Comprehensive Notes On

Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc

Class X - Information Technology (IT 402)

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1 Comprehensive Notes

1.1 Chapter 4: Analyse Data using Scenarios and Goal Seek

1.1.1 Consolidating Data

Definition: Data consolidation is the process of collecting, combining, and summarizing data from multiple worksheets or workbooks into a single master worksheet.

Relevance: It enables decision-makers to aggregate distributed information (such as monthly sales from different regional offices) into a single corporate report without manual copy-pasting.

Example: Combining Q1 sales figures from four separate branch sheets (`North`, `South`, `East`, `West`) into a unified `Annual_Summary` sheet.

⚠ Steps to Consolidate Data

1. Open the spreadsheet containing the source sheets and create a target master sheet.
2. Click the target cell in the master sheet, then select **'Data → Consolidate...'**.
3. **Function:** Choose a summary function (`Sum`, `Average`, `Count`, `Max`, `Min`, `Product`). `Sum` is default.
4. **Source Data Range:** Click in the field, navigate to the first source sheet, select the data range (including headers), and click **Add**. Repeat for all source sheets.
5. **Copy results to:** Specify the top-left cell of the destination range in the master sheet.
6. **Options:**
   - Check **Row labels** / **Column labels** if source ranges have text headers for exact label matching.
   - Check **Link to source data** to dynamically update summary values whenever source data changes.
7. Click **OK** to execute consolidation.

💡 Key Concept: Link to Source Data

When **'Link to source data'** is enabled, Calc creates dynamic formula links instead of pasting static values. If any numbers in the individual branch sheets are revised, the master summary updates automatically upon opening.

1.1.2 Subtotals and Data Outlining

Definition: The Subtotal tool automatically groups rows of data in a sorted table and calculates summary statistics (such as Sum, Average, or Count) for each group, inserting group totals and a grand total.

Relevance: It simplifies large, detailed transaction logs by inserting intermediate category totals

without writing manual `SUMIF` formulas.

Example: Calculating the total sales amount for each product category in an inventory register containing 1,000 transaction entries.

⚠ Mandatory Pre-requisite & Steps for Subtotals

CRITICAL RULE: Data MUST be sorted by the grouping column before running the Subtotals command. Unsorted data will generate duplicate, broken subtotal rows for repeated category names.

1. Sort the dataset by the grouping column (e.g., sort by `Category`).
2. Select the range of data and choose **'Data → Subtotals...'**.
3. In the **1st Group** tab, select the column under **Group by** (e.g., `Category`).
4. Under **Calculate subtotals for**, check the numerical columns to summarize (e.g., `Sales`).
5. Select the desired mathematical operation under **Use function** (e.g., `Sum`).
6. (Optional) Configure nested grouping under the **2nd Group** and **3rd Group** tabs.
7. Click **OK**.

Outline Controls

Subtotals automatically generate outline controls (+, −, and level buttons 1, 2, 3) on the left margin of row headers. Level 1 displays only the Grand Total, Level 2 displays Subtotals + Grand Total, and Level 3 reveals all raw detail rows.

1.1.3 What-If Scenarios

Definition: A What-If Scenario is a saved set of cell values that can be substituted into a spreadsheet model to observe how dependent formula results change under varying assumptions.

Relevance: Scenarios allow managers to evaluate multiple hypothetical operational conditions (such as Optimistic, Realistic, and Pessimistic financial forecasts) within a single worksheet.

Example: Modeling monthly loan EMI payments under three potential interest rate scenarios (6.5%, 7.5%, and 8.5%).

⚠ Steps to Create and Switch Scenarios

1. Set up the model with input cells (variables) and formula cells (dependent results).
2. Select the input cells that will vary across scenarios (use `Ctrl + Click` for non-adjacent cells).
3. Choose **'Tools → Scenarios...'**.
4. Enter a clear scenario **Name** (e.g., "Optimistic Rate").

5. Configure optional settings: **Display border**, border color, and check **Prevent changes**. Click **OK**.
6. Enter new input values on the sheet and repeat steps 2–5 to create additional scenarios.
7. **Switching Scenarios:** Click the drop-down arrow in the scenario border on the worksheet, or open the Navigator panel (F5) and double-click a scenario under Scenarios.

1.1.4 Goal Seek

Definition: Goal Seek is a reverse calculation tool that determines the specific single input variable value required to achieve a desired target output in a formula cell.

Relevance: Instead of manually guessing input values through trial and error, Goal Seek calculates the precise required variable in one operation.

Example: Finding the minimum exam mark required in a final subject to achieve an overall target average score of 80%.

⚠ Steps to Use Goal Seek

1. Select the cell containing the output formula (**Formula cell**).
2. Choose **'Tools → Goal Seek...'**.
3. Verify **Formula cell** address.
4. Enter the desired numerical outcome in the **Target value** field (e.g., 80).
5. Click in **Variable cell** and select the single input cell to alter.
6. Click **OK**. When Calc displays a solution dialog, click **Yes** to insert the result into the variable cell.

Table 1: Comparison of What-If Scenarios and Goal Seek

Feature	What-If Scenarios	Goal Seek
Direction	Forward analysis (Inputs → Output)	Reverse analysis (Target Output → Input)
Input Capacity	Swaps multiple variable input cells	Modifies only ONE single variable cell
Primary Purpose	Compares multiple saved sets of conditions	Back-calculates an exact input needed for a target

1.2 Chapter 5: Using Macros in Spreadsheet

1.2.1 What is a Macro?

Definition: A macro is a saved sequence of keystrokes, menu commands, and operational steps written in LibreOffice Basic code that can be executed repeatedly to automate routine tasks.

Relevance: Macros save time and eliminate human error when performing repetitive spreadsheet tasks (such as applying uniform report formatting or inserting standard table headers).

Example: Automating a 10-step formatting sequence (merge, font Arial 14pt, bold, light blue fill, borders) into a single-click macro named `FormatHeader`.

Enabling Macro Recording

Macro recording is disabled by default in fresh installations of LibreOffice. To enable it: navigate to **'Tools → Options → LibreOffice → Advanced'** and check **'Enable macro recording (experimental)'**.

1.2.2 Recording and Running a Macro

Macro Naming Rules & Hierarchy

Naming Rules:

- Must start with a letter or an underscore (_).
- Cannot contain spaces, hyphens, or punctuation characters.
- Cannot use reserved keywords in LibreOffice Basic (e.g., `Sub`, `End`, `If`).

Storage Hierarchy: Saved macros are stored under `My Macros` → `Standard` → `Module1`.

To Record a Macro:

1. Select **'Tools → Macros → Record Macro'**. The floating 'Recording' toolbar appears.
2. Perform the desired actions on the worksheet.
3. Click **Stop Recording**.
4. In the macro dialog, select `My Macros` → `Standard` → `Module1`, enter a valid Macro Name, and click **Save**.

To Run a Macro: Select **'Tools → Macros → Run Macro...'**, navigate to `My Macros` → `Standard` → `Module1`, select the macro name, and click **Run**.

1.2.3 Creating Custom Macro Functions

Custom mathematical functions can be programmed using LibreOffice Basic code and used directly inside cell formulas just like built-in Calc functions.

Listing 1: Custom Function in LibreOffice Basic

```
Function CalculateDiscount(Price, Rate)
    If Price > 1000 Then
        CalculateDiscount = Price * (Rate / 100)
    Else
        CalculateDiscount = 0
    End If
End Function
```

Calling in Calc: Enter `=CALCULATEDISCOUNT(A2, 10)` in any worksheet cell.

1.3 Chapter 6: Linking Spreadsheet Data

1.3.1 Multiple Sheets & Referencing

Inserting Sheets: Select **'Sheet → Insert Sheet...'** or right-click any sheet tab. Specify position (*Before* or *After* current sheet), number of sheets, or import *From file*.

Cell Reference Syntax:

- Standard sheet name: `SheetName.CellAddress` (e.g., `Sheet2.A1`).
- Sheet name with spaces: `'Sheet Name'.CellAddress` (e.g., `'Q1 Sales'.B5`). Single quotes are mandatory.

1.3.2 Linking External Documents & Web Data

External File Reference Syntax:

```
='file:///C:/Users/Student/Documents/Sales.ods'#$'Sheet1'.A1
```

Linking Web Data (HTML Tables): Select cell, choose **'Sheet → Link to External Data...'**, enter Web URL, press Enter, select the target HTML table name, set optional refresh interval in seconds (**Update every**), and click **OK**.

1.3.3 Absolute vs. Relative Hyperlinks

Table 2: Comparison of Absolute and Relative Hyperlinks

Attribute	Absolute Hyperlink	Relative Hyperlink
Path Definition	Full path starting from root drive	Path relative to current file folder
Example	`file:///C:/School/Notes/Uni`	`../Notes/Unit2.ods`
Portability	Breaks if folder/file is moved	Works as long as relative folder structure stays intact

1.4 Chapter 7: Share and Review a Spreadsheet

1.4.1 Collaborative Sharing & Conflict Resolution

Sharing a Spreadsheet: Select **'Tools → Share Spreadsheet...'**, check **'Share this spreadsheet with other users'**, save to a shared network path. Title bar displays `(shared)`.

Disabled Features in Shared Mode

To prevent file corruption, the following features are disabled in shared mode: Conditional Formatting, Insert Images/Objects, Merge Cells, Track Changes, Grouping/Outlines, and Sheet Deletion.

Conflict Resolution: If two users edit the same cell simultaneously, the user saving second receives the **'Resolve Conflict'** dialog prompting them to choose *"Keep Mine"* or *"Keep Theirs"*.

1.4.2 Track Changes, Merging & Comparing

- **Record Changes:** Select **'Edit → Track Changes → Record'**. Cell modifications receive colored borders and red accent marks.
- **Manage Changes:** Select **'Edit → Track Changes → Manage...'** to review, accept, or reject edits.
- **Merge Document:** Combines tracked changes from separate edited copies back into the master document (**'Edit → Track Changes → Merge Document...'**).
- **Compare Document:** Compares two un-tracked files and highlights all differences as manageable changes (**'Edit → Track Changes → Compare Document...'**).

2 Comprehensive Question Bank

2.1 Multiple Choice Questions (MCQs)

1. Which menu command is used to combine numerical data from multiple worksheets into a single master sheet?

   (A) Tools → Goal Seek
   (B) Data → Consolidate
   (C) Sheet → Scenarios
   (D) Data → Subtotals

   Answer: (B) Data → Consolidate
   Explanation: The Consolidate command under the Data menu combines and summarizes data from multiple source ranges into a single target range using functions like SUM or AVERAGE.

2. What mandatory operation must be performed on data before running the Subtotals command?

   (A) Format cells as currency
   (B) Sort by the grouping column
   (C) Create a chart
   (D) Record a macro

   Answer: (B) Sort by the grouping column
   Explanation: Subtotals evaluate rows sequentially; if the dataset is unsorted, Calc will insert duplicate subtotal rows every time the category text changes.

3. Which tool back-calculates the required single input variable value for a specified formula target?

   (A) What-If Scenarios
   (B) Consolidate Data
   (C) Goal Seek
   (D) Macro Recorder

   Answer: (C) Goal Seek
   Explanation: Goal Seek works in reverse to calculate the exact single input variable needed to achieve a desired target result in a formula cell.

4. A saved sequence of operations and commands written in LibreOffice Basic code is called a:

   (A) Hyperlink
   (B) Subtotal
   (C) Macro
   (D) Scenario

   Answer: (C) Macro
   Explanation: A macro is a saved sequence of steps or functions stored in LibreOffice Basic to automate repetitive tasks.

5. What is the correct cell reference syntax for cell B5 on a sheet named `Quarter 1`?

   (A) `Quarter 1.B5`
   (B) `'Quarter 1'!B5`
   (C) `'Quarter 1'.B5`
   (D) `[Quarter 1].B5`

   Answer: (C) `'Quarter 1'.B5`
   Explanation: In Calc, sheet references use a dot separator, and sheet names containing spaces must be enclosed in single quotes.

6. Which menu path is used to enable real-time collaborative editing by multiple network users?

   (A) Edit → Track Changes
   (B) Tools → Share Spreadsheet...
   (C) File → Save As
   (D) Sheet → Link Data

   Answer: (B) Tools → Share Spreadsheet...
   Explanation: Tools → Share Spreadsheet opens the dialog to enable network multi-user editing.

7. In Track Changes mode, a cell containing an edited value is visually marked with a:

   (A) Dotted yellow background
   (B) Colored border and red corner mark
   (C) Double underline
   (D) Strikethrough font

   Answer: (B) Colored border and red corner mark
   Explanation: Recorded changes highlight the modified cell with a colored border and a small red accent triangle.

8. What is the main advantage of enabling 'Link to source data' when consolidating?

   (A) Creates an absolute hyperlink
   (B) Summary figures update dynamically when source values change
   (C) Locks source sheets
   (D) Converts formulas to static text

   Answer: (B) Summary figures update dynamically when source values change
   Explanation: Dynamic formula links ensure the consolidated sheet automatically reflects updates made in the source worksheets.

9. Which option must be enabled in Options before macro recording can be used?

   (A) Enable Experimental Features
   (B) Enable macro recording (experimental)
   (C) Enable Basic Compiler
   (D) Security Macro Security

   Answer: (B) Enable macro recording (experimental)
   Explanation: Under Tools → Options → LibreOffice → Advanced, checking 'Enable macro recording (experimental)' is required.

10. Which feature is explicitly disabled when a spreadsheet is in shared collaborative mode?

    (A) Entering numbers
    (B) Sorting rows
    (C) Conditional Formatting
    (D) Saving the document

    Answer: (C) Conditional Formatting
    Explanation: Conditional formatting, cell merging, and inserting objects are disabled in shared mode to prevent file corruption.

2.2 Assertion-Reasoning Questions

1. **Assertion (A):** Data must be sorted by the grouping column before applying the Subtotals tool.
   Reason (R): Subtotals insert summary calculation rows sequentially whenever the value in the specified grouping column changes.
   Answer: Both (A) and (R) are true, and (R) is the correct explanation of (A).
   Explanation: Subtotals evaluate rows sequentially down the dataset. If data is unsorted, every category shift creates a separate subtotal row, causing broken output. Sorting ensures identical category entries are grouped together.

2. **Assertion (A):** Goal Seek can evaluate multiple variable input cells simultaneously to achieve a desired target output.
   Reason (R): Goal Seek requires specifying a formula cell, a target value, and a single variable cell.
   Answer: (A) is false, but (R) is true.
   Explanation: Goal Seek can modify only ONE single variable cell at a time. Evaluating multiple input variables simultaneously requires What-If Scenarios or Solver.

3. **Assertion (A):** Relative hyperlinks continue to work properly even when the entire parent folder structure is moved to a new drive.
   Reason (R): Relative hyperlinks store only the path relative to the location of the active document rather than fixed root drive letters.
   Answer: Both (A) and (R) are true, and (R) is the correct explanation of (A).
   Explanation: Relative paths maintain location pointers relative to the current file. Moving the entire folder structure preserves these relative file relationships.

4. **Assertion (A):** Macro names in LibreOffice Basic can contain spaces and special symbols like hyphens.
   Reason (R): Macro names must begin with a letter or an underscore and contain only alphanumeric characters.
   Answer: (A) is false, but (R) is true.
   Explanation: Macro names cannot contain spaces, hyphens, or special punctuation characters; they must start with a letter or underscore.

5. **Assertion (A):** Cell merging and conditional formatting are disabled when a spreadsheet is in Shared mode.
   Reason (R): Disabling complex formatting features prevents file corruption during simultaneous multi-user network access.
   Answer: Both (A) and (R) are true, and (R) is the correct explanation of (A).
   Explanation: LibreOffice Calc locks advanced structural formatting features in shared mode to maintain file stability during concurrent edits.

2.3 One-Word / Brief Answer Questions

1. Name the tool used to combine data from multiple source ranges into a single summary master sheet. (**Consolidate**)

2. Which operation must be performed on data prior to applying Subtotals? (**Sorting**)

3. Name the tool that back-calculates an input variable for a desired target outcome. (**Goal Seek**)
4. In what programming language are LibreOffice macros written? (**LibreOffice Basic**)
5. Which key opens the Insert Hyperlink dialog box in Calc? (**Ctrl + K**)
6. What word appears in the title bar when a document is in collaborative mode? (**(shared)**)
7. Name the pop-up feature displayed when hovering over a cell with a recorded change. (**Tooltip**)
8. Which tool imports tracked changes from separate edited file copies back into the original master document? (**Merge Document**)
9. Which tool highlights differences between two un-tracked spreadsheet files? (**Compare Document**)
10. Name the default module where recorded macros are saved. (**Module1**)

2.4 Differentiate Between Questions

1. **Differentiate between What-If Scenarios and Goal Seek.**

Feature	What-If Scenarios	Goal Seek
Direction of Analysis	Forward (Inputs → Formula Result)	Reverse (Target Result → Input Variable)
Input Capacity	Swaps multiple variable input cells	Modifies only ONE single variable cell
Primary Use	Compares multiple hypothetical outcome models	Finds exact input needed for a target goal

2. **Differentiate between Data Consolidation and Subtotals.**

Feature	Data Consolidation	Subtotals
Data Source	Combines multiple sheets/workbooks	Processes a single sorted table in one sheet
Pre-requisite	Requires selecting ranges and headers	Requires sorting data by grouping column
Output Location	Generates output in a separate summary range	Inserts total rows directly inside raw data

3. **Differentiate between Absolute Hyperlinks and Relative Hyperlinks.**

Feature	Absolute Hyperlink	Relative Hyperlink
Path Structure	Full path from root (`file:///C:/...`)	Relative path (`../Folder/File.ods`)
Portability	Breaks if file or drive letter changes	Remains functional when folder moves
Use Case	Fixed local system references	Portable projects shared across computers

4. **Differentiate between Sharing a Spreadsheet and Tracking Changes.**

Feature	Sharing a Spreadsheet	Tracking Changes
Access Type	Real-time simultaneous multi-user editing	Editorial review of cell edits over time
Network Requirement	Requires shared network location	Works on local offline documents
Formatting Restrictions	Disables conditional formatting, merging, etc.	Retains all document formatting features

5. **Differentiate between Merging Documents and Comparing Documents.**

Feature	Merging Documents	Comparing Documents
Pre-requisite	File copy edited with 'Record Changes' ON	Analyzes two un-tracked separate files
Function	Combines recorded change logs into original	Calculates differences between file versions
Dialog Used	Manage Changes dialog (`Merge`)	Manage Changes dialog (`Compare`)

2.5 Short Answer Questions

1. **What is the primary purpose of data consolidation in LibreOffice Calc?**
   Answer: The primary purpose of data consolidation is to aggregate and summarize numerical data from multiple independent worksheets or external workbooks into a single master summary table using mathematical functions such as SUM, AVERAGE, or COUNT.

2. **Why must data be sorted before applying the Subtotal command?**
   Answer: Subtotals evaluate data sequentially down a table. If data is unsorted, Calc inserts a subtotal calculation line every single time a category label changes, resulting in multiple fragmented subtotals for the same category instead of one consolidated group total.

3. **How do you enable macro recording in LibreOffice Calc if the option is missing under Tools → Macros?**
   Answer: Navigate to `Tools` → `Options` → `LibreOffice` → `Advanced` on the menu bar, check the box labeled **'Enable macro recording (experimental)'**, and click OK.

4. **State three rules that must be followed when assigning a name to a macro.**
   Answer: (1) The name must begin with a letter or an underscore; (2) The name cannot contain spaces or special punctuation symbols; (3) The name cannot be a reserved programming keyword in LibreOffice Basic.

5. **What occurs when two users save conflicting edits to the same cell in a shared workbook?**
   Answer: The user who attempts to save second receives the **'Resolve Conflict'** dialog box. This dialog displays both edits ("Keep Mine" vs. "Keep Theirs") and requires the second user to explicitly choose which version to retain before saving.

2.6 Long Answer Questions

1. **Explain the complete step-by-step procedure to consolidate Q1 sales figures from three sheets ('North', 'South', 'East') into a 'Master' summary sheet using the SUM function.**
   Answer:

   (a) Open the workbook containing source sheets `North`, `South`, and `East`, and create a new blank sheet named `Master`.

   (b) Click cell A1 in the `Master` sheet and select **'Data → Consolidate...'** on the menu bar.

   (c) In the Consolidate dialog box, ensure the **Function** drop-down is set to `Sum`.

   (d) Click in the **Source data range** field, navigate to sheet `North`, select the data range including headers, and click **Add**.

   (e) Repeat step 4 for sheets `South` and `East` so all three ranges appear in the **Consolidation ranges** list box.

   (f) Under **Options**, check **Row labels** and **Column labels** to match data based on header text.

   (g) Check **Link to source data** to establish dynamic formula updates.

   (h) Ensure **Copy results to** specifies `'Master'.A1` and click **OK**. Consolidated totals will populate the Master sheet.

2. **Describe how to record a macro named `FormatReport` that merges cells A1:F1, sets font to Arial 14pt Bold, and applies a light blue fill color.**
   Answer:

   (a) Enable macro recording via `Tools` → `Options` → `LibreOffice` → `Advanced` by checking **'Enable macro recording (experimental)'**.

   (b) Select **'Tools → Macros → Record Macro'**. The floating 'Recording' toolbar appears.

   (c) Perform the formatting actions: select cell range A1:F1, click 'Merge and Center Cells', set font family to 'Arial', font size to '14', click 'Bold', and apply Light Blue background color.

   (d) Click **Stop Recording** on the floating toolbar.

   (e) In the save dialog, expand `My Macros` → `Standard` → `Module1`, enter `FormatReport` as the Macro Name, and click **Save**.

3. **Explain how live web data (HTML tables) can be linked into a LibreOffice Calc worksheet and automatically refreshed.**
   Answer:

   (a) Click the cell on the worksheet where the imported web table should begin.

   (b) Select **'Sheet → Link to External Data...'** from the menu bar.

   (c) In the 'URL of External Data Source' field, paste the target web page URL (e.g., `https://www.example.com/data.html`) and press **Enter**.

   (d) Calc connects to the URL and lists available HTML tables under 'Available Tables/Ranges'. Select the target table.

(e) Check **Update every** at the bottom of the dialog and specify the refresh interval in seconds (e.g., 60 seconds).

(f) Click **OK**. Live web table data will be inserted and refreshed automatically based on the timer.

2.7 Case-Study / Competency-Based Questions

1. **Case Scenario 1: Financial Planning for Higher Education**
Passage: Rohan is planning his higher studies and needs a total education loan of ₹8,00,000. He sets up a spreadsheet model where cell B1 is Loan Amount (₹8,00,000), cell B2 is Annual Interest Rate (8.5%), cell B3 is Tenure in Years (5), and cell B4 contains the EMI formula `=PMT(B2/12, B3*12, -B1)`. Rohan wants to evaluate three interest rate scenarios (7.5%, 8.5%, 9.5%) to observe changes in EMI. Furthermore, if he can afford a maximum EMI of exactly ₹15,000, he wants to calculate the maximum loan amount he can borrow.

   (A) Which tool should Rohan use to compare the three EMI outcomes for interest rates 7.5%, 8.5%, and 9.5%?

   (B) Which tool should Rohan use to back-calculate the maximum loan amount for an EMI of ₹15,000?

   (C) In Rohan's Goal Seek calculation, which cell is the Formula cell and which cell is the Variable cell?

   (D) State one major difference between the two tools Rohan used.

   Answers:

   (A) What-If Scenarios (`Tools` → `Scenarios...`).

   (B) Goal Seek (`Tools` → `Goal Seek...`).

   (C) Formula cell is **B4** (EMI calculation) and Variable cell is **B1** (Loan Amount).

   (D) Scenarios evaluate multiple input values to see varying outputs, whereas Goal Seek back-calculates a single input for a fixed target output.

2. **Case Scenario 2: Regional Sales Data Aggregation**
Passage: An electronics company has four zonal managers managing sales in North, South, East, and West zones. Each manager submits a separate ODS file containing monthly product sales tables. The General Manager opens a master file and uses Calc's Consolidate tool to generate an annual sales report. She checks the 'Link to source data' option during consolidation. Later, the South zone manager updates his December sales figures.

   (A) Under which menu is the Consolidate command located?

   (B) Why did the General Manager check 'Link to source data'?

   (C) What will happen to the Master summary sheet when the South manager updates his sales figures?

   (D) What options must be checked if row and column headers in source sheets are arranged in different order?

   Answers:

(A) `Data` → `Consolidate...`

(B) To create dynamic formula links so updates in source branch sheets automatically reflect in the master sheet.

(C) The Master summary figures will update automatically to reflect the revised December sales numbers.

(D) **Row labels** and **Column labels** under Options.

3. **Case Scenario 3: Collaborative Project Review**
Passage: Priya and Amit are working on a school project report spreadsheet over a local network. Priya shares the spreadsheet using `Tools` → `Share Spreadsheet...`. While working simultaneously, both try to edit cell C10. Amit saves his work first. When Priya clicks Save, a prompt appears. Later, their teacher wants to review all individual changes made by Priya and Amit offline.

(A) What indicator appears in the title bar when Priya shares the spreadsheet?

(B) What dialog box appears on Priya's screen when she tries to save her changes after Amit?

(C) Name two spreadsheet features that become disabled while the file is in Shared mode.

(D) Which feature should the teacher use offline to inspect, accept, or reject each change made by Priya and Amit?

Answers:

(A) The text **`(shared)`** appears in the title bar next to the file name.

(B) The **'Resolve Conflict'** dialog box.

(C) Conditional Formatting and Cell Merging (or Insert Images/Objects).

(D) Track Changes (`Edit` → `Track Changes` → `Manage...`).