Business Analytics with Excel Certification Training

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Objectives

- To analyze the sales based on various product categories

- To enable the users to be able to pick a product category and see trends month-by-month and product-by-product

Prerequisites

- Creating charts and graphs in excel

- Analyzing data in excel

- Formatting data in excel

Industry Relevance

- **Creating charts and graphs in excel:** It is used to help express complex data in a simple format.

- **Analyzing data in excel:** It helps gain insights into the data through high-level visual summaries, trends, and patterns.

- **Formatting data in excel:** It helps to make data look more interesting and descriptive.

Problem Statement

A company wishes to add user control for product categories for customers to choose a category and view the trend month-by-month and product-by-product. They will use Excel to analyze sales based on product categories and create a sales dashboard that breaks down sales by product category.

Dataset Description

Variable	-	Description
• Order ID	-	Unique order ID of a productGender
• Order Date	-	Order placement date
• Ship Date	-	Shipment date of the placed order
• Aging	-	Used to create histogram bin
• Ship Mode	-	Shipment mode of placed order
• Product Category	-	Product category
• Product	-	Name of the product
• Sales	-	Sales amount
• Quantity	-	The amount or number of a material

Dataset Description

Variable	-	Description
Discount	-	A deduction from the usual cost of something
Profit	-	A financial advantage or benefit
Shipping Cost	-	The amount required to ship the placed order
Order Priority	-	Precedence of placed order
Customer ID	-	Unique customer ID
Customer Name	-	Name of the customer
City	-	Unique city name
State	-	Unique state name
Country	-	Unique country name
Region	-	Especially the part of a country
Months	-	The month of placing the order

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

1. Use the saved sample e-commerce database

2. Prepare a table of sales and profit month-wise in a working sheet

   - Click the data tab, and then click on data analysis under the analyze group

   - Select histogram

   - In the histogram dialog box, click the labels check box

   - After that, select the range ("Sales Data!D1:D51291") in the Input reference box and ("Working!K3:K7") in the bin range reference box

   - In the output section, select range "Working!N3" for the binning table, click the histogram check box, and then OK

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

3. Prepare the sales table region-wise in the working sheet

4. Create user control combo box for the product category

- Insert combo box for the product category list in the dashboard sheet

- Pass the input range and cell for the combo box

- Pass input range "Working!Q2:Q5" and cell link "Working!R2" from the working sheet

- Write the equal sign and then the function name

- Pass the first argument as Cell "Q1"

- In the second argument, select the cell "R2"

- In the third argument, type zero and close the parenthesis

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

5. Create a column chart of the month-wise table and region-wise table

   - Write the SUMIFS formula to calculate the total sales, quantity, and profit

   - Enter the equal sign and then enter the function name and open parenthesis

   - Pass the first argument, Sum_Range. Select range 'Sales Data'!$H:$H, and then insert a comma

   - Now, pass the second argument product category column "criteria Range1" as 'Sales Data'!$F:$F, and then insert a comma

   - Pass the third argument "criteria1" as "Working!R3", and then insert a comma

   - Perform the same function to calculate the quantity in Cell G7

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

For-Profit

- In K7, write the equal sign and then enter the function name and open parenthesis
- The first argument is Sum_Range, select range 'Sales Data'!K:K, and then insert a comma

- Pass the second argument Product Category column "criteria Range1" as 'Sales Data'!F:F, and then insert a comma
- Now, pass the third argument "criteria1" as "R3", and then insert a comma

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

SUMIFS formula to calculate sales and profit month-wise

Enter the formula in cell C4:

- Enter the equal sign and then enter the function name and open parenthesis
- The first argument is Sum_Range, select range 'Sales Data'!H:H, and then insert a comma
- Pass the second argument month column "criteria Range1" as 'Sales Data'!U:U, and then insert a comma
- Now, pass the third argument "criteria1" as "B4," and then insert a comma
- Pass the fourth argument as Data!F:F product category column, and then insert a comma
- Pass the fifth argument as "R3"
- Now, copy and paste the formula in range C4:C15

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:
SUMIFS formula to calculate sales region wise

- Write the equal sign and then enter the function name and open parenthesis
- The first argument is Sum_Range, select range 'Sales Data'!H:H, and then insert a comma
- Pass the second argument region column "criteria Range1" as 'Sales Data'!T:T, and then insert a comma
- Now, pass the third argument "criteria1" as "F4," and then insert a comma
- Pass the fourth argument as Data!F:F product category column and then insert a comma
- Pass the fifth argument as "R3"
- Now, copy and paste the formula in range G4:G16

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:
SUMIFS formula to calculate sales region wise

- Write the equal sign and then enter the function name and open parenthesis
- The first argument is Sum_Range, select range 'Sales Data'!H:H, and then insert a comma
- Pass the second argument region column "criteria Range1" as 'Sales Data'!T:T, and then insert a comma
- Now, pass the third argument "criteria1" as "F4," and then insert a comma
- Pass the fourth argument as Data!F:F product category column and then insert a comma
- Pass the fifth argument as "R3"
- Now, copy and paste the formula in range G4:G16

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

Create column chart

- Now, create the column chart for both region-wise and month-wise tables
- Select table (B3:D15), click the insert tab, and then select Insert column chart under Charts Panel

Tasks to Perform

Perform the below tasks on the dataset provided using Excel:

6. Link the table with a combo box

7. Create a dashboard and calculate the predicted and actual tips values.

8. Calculate the RMSE (Root Mean Square Error) of the model. RMSE is the root of the mean of square errors.

Project Outcome

- The aim of the project is to analyze the sales based on various product categories.

- The users should be able to pick a product category and can see trends month-by-month and product-by-product.

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Submission Process

1. Complete the project in the Simplilearn lab

2. Complete each task listed in the problem statement

3. Take screenshots of the results for each question and the corresponding code

4. Save it as a document and submit using the assessment tab

5. Tap the "Submit" button (this will present you with three choices)

6. Attach three files and then click "Submit"

Note: Be sure to include screenshots of the output

DATA AND
ARTIFICIAL INTELLIGENCE

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Thank You