**Assignment -2**

Python Programming

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| Assignment Date | 27 September 2022 |
| Student Name | Anantha Kirishnan S |
| Student Roll Number | 412519104005 |
| Maximum Marks | 2 Marks |

**Question-1:**

Download dataset

Solution:

import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

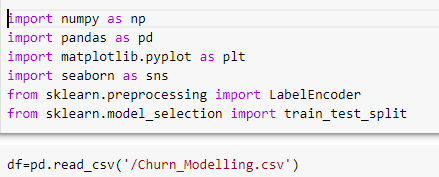
import seaborn as sns

from sklearn.preprocessing import LabelEncoder

from sklearn.model\_selection import train\_test\_split

df=pd.read\_csv('/Churn\_Modelling.csv')

df.head()



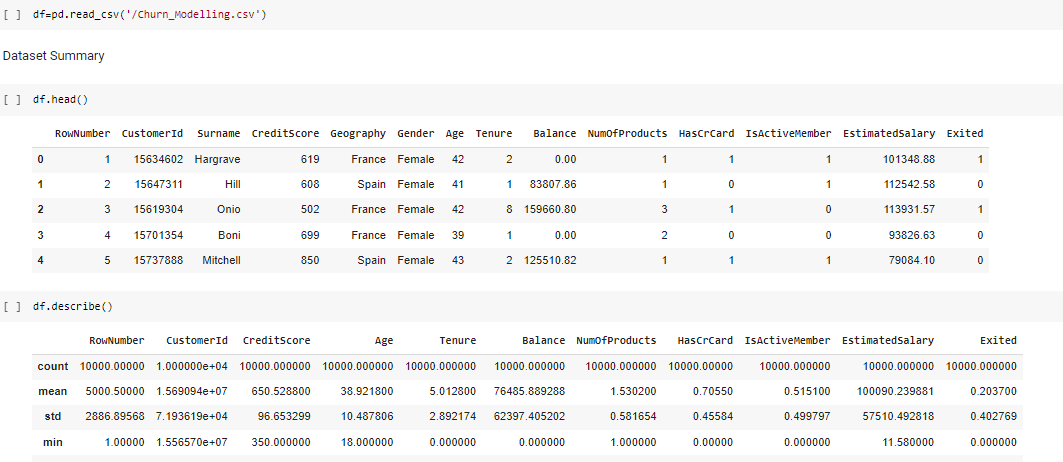
Question 2:

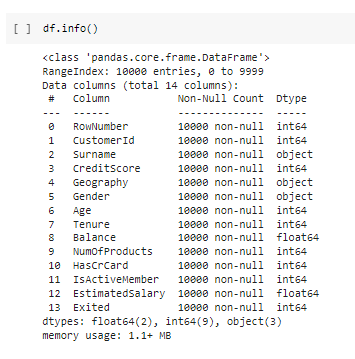
Dataset details

Solution:  
 df.head()

df.describe()

df.info()



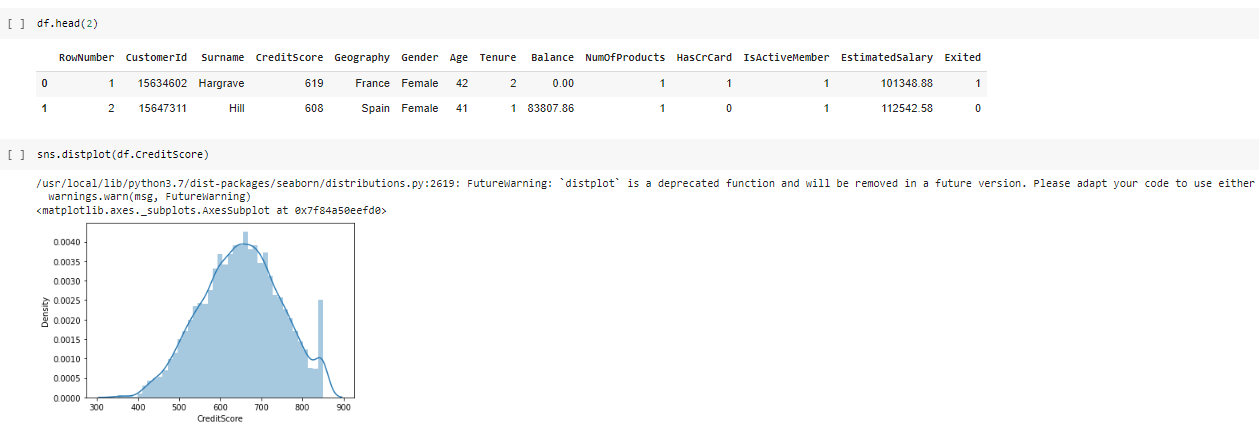


Question 3:

Plot of dataset details and etc

Solution:  
 sns.distplot(df.Age)

sns.distplot(df.CreditScore)

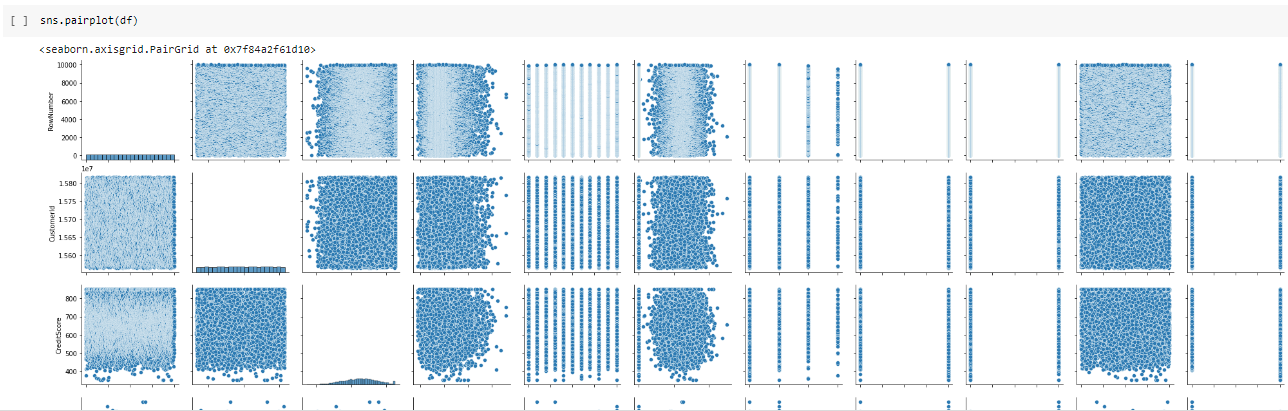




Question 5:

dataset pairplot

Solution:  
 sns.pairplot(df)

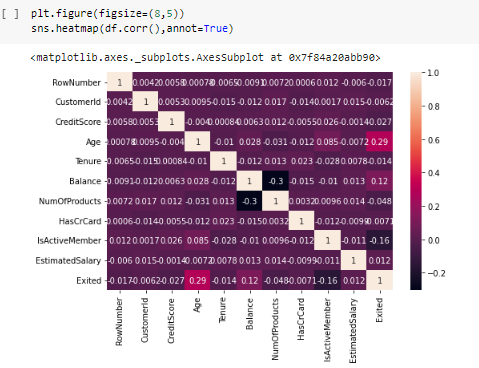


Question 6:

Heat map of dataset features

Solution:  
 plt.figure(figsize=(8,5))

sns.heatmap(df.corr(),annot=True)

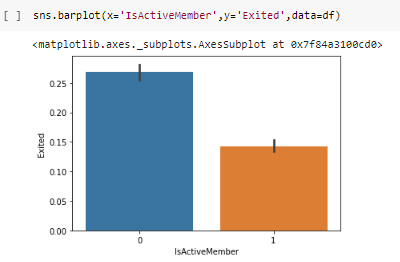
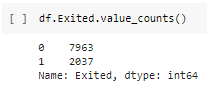


Question 7:

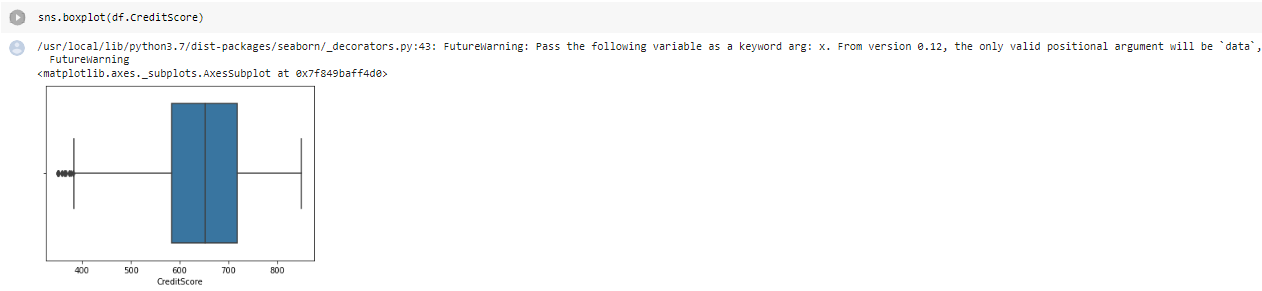
Explotary data analysis

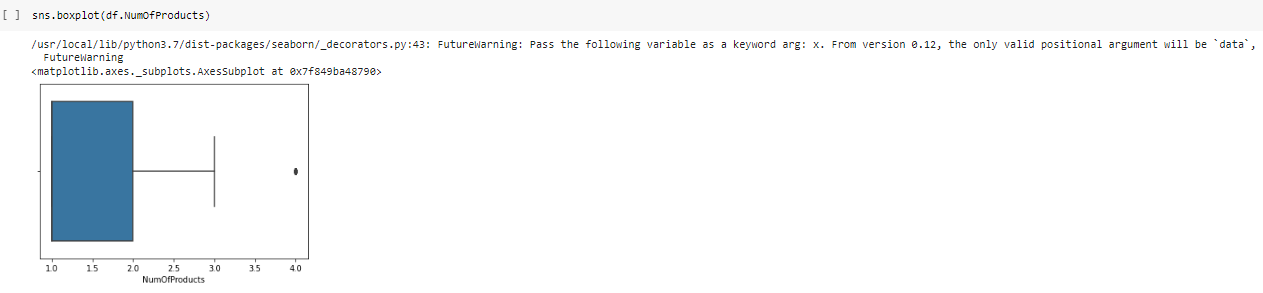
Solution:  
 df.Exited.value\_counts()  
 df.isnull().sum()

df.head(2)



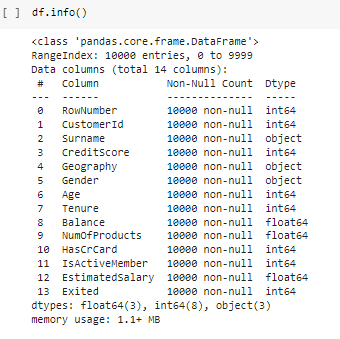
Question 8:  
 Boxplot

Solution:  




Question 9:  
dataset info

solution:  
 df.info()



Question 10:  
Preprocessing

Solution:

from sklearn.preprocessing import LabelEncoder

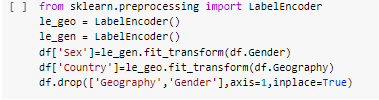
le\_geo = LabelEncoder()

le\_gen = LabelEncoder()

df['Sex']=le\_gen.fit\_transform(df.Gender)

df['Country']=le\_geo.fit\_transform(df.Geography)

df.drop(['Geography','Gender'],axis=1,inplace=True)



Question 11:

Preprocessing 1

Solution:

from sklearn.preprocessing import StandardScaler

sc=StandardScaler()

X = sc.fit\_transform(X)

