

Assignment -2

Python Programming

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Assignment Date	25 September 2022
Student Name	Jerim Jeevs J
Student Roll Number	720819106043
Maximum Marks	2 Marks

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
```

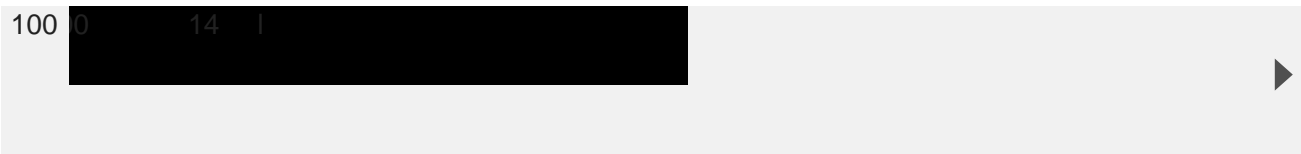
2.Loading the data Set

```
df=pd.read_csv("Churn_Modelling.csv")
df
```



RowNumber CustomerId Surname CreditScore Geography Gender Age Tenure								
0	1	15634602	Hargrave	619	France	Female	42	2
1	2	15647311	Hill	608	Spain	Female	41	1
2	3	15619304	Onio	502	France	Female	42	8
3	4	15701354	Boni	699	France	Female	39	1
4	5	15737888	Mitchell	850	Spain	Female	43	2
...
9995	9996	15606229	Obijaku	771	France	Male	39	5
9996	9997	15569892	Johnstone	516	France	Male	35	10
9997	9998	15584532	Liu	709	France	Female	36	7

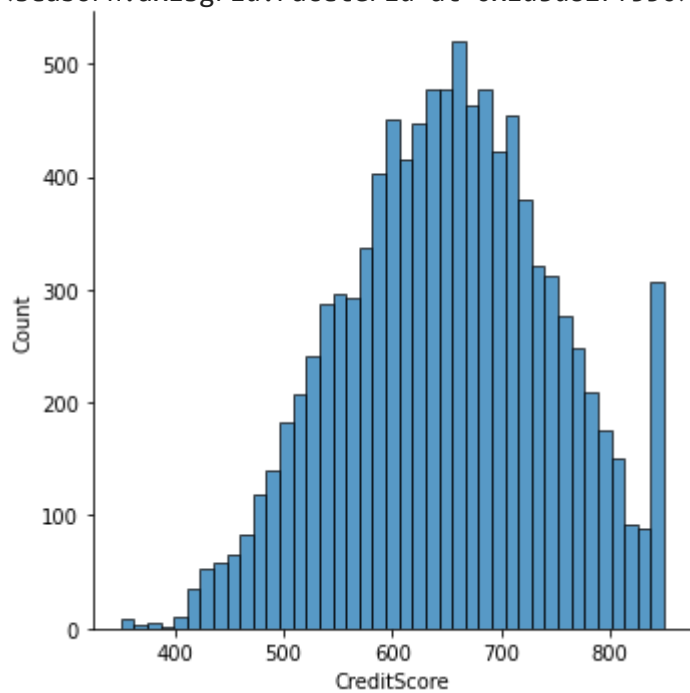
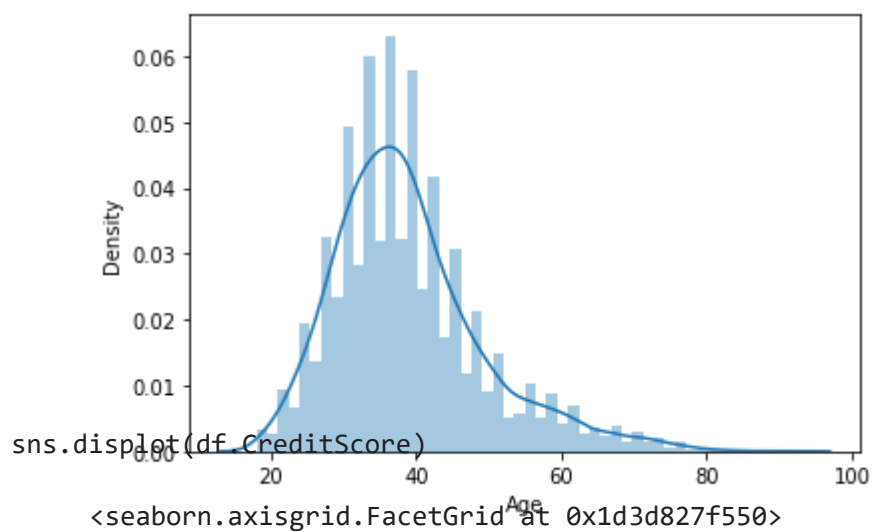
9998	9999	15682355	Sabbatini	772	Germany	Male	42	3
9999	10000	15628319	Walker 792	France	Female	28	4	



3.Visulaizato in 3.1

Univariate Analysis

```
sns.distplot(df.Age) C:\ProgramData\Anaconda3\lib\site-
packages\seaborn\distributions.py:2619: FutureWarni warnings.warn(msg, FutureWarning)
<AxesSubplot:xlabel='Age', ylabel='Density'>
```



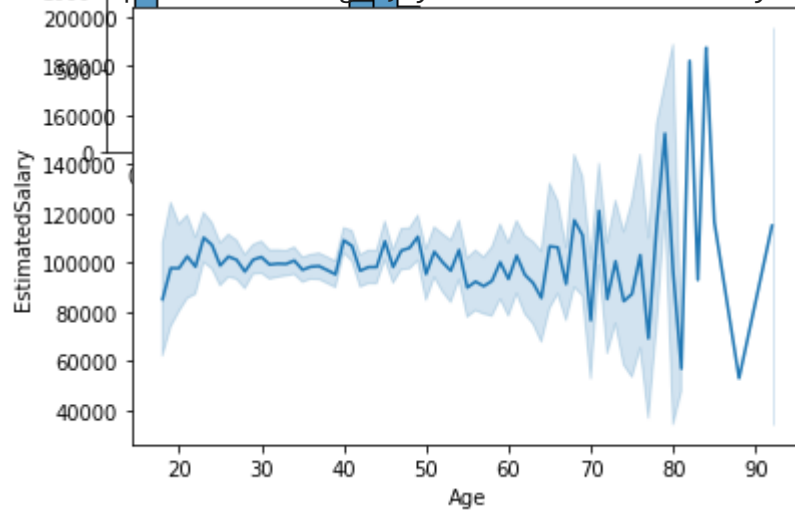
```
sns.displot(df.Balance)
<seaborn.axisgrid.FacetGrid at 0x1d3d40c6700>
sns.lineplot(df.Age,df.Balance)
```

C:\ProgramData\Anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning:

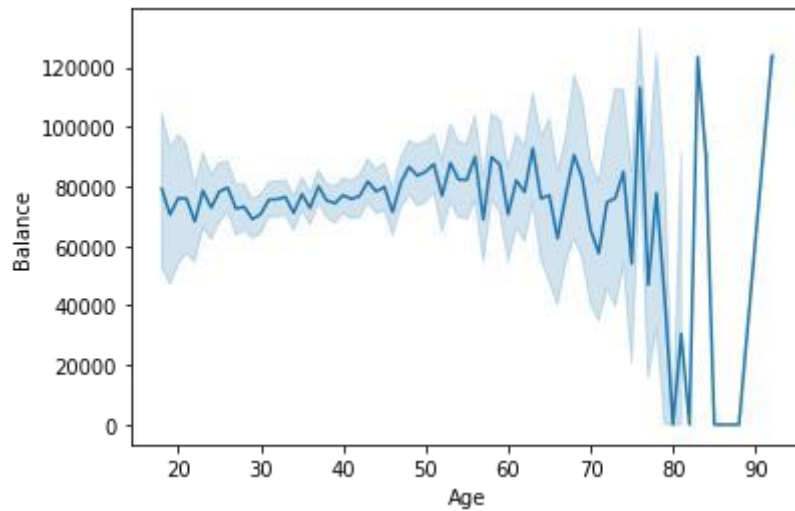
3.2 Bi - Variate analysis

```
sns.lineplot(df.Age,df.EstimatedSalary)
```

C:\ProgramData\Anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning: warnings.warn(
<AxesSubplot:xlabel='Age', ylabel='EstimatedSalary'>

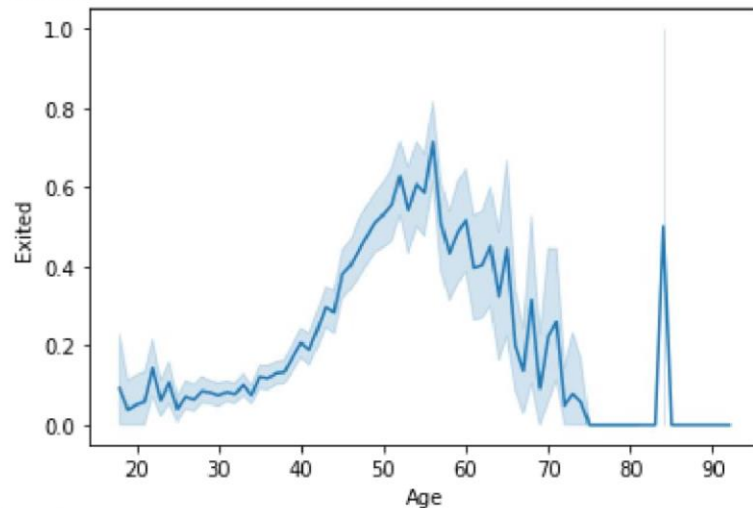


```
warnings.warn( <AxesSubplot:xlabel='Age',  
ylabel='Balance'>
```

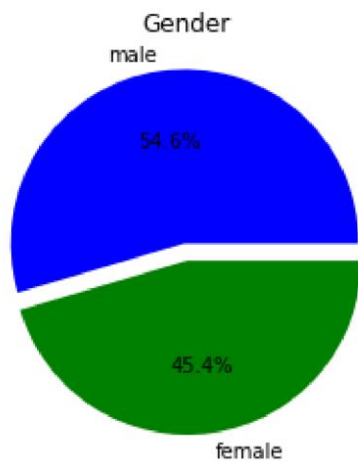


```
sns.lineplot(df.Age,df.Exited)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning:
warnings.warn(
<AxesSubplot:xlabel='Age', ylabel='Exited'>
```

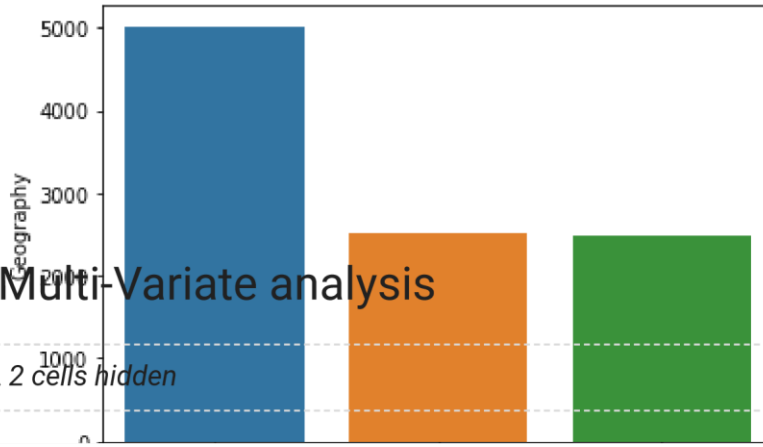


```
plt.pie(df.Gender.value_counts(), [0.1, 0], labels=["male", "female"], autopct="%1.1f%%", colors
plt.title("Gender")
plt.show()
```



```
sns.barplot(df.Geography.value_counts().index, df.Geography.value_counts())
C:\ProgramData\Anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning:
warnings.warn(
```

<AxesSubplot:ylabel='Geography'>



▶ 3.3 Multi-Variate analysis

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▶ 4. Perform the descriptive Statistics

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▶ 5. Handling the missing Values

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▶ 6. Finding Outliers

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▶ 7. Check for Categorical columns and perform encoding

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▶ 8. Split the data into dependent and independent variables

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▶ 9. Scale the independent variables

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▶ 10. Split the data into training and testing

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