In [1]:
```
import pandas as pd
from sklearn.preprocessing import StandardScaler
from sklearn.cluster import DBSCAN
```

In [2]:
```
data=pd.read_csv('Wholesale customers data.csv')
data.head()
```

Out[2]:

	Channel	Region	Fresh	Milk	Grocery	Frozen	Detergents_Paper	Delicassen
0	2	3	12669	9656	7561	214	2674	1338
1	2	3	7057	9810	9568	1762	3293	1776
2	2	3	6353	8808	7684	2405	3516	7844
3	1	3	13265	1196	4221	6404	507	1788
4	2	3	22615	5410	7198	3915	1777	5185

In [3]:
```
data=data.drop(['Channel','Region'],axis=1)
data
```

Out[3]:

	Fresh	Milk	Grocery	Frozen	Detergents_Paper	Delicassen
0	12669	9656	7561	214	2674	1338
1	7057	9810	9568	1762	3293	1776
2	6353	8808	7684	2405	3516	7844
3	13265	1196	4221	6404	507	1788
4	22615	5410	7198	3915	1777	5185
...	...	...	...	...	...	...
435	29703	12051	16027	13135	182	2204
436	39228	1431	764	4510	93	2346
437	14531	15488	30243	437	14841	1867
438	10290	1981	2232	1038	168	2125
439	2787	1698	2510	65	477	52

440 rows × 6 columns

In [4]:
```
sc=StandardScaler()
x=sc.fit_transform(data)
x
```

Out[4]:
```
array([[ 0.05293319,  0.52356777, -0.04111489, -0.58936716, -0.04356873,
        -0.06633906],
       [-0.39130197,  0.54445767,  0.17031835, -0.27013618,  0.08640684,
         0.08915105],
       [-0.44702926,  0.40853771, -0.0281571 , -0.13753572,  0.13323164,
         2.24329255],
       ...,
       [ 0.20032554,  1.31467078,  2.34838631, -0.54337975,  2.51121768,
         0.12145607],
       [-0.13538389, -0.51753572, -0.60251388, -0.41944059, -0.56977032,
         0.21304614],
       [-0.72930698, -0.5559243 , -0.57322717, -0.62009417, -0.50488752,
        -0.52286938]])
```

In [5]:
```
dbscan=DBSCAN(eps=0.8,min_samples=6)
dbscan.fit(x)
```

Out[5]:
```
DBSCAN(eps=0.8, min_samples=6)
```

In [6]:
```
dbscan.labels_
```

Out[6]:
```
array([ 0,  0, -1,  0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,
       -1,  0,  0,  0,  0, -1, -1, -1,  0,  0,  0, -1,  0,  0,  0,  0, -1,
        0,  0,  0,  0,  0, -1, -1,  0,  0,  0,  0, -1,  0, -1,  0, -1,  0,
        0,  0,  0,  0,  0, -1,  0,  0,  0,  0, -1,  0,  0,  0, -1,  0,  0,
        0,  0,  0, -1,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0,
       -1, -1, -1,  0,  0,  0,  0, -1, -1,  0,  0,  0,  0,  0,  0, -1,  0,
        0, -1,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,
        0,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,
        0,  0,  0,  0,  0, -1, -1,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0,
        0,  0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,  0,
        0, -1,  0,  0,  0,  0, -1,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,
        0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0, -1, -1,  0,
        0,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,  0, -1,  0, -1,  0,  0,
        0,  0,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,
        0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0, -1, -1,
        0,  0,  0, -1, -1,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,  0,
        0,  0,  0,  0,  0, -1,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,  0,
        0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0,
        0,  0,  0, -1,  0,  0, -1,  0,  0,  0,  0,  0,  0, -1,  0,  0,  0,
        0,  0, -1,  0,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,  0, -1,  0,
        0,  0,  0, -1,  0,  0,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,  0,
       -1, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0,
        0,  0, -1,  0,  0,  0,  0,  0, -1,  0, -1,  0,  0,  0,  0,  0,  0,
        0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0, -1,  0,  0,  0,  0,
        0, -1,  0, -1,  0, -1,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,
       -1,  0, -1,  0,  0, -1, -1,  0,  0,  0, -1,  0, -1,  0,  0],
      dtype=int64)
```

In [7]:
```
data['cluster']=dbscan.labels_
```

In [8]:
```
data.head()
```

Out[8]:

	Fresh	Milk	Grocery	Frozen	Detergents_Paper	Delicassen	cluster
0	12669	9656	7561	214	2674	1338	0
1	7057	9810	9568	1762	3293	1776	0
2	6353	8808	7684	2405	3516	7844	-1
3	13265	1196	4221	6404	507	1788	0
4	22615	5410	7198	3915	1777	5185	-1