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

In [2]:
```
df=pd.read_csv('Social_Network_Ads.csv')
```

In [3]:
```
df
```

Out[3]:

	User ID	Gender	Age	EstimatedSalary	Purchased
0	15624510	Male	19	19000	0
1	15810944	Male	35	20000	0
2	15668575	Female	26	43000	0
3	15603246	Female	27	57000	0
4	15804002	Male	19	76000	0
...	...	...	...	...	...
395	15691863	Female	46	41000	1
396	15706071	Male	51	23000	1
397	15654296	Female	50	20000	1
398	15755018	Male	36	33000	0
399	15594041	Female	49	36000	1

400 rows × 5 columns

In [4]:
```
df=df.drop(columns=["User ID"])
```

In [5]:
```
df
```

Out[5]:

	Gender	Age	EstimatedSalary	Purchased
0	Male	19	19000	0
1	Male	35	20000	0
2	Female	26	43000	0
3	Female	27	57000	0
4	Male	19	76000	0
...	...	...	...	...
395	Female	46	41000	1
396	Male	51	23000	1
397	Female	50	20000	1
398	Male	36	33000	0
399	Female	49	36000	1

400 rows × 4 columns

In [6]:
```
df=pd.get_dummies(df,drop_first=True)
```

In [7]:
```
df
```

Out[7]:

	Age	EstimatedSalary	Purchased	Gender_Male
0	19	19000	0	1
1	35	20000	0	1
2	26	43000	0	0
3	27	57000	0	0
4	19	76000	0	1
...	...	...	...	...
395	46	41000	1	0
396	51	23000	1	1
397	50	20000	1	0
398	36	33000	0	1
399	49	36000	1	0

400 rows × 4 columns

In [8]:
```
independent=df[["Age","EstimatedSalary","Gender_Male"]]
dependent=df[["Purchased"]]
```

In [9]:
```
from sklearn.model_selection import train_test_split
X_train,X_test,Y_train,Y_test=train_test_split(independent,dependent,test_size=0.2,random_state=42)
```

In [10]:
```
from sklearn.svm import SVC
classifier=SVC(kernel='rbf',random_state=0)
classifier.fit(X_train,Y_train)
```

```
C:\ProgramData\Anaconda3\lib\site-packages\sklearn\utils\validation.py:993: DataConversionWarning: A column-vector y was passed when a 1d array was expected.
Please change the shape of y to (n_samples, ), for example using ravel().
  y = column_or_1d(y, warn=True)
```

Out[10]:
```
SVC(random_state=0)
```

In [11]:
```
Y_pred=classifier.predict(X_test)
```

In [12]:
```
from sklearn.metrics import confusion_matrix
cm=confusion_matrix(Y_test,Y_pred)
```

In [13]:
```
print(cm)
```

```
[[49  3]
 [18 10]]
```

In [16]:
```
Age=int(input("enter the prediction input value:"))
EstimatedSalary=int(input("enter the prediction input value:"))
Gender_Male=int(input("enter the prediction input value:"))
future_prediction=classifier.predict([[Age,EstimatedSalary,Gender_Male]])
print("future_prediction={Purchased=0,Non Purchased=1}",format(future_prediction))
```

```
enter the prediction input value:26
enter the prediction input value:43000
enter the prediction input value:0
future_prediction={Purchased=0,Non Purchased=1} [0]
C:\ProgramData\Anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have valid feature names, but SVC was fitted with feature names
  warnings.warn(
```

In [ ]: