

# **Inside Microsoft Office**

For Aptech Centre USE ONLY

# Inside Microsoft Office Trainer Guide

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First Edition - 2021



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## Preface

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This book, Inside Microsoft Office Trainer Guide, introduces you to Microsoft Windows 10 operating system and Microsoft Office 2019 suite. The book then explains basics of each of the key Microsoft Office 2019 products.

The faculty/trainer should teach the concepts in the theory class using the slides. This Trainer's Guide will provide guidance on the flow of the module and also provide tips and additional examples wherever necessary. The trainer can ask questions to make the session interactive and also to test the understanding of the students.

This book is the result of a concentrated effort of the Design Team, which is continuously striving to bring you the best and the latest in Information Technology. The process of design has been a part of the ISO 9001 Certification for Aptech-IT Division, Education Support Services. As part of Aptech's quality drive, this team does intensive research and curriculum enrichment to keep it in line with industry trends.

We will be glad to receive your suggestions.

Design Team

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# Session 1: Getting Started with Windows 10

## 1.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 1.1.1 Teaching Skills

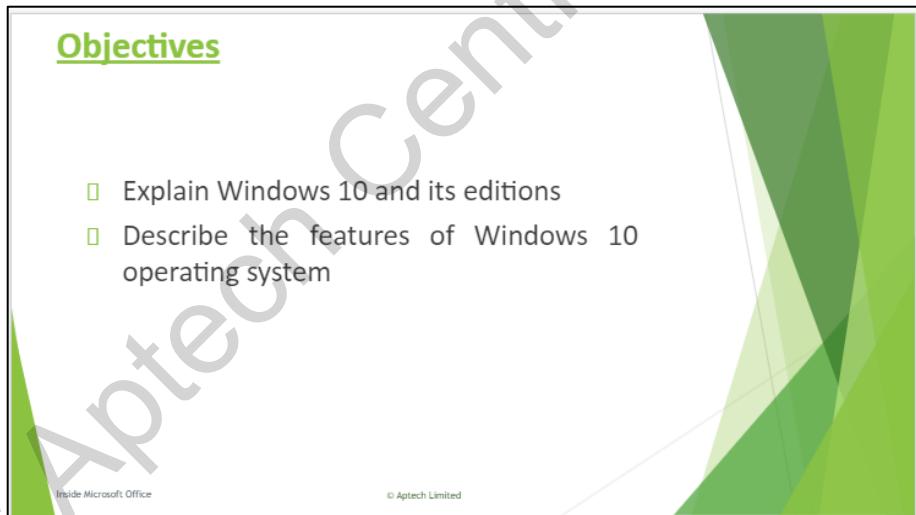
To teach this session, you should be well versed with setting up Windows 10 and basic features and benefits of Windows 10.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2



The slide has a green decorative border. At the top left, the word "Objectives" is written in green. Below it, there is a bulleted list of two items:

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

At the bottom left, it says "Inside Microsoft Office". At the bottom right, it says "© Aptech Limited".

### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in slide 2.

## 1.2 In-Class Explanations

Slide 3

### 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.



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#### Instructions to the Trainer(s):

- Introduce the session using Slide 3 and tell the students about Windows 10. Tell the students that Microsoft released Windows 10 on July 29, 2015 and it was marketed as a service that would receive continuous updates from Microsoft, as and when these updates are available.
- Windows 10 operating system is available in 12 editions, with each edition having a specific set of features and can be installed on a specific device.
- Windows 10 also introduced the Microsoft Edge Web browser, a virtual desktop system, a window and desktop management feature called Task View, support for fingerprint and face recognition login, new security features for enterprise environments, and DirectX 12.
- Windows 10 is the most advanced and secure Windows operating system to date with its universal, customized apps, features, and advanced security options for desktops, laptops, and tablets.
- Windows 10 includes online versions for:
  - OneNote
  - Word
  - Excel
  - PowerPoint
- Main advantages of Windows 10:
  - Return of the start menu
  - System updates for a longer period
  - Excellent virus protection
  - Touch screen for hybrid devices
  - Full control over Windows 10
  - Lighter and faster operating system
  - Possible privacy problems

➤ Key Functions of Windows 10

- User Interface
- Resource Management
- Task Management
- File Management
- Utilities

For more information related to Windows 10 operating system, refer to:

<https://www.howtogeek.com/250228/what-windows-10s-optional-features-do-and-how-to-turn-them-on-or-off/>

Slide 4

## 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



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**Instructions to the Trainer(s):**

➤ Using Slide 4, explain students the features of Windows 10:

- **Touch-optimized interface Windows Assistant:** Also known as tablet mode or a traditional desktop interface similar to that of Windows 7 along with live tiles from Windows 8.
- **Multi-tasking:** Windows 10 allows working on multiple applications or programs simultaneously and provides the Task View button on the Taskbar to switch between these open apps or programs easily.
- **Windows Assistant:** Windows 10 operating system provides an assistant, which helps users to search for apps, programs, and documents.
- **All notifications in one location:** Windows 10 displays all notifications related to applications, at one location, in ACTION CENTER.
- **Improved Windows Explorer:** Windows 10 provides an improved Windows Explorer. Windows Explorer enables users to navigate to different folders.

- **Phone Addition:** Windows 10 enables users to set up their phones to work with the PCs and use any Microsoft service available on the PC.
- Some of the hidden features of Windows 10 are as follows:
- GodMode
  - Virtual Desktop (Task View)
  - Scroll Inactive Windows
  - Play Xbox One Games On Your Windows 10 PC
  - Keyboard Shortcuts

## 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.



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### **Instructions to the Trainer(s):**

- Using Slide 5, tell the students about the Taskbar of Windows 10.
- A taskbar is an element of a graphical user interface which has various purposes. It typically shows which programs are currently running.
- The taskbar is the access point for programs displayed on the desktop, even if the program is minimized. Such programs are said to have desktop presence.
- With the taskbar, users can view the open primary windows and certain secondary windows on the desktop, and can quickly switch between them.
- The Taskbar is the bar, typically appearing along the bottom edge of your screen, that holds the Start button, the notification area (commonly known as the Tray), and the task buttons (one for each open application window).
- Main parts of the taskbar include:
  - Start Button -- Opens the menu.
  - Quick Launch bar -- Contains shortcuts to commonly used applications.
  - Main Taskbar -- Displays icons for all open applications and files.
  - System Tray -- Contains the clock and icons for some of the programs running in the background.

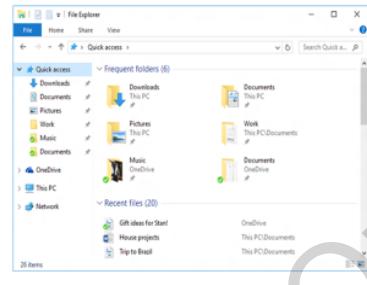
### **In-Class Question:**

**Question:** Where is taskbar on Windows 10?

**Answer:** The Windows 10 taskbar sits at the bottom of the screen giving the user access to the Start Menu, as well as the icons of frequently used applications.

## 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

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### **Instructions to the Trainer(s):**

- Using Slide 6, explain features and functions of Windows 10 File Explorer.
- Tell the students that the quickest way to access the File Explorer is to double-click the folder icon on the Taskbar.
- The Home menu of File Explorer allows users to perform following tasks:
  - Creating new files and folders
  - Copying and pasting files and folders
  - Moving files and folders from one location to another
  - Renaming files and folders
  - Deleting files and folders
  - Opening existing files and folders
  - Selecting files and folders
- The Share menu allows users to share files and folders through following ways:
  - Sharing a file through email
  - Reducing the size of a file or a folder using compression software, such as WinZip so that it takes less space
  - Printing a file
  - Sharing files with other users on the organization network
- The View menu of File Explorer allows users to perform following tasks:
  - Sorting the files and folders per various criteria, such as by type, by date of creation, by authors, by name, and many more.
  - Change the View of files and folders. For example, change the display of files and folders as icons to lists, to small icons, or to large icons.

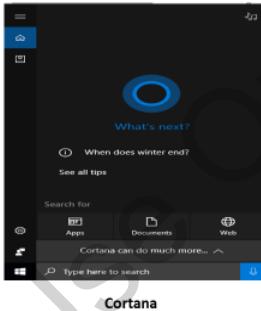
- View the details of each file and folder created, such as name of the file, date and time of creation, file or folder size, and so on.
- Adding a new pane to display the preview of the file or folder.

Slide 7

## **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.



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**Instructions to the Trainer(s):**

- Using Slide 7, explain about Cortana and its functionalities.
- Tell the students that Cortana is similar to any other virtual assistant, helps the user to find files, apps, and folders, in the PC, set appointments, search and answer questions, and much more.
- Cortana is Microsoft's personal productivity assistant that helps users save time and focus attention on what matters most.
- Microsoft has made its digital personal assistant – Cortana – more integral to Windows 10 with every major update. Apart from searching your computer, it displays notifications, can send emails, set reminders, and do all of that using your voice.
- Cortana in Windows has a chat-based UI that gives you the ability to interact using typed or spoken natural language queries. You can resize, move, and dock the app window on your desktop to accommodate your preferred workflow.
- Cortana has a 'do-not-disturb' mode in which users can specify 'quiet hours', as was available for Windows Phone 8.1 users.
- Here are some things Cortana can do for you:
  - Manage your calendar and keep your schedule up to date
  - Join a meeting in Microsoft Teams or find out who your next meeting is with
  - Create and manage lists
  - Set reminders and alarms
  - Find facts, definitions, and info
  - Open apps on your computer

## 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

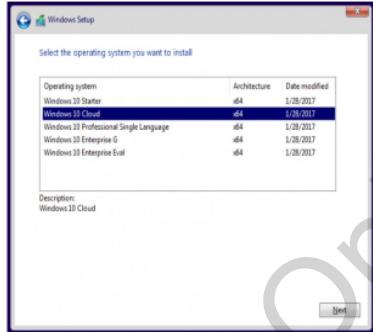
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### Instructions to the Trainer(s):

- Using Slide 8, explain the types of user accounts.
- Tell the students that:
  - The administrator account has access to all applications installed and files and folders stored in the PC.
  - The user account is generally the name of a user who owns the PC (individually-owned laptop or desktop) or the name of the employee of an organization who has been allotted the PC (which can be a laptop or a desktop).
  - Examples of user accounts can be: John Smith (in case of a stand-alone personally owned PC) or john.smith@abc.com (in case of an organization's owned PC allotted to the user named John Smith).
- Every user account has an associated user account name and can have a user account picture and a password. Any user can change following details for his or her account:
  - **Account name:** You can change the display name that appears on the Welcome screen and Start menu.
  - **Account picture:** You can change the picture that identifies you on the Welcome screen and Start menu.
  - **Password:** You can create or change the password.

## 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**

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### Instructions to the Trainer(s):

- Using Slide 9, tell the students about Microsoft Cloud storage.
- Tell the students that Microsoft Cloud storage is free to all users who have a valid Microsoft account or a Microsoft Outlook account.
- Microsoft Cloud storage provides a range of cloud services, including compute, analytics, storage, and networking.
- Microsoft's cloud storage service, OneDrive, can back up your personal and work files online. It is built into Windows 10. With it you can sync files on your Windows 10 PC to the cloud and to your other Windows PCs, smartphone, or tablet (with the OneDrive app for Android or iOS installed on either).
- Cloud allows users to share their data within and across the organization over the Web, it also allows retrieving of data, backups, recovery, file storage, and so on.
- Users can access their data anytime 24/7.
- Cloud also allows users to maintain the privacy of their data.
- Different types of cloud are as follows:
  - Public cloud: Any user can access (Not secure).
  - Private cloud: Only authenticated users can gain access.
  - Hybrid cloud.

- To make cloud storage work, save files and create folders within the cloud storage folder tree on your PC's mass storage system. The folders are found in your account's home folder, given the name of the cloud service that you are using. For example:
  - Dropbox
  - Google Drive
  - OneDrive

For more information on Windows 10 Cloud, refer to:

<https://www.dummies.com/computers/pcs/data-storage/cloud-storage-on-your-windows-10-pc/>

[https://www.tutorialspoint.com/windows10/windows10\\_cloud.htm](https://www.tutorialspoint.com/windows10/windows10_cloud.htm)

Slide 10

## 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

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### Instructions to the Trainer(s):

- Using Slide 10, explain about Universal Apps
- Tell the students that 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.
- Universal Windows Platform (UWP) is a computing platform created by Microsoft and first introduced in Windows 10. The purpose of this platform is to help develop universal apps that run on Windows 10, Windows 10 Mobile, Xbox One, and HoloLens without requiring to be rewritten for each.
- Universal Apps supports Windows app development using C++, C#, VB.NET, and XAML.

For more information related to Windows 10 universal apps, refer to:

[https://www.tutorialspoint.com/windows10/windows10\\_universal\\_apps.htm](https://www.tutorialspoint.com/windows10/windows10_universal_apps.htm)

## 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

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### Instructions to the Trainer(s):

- Using Slide 11, explain about Microsoft Edge, which works similar to other Web browsers.
- Windows 10 includes the first version of Microsoft's new browser – Edge. By default, Edge can be accessed by clicking the icon placed on the taskbar. The toolbar, however, is more simplified than the Internet Explorer.
- It features following buttons –
  - Back – Takes you to the previous Web page.
  - Forward – Takes you to the next Web page.
  - Refresh – Reloads the Web page.
  - New tab – Add another tab to see a different Web page.
  - Hub (Favorites and History) – See lists of favorite Web pages and history of visited Web pages.
  - Web Notes – Make Web Notes on the Web page.
  - Share – Share the Web page via e-mail or other methods.
  - More options – See more options to configure the browser.
- Some of the best Web browsers for Windows 10 are as follows:
  - Google Chrome
  - Mozilla Firefox
  - Opera
  - Microsoft Edge
  - Torch Browser
- Some of the basic features include:
  - Navigation buttons
  - Stop button

- Home button
- Refresh button
- Tabbed browsing
- Bookmark buttons

For more information related to Microsoft Edge, refer to:  
<https://www.microsoft.com/en-us/edge/features>

Slide 12

**Security**

► Windows 10 uses following three security tools:

1. User account control
2. Windows firewall
3. Windows defender

**Security for Windows 10**

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#### Instructions to the Trainer(s):

- Using Slide 12, discuss the security tools of Windows 10.
  - **User account control:** This tool generates an alert when an application or a user, attempts to change the settings of the PC. The system administrator can use this alert to take appropriate action.
  - **Windows firewall:** This application prevents any external and unauthorized access to the PC.
  - **Windows defender:** This is an anti-virus and malware protection application, integrated with Windows 10 operating system.
- **Security features in Windows 10 include:**
  - Account protection
  - App and browser control
  - Device security
  - Virus and threat protection
  - Firewall and network protection

## Slides 13 and 14

### Summary [1-2]

- ▶ 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.

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### Summary [2-2]

- ▶ 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.

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### Instructions to the Trainer(s):

- Using Slides 13 and 14, summarize the content explained in this session.
- Here, the students will have a basic *go-through* regarding all the topics discussed and have an understanding regarding the same.

## Session 2: Introducing Microsoft Office 2019

### 2.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 2.1.1 Teaching Skills

To teach this session, you should be well versed with Microsoft Office 2019 features and products.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**Objectives**

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

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#### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in slide 2.

Slides 3 and 4

## 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

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## 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.

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

**Instructions to the Trainer(s):**

- Introduce the session using slides 3 and 4 and tell students about Microsoft Office 2019.
- Microsoft Office is a set of computer applications mainly used for business or office purposes. First introduced in 1990, Office software is made by the Microsoft Corporation.
- MS Office helps simplify basic office tasks and improve work productivity.
- Tell the students that Microsoft Office suite includes products such as:
  - Microsoft Word
  - Microsoft Excel
  - Microsoft PowerPoint
  - And many more tools
- Office 2019 allows users to do the following:
  - Create presentations
  - Build data models
  - Create rich reports with tools and capabilities such as PowerPoint Morph, new chart types in Excel, and improved inking across apps.

- Office 2019 helps users to manage their time, email, and contacts more easily.
- Office 2019 is available for both Windows and macOS, and includes classic versions of Word, Excel, PowerPoint, and Outlook.

Slide 5

### 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.



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#### Instructions to the Trainer(s):

- Using Slide 5, tell the students about Office 365.
- Microsoft 365, formerly Office 365, is a line of subscription services offered by Microsoft which adds to and includes the Microsoft Office product line.
- The brand was launched on 10 July, 2017, for a superset of Office 365 with Windows 10 Enterprise licenses and other cloud-based security and device management products.
- Microsoft 365 includes pricing plans that allow use of Microsoft Office software suite over the life of the subscription, as well as cloud-based software-as-a-service products for business environments.
- All Microsoft 365 plans include automatic updates to their respective software at no additional charge.
- For more information on Office 365, refer to:  
[https://en.wikipedia.org/wiki/Microsoft\\_365](https://en.wikipedia.org/wiki/Microsoft_365)  
<https://support.microsoft.com/en-us/office/what-s-the-difference-between-microsoft-365-and-office-2019-ed447ebf-6060-46f9-9e90-a239bd27eb96>

## Slides 6 and 7

### 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:

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

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### Exploring Microsoft Office [2-2]

Ribbon

Document1 - Word

Sign in Tell me Share

Clipboard Font Paragraph

Font Paragraph

Normal No Spacing Heading 1 Styles

Editing Create and Share Request Adobe PDF Signatures Adobe Acrobat

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#### Instructions to the Trainer(s):

- Using Slide 6, discuss the Microsoft Office Explorer.
- Microsoft Office 2019 displays commands in a series of icons stored on different tabs. This combination of icons and tabs is known as the Ribbon interface, which appears in Word, PowerPoint, Excel, Outlook, and Access.
- Microsoft Word 2019's Ribbon presents tabs that you can click to reveal groups of helpful icons. These icons represent command buttons, input boxes, and menus that are helpful when navigating through a Word document.
- Tell the students that the Ribbon helps users to do the following tasks:
  - Identify
  - Locate
  - Understand
  - Use Commands efficiently
- Also, explain the tabs and groups and other components included in a Ribbon.

- Using Slide 7, discuss the structure of a Ribbon.
- The Ribbon is composed of three parts:
  - Tabs
  - Groups, and
  - Commands.

For more information on Ribbon, refer to:

<https://www.dummies.com/software/microsoft-office/microsoft-office-2019-ribbon-tabs/>

<https://support.microsoft.com/en-us/office/show-or-hide-the-ribbon-in-office-d946b26e-0c8c-402d-a0f7-c6efa296b527>

**In-Class Question:**

**Question:** What is a Ribbon in Microsoft Office packages?

**Answer:** The Ribbon is a set of toolbars and commands at the top of the window in Office programs designed to help you quickly find the commands that you require to complete a task.

**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	

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**Instructions to the Trainer(s):**

- Using Slide 8, explain new features in Office 2019.
- In Office 2019, you will find
  - New inking tools
  - Data types
  - Functions
  - Translation
  - Editing tools, motion graphics, and ease-of-use features
- Office 2019 also provides support for visual impact, LaTeX equation, Zoom for PowerPoint, , Accessibility checker, and so on.



**Instructions to the Trainer(s):**

- Using Slide 9, tell the students about different editions in Office 2019.
- Office 2019 comes in three editions
  - 2019 Home and Student for PC/Mac
  - 2019 Home and Business for PC/Mac
  - Microsoft Office 2019 Professional
- Desktop versions are significantly different than Office 365.

For more information on MS Office 2019 Editions, refer to:

[https://en.wikipedia.org/wiki/Microsoft\\_Office\\_2019](https://en.wikipedia.org/wiki/Microsoft_Office_2019)

**Understanding Office 2019 Editions [2-2]**

<b>Office Home &amp; Business 2019</b>	<b>Office Home &amp; Student 2019</b>	<b>Office Professional 2019</b>
<p>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</p> <p>All languages included. Compatible with Windows 10 or macOS*</p>	<ul style="list-style-type: none"><li>• One-time purchase for one PC or Mac</li><li>• Classic 2019 versions of Word, Excel, and PowerPoint</li><li>• Microsoft support included for 60 days at no extra cost</li><li>• Licensed for home use</li></ul> <p>All languages included. Compatible with Windows 10 or macOS*</p>	<p>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</p> <p>All languages included. Compatible with Windows 10*</p>
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**Instructions to the Trainer(s):**

- Use Slide 10 to help students understand the Office 2019 Editions in detail.
- It consists of the following:
  - **Office Home & Business 2019:** Office 2019 Home and Business also includes Outlook, Project, Visio, Access, and Publisher.
  - **Office Home & Student 2019:** Office 2019 Home and Student includes Word, Excel, PowerPoint, and OneNote
  - **Office Professional 2019:** Office Professional Plus 2019 includes Access, Excel, OneNote, Outlook, PowerPoint, Publisher, Word, and Skype for Business.

**In-Class Question:**

**Question:** What is the cheapest way to get Microsoft Office?

**Answer:** The cheapest version is usually the 'Home and Student' Edition which comes with a lifetime license for one user.

## Slide 11

### **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.

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### **Instructions to the Trainer(s):**

- Show students Slide 11.
- Summarize the session by reading out each point on the slide.

## Session 3: Working with Microsoft Word – Part 1

### 3.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 3.1.1 Teaching Skills

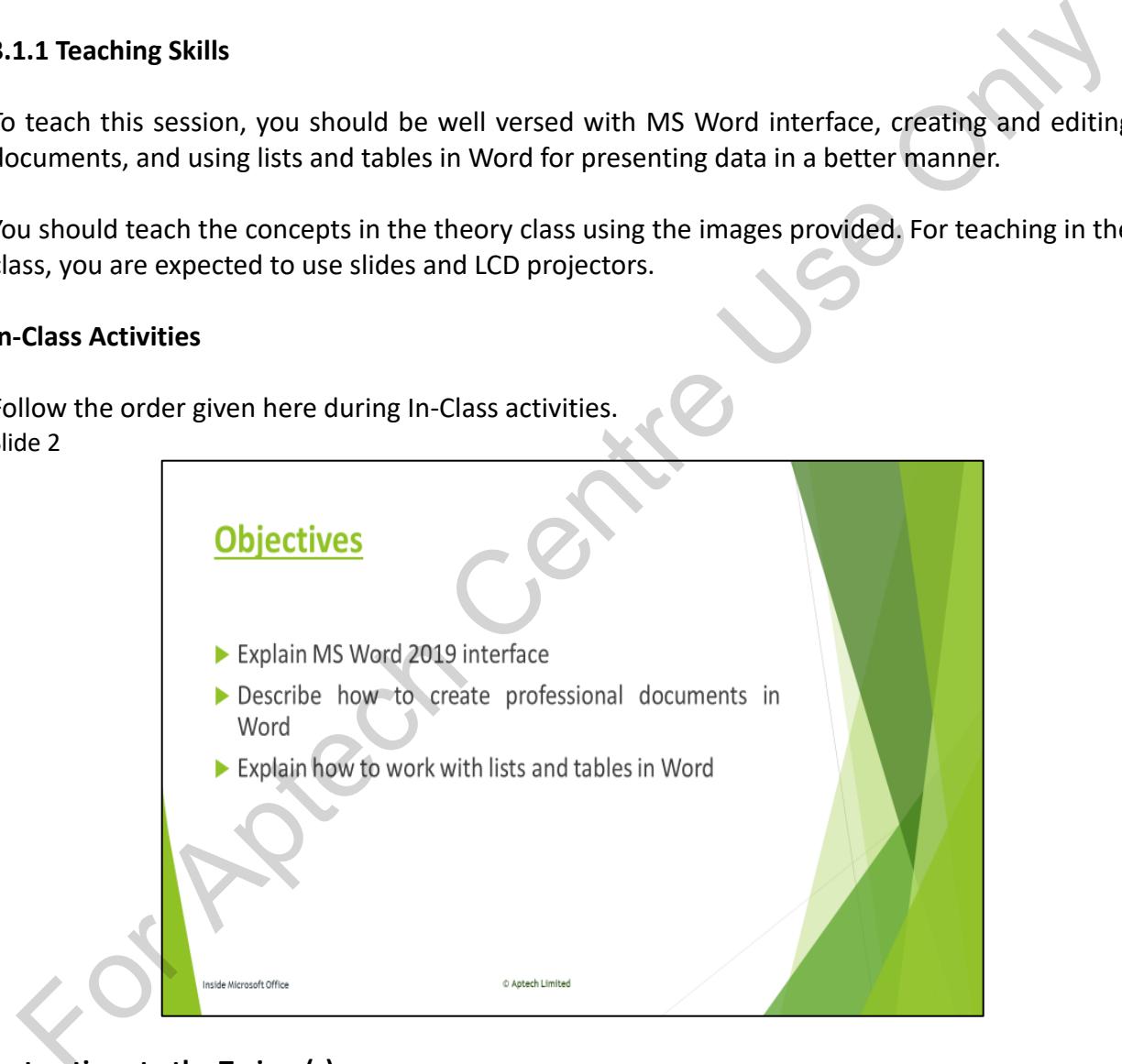
To teach this session, you should be well versed with MS Word interface, creating and editing documents, and using lists and tables in Word for presenting data in a better manner.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2



The slide features a large, semi-transparent watermark of the 'Aptech Centre' logo, which includes the text 'Aptech', 'Centre', and 'For Apechi Use Only' in a stylized font. The slide itself has a white background with a decorative green and yellow geometric pattern on the right side. At the top left, the word 'Objectives' is written in green. Below it, there is a bulleted list of three items, each preceded by a green triangle icon. At the bottom left, the text 'Inside Microsoft Office' is visible, and at the bottom right, the text '© Aptech Limited' is visible.

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

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#### Instructions to the Trainer(s):

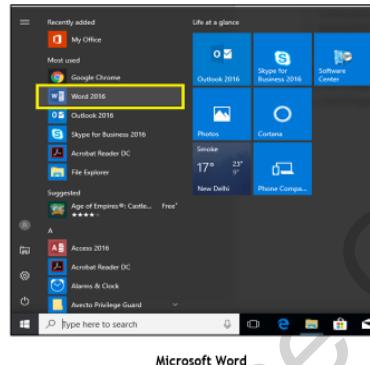
Give students a brief overview of the current session through the session objectives listed in slide 2.

### 3.2 In-Class Explanations

Slides 3 and 4

#### 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.



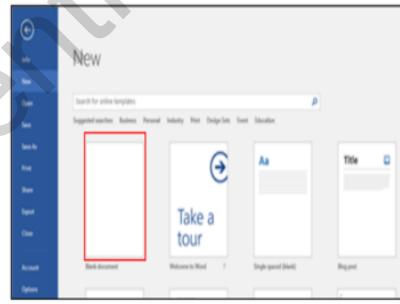
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3

#### 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.



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#### **Instructions to the Trainer(s):**

- Introduce the session using Slide 3, discuss with students about Microsoft Word (MS Word). Define its primary functions.
- Tell the students that, MS Word is one of the most used digital word processors, universally accepted by students, professionals, and businesses alike.
- MS Word helps to create error-free, professional, good-looking, well-organized documents to enhance communication.
- MS Word helps to visualize information by using diagrams and charts.
- Word quickly build tables of contents, indexes, and equations.
- Word includes the 'Tell me what you want to do' feature, which is useful for beginners and experienced users as well. It acts as an '**assistant**' and allows users to save time.

- Using Slide 4, explain to the students that Word helps to do the following:
  - Create and format documents and themes
  - Review track changes
  - Save and share your work
  - Chat, comment, and collaborate with team-members
- MS Word also helps in importing a file, exporting a document, closing a document, and so on.
- MS Word has features including:
  - Spell check
  - Grammar check
  - Text and font formatting
  - HTML support
  - Image support
  - Advanced page layout and more

## Slides 5 and 6

### 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.

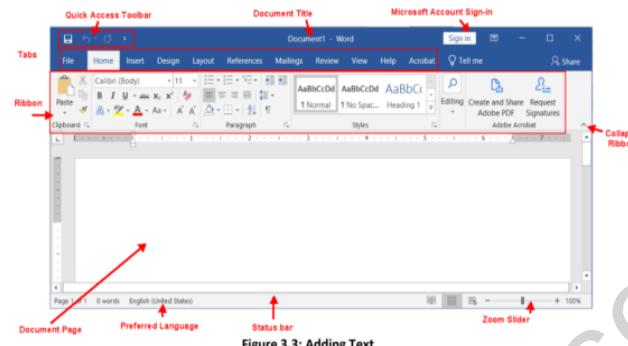


Figure 3.3: Adding Text

### Understanding the Word 2019 Interface [2-2]

- Key elements of MS Word Interface:



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### Instructions to the Trainer(s):

- Using Slide 5, explain students the Word 2019 user interface. There are different parts of MS Word interface such as -
- Quick Access Toolbar
  - Document Toolbar
  - Formatting Toolbar
  - Status bar
  - Ribbon and so on

Show the figure on Slide 5 and explain each part.

- Using Slide 6, explain the key elements of MS Word Interface.

- Word's graphical user interface comprises the Ribbon, menus, dialog boxes, task panes, and more.
- Tell the students that the Ribbon includes following items:
  - Quick Access Toolbar
  - Document Title
  - Share
  - Tell me what you want to do
  - Status Bar
  - Zoom Controls
  - Document Area
  - Scales
  - Commands
  - Command Groups

For more information on MS Word user interface, refer to:

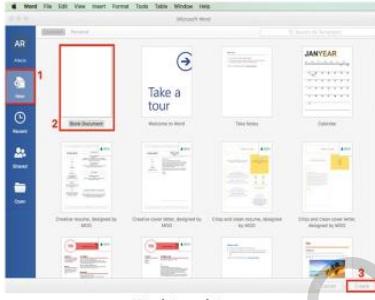
<https://www.universalclass.com/articles/computers/what-is-microsoft-word-2019-and-what-can-it-do.htm>

<https://www.digiruns.com/introduction-and-user-interface-to-microsoft-word/>

## 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.



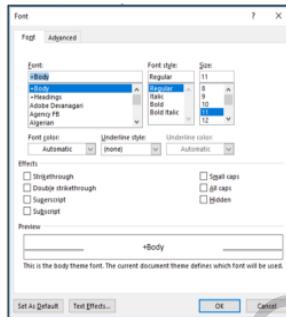
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### Instructions to the Trainer(s):

- Ask students for some examples of professional documents they may have seen in their lives so far.
- List some examples to guide their answers – course prospectus, brochures, formal letters, chapters of a book, a sales report, and so on.
- Using Slide 7, explain students the process of creating professional documents in MS Word 2019.
- Tell the students about in-built templates available in Word. Mention some examples of these templates and tell students how these templates can make their work easier and efficient.
- Creation of professional documents involves examining elements of a professional report and reviewing the structuring, styling, and finalizing of your document in Microsoft Word.
- Students must understand the guidelines for writing and creating a document or report that would enhance the look and feel of their creation.

## 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**

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**Instructions to the Trainer(s):**

- Using Slide 8, explain the students about working with text in MS Word 2019.
- Tell the students how one can create a text box in Word.
- Besides text boxes, users can also work with text in the document. This can involve following operations:
  - **Selecting and editing text:** When you select text or images in Word, a hover toolbar with command shortcuts will appear. Choose any of the commands to perform operations on the text. For example, you can highlight the selected text in a specific color or you can underline text, change font, font size, and so on.
  - **Copying and pasting text:** Select the text you want to copy (or press Ctrl + C). Click Paste command on Home tab. You can also press Ctrl + V.
  - **Deleting text:** There are several ways to delete, or remove text in a document
    - To delete text to the left of the insertion point, press the Backspace key on your keyboard.
    - To delete text to the right of the insertion point, press the Delete key on your keyboard.
    - Select the text you want to remove, then press the Delete key.
  - **Dragging and dropping text:** Click and drag the text to the location where you want it to appear. A small rectangle will appear below the arrow to indicate that you are moving text.
  - **Undo and Redo:** Explain to students what Undo and Redo mean, in the context of a Word document. The Quick Access toolbar at the top of the Ribbon has Undo and Redo icons. Users can also press Ctrl + Z on the keyboard. Users can continue using this command to undo multiple changes in a row. By contrast, Redo command allows users to reverse the last undo. Users can also access this command by pressing Ctrl + Y.

For more information, refer to:

<https://www.technology.pitt.edu/sites/default/files/Microsoft%20Word%202019%20Fundamentals%20Manual.pdf>

Slide 9

The slide has a title 'Working with Styles' at the top. Below it are three green, yellow, and orange 3D-style boxes containing text: 'Changing appearance of the entire document', 'Providing a structural flow and ensures consistency', and 'Containing built-in styles and themes'. To the right is a screenshot of the Microsoft Word 'Styles' pane, which lists various styles like Normal, Heading 1, Heading 2, etc., with 'Quote' selected. At the bottom left is the text 'Inside Microsoft Office' and at the bottom right is '© Aptech Limited'.

#### Instructions to the Trainer(s):

- Using Slide 9, discuss about the styles and formatting in Microsoft Windows 2019.
- Tell the students that styles are one of the most important features in Microsoft Word. Styles enable users to quickly format modifications throughout the document.
- Word provides several built-in styles that users can apply to change overall appearance of text in a document. Styles can also be used with bullet numbering to make working with outline numbered lists easier.
- In earlier software, users had to write several lines of commands to render bold, italicized, or underlined text. Now with readymade styles in Word, users can apply these to text with a click of the mouse. Give students an analogy to introduce the concept of readymade styles. When a person attempts to get a custom-tailored garment, it can be a cumbersome process. Having a readymade outfit that can also be paired with several other items of clothing can save time and effort. In the same way, using one or more readymade styles to format text in Word can save time and effort.
- Additionally, styles are also used to identify relevant parts of a document, such as headings, hyperlinks, footnotes, and so on.
- Explain to students about the Styles group in the Ribbon and how to select and apply a style from the group.
- Explain about the Styles dialog box launcher and various options in the Styles pane.

### In-Class Question

**Question:** What are the keyboard shortcuts for Undo and Redo respectively?

**Answer:** Ctrl + Z and Ctrl + Y are the keyboard shortcuts for Undo and Redo respectively.

### Additional Information:

Paragraph styles are the most important styles. They are called paragraph styles because when you use a paragraph style, Word can format a whole paragraph of text at a time. Word identifies paragraph styles with the paragraph symbol. Character styles are used to format a few characters within a paragraph. Word identifies them with an, ‘a’ sign.

For more information on styles, refer to following links and also share with students so that they can read later:

<https://theopendesk.com/2020/07/27/what-are-word-styles/>

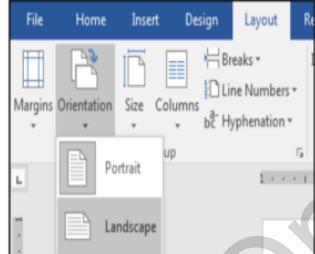
<https://www.dummies.com/software/microsoft-office/how-to-apply-styles-and-style-sets-in-word-2019/>

<https://support.microsoft.com/en-us/office/apply-styles-f8b96097-4d25-4fac-8200-6139c8093109>

<https://support.microsoft.com/en-us/office/add-and-remove-styles-from-the-quick-styles-gallery-21c5b9de-b19e-4575-bc87-cb2b55ece224>

## 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

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### Instructions to the Trainer(s):

- Using Slide 10, discuss Page Layouts in Word 2019.
- A page layout consists of following options:
  - Document themes
  - Document Margins
  - Paragraph Indentation
  - Line Numbering
- **Layout or Page Layout in Microsoft Word:** Layout is the arrangement or setting of some pages or whole document based upon the content requirement. Setting margins, orientations, sizes columns and spacing of a page is a very important process before taking a printout of a document. Explain to students these terms:
  - **Margins:** Margin is the space between the content beginning or ending in the document and the edges of the document pages.
  - **Orientations:** Orientation is the page layout, in which the document is displayed or printed. The common types of orientations are Portrait and Landscape.
  - **Size:** Choose different page sizes in a word document based upon your requirement.
  - **Columns:** Splitting (dividing) the text vertically in the pages called, columns. These include one column, two columns, three columns, left columns, and right columns.
  - **Line Numbers:** Start each line in a document by using the Line Numbers in the Margin for your further reference even when the content starts with Bulleted or Numbered List.
- **Paragraph in Page Layout in Microsoft Word:** A paragraph contains one or more lines with a combination of the words, numbers, or other characters.

For more information, refer to:

<https://business.tutsplus.com/tutorials/make-page-layout-designs-microsoft-word--cms-34172>

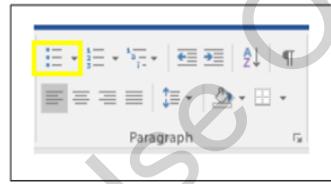
<https://edu.gcfglobal.org/en/word/page-layout/1/>

<https://support.microsoft.com/en-us/office/change-document-layout-d8eae84b-756b-4e7d-8b3d-7fbcb41e50cc>

Slide 11

## 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

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### Instructions to the Trainer(s):

- Using Slide 11, explain students about creation of list in Word 2019.
- Tell them that there are two types of lists commonly used in printed material:
  - Bulleted list
  - Numbered list
- Give some examples of lists of each of these types.
- Explain to students that Word allows users to quickly and easily create lists. To do so, one can follow these steps:
  - Type the list, only pressing Enter at the end of each item in the list.
  - Select all the items in the list.
  - Display the Home tab of the ribbon.
  - Click the Bullets tool or the Numbering tool (both in the Paragraph group) depending on the type of list to be created.
  - Tell students that in Word there are several different styles of bulleted and numbered lists. Tell them that one can even customize the bullet symbol in Word besides using standard symbol available.

For more information, refer to:

<https://support.microsoft.com/en-us/office/create-a-bulleted-or-numbered-list-9ff81241-58a8-4d88-8d8c-acab3006a23e>

<https://support.microsoft.com/en-us/office/define-new-bullets-numbers-and-multilevel-lists-6c06ef65-27ad-4893-80c9-0b944cb81f5f>

<https://support.microsoft.com/en-us/office/change-the-numbering-in-a-numbered-list-a9731137-8a85-47ce-a7e4-8b1c6c8c77a3>

### In-Class Question:

What are the two common types of orientations?

Answer: Portrait and Landscape.

Slides 12 and 13

### 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.

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### Creating Tables [2-2]

Table Dialog box Table Command  
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**Instructions to the Trainer(s):**

- Using Slide 12, explain students how tables can be created in Word 2019.
- Tell the students that a table consists of rows and columns, which can make text easy to type, edit, and format while spacing it correctly in your document. Tables organize text into cells, where a cell is the intersection of a row and a column.
- A table helps to do the following:
  - Organize and present information
  - Align numbers
  - Sort and perform calculations
- Word provides four ways to create a table:
  - Click Insert tab, click Table icon, and then, highlight the number of rows and columns for your table (up to a maximum of eight rows and ten columns).
  - Use the Insert Table dialog box.
  - Draw the size and position of the table with the mouse.
  - Convert existing text (divided by a delimiter character such as a tab or a comma).
- Using Slide 13, students can view the displaying of table Dialog box and Table command box.
- Tell the students that the table dialog box displays the number of rows, columns, behavior, and so on.
- The Table command allows you to select how many rows can be inserted, along with different shapes, pictures, and so on.

For more information, refer to:

<https://support.microsoft.com/en-us/office/insert-a-table-a138f745-73ef-4879-b99a-2f3d38be612a>

<https://support.microsoft.com/en-us/office/resize-a-table-column-or-row-9340d478-21be-4392-81cf-488f7bbd6715>

<https://support.microsoft.com/en-us/office/sort-the-contents-of-a-table-f8392477-4613-49cd-aba6-7c2e48f1d91f>

**In-Class Question:**

**Question:** What is the function of a table in a document?

**Answer:** A table is a data structure that organizes information into rows and columns. It can be used to both store and display data in a structured format.

## 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.

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**Instructions to the Trainer(s):**

- Show students Slide 14.
- Summarize the session by reading out each point on the slide.

## Session 4: Working with Microsoft Word – Part II

### 4.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 4.1.1 Teaching Skills

To teach this session, you should be familiar with using images in Word and performing content reviews.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**Objectives**

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

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#### Instructions to the Trainer(s):

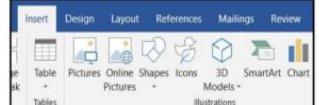
Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 4.2 In-Class Explanations

Slides 3 and 4

### 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

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### 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.

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### Instructions to the Trainer(s):

- Using Slide 3, discuss with students about how pictures and shapes can be added in Word.
- Ask students about some scenarios that would require adding of images and shapes.
- Give some examples to guide their answers – designing a travel and tourism brochure that would feature photos of destinations, designing a party invitation, creating a visually rich sales report with photos of products, and so on.
- Explain to students that adding pictures to a document can help to illustrate important information and increase its appeal. Text-only documents can become boring after a while.
- One can add images using any of these approaches:
  - Select Insert → Pictures → This PC for a picture on your PC.
  - Select Insert → Online Pictures to add stock images from Bing.

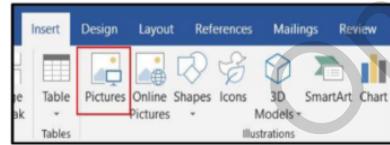
- With respect to pictures and shapes, Word supports:
  - Images and Multimedia
  - Pictures and Online Pictures
  - Picture Tools
  - Shapes
  - SmartArt and WordArt
  - Format Text Effects
  - Chart
  - Screenshot
  - Online Video
- Using Slide 4, discuss the Illustration group options with students and explain briefly what each option means.
- Tell students that the Picture Tools group is initially not visible on the Ribbon and becomes visible only when a picture is added in the document.

## Slides 5 and 6

### 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



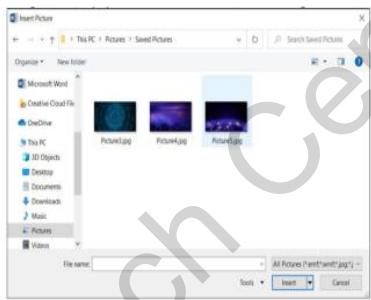
Insert Pictures options

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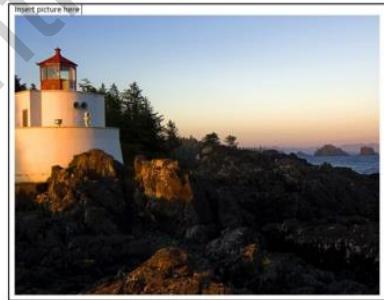
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5

### Adding Pictures [2-2]



Picture Window



Picture inserted in a document

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6

### Instructions to the Trainer(s):

➤ Using Slides 5 and 6, explain students the process of adding pictures in Word 2019.

For more information, refer to:

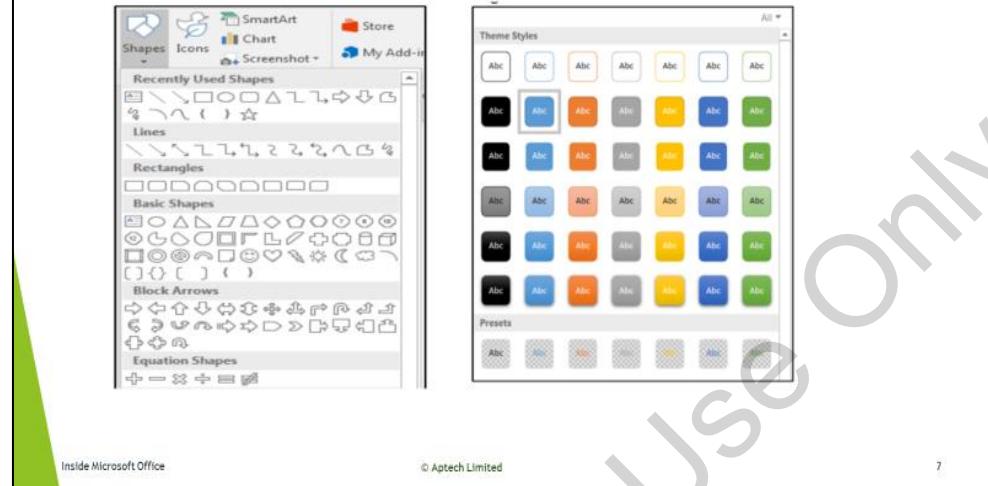
<https://support.microsoft.com/en-us/office/insert-a-background-picture-or-image-in-word-08782ea3-086c-4778-94bb-2ea3d187f83e>

<https://support.microsoft.com/en-us/office/insert-pictures-3c51edf4-22e1-460a-b372-9329a8724344>

<https://support.microsoft.com/en-us/office/align-pictures-shapes-wordart-and-other-objects-in-word-b8c4cada-67d5-446a-b7eb-ea22a44d3153>

## Adding Shapes

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



### **Instructions to the Trainer(s):**

- Using Slide 7, explain students that different shapes can be added to a document as per user's requirements. Shapes help in making data look more attractive.
- Shapes dialog box provides options such as:
  - Recently used shapes
  - Basic shapes
  - Block arrows
  - Equation shapes

For more information, refer to:

<https://support.microsoft.com/en-us/topic/add-shapes-0e492bb4-3f91-43b5-803f-dd0998e0eb89>  
<https://support.microsoft.com/en-us/office/change-the-colors-in-a-text-box-or-shape-c3ab6bb7-89f9-4908-912e-e86ea5fd106d>  
<https://support.microsoft.com/en-us/office/draw-or-delete-a-line-or-connector-f304ef73-9514-450b-9bb9-28c6057020f2>

## Slides 8 and 9

### Picture Tools [1-2]

The diagram illustrates the Picture Style Group, which includes four main options:

- 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**

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### Picture Tools [2-2]

For shapes, the Format menu consists of the following:

The Format menu for shapes consists of the following options:

- Insert Shapes**: Allows users to insert any available shape, and edit it, if required. This group provides an option that allows a user to Insert a text box within a shape.
- Shape Styles**: Allows users to fill shapes with colors, apply effects to shape outline, and change the color of the shape outline. In addition, this group provides options to apply various effects to a selected shape, such as **Shadow, Reflection, Glow**, and so on.
- WordArt Styles**: Allows users to apply various WordArt styles and effects to the text added in a shape. This group is enabled only when a text box is added in a shape.
- Text**: Allows users to change the direction of the text, align text, and add a link to the text added in a shape.
- Arrange**: Allows users to try various options to arrange text and shapes. For example, users can bring the text in front of the shape or at the back of the shape, using various options.
- Size**: Allows users to change the size of the shape, such as height, width, and degree of rotation.

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### Instructions to the Trainer(s):

- Using Slide 8, explain the representation of Picture tools and styles.
- Here, explain to students about how the formatting of these picture tools can be done.
- Picture Styles are a set of various formatting combinations that you can add to your images. These include 3-D effects, shadows, reflections, glows, bevel effects, and more.
- The Picture style group comprises following options:
  - Adjust
  - Picture styles
  - Arrange
  - Size

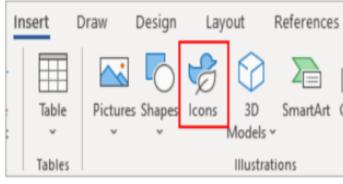
- Using Slide 9, explain the students about different format menu that the picture tools provide us with.
- Also, explain them about the Insert shapes, Shape styles, WordArt Styles, Text, and so on in brief.

For Aptech Centre Use Only

## 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

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### **Instructions to the Trainer(s):**

- Using Slide 10, briefly explain about inserting icons and SVG images to the students.
- Explain to the students how the new icons, color, and size of icons can be customized based on users' requirements.
  
- For more information, refer to:  
[https://developer.mozilla.org/en-US/docs/Learn/HTML/Multimedia\\_and\\_embedding/Adding\\_vector\\_graphics\\_to\\_the\\_Web](https://developer.mozilla.org/en-US/docs/Learn/HTML/Multimedia_and_embedding/Adding_vector_graphics_to_the_Web)

## Slides 11 and 12

### 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

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### Reviewing Documents [2-2]

The diagram illustrates the eight groups of commands under the Review tab, arranged vertically from top to bottom:

- Proofing**: Consists of commands that allow users to check spelling and grammar, check thesaurus, and perform word count on the document.
- Speech**: Consists of commands that allow users to read the document aloud and highlight each word as it is read.
- Language**: Consists of commands that allow users to translate content into a different language using Microsoft's online translate service. This also allows to choose the language for proofing such as spell check.
- Comments**: Consists of commands that allow users to add or delete a comment. User can also navigate between comments via previous and next buttons. Show comments button can be used to view all the comments in the document.
- Tracking**: Consists of commands that allow users to provide feedback or make revision to a document via keeping track of changes made.
- Changes**: This group consists of commands that allow users to accept or reject changes provided by the reviewer.
- Compare**: This group consists of commands that allow users to compare two different documents. This also allows users to combine revisions from different users into a single document.
- Protect**: This group consists of commands that allow users to block authors from editing document, or restrict users from editing complete or partial document.

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### Instructions to the Trainer(s):

- Using Slide 11, explain the importance of reviewing and how it can be done.
- Reviewing a document is a key requirement, as it helps to understand the required changes or modifications.
- In MS Word 2019, turning ON Track Changes gives you and your coworkers a way to make changes that can be easily identified. These 'track-changed' suggestions can be viewed by the author or reviewer and accepted or removed.
- Explain to students in detail about the Review tab, its various commands, and process to review a document.

- To review and modify a document, following are some of the actions:
  - Using Track Changes Option Under Review tab
  - Merging Comments and Changes into One Document
  - Accepting and Rejecting Changes

- For more information on reviewing of documents, refer to:

<https://support.microsoft.com/en-us/office/track-changes-in-word-197ba630-0f5f-4a8e-9a77-3712475e806a>

<https://support.microsoft.com/en-us/office/accept-tracked-changes-4838d24c-d5d1-4c6c-8e39-78b44bd2b4cc>

<https://support.microsoft.com/en-us/office/insert-comments-in-a-document-95a93b1e-aaea-4c8d-a25d-8f91eb217390>

<https://guides.lib.umich.edu/c.php?g=283073&p=1886011>

- Slide 12 displays the visual representation of reviewing documents, and how proofing, speech, comments, and so on can be used. Explain in brief.

**In-Class Question:**

**Question:** What is the purpose of the Reviewing Pane?

**Answer:** The Reviewing Pane displays long comments that do not fit within a comment bubble.

## 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.

The image shows two parts of the Microsoft Word interface. On the left, the ribbon is visible with the 'Proofing' tab selected, indicated by a blue border. Below the ribbon, the 'Proofing Group' contains icons for 'Spelling & Thesaurus', 'Grammar', and 'Word Count'. On the right, a 'Spelling' dialog box is open, showing the word 'process' in the list. The dialog has buttons for 'Ignore Once', 'Ignore All', and 'Add'. Below the list are 'Change' and 'Change All' buttons.

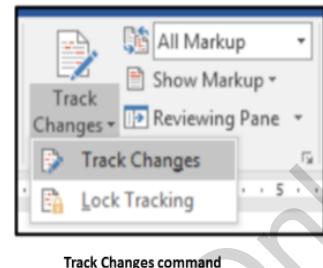
### Instructions to the Trainer(s):

- Using Slide 13, explain to the students about proofing in MS Word 2019.
- By applying proofing in a document, spelling and grammar checks can be done. This process helps to correct incorrect spelling and grammar in a document.
- **Full Screen Reading view** is useful for proofing documents.
  
- Proofing tools are used in MS Word as follows:
  - Open a Microsoft Word document.
  - Go to File → Options.
  - Select Proofing from the list on the left of the dialog box.
  
- For more information on proofing, refer to:

<https://www.universalclass.com/articles/computers/how-to-use-the-proofing-tools-in-word-2019.htm#:~:text=This%20tool%20checks%20grammar%20and,the%20%22Review%22%20ribbon%20tab>

## 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.



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14

### Instructions to the Trainer(s):

- Using Slide 14, explain what is meant by track changes and how it can be used in MS Word.
- Track Changes is a tool in Word which allows you to show any markups, changes, or comments made to a document.
- Tell the students about the working of Track changes, the features that it provides and how it is useful.
- Steps for using Track changes in MS Word are as follows:
  - Select the Review tab.
  - Select the Track Changes icon to turn it ON or OFF.
  - Make desired changes
- The author of the document can then:
  - Select Accept or Reject
  - Select the Track Changes icon to stop tracking changes
- For more information, refer to:

<https://digitalcommunications.wp.st-andrews.ac.uk/2017/02/10/how-to-use-track-changes-in-word/>

<https://erinwrightwriting.com/use-track-changes-microsoft-word/>

<https://support.microsoft.com/en-us/office/track-changes-in-word-197ba630-0f5f-4a8e-9a77-3712475e806a>

<https://support.microsoft.com/en-us/office/accept-tracked-changes-4838d24c-d5d1-4c6c-8e39-78b44bd2b4cc>

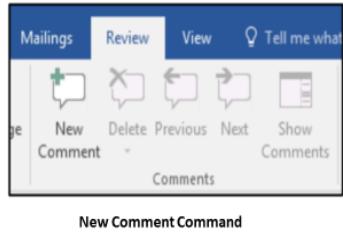
<https://support.microsoft.com/en-us/office/insert-comments-in-a-document-95a93b1e-aaea-4c8d-a25d-8f91eb217390>

<https://guides.lib.umich.edu/c.php?g=283073&p=1886011>

## 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

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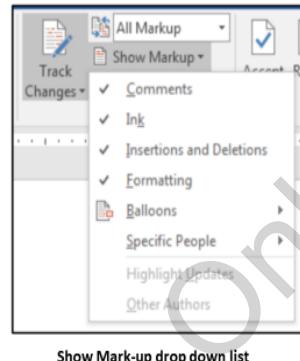
15

### Instructions to the Trainer(s):

- Using Slide 15, explain the importance of adding comments in Word 2019.
- Explain in brief the steps that must be followed while commenting in a document.
- Comments are text notes added to the program to provide explanatory information about the source code.
- Adding a comment to a document is similar to writing a note in the page's margin. You can use Word's comments feature to add suggestions, notes, or reminders to your documents. Comments appear in boxes at the side of the page.
- The importance of comment tool in MS Word is that the user can use it to leave comments for a proofreader before getting it checked and might receive feedback in comments if you are having your work edited.
- Comments can also be used to make notes while redrafting a document.

## 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.



### Instructions to the Trainer(s):

- Using Slide 16, explain about the markup area and show markup command. Tell the students, how the show markup down list can help to either hide or show the comments.
- With a word processor and some other text editors, markup are comments and tracked changes that help keep track of changes made to documents being modified by multiple people.
- For more information, refer to:

<https://www.dummies.com/software/microsoft-office/word/how-to-use-comments-in-microsoft-word-2019/>

**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.

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**Instructions to the Trainer(s):**

- Show students Slide 17.
- Summarize the session by reading out each point on the slide.

## Session 5: Working with Microsoft Word – Part III

### 5.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 5.1.1 Teaching Skills

To teach this session, you should be well versed with templates, forms, and mail merge in Word.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**Objectives**

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

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#### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 5.2 In-Class Explanations

### Slide 3

### 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.

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#### Instructions to the Trainer(s):

- Introduce the session using Slide 3 and tell the students about data analysis in MS Word.
- Tell that every Word document they create is fashioned from a template. Even if they do not choose any specific template, a default blank template will be applied for their documents. The purpose of a template is to store styles for Word documents.
- During the process of creating a document in Word 2019, one can choose a template and the styles on the template become available to the user when the user works on that document.

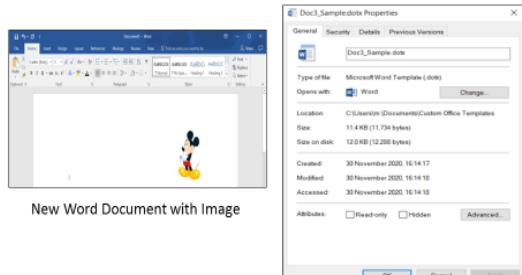
#### Forms in MS Word:

- Word provides a way that you can create standardized documents rather easily, allowing users to enter only the information that changes from one document to the next. These are called forms and they consist of a protected document template that has special fields inserted within the template.

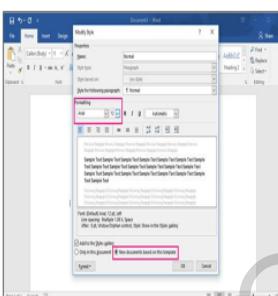
## Slides 4 ad 5

### 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

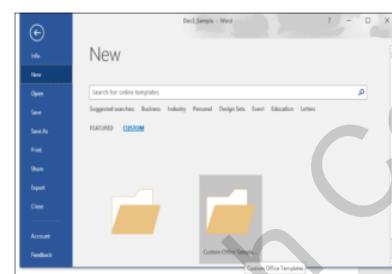


Properties Dialog Box

Modify Style Dialog Box – Modified Font Options

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### Creating Templates [2-2]



New Dialog Box-Custom Tab



Custom Tab with the User-Defined Template

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### Instructions to the Trainer(s):

- Using Slide 4, explain to the students how templates are created in MS Word.
- Templates are used to provide the styling effect that allows to create, modify, delete, and rename.
- Following are steps to create template in MS Word:
  - Create a new document or open a document with styles that you can reuse.
  - On the File tab, choose Save As.
  - Click This PC.
  - Click the Browse button.
    - The Save As dialog box appears.

- Open the Save As Type menu and choose Word Template.
  - Enter a name for your template.
  - Click the Save button.
    - Create, modify, and delete styles as necessary.
- Using Slide 5, students can view the new dialog box Custom Tab and Custom Tab with user defined template.

**In-Class Question:**

**Question:** What is the tab stop in Microsoft Word?

**Answer:** A tab stop is a horizontal position which is set for placing and aligning text on a page.

Slides 6 and 7

# 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

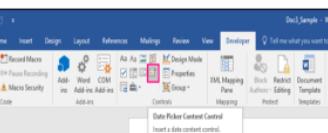
Date pickers

Drop-down lists

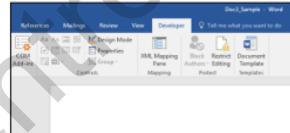
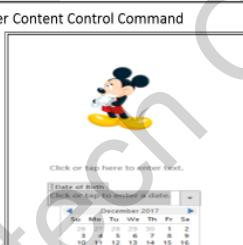
Content Control Properties Dialog Box

Word Options Dialog Box

## Creating Forms [2-2]



Date Picker Content Control Command



### **Instructions to the Trainer(s):**

- Using Slide 6, explain to the students about forms and their purpose.
  - Tell the students that forms are used for collecting and recording data/information. It facilitates data entry in an easier and error free way.
  - The user can create controls such as:
    - Check boxes
    - Text boxes
    - Radio buttons
    - Date pickers for recording data
    - Drop-down lists

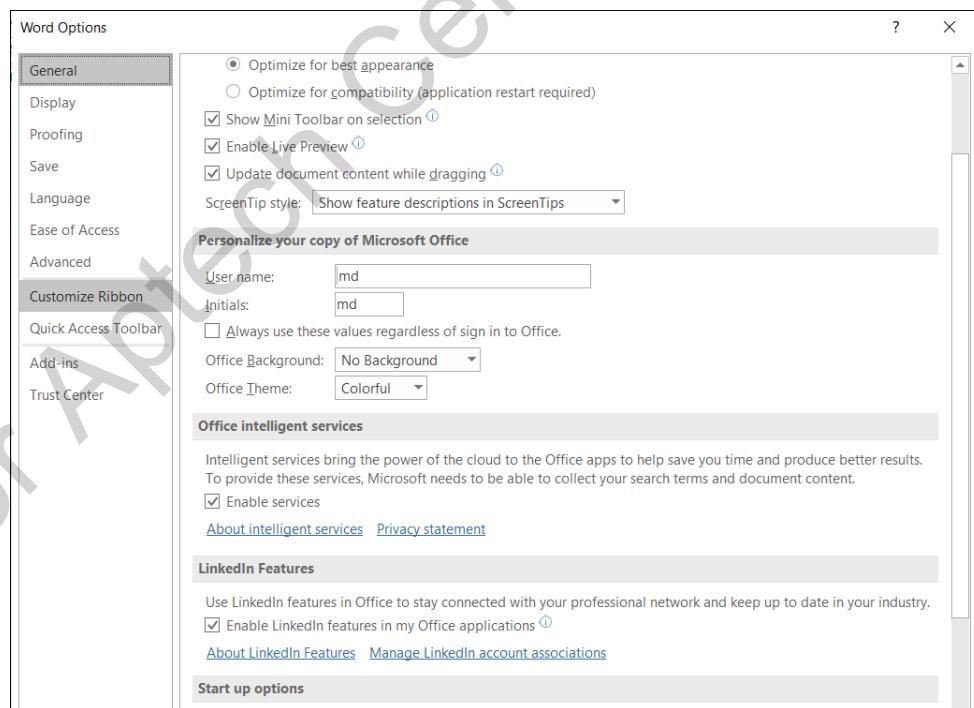
- Using Slide 7, explain different ways in which forms are created.
- MS Word form template allows users to create
  - **Insert a text control:** Users can format text as bold or italic and they can type multiple paragraphs.
  - **Insert a picture control:** A picture control is often used for templates, but you can also add a picture control to a form.
  - **Insert a building block control:** To choose a specific block of text.
  - **Insert a combo-box or drop-down list:** In a combo box, users can select from a list of choices that you provide or they can type in their own information. In a drop-down list, users can only select from the list of choices.
  - **Insert a date picker:** User can present a calendar control as part of a form

To create these controls, for example, a date picker control, follow these steps:

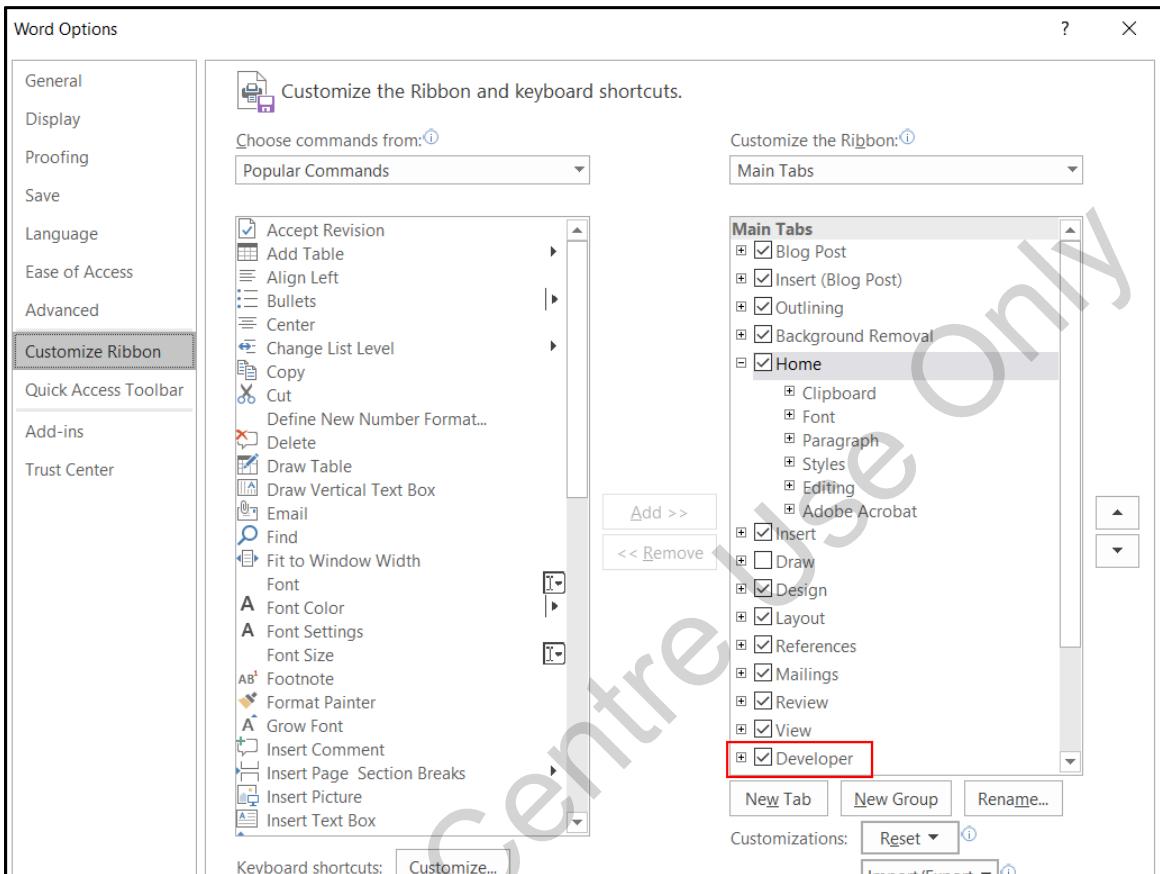
- Click in the document at the point where you want to insert the date picker control.
- Select Developer tab. In the Controls group, click Date Picker Content Control button. If the Developer tab is not visible, click File → Options → Customize Ribbon and enable Developer in the right panel.

These actions are depicted here:

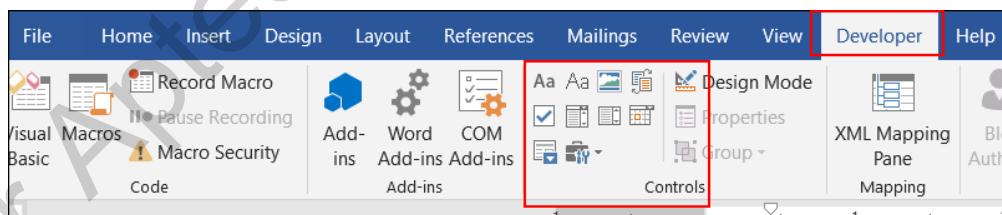
#### Selecting Customize Ribbon:



## Enabling Developer tab:



## Selecting controls under Developer tab and Controls group:



- **Insert a check box:**

- Click where you want to insert the check box control.
- Select Developer tab. In the Controls group, click Check Box Control button.

## Slide 8

### 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 Microsoft Word ribbon with the 'Mailings' tab selected. Below the ribbon, there are several options: Envelopes, Labels, Start Mail Merge, Recipients, Merge Fields, and Write & Insert Fields. A dropdown menu is open under 'Recipients' with options: Type a New List..., Use an Existing List..., and Choose from Outlook Contacts... The main area shows a 'New Address List' dialog box and a 'Specify address elements' dialog box. The 'New Address List' dialog has columns for Title, First Name, Last Name, Company, Address Line 1, and Address. It lists entries for 'Mr. Josh Randall Jr.' and 'Joshua Randall Jr.'. The 'Specify address elements' dialog shows checked options for inserting recipient names, company names, and postal addresses, with specific settings for the United States. To the right, a sample letter is shown addressed to 'Mr. Gall Erickson' with a message about a postponed meeting. The final outcome after merging is also displayed.

Final Outcome After Merging

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#### Instructions to the Trainer(s):

- Using Slide 8, explain the concept of Mail Merge and its functionality.
- Tell the students that Mail Merge is a process which helps users in creating personalized documents/letters, mailing labels for mass mailing or pre-addressed envelopes.
- Mail Merge is a handy feature that incorporates data from both Microsoft Word and Microsoft Excel and allows you to create multiple documents at once, such as letters, saving you the time and effort of retying the same letter over and over.
- Use of Mail Merge in MS Word is as follows:
  - In a blank Microsoft Word document, click the Mailings tab, and in the Start Mail Merge group, click Start Mail Merge.
  - Click Step-by-Step Mail Merge Wizard.
  - Select your document type.
  - Select the starting document.
  - Select recipients.
  - Write the letter and add custom fields.

## Slide 9

### 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.

### **Instructions to the Trainer(s):**

- Show students Slide 9.
- Summarize the session by reading out each point on the slide.

## Session 6: Introduction to Microsoft Excel 2019

### 6.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 6.1.1 Teaching Skills

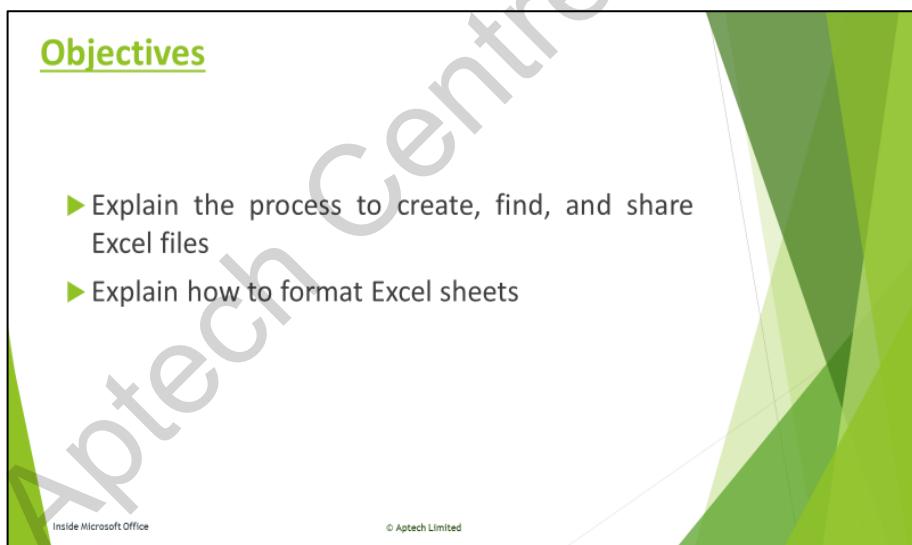
To teach this session, you should be well versed with basic features of Microsoft (MS) Excel 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2



#### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 6.2 In-Class Explanations

### Slide 3

### 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.



The image shows the Windows 10 Start menu. A red box highlights the 'Excel' icon under the 'Office' category. Other visible icons include Candy Crush Friends, Coffee Cup Software, Color Cap, Connect, CyberLink, EASyPlan 2, EPSON, Feedback Hub, Film & TV, File Explorer, Get help, Google Chrome, Groove Music, Mail, Microsoft Edge, Microsoft Store, Photos, Settings, Task View, and YouTube. A search bar at the bottom says 'Type here to search'.

Windows 10 Startup Menu with Microsoft Excel

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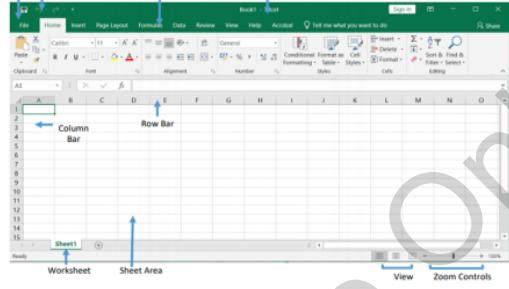
#### Instructions to the Trainer(s):

- Introduce the session using Slide 3, discuss with students about MS Excel 2019.
- Begin the session with an analogy or example scenario. For example, a person named James Smith is an accountant working with a firm and must store large amounts of numeric data. He must perform frequent operations on this data such as adding them up, sorting them, grouping them, displaying a graph for some of the data, and so on. He requires a software application that can help him perform these tasks in an easy manner. Microsoft Excel, which is part of Office 2019 suite, is one such software application that can fulfil his requirements.
- Tell students that Excel is a spreadsheet software which presents data in tables arranged in rows and columns. These tables can be manipulated mathematically using both basic and complex arithmetic operations and functions. One can also perform text-based operations and use data visualization tools such as charts and graphs.
- Explain to students the terms workbook, worksheet, and cells.
- Excel allows users to perform following tasks:
  - Create basic worksheets.
  - Perform calculations in an Excel worksheet.
  - Modify an Excel worksheet.
  - Modify appearance of data within a worksheet.
  - Manage Excel workbooks.
  - Print the content of an Excel worksheet.

## 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



The screenshot shows a Microsoft Excel window with the ribbon at the top. The ribbon tabs visible are File, Home, Insert, Page Layout, Formulas, Data, Review, View, and Addins. Below the ribbon is the title bar. The main area is a worksheet grid with columns labeled A through O and rows labeled 1 through 15. The 'Column Bar' is located on the left side of the grid, and the 'Row Bar' is located above it. The 'Worksheet' tab is selected in the bottom-left corner. The bottom of the screen features the 'View' tab and 'Zoom Controls'. The status bar at the bottom displays 'Inside Microsoft Office' and '© Aptech Limited'.

Microsoft Excel Spreadsheet

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4

### Instructions to the Trainer(s):

- Using Slide 4, explain students about main components of Excel 2019. List and explain the properties of each component in detail.
- Components of Excel include:
  - File Tab
  - Quick Access Toolbar
  - Ribbon
  - Title Bar
  - Row Bar
  - Column Bar
  - Worksheet
  - Sheet Area
  - Zoom Controls
  - View Buttons
  - Backstage View
- Common uses of Excel are as follows:
  - Create budgets
  - Produce graphs and charts
  - Store and sort data
  - Organize data and perform financial analysis

For more information, refer to:

<https://khyberacademy.com/parts-of-microsoft-Excel-window/>

## 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 <b>Home</b> , <b>Insert</b> , and <b>Page Layout</b> 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.

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### **Instructions to the Trainer(s):**

- Using Slide 5, explain to students the three components comprising the Ribbon namely, Tabs, Groups, and Commands. Tell students what each component means in detail.

### **Who Uses Excel:**

- Excel is typically used across all business functions and in companies from small enterprises to large corporations. It is also used by individuals for expense tracking, list creation, and so on.

**Create, Find, and Share Excel Files**

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

- Create File
- Find an Excel File
- Share File

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**Instructions to the Trainer(s):**

- Using the Slide 6, explain basic operations in Excel such as create, find, and share in detail.
- The Create File task helps the user to create and identify the data created in MS Excel. One can create a worksheet file using File → New option in Excel.
- Excel allows users to open any existing file stored in Excel and share it within or outside an organization.
- Some other Excel basic operations are as follows:
  - Add a worksheet.
  - Delete a worksheet.
  - Rename a worksheet.
  - Move a worksheet.
  - Copy a worksheet.

For more information, refer to:

<https://www.ablebits.com/office-addins-blog/2017/08/02/Excel-shared-workbook-share-file-multiple-users/>

## Slides 7 and 8

### 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**

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### 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)	.xism	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**

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### Instructions to the Trainer(s):

- Using Slide 7, briefly explain how formatting of Excel sheets is performed.
- Tell students how categorization of file formats is done.
- Categorization of File Formats:
  - Excel File format
  - Text File format
  - Other File formats as shown in the table
- In Excel, formatting worksheet data is quite easy. One can use several fast and simple ways to create professional-looking worksheets. Formatting is used to change the appearance of the data represented in the worksheet.
- Using Slide 8, explain the formatting commands and give a detailed description of each command. Tabular format helps in better understanding of what each data means.
- Formatting can be done in multiple ways - one can format the font of the cells or we can format the table by using styles and Format options available in the Home tab.

For more information of formatting Excel sheets, refer to:

<https://business.tutsplus.com/tutorials/format-Excel-spreadsheet--cms-30160>

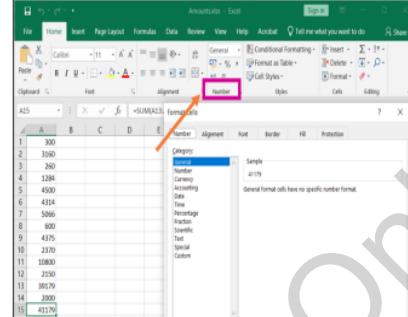
## Page Formatting

► 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

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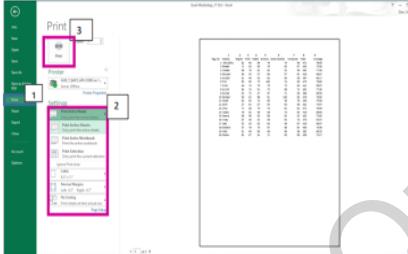
9

### Instructions to the Trainer(s):

- Using Slide 9, explain to the students how Page formatting works. Also, tell the students how the formatting of cells is done.
- Page formatting is the layout of the page when it is printed on a printer. It includes page size, page orientation, page margins, headers, and footer, and so on. Page formatting is defined in page setup dialog box.
- Format cell options from the shortcut menu are as follows:
  - **General:** This is the default cell format.
  - **Number:** This displays the cell format as number with separator.
  - **Currency:** This displays the cell format as currency with currency sign.
  - **Accounting:** This format is similar to currency, used for accounting purposes.
  - **Date:** This format has various options and date can be stored using any one of them. For example, 14-Mar, 14-Mar-12, 3/14, 03/14/12, Mar-12, and so on.
  - **Time:** This format has several options and time can be stored using any one of them. For example, 13:30, 13:30 PM, 1:30 PM, and so on.
  - **Percentage:** This represents the cell value in percentage with decimal values. For example, 78.50%, 1.398%, and so on.

## 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

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### **Instructions to the Trainer(s):**

- Using Slide 10, explain the process of print formatting.
- A print area is a set of cells that you specify to print when you do not want to print entire worksheet. When you print a worksheet after defining a print area, only the print area is printed.
- In an Excel spreadsheet, print area is a designated part of the spreadsheet to be printed. It is useful when one wants to print a certain section or group of cells frequently. One can specify the Print Area by highlighting cells to include, then clicking Page Layout tab and Set Print Area. Page Layout tab also has an option under Print Area to clear an already set Print Area.

For additional information on printing in MS Excel, refer to:

<https://www.makeuseof.com/tag/Excel-secrets-discovered-6-steps-for-perfect-printing/>

## Slides 11 and 12

### Name Groups of Data [1-2]

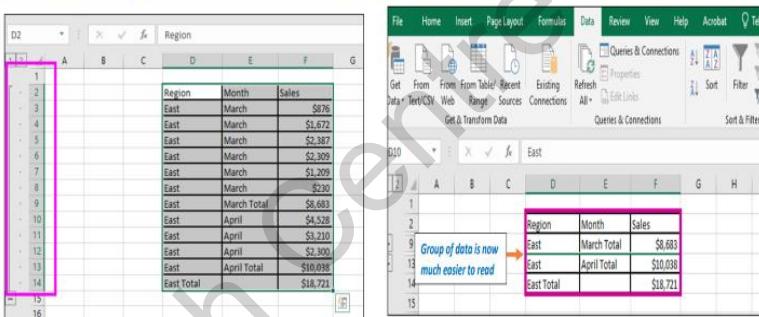
- ▶ Excel can help to organize data into Groups, allowing to easily show or hide different sections of a worksheet.
- ▶ If there is a list of data that needs to be grouped or summarized, an outline of up to eight levels can be created, one under each group.
- ▶ An outline is used to quickly display the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



Auto online Group

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### Name Groups of Data [2-2]



Formation of Group      Group of Data

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### Instructions to the Trainer(s):

- Using Slide 10, explain grouping of data. Tell that Excel helps to organize, list, and give a quick outline of the data.
- Give an example scenario to help students understand the requirement for grouping. An organization is calculating annual bonuses to be paid to each of its salespersons. The bonus is to be paid based on the consolidated sales made by each salesperson for a region. To group the sales data by salesperson and region, one requires grouping features in an application. Excel provides these features. Using grouping capabilities of Excel, the organization can easily determine bonuses for its employees.
- Tell the students, that in order to perform grouping of data they must follow certain steps.

- Grouping cells can make your data easier to read and it can even help you automate some tasks.
- Tell that grouping in Excel can be used when a sheet has properly structured data and with the header names mentioned in the columns. Grouping allows users to club rows or columns of any number together so that one can create a subset of data under selected columns and rows.
- Also, tell students about keyboard shortcuts for grouping and ungrouping - Shift + Alt + Right Arrow is the shortcut to group rows or columns. Shift + Alt + Left Arrow is the shortcut to ungroup.

For performing grouping of data, one can refer to:

<https://edu.gcfglobal.org/en/Excel2016/groups-and-subtotals/1/>

<https://support.microsoft.com/en-us/office/outline-group-data-in-a-worksheet-08ce98c4-0063-4d42-8ac7-8278c49e9aff>

- Using Slide 12, tell students how they can view the formation of groups and how grouping of data is done.

### In-Class Question

What is a print area?

**Answer:** Print area is a set of cells that you specify to print when you do not want to print entire worksheet. When you print a worksheet after defining a print area, only the print area is printed.

## 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.

### Instructions to the Trainer(s):

- Show students Slide 13.
- Summarize the session by reading out each point on the Slide.

# Session 7: Formulas, Functions, Charts, and Additional Features in Excel 2019

## 7.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 7.1.1 Teaching Skills

To teach this session, you should be well versed with Excel formulas and functions. You should be familiar with creating and using charts and other additional features in Excel 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

The slide has a light gray background with a decorative green and white geometric pattern on the right side. The title 'Objectives' is at the top in a green, underlined font. Below it is a bulleted list of three items:

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

At the bottom left is the text 'Inside Microsoft Office' and at the bottom right is '© Aptech Limited'.

### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 7.2 In-Class Explanations

Slide 3

### 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.

#### Instructions to the Trainer(s):

- Introduce the session using Slide 3 and discuss with students about formulas and functions in Microsoft Excel 2019.
- Tell students that MS Excel with its wide range of functions, visualizations (interpreting data to understand the hidden value in data), and arrays (formulas and functions) empowers the user to generate insights from data, which otherwise is hard to see.
- Tell them that a formula is an expression which calculates value of a cell. Functions are predefined formulas and are already available in Excel.

## 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.

### **Instructions to the Trainer(s):**

- Using Slide 4, discuss how formulas can be entered in Excel 2019.
- Formula is an expression that calculates values in a cell or in a range of cells. For example, =A2+A2+A3+A4 is a formula that adds up the values in cells A2 through A4.
- Tell students that one can enter simple formulas directly as expressions by typing them out.
- One can also create equations as formulas by using a few steps:
  - On the Insert tab, in the Text group, click Object.
  - In the Object dialog box, click the Create New tab.
  - In the Object type box, click Microsoft Equation 3.0, and then click OK.
  - Use the symbols, templates, or frameworks on the Equation toolbar to edit the equation.

For more information on formulas, refer to:

<https://exceljet.net/excel-formulas-and-functions>

<https://www.excel-easy.com/introduction/formulas-functions.html>

<https://support.microsoft.com/en-us/office/overview-of-formulas-in-excel-ecfdc708-9162-49e8-b993-c311f47ca173>

## 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.

### Instructions to the Trainer(s):

- Using Slide 5, explain to students about the concept of range names in Excel.
- A cell range in an Excel file is a collection of selected cells. This range is usually symmetrical (square), but can exist in separate cells too. A cell range can be referred to in a formula as well.
- Some of the guidelines for range names in Excel 2019 are as follows:
  - Cannot contain spaces. Instead of a space, use the underscore
  - Cannot correspond to cell coordinates in the worksheet
  - Must be unique within their scope
- Range formulas used in Excel 2019 are as follows:
  - Minimum and Maximum Formulas
  - Top k and Bottom k Formulas
  - Conditional Minimum and Maximum Formulas

## Slides 6 and 7

### 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

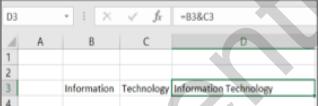
**Using Comparison Formulas:** A comparison formula compares two or more numbers, text strings, cell contents, or function results.

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

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### 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.



**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

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### Instructions to the Trainer(s):

- Using Slide 6, explain the basic formulas in Excel 2019.
- Some of the Excel basic formulas in Excel 2019 are as follows:
  - **Arithmetic formula:** To perform basic mathematical operations such as addition, subtraction, or multiplication — or to combine numbers — and produce numeric results, use the arithmetic formula.
  - **Comparison formula:** To perform comparison between two operators or two values.

- Using Slide 7, explain about Text formula and Reference formula in Excel 2019.
  - **Text concatenation:** Use the ampersand (&) to join, or concatenate, one or more text strings to produce a single piece of text.
  - **Reference formulas:** Union operator that combines multiple references into one reference.
- Tell students that when we build a formula that combines different computational operators, Excel follows the set order of operator precedence. When we use operators sharing same level of precedence, Excel evaluates each element in the equation by using a left-to-right order.

For more information, refer to:

<https://www.dummies.com/software/microsoft-office/excel/building-excel-formulas-with-computational-operators-in-excel-2019/>

**In-Class Question:**

**Question:** What is a formula bar in Excel?

**Answer:** Excel formula bar is a special toolbar at the top of the Excel worksheet window, labeled with function symbol (fx).

## Slides 8 and 9

### 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.

A screenshot of Microsoft Excel showing a table titled 'Expenses'. The first column contains month names (January through December). The second column contains expense amounts. Cell D7 contains the value '98.75' with a green border, indicating it is formatted as text. A tooltip below the cell says: 'The number in this cell is formatted as text or preceded by an apostrophe.'

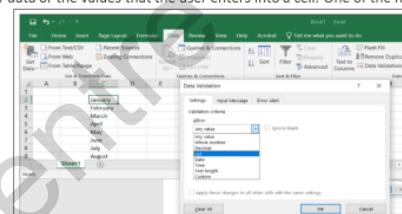
A screenshot of Microsoft Excel showing a table titled 'Expenses'. The formula bar at the top shows '=SUM(D4:D8)'. The result of the sum, '110', is displayed in cell C11. The cells D4 through D8 are highlighted with a blue border.

A screenshot of Microsoft Excel showing the same table as above, but now the numbers are right-aligned. An annotation with an orange arrow points to the right-aligned numbers in the second column, with the text '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.

A screenshot of Microsoft Excel showing a table with month names in column A. Cell A1 has a dropdown arrow icon. A dropdown menu is open, listing the months from January to August.



A screenshot of Microsoft Excel showing the same table as above, but now cell A1 contains a dropdown arrow icon. When the arrow is clicked, it shows the list of months: January, February, March, April, May, June, July, and August.

### Instructions to the Trainer(s):

- Using Slide 8, explain what is an advanced formula.
- Advanced formula includes converting text and validation of data
- To convert numbers, select the cells that have numbers stored as text. On the Home tab, click Paste → Paste Special. Click Multiply, and then, click OK. Excel multiplies each cell by 1, and in doing so, converts the text to numbers.
- Using Slide 9, explain to students how data can be validated in Excel.
- Data validation is a feature in Excel used to control what a user can enter into a cell. Assume that a cell is expected to store only 10-digit values for phone numbers. Users can restrict the data entered to satisfy this constraint using Data Validation feature of Excel.

➤ Types of data validation are as follows:

- **Length check:** Cell data falls between given limits
- **Lookup table:** Looks up acceptable values in a table
- **Presence check:** Checks that data has been entered into a field
- **Range check:** Checks that a value falls within the specified range
- **Date and time ranges:** Checks that cell values fall between given date range or given time range

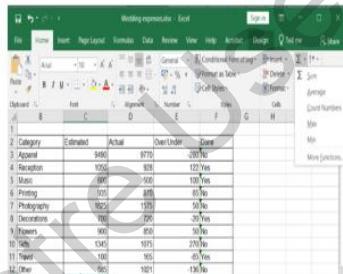
Slide 10

## 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



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### Instructions to the Trainer(s):

- Using Slide 10, explain the use of functions.
- Tell students that functions are predefined formulas and are already available in Excel. For example, SUM is a built-in function that enables users to calculate sum of numbers in a range of cells.
- Excel includes many common functions that can be used to quickly perform operations. Arithmetic functions help users find the sum, average, count, maximum value, and minimum value for a range of cells. There are other categories of functions as well. In order to use functions correctly, users must understand different parts of a function and how to create arguments to calculate values and cell references.
- Basic functions used in Excel include:
- SUM
  - AVERAGE
  - COUNT
  - MAX and MIN
  - TRIM
  - IF

- CONCAT
- LEFT
- LOWER
- TRIM
- UPPER

➤ Formulas can also make use of functions. Some examples are as follows:

- =SUM(A2:A8) – A simple selection that sums the values of a column
- =SUM(A2:A8)/20 – Shows you can also turn your function into a formula
- =AVERAGE(number1, [number2], ...)
- =AVERAGE(B2:B11) – Shows a simple average, also similar to (SUM(B2:B11)/10)

For more information on Excel functions, refer to:

<https://www.excel-easy.com/introduction/formulas-functions.html>

<https://support.microsoft.com/en-us/office/excel-functions-alphabetical-b3944572-255d-4efb-bb96-c6d90033e188>

<https://trumpexcel.com/excel-functions/>

<https://www.contextures.com/xlcombine01.html>

For more information on Excel formulas using functions, refer to:

<https://www.lifewire.com/excel-formulas-step-by-step-tutorial-3123636>

<https://www.universalclass.com/articles/computers/excel/how-to-create-formulas-functions-and-do-calculations-in-excel-2019.htm>

## Slides 11 and 12

### 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.	IFS(logical_test1, value_if_true1, [logical_test2, value_if_true2], [logical_test3, value_if_true3],...) Where, logical_test1 (required): Condition that evaluates to TRUE or FALSE. value_if_true1 (required): Result to be returned if logical_test1 evaluates to TRUE. Can be empty. logical_test2...logical_test27 (optional): Condition that evaluates to TRUE or FALSE. value_if_true2...value_if_true27 (optional): Result to be returned if logical_testN evaluates to TRUE. Each value_if_trueN corresponds with a condition logical_testN. Can be empty. IFS function allows you to test up to 127 different conditions hence, the variables can be named up to 127.	=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.	MAXIFS(max_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...) Where, max_range (required): Actual range of cells in which maximum will be determined. criteria_range1 (required): Is the set of cells to evaluate with the criteria. criteria1 (required): Is the criteria in the form of a number, expression, or text that defines which cells will be evaluated as maximum. criteria2,...(optional): Additional ranges and their associated criteria. You can enter up to 126 range/criteria pairs.	=MAXIFS(G2:G5,B3:B6,"a")
MINIFS	Returns the smallest number in a range, that meets a single or multiple criteria.	MINIFS(min_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...) Where, min_range (required): Actual range of cells in which the minimum value will be determined. criteria_range1 (required): Is the set of cells to evaluate with the criteria. criteria1 (required): Is the criteria in the form of a number, expression, or text that defines which cells will be evaluated as minimum. criteria2,...(optional): Additional ranges and their associated criteria. You can enter up to 126 range/criteria pairs.	=MINIFS(G2:G7,B2:B7,1)

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### 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, [Value to match2, ...], 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

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### Instructions to the Trainer(s):

- Using Slide 11, discuss the new functions and their characteristics.
- Tell students that Excel includes six new or improved functions, as follows: IFS, SWITCH, TEXTJOIN, CONCAT, MAXIFS, and MINIFS.
- IFS and SWITCH are simplified versions of the nested IF function, which eliminates the need for more complicated nested functions.

➤ These functions are explained as follows:

- **IFS Function:** The nested IFS let us check multiple conditions and return a different value when any of the conditions is met.
- **MINIFS Function:** The MINIFS function is used to get the minimum value from the given range when all of the given conditions are satisfied.
- **MAXIFS Function:** To get the maximum value in a range when one or more conditions match, you must use MAX with IF with some tricks.
- **CONCAT Function:** This function allows you to combine text, strings, or range into one string saving time and energy.
- **TEXTJOIN Function:** It joins multiple cells or ranges to one string with a specified delimiter. You can specify the delimiter or a separator in the function.
- **SWITCH Function:** SWITCH function does not work with logical operators like, <, >, etc. It only evaluates character or an integer.

➤ Using Slide 12, explain new functions in MS Excel 2019.

- **The SWITCH Function:** Returns different values depending on the one expression results. Unlike the IFS function that returns values based on TRUE, FALSE; the SWITCH function return values based on VALUES returned by the expression.
- **CONCAT Function:** The function can take multiple cells, ranges as arguments.

#### **In-Class Question:**

**Question:** What is a built-in function?

**Answer:** A function which is already defined in an application is called built-in function.

For more information, refer to:

<https://www.exceltip.com/excel-365-functions/10-new-functions-in-excel-2019-and-365.html>

<https://www.journalofaccountancy.com/issues/2018/dec/microsoft-excel-2019-new.html>

<https://www.excelfunctions.net/excel-2019-new-functions.html>

## Slides 13 and 14

### 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

Select Insert → Icons. The illustrations group contains tools that let you add shapes, icons, SmartArt, and more.

Scroll through the icons or jump to a category by clicking a name in the navigation pane at the left. You can search for icons by using the box near the top left corner.

Choose an icon and then, click Insert at the lower right. You can select multiple icons to insert by clicking each of them once.

Rotate, color, and resize your icon as per your requirements.

**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.

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### 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:

**Map Charts**

Allow users to compare values and show categories across geographical regions. They can be used when you have geographical regions in your data, such as countries/regions, states, and so on.

**Funnel Charts**

Show values across multiple stages in a process. For example, you could use a funnel chart to show the number of sales prospects at each stage in a sales pipeline.

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#### Instructions to the Trainer(s):

- Using Slide 13, tell students that they will learn how to insert icons and charts in Excel.
- Tell students:
  - **To insert an icon:** Select Insert → Icons. Scroll through the icons or jump to a category by clicking a name in the navigation pane at the left. Choose an icon and then, click Insert at the lower right.
  - **To insert a chart:** For this, you use Chart Layouts and Chart Styles.
    - **Chart Layouts:** Click the Add Chart Element button to select the type of chart element you want to add.

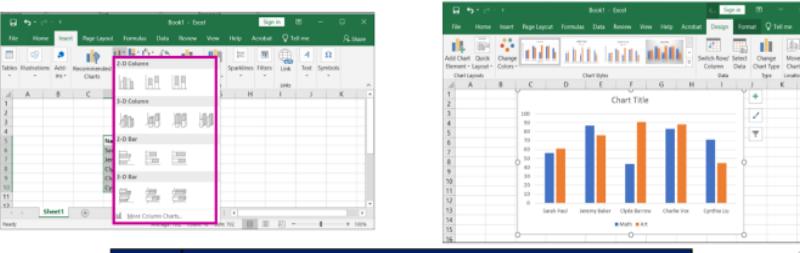
- **Chart Styles:** Click Change Colors to open a drop-down gallery and then, select a new color scheme for the data series in the selected chart.
  - Using Slide 14, discuss the chart types in MS Excel.
- Different types of charts are as follows:
- Column chart
  - Line chart
  - Bar chart
  - Area chart
  - Stock chart
  - Surface chart
  - Radar charts
  - Treemap chart
- Excel has built-in support for adding chart and map combinations – also known as map charts – since Excel 2016 onwards. A map chart is an easy-to-use tool that is great for when you want to visualize geographic data on a map.
- New types of charts include:
- **Map chart:** Compare values and show categories across geographical regions.
  - **Funnel chart:** Funnel charts show values across multiple stages in a process. For example, you could use a funnel chart to show the number of sales prospects at each stage in a sales pipeline. Typically, the values decrease gradually, allowing the bars to resemble a funnel.

For more information, refer to:

<https://support.microsoft.com/en-us/office/create-a-chart-from-start-to-finish-0baf399e-dd61-4e18-8a73-b3fd5d5680c2>

<https://www.guru99.com/visualizing-data-using-charts-in-excel.html>

## 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.

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### Instructions to the Trainer(s):

- Using Slide 15, students will learn to create and modify charts in Excel.
- Explain the steps as given in the Student Guide.
- Once your chart is created in Excel, there are many ways to modify the way it looks and its location. To add any labels, click Add Chart Element in the Chart Layouts group and select the desired label. To change the chart type, data, or location, use the Chart Tools tab on Ribbon.

For more information, refer to:

<https://www.excel-easy.com/data-analysis/charts.html>

<https://www.guru99.com/visualizing-data-using-charts-in-excel.html>

<https://www.optimizesmart.com/how-to-select-best-excel-charts-for-your-data-analysis-reporting/>

## 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.

### Instructions to the Trainer(s):

- Using Slide 16, discuss the new features and enhancements in Excel 2019.
- Excel 2019 has added many new features such as -
  - Improved accessibility
  - Audio with sound effects
  - View changes and modify if required
  - Analyzing transactions to rank data
  - Identifying significant outliers
  - Identifying fraudulent transactions

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 17.
- Summarize the session by reading out each point on the slide.

## Session 8: Data Analysis and Security of Data in Microsoft Excel 2019

### 8.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### 8.1.1 Teaching Skills

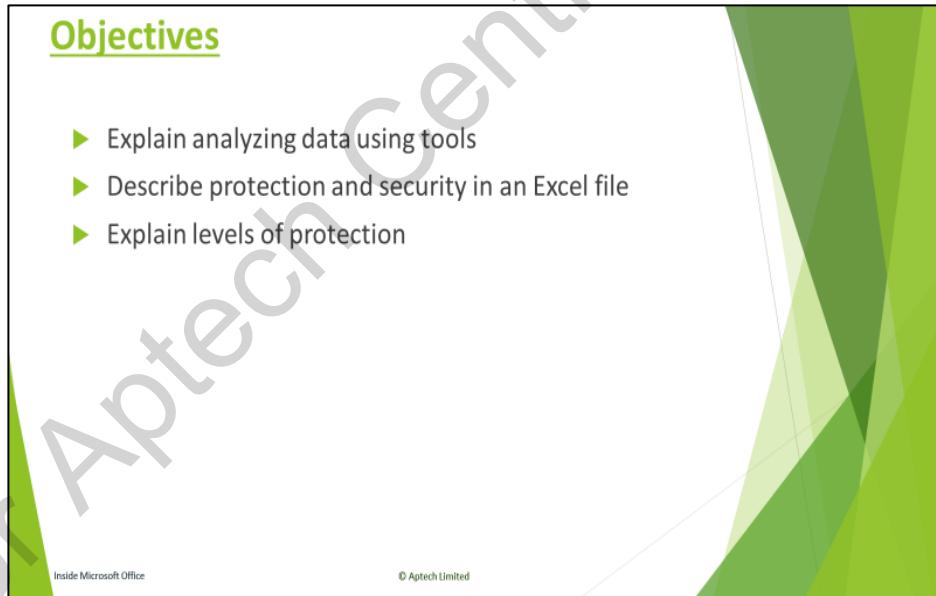
To teach this session, you should be well versed with data analysis and data security in Microsoft Excel 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2



The slide features a decorative background with overlapping green and yellow triangles. At the top left, the word "Objectives" is written in a green, bold, sans-serif font. Below it is a bulleted list of three items, each preceded by a green triangle icon. At the bottom left, the text "Inside Microsoft Office" is visible, and at the bottom right, "© Aptech Limited".

**Objectives**

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

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#### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 8.2 In-Class Explanations

Slides 3 and 4

### 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

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### 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

The screenshot shows two versions of an Excel spreadsheet. The left side shows the original data with rows 1 through 18. The right side shows the data after applying a sort, with rows 1 through 18 rearranged. Both versions have the same columns: Last Name, Sales, Country, and Quarter. The data includes names like Smith, Johnson, Williams, Brown, and Jones, along with their respective sales figures and quarter codes.

Data before and after sorting

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### Instructions to the Trainer(s):

- Introduce the session using Slide 3. Discuss with students about Data Analysis in Microsoft Excel 2019.
- Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense, recap, and evaluate data.
- Tell students that data analysis also helps to sort and filter data.
- Give students an example scenario to understand the concept of data analysis better. A pharmacy organization is compiling annual reports of medicines sold. It must depict

medicines sold by region, highest sold medicines, lowest selling medicines, growth trajectory of medicines sold, and more. To do this, the organization might have to put in weeks of hard work and effort to arrive at results. Instead, if the organization uses data analysis tools offered by Excel, it can save time and effort and produce efficient reports.

- Using Slide 4, explain how sorting can be done in MS Excel 2019.
- Sorting in Excel is nothing but arranging data stored in Excel according to your requirements. It can be done by depending on the value type stored in cells. Some common examples include sorting alphabetically (A to Z or Z to A), by value (largest to smallest or smallest to largest), by day of the week (Mon, Tue, Wed...), and so on.
- Sorting can be done in different ways:
  - Ascending order sorting
  - Descending order sorting
  - Lowest to Highest
  - Highest to Lowest
  - Sort date or time
- Multi-level sorting can also be done by using advanced sorting techniques.

For more information, refer to:

<https://www.educba.com/sorting-in-Excel/>

<https://excelwithbusiness.com/blog/15-excel-data-analysis-functions-need/>

<https://support.microsoft.com/en-us/office/analyze-data-in-excel-3223aab8-f543-4fda-85ed-76bb0295ffc4>

## Slide 5

### 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

The screenshot shows a Microsoft Excel spreadsheet titled "Sales.xlsx". The data consists of four columns: Last Name, Sales, Country, and Quarter. The "Data" tab is active in the ribbon. A filter icon is present in the ribbon's "Data" section. A "Filter" dialog box is displayed, showing the filter criteria for the "Last Name" column. The selected filters are "Smith", "Brown", "Johnson", and "Jones". The main table shows the original data, and a smaller preview window on the right shows the filtered data where only the rows for Smith, Brown, Johnson, and Jones are visible, while the other rows are hidden.

### Instructions to the Trainer(s):

- Using Slide 5, discuss the concept of filtering in MS Excel.
- Filtering data in MS Excel refers to displaying only the rows that meet certain conditions. The other rows that do not meet the conditions will be hidden.
- Filters can be used to narrow down the data in your worksheet and hide parts of it from view. While it may seem similar to grouping, filtering is different because it allows you to qualify and display only the data that interests you.
- The Excel FILTER function filters a range of data based on supplied criteria and extracts matching records.

### In-Class Question:

**Question:** What are the types of Filters in Excel?

**Answer:** Auto Filter and Advanced Filter

## 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 two parts of the Microsoft Excel interface. On the left, the 'Conditional Formatting' dialog box is open over a grid of numerical data. The dialog box has tabs for 'Format' and 'Rules'. Under 'Rules', there are several options like 'Format cells that contain', 'Format cells that have a certain color', etc. A preview window shows how the selected rule would apply to the data. On the right, the main Excel window shows the results of the conditional formatting. Cells containing the value '87' are highlighted with a red background and white text. The data grid looks like this:

	A	B	C	D
1	14			
2	9			
3	39			
4	25			
5	16			
6	87			
7	30			
8	48			
9	55			
10	78			

Results of Conditional Formatting

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### Instructions to the Trainer(s):

- Using the Slide 6, explain the conditional formatting concept to students.
- Conditional formatting is a feature of Excel which allows you to apply a format to a cell or a range of cells based on certain criteria.
- Conditional formatting is an important tool to visualize the data and it automatically applies formatting such as color, data bar, and different icon to the selected cell.
- Conditional formatting can be applied in multiple ways to analyze data.
- Types of conditional formatting:
  - Background Color Shading (of cells)
  - Foreground Color Shading (of fonts)
  - Data Bars
  - Icons (which have four different image types)
  - Values

## Slide 7

### 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 first screenshot shows a Microsoft Excel spreadsheet with a table of data. The columns are labeled Order ID, Product, Category, Amount, Date, and Country. The second screenshot shows the 'Create PivotTable' dialog box, where the user has selected the range A1:E21 and chosen to place the report in a new worksheet named 'PivotTable1'. The third screenshot shows the resulting PivotTable in a new sheet, with a single row showing the sum of amounts for each country: Country, Apple, Banana, Broccoli, Carrots, Orange, and Grand Total.

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### Instructions to the Trainer(s):

- Using Slide 7, explain PivotTables.
- A PivotTable is used to summarize, sort, reorganize, group, count, total, or average data stored in a table.
- PivotTables allow us to transform columns into rows and rows into columns. It also allows grouping by any field (column) and using advanced calculations on them.
- PivotTable is a technique in data processing and enable to arrange and rearrange (or 'pivot') statistics in order to present useful information in a better manner.
- In simplest terms, PivotTables are worksheet tables that let users summarize and analyze Excel data.

### In-Class Question:

**Question** What are the basic components of a PivotTable?

**Answer:** Filters, Columns, Rows, and Values

## 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	Otr 3	
3	Williams	\$87,650	UK	Otr 3	
4	Brown	\$78,604	USA	Otr 1	
5	Johnson	\$76,026	USA	Otr 1	
6	Jones	\$67,834	USA	Otr 2	
7	Smith	\$65,412	USA	Otr 2	
8	Jones	\$56,789	USA	Otr 1	
9	Brown	\$56,230	USA	Otr 2	
10	Jones	\$45,987	USA	Otr 3	
11	Brown	\$34,987	USA	Otr 3	
12	Smith	\$34,587	USA	Otr 1	
13	Johnson	\$23,987	USA	Otr 2	
14	Johnson	\$23,765	USA	Otr 3	
15	Williams	\$23,059	UK	Otr 1	
16	Williams	\$12,987	UK	Otr 2	
17					
18					

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### Instructions to the Trainer(s):

- Using Slide 8, explain to students about importance of tables in Excel.
- A table is a powerful feature to group data in Excel. You can have multiple tables on the same sheet. Although data in an Excel worksheet is by default stored in rows and columns, when applying formulas or functions to a specific range of cells, it helps to have them in tabular format.
- Besides using the **Table command** in the **Tables** group, under the **Insert** tab, one can also create and use tables in Excel using following approach:
  - Select the cell or the range in the data.
  - Select Home → Format as Table.
  - Pick a table style.
  - In the Format as Table dialog box, select the check box next to **My table has headers** if you want the first row of the range to be the header row, and then, click OK.
- Different reasons for using tables in Excel are as follows:
  - Filtering
  - Easy Data Entry
  - Calculated Columns
  - Quick Formatting
  - Sorting

## Slides 9 to 11

### 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.

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### What-if Analysis [2-3]

**Scenario Manager Option**

Several Scenarios Created Using Scenario Manager

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**What-if Analysis [3-3]**

Checking the Result of Each Scenario

Scenario Manager

Scenario	Value
60% higher price	\$85
70% higher price	\$70
75% higher price	\$75
85% higher price	\$85

Scenario Summary

	A	B	C	D	E	F	G	H
Current Values:								
Changing Cells:	\$H\$4	\$85	60	70	75	\$85		
Result Cells:	\$H\$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.

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### Instructions to the Trainer(s):

- Using Slides 9 to 11, explain to students about What-if Analysis in Excel.
- What-if analysis is a technique that is used to determine how projected performance is affected by changes in the assumptions that projections are based upon.
- What-if Analysis is the process of changing values in cells to determine how those changes will affect the outcome of formulas on the worksheet.
- Three kinds of What-if Analysis tools in Excel include:
  - Scenarios
  - Goal Seek
  - Data Tables
- Scenarios and Data tables take sets of input values and determine possible results.
- Using Slide 10, explain the following:
  - **Advantages of What-if Analysis:** What-if analysis allows project managers to recognize options and impact from events and changing assumptions. With proper utilization, project managers can make more informed decisions and predict the outcome of those decisions more accurately.
  - **Disadvantages of What-if Analysis:**
    - Only useful if you create right questions.
    - Relies on intuition of users.
    - More subjective than other techniques.
- Using Slide 11, tell students that they will learn the scenario of What-if analysis.
- A Scenario is a set of values that Excel saves and can substitute automatically on your worksheet. You can create and save different groups of values as scenarios and then switch between these scenarios to view different results.

- Scenario analysis is commonly used to estimate changes to a portfolio's value in response to an unfavorable event and may be used to examine a theoretical worst-case scenario.
- Benefits of scenario analysis:
  - Allows organizations to evaluate the impact that unexpected changes in the business environment will have on investment and other decisions
  - Helps to test robustness of future decisions
  - To understand potential impact of unexpected influences
  - Identify potential opportunities and threats

What-if Analysis also known as Sensitivity Analysis.

For additional information, refer to:

<https://www.Excel-easy.com/data-analysis/what-if-analysis.html>

<https://institute.acs.org/lab-safety/hazard-assessment/ways-to-conduct/what-if-analysis.html>

**In-Class Question:**

**Question:** What are three kinds of What-if Analysis tools available in Excel?

**Answer:**

- Scenarios
- Goal Seek
- Data Tables

## 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.

### Instructions to the Trainer(s):

- Using Slide 12, discuss about Analysis ToolPak add-in used in Excel.
- Analysis ToolPak is an Excel add-in program that provides readymade data analysis tools for:
  - Financial data analysis
  - Statistical data analysis
  - Engineering data analysis

For more information, refer to:

<https://support.microsoft.com/en-us/office/use-the-analysis-toolpak-to-perform-complex-data-analysis-6c67ccf0-f4a9-487c-8dec-bdb5a2cefab6>

<https://www.excel-easy.com/data-analysis/analysis-toolpak.html>

### In-Class Question:

**Question:** What is Analysis ToolPak in Excel?

**Answer:** Analysis ToolPak is an add-in that comes with Microsoft Excel and provides a variety of data analysis tools.

## 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

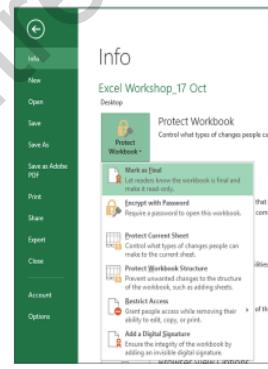
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## Protection and Security in Excel [2-4]

- ▶ 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

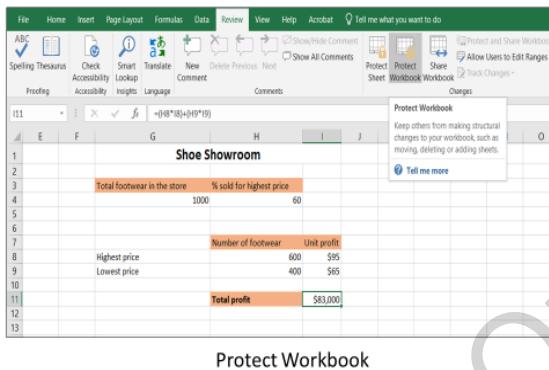
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## Protection and Security in Excel [3-4]

- ▶ 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



Protect Workbook

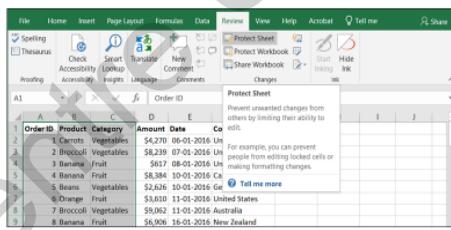
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## Protection and Security in Excel [4-4]

- ▶ 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

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### **Instructions to the Trainer(s):**

- Using Slide 13, explain to students how data can be secured in Excel.
- Excel gives the ability to protect your work, so that no one can edit, reformat, or delete the worksheet without your consent.
- For securing and protecting data in worksheets, users should generate passwords that are not too weak and not too strong (because they might be forgotten).
- Steps to secure data in Excel are as follows:
  - Select File → Info.
  - Select the Protect Workbook box and choose Encrypt with Password.
  - Enter a password in the Password box and then, select OK.
  - Confirm the password in the Reenter Password box and then, select OK.
- Using Slide 14, discuss the procedure to secure and protect data in Excel.

- Security features in Excel:
  - **File-level:** This refers to the ability to lock down an Excel file by specifying a password so that unauthorized users cannot open or modify it.
  - **Workbook-level:** Users can lock the structure of their workbook by specifying a password.
- Using Slide 15, explain the concept of protecting worksheets in Excel.
- To prevent other users from accidentally or deliberately changing, moving, or deleting data in a worksheet, users can lock cells on their Excel worksheet and then, protect it with a password.
- Using Slide 16, explain that students will learn more about Worksheet protection.
- Worksheet protection is a two-step process:
  - Step 1: Unlock any cells that must be editable
  - Step 2: Protect the worksheet

**In-Class Question:**

**Question:** What is Protect Workbook feature in Excel?

**Answer:** To prevent other users from viewing hidden worksheets, adding, moving, deleting, or hiding worksheets, and renaming worksheets, you can protect the structure of your Excel workbook with a password.

## 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.

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### Instructions to the Trainer(s):

- Using Slide 17, explain to students that they will now learn the levels of protection in Excel.
- Excel ensures protection and security of data by encrypting the file, generating strong passwords, maintaining backup, and so on.
- Excel also ensures that only authenticated users should be allowed to access the data/files/worksheets.
- Three important levels of protection are as follows:
  - Password protection to open a file
  - Password protection to change the data
  - Password protection for changing the structure - such as adding, deleting, or hiding worksheets

## Slide 18

### 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.

### Instructions to the Trainer(s):

- Show students Slide 18.
- Summarize the session by reading out each point on the Slide.

# Session 9: Pivot Table and PivotCharts in Microsoft Excel 2019

## 9.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 9.1.1 Teaching Skills

To teach this session, you should be well versed with PivotTables and PivotCharts in Microsoft Excel 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**Objectives**

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

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### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 9.2 In-Class Explanations

Slides 3 to 5

### Analyzing Data Using PivotTable [1-3]

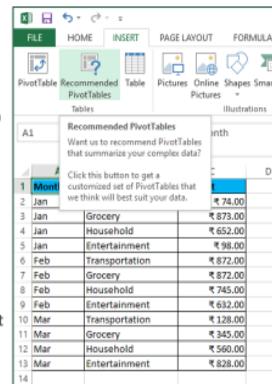
- ▶ A pivot table allows the user to extract significance from a large and detailed data set
- ▶ A pivot table can be used to summarize, analyze, explore, and present summary data
- ▶ Pivot table can analyze numerical data and is especially designed for presenting concise, attractive, and annotated (adding 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
4 Jan	Household	\$652				Grocery	873
5 Jan	Entertainment	\$98				Household	652
6 Feb	Transportation	\$872				Transportation	74
7 Feb	Grocery	\$872					
8 Feb	Household	\$745					
9 Feb	Entertainment	\$632					
10 Mar	Transportation	\$128					
11 Mar	Grocery	\$345					
12 Mar	Household	\$560					
13 Mar	Entertainment	\$828					
14							
15							
16							
17							
						Grand Total	6679

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.



A1	B1	C1	D1
1 Month	2 Jan	3 Jan	4 Jan
	Grocery	Household	Entertainment
	\$873.00	\$652.00	\$98.00
	5 Jan	6 Feb	7 Feb
	Transportation	Grocery	Grocery
	\$872.00	\$872.00	\$745.00
	8 Feb	9 Feb	10 Mar
	Household	Entertainment	Transportation
	\$632.00	\$632.00	\$128.00
	11 Mar	12 Mar	13 Mar
	Grocery	Household	Entertainment
	\$345.00	\$560.00	\$828.00
	14	15	16
	17		

Recommended PivotTables Option

## Analyzing Data Using PivotTable [3-3]

The screenshot shows the Microsoft Excel ribbon at the top. A dialog box titled "Recommended PivotTables" is open, displaying a list of pivot tables based on the current data. One table, "Sum of Amount by Category", is selected. To the right, the resulting PivotTable is shown in the worksheet area, containing data for Entertainment, Grocery, Household, and Transportation categories across January, February, and March. The PivotTable tools ribbon tab is also visible.

	Entertainment	Grocery	Household	Transportation	Total
Jan	1558	2090	1957	1074	6679
Feb	1558	2090	1957	1074	6679
Mar	1558	2090	1957	1074	6679
<b>Grand Total</b>	<b>4674</b>	<b>6270</b>	<b>5911</b>	<b>3221</b>	<b>19826</b>

Sum of Amount by Month

Sum of Amount by Category

Row Labels : Sum of Amount

Entertainment 1558

Grocery 2090

Household 1957

Transportation 1074

Grand Total 6679

3 Row Labels - Sum of Amount

4 Entertainment 1558

5 Grocery 2090

6 Household 1957

7 Transportation 1074

8 Grand Total 6679

9

Resulting PivotTable

PivotTable

Tools

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### Instructions to the Trainer(s):

- Introduce the session using Slide 3 and discuss with students about analyzing data using PivotTable in Microsoft Excel 2019.
- Tell them that a PivotTable is a powerful tool to calculate, summarize, and analyze data that lets users see comparisons, patterns, and trends in their data. A PivotTable is a table of statistics that summarizes the data of a more extensive table such as, from a database, spreadsheet, or business intelligence program. The generated PivotTable might include sums, averages, or other statistics, which it groups together in a meaningful way.
- Using Slide 4, explain how data analysis can be done using PivotTable in Excel 2019.
- Using Slide 5, discuss how to make selections from recommended PivotTable, Result, and PivotTable Tools.
- PivotTables consist of four areas:
  - Filters
  - Columns
  - Rows
  - Table
- In a worksheet containing a PivotTable, the Ribbon will display a new contextual tab, PivotTable Tools, having Analyze and Design tabs. The Analyze tab has several commands that enable users to explore data in the PivotTable.

For more information on PivotTables, refer to:

<https://www.lumeer.io/pivot-table-complete-guide/>

<https://exceljet.net/pivot-table-tips>

<https://edu.gcfglobal.org/en/excel2016/intro-to-pivottables/1/>

## Understanding the PivotTable

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

Explore the data  
Change the form layout and field arrangement  
Change the layout of columns, rows, and subtotal  
Change the display of blanks and errors  
Change the format

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### Instructions to the Trainer(s):

- Using Slide 6, explain to students about the process of generating a PivotTable.
- Several tasks can be performed in PivotTable, such as:
  - Explore the data
  - Change the form/layout
  - Change the layout of columns, rows, and subtotal
  - Change the display of blanks and errors
  - Change the format

### In-Class Question:

**Question:** What are the benefits of PivotTables in Excel?

**Answer:** Some of the benefits of PivotTables in Excel are that they are easy to use, generate flexible, efficient reports, enable summarizing statistics, and so on.

For additional information, refer to:

<https://www.lumeer.io/pivot-table-complete-guide/>

<https://exceljet.net/pivot-table-tips>

<https://edu.gcfglobal.org/en/excel2016/intro-to-pivottables/1/>

<https://www.excel-easy.com/data-analysis/pivot-tables.html>

### 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

Month	Jan
Entertainment	98
Grocery	873
Household	652
Transportation	74
<b>Grand Total</b>	<b>1697</b>

Expanded PivotTable

Month	Jan
Entertainment	1558
Grocery	2090
Household	1957
Transportation	1074
<b>Grand Total</b>	<b>6679</b>

Collapsed PivotTable

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#### Instructions to the Trainer(s):

- Using Slide 7, explain to students that once a PivotTable is created, users can perform several operations on it.
- Explain to students how to explore data within a PivotTable.
- Tell them that exploring data involves analysis, sorting, visualization, filtering, and so on.

For additional information, refer to:

<https://www.lumeer.io/pivot-table-complete-guide/>

<https://exceljet.net/pivot-table-tips>

<https://edu.gcfglobal.org/en/excel2016/intro-to-pivottables/1/>

<https://www.excel-easy.com/data-analysis/pivot-tables.html>

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

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



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



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.



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



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

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## 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

### Instructions to the Trainer(s):

- Using Slides 8 to 10, explain to students the concept of changing form layout and field arrangement in PivotTables.
- Excel can automatically generate a built-in data form for your range or table. The data form displays all column headers as labels in a single dialog box.
- Field lists allows the user to arrange and re-arrange data.
- In order to change form layout and field arrangement, users can use following steps:
  - Change the table format form: Compact, Outline, or Tabular
  - Add, rearrange, and remove data fields
  - Change the order of fields or items
- Using Slide 9, explain to students about different form layouts in Excel, such as:
  - **Compact Form:**
    - In Compact Form, each Row label is in a separate row.
    - Row field label is always above the labels for the inner fields.
    - Each Row label is indented from the field above it in order to differentiate the fields.
    - Row labels cannot be repeated.
  - **Outline Form:**
    - Display subtotals at the top of each group.
  - **Tabular Form:**
    - Every record is placed on one row.
    - Each column contains a type of data, such as date, price, and so on.
    - There are no blank rows or columns.
    - Column labels are in one cell per column and located on the first row.

- Using Slide 10, explain about fields in PivotTables and PivotCharts.
- A PivotTable consists of the following:
  - **Values:** Used to display summary numeric data.
  - **Row Labels:** Used to display fields as rows on the side of the report.
  - **Column Labels:** Used to display fields as columns on the top of the report.
  - **Report Filter:** Used to filter the entire report based on the selected item in the report filter.

For additional information, refer to:

<https://www.lumeer.io/pivot-table-complete-guide/>

<https://exceljet.net/pivot-table-tips>

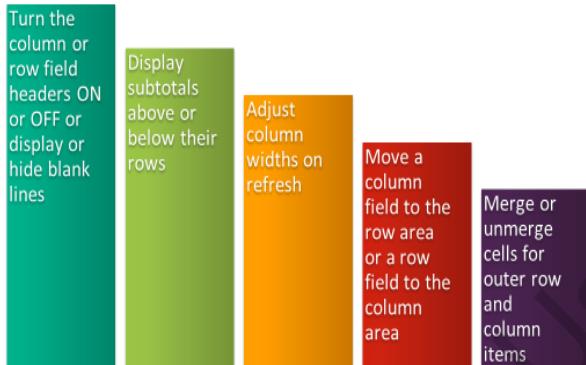
<https://edu.gcfglobal.org/en/excel2016/intro-to-pivottables/1/>

<https://www.excel-easy.com/data-analysis/pivot-tables.html>

## Slides 11 and 12

### 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:



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### 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

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#### Instructions to the Trainer(s):

- Using Slide 11, explain that students will learn to change the layout of rows, columns, and subtotals.
- After creating a PivotTable and adding fields, users can change the layout depending on their requirement in order to enhance the report layout and format to make the data easier to read and scan for details.

- To change the layout of a PivotTable, users can change the PivotTable form and the way that fields, columns, rows, subtotals, empty cells, and lines are displayed.
- To change the format of the PivotTable, users can apply a predefined style, banded rows, and conditional formatting.
- MS Excel also allows users to rearrange fields in a PivotTable.
- Adjust, Move, Merge, and Unmerge the data in the PivotTable can be performed.
- Using Slide 12, discuss about hiding and showing fields in PivotTable.
  - **To hide the Field List,**  
Right-click the PivotTable and select Hide Field List.
  - **To show the field list,**  
Right-click the PivotTable and select Show Field List.

For additional information, refer to:

<https://www.lumeer.io/pivot-table-complete-guide/>

<https://exceljet.net/pivot-table-tips>

<https://edu.gcfglobal.org/en/excel2016/intro-to-pivottables/1/>

<https://www.excel-easy.com/data-analysis/pivot-tables.html>

**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.

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**Instructions to the Trainer(s):**

- Using Slide 13, explain to students about how data can be secured in Excel.
- To change the display of blanks and errors, follow the steps:
  - Change how errors and empty cells are displayed
  - Change how items and labels without data are shown
  - Display or hide blank rows
- A blank is inserted as a placeholder for empty cells in source data.

## 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:

Manually and conditionally format cells and ranges

Changing the overall PivotTable format style

Changing the number format for fields

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### **Instructions to the Trainer(s):**

- Using Slide 14 discuss how format of a PivotTable can be changed.
- PivotTables allow users to change the format of the data, wherein they can change the format manually, change the overall style of data, or change number format for fields.
- PivotTable also allows to change format by choosing the wide variety of data or from a report.
- Depending on user's requirement, formatting can be done to either the text, style, color, or the entire document.

For additional information, refer to:

<https://www.contextures.com/excel-pivot-table-format.html>

<https://www.goodly.co.in/formatting-tips-for-pivot-tables/>

<https://www.teachucomp.com/format-a-pivottable-in-excel-instructions/>

## Slides 15 to 19

### 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

Sum of Amount

Category	Sum of Amount
Jan	1897
Entertainment	875
Grocery	925
Holiday	34
Transportation	125
Utilities	432
Entertainment	875
Grocery	925
Holiday	34
Transportation	125
Utilities	432
Entertainment	875
Grocery	925
Holiday	34
Transportation	125
Utilities	432
Total	5679

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

Creating PivotChart without using a PivotTable

Click anywhere in the data as shown in the worksheet

Select the Recommended Charts option from the Charts group in the Insert tab

Select any chart with the PivotChart icon in the top corner under the Recommended Charts tab

Once the desired chart is selected from the Recommended Chart tab, click OK to close the Insert Chart dialog box.

PivotChart Created

Sum of Amount

Sums of Amount by Month

Month	Sum of Amount
Jan	1897
Feb	3500
Mar	2100

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### 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

Sum of Amount

Sums of Amount by Month

Month	Sum of Amount
Jan	1897
Mar	2100
Feb	3500

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### 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.



### 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

#### **Instructions to the Trainer(s):**

- Using Slide 15, explain differences between PivotChart and standard chart.
- **PivotChart:**
  - A PivotChart is a visual representation of a PivotTable in Excel. PivotCharts and PivotTables are connected with each other.
  - Types of PivotCharts are namely, Column, Line, Pie, Bar, and so on.
- **Standard Chart:**
  - Standard or absolute charts are useful for comparing specific values and for representing discrete data, such as data for different regions or individual employees.
  - Types are namely, Line graphs, bar graphs and histograms, pie charts, and Cartesian graphs.

- Using Slide 16, explain further differences between PivotChart and Standard charts. A PivotChart is linked to a PivotTable bidirectionally. Filters, sorts, and data rearrangements applied to PivotCharts are also applied to their associated PivotTable and vice versa. Slicers can also be applied to PivotCharts and a single slicer can be applied to multiple PivotTables/PivotCharts if the PivotTables/PivotCharts are based on the same data providing us multiple view points over a single data set.
- Using Slide 17 discuss how sorting on PivotChart is performed. PivotCharts can be sorted in Ascending and Descending order.
- Steps to perform sorting on a PivotChart are as follows:
  - From the PivotChart, select any interactive field, such as Jan/Feb/Mar, and right-click to select Sort option from the pop-up menu.
  - Select either Sort Smallest to Largest or Sort Largest to Smallest option to sort and display data in PivotChart in a specific order.
- Using Slide 18, discuss the use of Analyze and Design tabs for building PivotCharts.
- The Analyze tab has several commands that will enable users to explore data in the PivotTable. The Design tab commands will be useful to structure the PivotTable and PivotChart with various report options and style options.
- Using Slide 19, discuss the difference between PivotChart and standard chart.
- More differences between PivotChart and Standard Charts are as follows:
  - Source data Standard charts are linked directly to worksheet cells, while PivotCharts are based on their associated PivotTable's data source.
  - Unlike a standard chart, users cannot change the chart data range in a PivotChart's Select Data Source dialog box.
  - Standard charts do not lose this formatting once it is applied.

For more information on working with PivotCharts, refer to:

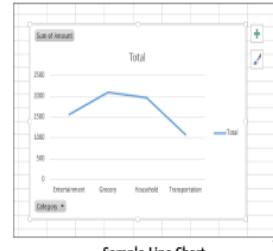
<https://www.excel-easy.com/examples/pivot-chart.html>

<https://www.dummies.com/software/microsoft-office/excel/creating-pivot-charts-in-excel-2019/>

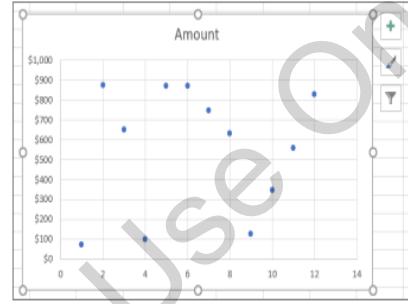
## Available Chart Types in PivotChart

- 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

### Instructions to the Trainer(s):

- Using Slide 20, explain to students about different types of PivotCharts.  
➤ Different types of PivotCharts available in Excel 2019 are as follows:
- Column
  - Stacking column
  - Bar
  - Stacking bar
  - Pie
  - Pyramid
  - Funnel
  - Line

## Change a Chart Type

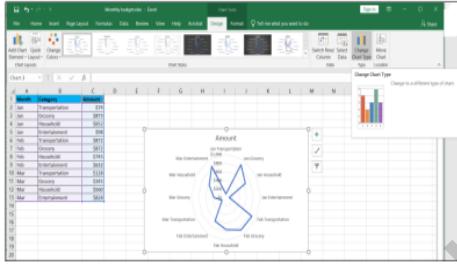
► If a chart type has already been selected, but the user wants to change the chart type to depict the data in some other format, it can be done in two simple steps:

**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

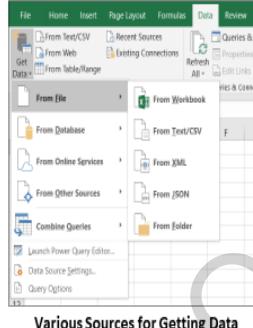
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### Instructions to the Trainer(s):

- Using Slide 21, tell students that they will now learn how to change a chart type.
- After creating a chart, users can change the chart type in Excel. Alternatively, they can also choose a different sub-type of the same general chart type that was first selected.
- To change the chart type in Excel, select a chart or one of the chart's elements and click Design tab of Chart Tools contextual tab in the Ribbon. Then, click Change Chart Type button in the Type group.

## 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

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## 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.

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### Instructions to the Trainer(s):

- Using Slide 22, explain about Power Query in MS Excel.
- Power Query is a business intelligence tool available in Excel that allows users to import data from many different sources and then clean, transform, and reshape data as required.

- Power Query allows users to set up a query one time and then reuse it multiple times with a simple refresh.
- Power Query is included with Excel from version 2016 onwards. It has been renamed and is now present on the Data tab of the Ribbon in the Get and Transform Data group.
- Through Slide 23, students will learn different ways in which data can be received in Power Query.
- MS Excel allows following options to get Power Query data:
  - Get data from a file such as Excel, Text, or CSV file
  - Get data from databases such as SQL Server or Microsoft Access
  - Get data from cloud databases such as Microsoft Azure
  - Get data from online services
  - Get data from Hadoop, Microsoft Query, or ODBC
  - Merge queries to consolidate data
  - Append data

<u>Areas of the Query Editor</u>					
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.

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### Instructions to the Trainer(s):

- Using Slide 24, explain the areas of Query Editor.
- Following are areas of query editor:
  - Query Editor ribbon
  - Query List
  - Data Preview
  - Formula Bar
  - Properties
  - Applied steps

For more information, refer to:

- <https://www.universalclass.com/articles/computers/excel/how-to-use-get-and-transform-to-perform-queries-in-excel-2019.htm>
- <https://www.dummies.com/software/microsoft-office/excel/transforming-a-data-query-in-the-power-query-editor-in-excel-2019/>
- <https://www.upslide.net/en/power-query/>

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 25.
- Summarize the session by reading out each point on the slide.

# Session 10: Understanding Microsoft PowerPoint 2019

## 10.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 10.1.1 Teaching Skills

To teach this session, you should be well versed with basic features of Microsoft (MS) PowerPoint 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use Slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

The slide has a white background with a decorative green and yellow diagonal pattern on the right side. At the top left, the word "Objectives" is written in green. Below it is a bulleted list:

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

At the bottom left, it says "Inside Microsoft Office". At the bottom center, it says "© Aptech Limited".

### Instructions to the Trainer(s):

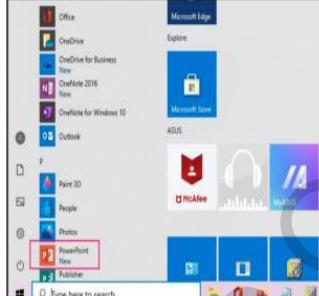
Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 10.2 In-Class Explanations

Slides 3 and 4

### 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

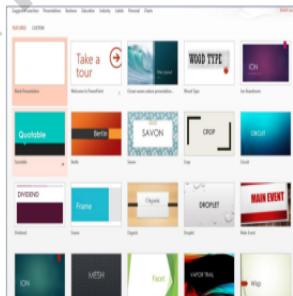


Selecting PowerPoint 2019

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### 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

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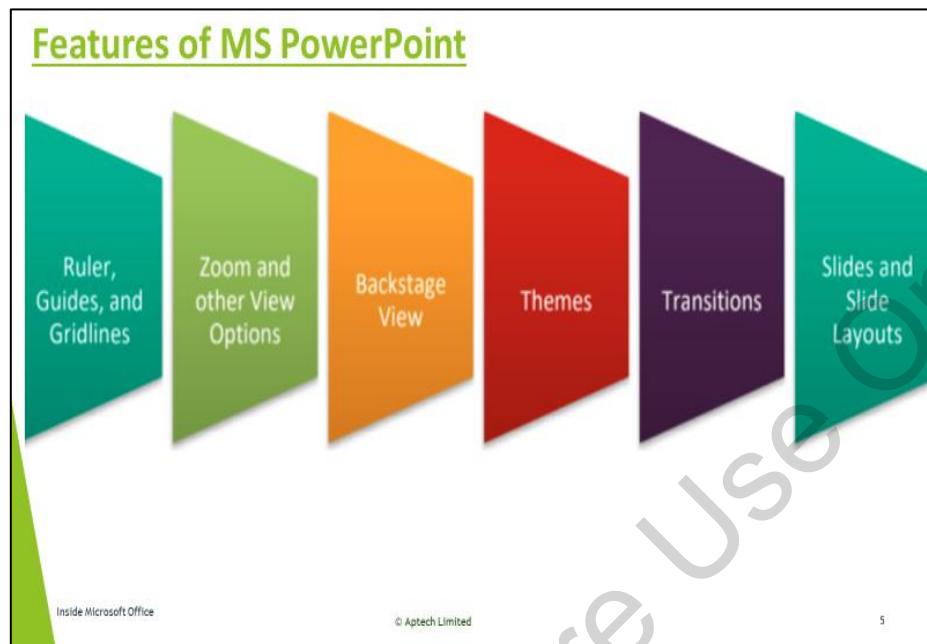
#### Instructions to the Trainer(s):

- Introduce the session using Slide 3, discuss with students about PowerPoint.
- Tell them that PowerPoint is a powerful slide show presentation program.
- PowerPoint is a standard component of Microsoft Office suite. It allows users to create slides to convey information rich in multimedia. One can show slides with audio, video, 3D models, visually appealing text, animations, and more using PowerPoint.

- Tell the students that once users have created their presentations, they can use any of these types of media to show the presentations:
  - Computer screen
  - Big-screen TV
  - Computer projector
  - Webcast
  - Printed pages
- Using Slide 4, explain steps to begin with PowerPoint 2019.

For more information, refer to:

<https://edu.gcfglobal.org/en/powerpoint/getting-started-with-powerpoint/1/>

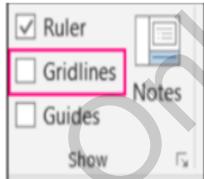


**Instructions to the Trainer(s):**

- Using Slide 5, discuss features of PowerPoint 2019.
- Tell students that PowerPoint 2019 provides following features:
  - Funnel Charts
  - Transition Morph
  - Zoom
  - Insert Icons and 3D Models
  - Add on Online Video
  - Convert to High Quality Videos
  - Text Highlighter
- Describe each of these features in brief.

## 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

Inside Microsoft Office

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### Instructions to the Trainer(s):

- Using Slide 6, discuss the ruler, guides, and gridlines in PowerPoint 2019.
- Through the ruler, users can get provides visual cues where to place text and slide objects. There are two rulers in PowerPoint: one displays horizontally at the top of the active slide and the other displays vertically along the left edge of the slide.
- The main purpose of using guides in PowerPoint 2019 is that users can align multiple objects for a clean, professional look.
- PowerPoint's Gridlines help users to position slide objects more precisely. Users can align shapes and other objects in PowerPoint slides.

### In-Class Question:

**Question:** How do you display the ruler gridlines and guides in PowerPoint?

**Answer:** To display one or all of these three tools, go to the View tab in PowerPoint 2013 and enable the respective checkboxes.

## 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

The screenshot shows the Microsoft PowerPoint ribbon at the top. Below the ribbon, there are two side-by-side views of the slide area. The left view is labeled 'Slide Views' and shows four small thumbnail icons for navigating between slides. The right view is labeled 'Zoom Slider' and shows a zoom slider with a value of 41%. Both views include standard ribbon tabs like Home, Insert, Design, etc., and status bars at the bottom.

### **Instructions to the Trainer(s):**

- Using Slide 7, explain the zoom and other view options in PowerPoint.
- PowerPoint allows users to zoom into data when they are within a presentation. Users can select Insert → Zoom and get a choice of three different kinds of Zoom, namely, Summary Zoom, Section Zoom, and Slide Zoom.
- Summary Zoom lets users create a visual summary of their presentation. They can also select the slides they want included in the summary.
- Section Zoom enables users to show a zoomed in view of a section of their presentation.
- Slide Zoom enables users to show a zoomed in view of selected slides only.
- PowerPoint also provides other view options, such as:
  - Normal View
  - Slide Sorter View
  - Reading View
  - Slide Show View

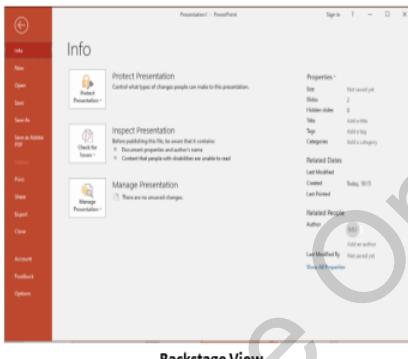
For more information, refer to:

<https://support.microsoft.com/en-us/office/use-zoom-for-powerpoint-to-bring-your-presentation-to-life-9d6c58cd-2125-4d29-86b1-0097c7dc47d7>

## 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

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**Instructions to the Trainer(s):**

- Using Slide 8, explain to students about Backstage view in PowerPoint.
- Backstage view is the area where files and data about them is managed.
- Backstage view helps in creating new documents, saving and opening documents, printing, and sharing documents, inspecting for hidden metadata or personal information, and setting options, and so on. If users already have an opened presentation, then, it will display a window showing details about the opened file.
- To access Backstage view, users can click File tab. They can exit this view by clicking any tab (including the File tab again). Alternatively, they can also press Esc key to exit.

## Slides 9 and 10

### 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

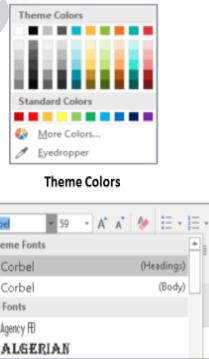
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9

### 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

Standard Colors

More Colors...

Eyedropper

Theme Fonts

Corbel

Theme Fonts

T Corbel (Heading)

T Corbel (Body)

All Fonts

T Agency FB

T ALGERIAN

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10

### Instructions to the Trainer(s):

- Using Slide 9, explain students what are themes and how to apply themes in PowerPoint.
- A theme is a predefined set of colors, fonts, and visual effects that you apply to your Slides for a unified, professional look.
- Using a theme gives your presentation a harmonious appearance with minimal effort.
- Themes provide a complete slide design for your presentation, including background designs, font styles, colors, and layouts.
- Using Slide 10, explain the elements of themes in PowerPoint.
- The most basic element of a PowerPoint presentation is the slide. A slide is a single screen of a presentation and every presentation is composed of several Slides.
- Slides are composed of a combination of textual and visual elements. Text may be organized as captions, paragraphs, or bulleted points.

- Each PowerPoint presentation theme has its own theme element:
  - **Theme Colors:** They provide different colors, light, and dark shades.
  - **Theme Fonts:** Clicking the arrows in the Variants gallery makes different fonts available.

## Slides 11 and 12

### 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



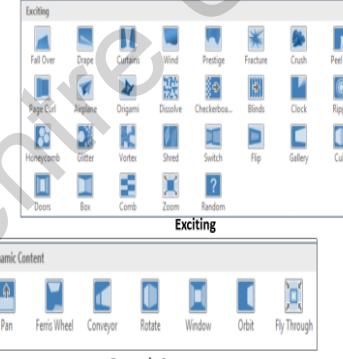
Transition Tab

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### Applying Transitions [2-2]

Transition categories are as follows:

- Subtle
- Exciting
- Dynamic Content



Exciting

Fall Over	Drape	Curtains	Wind	Prestige	Fracture	Crush	Peel Off
Page Curl	Zigzag	Origami	Dissolve	Checkered	Blinds	Clock	Ripple
Holographic	Guitar	Vortex	Shed	Switch	Flip	Gallery	Cube
Doors	Box	Comb	Zoom	?			

Subtle

None	Cut	Fade	Push	Wipe	Split	Reverse	Random Bars
Shape	Uncover	Cover	Flash				

Dynamic Content

Pan	Ferris Wheel	Conveyor	Rotate	Window	Orbit	Fly Through
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### Instructions to the Trainer(s):

- Using Slide 11, explain that students will learn how to apply transitions in PowerPoint.
- Transitions are motion effects that add movement to slides as you advance from one slide to another.
- There are many transitions to choose from in PowerPoint and each one of them allows you to control the speed and even add sound.
- Steps for applying transitions in PowerPoint are as follows-
  - On the Transitions tab, under Transition to This Slide, click the transition that you want, such as Fade.
  - To give a different effect for the transition, such as the direction it moves on the screen, click Effect Options, and then select the variation you want.

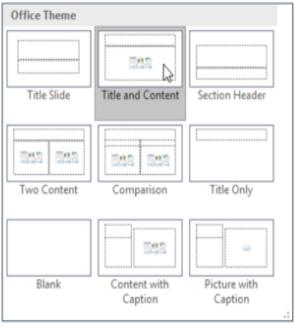
- Under Apply To, click All Slides.
- Using Slide 12, discuss about categories of transitions.
- Transitions are categorized into three types:
- Subtle (slight transitions) Subtle transitions.
  - Exciting (strong transitions) Exciting transitions.
  - Dynamic Content (strong transitions that affect only the content, such as text or images) Strong transitions.

## Slides 13 and 14

### 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



Office Theme  
Title Slide    Title and Content    Section Header  
Two Content    Comparison    Title Only  
Blank    Content with Caption    Picture with Caption

Slide Layouts

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### Slides and Slide Layouts [2-2]



Slide created using a Layout

Layout Command

File Home Insert Design Transitions Animations Slide S  
Paste + Clipboard New Slide + Office Theme  
1    2    3  
Title Slide    Title and Content    Section Header  
Two Content    Comparison    Title Only  
Blank    Content with Caption    Picture with Caption

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#### Instructions to the Trainer(s):

- Using Slide 13, explain that students will learn about slide layout in PowerPoint.
- Slide layouts contain formatting, positioning, and placeholder boxes for all content that appears on a slide. Placeholders are dotted-line containers on slide layouts that hold content such as titles, body text, tables, charts, SmartArt graphics, pictures, clip art, videos, and sounds.
- In PowerPoint, a slide layout is like a slide template, and contains formatting (such as applied themes) and placeholders.
- Types of slide layouts in PowerPoint are as follows:
  - Text Slide layout
  - Table of content Slide layout
  - Impact Message Slide layout

- Two Text Content Slide layout
- Using Slide 14, discuss layouts of slides and their commands.

## Slides 15 and 16

### 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



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### Organizing Slides [2-2]



Moving Slide      Copy Slide Command      Pasting the Copied Slide

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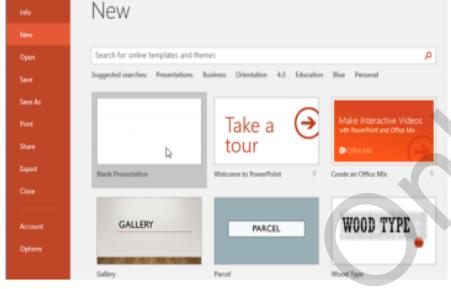
### Instructions to the Trainer(s):

- Using Slide 15, explain the concept of organizing slides in PowerPoint.
- PowerPoint has the feature to organize slides as per the requirement.
- Users can rearrange the slides, duplicate, and delete slides from the presentation.
- PowerPoint also allows to organize slides into sections and manage them.

- Using Slide 16, discuss different ways to organize Slides.
- Organizing slides includes:
  - Moving the slide
  - Copy slide Command
  - Putting the Copied slide
- To change the slide order, students can follow the steps:
  - If the slides you want to move around are next to each other, you can “drag and drop” them in the Normal View.
  - Click on the small image of the slide in the left column, and drag it where you want it to be.
  - When you see the horizontal line, let go, and the slides will change places.

## 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



The screenshot shows the Microsoft PowerPoint 'New' screen. On the left is a vertical red sidebar with options: Info, New (highlighted), Open, Save As, Print, Share, Export, Close, Account, and Options. The main area has a search bar at the top. Below it are 'Suggested searches' for Presentations, Business, Orientation, 4:3, Education, Blue, and Personal. There are four large preview cards: 'Blank Presentation' (selected), 'Welcome to PowerPoint', 'Create an Office Mix', and 'WOOD TYPE'. A 'Take a tour' button with a red arrow is visible. At the bottom, there are links for 'Gallery', 'Parcel', and 'Wood Type'. A caption below the screenshot reads 'Selecting Blank Presentation'.

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**Instructions to the Trainer(s):**

- Using Slide 17, explain that students will learn to create PowerPoint slides.

## Slide 18

### 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.

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### Instructions to the Trainer(s):

- Show students Slide 18.
- Summarize the session by reading out each point on the Slide.

# Session 11: Understanding Microsoft PowerPoint 2019-II

## 11.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 11.1.1 Teaching Skills

To teach this session, you should be well versed with animations, zoom capabilities, and transition features.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**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

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### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 11.2 In-Class Explanations

Slide 3

### 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

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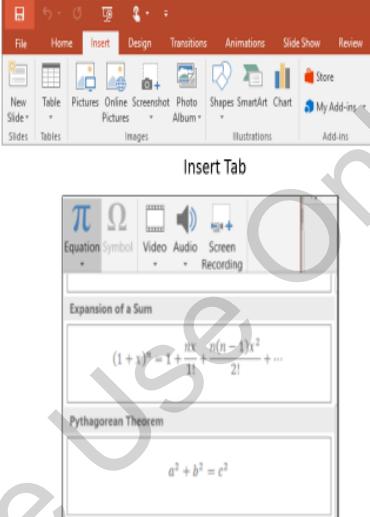
3

#### Instructions to the Trainer(s):

- Using Slide 3, introduce the Ribbon and Home tab of PowerPoint 2019 to students.
- In Microsoft PowerPoint, the Home tab gives access to the most commonly used commands and is used to perform many common tasks such as changing fonts, cutting, and pasting text and adding images into presentations, changing paragraph formats, and drawing objects.
- The main commands are arranged in groups on the Home tab: Clipboard, Slides, Font, Paragraph, Drawing, and Editing.
- When users copy an item from within PowerPoint or another application, the item is stored temporarily on a Clipboard. In PowerPoint 2019, the Clipboard can hold up to 24 items at the same time. This means that you can copy one item after another and then, paste them when they are required.

## 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

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4

Inserting Equations

### Instructions to the Trainer(s):

- Using Slide 4, explain the Insert tab in MS PowerPoint 2019.
- Having only text or images on slides can make presentations monotonous. To deliver a modern-day presentation rich in multimedia, one can add audio, video, 3D shapes, and more.
- The Insert tab contains commands for various items that you may want to insert into a document.
- These items include tables, WordArt, 3D shapes, charts, audio, video, signature line, date and time, shapes, equations, and so on.
- Besides these, one of the new items that users can insert from PowerPoint 2019 onwards is Zoom slides. The Zoom feature is new to PowerPoint 2019. Using the Insert tab and Zoom drop-down, users can insert a summary zoom, section zoom, or slide zoom.

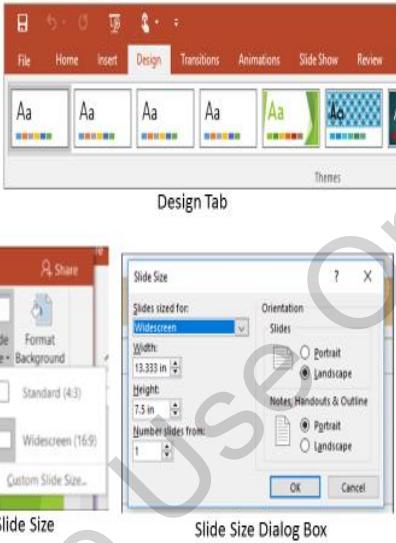
For more information on Insert tab, refer to:

<https://my-expriences.blogspot.com/2019/04/ms-powerpoint-insert-tab.html>

[https://www8.sunydutchess.edu/tlc\\_web/pdf/Insert\\_Tab.pdf](https://www8.sunydutchess.edu/tlc_web/pdf/Insert_Tab.pdf)

### 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

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#### **Instructions to the Trainer(s):**

- Using Slide 5, discuss the Design tab in PowerPoint 2019.
- Tell students that Design tab is used to apply a design to a PowerPoint presentation. It is also possible to make changes to the slide size, slide background, and other design attributes using commands in this tab.
- Design templates called as Themes contain color schemes, slide, and title masters with custom formatting, and styled fonts designed for a particular 'look' are available through the Design tab.
- On the Design tab, the user can add themes or color scheme, or change the background format. Themes applied to a document provides a professional look to the document.

#### **In-Class Question:**

**Question:** What are different items included in Insert tab?

**Answer:** The Insert tab includes commands to add tables, WordArt, 3D shapes, charts, audio, video, signature line, date and time, shapes, equations, and more.

## 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

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### Instructions to the Trainer(s):

- Using Slide 6, explain to students about transitions and animations in PowerPoint 2019.
- Explain the definition of transition as given on Slide 6.
- Tell students that transitions and animations are added to make presentations more dynamic and lively. Audiences are more engaged with visually appealing presentations than boring ones.
- A transition can be as simple as fading to the next slide or as flashy as an eye-catching effect. PowerPoint has special effects which makes it easy to apply transitions thus, giving a professional look. Animation effects are applied to objects on a slide.
- Transitions are classified into three categories:
  - Subtle, Exciting, and Dynamic.

### Use of Transitions:

- Transitions are used to make presentations more dynamic by providing special effects during movement.

### Use of Animations:

- Animations can help make a PowerPoint presentation dynamic by providing special effects to objects on slides.

## 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

### **Instructions to the Trainer(s):**

- Using Slide 7, explain to students about reviewing and viewing presentations in PowerPoint.
- Reviewing is a mechanism that helps to remove unwanted errors and improve the presentation. Errors can be grammatical mistakes, spelling errors, repetition of data, and so on.
- Give students an example scenario to understand this. A person named Peter has created a presentation. His boss James checks the presentation and finds several mistakes in it. He then suggests corrections and modifications to be made to improve the presentation. This is the process of reviewing.
- In the example given earlier, when Peter receives the reviewed presentation, he can view the comments given by his boss and make changes accordingly.
- Views in PowerPoint that can be used by users while making modifications to a presentation are as follows:
  - Normal view
  - Slide Sorter view
  - Notes Page view
  - Slide Show view
  - Presenter view

## 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



Comments

New

m 1 minute ago Change the color of hyperlinks

Reply...

Typing Comment

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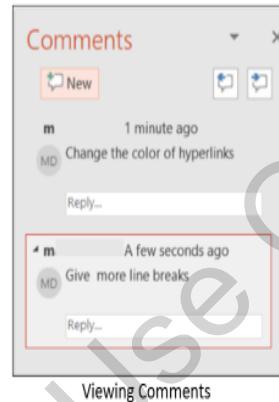
8

### Instructions to the Trainer(s):

- Using Slide 8, explain students how to add a review comment in PowerPoint.
- MS PowerPoint allows users to add comments to slides on a PowerPoint that can be referred to whenever they want.
- Comments are considered as feedback from the reviewer's end. Adding comments to a presentation helps the author of a presentation to understand errors/mistakes caused.
- Slide 8 displays steps to add a comment:
  - Select the text or object to add a comment on a slide.
  - Click anywhere on the slide to add a general comment about a slide.
  - Click the New comment option in the Comments group on the Review tab.

## 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



### **Instructions to the Trainer(s):**

- Using Slide 9, explain students how to view comments in MS PowerPoint 2019.
- Tell the students that they can view or reply to any comment.
- Steps to view and reply to comments:
  - Go to the comment icon on the slide. The Comments pane will open and you can see comments mentioned for that slide.
  - Go to the comment icon or click the Show Comments command on the Review tab.

The slide has a green header bar with the title 'Editing Comment'. Below the title is a text block: 'A comment can be edited after being saved. A new comment box is not required to edit the comments.' Two callout boxes are positioned below the text: a yellow box containing 'Step 1 – Select the comment to be edited in the Comments pane.' and an orange box containing 'Step 2 – Type the desired changes, then press Enter or click anywhere outside the comment box. The changes will be applied.' The slide footer contains the text 'Inside Microsoft Office', '© Aptech Limited', and the number '10'.

**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.

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**Instructions to the Trainer(s):**

- Using Slide 10, explain how comments can be edited in MS PowerPoint 2019.
- Comments are provided by the reviewer when they find some error/problem in the document shared. Comments help to modify the data and understand the errors caused.
- Users can edit comments on the Comments tab for moderation purposes.
- Steps to edit a comment are as follows:
  - Select the comment to edit in the Comment pane.
  - Type the desired changes.

## 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

The screenshot shows the Microsoft PowerPoint interface. On the left, a 'Revisions' pane is open under the 'Review' tab, displaying 'Slide Changes' and 'Presentation Changes'. The 'Slide Changes' section lists modifications like 'Google Shape:69:p14: EDIT IN POWERPOINT' and 'Google Shape:70:p14: EDIT IN GOOGLE SLIDES'. The 'Presentation Changes' section lists changes to slide properties, slide 1, theme, and slides 11 and 12. On the right, the ribbon is visible with the 'Review' tab selected. Below the ribbon, the 'Compare Option' dropdown is open, showing options like 'New', 'Delete', 'Previous', 'Next', 'Show Comments', 'Comments', 'Accept', 'Reject', and 'Compare'.

Reviewing Pane Showing Comparison Notes

powerpoint2016\_reviewing\_practice - PowerPoint

Revisions Animations Slide Show Review View Tell me what you want to do

New Delete Previous Next Show Comments Comments Accept Reject Compare

Compare Option

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### Instructions to the Trainer(s):

- Using Slide 11, explain to students that they will learn how to compare presentations.
- Give them a scenario to understand the necessity for comparing presentations. A person named Mark has created a presentation. His coworker Sarah has taken the same presentation and made some modifications. Now, Mark wants to see what are the changes that Sarah has made. To view the changes, Mark can make use of the Compare feature in PowerPoint.
- Two or more presentations can be compared to review and differentiate, if there are versions of similar presentations or same presentation has been received from various sources.
- The Revision pane allows users to compare the presentations.
- The Compare tab as shown in Slide 11 can be used to compare presentations.

## 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.

The image shows a Microsoft PowerPoint slide titled "Zoom Capabilities for Ordering of Slides within Presentations". Below the title is a bulleted list of three points. To the right of the list are two screenshots: one showing the "Insert Zoom Feature" ribbon tab and another showing the "Insert Slide Zoom" dialog box. The "Insert Slide Zoom" dialog box displays a grid of thumbnail images of various slides with checkboxes next to them, indicating they can be selected for a zoomed-in view during a presentation.

Types of Zoom

Insert Zoom Feature

Insert Slide Zoom

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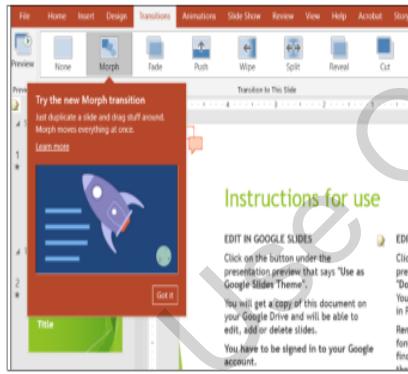
12

### **Instructions to the Trainer(s):**

- Using Slide 12, explain to students how one can use zoom capabilities to order slides in specific sequence.
- Tell students that through Zoom feature in PowerPoint, you can jump to and from specific slides, sections, and portions of your presentation. You can arrange slide sequence using the Zoom feature.
- Sections of slides can be created for navigation purposes.
- There are three different ways you can zoom in on a PowerPoint presentation:
  - Summary zoom
  - Section zoom
  - 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.



The screenshot shows the Microsoft PowerPoint ribbon with the 'Transitions' tab selected. A tooltip window titled 'Try the new Morph transition' is displayed, explaining that it allows users to duplicate a slide and drag stuff around, with the note 'Morph moves everything at once.' Below the ribbon, a preview window shows a slide with a rocket ship and text, and a 'Get it' button. To the right, there is a section titled 'Instructions for use' with instructions for editing in Google Slides, including steps to click the 'Use as Google Slides Theme' button and sign in to a Google account. The bottom left corner of the slide contains the text 'Inside Microsoft Office' and the bottom right corner contains the number '13'.

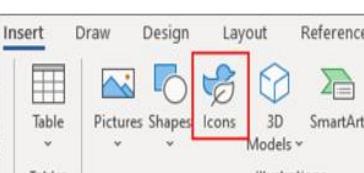
### Instructions to the Trainer(s):

- Using Slide 13, explain that students will learn about morph transition feature in MS PowerPoint 2019.
- PowerPoint Morph allows to transition slides by morphing, which means to change the from or shape.
- Morph enables to animate smooth movement from one slide to the other.
- Morphing transition is a feature that is introduced in PowerPoint 2019. You can use this feature to animate text, shapes, pictures, SmartArt, WordArt, and charts.

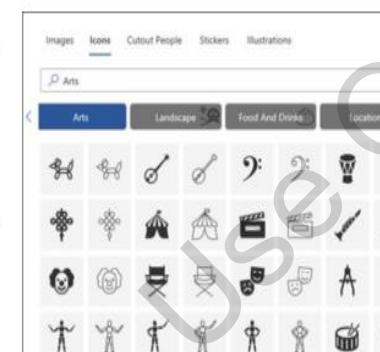
# Inserting Icons, SVG, and 3D models

## 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

### **Instructions to the Trainer(s):**

- Using Slide 14, explain to students about inserting icons, Scalable Vector Graphic (SVG), and 3D models into slides.
  - PowerPoint 2019 makes it fast and easy to add built-in icons and 3D models.
  - Icons can be defined as the small graphic representations. They are simple to use and understand.
  - Icons are scalable with vector graphics.
  - MS PowerPoint allows users to insert and edit SVG images in presentations to create sharp, well-designed content. The color and size of each component can be customized based on the user's requirements.

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 15.
- Summarize the session by reading out each point on the slide.

## **Session 12: Understanding Microsoft OneNote 2019**

### **12.1 Pre-Class Activities**

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

#### **12.1.1 Teaching Skills**

To teach this session, you should be well versed with the tools and features of MS OneNote 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

#### **In-Class Activities**

Follow the order given here during In-Class activities.

Slide 2

**Objectives**

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

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#### **Instructions to the Trainer(s):**

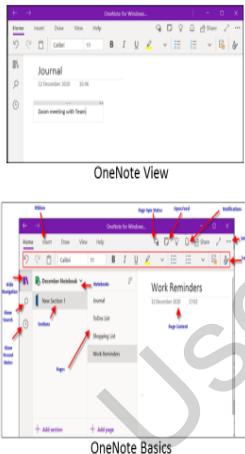
Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 12.2 In-Class Explanations

Slides 3 and 4

### 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

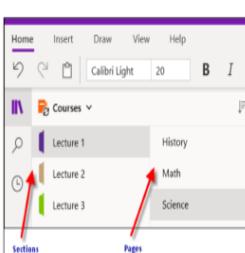


OneNote Basics

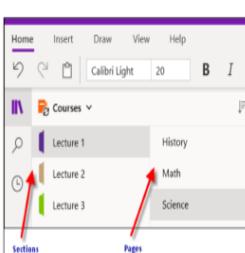
Inside Microsoft Office © Aptech Limited 3

### 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



Sections Pages

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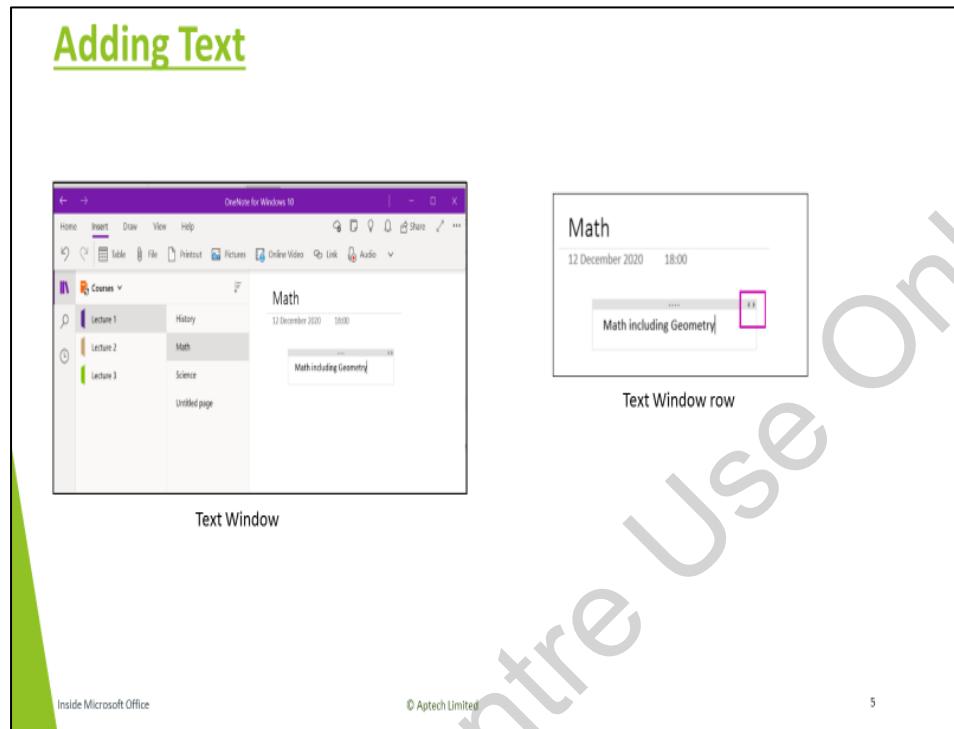
#### Instructions to the Trainer(s):

- Using Slide 3, introduce the Microsoft OneNote 2019 to students.
- Tell students that OneNote is a tiered organizational system which consists of online notebooks, sections, and notes.

- The advantage of Online notebooks is that they can be available anytime which help users to access whenever they want, without requiring to maintain physical notes.
- OneNote makes notebooks available after one has created a free Microsoft account. It makes it possible for users to highlight, draw, enter text, and zoom in the content.
- OneNote automatically saves changes with the data in the notebooks.
- Using Slide 4, explain to students that they will learn various functions of MS OneNote 2019.
- OneNote is a digital note-taking app that allows users to share notes and make modifications such as edit, add, delete, upgrade, and so on.
- Some of the functions of MS OneNote 2019 are as follows:
  - It helps to store users' notes, drawings, screen clippings, and audio commentaries.
  - Notes can be shared with other OneNote users over the Internet or a network.

For more information, refer to:

<https://www.pcworld.com/article/2686026/microsoft-onenote-for-beginners-everything-you-need-to-know.html>



**Instructions to the Trainer(s):**

- Using Slide 5, discuss about how text can be added in MS OneNote 2019.
- OneNote allows users to add text. Steps for adding text in OneNote are as follows:
  - Type anywhere on the page and click the area you want to type.
  - There is no specific rule to type/enter the text.
- MS OneNote 2019 also allows user to format text, change font type and size, color, highlight text, and so on.

## Slide 6

### Adding Links

The screenshot illustrates the steps to add a link in Microsoft OneNote 2019. It consists of two side-by-side windows:

- Text Window with Link option:** This window shows the OneNote ribbon with the "Insert" tab selected. A red box highlights the "Link" button in the "Links" group. The main pane displays a notebook page titled "Math" with sections for "History", "Math", "Science", and "Untitled page".
- Link Inserted in a Page:** This window shows the same notebook page after a link has been added. The word "Geometry" in the "Math" section is now blue and underlined, indicating it is a hyperlink.

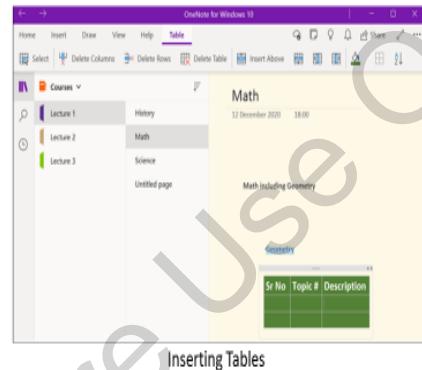
Below the windows, the text "Inside Microsoft Office" and "© Aptech Limited" are visible, along with a small number "6".

#### Instructions to the Trainer(s):

- Using Slide 6, explain to students how links can be added in MS OneNote 2019.
- Besides adding text in MS OneNote, users can also add links. OneNote allows users to add hyperlinks within notebooks, pages, or sections of a notebook.
- To create links in notebook, following steps must be considered:
  - First highlight the text you want to turn into a link.
  - Then, click **Insert** tab in the Ribbon and click **Link** under **Links** group.

## 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.



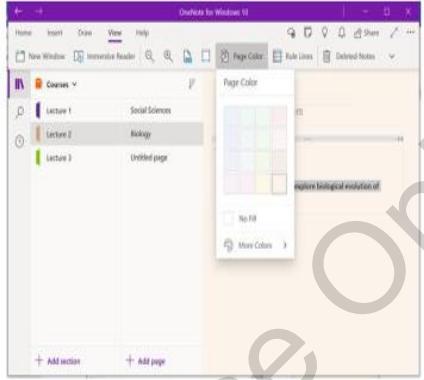
Inserting Tables

### Instructions to the Trainer(s):

- Using Slide 7, explain students how tables can be added in MS OneNote 2019.
- Tables are a great way to organize information on your pages. Tables consist of rows and columns, where data can be added, deleted, or modified depending on the users' requirement.
- In order to insert tables in MS OneNote 2019, you can use the table-related commands on the Ribbon to format the table and perform sorting on the table.
- Tables can be sorted alphabetically or numerically.
- Steps to sort a table are as follows:
  - Click any cell in your table.
  - Click Table tab, then, click Sort.
  - To exclude the tables header row (first row) from being sorted, click to select **Include Header**.
  - Click either **Sort Ascending** or **Sort Descending**.

## 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

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### **Instructions to the Trainer(s):**

- Using Slide 8, explain students how to add designs to new pages in OneNote.
- OneNote has a wide variety of page templates that you can use with your notebooks.
- A OneNote template is a page design that you can apply to new pages in your notebook to give an appealing background, more uniform appearance, or a consistent layout. Attractive and pleasing templates add visual appeal.
- Page templates offer preset layouts and formatting to help create better and uniform notes.

## Adding Guides for Handwriting and Drawing



The image contains two side-by-side screenshots of the Microsoft OneNote application. Both screenshots show a white page with the handwritten text "Nothing STOPS" written in green and pink ink. The top screenshot is labeled "Handwritten Text" and the bottom one is labeled "Ink to Text". Above each screenshot is a ribbon menu bar with various drawing tools. A vertical green bar is visible on the left edge of the slide.

▶ 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.

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### Instructions to the Trainer(s):

- Using Slide 9, explain students how guides are added for handwriting and drawing in MS OneNote 2019.
- OneNote allows users to include handwritten notes instead of typing. It also allows to capture ideas with drawing and handwriting, which saves time for the user.
- Another advantage of OneNote is that it can convert handwritten notes into text.
- Steps for handwriting and drawing are as follows:
  - Click View on the Ribbon.
  - Click Rule Lines.
  - Click any style on the menu and select it.

## 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.

The image contains two side-by-side screenshots of the Microsoft OneNote application interface. The left screenshot, titled 'Copying Link to Notebook', shows a context menu open over a section header 'New Section 1' in the 'December Notebook'. The menu includes options like 'Nickname Notebook', 'Sync', 'Close This Notebook', 'Notebook Colour', 'Copy Link to Notebook' (which is highlighted with a red box), 'Pin Notebook to Start', and 'View Deleted Notes'. The right screenshot, titled 'Pasting Link to Notebook', shows a context menu open over a section header 'Next Entry' in the 'November Notebook'. The menu includes options like 'Callout', 'B', 'A', 'V', 'Copy', 'Paste', 'Delete', and 'Pin Notebook'. A red box highlights the 'Paste' option in the menu. Both screenshots show the OneNote ribbon at the top with tabs like Home, Insert, Draw, View, Help, etc.

Copying Link to Notebook

Pasting Link to Notebook

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10

### Instructions to the Trainer(s):

- Using Slide 10, explain students how to create links in notebooks.
- MS OneNote allows users to add data and links online.
- Links provided are useful since users can just click and get access to the desired page easily, rather than searching the content online.
- Tables can be easily created in MS OneNote and tabular content can be added inside them. Tables are a neat way to represent grouped data.
- Slide 10 displays how links can be copied and pasted in 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.

The image shows two screenshots of Microsoft OneNote 2019. The left screenshot, titled 'Tagging a Note', shows a context menu open over a note titled 'Biological Evolution'. The menu includes options like 'Cut', 'Copy', and 'Tag Note'. The right screenshot, titled 'Search for Tagged Notes', shows a search results page for the tag 'Important'. It lists a single note titled 'Biological Evolution' under the 'Biology' notebook. The search bar at the top contains the text 'Important'.

Tagging a Note

Search for Tagged Notes

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### Instructions to the Trainer(s):

- Using Slide 11, students will learn to tag notes in MS OneNote 2019.
- Tags are a way to categorize and prioritize notes in OneNote. Tags provide more structure to your notes.
- By using tags, users can quickly return to important items, set reminder about action items, or filter notes that they would want to share with their team-members.

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

Supported Arithmetic Operators

### Instructions to the Trainer(s):

- Using Slide 12, explain students how calculations can be performed in MS OneNote 2019.
- OneNote is a great tool for taking notes, keeping outlines, and more. One less-known OneNote feature is its ability to solve math problems.
- OneNote has built-in basic calculations, formulas, and symbols. Math equations can be jotted during a meeting, conference, or class.
- There are certain tips that must be followed:
  - Avoid spaces in equations. Type out numbers, operations, and functions.
  - Function codes are not case-sensitive.
  - To create a new line after the equation result, press Enter after the equal sign.

For more information, refer to:

<https://support.microsoft.com/en-us/office/solve-math-equations-with-math-assistant-in-onenote-1b37bb8d-ecd1-40d7-8d0f-5e6e46547441>

## New Features in OneNote for Windows 10

The slide contains seven bullet points, each with a colored box and a corresponding description:

- 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.

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### Instructions to the Trainer(s):

- Using Slide 13, explain students new features in OneNote.
- OneNote enables collaboration in real-time.
- Notebooks can be shared for viewing or editing and as OneNote automatically saves as you work, multiple users can collaborate at the same time.
- New features in OneNote for Windows 10 are as follows:
  - View a feed of all your notes.
  - Use Dark Mode.
  - Improved printouts of Office files.
  - Improved Print to OneNote.
  - Search for text phrases.
  - Easily upload and insert cloud files.
  - Edit and use embedded file attachments.

### In-Class Question:

**Question:** What is a less-known feature of OneNote?

**Answer:** OneNote provides help to solve math problems easily.

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 14.
- Summarize the session by reading out each point on the slide.

# Session 13: Using Microsoft Outlook 2019

## 13.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 13.1.1 Teaching Skills

To teach this session, you should be well versed with the functions and new features of MS Outlook 2019.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**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

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### Instructions to the Trainer(s):

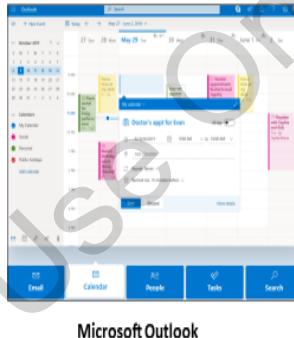
Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 13.2 In-Class Explanations

Slide 3

### Getting Started with Microsoft Outlook

- ▶ Primarily an email client application
- ▶ A part of Microsoft Office suite of applications that helps users in following functions, besides sending and receiving emails:
  - Manage calendars and meetings
  - Maintain contacts
  - Set reminders for tasks



Microsoft Outlook

Inside Microsoft Office

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#### Instructions to the Trainer(s):

- Using Slide 3, introduce the Microsoft Outlook 2019 to students.
- Tell students that today they may be familiar with email applications such as Gmail, Hotmail, and so on. However, long before Gmail arrived, there used to be an email client program from Microsoft named Outlook. The early versions of Outlook were quite different in appearance and functionality from present day Outlook. With time, Outlook has evolved to become a sophisticated personal manager application. It is available as part of the Microsoft Office suite.
- Outlook is primarily an email client application. Besides sending and receiving emails, Outlook can also help to:
  - Manage calendar and events
  - Schedule and organize meetings
  - Maintain contacts
  - Set reminders for tasks and events
  - Enable to create notes and journals

## Slides 4 and 5

### Organizing Emails [1-2]

► Primary and main function of Microsoft Outlook is to:

- Send emails
- Receive emails
- Manage emails

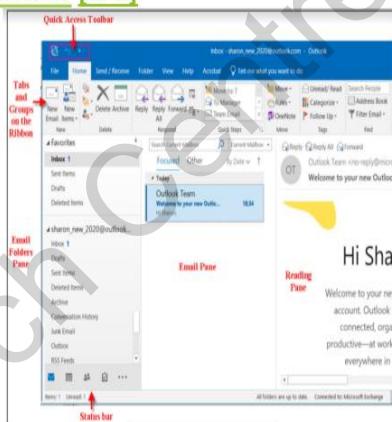


Outlook in the Start menu      Outlook 2019 Window

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4

### Organizing Emails [2-2]



Quick Access Toolbar  
Tabs and Groups on the Ribbon  
Email Folders Pane  
Status bar

Outlook 2019 User Interface

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5

### Instructions to the Trainer(s):

- Using Slides 4 and 5, explain students the process of organizing emails in Outlook 2019.
- Outlook allows to create a structure of folders for organizing emails.
- Bring out the necessity for having folder structure to organize and maintain emails. Give an example scenario. Suppose Cathy Newman is an employee of a large global organization and uses Outlook 2019 as her email client. She receives hundreds of official emails every week. Some of these are specifically from regionwise heads. By categorizing her emails into regionwise folders, she can look for specific mails easily and quickly.

- Outlook allows users to perform following tasks:
  - Create Folders
  - Copy a Folder
  - Archive Folders
  - Move emails into specific folders

For more information, refer to:

<https://support.microsoft.com/en-us/office/organize-your-inbox-9aea8ad7-883d-459b-a3ea-ae20f06cfb32>

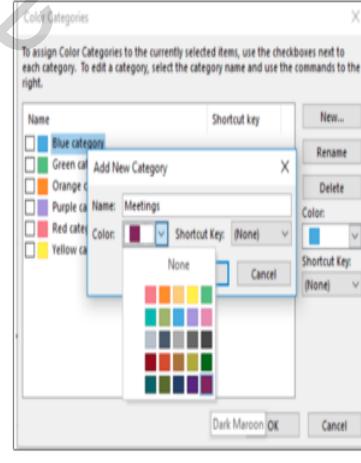
<https://business.tutsplus.com/tutorials/how-to-organize-your-outlook-email--cms-30357>

<https://www.cedarville.edu/insights/computer-help/post/create-and-manage-folders-in-outlook>

Slide 6

## 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

### Instructions to the Trainer(s):

- Using Slide 6, explain students the use of categories in Outlook 2019.
- Tell students that categories are used to organize emails so that they are easier to find, whenever required.
- Outlook provides six categories by default, that can be renamed. The six categories are according to the colors.

- Categories also help in applying color to items in your Mail, Calendar, People, Tasks, and Notes.
- Color categories allow you to easily identify and group associated items in Outlook.

**In-Class Question:**

**Question:** How many categories are provided by Outlook 2019?

**Answer:** Outlook 2019 provides six categories.

Slide 7

## 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

All Unread Mentions By Date Newest < Today

weekly meeting

Current Mailbox

Current Folder Subfolders Current Mailbox All Mailboxes All Outlook Items

< Two Weeks Ago

Current Mailbox Drop-down list

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**Instructions to the Trainer(s):**

- Using Slide 7, explain students how to search mails in Outlook.
- Tell students that search is a powerful tool which is used to find email messages anywhere in Outlook.
- 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.

For more information, refer to:

<https://kb.wisc.edu/office365/page.php?id=52402>

<https://redmondmag.com/articles/2020/05/05/outlook-search-hacks.aspx>

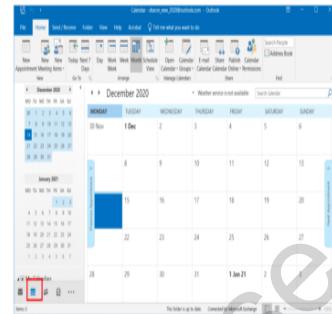
<https://www.online-tech-tips.com/ms-office-tips/search-outlook-email/>

## Slides 8 and 9

### 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

Inside Microsoft Office

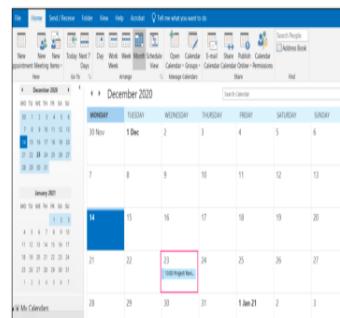
© Aptech Limited

8

### 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

Inside Microsoft Office

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9

### Instructions to the Trainer(s):

- Using Slide 8, explain students how to use Calendar in Outlook 2019.
- Outlook provides powerful scheduling features using the Calendar functionality.
- The Calendar functionality allows users to do the following:
  - Create appointments and events.
  - Organize meetings.

- View group schedules.
- Using Slide 9, explain students how to use Calendar in Outlook 2019.
- Outlook Calendar is an excellent tool for maintaining and scheduling meetings, activities, events, and tasks.
- Calendar of Outlook allows users to view their schedule in the following ways:
- Today
  - Next Seven Days
  - Day
  - Work Week
  - Week
  - Month

**In-Class Question:**

**Question:** What is the purpose of a calendar in Outlook 2019?

**Answer:** Calendar in Outlook 2019 helps to view and schedule important meetings and manage them.

Slides 10 and 11

### 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.

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## 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.

### Instructions to the Trainer(s):

- Using Slides 10 and 11, explain the new features in Outlook 2019.
- New features such as improved accessibility, focused inbox, visual impact, viewing three time zones, and listening to emails via audio are provided by Outlook 2019.
- Outlook also provides users with following features:
  - Scheduling emails
  - Create new meetings, appointments, tasks, and contacts from one window
  - Sharing calendars
  - Effective Task management
  - To mark emails as read when deleting
  - Never miss a reminder
  - Email sorting made easy
  - Knowing who you will meet with
  - Automatic download of cloud attachments

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 12.
- Summarize the session by reading out each point on the slide.

# Session 14: Skype, Skype for Business, and Microsoft Teams

## 14.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 14.1.1 Teaching Skills

To teach this session, you should be well versed with features of Skype, Skype for Business, and Microsoft Teams. You should also be able to communicate and collaborate using Skype.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

## In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

**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

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### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 14.2 In-Class Explanations

Slide 3

### 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.



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### Instructions to the Trainer(s):

- Using Slide 3, introduce the Microsoft Skype to students.
- Microsoft Skype is an instant messaging communication application that allows users to interact with each other, typically in an organizational setup.
- Skype also has video-conferencing, Instant Messaging (IM), file transfer, debit-based calls to landline and mobile phones, and other features.
- 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.

For more information on Skype, refer to:

<https://en.wikipedia.org/wiki/Skype>

<https://apps.apple.com/us/app/skype-for-iphone/id304878510>

## Features of Skype

<b>Audio and HD video calling</b>	Audio and HD video calls in one to one or group calls with users on Skype
<b>Smart Messaging</b>	Reacting to any message with cool reactions or using @ mentions to grab attention of other users during communication
<b>Screen sharing</b>	Sharing presentations, photos, or anything else on your screen during a call through integrated screen sharing
<b>Phone calls</b>	Reaching friends or acquaintances across the world who are not online with affordable international calling rates to mobiles and landlines.
<b>Call recording with live subtitles</b>	Recording Skype calls to capture special moments and meetings, and using live subtitles to read words that are spoken

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### **Instructions to the Trainer(s):**

- Using Slide 4, explain students the features of Skype.
- Skype offers a number of features based around calling (both free and paid), messaging video chat, and file and screen sharing.
- Features of Skype are as follows:
  - Audio and HD video calling
  - Smart Messaging
  - Screen sharing
  - Phone calls
  - Call recording with live subtitles

For more information, refer to:

[https://en.wikipedia.org/wiki/Features\\_of\\_Skype](https://en.wikipedia.org/wiki/Features_of_Skype)

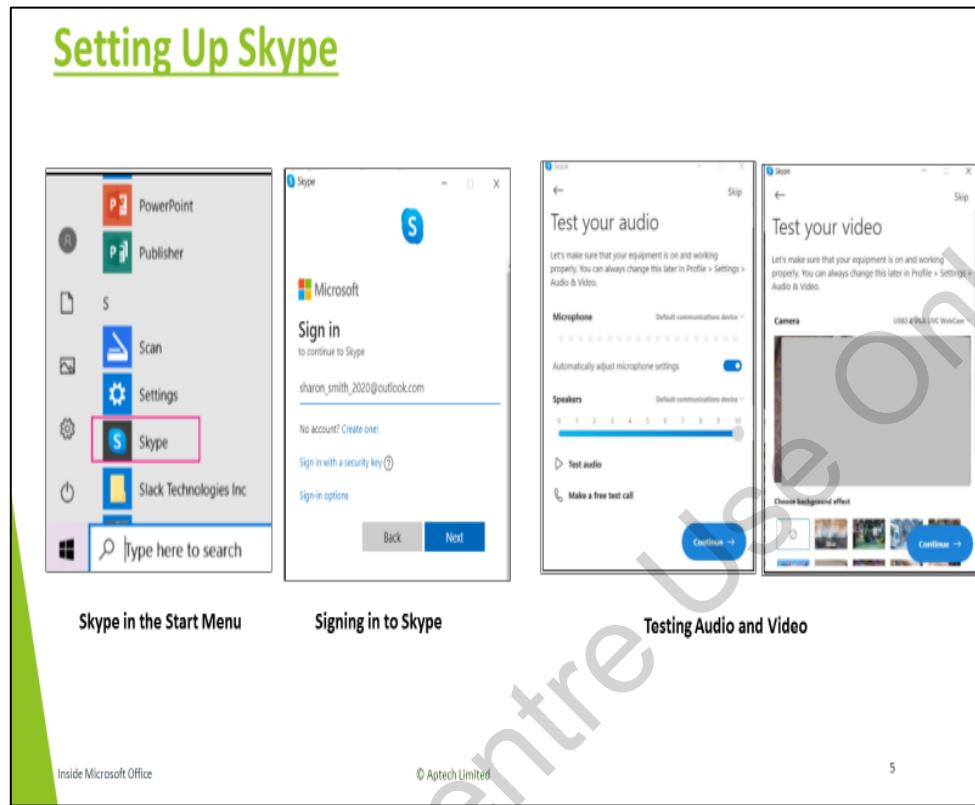
<https://www.xcellhost.cloud/blog/top-10-features-skype-business-makes-ideal-solution>

### **In-Class Question:**

**Question:** What is Skype used for?

**Answer:** Skype allows users to perform instant messaging, audio, and video conferences and calls.

## Slide 5



### Instructions to the Trainer(s):

- Using Slide 5, explain students how the setup can be done for Skype.
- Skype can be used on a computer, mobile phone, or tablet. If both users are using Skype, the call is completely free. Users only require to pay when they are using premium features such as voice mail, SMS texts or making calls to a landline, cell, or outside of Skype, otherwise it is free.
- In order to set up Skype on your system, you must follow basic steps:
  - Download Skype
  - Extra installation options
  - Sign in or sign up
  - Test sound and video

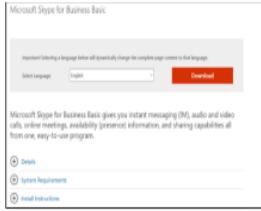
For more information, refer to:

<https://www.wikihow.com/Set-up-a-Skype-Account>

<https://www.dummies.com/education/internet-basics/how-to-download-and-install-skype/>

## 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



Microsoft Skype for Business Basic

Select language: English

Microsoft Skype for Business Basic gives you instant messaging (IM), audio and video calls, online meetings, availability (presence) information, and sharing capabilities all from one, easy-to-use program.

① Details  
② System Requirements  
③ Install Instructions



Skype for Business

Sign in

Sign-in address:

Change Use the sign-in address for your organization. Enter a Skype Name or Microsoft account.

Learn More

Password:

Save my password

Sign in as:  Available  Busy  Away

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### Instructions to the Trainer(s):

- Using Slide 6, explain students the Skype for Business.
- Skype for Business, formerly known as Microsoft Lync Server, is a product similar to Skype, but exclusively for use with co-workers and enterprises.
- Similar to Skype, it offers features such as presence, Instant Messaging (IM), audio and video calls, and online meetings.
- Skype for Business lets you add up to 250 people to online meetings, provides enterprise-grade security, allows you to manage employee accounts, and is integrated into your Office apps.
- Skype for Business has a minimum set of features, they are as follows:
  - Availability information
  - Sharing capabilities

## 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

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

Skype Statuses

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**Instructions to the Trainer(s):**

- Using Slide 7, discuss the understanding for 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 allows enterprise users to communicate through text chat, voice calls, video calls, and online meetings.
- Skype Status can be one of these:
  - Available
  - In a meeting
  - Busy
  - Offline
  - Away
  - In a call
  - In a conference call

For more information, refer to:

<https://support.skype.com/en/faq/FA34551/what-s-the-difference-between-skype-microsoft-teams-and-skype-for-business>  
<https://technology.ku.edu/skype-for-business-faqs>

## Slides 8 to 11

### 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**

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### 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

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## 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.

### Instructions to the Trainer(s):

- Using Slides 8 to 11, explain to students in detail about Microsoft Teams.
- Microsoft Teams is a business messaging and collaboration process which lets you host audio, video, and Web conference with anyone inside or outside your organization. It enables your team to stay organized and collaborate.
- Teams is replacing existing Microsoft-operated business messaging and collaboration platforms, including Skype For Business and Microsoft Classroom.

- Following are features of Microsoft Teams:
  - **Messaging:** There are two types of Messaging in Teams namely, Peer-to-peer Chat and Group Chat.
  - **Meetings:** These are very different to meetings in Skype for Business. Users can schedule a meeting from within a chat, a Team, or the meetings app inside Team.
  - **Video/Audio Calls:** Voice in Microsoft Teams is also a little different from Skype for Business.
- Organization-wide teams can perform several actions:
  - Permit only team owners to submit posts in the General channel
  - Switch off @**(team name)** and @**(team name)** mentions
  - Automatically set favorite important channels
  - Remove accounts that might not belong
- Microsoft Teams is enabled for most organizations using Microsoft Office and consists of following features:
  - Built-in translator
  - Meeting Whiteboards
  - Renaming channels and limiting emoji usage
  - Immersive reader
  - Notify when available
- Microsoft Teams provide users with new features that would enhance communication and give desired results.
- New features of Microsoft Teams include:
  - Blurred background
  - Microsoft Live Events
  - Out-of-the-box analytics
  - Intelligent BOT Framework
  - Direct access to SharePoint, OneDrive, Skype, and Outlook
  - Secure Collaboration

**In-Class Question:**

**Question:** What is Microsoft Teams?

**Answer:** A chat and collaboration platform for Microsoft Office customers designed to simplify group work.

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 12.
- Summarize the session by reading out each point on the slide.

# Session 15: Using Microsoft OneDrive 2019

## 15.1 Pre-Class Activities

Before you commence the session, you should familiarize yourself with the topics of this session in-depth. Prepare a question or two that will be a key point to relate the current session objectives.

### 15.1.1 Teaching Skills

To teach this session, you should be well versed with OneDrive, process of syncing Online OneDrive content, and UI and collaboration of OneDrive.

You should teach the concepts in the theory class using the images provided. For teaching in the class, you are expected to use slides and LCD projectors.

### In-Class Activities

Follow the order given here during In-Class activities.

Slide 2

The slide has a white background with a decorative green and yellow geometric pattern on the right side. At the top left, the word 'Objectives' is written in green. Below it is a bulleted list of five items, each preceded by a green triangle:

- ▶ 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.

At the bottom of the slide, there are three small pieces of text: 'Inside Microsoft Office', '© Aptech Limited', and '© Aptech Limited'.

### Instructions to the Trainer(s):

Give students a brief overview of the current session through the session objectives listed in Slide 2.

## 15.2 In-Class Explanations

Slide 3

### 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

Inside Microsoft Office

© Aptech Limited

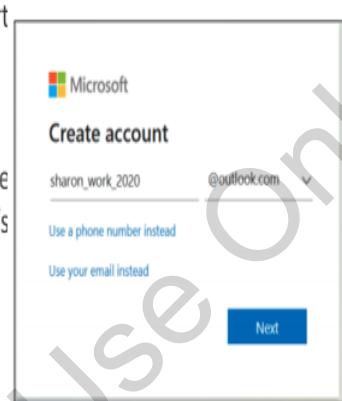
3

#### Instructions to the Trainer(s):

- Using Slide 3, discuss with students about Microsoft OneDrive 2019.
- Microsoft OneDrive (formerly SkyDrive) is a file hosting service and synchronization service operated by Microsoft as part of its Web version of Office.
- OneDrive for Business is the secure cloud storage app for Microsoft 365.
- OneDrive allows users to do the following:
  - Share files, collaborate anywhere, and protect your business documents.
- OneDrive can utilize Files On-Demand, where files synchronized with OneDrive show up in file listings, but do not require any disk space.
- OneDrive can be used as follows:
  - Simple storage location for files and documents.
  - Collaboration tool.

## 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.



Microsoft  
Create account  
sharon\_work\_2020 @outlook.com  
Use a phone number instead  
Use your email instead  
Next

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Signing into MS OneDrive

### Instructions to the Trainer(s):

- Using Slide 4, explain to students about signing-in process to Microsoft OneDrive 2019.
- Users can access OneDrive either through the Start menu or login to the Web version of OneDrive.
- OneDrive can be used by individuals to store their data on the cloud or can be used in organizations, where employees sign in to OneDrive using their organization's username and password.
- Following are steps users can use to sign-in into Microsoft OneDrive via the Web:
  - Go to onedrive.com and select Sign in at the top of the page.
  - Enter your Microsoft account (email address) and select Next.
  - Type your password and select Sign In.

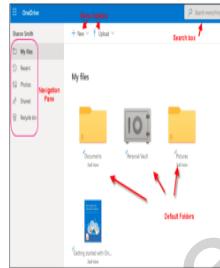
For more information, refer to:

<https://support.microsoft.com/en-us/office/sign-in-to-onedrive-in-android-babc9692-fb53-40b4-8b24-6b83ff95455e>

## 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

Inside Microsoft Office © Aptech Limited 5

## 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

Inside Microsoft Office © Aptech Limited 6

### **Instructions to the Trainer(s):**

- Using Slide 5, explain students the understanding of OneDrive Interface.
- OneDrive allows to sync data among computers, phones, and/or tablets that are set up using the same Microsoft account.
- The OneDrive page consists of the following:
  - Navigation Pane
  - Search Box
  - Menu bar
  - Files pane

- Using Slide 6, explain students the icons used in Microsoft OneDrive.
- The Microsoft OneDrive icons in desktop notification areas, menu bars, Windows File Explorer, and macOS Finder tell you the sync state of the file or folder.
- OneDrive allows users to view the files and folders contained in the OneDrive folder.
- OneDrive also allows users to sort the files and folders by following- the name, type, file size, modified, and so on.

Slide 7

## 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.

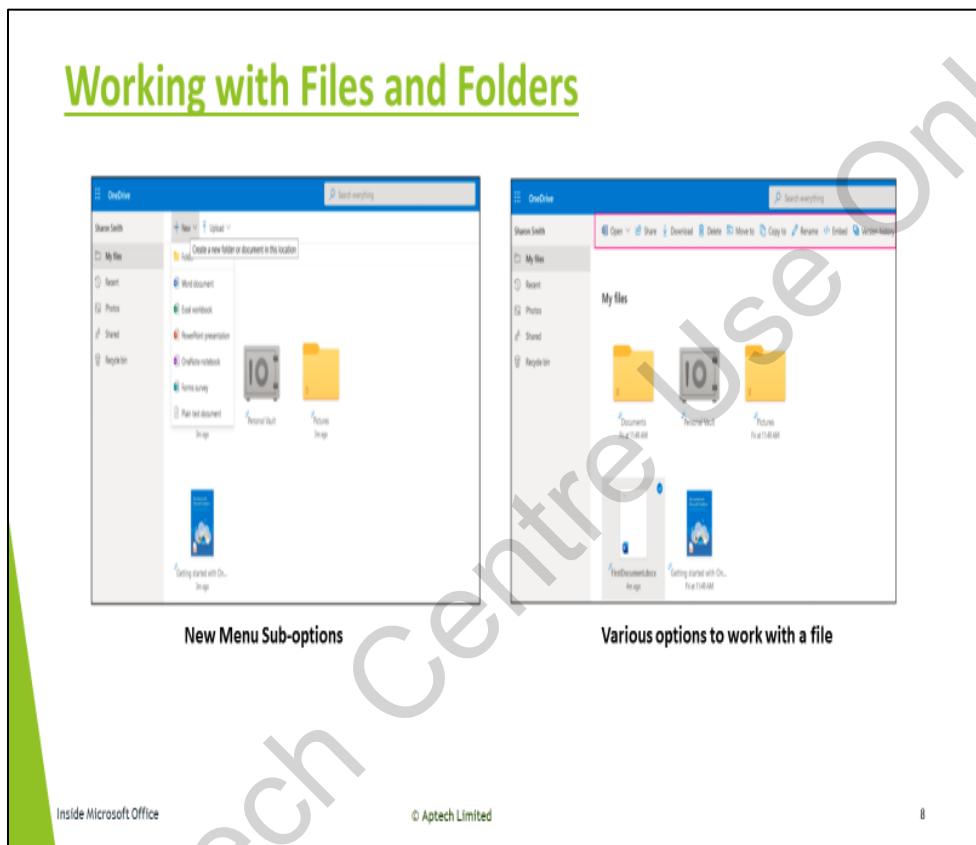
### **Instructions to the Trainer(s):**

- Using Slide 7, discuss collaboration with OneDrive.
- OneDrive is an excellent content collaboration service within Office 2019. It allows users to store files, share content when required, and collaborate on documents with colleagues or external users.
- OneDrive allows to share a file from within Word, Excel, PowerPoint, or another Office app.
- OneDrive provides a single location for all files and folders that can be accessed by multiple users.
- Location can be a repository of files and folders, where users can add files, folders, and share with other users, edit in their applications.

For more information, refer to:

<https://support.microsoft.com/en-us/office/collaborate-in-onedrive-d8a2a19a-e306-4ca5-9b00-19b0e96890d6>

Slide 8



#### Instructions to the Trainer(s):

- Using Slide 8, explain the working with files and folders in Microsoft OneDrive 2019.
- OneDrive provides place to store, share, and sync your personal, work, or school files. It also allows users to save their files in OneDrive and then, work with them from almost any device.
- Steps to create files in OneDrive are as follows:
  - Select New and choose the type of file you want.
  - In order to rename the file, click the file name in the title bar.
  - All changes are automatically saved in the Office online apps.

#### In-Class Question:

**Question:** What functions does OneDrive provide users to perform?

**Answer:** OneDrive allow users to store, share, save, and sync their data.

## Slides 9 and 10

### Syncing OneDrive Local Folder with Online OneDrive [1-2]

► 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 a file explorer window titled 'OneDrive'. It displays a list of files and folders under the 'Local OneDrive Folder' path. The items listed are:

Name	Status	Date modified	Type	Size
Desktop	20-12-2020 13:01	20-12-2020 13:01	File folder	
Documents	20-12-2020 13:01	20-12-2020 13:01	File folder	
Pictures	20-12-2020 13:01	20-12-2020 13:01	File folder	
FirstDocument.docx	20-12-2020 12:36	20-12-2020 13:01	Microsoft Word Document	11 KB
Getting started with OneDrive.pdf	19-12-2020 11:49	19-12-2020 11:49	Adobe Acrobat Document	1,125 KB
Personal Vault	20-12-2020 13:01	20-12-2020 13:01	Shortcut	2 KB

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### Syncing OneDrive Local Folder with Online OneDrive [2-2]

The screenshot shows two windows from the Microsoft OneDrive app.

**MS OneDrive Accounts Tab:** This window shows account information for 'OneDrive (sharon.smith\_202@outlook.com)'. It indicates 183 MB of 5 GB cloud storage used. There are tabs for 'Settings', 'Account', 'Backup', 'Office', and 'About'. A link to 'Add an account' is visible. Below the account info, there's a section for 'Choose folders' where users can select which folders will be available on their PC. A 'Personal Vault' section follows, with a note about security settings.

**Choose folders:** This is a separate dialog box titled 'Choose folders'. It asks the user to choose what files they want to be available in their 'OneDrive' folder. It includes checkboxes for 'Make all files available' and 'Make these folders visible'. A list of folders is shown, each with a checkbox next to it. The list includes 'FirstDocument.docx (11 KB)', 'Desktop (151.1 MB)', 'Documents (214 MB)', 'Personal Vault (0 KB)', and 'Pictures (41 KB)'. At the bottom, there are 'Cancel' and 'OK' buttons.

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#### Instructions to the Trainer(s):

- Using Slides 9 and 10, explain how syncing OneDrive local folder with Online OneDrive can be done.
- When you set up synchronization between a cloud service and a desktop device, the OneDrive app runs on your desktop and automatically keeps your files in sync. You can now add, edit, or remove files from your computer, and your changes sync automatically.
- Steps to sync local folders to OneDrive are as follows:
  - Click your libraries folder.

- Right-click your OneDrive icon and from the shortcut menu.
  - Click Choose OneDrive folders.
  - Check the folders and then, click OK.
- ‘Syncing’ means to copy or delete files manually or automatically.
- Microsoft OneDrive allows users to sync files between the system and cloud. When data is stored on cloud, users can access the data whenever and wherever they want.
- If some kind of modifications is performed on the file or folder, then changes are also observed on the OneDrive Website.

Slide 11

## 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.

### **Instructions to the Trainer(s):**

- Show students Slide 11.
- Summarize the session by reading out each point on the slide.