Assignment -7

1. How do you create a drop-down list using Data validation in Excel?

A drop-down list is created using Data validation list.

steps
- → select the cell (s)
- → Go to Data → Data validation
- → Under Allow, choose list
- → In source, enter values (or) select a range
- → click OK.

Example

Yes, NO, may be

uses:-
- → standardized data entry
- → Avoids typing mistakes

2) what steps would you take to ensure data validation rules are applied correctly?

Ensuring data validation rules are applied correctly means setting the right rules, guiding the user, and Testing inputs so that only valid and accurate data can be entered into Excel cells.

step-by-step Process

1. select the Correct Cell Range
⇒ Always select the exact cells where validation is required.
⇒ use absolute references if copying rules.

⊕ choose the Appropriate validation Type

Goto Data ⇒ Data validation and select:

⇒ whole Number ⇒ for age, quantity
⇒ Decimal ⇒ for Percentages
⇒ List ⇒ for drop-down
⇒ Date/Time ⇒ for schedules
⇒ custom ⇒ for advanced rules.

* set Accurate Criteria

⇒ Define correct minimum and maximum values
⇒ use formulas carefully (e.g, >=, <=)

Example:

Between 1 and 100

\# Use Input message

⇒ Displays instructions when a cell is selected
⇒ Helps users know what to enter.

Example:

Title : Age
message : Enter age between 18 and 60.

3) Explain the process of Protecting a worksheet with a password.

worksheet Protection in Excel is used to prevent unauthorized users from modifying data, formulas, or structure of a worksheet. By applying a Password, the sheet can be viewed but not edited without Permission.

steps to Protect a worksheet

→ Open the Excel worksheet you want to Protect.
→ Go to the Review tab on the Ribbon.
→ click on Protect sheet.
→ Enter a Password and confirm it.
→ Select the active actions users are allowed to Perform.
→ click ok to apply Protection.

Result:

→ Editing, deleting or formatting cells is restricted.
→ Only authorized users with the Password can unprotect the sheet.

4) How do you Protect specific cells while allowing others to be edited.

In Excel, it is Possible to Protect only certain cells while keeping other cells editable. This feature is useful when users need to enter data in specific cells but should not change formulas or

important values.

steps to Protect specific cells

⇒ select the cells that should remain editable.

⇒ Right-clicks and choose Format cells.

⇒ Go to the Protection tab.

⇒ Uncheck the "Locked" option and click ok.

⇒ Go to the Review tab and click Protect sheet.

⇒ set a Password and confirm it.

Result:

⇒ Locked cells are Protected and cannot be edited.

⇒ unlocked cells remain editable for data entry.

5) what is the purpose of the SUBTOTAL function, and how is it different from SUM?

The SUBTOTAL function in Excel is used to perform calculations such as SUM, AVERAGE, COUNT, MAX, and MIN on a range of data, Its main purpose is to calculate values only for visible rows, especially when data is filtered.

Purpose of the SUBTOTAL function

⇒ Performs calculations on filtered data

⇒ Ignores hidden rows

⇒ Automatically updates results when filters are applied or removed.

Syntax:

=SUBTOTAL (function_num, range)

Example:

=SUBTOTAL (9, A1 : A20)

Here, 9 represents sum and only visible values are added.

6) How do you apply data validation to prevent duplicate entries?

In Excel data validation can be used to prevent duplicate entries by applying a custom validation formula. This ensures that each value entered in a selected range is unique, improving data accuracy.

Steps to Prevent Duplicate Entries

⇒ select the cell range where duplicates are allowed. (eg., A1:A20)

⇒ Go to the data tab and click data validation.

⇒ Under Allow, choose custom.

⇒ Enter the following formula:

$$\neq \text{cost} = COUNTIF (\$A\$1 : \$A\$20, A2) = 1$$

⇒ click ok to apply the rule.

Explanation of Formula

→ COUNTIF counts how many time a value appears in the range.

→ If count is more than 1, Excel blocks the entry.

Practical Applications:

→ Employee ID number
→ Roll number
→ Invoice number
→ Product Codes.

7) How would you restrict data entry to a specific range of values?

In Excel, Data validation is used to restrict data entry so that users can enter only values within a defined range. This helps maintain data accuracy and consistency.

Steps to Restrict Data Entry:-

→ Select the cells where data entry should be restricted (e.g., B1:B20)

→ Go to the Data tab → click Data validation.

→ In the Settings Tab:

→ choose Allow : whole Number or Decimal

→ set minimum and maximum values

⇒ click ok.

Example:

To allow marks blw 0 and 100 :

Allow: whole number
minimum : 0
maximum : 100

Using Input message

→ Displays guidance like:
"Please enter a value blw 0 and 100!"

8) what are the security options available in Excel for Protecting workbooks?

microsoft Excel Provides several security options to Protect data from unauthorized access, accidential changes, and misuse. These options help secure both workbooks and worksheets.

⇒ Password Protection for workbook

→ Prevents unauthorized users from opening or modifying the workbook.

⇒ Path :

File → Info ⇒ Protect workbook → Encrypt with Password.

⇒ Protect workbook structure

→ Restricts users from adding, deleting, moving or renaming sheets.

→ Ensures the workbook structure remains unchanged

⇒ Path:
   Review ⇒ Protect workbook.

⇒ Protect worksheet :

→ Locke selected cells and controls what users can editing.

→ Allow permission settings like selecting cells, formatting or inserting rows.

⇒ Path:
   Review ⇒ Protect sheet.

⇒ cell Locking and Hiding formulas

→ Locked cells Prevent editing.

→ Hidden formulas Protect sensitive calculations.

→ Applied through format cells ⇒ Protection.

⇒ Read-only and File Permission.

→ Opens the workbooks in Read only mode to Prevent editing.

→ File Permissions Can restrict Printing, copying or editing.

9) How do you hide formulas in a worksheet while still allowing data entry?

In Excel, formulas can be hidden to protect calculations while still allowing users to enter or modify data in other cells. This is achieved using cells Protection and worksheet Protection.

steps to Hide formulas:

→ select the cells containing formulas

⇒ Right-click ⇒ Format cells ⇒ go to the Protection tab.

⇒ check Hidden and Locked, then click ok.

Allow data entry in other cells:

⇒ select cells where users should enter data

⇒ Right click ⇒ Format cells ⇒ Protection

⇒ Uncheck "Locked" and click OK.

Protect the worksheet:

⇒ Goto review tab

⇒ click Protect sheet

⇒ set a Password and choose allowed action.

Result:

⇒ Formulas are not visible in the formula box.

⇒ users can enter data only in unlocked cell.

⇒ calculations remain Protected.

10) Explain how
Perform calcu
The SUBT
calculations
MIN on
hidden or
syntax:

=SUBT
steps to

⇒ Apply

⇒ In an

=S

⇒ the

rows

Example

If

the SUB

only

(10) Explain how to use the SUBTOTAL function to perform calculations on filtered data.

The SUBTOTAL function in Excel is used to perform calculations such as SUM, AVERAGE, COUNT, MAX, MIN on a range of data, while automatically ignoring hidden or filtered lists or tables.

Syntax:

=SUBTOTAL (function_num, range)

steps to use SUBTOTAL with Filtered Data

⇒ Apply a filter to your data using Data ⇒ Filter

⇒ In an empty cell, enter the SUBTOTAL formulae.

=SUBTOTAL (9, B2 : B20)

⇒ The result updates automatically based on visible rows only.

Example:

If a sales table is filtered by Region = south, the SUBTOTAL function calculates the sum of sales only for the visible rows.