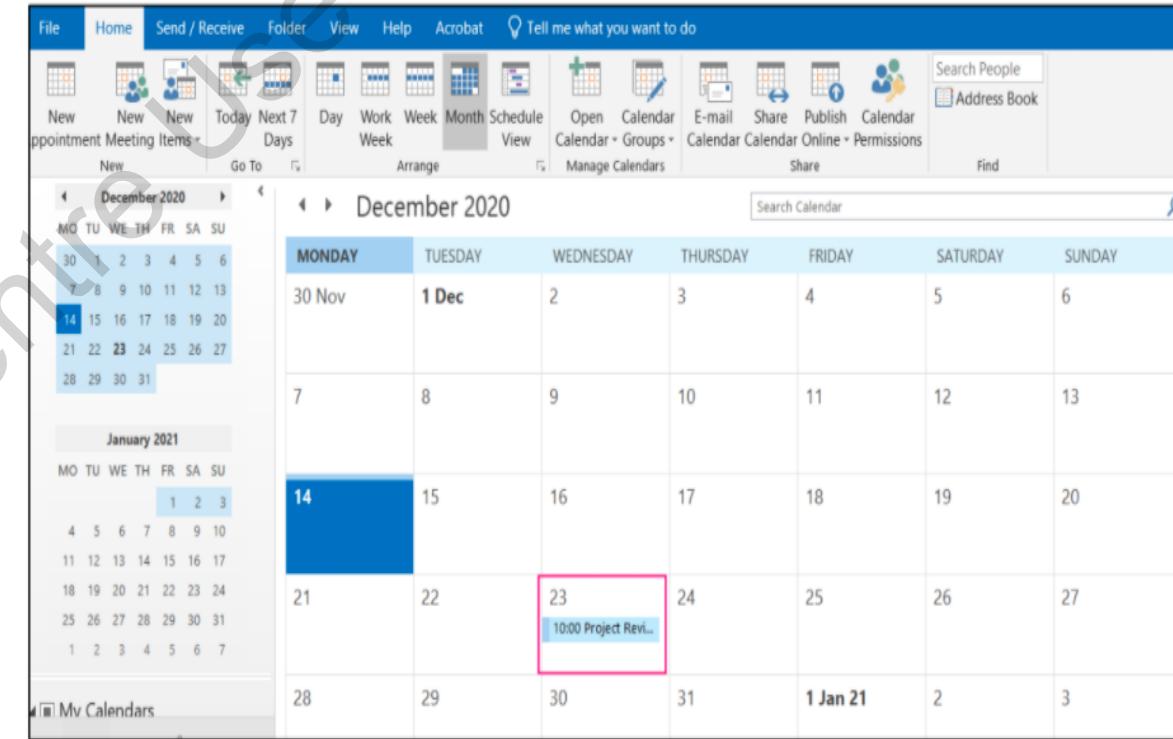


**Calendar View of Microsoft Outlook**

## Using the Calendar [2-2]

► Calendar of Microsoft Outlook allows users to view their schedule in the following ways:

- Today
- Next Seven Days
- Day
- Work Week
- Week
- Month



**Appointment on the Calendar**

# New Features in Outlook 2019 [1-2]

## Improved Accessibility

Accessibility Checker is enhanced with support for international standards and handy recommendations to make documents more accessible.

## Focused Inbox

Focused Inbox helps users focus on important emails. It separates users' inbox into two tabs namely, Focused and Other. Most important emails are on the Focused tab while the rest remain on the Other tab. Users will be notified about email flowing to Other. Users can switch between tabs at any time to take a quick look.

## Visual impact

Users can add visual appeal to documents, worksheets, and presentations by inserting SVG files that have filters applied to them.

## Viewing three time zones

While creating meetings, users can now add multiple time zones to their calendar to easily see everyone's availability and select a time that works for all.

## Listening to emails

Users can now have Outlook read their email messages aloud. This can allow them to complete other tasks in parallel while the email contents are being read aloud.

# New Features in Outlook 2019 [2-2]

## Marking emails as read when deleting

If **Deleted Items** folder includes unread items, a quick fix is available now to ensure all deleted messages are marked as read.

## Never miss a reminder

Users can set reminders to pop-up over the windows they are working in. Outlook can also flash in the taskbar to grab users' attention.

## Email sorting made easy

Sorting options and the Unread filter above the message list have been made available for those users who may not be keen to use Focused Inbox.

## Knowing who you will meet with

Users can see people's responses to a meeting request, even if they are not the meeting organizer.

## Automatic download of cloud attachments

When users drag and drop OneDrive attachments from an email message to their computer, a copy of the attachment files is downloaded for the user.

# Summary

- Emails are electronic messages sent or received by individuals or organizations.
- Microsoft Outlook is an email client application.
- Besides sending and receiving emails, Outlook can be used to manage calendars and meetings, maintain contacts, and set reminders for tasks.
- The latest version of Microsoft Outlook is Outlook 2019.
- Folders are used to organize emails as per department, year, month, groups, or projects, and are the best way to organize emails so that one can find them easily when required.
- Categories are used to organize emails so that they are easier to find when required.
- Microsoft Outlook provides six categories by default, which users can rename as per their requirements.
- The Calendar functionality allows users to create appointments and schedule meetings, and helps them to manage their office time.

# Inside Microsoft Office

## ► Session 14

Skype, Skype for Business,  
and Microsoft Teams



For Aptech Centre Use Only

# Objectives

- ▶ Explain Skype, Skype for Business, and Microsoft Teams
- ▶ Describe various options in Skype for communication and collaboration
- ▶ Explain Skype for Business
- ▶ Describe Microsoft Teams

# Skype

- ▶ Microsoft Skype is an instant messaging communication application that allows users to interact with each other, typically in an organizational setup.
- ▶ Skype allows users to have audio and video conversations.
- ▶ Users can connect to their friends, family members, and other users situated in different cities across the world.
- ▶ Skype is available as a free pre-installed app in Windows 10 systems.



# Features of Skype

## Audio and HD video calling

Audio and HD video calls in one to one or group calls with users on Skype

## Smart Messaging

Reacting to any message with cool reactions or using @ mentions to grab attention of other users during communication

## Screen sharing

Sharing presentations, photos, or anything else on your screen during a call through integrated screen sharing

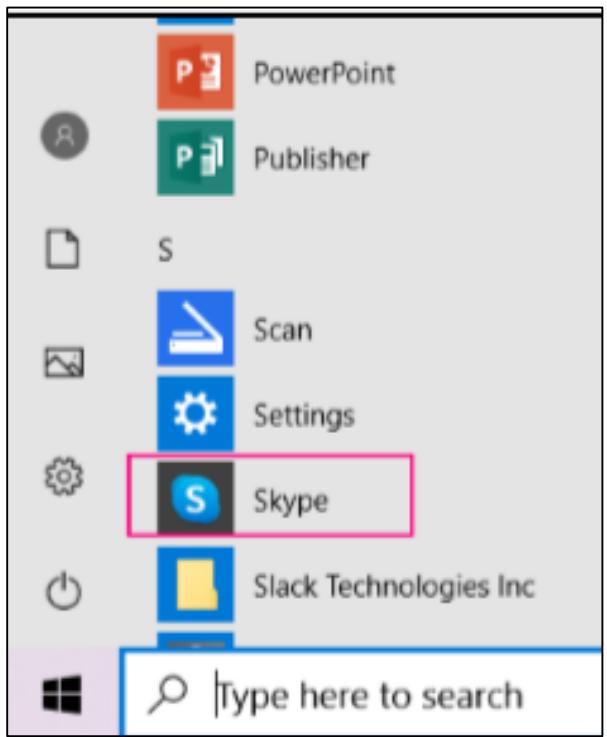
## Phone calls

Reaching friends or acquaintances across the world who are not online with affordable international calling rates to mobiles and landlines.

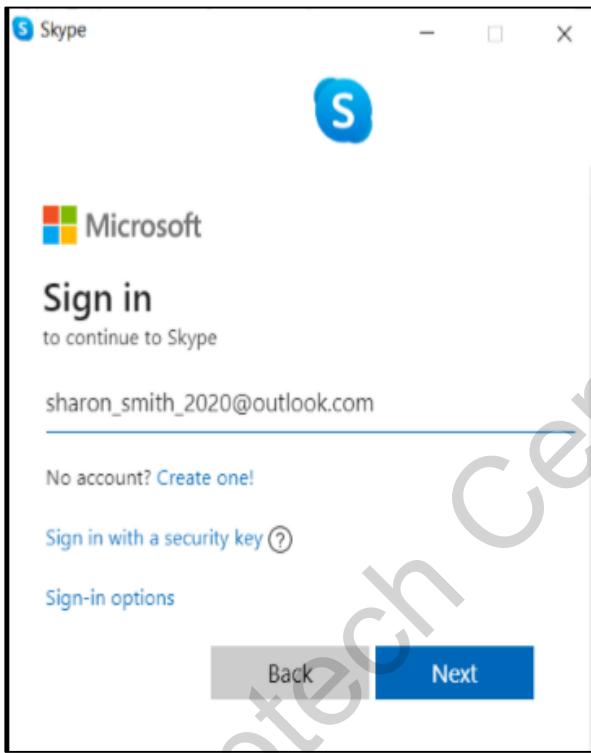
## Call recording with live subtitles

Recording Skype calls to capture special moments and meetings, and using live subtitles to read words that are spoken

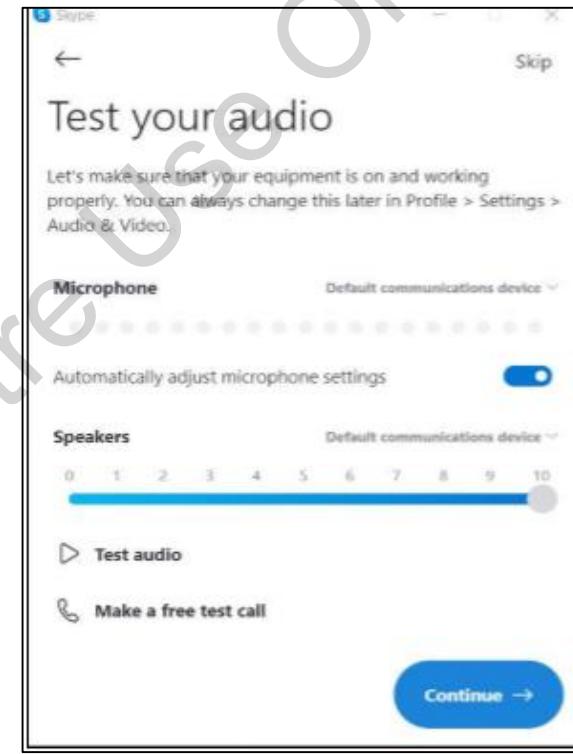
# Setting Up Skype



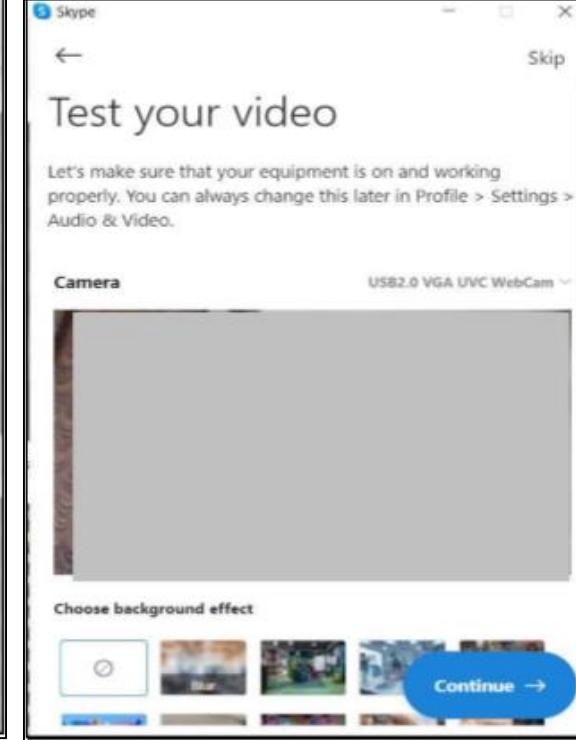
Skype in the Start Menu



Signing in to Skype

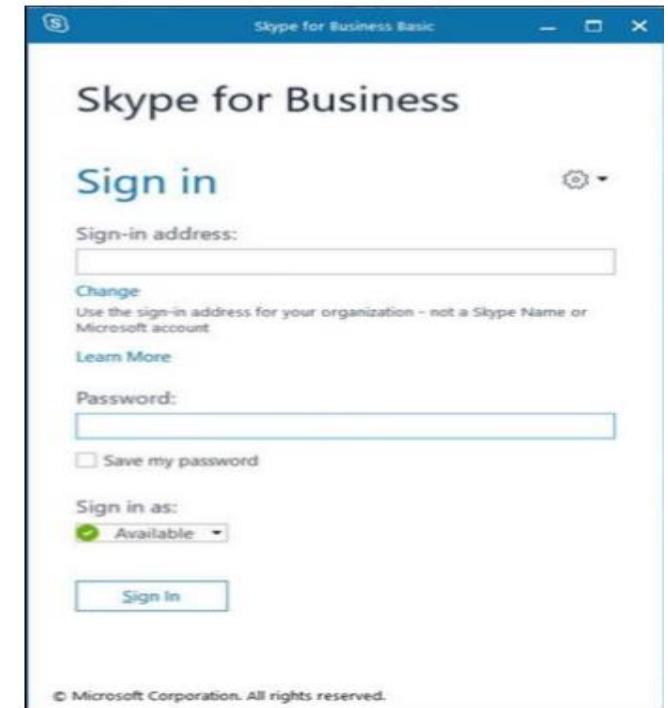
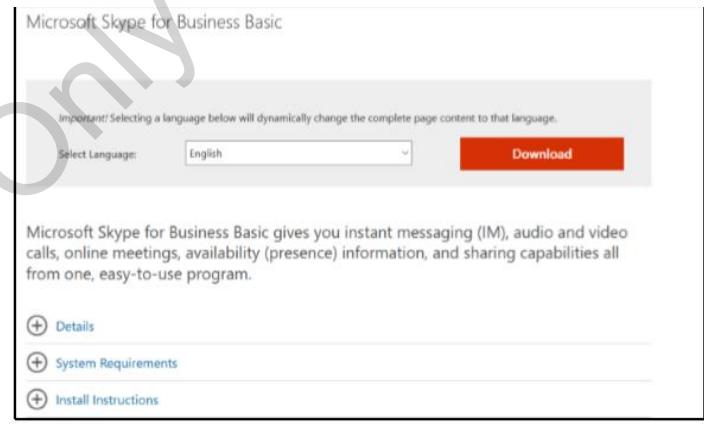


Testing Audio and Video



# Skype for Business

- ▶ Skype for Business, formerly called Lync, is a product along the lines of Skype, but for co-workers and enterprises.
- ▶ Similar to Skype, it offers features such as presence, Instant Messaging, audio and video calls, and online meetings.
- ▶ Skype for Business enables you to add up to 250 people to online meetings, provides enterprise-grade security, and also allows you to manage employee accounts.
- ▶ However, to login to Skype for Business client and connect to Skype for Business server, there are only two options:
  - An Office 365 account (which includes Skype for Business online service)
  - or
  - A work account with Skype for Business license



# Understanding the Skype for Business Interface

- ▶ The main interface includes buttons that are similar to the regular Skype software, such as adding contacts, making audio and video calls, options for collaboration, and so on.
- ▶ Skype for Business enables you to see when people are available, away from their desk, or in a meeting through their status.

## Displaying the Skype Status

- Available
- In a meeting
- Busy
- Offline
- Away
- In a call
- In a conference call

	Available *	Online and available
	Be Right Back **	Away from your computer briefly
	Away *, **	Logged on, but have been away from computer for a period of time.
	Off Work **	Not working or not available
	Busy *, **	Hard at work and shouldn't be interrupted
	In a call *	In a Skype for Business call (two-party call)
	In a meeting *	In a meeting (using Skype for Business or Outlook)
	In a conference call *	In a Skype for Business conference call (Skype meeting with audio)
	Do Not Disturb **	Do not want to be disturbed. You will see IMs, but only if you're both in the same Workgroup.
	Presenting *	Giving a presentation
	Out of the office	Set to OOF in your Outlook calendar
	Offline *	Not signed in
	Unknown	Presence can't be detected

\* Set automatically for you based on your keyboard activity or Outlook calendar.

\*\* You can set your presence to this anytime you want.

## Skype Statuses

# Microsoft Teams [1-4]

- ▶ Microsoft Teams is a business messaging and collaboration platform.
- ▶ It lets you host audio, video, and Web conferences with anyone inside or outside your organization.
- ▶ Teams of 10 or 10,000 can meet in one place, no matter where they are located.
- ▶ Users can easily share files, participate in one-to-one and group chats, and more, all with enterprise-grade security.



**Microsoft Teams in Action**

# Microsoft Teams [2-4]

## **Messaging**

- ▶ There are two types of Messaging in Teams namely, Peer-to-peer Chat and Group Chat.

## **Meetings**

- ▶ Meetings in Teams are also very different to meetings in Skype for Business. Users can schedule a meeting from within a chat, a Team, or the meetings app inside Teams.

## **Voice/Audio Calls**

- ▶ Voice in Microsoft Teams is also a little different from Skype for Business.

## **Organization-wide teams**

Permitting only team owners  
to submit posts in the  
General channel

Switch off @[team name]  
and @[team name]  
mentions

Automatically favorite  
important channels

Remove accounts that might  
not belong

# Microsoft Teams [3-4]

## **Built-in translator**

- ▶ More and more organizations these days comprise geographically distributed teams. Improved productivity is a key goal in formulating such teams.

## **Meeting whiteboards**

- ▶ Meetings in Microsoft Teams have a dedicated virtual whiteboard where participants can sketch together.

## **Renaming Channels and limiting Emoji usage**

- ▶ You can use emojis everywhere. If you have two channels bearing the same name (such as 'status meet') and you add an emoji to one of them, it will work in Teams perfectly although not in SharePoint.

## **Immersive reader**

- ▶ Through the immersive reader feature of Microsoft Teams, it is possible to easily view, translate, and hear individual messages.

## **Notify when available**

- ▶ One of the most-used features from Skype For Business, notify when available, is now available in Microsoft Teams. Whenever a user becomes available in Microsoft Teams, Teams will send a notification to inform you.

# Microsoft Teams [4-4]

## **Blurred background**

- ▶ If you do not want to show sensitive information/private stuff appearing in your background to your attendees/co-workers in meetings, you can use the blur my background feature in Microsoft Teams.

## **Microsoft Live Events**

- ▶ To broadcast meetings, webinars or live announcements in your organization to large online audiences you can use the Microsoft Teams live events feature.

## **Out-of-the-box analytics**

- ▶ These reports are essential to see who is collaborating in your team. For team owners, it indicates which users are inactive and which users are not using Teams frequently within your organization.

## **Intelligent BOT Framework**

- ▶ With Teams App Studio, you can deploy, download or submit your own bot to the Microsoft Teams staff to review and add it to the store.

## **Direct access to SharePoint, OneDrive, Skype, and Outlook**

- ▶ Microsoft Teams supports direct access to SharePoint, OneDrive, Skype, and Outlook.

## **Secure Collaboration**

- ▶ Microsoft Teams ensures industrial strength security while collaborating with other users of your organization.

# Summary

- Microsoft Skype is an instant messaging communication and collaboration application that allows users to interact with friends, family, and other users.
- Microsoft Skype of Business is similar to Skype, however, is more geared towards enterprise use, in an organizational setup.
- Skype of Business is designed for use with on-premises Skype for Business Server in Office 2019 Professional Plus, and a Software as a Service (SaaS) version called Skype for Business Online offered with Office 365.
- Skype and Skype for Business allow users to display their presence and their availability status.
- Skype for Business is used for scheduling meetings and conference calls among people who are located at different locations, such as different cities, or countries, or even continents.
- Skype for Business allows users to create a contact group, which contains contacts that have something in common, typically a business project, department, a business unit, and so on.
- Skype for Business will be phased out in a few years and is being replaced by Microsoft Teams.
- Microsoft Teams is a business messaging and collaboration platform that lets you host audio, video, and Web conferences with anyone inside or outside your organization.
- Microsoft Teams offers several powerful features including secure collaboration, immersive readers, built-in translators, facilities for organization-wide teams, direct access to SharePoint, OneDrive, Skype, and Outlook, and more.

# Inside Microsoft Office

## ► Session 15

### Using Microsoft OneDrive 2019



For AptechCentre Use Only

# Objectives

- ▶ Describe Microsoft OneDrive.
- ▶ Explain the user interface of OneDrive.
- ▶ Describe how to use OneDrive to Collaborate.
- ▶ Outline the process of syncing Online OneDrive Content with local OneDrive folders.

# Getting Started with Microsoft OneDrive

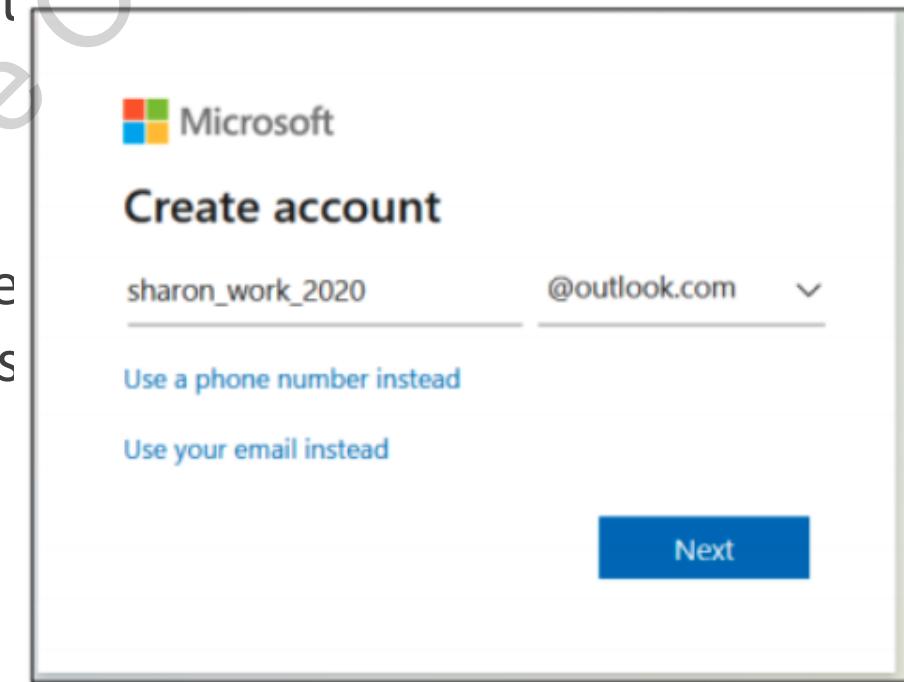
- ▶ Microsoft OneDrive is a file hosting service, which is a part of the online services provided by Microsoft.
  
- ▶ Microsoft OneDrive provides cloud storage in addition to the storage in laptop or desktop.
  
- ▶ OneDrive can be used as follows:
  - Simple storage location for files and documents
  - Collaboration tool



**Microsoft OneDrive Documents**

# Signing-in to Microsoft OneDrive

- ▶ Users can access OneDrive either through the Start menu or login to the Web version of OneDrive.
- ▶ OneDrive is generally used in organizations, where employees sign in to OneDrive using their organization's username and password.

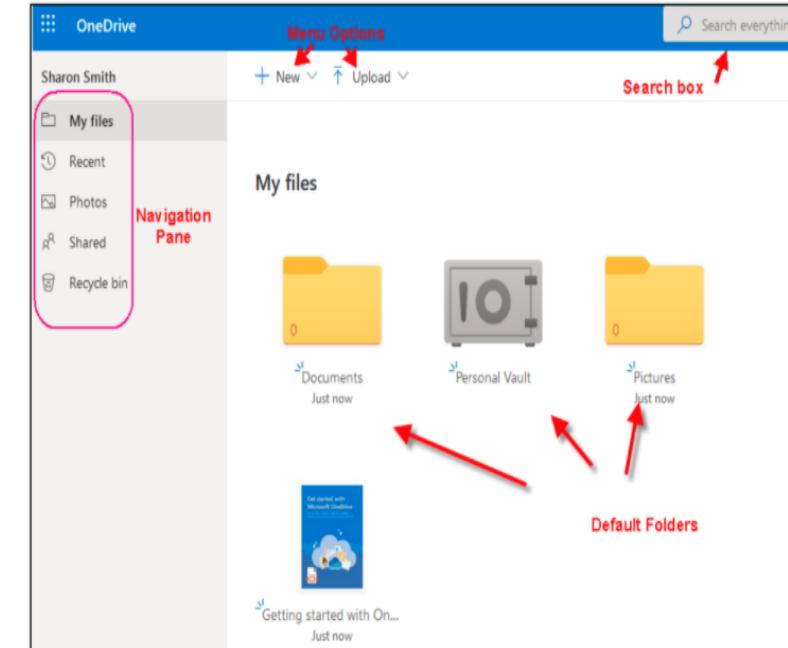


**Signing into MS OneDrive**

# Understanding the OneDrive Interface [1-2]

► The OneDrive page consists of:

- Navigation Pane
  - Files, Recent, Photos, Shared and Recycle Bin
- Search box
- Menu bar
- Files pane



Parts of OneDrive UI

## Understanding the OneDrive Interface [2-2]

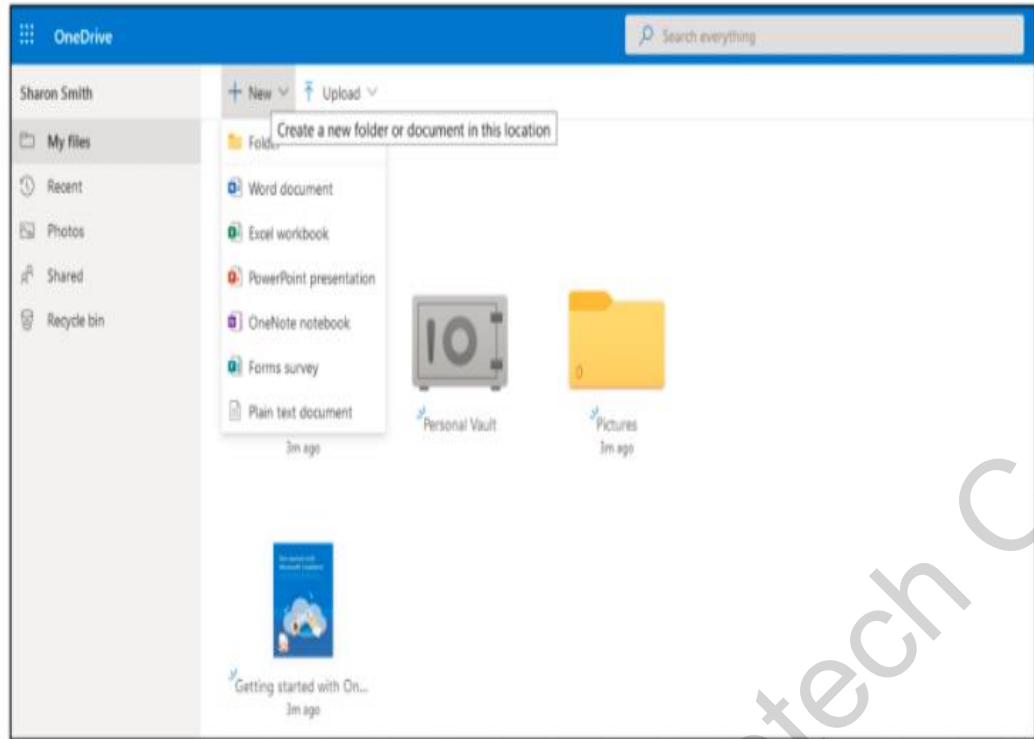
► In addition to these sections, OneDrive page also displays following icons:

-  : Provides options to view the files and folders contained in the OneDrive folder.
-  : Allows the users to sort the files and folders per the following criteria: Type, Name, Modified, Modified By, and File Size

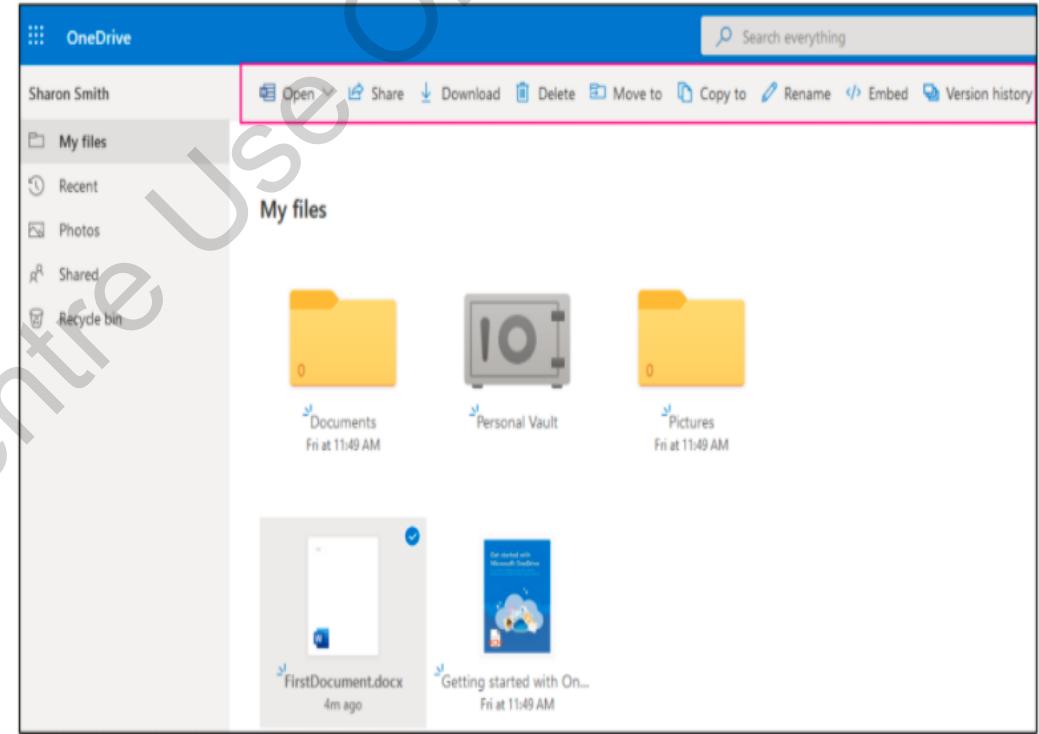
# Using OneDrive to Collaborate

- ▶ OneDrive application is an amazing collaboration tool that provides
  - An easy and effective way to collaborate and share files and folders with multiple users across all geographies.
  - Provides a single location for all files and folders that can be accessed by multiple users.
  - Location serves as a repository of files and folders, where users can add files and folders, share files and folders with other users, and edit files in their respective Microsoft applications.

# Working with Files and Folders



New Menu Sub-options

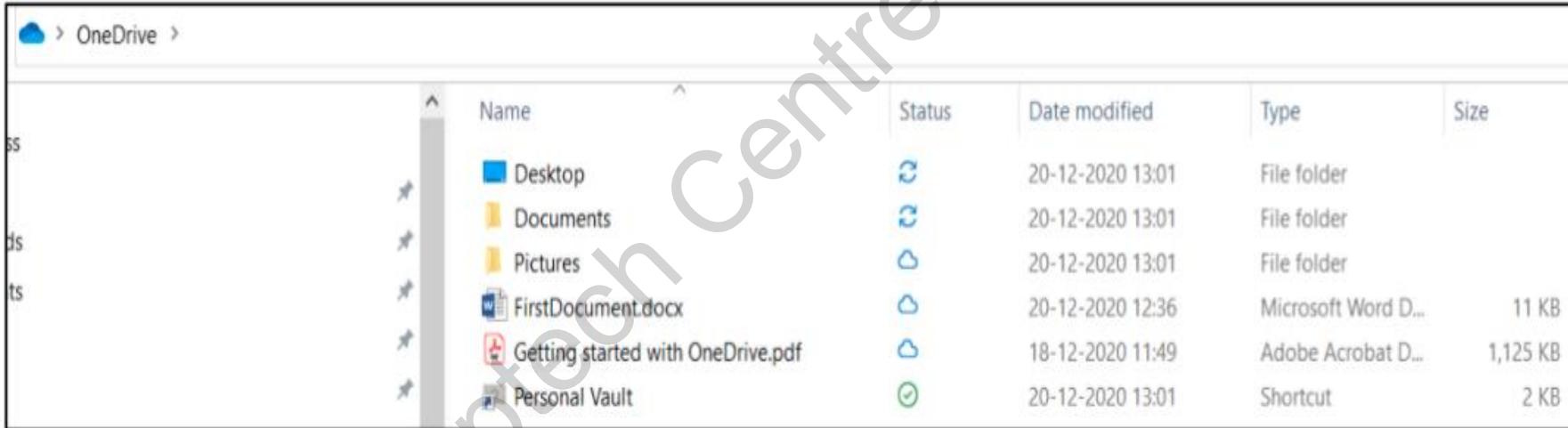


Various options to work with a file

# Syncing OneDrive Local Folder with Online OneDrive

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- OneDrive provides a local folder, which is a copy of the online OneDrive folder and is available in the user's laptop/desktop



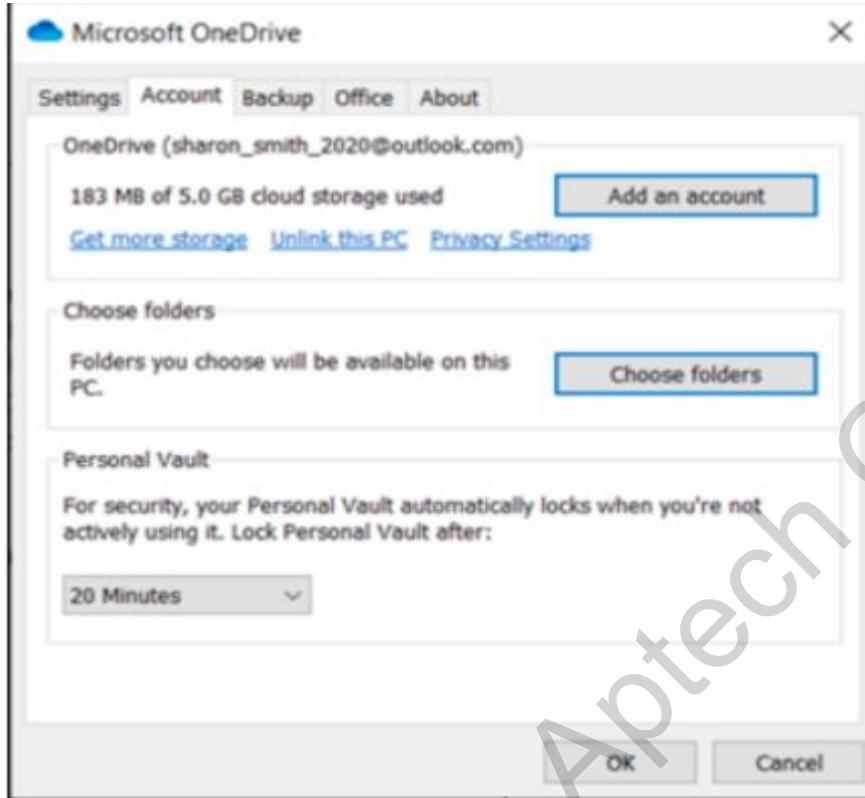
The screenshot shows the OneDrive desktop application interface. At the top, there is a navigation bar with a cloud icon, followed by 'OneDrive' and a back arrow. Below the navigation bar is a large, empty white area where files would be displayed. To the right of this area is a file list table.

Name	Status	Date modified	Type	Size
Desktop	🕒	20-12-2020 13:01	File folder	
Documents	🕒	20-12-2020 13:01	File folder	
Pictures	🕒	20-12-2020 13:01	File folder	
FirstDocument.docx	🕒	20-12-2020 12:36	Microsoft Word D...	11 KB
Getting started with OneDrive.pdf	🕒	18-12-2020 11:49	Adobe Acrobat D...	1,125 KB
Personal Vault	🕒	20-12-2020 13:01	Shortcut	2 KB

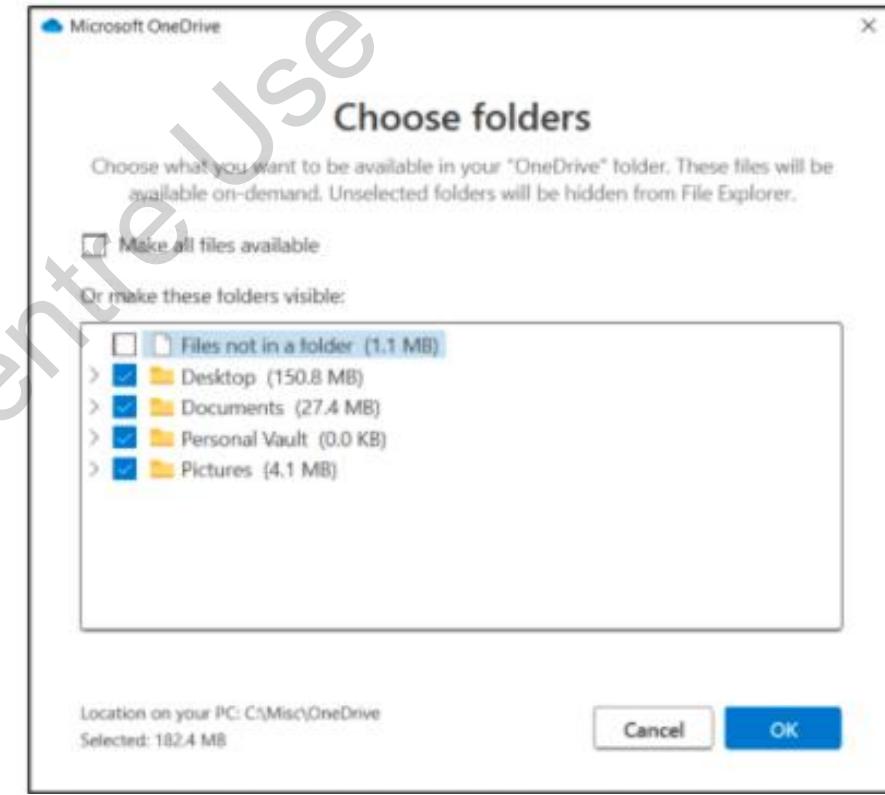
**Local OneDrive Folder**

# Syncing OneDrive Local Folder with Online OneDrive

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MS OneDrive Accounts Tab



Syncing Files and Folders

# Summary

- Microsoft OneDrive is a file hosting service, which is a part of online services provided by Microsoft Office 2019.
- OneDrive can be used as a simple storage location for files and documents, which can be accessed from any location and by users who have access to this storage.
- OneDrive can also be used as a collaboration tool that allows users situated at different locations to jointly edit documents and files.
- Microsoft OneDrive provides cloud storage in addition to the storage in laptop or desktop and provides 5 GB of free storage space to valid Microsoft users.
- OneDrive is generally used in organizations, where employees sign-in to OneDrive using their organization's username and password.
- Users can create or open various types of files such as Word documents, Excel spreadsheets, and so on, share them with others, copy or move them or even delete them.
- Users also have the option to upload existing files from their local folder to their online OneDrive page.
- Users can choose which folders or files on their OneDrive page to sync with their local OneDrive folder on their device.