HBFC Personal Loan Assignment

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1.According to the data, What percentage of personal loans have availed by customers?

1)	NO. OF BANK CUSTOMERS HAVE AVAILED PERSONAL LOANS	480
	PERCENTAGE OF CUSTOMER'S HAVE AVAILED PERSONAL LOANS	9.6

Customer took the personal loan is 480 . Percentage of it is 9.6%.

2.To generate a table for numerical data in a given data set? What are your observations?

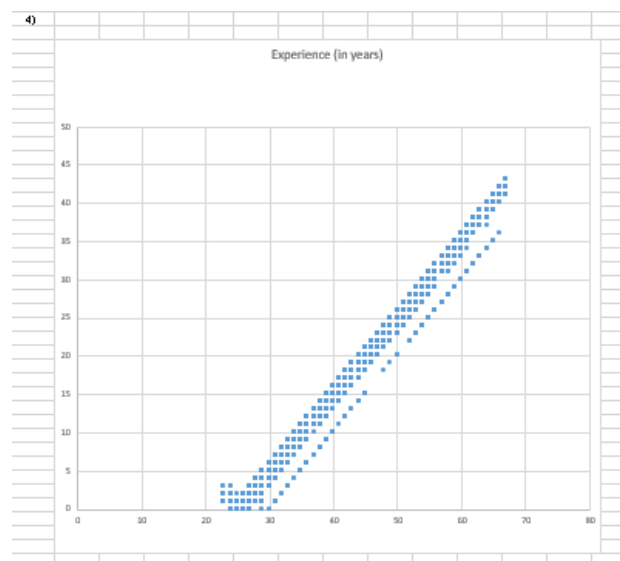| 2)	VALUE	AGE	EXPERI	INCOM	FAMIL'	CC Avg	MORTA
	Min	23	0	8	1	0	0
	Max	67	43	224	4	10	635
	Median	45	20	64	2	1.5	0
	Average	45.3384	20.1348	73.7742	2	1.93794	56.4988

 From the above data, we can see that the experience of the customer is proportional to their income. Hence, their CC Avg also have a reliable and in a descent rate.

From the Family members we can see that, in some case the income is increasing while the family members count is more.

3. Create a new categorical variable for Experience using 4 categories – a. 0 to 10 years b. 11 to 20 years c. 21 to 30 years and d. 30+ years.

3)

EXPERII	COUNT
01-'10'	1289
10-'20'	1253
20-'30'	1301
30+	1157
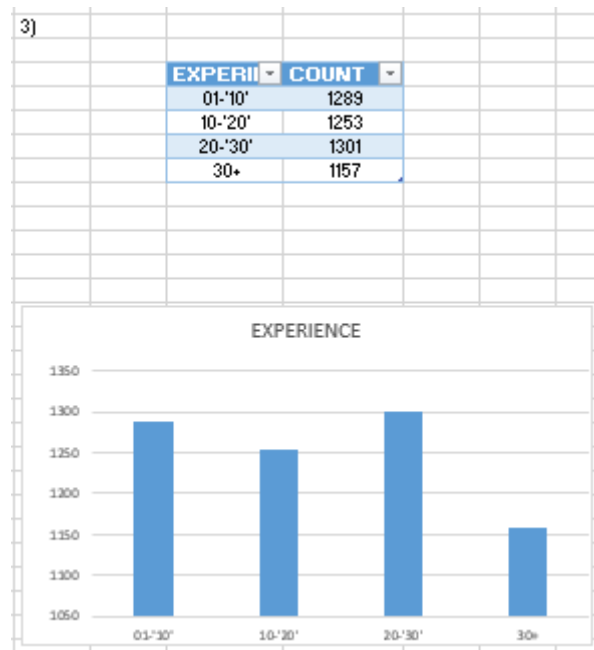
EXPERIENCE

4.Create a scatter plot of the Age and the Experience variable. What do you observe?

Experience (in years)

From the above plot, we can see that age and experience are correlated to each other. If the age is increasing then correspondingly the experience also increases. In the scatter plot the trend is towards the positive correlation.

5. What are the top 3 areas (ZIP Codes) where the bank's customers are located?

TOP 3 ZIPCODE OF THE CUSTOMERS		
RANK	ZIPCODE	COUNT
1	94720	169
2	94305	127
3	95616	116

The Top three zip-code of the customers are listed above.

6. How many customers have a combination of Fixed Deposits and Credit Cards but not Personal Loan?

6)	THE NO. OF CUSTOMERS HAVE CREDIT CARD AND TD , BUT NOT PERSONAL LOAN
	147

To know the details about the customer who has a good chances to avail the loan from the bank. 147 customers have a good score to avail loans.

7. What is the median income of the customers who have availed personal loans and compare it with the median income of those customers who have not availed personal loans? What do you infer?

AVAIL LOAN
142

NOT AVAIL LOAN
59

In the above observed value, we can see that the Median value of the customers who has availed loans has higher median value than compare to the customer who haven't availed loan. So we can come to the conclusion that who have higher income has avail the personal loans.

8. Create 4 separate Pivot Tables.

Summarise your data by percentages.

• Education vs Personal Loan

• TD Account Vs Personal Loan

• Online vs Personal Loan

• Income_Category vs Personal Loan

By comparing the personal loan with the other components, we can predict that the chances of the new customers who can be able to get the personal loan from the bank.

Education Vs Personal Loan

Count of Personal Loan	Column Labels		
Row Labels	No	Yes	Grand Total
Graduate	27.98%	28.74%	28.06%
Professional	30.21%	28.35%	30.02%
Undergraduate	41.80%	42.91%	41.92%
Grand Total	100.00%	100.00%	100.00%

TD account Vs Personal Loan

Count of Personal Loan	Column Labels		
Row Labels	No	Yes	Grand Total
No	96.54%	71.84%	93.96%
Yes	3.46%	28.16%	6.04%
Grand Total	100.00%	100.00%	100.00%

ONLINE Vs PERSONAL LOAN

Count of Personal Loan	Column Labels		
Row Labels	No	Yes	Grand Total
No	40.53%	38.51%	40.32%
Yes	59.47%	61.49%	59.68%
Grand Total	100.00%	100.00%	100.00%

INCOME CATEGORICAL Vs PERSONAL LOAN

Row Labels	Count of Personal Loan
0-50	38.28%
100+	24.24%
51-100	37.48%
Grand Total	100.00%

9. Analyse the Pivot tables created in the previous question and state any anomaly that you observe. Which categorical variables appear most important for your further study if you want to analyse which customers are most likely to take personal loans and why?

By analysing to the pivot table we can able to predict the customers who have a higher no. of chances to get a personal loan by the bank campaign.

From the analysis 9.6% customers have took the personal from the Bank and 90.4% to 89.56% doesn't have any loans.

10. Strategy to increase the no. of persons to avail personal loans in campaign.

The Data given by the HBFC clearly shows that the more no. of customers are interested in online service and good in income categorical.

There is a huge possibility to accept if we run the offer through the loan campaigns.

If we execute the campaign by good advertisement and cover it with media support, we can surely achieve the good no. of loan acceptance from the customers.