Al-Mustaqbal University / College of Technical Engineering
Department: Medical Instrumentation Techniques Engineering
Class: Fourth
Subject: Computer Applications / Code: MU0244007
Lecturer: M.Sc. Alaa Khalid& M.sc Ali Kareem
2ˢᵗ term–Lecture No. 1/ Introduction

1.1 What is Microsoft Excel?

Microsoft Office: is a comprehensive system of programs, servers, services, and solutions, including a dozen desktop productivity programs that you can install on your computer, and four new online program versions. To meet the varying needs of individuals and organizations, Microsoft offers five different Office software suites, each consisting of a different subset of programs. The following table identifies the programs available in each of the software suites.

Microsoft Excel: is a spreadsheet program with which you can analyze, communicates, and manages information.

Aside from actually typing the workbooks, there are a number of tasks that you will perform most during your usage of Excel. These tasks include:

- Creating new workbooks
- Opening existing workbooks
- Saving workbooks
- Working with text within workbooks
- Formatting workbooks
- Inserting non-text items
- Proofing workbooks
- Printing workbooks
- Closing workbooks

Here are just a few of the uses for Excel:

Number crunching: Create budgets, tabulate expenses, analyze survey results, and perform just about any type of financial analysis you can think of.
- **Creating charts:** Create a variety of highly customizable charts.
- **Organizing lists:** Use the row-and-column layout to store lists efficiently.
- **Text manipulation:** Clean up and standardize text-based data.
- **Accessing other data:** Import data from a variety of sources.
- **Creating graphical dashboards:** Summarize a large amount of business information in a concise format.
- **Creating graphics and diagrams:** Use Shapes and SmartArt to create professional looking diagrams.
- **Automating complex tasks:** Perform a tedious task with a single mouse click with Excel's macro capabilities.

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1.2 Starting Microsoft Excel

After logging on to Windows, the user will be presented with a screen containing a number of different icons. Start Microsoft Excel by clicking the **Start** button then selecting:

All Programs ➡️ **Microsoft office** ➡️ **Microsoft Excel**
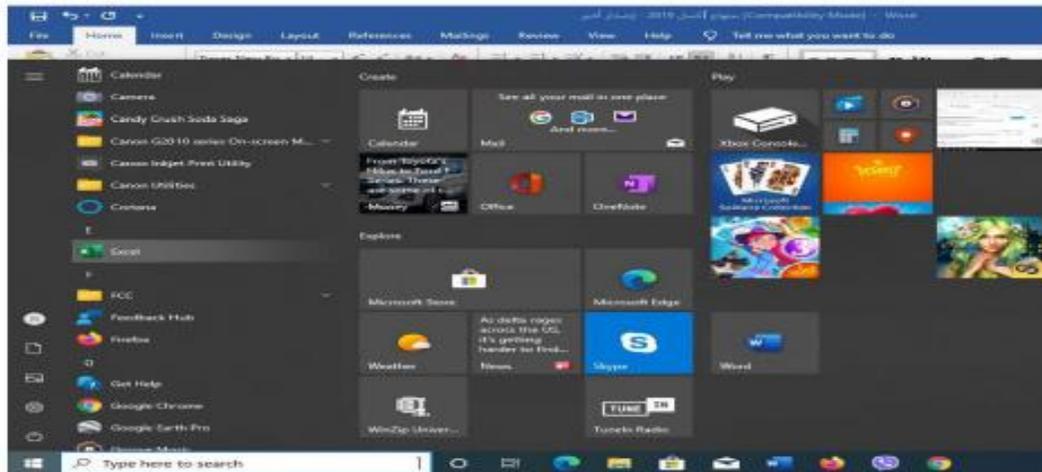
When you open Excel for the first time, the Excel Start Screen will appear. From here, you'll be able to create a new workbook, choose a template, and access your recently edited workbooks.

1- From the Excel Start Screen, locate and select Blank workbook to access the Excel interface.
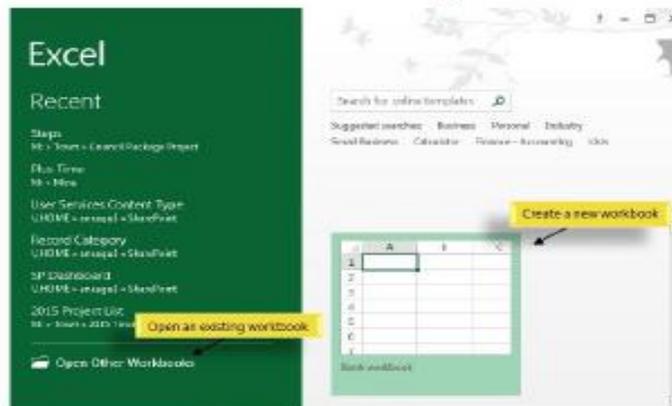2- Click Open Other Workbooks to work on an existing workbook.

Figure 2

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1.3 The Excel Interface

After starting Excel, you will see two windows - one within the other. The outer window is the Application Window and the inner window is the Workbook Window. When maximized, the Excel Workbook Window blends in with the Application Window.

After completing this module, you should be able to:

1- Identify the components of the Application Window.
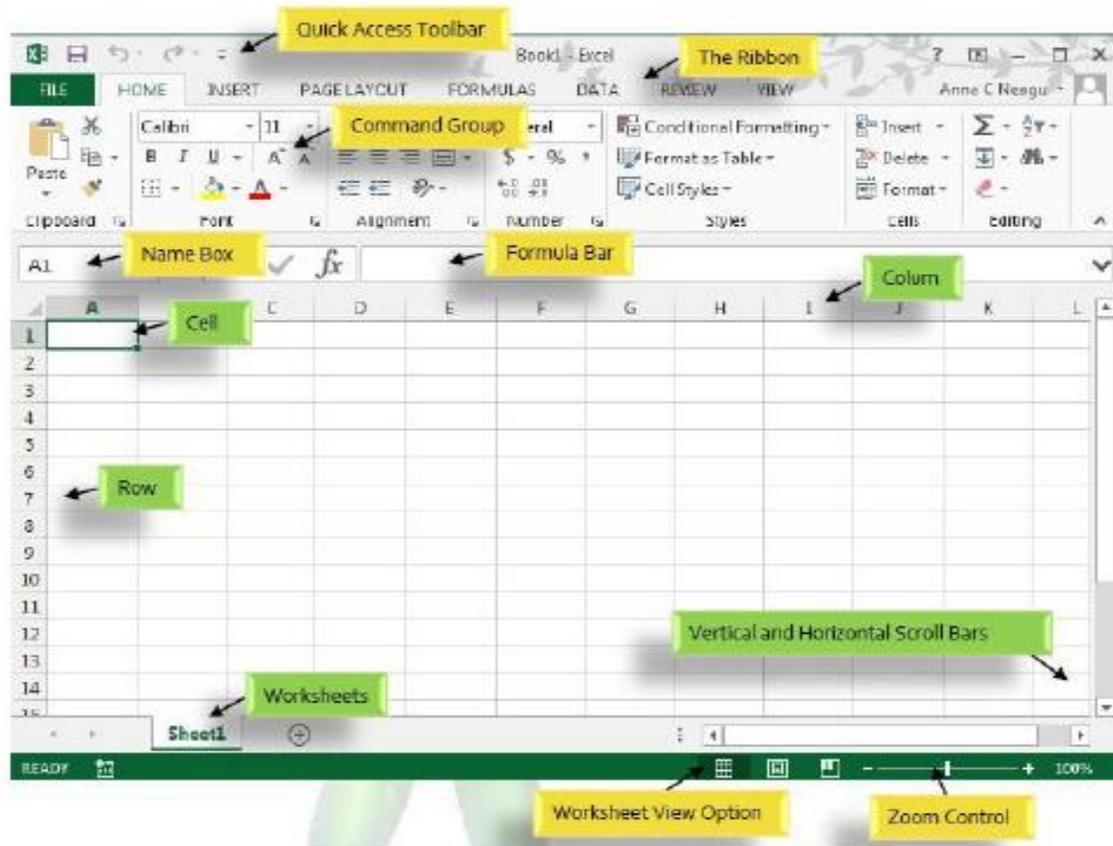2- Identify the components of the Workbook Window.

Figure 3

1- The Application Window

The Application Window provides the space for your worksheets and workbook elements such as charts. The components of the Application Window are described below.

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The Ribbon

Excel: uses a tabbed Ribbon system instead of traditional menus. The Ribbon contains multiple tabs, each with several groups of commands. You will use these tabs to perform the most common tasks in Excel.
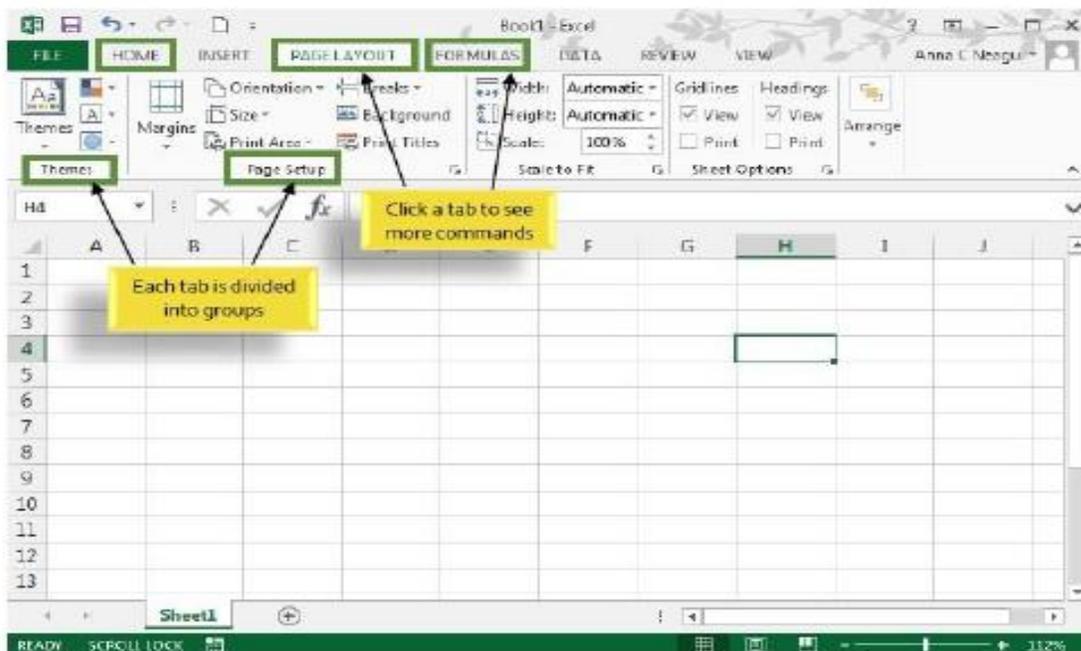

Figure 4

- *To minimize and maximize the Ribbon*

The Ribbon is designed to respond to your current task, but you can choose to minimize it if you find that it takes up too much screen space.

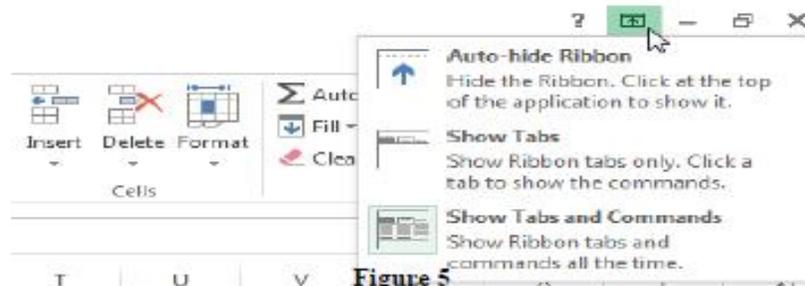1. Click the Ribbon Display Options arrow in the upper-right corner of the Ribbon.

Figure 5

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2. Select the desired minimizing option from the drop-down menu:

* Auto-hide Ribbon: Auto-hide displays your workbook in full-screen mode and completely hides the Ribbon. To show the Ribbon, click the Expand Ribbon command at the top of screen.
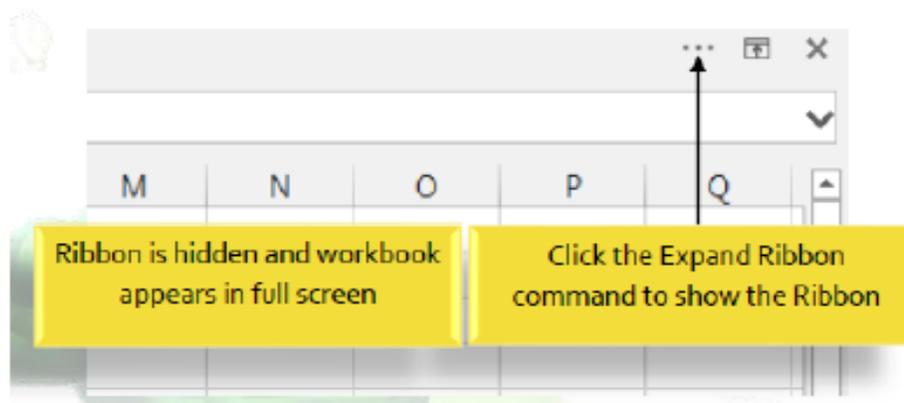

Figure 6

* Show Tabs: This option hides all command groups when not in use, but tabs will remain visible. To show the Ribbon, simply click a tab.
* Show Tabs and Commands: This option maximizes the Ribbon. All of the tabs and commands will be visible. This option is selected by default when you open Excel for the first time.

The Backstage View (The File Menu)

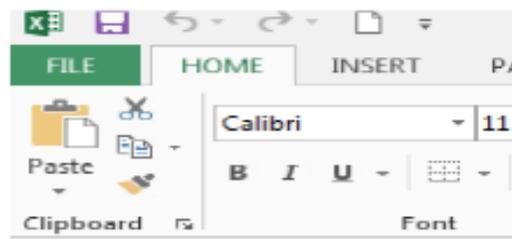Click the File tab on the Ribbon. Backstage view will appear.

Figure 7

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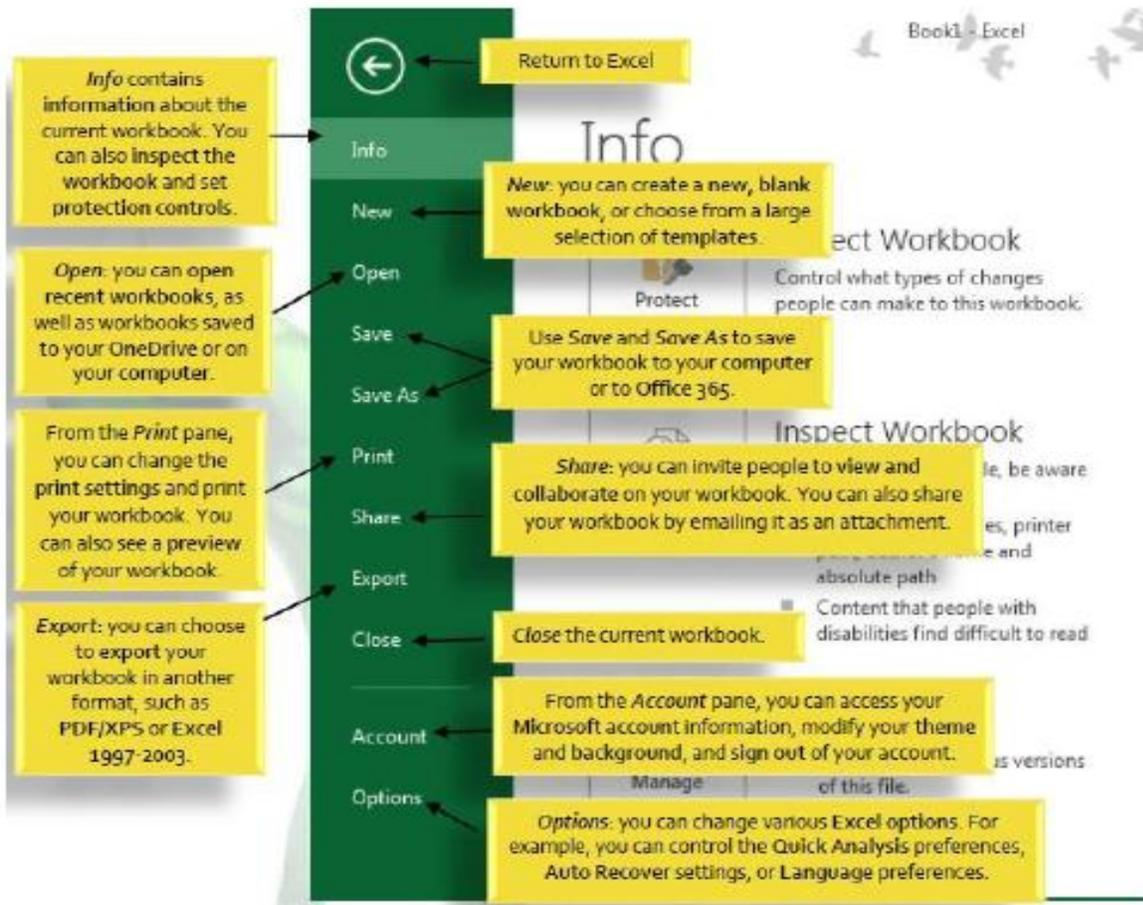**2ˢᵗ term–Lecture No. 1/ Introduction**

Figure 8

The Formula Bar

In the formula bar, you can enter or edit data, a formula, or a function that will appear in a specific cell.

In the image below, cell C1 is selected and 1984 is entered into the formula bar. Note how the data appears in both the formula bar and in cell C1.
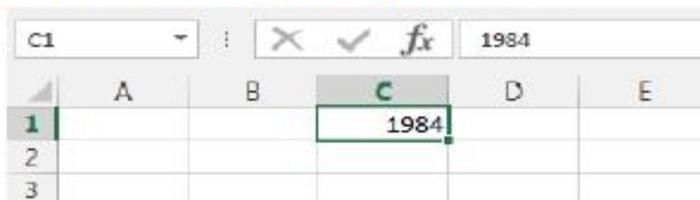
Figure 9

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The Name Box

The Name box displays the locatipn, or "name" of a selected cell.

In the figure below, cell B4 is selected. Note that cell B4 is where column B and row 4 intersect.
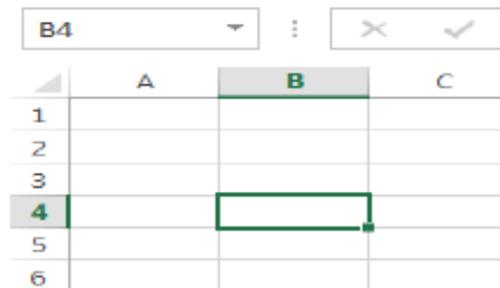

Figure 10

The Worksheet Views and Zoom Control

Excel has a variety of viewing options that change how your workbook is displayed. You can choose to view any workbook in Normal view, Page Layout view, or Page Break view. These views can be useful for various tasks, especially if you're planning to print the spreadsheet.

- To change worksheet views, locate and select the desired worksheet view command in the bottom-right corner of the Excel window.
- To use the Zoom control, click and drag the slider. The number to the right of the slider reflects the zoom percentage.
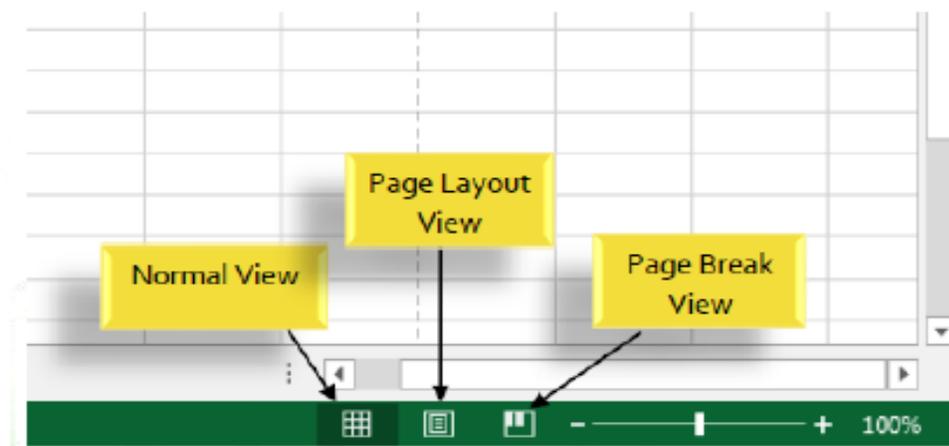

Figure 11

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2- The Workbook Window

In Excel, when you open up a new workbook it now contains only 1 worksheet There can be a max of 1,048,576 rows and 16,384 columns in an excel worksheet.

The Worksheet

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

Whenever you create a new Excel workbook, it will contain one worksheet named Sheet1. A worksheet is a grid of columns and rows where columns are designated by letters running across the top of the worksheet and rows are designated by numbers running down the left side of the worksheet.
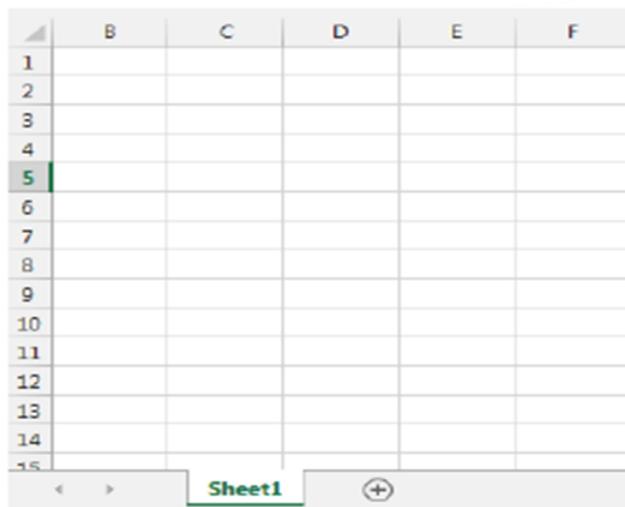

Figure 12

When working with a large amount of data, you can create multiple worksheets to help organize your workbook and make it easier to find content. You can also group worksheets to quickly add information to multiple worksheets at the same time.

- *To rename a worksheet*

Whenever you create a new Excel workbook, it will contain one worksheet named Sheet1. You can rename a worksheet to better reflect its content. In our example, we will create a training log organized by month.

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1- Right-click the worksheet you wish to rename, then select Rename from the worksheet menu.
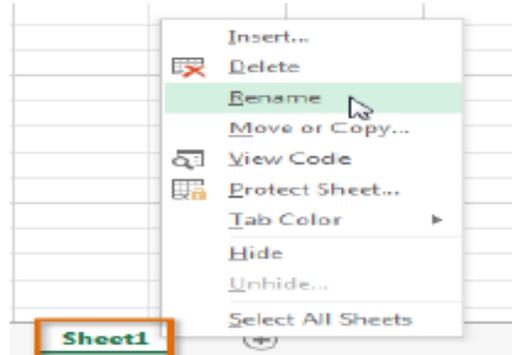

Figure 13

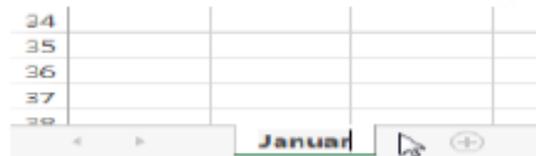2- Type the desired name for the worksheet.

Figure 14

3- Click anywhere outside of the worksheet, or press Enter on your keyboard. The worksheet will be renamed.

Figure 15

• *To insert a new worksheet*

1- Locate and select the new sheet button.

Figure 16

2- A new, blank worksheet will appear.

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- *To delete a worksheet*

1- Right-click the worksheet you wish to delete, then select Delete from the worksheet menu.
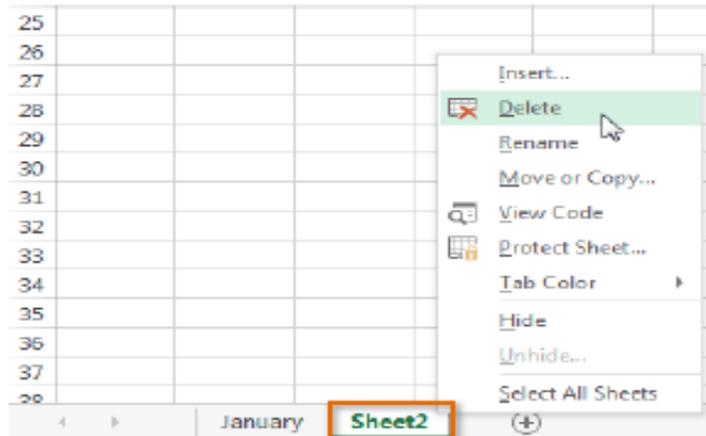

Figure 17

2- The worksheet will be deleted from your workbook.

- *To copy a worksheet*

If you need to duplicate the content of one worksheet to another, Excel allows you to copy an existing worksheet.

1- Right-click the worksheet you want to copy, then select Move or Copy from the worksheet menu.
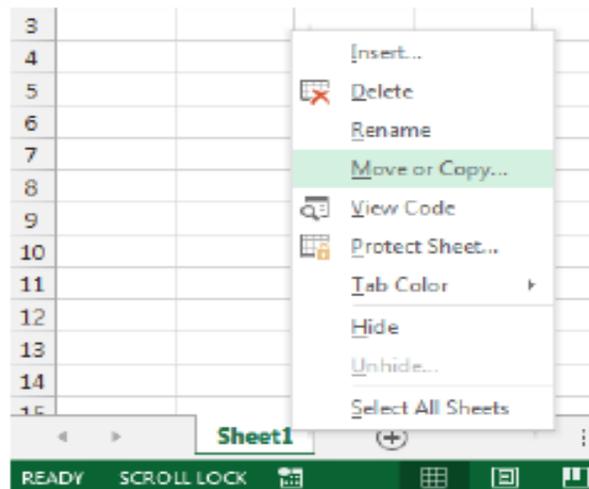

Figure 18

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2- The Move or Copy dialog box will appear. Choose where the sheet will appear in the before sheet: field. In our example, we'll choose (move to end) to place the worksheet to the right of the existing worksheet.
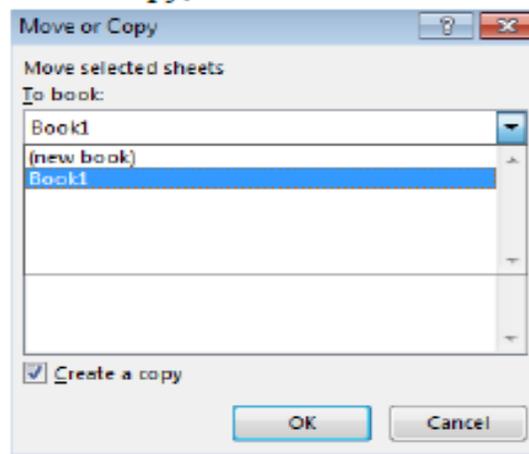
3- Check the box next to Create a copy, and then click OK.

Figure 19

4- The worksheet will be copied. It will have the same title as the original worksheet, as well as a version number.

- *To move a worksheet*

Sometimes you may want to move a worksheet to rearrange your workbook.

1- Select the worksheet you wish to move. The cursor will become a small worksheet icon.
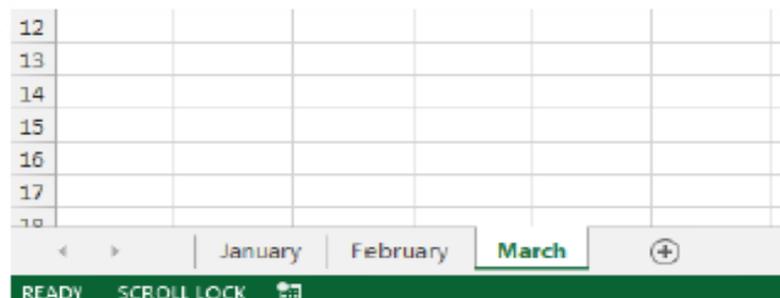2- Hold and drag the mouse until a small black arrow appears above the desired location.

Figure 20

3- Release the mouse. The worksheet will be moved.

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1.4 Create a new Blank Workbook

Excel files are called workbooks. Whenever you start a new project in Excel, you'll need to create a new workbook. There are several ways to start working with a workbook in Excel. You can choose to create a new workbook—either with a blank workbook or a predesigned template—or open an existing workbook.

- *Create a new blank workbook*

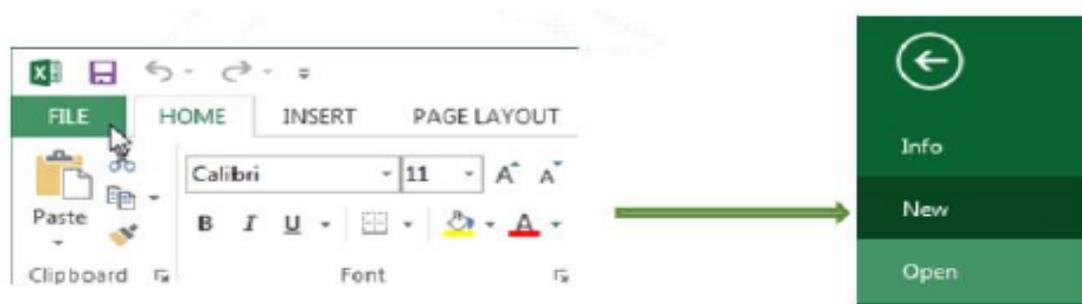 1- Select the File tab. backstage view will appear.

Figure 21

  2- Select New, then click Blank workbook.
  3- A new blank workbook will appear.

- *Open an existing workbook*

In addition to creating new workbooks, you'll often need to open a workbook that was previously saved.

  1- Navigate to Backstage view, and then click Open.

Figure 22

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2- Select Computer, and then click Brow— mailto:mohammed.qasim.obayes@uomus.edu.iq
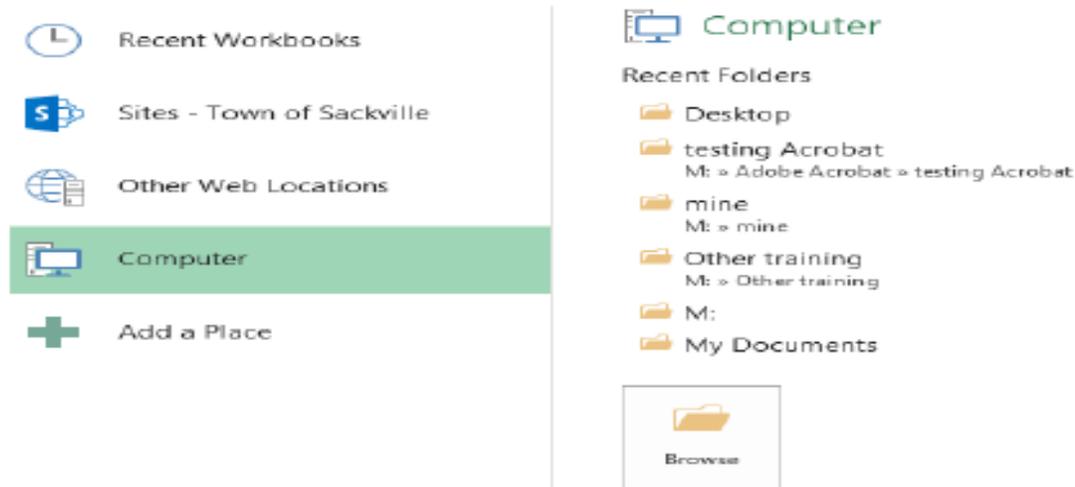
Figure 22

3- The Open dialog box will appear. Locate and select your workbook, then click Open.

Figure 23

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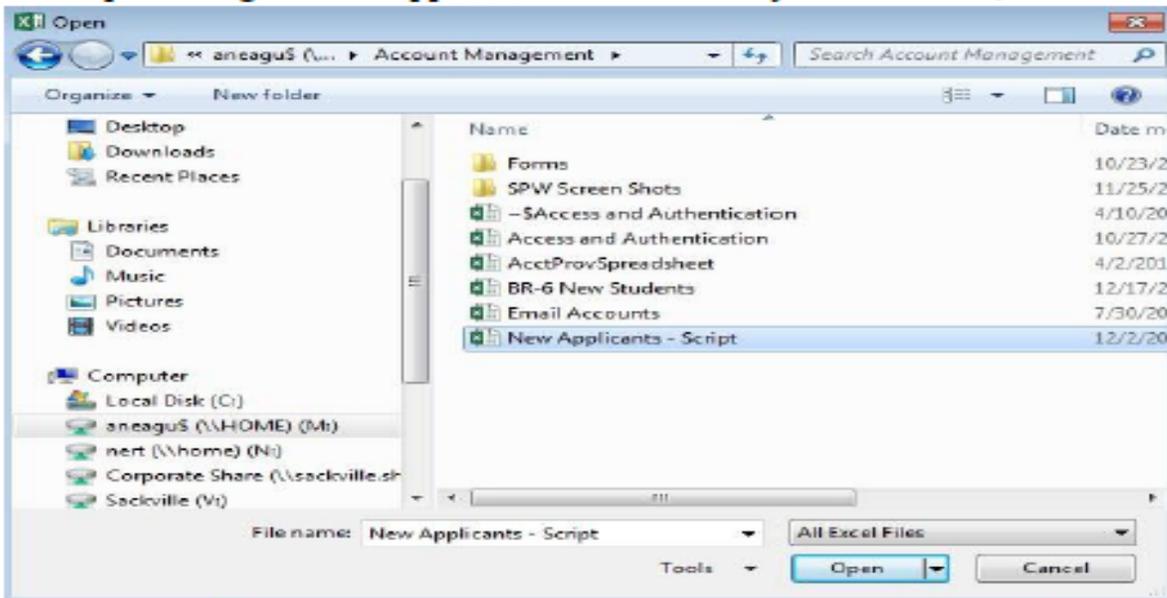**2ˢᵗ term–Lecture No. 1/ Introduction**

1.5 Saving and Sharing Workbooks

Whenever you create a new workbook in Excel, you'll need to know how to save it in order to access and edit it later. As with previous versions of Excel, you can save files locally to your computer. But unlike older versions, Excel also lets you save a workbook to the cloud using OneDrive. You can also export and share workbooks with others directly fromExcel.

Excel offers two ways to save a file: Save and Save As. These options work in similar ways, with a few important differences:

1- **Save**: When you create or edit a workbook, you'll use the Save command to save your changes. You'll use this command most of the time. When you save a file, you'll only need to choose a file name and location the first time. After that, you can just click the Save command to save it with the same name and location.
2- **Save As**: You'll use this command to create a copy of a workbook while keeping the original. When you use Save As, you'll need to choose a different name and/or location for the copied version.

● *To save a workbook*

It's important to save your workbook whenever you start a new project or make changes to an existing one. Saving early and often can prevent your work from being lost. You'll also need to pay close attention to where you save the workbook so it will be easy to find later.

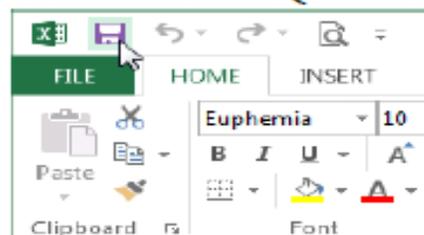1- Locate and select the Save command on the Quick Access Toolbar.

Figure 24

2- If you're saving the file for the first time, the Save As pane will appear in Backstage view.
3- You'll then need to choose where to save the file and give it a file name. To save the workbook to your computer, select Computer, and then click Browse. Alternatively, you can click OneDrive to save the file to your OneDrive.

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4- The Save As dialog box will appear. Select the location where you wish to save the workbook.

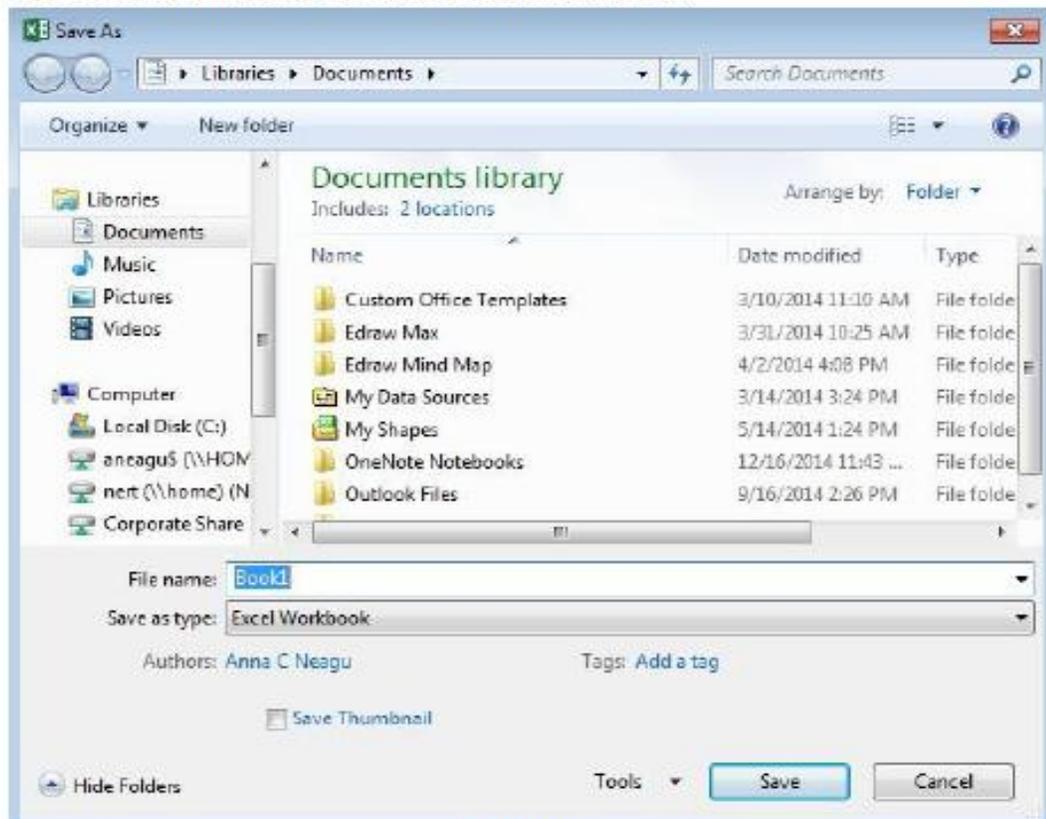5- Enter a file name for the workbook, then click Save.

Figure 25

6- The workbook will be saved. You can click the Save command again to save your changes as you modify the workbook.

- *Using Save As to make a copy*

If you want to save a different version of a workbook while keeping the original, you can create a copy. For example, if you have a file named "Sales Data" you could save it as "Sales Data 2" so you'll be able to edit the new file and still refer back to the original version.

To do this, you'll click the Save As command in backstage view. Just like when saving a file for the first time, you'll need to choose where to save the file and give it a new file name.

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