**Spreadsheet Software Basics Using Microsoft Excel 2016**

**1. Introduction to Excel (Excel Basics)**

Microsoft Excel is a spreadsheet application used to record, organize, calculate, and analyze data. It is widely used in business, education, finance, and personal data management.

**Starting Excel 2016:**

1. Click on the **Start Menu** or press the **Windows key**.
2. Type **"Excel 2016"** in the search bar.
3. Click on the **Excel 2016** app icon to launch the program.

**The Excel Interface:** When you open Excel, you will see the following components:

* **Title Bar**: Displays the name of the current workbook.
* **Ribbon**: Contains tabs (Home, Insert, Page Layout, etc.) with related command groups.
* **Workbook**: A file that contains one or more worksheets (also called spreadsheets).
* **Worksheet**: A grid made up of **rows** (numbered) and **columns** (lettered).
* **Cells**: Each box in the worksheet is called a **cell** (e.g., A1).
* **Formula Bar**: Shows the contents of the selected cell.
* **Sheet Tabs**: At the bottom, allowing access to different sheets in the workbook.

**Basic Navigation Practice:**

1. Open a new blank workbook.
2. Click on cell A1 and type: My First Excel Sheet
3. Press Enter to move to the cell below (A2).
4. Type the following sample data:

|  |  |  |
| --- | --- | --- |
| **A** | **B** | **C** |
| Name | Subject | Marks |
| John | Math | 85 |
| Mary | English | 78 |
| Kevin | Science | 90 |

1. Use the arrow keys to move around the worksheet.
2. Try selecting multiple cells by clicking and dragging from A1 to C4.

**Saving Your Workbook:**

1. Click on **File** → **Save As**.
2. Choose a location (e.g., Desktop or Documents).
3. Enter a file name like Student\_Grades.xlsx
4. Click **Save**.

**Tip:** Press Ctrl + S regularly to save your progress.

**2. Data Entry and Manipulation**

**Entering Data into Excel:** Excel worksheets consist of rows and columns. Each cell is identified by a column letter and row number (e.g., A1).

**Steps for Enter Data:(Note the following steps when you are working with excel)**

1. Click on a cell (e.g., A1).
2. Type a value (e.g., "Product").
3. Press Enter to go down to the next row or Tab to move to the next column.

**Practice Activity:**

1. Open a blank Excel worksheet.
2. Enter the following data starting from cell A1:

|  |  |  |
| --- | --- | --- |
| A | B | C |
| Product | Quantity | Price |
| Pens | 10 | 50 |
| Pencils | 20 | 30 |
| Erasers | 15 | 20 |

1. Save your workbook as Stationery\_Sales.xlsx

**Manipulating Data:**

**Copying and Pasting Data:**

* Select the cells you want to copy.
* Press Ctrl + C to copy.
* Click on the destination cell and press Ctrl + V to paste.

**Moving Data:**

* Select the cells.
* Hover your mouse over the edge until it becomes a four-sided arrow.
* Click and drag to the new location.

**Inserting and Deleting Rows/Columns:**

* Right-click on a row number (e.g., row 3) and choose "Insert" to add a new row above.
* Right-click and choose "Delete" to remove a row or column.

**AutoFill Feature:**

1. Type "Monday" in cell A1.
2. Hover over the bottom-right corner of the cell (a small square will appear).
3. Drag the fill handle down to fill the week (Tuesday, Wednesday, etc.).

**Sorting and Filtering:**

* Highlight your data table.
* Go to the **Data** tab on the Ribbon.
* Click **Sort A-Z** to sort alphabetically or by value.
* Click **Filter** to enable drop-down filters in each column header.

**Practice Task:**

1. Add a new product to your table: "Markers", Quantity: 8, Price: 60.
2. Use AutoFill to create a list of months in a new column.
3. Try sorting your product list by Price (lowest to highest).

**3. Formatting, Basic Formulas, and Functions**

**Formatting Cells:** Formatting helps make your worksheet more readable and presentable.

**Steps to Format Text and Numbers:**

1. Select the cell or range (e.g., A1:C1).
2. On the **Home** tab, choose:
   * **Bold**, **Italic**, or **Underline**
   * Font color or fill color
   * Center, left, or right alignment

**Number Formatting:**

* Select a range (e.g., C2:C5 for Price).
* Right-click and choose **Format Cells**.
* Choose **Currency** or **Number** format.

**Merging Cells:**

* Select A1:C1 → Click **Merge & Center** in the Home tab.
* This combines the cells into one centered title.

**Basic Formulas and Functions:** Formulas in Excel always begin with an equals sign =.

**Practice Data for Calculations:** Add this to your sheet in column D:

|  |
| --- |
| D (Total) |
| =B2\*C2 |
| =B3\*C3 |
| =B4\*C4 |
| =B5\*C5 |

**Common Functions:**

|  |  |  |
| --- | --- | --- |
| Function | Syntax | Description |
| SUM | =SUM(D2:D5) | Adds all values from D2 to D5 |
| AVERAGE | =AVERAGE(C2:C5) | Computes the average of values |
| IF | =IF(C2>40,"Expensive","Cheap") | Checks condition and returns text |

**Practice Formulas:**

1. In cell D2 type: =B2\*C2 → press Enter.
2. Use AutoFill to copy the formula down to D5.
3. In cell D6 type: =SUM(D2:D5) to get the total sales.
4. In cell E2 type: =IF(C2>40,"Expensive","Cheap") and drag down to apply to other rows.

| Product | Quantity | Price | | Pens | 10 | 50 | | Pencils | 20 | 30 | | Erasers | 15 | 20 |

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