NeenOpal

LATERAL PLACEMENT POSITION

Ask

- Candidates should attempt task 1 Mandatorily
- If any candidate wants they can attempt 2 tasks as well
    - If you are applying for a **BI Developer position** - please mandatorily attempt task 1 (Task 2 and 3 is optional for you)
    - If you are applying for a Data Scientist position - please mandatorily attempt task 1 and 2 (Task 3 is optional for you)

Please provide an original solution to the best of your ability.

Deadline

Today EoD (End of the Day)

Task List

1. Record Matching (Mandatory)
2. Python
3. Tableau/PowerBI

Please submit your task here: https://forms.gle/WffvpBAB6omCJ4ph6

TASK 1

Link to the data file: Record Matching Data File

Description

- There are 2 datasets present in the file. Data 1 and Data 2
- The primary key for both data1 and data2 is Order Id + Product ID combination (i.e. the individual datasets do not have any duplicate on this combination)

Provide solution and approach for the following:

1. How to identify the Records (Order ID + Product ID combination) present in data1 but missing in data2 (Specify the number of records missing in your answer)
2. How to identify the Records (Order ID + Product ID combination) missing in data1 but present in data2 (Specify the number of records missing in your answer)
3. Find the Sum of the total Qty of Records missing in data1 but present in data2
4. Find the total number of unique records (Order ID + Product ID combination) present in the combined dataset of data1 and data2

Allowed Tools: Excel, R, Python, SQL, Tableau, PowerBI

TASK 2

Please attempt the questions that follow in Python

Link to the File: Python Task Dummy Data

1. Read the csv or excel file.
2. Change the datatypes of the column and check the memory usage before and after the change in the data types.
3. Dump the data into the mysql database.
4. index the column after the data is inserted.

Note: Please make a note we are dumping the data everyday so first delete the indexing from the table and then insert the data.

Submission can be a document or any IDE Notebook

TASK 3

Tableau/PowerBI Task: Refer Sample Sales data and the column names in the excel file.

Link to the Excel File: Tableau/PowerBI Dummy Data

Create following in tableau:

- Formulas for YTD Sales, YTD LY Sales, YoY Growth (= YTD Sales / YTD LY Sales -1)
- Formulas for YTD Sales, YTD LY Sales, YoY Growth (= YTD Sales / YTD LY Sales -1) but with Financial Year starting as April and not January
- Create a chart/table which shows only the top Sub-Category within each category (the top sub-category should dynamically change based on the selection)
- Write a formula to compute Target Achievement % (= Total Sales / Target). Target to be taken as user input and dashboard should allow user to change the target
- Create a bar chart
    - With month as X-axis
    - For Y-axis, the chart should show either Sales or Quantity column depending on what the user wants to see

    - In the tooltip of each bar show the Top 5 Product Names for the month based on Profit

- Categorize the customers into **Score** between 1 to 4 based on the Total Sales value of the customer in the entire data
    - Bottom 25% customers – Score =1
    - Next 25% customers – Score =2
    - Next 25% customers – Score =3
    - Top 25% customers – Score =4

YTD -> Year to Date

LY -> Last Year

YoY -> Year-over-Year

Submission can be a tableau/PowerBI workbook or a word/pdf file explaining the logic/formula