

Chapter 1: Introduction to MS Excel 2016

Learning Objectives

- Describe the purpose and key applications of Microsoft Excel 2016.
- Identify the main features and tools introduced in excel 2016.
- Navigate the Excel 2016 interface, including the Ribbon, worksheets and workbooks.
- Understand the role of cells, rows, and columns in organizing data.

Chapter 1: Introduction to MS Excel 2016

- Microsoft Excel is one of the most widely used spreadsheet programs, designed for data organization.
- What is Excel?
 - Excel is part of the Microsoft Office suite, designed primarily as a spreadsheet program that enables users to:
 - Store data in an organized format within cells, rows, and columns.
 - Organize data through calculations, formulas, and built-in functions that simplify complex data manipulation.

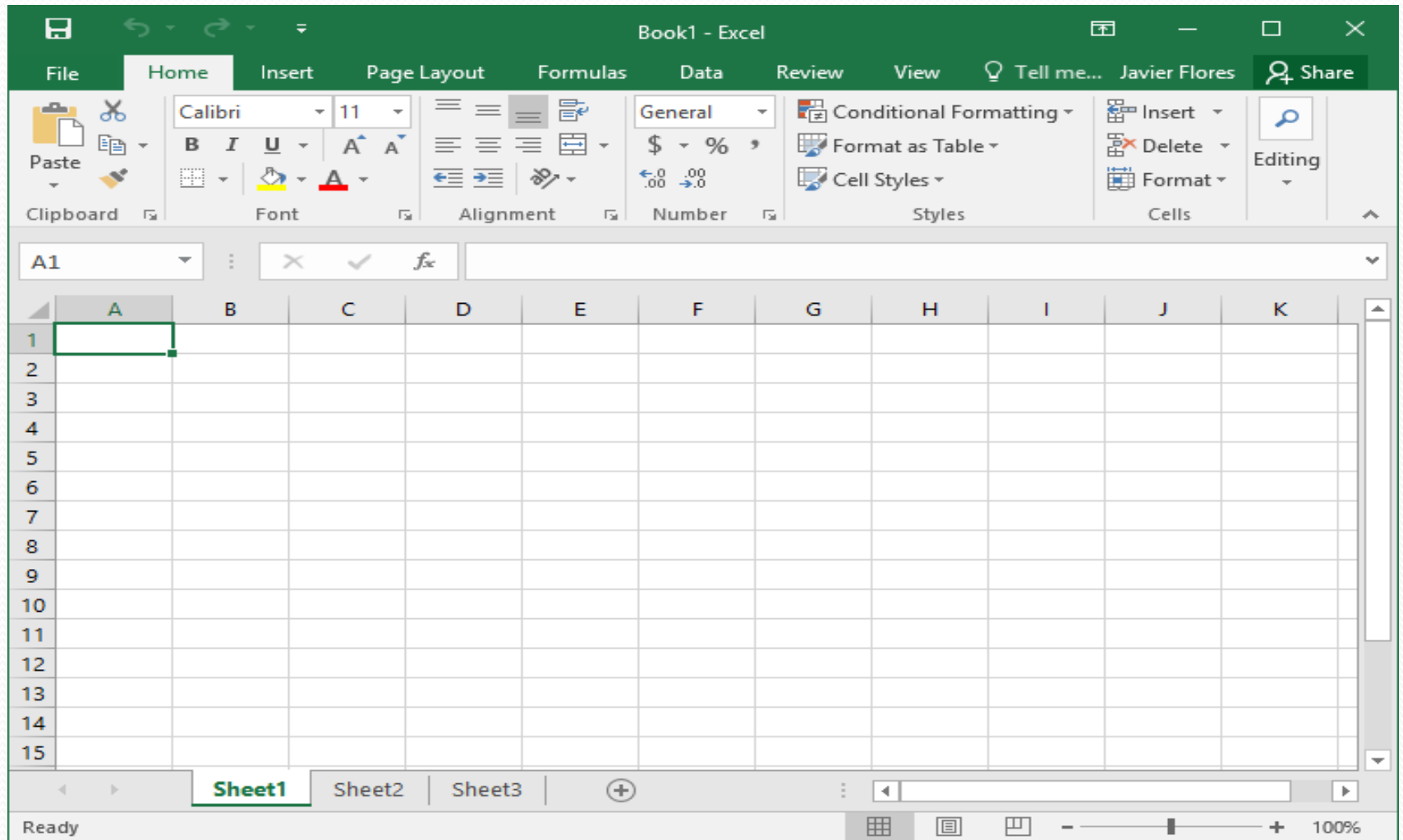
Chapter 1: Introduction to MS Excel 2016

- Visualize information with charts, graphs and PivotTables to help users quickly understand data patterns and trends.
- Common Applications of Excel
 - Financial Analysis
 - Data Analysis
 - Project Management
 - Inventory Management
 - Administrative and Operational Tasks

Overview of MS Excel 2016

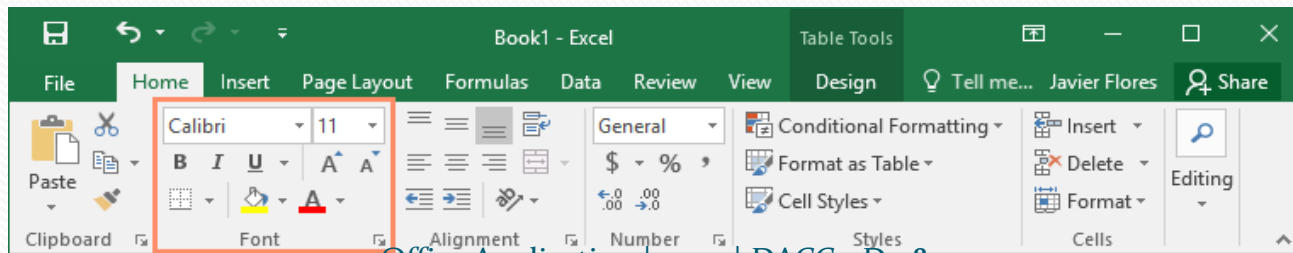
- Key features:
 - Enhanced Ribbon Interface
 - Tell me Feature
 - New chart Types
 - Improved PivotTables
 - Data Analyses Tools
 - Collaboration and Cloud Integration

MS Excel Interface



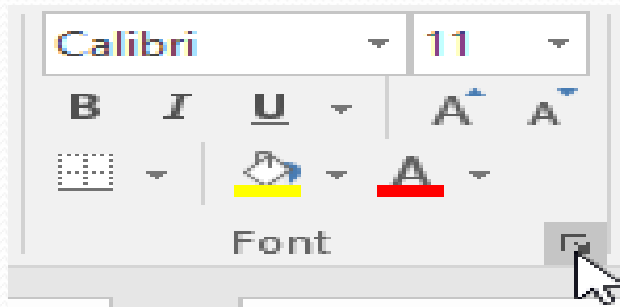
Excel Interface

- The **Ribbon** contains all of the **commands** you will need to perform common tasks in Excel. It has multiple **tabs**, each with several **groups** of commands
- Excel 2016 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.
- Each tab will have one or more groups.

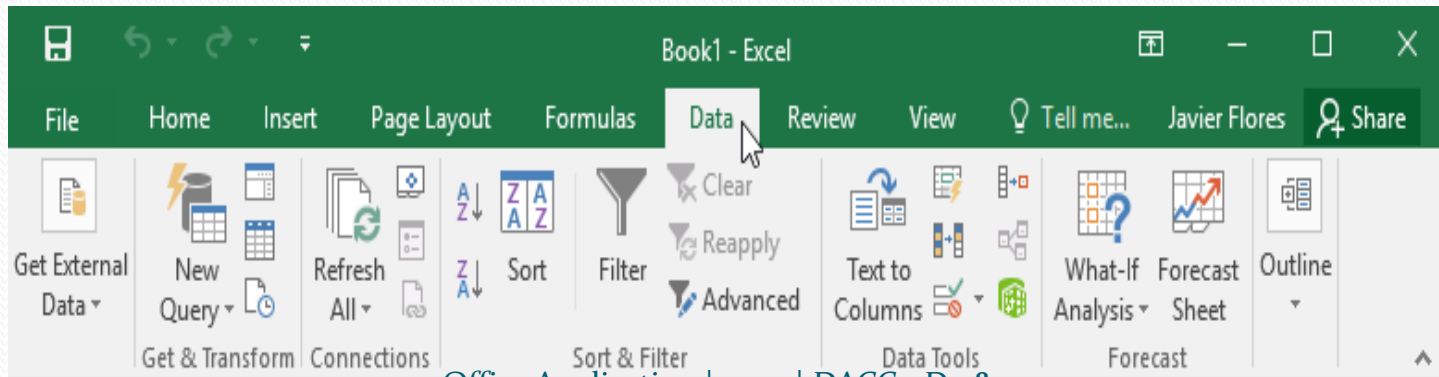


Excel Interface

- Some groups will have an arrow you can click for more options.

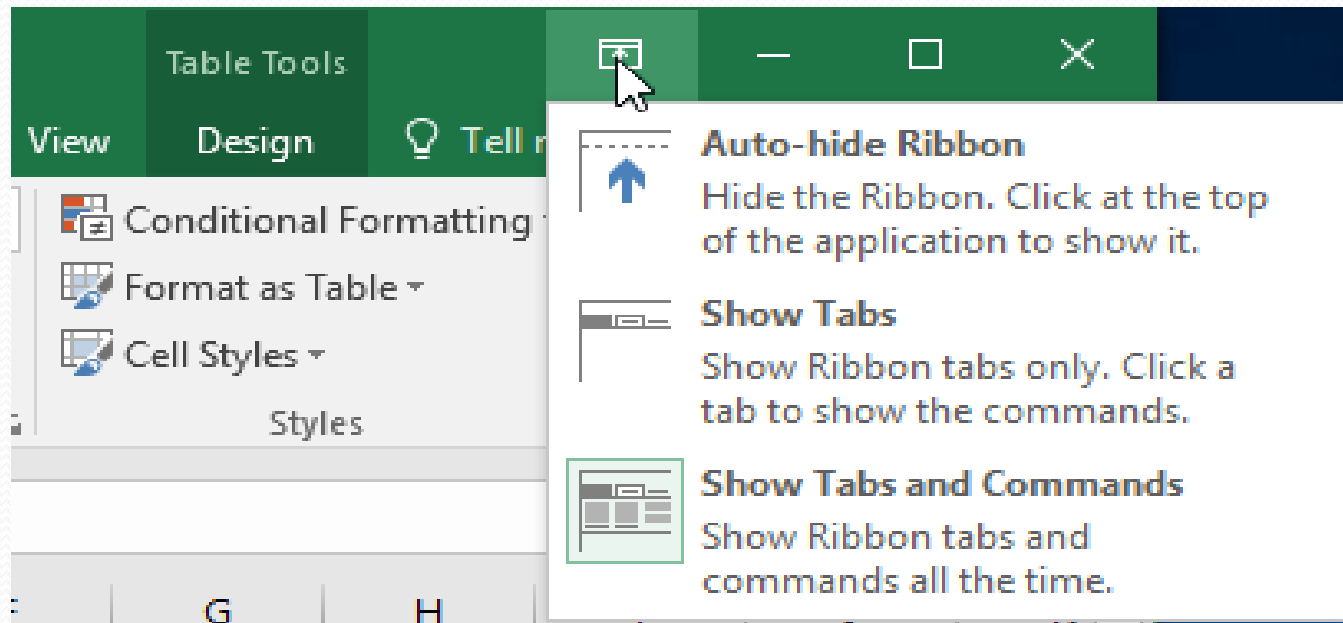


- Click a tab to see more commands



Excel Interface

- You can adjust how the Ribbon is displayed with the Ribbon Display Options.



Excel Interface

- The **Quick Access Toolbar** lets you access common commands no matter which tab is selected. You can customize the commands depending on your preference.
- The **Name box** displays the **location**, or **name**, of a **selected cell**.
- In the **formula bar**, you can enter or edit **data**, a formula, or a **function** that will appear in a specific cell.
- Each rectangle in a workbook is called a **cell**. A cell is the **intersection** of a row and a column. Simply click to **select** a cell.

Excel Interface

- A **column** is a group of cells that runs from the top of the page to the bottom. In Excel, columns are identified by **letters**.
- A **row** is a group of cells that runs from the left of the page to the right. In Excel, rows are identified by **numbers**.
- Excel files are called **workbooks**. Each workbook holds one or more **worksheets**. Click the tabs to switch between them, or right-click for more options.

Excel Interface

- Worksheet View Options: There are three ways to view a worksheet. Simply click a command to select the desired view.
- Zoom Control: Click and drag the **slider** to use the **zoom control**. The number to the right of the slider reflects the **zoom percentage**.
- Vertical and Horizontal Scroll Bar: The scroll bars allow you to scroll up and down or side to side. To do this, click and drag the **vertical** or **horizontal scroll bar**.

Chapter 1: Review Questions

- **What is Microsoft Excel?**
- **List three new features introduced in Excel 2016.**
- **Explain Cell.**
- **Explain Name box and Formula bar.**
- **Differentiate between worksheet and workbook.**

Chapter 2: Getting started with MS Excel 2016

- **Creating a Blank Workbook:**
- **From the Start Menu:**
 - Windows: Click the Start Menu, type Excel 2016 in the search bar, and click the application to open.
 - Select Blank Workbook from the Start Screen.

Using Templates:

Excel provides a variety of pre-designed templates to make it easier to start common tasks.

Key Parts of the Excel Interface

- **Ribbon**
- **Formula Bar**
- **Name Box**
- **Worksheet area**
- **Worksheet tabs**
- **Status Bar**
- **Backstage View**

Chapter 2: Review Questions

- Explain the following terms:
 - Ribbon
 - Worksheet area
 - Status Bar

Chapter 3: Working with Excel Worksheets & Workbook

Learning Objectives

- Describe the structure and function of workbook and worksheets.
- Create, open, and save Excel workbooks
- Add, delete, rename, and move worksheets within a workbook
- Navigate efficiently within a worksheet, including selecting rows, columns and cells.
- Use keyboard shortcuts and mouse tips to streamline workbook and worksheet management.

Worksheet

- **Definition:** Each worksheet in a workbook functions as an individual spreadsheet, organized in a grid format composed of rows and columns. This setup allows structured data entry, calculations, and data analysis.
- **Functionality:** Worksheets are designed for specific data categories, such as income statements, expense trackers, or sales summaries. Within a workbook, each worksheet can hold unique datasets, while keeping related information accessible in one file.

Workbook

- **Definition:** A workbook is an Excel file that holds you data, calculations, and any analysis you may need. Each new workbook allows you to start with a fresh, blank space for new projects, data entries, or analysis.

Managing Worksheets: Adding, Deleting, renaming and Moving

- Open Excel 2016 and do the following:
 - Add/insert new worksheet
 - Delete worksheet
 - Rename worksheet
 - Move worksheet

Chapter 3: Review Question

- **Differentiate between worksheet and workbook in excel.**

Chapter 4: Basic Data Entry and Formatting

Learning Objectives

- Enter Different Types of Data
- Modify Cell Content
- Apply Basic Formatting to Cells
- Use the Format Painter Tool
- Work with Cell Styles and Themes

Entering Data

- Users can enter various data types into cells, including text, numbers, and dates, each serving specific purpose in data organization and analysis.

The screenshot displays the Microsoft Excel interface. The 'Home' tab is active, showing the ribbon with options like Cut, Copy, Paste, and Format Painter. The formula bar shows the formula $=D7+D8$ in cell D10. The spreadsheet contains a table with columns: Item, Item price, Item quantity, and Price. The data is as follows:

	A	B	C	D	E	F	G
1	Item	Item price	Item quantity	Price			
2	Rice	10	1	10			
3	Ox and Palm	18	1	18			
4	Bread	5	2	10			
5	Bath soap	3	2	6			
6							
7	Sub total						
8	Tax (10%)						
9							
10	Total			48.4			
11							
12							
13							
14							
15							
16							
17							
18							
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20							
21							

The 'Format Cells' dialog box is open, showing the 'Number' tab. The 'Category' is set to 'General'. The 'Sample' shows '48.4'. The 'Format Cells' button is highlighted in the right-hand context menu. A green arrow points from the 'Format Cells' button in the context menu to the 'Format Cells' dialog box.

Formatting Cells

- Proper cell formatting in Excel enhances readability, organization, and overall presentation.
- Excel offers various formatting tools such as:
 - Fonts, colors, and alignment, helping users make data both functional and visually engaging.

Format Painter Tool

- Format Painter Tool in Excel is a quick and efficient way to apply the same formatting across multiple cells or ranges.

Cell styles and Themes

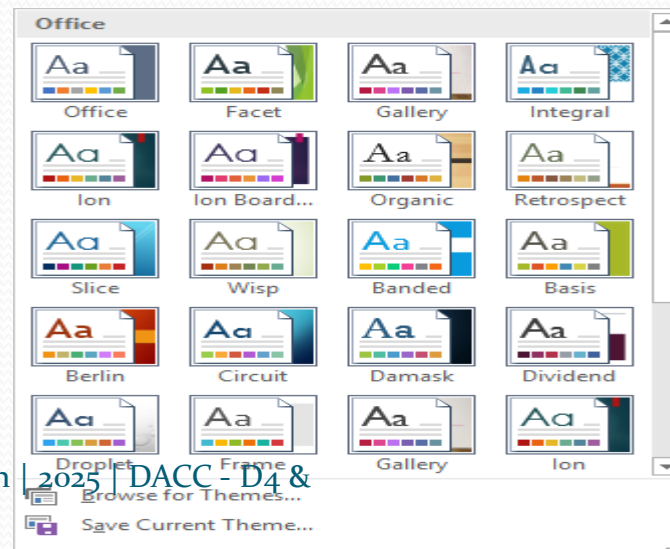
- Cell styles and Themes allow users to create a cohesive and professional appearance across sheets.
- **Cell styles**
 - *Home tab>Styles group>Cell Styles>gallery of pre-defines styles available*

Types of Cell Styles

- Title and Heading Styles
- Accent styles
- Input and Calculation Styles

Themes

- Themes allow you to apply a consistent set of colors, fonts, and effects across an entire workbook, giving it a unified look.
- **Steps:**
 - *Page layout tab>Themes group>A drop down menu appears with a list of available themes to choose from.*



Chapter 4: Review Questions

- Explain the following terms:
 - *AutoFit*
 - *Merge & Center*
 - *Format Painter*
 - *AutoFill*
 - *Freeze Panes*

Thank
you



Practical Exercises (1/3)

Using one workbook complete each of the listed activities

- **Practical Exercise 2.3 (page 17)**
 - Create a blank workbook – open excel and use Ctrl + N
 - Create a new workbook from a template
 - Save your workbook – use Ctrl + S. **YourIDNumber_ExcelPractical**
- **Identify key parts of the excel interface**
 - The Ribbon
 - Formula bar
 - Worksheet area
 - Worksheet tabs
 - Status bar
 - Backstage view

Practical Exercises (2/3)

Using one workbook complete each of the listed activities. Use different worksheets for each practical exercise.

- Understand columns, rows and cells
- Resize rows and columns
- Use navigation keys or tab key on the keyboard to move
- Add 5 new worksheets (Shift + F11) and rename worksheets to the bold labelled names below
- 4.2.1.4 Practical exercise: **Budget sheet** (Page 50)
- 5.2.1.1 Practical exercises 1-4: **Basic formulas** (Page 71 – 72)
- 5.3.2 Practical exercises 1-6: **Cell referencing & formulas** (Page 73 – 74)
- 5.4.2 Practical exercises 1-5: **Cell range formulas** (Page 76)
- **ITI grading system** (Refer to last slide in this lecture)
 - Refer to page 80 for GPA formula (nested if formula)

Practical Exercises (3/3)

Using one workbook complete each of the listed activities. Use different worksheets for each practical exercise.

500_Practical.xlsx - Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
		STUDENT ID	STUDENT NAME	Assignment 1	A1%	Assignment 2	A2%	Test 1	T1WS	Mid Semester Exam	MSE%	Final Exam	FE%	Total%	Grade Point (GPA)	
2				120	13%	120	13%	50	14%	100	20%	100	40%	100%		
3		123	Conrad Toobonu	93	10.1%	93	10.1%	20	5.6%	50	10.0%	50	20.0%	55.8%	P+	
4		234	Danny Lakau	94	10.2%	94	10.2%	25	7.0%	60	12.0%	60	24.0%	63.4%	C-	
5		321	David Nave	98	10.6%	98	10.6%	23	6.4%	70	14.0%	70	28.0%	69.7%	C	
6		400	Donoven David	86	9.3%	86	9.3%	50	14.0%	80	16.0%	80	32.0%	80.6%	D+	
7		554	Elizabeth Kumaru	96	10.4%	96	10.4%	40	11.2%	90	18.0%	90	36.0%	86.0%	HD	
8		678	Grace Temet	80	8.7%	80	8.7%	45	12.6%	100	20.0%	100	40.0%	89.9%	HD	
9		789	Ian Mariyo	97	10.5%	97	10.5%	30	8.4%	85	17.0%	85	34.0%	80.4%	D+	
10		876	Israel Beaso	70	7.6%	70	7.6%	49	13.7%	65	13.0%	60	24.0%	65.9%	C	
11		987	Januarius Happot	98	10.6%	98	10.6%	46	12.9%	30	6.0%	95	38.0%	78.1%	D	
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Budget sheet Basic formulas Cell referencing & formulas Cell range formulas ITI grading system