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

In [ ]:
```
df = pd.read_csv('customer.csv',encoding = 'iso-8859-1')
```

In [ ]:
```
df.head()
```

Out[ ]:

	gender	age	salary	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

In [ ]:
```
from sklearn.preprocessing import StandardScaler
from sklearn.model_selection import train_test_split
from sklearn.neighbors import KNeighborsClassifier
```

In [ ]:
```
att = df[['age','salary']]
label = df['purchased']

att_train , att_test , class_train , class_test = train_test_split(att,label,random

scaler = StandardScaler()
scaler.fit(att_train)

att_train[['age','salary']] = scaler.transform(att_train)

model = KNeighborsClassifier(n_neighbors=3)
model.fit(att_train, class_train)

model.score(scaler.transform(att_test), class_test)
# model.score(att_train, class_train)
```

```
c:\Users\HP\Desktop\DataSci\.venv\Lib\site-packages\sklearn\base.py:493: UserWarnin
g: X does not have valid feature names, but KNeighborsClassifier was fitted with fea
ture names
  warnings.warn(
```

Out[ ]:
```
0.95
```

In [ ]:
```
# pd.concat([att_train, class_train], axis=1)

# result = pd.concat([att_train, class_train], axis=1)
# result['predict'] = model.predict(att_train)
# result
```

```
result = pd.concat([att_test, class_test], axis=1)
result['predict'] = model.predict(scaler.transform(att_test))
result
```

```
c:\Users\HP\Desktop\DataSci\.venv\Lib\site-packages\sklearn\base.py:493: UserWarnin
g: X does not have valid feature names, but KNeighborsClassifier was fitted with fea
ture names
  warnings.warn(
```

Out[ ]:

	age	salary	purchased	predict
132	30	87000	0	0
309	38	50000	0	0
341	35	75000	0	0
196	30	79000	0	0
246	35	50000	0	0
...	...	...	...	...
14	18	82000	0	0
363	42	79000	0	0
304	40	60000	0	0
361	53	34000	1	1
329	47	107000	1	1

80 rows × 4 columns

In [ ]:
```
model.predict(scaler.transform([[20,20000]]))
```

```
c:\Users\HP\Desktop\DataSci\.venv\Lib\site-packages\sklearn\base.py:493: UserWarnin
g: X does not have valid feature names, but StandardScaler was fitted with feature n
ames
  warnings.warn(
c:\Users\HP\Desktop\DataSci\.venv\Lib\site-packages\sklearn\base.py:493: UserWarnin
g: X does not have valid feature names, but KNeighborsClassifier was fitted with fea
ture names
  warnings.warn(
```

Out[ ]:
```
array([0], dtype=int64)
```

In [ ]:
```
```