ICT PRACTICAL WORKSHEET - STD IX

Worksheet No	4.1
Name of Chapter	Data Analysis Made Easy
Name of Activity	Calculating Population Density
Software Used	LibreOffice Calc
Time	40 Minutes

Order of Events

Opening the Data File	Open Census_India_2011.ots from the School_Resources folder in LibreOffice Calc.
Understanding the Data	Observe the table structure. Identify columns: **State, Population, Area(Km²), Density**.
Calculating Density	Click on cell **G2**. Type the formula **=C2/F2** and press **Enter**.
Using Fill Handle	Drag the **fill handle** from G2 down to apply the formula to all states.
Formatting Numbers	Select column **G**. Use **Delete Decimal Place** to round density values to **two decimal places**.
Saving the File	Save the file as **Population_Density_Analysis.ods**.
Finishing	Keep the file open for the next worksheet.

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Worksheet No	4.2
Name of Chapter	Data Analysis Made Easy
Name of Activity	Classifying Data Using LOOKUP Function
Software Used	LibreOffice Calc
Time	40 Minutes

Order of Events

Creating Lookup Table	Go to Sheet2. Create a table with Population Density ranges and Category labels as per Table 4.1.
Naming the Range	Select the lookup table. Go to **Data → Define Range**. Name it **Criteria** and click **OK**.
Applying LOOKUP	Go back to **Sheet1**. Select cell **J2**. Click **Function Wizard (fx) → LOOKUP → Next**.
Setting Parameters	In **Search Criterion**, enter **G2**. In **Search Vector**, enter **Criteria**. Leave **Result Vector** blank. Click **OK**.
Filling Down	Drag the **fill handle** in J2 down to apply the LOOKUP to all rows.
Adding Header	Label column J as **Classification**.
Saving Progress	Save the file.

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Worksheet No	4.3
Name of Chapter	Data Analysis Made Easy
Name of Activity	Counting Categories with COUNTIF
Software Used	LibreOffice Calc

Worksheet No	4.3
Time	40 Minutes

Order of Events

Preparing Count List	In a new area (e.g., Sheet3), list all density categories: Very Low, Low, Medium, High, Very High.
Using COUNTIF	Select the cell next to **Very Low Density**. Use **fx → COUNTIF**.
Setting Range	In **Range**, select **J2:J36** (Classification column).
Setting Criteria	In **Criteria**, click the cell containing **Very Low Density**.
Completing Counts	Drag the **fill handle** to count all categories automatically.
Labeling Results	Add a header: **Number of States**.
Final Save	Save the file.

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Worksheet No	4.4
Name of Chapter	Data Analysis Made Easy
Name of Activity	Filtering Data and Protecting Sheets
Software Used	LibreOffice Calc
Time	40 Minutes

Order of Events

Applying AutoFilter	Click any cell in the Classification column. Go to Data → AutoFilter.
Filtering Very High Density	Click the **dropdown** in the Classification header. Check only **Very High Density**. Click **OK**.
Viewing Filtered Data	Observe that only states with **Very High Density** are displayed.
Clearing Filter	Go to **Data → AutoFilter** again to remove the filter.
Protecting the Sheet	Go to **Tools → Protect Sheet**. Enter a **password** and confirm. Click **OK**.

Applying AutoFilter	Click any cell in the Classification column. Go to Data → AutoFilter.
Testing Protection	Try editing a cell. It should be locked.
Final Export	Save and export the final file as **Protected_Census_Analysis.ods**.
