In [1]:
```
# import libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [2]:
```
from sklearn.linear_model import LogisticRegression
```

In [3]:
```
# To Import Dataset
sd=pd.read_csv(r"c:\Users\user\Downloads\C2_train.gender_submission.csv")
sd
```

Out[3]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	C
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	
...	...	...	...	...	...	...	...	...	...	...	
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536	13.0000	
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053	30.0000	
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C. 6607	23.4500	
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369	30.0000	
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376	7.7500	

891 rows × 12 columns

In [16]:
```
sd.fillna(20)
```

Out[16]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	C
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171	7.2500	
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599	71.2833	
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282	7.9250	
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803	53.1000	
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450	8.0500	
...	...	...	...	...	...	...	...	...	...	...	
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536	13.0000	
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112053	30.0000	
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	20.0	1	2	W./C. 6607	23.4500	
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369	30.0000	
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376	7.7500	

891 rows × 12 columns

In [18]:
```
sd1=sd[['Survived','PassengerId','Pclass']]
sd1
```

Out[18]:

	Survived	PassengerId	Pclass
0	0	1	3
1	1	2	1
2	1	3	3
3	1	4	1
4	0	5	3
...	...	...	...
886	0	887	2
887	1	888	1
888	0	889	3
889	1	890	1
890	0	891	3

891 rows × 3 columns

In [19]:
```
feature_matrix = sd1.iloc[:,0:12]
target_vector=sd1.iloc[:,-1]
```

In [20]:
```
feature_matrix.shape
```

Out[20]:
```
(891, 3)
```

In [21]:
```
target_vector.shape
```

Out[21]:
```
(891,)
```

In [22]:
```
from sklearn.preprocessing import StandardScaler
```

In [23]:
```
fs=StandardScaler().fit_transform(feature_matrix)
```

In [24]:
```
logr= LogisticRegression()
logr.fit(fs,target_vector)
```

Out[24]:
```
LogisticRegression()
```

In [27]:
```
observation =[[1.2,2.3,3.3]]
```

In [28]:
```
prediction=logr.predict(observation)
print(prediction)
```

```
[3]
```

In [29]:
```
logr.classes_
```

Out[29]:
```
array([1, 2, 3], dtype=int64)
```

In [30]:
```
logr.predict_proba(observation)[0][0]
```

Out[30]:
```
1.216239664101815e-20
```