

Class X ICT Practical

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Contents

1	Practical 1: Applying & Formatting Default Styles	5
1.1	Aim	5
1.2	Requirements	5
1.3	Procedure	5
1.4	Results	6
1.5	Precautions	6
2	Practical 2: Creating and Updating Custom Styles	7
2.1	Aim	7
2.2	Requirements	7
2.3	Procedure	7
2.4	Results	8
2.5	Precautions	8
3	Practical 3: Inserting and Modifying Images	9
3.1	Aim	9
3.2	Requirements	9
3.3	Procedure	9
3.4	Results	10
3.5	Precautions	10
4	Practical 4: Drawing a Family Tree	11
4.1	Aim	11
4.2	Requirements	11
4.3	Procedure	11
4.4	Results	11
4.5	Precautions	11
5	Practical 5: Modifying and Grouping Drawing Objects	12
5.1	Aim	12
5.2	Requirements	12
5.3	Procedure	12
5.4	Results	12
5.5	Precautions	12
6	Practical 6: Consolidating and Grouping & Subtotaling Data	14
6.1	Aim	14
6.2	Requirements	14
6.3	Procedure	14
6.4	Results	15
6.5	Precautions	15
7	Practical 7: What-If Analysis: Scenarios and Data Tables	16
7.1	Aim	16
7.2	Requirements	16
7.3	Procedure	16
7.4	Results	17
7.5	Precautions	17
8	Practical 8: Using Goal Seek for Target Analysis	18
8.1	Aim	18
8.2	Requirements	18
8.3	Procedure	18
8.4	Results	18
8.5	Precautions	18

9	Practical 9: Creating and Using Macros	19
9.1	Aim	19
9.2	Requirements	19
9.3	Procedure	19
9.4	Results	20
9.5	Precautions	20
10	Practical 10: Track Changes, Merging and Comparing	21
10.1	Aim	21
10.2	Requirements	21
10.3	Procedure	21
10.4	Results	22
10.5	Precautions	22
11	Practical 11: Creating Databases, Tables, and Managing Records	24
11.1	Aim	24
11.2	Requirements	24
11.3	Procedure	24
11.4	Results	25
11.5	Precautions	25
12	Practical 12: Creating Relation between Tables	26
12.1	Aim	26
12.2	Requirements	26
12.3	Procedure	26
12.4	Results	26
12.5	Precautions	26
13	Practical 13: Creating Queries	27
13.1	Aim	27
13.2	Requirements	27
13.3	Procedure	27
13.4	Results	27
13.5	Precautions	27
14	Practical 14: Creating Forms	28
14.1	Aim	28
14.2	Requirements	28
14.3	Procedure	28
14.4	Results	29
14.5	Precautions	29
15	Practical 15: Creating Reports	30
15.1	Aim	30
15.2	Requirements	30
15.3	Procedure	30
15.4	Results	30
15.5	Precautions	30

Unit 1: Digital Documentation (Advanced) using LibreOffice Writer

1 Practical 1: Applying & Formatting Default Styles

1.1 Aim

- Apply an existing Heading style, from Paragraph Styles in Libreoffice Writer.
- Change the orientation of the page to Landscape using Styles in Libreoffice Writer.
- Apply fill formatting to paragraphs in Libreoffice Writer.

1.2 Requirements

- Computer with Libreoffice Writer installed.

1.3 Procedure (Write down the steps sequentially as performed)

Part A: Apply an existing Heading style, from Paragraph Styles in Libreoffice Writer.

1. Open Libreoffice Writer.
2. Go to **File** → **New** → **Text Document**.
3. Write a paragraph about noise pollution.
4. Add a title **Noise Pollution** on the top.
5. Select the title **Noise Pollution**.
6. Open **Styles** Menu using **Sidebar** or **F11**.
7. Go to **Headings** option and select **Heading 4** style.
8. Go to **File** → **Save As** and save the file as **noise.odt**.
9. Close the file.

Part B: Change the orientation of the page to Landscape using Styles in Libreoffice Writer.

1. Open file **noise.odt** created in Practical 1.
2. Insert a blank page at the beginning of the document.
 - (a) Move the cursor to the beginning of the document.
 - (b) Go to **Insert** → **Page Break**.
 - (c) Close the file.
3. Open **Styles** Menu using **Sidebar** or **F11**.
4. Go to **Page Styles** option.
5. Double click on **Landscape** to change the page orientation to Landscape.
6. Go to **File** → **Save** to save the changes.
7. Close the file.

Part C: Apply fill formatting to paragraphs in Libreoffice Writer.

1. Open file **noise.odt** created in Practical 1.
2. Open the **Styles** Menu using **Sidebar** or **F11**.
3. Select to **Paragraph Styles** → **Body text** → **Body Text, Indented**
4. Select the **Fill Format Mode** icon on top right side of the **Styles** Menu.
5. Select the paragraph.
6. Go to **File** → **Save** to save the changes.
7. Close the file.

1.4 Results

- **Part A:** The title `Noise Pollution` is now styled as `Heading 4`.
- **Part B:** The page orientation of the document is now set to `Landscape`.
- **Part C:** The selected paragraph is now formatted with the `Body Text, Indented` style. Which is used to indent the whole paragraph by 0.2 inch in the left margin.

1.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

2 Practical 2: Creating and Updating Custom Styles

2.1 Aim

- Create a custom paragraph style in Libreoffice Writer.
- Create a new style using drag and drop in Libreoffice Writer.
- Update existing styles in Libreoffice Writer.

2.2 Requirements

- Computer with Libreoffice Writer installed.

2.3 Procedure (Write down the steps sequentially as performed)

Part A: Create a custom paragraph style in Libreoffice Writer.

1. Open file `noise.odt` created in Practical 1.
2. Open the **Styles** Menu using **Sidebar** or **F11**.
3. Select the paragraph.
4. Change the font size to 14pt, font color to red, font face to **Arial** and line spacing to 1.5.
5. Select **Paragraph Styles** → **Styles Action Button** at top right corner of the **Styles Menu**.
6. Click on **New Style** from **Selection**.
7. Enter the name `myStyle` for the new style and click **OK**.
8. Go to **File** → **Save** to save the changes.
9. Close the file.

Part B: Create a new style using drag and drop in Libreoffice Writer.

1. Open file `noise.odt` created in Practical 1.
2. Open the **Styles** Menu using **Sidebar** or **F11**.
3. Select the paragraph.
4. Change the font size to 15pt, font color to blue, font face to **Times New Roman** and line spacing to 2.0.
5. Select **Paragraph Styles** from the **Styles Menu**.
6. Drag the selected paragraph to the into the **Styles Menu**.
7. Enter the name `myStyle1` for the new style and click **OK**.
8. Go to **File** → **Save** to save the changes.
9. Close the file.

Part C: Update existing styles in Libreoffice Writer.

1. Open file `noise.odt` created in Practical 1.
 2. Open the **Styles** Menu using **Sidebar** or **F11**.
 3. Select the paragraph with the style `myStyle1`.
 4. Change the font size to 16pt, font color to green, font face to **Courier New** and line spacing to 1.0.
 5. Click on **Styles Action Button** at top right corner of the **Styles Menu**.
 6. Click on **Update Selected Style**.
 7. Go to **File** → **Save** to save the changes.
 8. Close the file.
-

2.4 Results

- **Part A:** A new paragraph style named `myStyle` is created with the specified formatting (14pt Arial font, red color, and 1.5 line spacing).
- **Part B:** A new paragraph style named `myStyle1` is created with the specified formatting (15pt Times New Roman font, blue color, and 2.0 line spacing).
- **Part C:** The style `myStyle1` is updated with the new formatting (16pt Courier New font, green color, and 1.0 line spacing).

2.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

3 Practical 3: Inserting and Modifying Images

3.1 Aim

- Insert an image into a document in Libreoffice Writer.
- Delete an image from a document in Libreoffice Writer.
- Insert an image into a document using drag and drop in Libreoffice Writer.
- Insert an image into a document using copy and paste in Libreoffice Writer.
- Crop, Resize, and rotate an image in Libreoffice Writer.

3.2 Requirements

- Computer with Libreoffice Writer installed.
- An image file (e.g., Desktop/image.jpg) to insert.

3.3 Procedure (Write down the steps sequentially as performed)

Part A: Insert an image into a document in Libreoffice Writer.

1. Open file `noise.odt` created in Practical 1.
2. Place the cursor where you want to insert the image.
3. Go to **Insert** → **Image**.
4. Browse to the location of the image file (e.g., Desktop/image.jpg) and select it.
5. Click on **Open** to insert the image into the document.
6. Go to **File** → **Save** to save the changes.
7. Close the file.

Part B: Delete an image from a document in Libreoffice Writer.

1. Open file `noise.odt` containing the image.
2. Click on the image you want to delete to select it.
3. Press the **Delete** key on your keyboard to remove the image.
4. Go to **File** → **Save** to save the changes.
5. Close the file.

Part C: Insert an image into a document using drag and drop in Libreoffice Writer.

1. Open file `noise.odt`.
2. Open the folder containing the image file (e.g., Desktop/image.jpg).
3. Click and hold the image file, then drag it into the Libreoffice Writer document.
4. Release the mouse button to drop the image at the desired location in the document.
5. Go to **File** → **Save** to save the changes.
6. Close the file.

Part D: Insert an image into a document using copy and paste in Libreoffice Writer.

1. Open file `noise.odt`.
-

2. Click on the previously inserted image and press **Delete** to remove it.
3. Open the folder containing the image file (e.g., **Desktop/image.jpg**).
4. Right-click on the image file and select **Copy**.
5. Go back to Libreoffice Writer and place the cursor where you want to insert the image.
6. Right-click and select **Paste** or press **Ctrl + V** on your keyboard.
7. Go to **File** → **Save** to save the changes.
8. Close the file.

Part E: Crop, Resize, and rotate an image in Libreoffice Writer.

1. Open file **noise.odt**.
2. Click on the pasted image you want to modify to select it.
3. To crop the image:
 - (a) Right-click on the image and select **Crop**.
 - (b) Adjust the cropping handles to select the area you want to keep.
 - (c) Press **Enter** to apply the crop.
 - (d) Close the file.
4. To resize the image:
 - (a) Position the pointer over one of the sizing handles (small squares) at the corners or sides of the image. The pointer changes shape to indicate the direction of resizing.
 - (b) Click and drag the handle to resize the image.
5. To rotate the image:
 - (a) Go to the image toolbar and click on the rotate button.
 - (b) Position the pointer over the rotation handle (in four corner) that appears above the image.
 - (c) Click and drag the rotation handle to rotate the image to the desired angle.
6. Go to **File** → **Save** to save the changes.
7. Close the file.

3.4 Results

- **Part A:** An image is successfully inserted into the document at the specified location.
- **Part B:** The selected image is successfully deleted from the document.
- **Part C:** An image is successfully inserted into the document using drag and drop.
- **Part D:** An image is successfully inserted into the document using copy and paste.
- **Part E:** The image is successfully cropped, resized, and rotated as per the specified modifications.

3.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

4 Practical 4: Drawing a Family Tree

4.1 Aim

Create a family tree using the Drawing tool in Libreoffice Writer.

4.2 Requirements

- Computer with Libreoffice Writer installed.
- Basic knowledge of family relationships.

4.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open a new document in Libreoffice Writer.
2. Go to **View** → **Toolbar** → **Drawing** to open the Drawing toolbar (at the bottom of the window).
3. Use the **Rectangle** tool to draw shapes representing family members.
4. Use the **Line** tool to draw lines connecting family members.
5. To add name select the **Square shape** and start typing the name of the family member.
6. Go to **File** → **Save As**, enter `family_tree.odt`, and save the document.
7. Close the file.

4.4 Results

- **Part A:** A family tree is successfully created using the Drawing tool in Libreoffice Writer.

4.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
-

5 Practical 5: Modifying and Grouping Drawing Objects

5.1 Aim

- Change the color of the shapes and lines in a drawing object in Libreoffice Writer.
- Group all the family tree drawing objects together in Libreoffice Writer.

5.2 Requirements

- Computer with Libreoffice Writer installed.
- A document containing a drawing object (e.g., a family tree created in Practical 12).

5.3 Procedure (Write down the steps sequentially as performed)

Part A: Change the color of the shapes and lines in a drawing object in Libreoffice Writer.

1. Open the document `family_tree.odt` containing the drawing object.
2. Click on the shape or line you want to modify to select it.
3. Go to **Drawing Object Properties Toolbar** → **Fill Color** or **Line Color** to change the color.
4. Change the fill color of the shape to a desired color (e.g., red, blue, green).
5. Change the line color of the line to a desired color (e.g., black, gray).
6. Go to **File** → **Save** to save the changes.
7. Close the file.

Part B: Group all the family tree drawing objects together in Libreoffice Writer.

1. Open the document `family_tree.odt` containing the drawing object.
2. Hold down the **Shift** key and click on each shape or line to select multiple objects.
3. Go to **Format** → **Group** → **Group** to group the selected objects.
4. Go to **File** → **Save** to save the changes.
5. Close the file.

5.4 Results

- **Part A:** The colors of the shapes and lines in the drawing object are successfully changed.
- **Part B:** All the family tree drawing objects are successfully grouped together.

5.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
-

Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc

6 Practical 6: Consolidating and Grouping & Subtotaling Data

6.1 Aim

- Consolidate data from multiple sheets into a single sheet in Libreoffice Calc.
- Group and subtotal data in Libreoffice Calc.

6.2 Requirements

- Computer with Libreoffice Calc installed.
- Basic knowledge of spreadsheet operations.

6.3 Procedure (Write down the steps sequentially as performed)

Part A: Consolidate data from multiple sheets into a single sheet in Libreoffice Calc.

1. Open Libreoffice Calc.
2. Create a new spreadsheet.
3. Rename the first sheet to **Q1_Sales** and add sales data for the first quarter.
4. Add a new sheet, rename it to **Q2_Sales**, and add similar sales data for the second quarter.
5. Add a third sheet and rename it to **Consolidated_Sales**.
6. Go to the **Consolidated_Sales** sheet and select the cell where you want the data to start.
7. Go to **Data → Consolidate**.
8. In the Consolidate dialog box, select the function you want to use (e.g., Sum).
9. Select the data ranges from **Q1_Sales** and **Q2_Sales** and click **Add** to include them.
10. Expand **More** and check **Row labels** and **Column labels** if your data has headers.
11. Click **OK** to perform the consolidation.
12. Go to **File → Save As**, name the file **data_analysis.ods**, and save.
13. Close the file.

Part B: Group and subtotal data in Libreoffice Calc.

1. Open Libreoffice Calc.
 2. Open the **data_analysis.ods** file.
 3. Go to the **Consolidated_Sales** sheet.
 4. Select the range of data you want to group and subtotal.
 5. Go to **Data → Group and Outline → Group**.
 6. In the Group dialog box, select the columns or rows you want to group by.
 7. Click **OK** to create the group.
 8. To add subtotals, go to **Data → Subtotals**.
 9. In the Subtotals dialog box, select the column to group by and the function to use for subtotals (e.g., Sum, Average).
 10. Click **OK** to apply the subtotals.
 11. Review the grouped and subtotaled data in the spreadsheet.
 12. Go to **File → Save** to save the changes.
 13. Close the file.
-

6.4 Results

- **Part A:** Data from multiple sheets is successfully consolidated into a single sheet in Libreoffice Calc.
- **Part B:** Data is successfully grouped and subtotaled in Libreoffice Calc.

6.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

7 Practical 7: What-If Analysis: Scenarios and Data Tables

7.1 Aim

- To get insight into the EMI, total amount paid, and total interest paid on the loan amount (principal) taken for a fixed rate of interest over a number of time periods. Now we want to see what the EMI will be and how much total interest will be paid for different loan amounts and time periods.
- To calculate the profit on an annual series of sales depending on the selling price, cost price, and fixed cost expenses.

7.2 Requirements

- Computer with Libreoffice Calc installed.
- The `data_analysis.ods` file.
- Basic knowledge of spreadsheet operations.
- Familiarity with loan calculations.

7.3 Procedure (Write down the steps sequentially as performed)

Part A: To get insight into the EMI, total amount paid, and total interest paid on the loan amount (principal) taken for a fixed rate of interest over a number of time periods. Now we want to see what the EMI will be and how much total interest will be paid for different loan amounts and time periods.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and add a new sheet named `EMI_Calc`.
3. Enter the following data in the `EMI_Calc` sheet:
 - Loan Amount (Principal) in cell B2
 - Rate of Interest (in percentage) in cell B3
 - Time Period (in years) in cell B4
4. Use the following formulas to calculate:
 - EMI in cell B5 using the formula: `=PMT(B3/12, B4*12, -B2)`
 - Total Amount Paid in cell B6 using the formula: `=B5 * B4 * 12`
 - Total Interest Paid in cell B7 using the formula: `=B6 - B2`
5. Go to **Data** → **Scenarios**.
6. In the Scenarios dialog box, click on **Add** to create a new scenario.
7. Enter a name for the scenario (e.g., "Scenario 1") and modify the loan amount and time period values.
8. Repeat steps 5-7 to create multiple scenarios with different loan amounts and time periods.
9. After creating all scenarios, select each scenario in the Scenarios dialog box and click **Show** to view the results for each scenario.
10. Analyze the EMI, total amount paid, and total interest paid for each scenario.
11. Go to **File** → **Save** to save the changes.
12. Close the file.

Part B: To calculate the profit on an annual series of sales depending on the selling price, cost price, and fixed cost expenses.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and add a new sheet named `Profit_Calc`.
3. Enter the following data in the `Profit_Calc` sheet:
 - Selling Price per unit in cell B2
 - Cost Price per unit in cell B3
 - Fixed Cost Expenses in cell B4
 - Number of Units Sold in cell B5
4. Use the following formula to calculate Profit in cell B6: $=(B2 - B3) * B5 - B4$
5. Go to **Data** → **What-If Analysis** → **Data Table**.
6. In the Data Table dialog box, select the input cell for Selling Price (B2) and Cost Price (B3).
7. Enter a range of values for Selling Price and Cost Price to analyze different scenarios.
8. Click **OK** to generate the data table showing profit for different combinations of selling price and cost price.
9. Analyze the profit results in the data table.
10. Go to **File** → **Save** to save the changes.
11. Close the file.

7.4 Results

- **Part A:** Different scenarios are successfully created in Libreoffice Calc to analyze the impact of varying loan amounts and time periods on EMI, total amount paid, and total interest paid.
- **Part B:** A data table is successfully created in Libreoffice Calc to analyze profit based on varying selling prices and cost prices.

7.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

8 Practical 8: Using Goal Seek for Target Analysis

8.1 Aim

To perform backward calculations to find an input value based on a specific output. A student has received marks in 4 subjects and must appear for the 5th subject with a target aggregate score of 70. The student can use the Goal Seek tool to determine how many marks are needed in the 5th subject to achieve the required percentage.

8.2 Requirements

- Computer with Libreoffice Calc installed.
- The `data_analysis.ods` file.
- Basic knowledge of spreadsheet operations.
- Familiarity with percentage calculations.

8.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and add a new sheet named **Student_Marks**.
3. Enter the following data in the **Student_Marks** sheet:
 - Marks obtained in Subject 1 in cell B2
 - Marks obtained in Subject 2 in cell B3
 - Marks obtained in Subject 3 in cell B4
 - Marks obtained in Subject 4 in cell B5
 - Marks obtained in Subject 5 (to be calculated) in cell B6
4. Use the following formula to calculate the aggregate percentage in cell B7: $=((B2 + B3 + B4 + B5 + B6) / 500) * 100$
5. Go to **Data** → **Goal Seek**.
6. In the Goal Seek dialog box, set the following:
 - Set Cell: B7 (Aggregate Percentage)
 - To Value: 70 (Target Percentage)
 - By Changing Cell: B6 (Marks in Subject 5)
7. Click **OK** to perform the Goal Seek analysis.
8. Review the result showing the required marks in Subject 5 to achieve the target percentage.
9. Go to **File** → **Save** to save the changes.
10. Close the file.

8.4 Results

- **Part A:** The required marks in Subject 5 are successfully calculated using the Goal Seek tool in Libreoffice Calc.

8.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
-

9 Practical 9: Creating and Using Macros

9.1 Aim

- Record a macro to apply the following style to the heading "Data Analysis" in cell A1: font style should be "Times New Roman", font size should be "14", and font color should be "Blue". Cells from A1 to G1 should be merged and centered.
- Calculate the number of tiles required for flooring a room using a macro as a function. The length and width of the room and the length and width of a tile are entered in the spreadsheet.

9.2 Requirements

- Computer with Libreoffice Calc installed.
- The `data_analysis.ods` file.
- Basic knowledge of spreadsheet operations.
- Familiarity with macros.

9.3 Procedure (Write down the steps sequentially as performed)

Part A: Record a macro to apply the following style to the heading "Data Analysis" in cell A1: font style should be "Times New Roman", font size should be "14", and font color should be "Blue". Cells from A1 to G1 should be merged and centered.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and add a new sheet named `Macro_Format`.
3. Enter "Data Analysis" in cell A1 of the `Macro_Format` sheet.
4. Go to **Tools** → **Macros** → **Record Macro**.
5. Select cell A1.
6. Change the font style to "Times New Roman", font size to "14", and font color to "Blue".
7. Select cells A1 to G1 and go to **Format** → **Merge Cells** → **Merge and Center Cells**.
8. Stop the macro recording by clicking on the **Stop Recording** button.
9. Save the macro with a name (e.g., "FormatHeadingMacro") in the desired library.
10. To run the macro, go to **Tools** → **Macros** → **Run Macro**.
11. Select the saved macro and click **Run**.
12. Go to **File** → **Save** to save the changes.
13. Close the file.

Part B: Calculate the number of tiles required for flooring a room using a macro as a function. The length and width of the room and the length and width of a tile are entered in the spreadsheet.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and add a new sheet named `Tile_Calc`.
3. Enter the following data in the `Tile_Calc` sheet:
 - Length of the room in cell A2
 - Width of the room in cell B2

- Length of the tile in cell C2
- Width of the tile in cell D2

4. Go to **Tools** → **Macros** → **Organize Macros** → **LibreOffice Basic**.
5. In the Macro dialog box, select the desired library and click on **New** to create a new module.
6. Enter the following code to create a function that calculates the number of tiles required:

```
Function CalculateTiles(roomLength As Double, roomWidth As Double,
    tileLength As Double, tileWidth As Double) As Double
    Dim areaRoom As Double
    Dim areaTile As Double
    areaRoom = roomLength * roomWidth
    areaTile = tileLength * tileWidth
    CalculateTiles = areaRoom / areaTile
End Function
```

7. Save the macro and close the Macro dialog box.
8. In cell E2, enter the formula to call the macro function: `=CalculateTiles(A2, B2, C2, D2)`
9. Press **Enter** to calculate the number of tiles required.
10. Go to **File** → **Save** to save the changes.
11. Close the file.

9.4 Results

- **Part A:** The macro is successfully recorded and run, applying the specified formatting to the heading "Data Analysis" in cell A1.
- **Part B:** The macro function is successfully created and calculates the number of tiles required for flooring the room based on the provided dimensions.

9.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

10 Practical 10: Track Changes, Merging and Comparing

10.1 Aim

- To record the changes made by different users in the spreadsheet. Authors and reviewers can add their own comments as well. Review all the changes to accept or reject them in order to prepare the final spreadsheet based on all modifications made by team members.
- Create a new version of a spreadsheet, modify it, and compare it with the original in Libreoffice Calc.

10.2 Requirements

- Computer with Libreoffice Calc installed.
- The `data_analysis.ods` file.
- Basic knowledge of spreadsheet operations.

10.3 Procedure (Write down the steps sequentially as performed)

Part A: To record the changes made by different users in the spreadsheet. Authors and reviewers can add their own comments as well. Review all the changes to accept or reject them in order to prepare the final spreadsheet based on all modifications made by team members.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file and go to the `Student_Marks` sheet.
3. Go to `Edit → Track Changes → Record`.
4. Make changes to the document (e.g., add, delete, or modify text).
5. To add comments, select the text you want to comment on, then go to `Insert → Comment` and type your comment.
6. After making all changes, go to `Edit → Track Changes → Show`.
7. Review each change and comment. To accept or reject changes, go to `Edit → Track Changes → Accept or Reject`.
8. Choose to accept or reject each change as needed.
9. Go to `File → Save` to save the final document.
10. Close the file.

Part B: Create a new version of a spreadsheet, modify it, and compare it with the original in Libreoffice Calc.

1. Open Libreoffice Calc.
2. Open the `data_analysis.ods` file.
3. Go to `File → Save As` and save it as `data_analysis_v2.ods`.
4. Make a small change in any sheet (e.g., update a value in the `Student_Marks` sheet) and save the file.
5. Go to `Edit → Compare Document`.
6. Select the original `data_analysis.ods` file to compare with the current version.
7. Click `Open` to start the comparison.
8. Review the differences highlighted in the document.
9. To merge changes, go to `Edit → Track Changes → Accept or Reject`.

10. Choose to accept or reject each change as needed.
11. Go to **File** → **Save** to save the merged document.
12. Close the file.

10.4 Results

- **Part A:** Changes made by different users are successfully tracked, reviewed, and finalized in the document.
- **Part B:** The two spreadsheets are successfully merged and compared in Libreoffice Calc.

10.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
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Unit 3: Database Management System using LibreOffice Base

11 Practical 11: Creating Databases, Tables, and Managing Records

11.1 Aim

- Create a database name **School** and a table name **StudentDetails** in Libreoffice Base.
- Insert, update, and delete records in the **StudentDetails** table of the **School** database in Libreoffice Base.

11.2 Requirements

- Computer with Libreoffice Base installed.
- Basic knowledge of database management systems.
- Familiarity with database concepts such as tables, fields, and data types.

11.3 Procedure (Write down the steps sequentially as performed)

Part A: Create a database name **School** and a table name **StudentDetails** in Libreoffice Base.

1. Open Libreoffice Base.
2. Select **Create a new database** and click **Next**.
3. Choose **No, do register the database for me** and click **Finish**.
4. Save the database with the name **School**.
5. In the Database window, go to the **Tables** section and click on **Create Table in Design View**.
6. Define the fields for the table **StudentDetails** as follows:
 - **RollNo** - Integer
 - **Name** - Text
 - **FatherName** - Text
 - **DateOfBirth** - Date
 - **Village** - Text
7. Set **RollNo** as the primary key by right-clicking on the row and selecting **Primary Key**.
8. Save the table with the name **StudentDetails**.
9. Close the table design view.
10. Go to **File** → **Save** to save the database.
11. Close the database.

Part B: Insert, update, and delete records in the **StudentDetails** table of the **School** database in Libreoffice Base.

1. Open Libreoffice Base.
 2. Open the database named **School**.
 3. In the Database window, go to the **Tables** section and double-click on the **StudentDetails** table to open it.
 4. To insert new records:
 - (a) Click on the **New Record** button (a blank row at the bottom).
 - (b) Enter details for three students (**RollNo** 1, 2, and 3), ensuring you provide realistic values for **Name**, **FatherName**, **DateOfBirth** (in DD/MM/YYYY format), and **Village**.
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- (c) Press **Enter** after each record to save it.
- (d) Close the file.

5. To update a record:

- (a) Select the record with RollNo 1.
- (b) Update the **DateOfBirth** to "01/01/2010".
- (c) Press **Enter** to save the changes.

6. To delete a record:

- (a) Select the record with RollNo 3.
- (b) Right-click and select **Delete Record**.
- (c) Confirm the deletion when prompted, leaving RollNo 1 and 2 in the table.

7. Go to **File** → **Save** to save the changes.

8. Close the database.

11.4 Results

- **Part A:** A database named **School** and a table named **StudentDetails** are successfully created in Libreoffice Base.
- **Part B:** Records are successfully inserted, updated, and deleted in the **StudentDetails** table of the **School** database in Libreoffice Base.

11.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

12 Practical 12: Creating Relation between Tables

12.1 Aim

Create a relationship between two tables **StudentDetails** & **ExamMarks** in the **School** database in Libreoffice Base.

12.2 Requirements

- Computer with Libreoffice Base installed.
- A database named **School**.
- Basic knowledge of database relationships.

12.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open Libreoffice Base.
2. Open the database named **School**.
3. In the Database window, go to the **Tables** section and create a new table named **ExamMarks** with the following fields:
 - **S1.No.** - Integer
 - **RollNo** - Integer
 - **Subject** - Text
 - **Marks** - Integer
4. Set **S1.No.** to auto-increment by selecting the field and checking the **AutoValue** option.
5. Set **S1.No.** as the primary key by right-clicking on the row and selecting **Primary Key**.
6. Save the table with the name **ExamMarks**.
7. Close the table design view.
8. Go to **Tools** → **Relationships**.
9. In the Relationships window, drag the **RollNo** field from the **StudentDetails** table to the **RollNo** field in the **ExamMarks** table to create a relationship.
10. Close the Relationships window and save the changes.
11. Open the **ExamMarks** table and insert records corresponding to the existing Students (e.g., RollNo 1 and 2), providing subjects and marks.
12. Go to **File** → **Save** to save the database.
13. Close the database.
14. Close the file.

12.4 Results

- **Part A:** A relationship is successfully created between the **StudentDetails** and **ExamMarks** tables in the **School** database in Libreoffice Base.

12.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
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13 Practical 13: Creating Queries

13.1 Aim

Create a query to display the names, subjects and marks of students in the **School** database in Libreoffice Base.

13.2 Requirements

- Computer with Libreoffice Base installed.
- A database named **School** with tables named **StudentDetails** and **ExamMarks**.
- Basic knowledge of database queries.

13.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open Libreoffice Base.
2. Open the database named **School**.
3. In the Database window, go to the **Queries** section and click on **Create Query in Design View**.
4. In the Query Design view, add the **StudentDetails** and **ExamMarks** tables to the query.
5. Drag and drop the following fields into the query grid:
 - From **StudentDetails** table: **Name**
 - From **ExamMarks** table: **Subject, Marks**
6. Save the query with a name (e.g., "StudentMarksQuery").
7. Run the query by clicking on the **Run Query** button (green checkmark).
8. Review the results displaying the student names, subjects, and marks for the retained students (RollNo 1 and 2).
9. Go to **File** → **Save** to save the database.
10. Close the database.
11. Close the file.

13.4 Results

- **Part A:** A query is successfully created in Libreoffice Base to display the names, subjects, and marks of students in the **School** database.

13.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
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14 Practical 14: Creating Forms

14.1 Aim

Create a form to enter student details into the **StudentDetails** table and another form to enter marks into the **ExamMarks** table of the **School** database in Libreoffice Base.

14.2 Requirements

- Computer with Libreoffice Base installed.
- A database named **School** with tables named **StudentDetails** and **ExamMarks**.
- Basic knowledge of database forms.

14.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open Libreoffice Base.
2. Open the database named **School**.
3. In the Database window, go to the **Forms** section and click on **Use wizard to create form**.
4. In the Form Design view, use the **Add Fields** button to add fields from the **StudentDetails** table:
 - **RollNo**
 - **Name**
 - **FatherName**
 - **DateOfBirth**
 - **Village**
5. Arrange the fields on the form as desired.
6. To add a submit button:
 - (a) From the Form toolbar, click on **Push Button** tool.
 - (b) Draw a button on the form below the fields.
 - (c) Right-click on the button and select **Properties**.
 - (d) In the General tab, set the label to "Submit" or "Save".
 - (e) In the Events tab, select the **Mouse Button Pressed** event and assign an action or macro if needed.
 - (f) Close the Properties dialog.
 - (g) Close the file.
7. Save the form with a name (e.g., "StudentDetailsForm").
8. Repeat steps 3-6 to create another form for the **ExamMarks** table, adding the following fields:
 - **Sl.No.**
 - **RollNo**
 - **Subject**
 - **Marks**
9. Add a submit button to this form as well using the same procedure described in step 6.
10. Save the second form with a name (e.g., "ExamMarksForm").
11. Open the forms and use them to add NEW records (e.g., RollNo 4 and 5) with their corresponding marks.
12. Go to **File** → **Save** to save the database.
13. Close the database.

14.4 Results

- **Part A:** Forms are successfully created in Libreoffice Base to enter student details into the **StudentDetails** table and marks into the **ExamMarks** table of the **School** database.

14.5 Precautions

- Read and follow the instructions carefully.
- Save your work periodically to avoid data loss.
- Perform the operations in the correct sequence as mentioned in the procedure.

15 Practical 15: Creating Reports

15.1 Aim

Create a report to display student details along with their exam marks from the `StudentMarksQuery` query in the `School` database in Libreoffice Base.

15.2 Requirements

- Computer with Libreoffice Base installed.
- A database named `School` with a query named `StudentMarksQuery`.
- Basic knowledge of database reports.

15.3 Procedure (Write down the steps sequentially as performed)

Part A: Procedure

1. Open Libreoffice Base.
2. Open the database named `School`.
3. In the Database window, go to the **Reports** section and click on **Use wizard to create report**.
4. In the Report Wizard, select the `StudentMarksQuery` query as the data source.
5. Select the fields to include in the report:
 - `Name`
 - `Subject`
 - `Marks`
6. In the grouping options, choose to group by `Name`.
7. Arrange the fields in the desired order and choose any grouping or sorting options as needed.
8. Customize the layout and style of the report using the available options in the wizard.
9. Save the report with a name (e.g., "StudentMarksReport").
10. Preview the report to ensure it displays the data correctly, including the initial records and the newly added ones from the forms.
11. Go to **File** → **Save** to save the database.
12. Close the database.
13. Close the file.

15.4 Results

- **Part A:** A report is successfully created in Libreoffice Base to display student details along with their exam marks from the `StudentMarksQuery` query in the `School` database.

15.5 Precautions

- Read and follow the instructions carefully.
 - Save your work periodically to avoid data loss.
 - Perform the operations in the correct sequence as mentioned in the procedure.
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