**EXCEL**

# **Data Validation**

Itis a feature that controls what data can be entered into a cell. It ensures that only valid data (as per specific criteria) is entered, which helps avoid input errors.

**How to apply Data Validation with a formula:**

1. **Select the cells** where you want to apply validation.
2. Go to the **Data** tab on the ribbon.
3. Click on **Data Validation** in the **Data Tools** group.
4. In the **Data Validation** dialog box, under the **Settings** tab:
   * Choose **Custom** in the **Allow** dropdown.
   * In the **Formula** field, enter your formula to validate the data.
5. Press **OK**.

**Data Validation** (By list , text, number , source, time , date ,message)

# **Handling Null Values:**

**Select Null Values**:

* + **Select the range** of cells you want to check for null values.
  + Press **F5** to open the **Go To** dialog.
  + Click on **Special**.
  + Select **Blanks**.
  + Press **Ctrl + -** to delete the selected blank cells.
  + Choose **Shift cells up** (or any option based on your need).

# **TRIM Function:**

* To remove extra spaces from a cell, use the **TRIM** function.
* =TRIM(A1)

# **Text Functions (Scalar Functions):**

1. **CONCATENATE**:
   * **Description**: Combines multiple text strings into one.
   * **Formula**:=CONCATENATE(text1, text2, ...)

Example:=CONCATENATE(A1, " ", B1)

1. **MID** (Extract substring):
   * **Description**: Extracts a substring from a string (starting at any position).
   * **Formula**:=MID(text, start\_num, num\_chars)

Example:=MID(A1, 2, 5)

1. **LOWER**:
   * **Description**: Converts all uppercase letters in a text string to lowercase.
   * **Formula**:=LOWER(text)

Example:=LOWER(A1)

1. **UPPER**:
   * **Description**: Converts all lowercase letters in a text string to uppercase.
   * **Formula**:=UPPER(text)

Example:=UPPER(A1)

1. **LEFT**:
   * **Description**: Returns a specified number of characters from the start of a text string.
   * **Formula**:=LEFT(text, num\_chars)

Example:=LEFT(A1, 4)

1. **RIGHT**:
   * **Description**: Returns a specified number of characters from the end of a text string.
   * **Formula**:=RIGHT(text, num\_chars)

Example:=RIGHT(A1, 3)

1. **REPLACE**:
   * **Description**: Replaces part of a text string, based on the number of characters, with a different text string.
   * **Formula**:=REPLACE(old\_text, start\_num, num\_chars, new\_text)

Example:=REPLACE(A1, 1, 3, "New")

1. **FIND**:
   * **Description**: Finds the starting position of one text string within another (case-sensitive).
   * **Formula**: =FIND(find\_text, within\_text, [start\_num])

Example:=FIND("apple", A1)

1. **SEARCH**:
   * **Description**: Similar to FIND but case-insensitive.
   * **Formula**: =SEARCH(find\_text, within\_text, [start\_num])

Example:=SEARCH("apple", A1)

1. **PROPER**:
   * **Description**: Capitalizes the first letter of each word in a text string.
   * **Formula**: =PROPER(text)

Example:=PROPER(A1)

1. **LEN**:
   * **Description**: Returns the length of a text string (number of characters).
   * **Formula**: =LEN(text)

Example:=LEN(A1)

# **Conditional Formatting:**

1. **Filter or Sort Out the Null Values**:
   * **Steps**:
     + Use a filter or conditional formatting to highlight null values or blanks.
     + **Formula Example**:

=ISBLANK(A1)

1. **Conditional Formatting with Filters**:
   * **Steps**:
     + Select cells you want to apply formatting to.
     + Go to **Home** > **Conditional Formatting**.
     + Create a new rule based on a formula:

# **Data to Sort:**

You can use conditional formatting to visually sort data based on specific conditions.

Data 🡪Sort , SortNested

# **Text To Column :**

Data -->Text to Columns button. -->Delimited--> next--> choose(, Space, Comma, Tab, Semicolon, or Other)

# **Aggregate Function**:

### ****SUM****: =SUM(range)

Example: =SUM(A1:A10)

### ****SUMIF****:=SUMIF(range, criteria, [sum\_range])

Example =SUMIF(A1:A10, ">10", B1:B10)

### ****SUMIFS****: =SUMIFS(sum\_range, criteria\_range1, criteria1, [criteria\_range2, criteria2], ...)

Example =SUMIFS(B1:B10, A1:A10, ">10", C1:C10, "Active")

### ****COUNT****: =COUNT(range)

Example:=COUNT(A1:A10)

### ****COUNTIF****:=COUNTIF(range, criteria)

Example:=COUNTIF(A1:A10, "Completed")

### ****COUNTA**** (text):

=COUNTA(range)

Example:=COUNTA(A1:A10)

### ****COUNTIFS****:=COUNTIFS(criteria\_range1, criteria1, [criteria\_range2, criteria2], ...)

Example=COUNTIFS(A1:A10, ">10", B1:B10, "Yes")

### ****AND****:=AND(logical1, [logical2], ...)

Example:=AND(A1>10, B1="Yes")

### ****OR****:=OR(logical1, [logical2], ...)

Example:=OR(A1>10, B1="Yes")

### ****IF****:=IF(logical\_test, value\_if\_true, value\_if\_false)

Example =IF(A1>10, "High", "Low")

### ****VLOOKUP****: =VLOOKUP(lookup\_value, table\_array, col\_index\_num,false)

Example:=VLOOKUP(A1, B1:D10, 3, FALSE)

### ****XLOOKUP****: =XLOOKUP(lookup\_value, lookup\_array, return\_array, [if\_not\_found], [match\_mode], [search\_mode])

Example =XLOOKUP(A1, B1:B10, C1:C10, "Not Found")

### ****HLOOKUP****: =HLOOKUP(lookup\_value, table\_array, row\_index\_num, [range\_lookup])

Example:=HLOOKUP(A1, B1:F5, 3, FALSE)

# **Data From Other Sources:**

**1. Get Data from the Web in Excel:**

**Steps:**

1. **Open Excel**.
2. Go to the **Data** tab.
3. Click on **Get Data** > **From Other Sources** > **From Web**.
4. A dialog box will appear. Enter the **URL** of the web page from which you want to get the data and click **OK**.
5. Excel will try to connect to the website. If successful, you’ll see a preview of the web data.
6. Choose the **table** or **data** you want to import from the website.
7. Click on **Load** to bring the data into your worksheet.

**Example:**

If you want to extract a table from a URL like https://www.example.com, follow the steps above to pull the data into Excel.

**2. Get Data from a CSV File in Excel:**

1. **Open Excel**.
2. Go to the **Data** tab.
3. Click on **Get Data** > **From File** > **From Text/CSV**.
4. Browse your computer for the **CSV file** and click **Import**.
5. Excel will open a preview of the CSV file. Review the columns and formatting.
6. Click on **Load** to import the data directly into the worksheet, or click **Transform Data** if you need to make changes before importing (e.g., removing columns, changing formats).

**Example:**

If you have a CSV file like data.csv, follow these steps to import the contents into Excel.

# **Custom List:**

Option 🡪 Advance 🡪custom list 🡪 add data

# **Make Directory:**

MD + cell value 🡪ctrl+e🡪Notepad🡪save file as .bat

# **GIT COMMANDS**

git init

git remote add origin https://github.com/hadiqamehdi/EXCEL.git

git add "Example.xlsx"

git commit -m " advance excel Excel file"

git push -u origin main