Business Analytics with Excel

E Commerce Dashboard Project:

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-byproduct. They will use Excel to analyse sales based on product categories and create a sales dashboard that breaks down sales by product category.

Tasks to Perform:
1. **Use the saved sample e-commerce database.**
2. **Prepare a table of sales and profit month-wise in a working sheet.**

Steps:
  1. Select the data range in the excel.
  2. Insert Pivot table, select rows as 'Months' column and set values sum of 'Sales' and 'Profit' data in the worksheet.
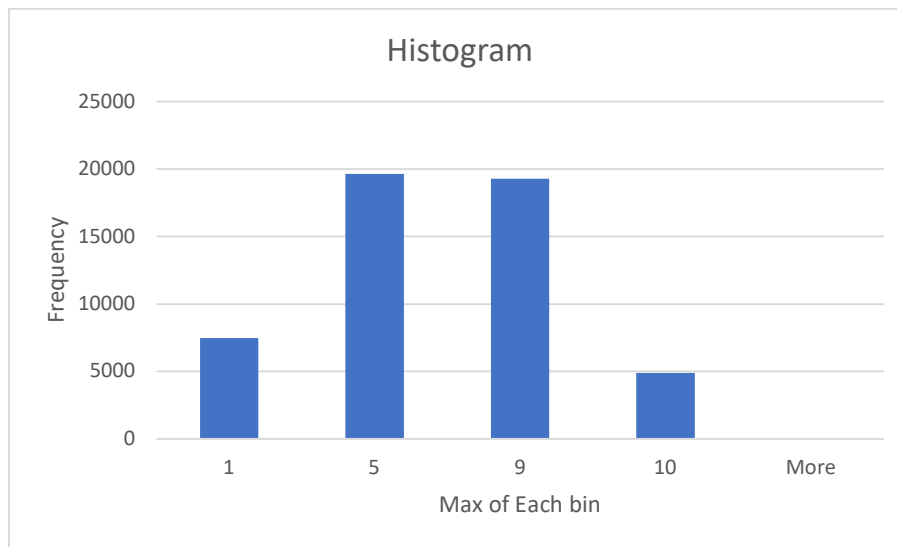
Month	Total Sales	Total Profit
Jan	676313	313566
Feb	610240	286103
Mar	686681	317186
Apr	659404	308365
May	672547	313751
Jun	664560	307585
Jul	685152	318703
Aug	670788	310443
Sep	658844	305334
Oct	689116	320749
Nov	656663	304716
Dec	693073	323402

3.**Create a histogram for bins of 'Aging' data in the worksheet**

Steps:
  1. Select the data range in the worksheet
  2. Under Data Analysis Tool Pak, click on histogram and give input range and bin range and output range and click OK.
  3. The required histogram is created as follows for the different aging days.

Bin	Max of each bin
0 to 1	1
2 to 5	5
6 to 9	9
9 to 10	10
more than 10	

Histogram

4. **Prepare the sales table region-wise in the working sheet.**

Steps:
1. Select the data range in the excel.
2. Insert Pivot table, select rows as 'Region' and columns as 'Product Category' and set values sum of 'Sales' and 'Profit' data in the worksheet.

Region	Total Sum of Sales	Total Sum of Profit
Africa	713074	332206.8267
Canada	60003	27782.30667
Caribbean	260495	120602.6967
Central	1735900	804172.61
Central Asia	321005	149526.0267
East	446468	206683.0267
EMEA	788072	368553.72
North	750482	349285.21
North Asia	369816	170911.3567
Oceania	544827	253680.8133
South	1034884	479146.82
Southeast Asia	500923	235587.8467
West	497432	231763.69

5. **Create user control combo box for the product category**

The second table is derived by creating a combo box for the product category and using cell link property, Region-wise sales for the product category is obtained.

Formula used for linking combo box:
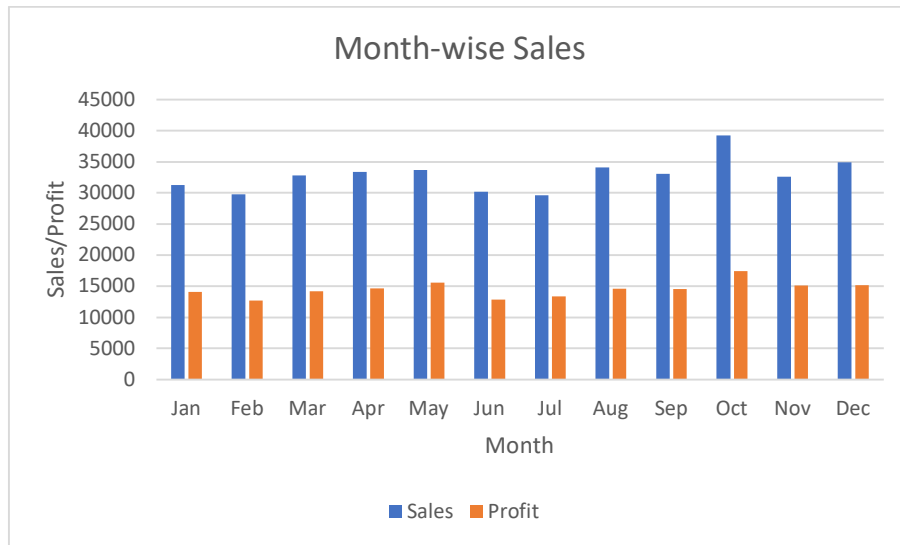
Sales = OFFSET($A$5,ROW() - 8,$O$2)

Region	Sales
Africa	102156

Canada	10382
Caribbean	32493
Central	227929
Central Asia	35956
East	72321
EMEA	102947
North	100025
North Asia	56978
Oceania	66631
South	139614
Southeast Asia	74598
West	75109

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

Steps:
1. Create 2 tables, one table for month-wise and one table for region-wise sales and profit.
2. Create a combo box, under the developer tab click insert combo box for different product categories.
3. Use formula Product category =OFFSET($B$2,$D$3,0) for linking the combo box to the Sales table.
4. **Month-wise sales Table:**
5. In the month-wise sales table, enter the formula Sales =SUMIFS('Sales Data'!H:H,'Sales Data'!U:U,'Sales Dashboard'!$A10,'Sales Data'!F:F,'Sales Dashboard'!$D$4)
6. Enter the formula Profit = =SUMIFS('Sales Data'!K:K,'Sales Data'!U:U,'Sales Dashboard'!$A10,'Sales Data'!F:F,'Sales Dashboard'!$D$4)
7. **Create a 2D column chart for the Month wise Sales data**

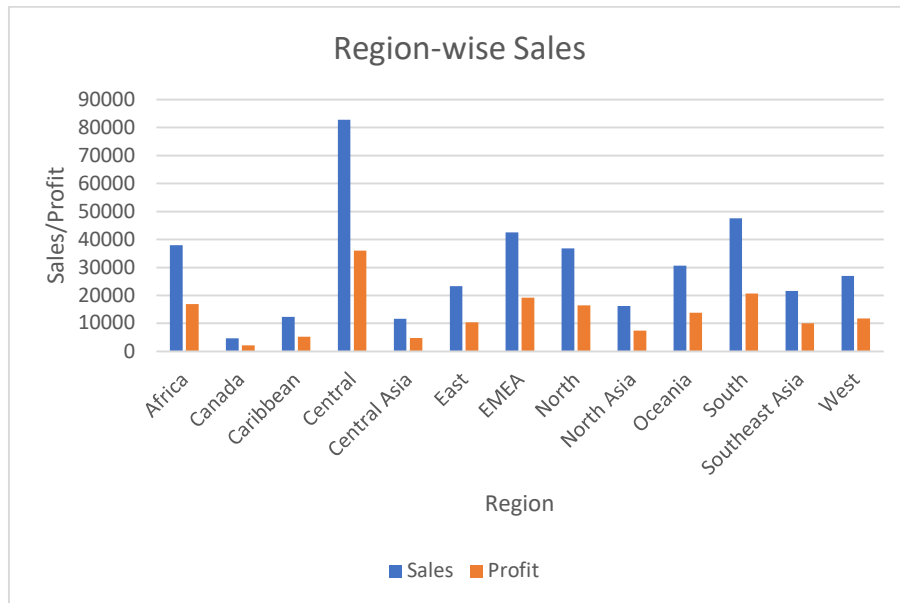| Months	Sales	Profit
Jan	31280	14090
Feb	29776	12679
Mar	32800	14173
Apr	33417	14603
May	33705	15610
Jun	30219	12858
Jul	29644	13384
Aug	34088	14562
Sep	33069	14518
Oct	39240	17419
Nov	32598	15121
Dec	34902	15157

7. Link the table with a combo box

8. Create a dashboard

1. Use formula Product category =OFFSET($B$2,$D$3,0) for linking the combo box to the Sales table.
2. **Region-wise sales Table:**
3. Enter the formula Sales = SUMIFS('Sales Data'!H:H,'Sales Data'!T:T,'Sales Dashboard'!E10,'Sales Data'!F:F,'Sales Dashboard'!$D$4)
4. Enter the formula Profit = SUMIFS('Sales Data'!K:K,'Sales Data'!T:T,'Sales Dashboard'!E10,'Sales Data'!F:F,'Sales Dashboard'!$D$4)
5. **Create a 2D column chart for the Region-wise Sales data**

Region	Sales	Profit
Africa	37993	16824
Canada	4602	2069
Caribbean	12287	5249
Central	82750	35973
Central Asia	11573	4736
East	23353	10352
EMEA	42527	19174
North	36746	16388
North Asia	16230	7355
Oceania	30575	13727
South	47491	20618
Southeast Asia	21604	9969
West	27007	11741

CONCLUSION:

The Sales Dashboard is designed based on the requirements where the user can analyze the sales based on the product categories and also see the trends month-wise and region-wise for different product categories.

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