**Excel Assignment-7**

**1.Ans:** The function available in the different dropdowns present in the function library are as follows:

1. AutoSum:
   * SUM
   * AVERAGE
   * COUNT
   * MAX
   * MIN
2. Recently Used (This list will depend on your recent activity):
   * SUMIF
   * VLOOKUP
   * IF
   * CONCATENATE
   * INDEX
3. All (This typically shows all available functions):
   * PMT (for calculating loan payments)
   * DATE (for creating a date)
   * TIME (for creating a time)
   * TEXT (for formatting text)
   * RAND (for generating random numbers)
4. Financial:
   * FV (Future Value)
   * NPV (Net Present Value)
   * IRR (Internal Rate of Return)
   * PV (Present Value)
   * PMT (Payment)
5. Date & Time:
   * TODAY (returns the current date)
   * NOW (returns the current date and time)
   * YEAR (extracts the year from a date)
   * MONTH (extracts the month from a date)
   * DAY (extracts the day from a date)
6. Math & Trig:
   * ABS (returns the absolute value of a number)
   * SQRT (calculates the square root of a number)
   * SIN (calculates the sine of an angle)
   * COS (calculates the cosine of an angle)
   * PI (returns the mathematical constant π)
7. Text:
   * CONCATENATE (combines text from multiple cells)
   * LEFT (extracts a specified number of characters from the beginning of a text string)
   * RIGHT (extracts a specified number of characters from the end of a text string)
   * LEN (returns the number of characters in a text string)
   * SUBSTITUTE (replaces occurrences of a specified text in a string)
8. Lookup & Reference:
   * VLOOKUP (searches for a value in a table and returns a corresponding value)
   * HLOOKUP (similar to VLOOKUP, but searches in a horizontal table)
   * INDEX (returns the value of a cell in a specified row and column)
   * MATCH (searches for a specified value in a range and returns its position)

**2.Ans**: In Microsoft Excel, there are several ways to select columns and rows, depending on your specific needs. Here are some common methods:

1. Click and Drag:
   * To select a single column, click on the lettered header at the top of the column (e.g., "A" for the first column), and drag your cursor to select multiple columns.
   * To select a single row, click on the numbered header on the left side of the row (e.g., "1" for the first row), and drag your cursor to select multiple rows.
2. Click on Column/Row Headers:
   * You can also click on a single column header or row header to select the entire column or row.
3. Keyboard Shortcuts:
   * To select an entire column, place your cursor in any cell within the column and use the keyboard shortcut Ctrl + Spacebar.
   * To select an entire row, place your cursor in any cell within the row and use the keyboard shortcut Shift + Spacebar.
4. Select Multiple Columns/Rows:
   * To select non-contiguous columns or rows, hold down the Ctrl key (or Cmd on a Mac) while clicking on the column or row headers.
5. Select Adjacent Columns/Rows:
   * To select a range of adjacent columns, click on the header of the first column, hold down the mouse button, and drag to the last column.
   * To select a range of adjacent rows, click on the header of the first row, hold down the mouse button, and drag to the last row.
6. Select Entire Worksheet:
   * To select the entire worksheet, click the square in the upper-left corner between the column and row headers (above the "A" and to the left of "1").
7. Name Box:
   * You can also use the Name Box, located to the left of the formula bar, to select specific cells, columns, or rows by entering their cell references. For example, enter "A1" and press Enter to select cell A1.
8. Filtering:
   * You can use the AutoFilter feature to select columns or rows based on specific criteria. When you filter data, only the visible rows or columns are selected.
9. Go To:
   * Use the "Go To" feature (Press Ctrl + G or F5) to quickly navigate to and select specific cells, columns, or rows by entering their references.

**3.Ans:** "AutoFit" is a feature in Microsoft Excel that allows you to automatically adjust the width or height of a cell, column, or row to accommodate the contents within it. You can use AutoFit to ensure that the content fits comfortably within a cell without being truncated or overflowing, making your Excel spreadsheet more visually appealing and easier to read.

Uses of AutoFit:

* **Improved Readability**: AutoFit helps ensure that your data is legible and that long text or numbers are not cut off or hidden in cells.
* **Professional Appearance**: It helps your Excel spreadsheet look more polished and professional by eliminating unnecessary white space or text overflow.
* **Consistency**: AutoFit ensures consistent formatting, so you don't have some columns or rows that are too wide or too narrow compared to the content they contain.
* **Efficiency**: It saves time by automatically adjusting column or row widths and heights instead of manually adjusting them one by one.

**4.Ans**: You can insert new rows and columns into an existing table in Microsoft Excel by following steps:

**Inserting Rows:**

1. Select the Row or Rows Above Where You Want to Insert:
   * Click on the row number(s) where you want to insert the new row(s). If you want to insert multiple rows, select the same number of rows as you want to add.
2. Right-Click and Choose "Insert":
   * Right-click on the selected row number(s).
   * From the context menu that appears, choose "Insert."
3. New Row(s) Added:
   * Excel will insert the new row(s) above the selected row(s).
   * The table will automatically adjust to include the new row(s), and the formatting and formulas in adjacent rows will be preserved.

**Inserting Columns:**

1. Select the Column or Columns to the Left of Where You Want to Insert:
   * Click on the column letter(s) to the left of where you want to insert the new column(s). If you want to insert multiple columns, select the same number of columns as you want to add.
2. Right-Click and Choose "Insert":
   * Right-click on the selected column letter(s).
   * From the context menu that appears, choose "Insert."
3. New Column(s) Added:
   * Excel will insert the new column(s) to the left of the selected column(s).
   * The table will automatically adjust to include the new column(s), and the formatting and formulas in adjacent columns will be preserved.

**5.Ans:** In Microsoft Excel, you can hide and unhide columns to control the visibility of specific columns within your worksheet.

**To Hide Columns:**

1. **Select the Columns You Want to Hide**:
   * Click on the column letters at the top of the worksheet to select the columns you want to hide. You can select multiple columns by clicking and dragging across their headers or by holding down the **Ctrl** key and clicking on the column headers.
2. **Right-Click and Choose "Hide"**:
   * Right-click on one of the selected column headers.
   * From the context menu that appears, choose "Hide."

Alternatively, you can also use the keyboard shortcut **Ctrl** + **0** (zero) to hide selected columns.

1. **Columns are Hidden**:
   * The selected columns will be hidden from view, and the remaining columns will adjust to fill the space.

**To Unhide Columns:**

1. **Select the Columns Surrounding the Hidden Columns**:
   * Click on the column letters on either side of the hidden columns. For example, if columns B and C are hidden, click on columns A and D.
2. **Right-Click and Choose "Unhide"**:
   * Right-click on one of the selected column headers.
   * From the context menu that appears, choose "Unhide."

Alternatively, you can use the keyboard shortcut **Ctrl** + **Shift** + **0** (zero) to unhide the selected columns.

1. **Columns are Unhidden**:
   * The hidden columns will be restored to their original positions, and they will become visible again.

**6.Ans:** create a simple table in an Excel worksheet and use different functions available in the AutoSum command. In this example, we'll use AutoSum to perform basic calculations on a set of numbers.

**Step 1: Create the Table**

1. Open Microsoft Excel.

| A | B | C | D |

|---------|---------|---------|---------|

| Date | Income | Expenses| Balance|

|01/01/23 | 2000 | 800 | =B2-C2 |

|01/02/23 | 1500 | 700 | =B3-C3 |

|01/03/23 | 1800 | 900 | =B4-C4 |

In this table, column A contains dates, column B contains income amounts, column C contains expense amounts, and column D contains a formula to calculate the balance.

**Step 2: Use AutoSum for Different Functions**

Now, let's use AutoSum to calculate various values in this table:

1. Sum Function:
   * To calculate the total income, select cell B5 (the cell below the "Income" column).
   * Go to the "Formulas" tab in the Excel ribbon.
   * Click on "AutoSum" in the "Function Library" group.
   * Excel will automatically suggest the SUM function for you since it detects adjacent cells with numbers.
   * Press Enter to confirm, and the total income will be displayed in cell B5.
2. Average Function:
   * To calculate the average expense, select cell C5 (the cell below the "Expenses" column).
   * Click on "AutoSum" in the "Function Library" group.
   * This time, choose "Average" from the dropdown.
   * Excel will suggest the AVERAGE function.
   * Press Enter, and the average expense will be displayed in cell C5.
3. Minimum and Maximum Functions:
   * To find the minimum and maximum balances, select cells D5 and D6 (the cells below "Balance" and "Balance").
   * Click on "AutoSum" in the "Function Library" group.
   * Choose "Min" from the dropdown to find the minimum balance.
   * Choose "Max" from the dropdown to find the maximum balance.
   * Excel will suggest the appropriate functions for both.
   * Press Enter to display the results.