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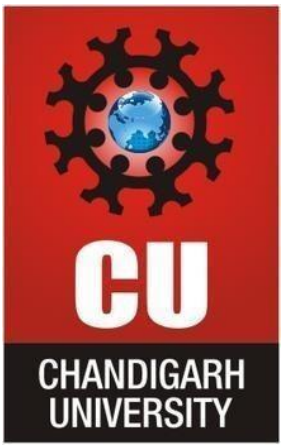

Submitted By: Lipakshi	**Submitted To:** Navneet Kaur
Subject Name	Machine Learning Lab
Subject Code	20CSP-317
Branch	Computer Science
Semester	5th

UNIVERSITY INSTITUTE OF ENGINEERING

Department of Computer Science & Engineering

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Subject Name: Machine Learning Lab

Subject Code: 20CSP-317

Submitted to:

Faculty name: Navneet Kaur

Submitted by:

Name: Lipakshi

UID: 20BCS5082

Section: 607

Group: B

Ex. No	List of Experiments	Date	Conduc t (MM: 12)	Viva (MM : 10)	Record (MM: 8)	Total (MM: 30)	Remarks/Signature
1.1	Implement Exploratory Data Analysis on any data set.						
1.2	Implement Data Visualization.	23-08-2022					
1.3	Data analysis of any data set via graphs using linear regression.						
1.4	Implement support Vector machine on any data set and analyse the accuracy with logistic regression.	10-10-2022					

2.2	Implement Naive Bayes on any Data Set.	10-10-2022					
2.3							
2.4							
3.1	Implement K-Means	07-11-2022					
3.2							
3.3							

Experiment 8

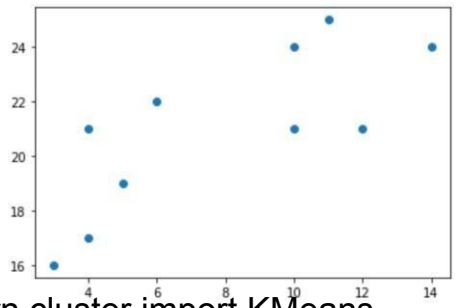
Q1. Task to be done/ Which logistics used: Implement K-Means

 # Code:

```
import matplotlib.pyplot as plt


x = [4, 5, 10, 4, 3, 11, 14 , 6, 10, 12] y =

[21, 19, 24, 17, 16, 25, 24, 22, 21, 21]


plt.scatter(x, y)
```

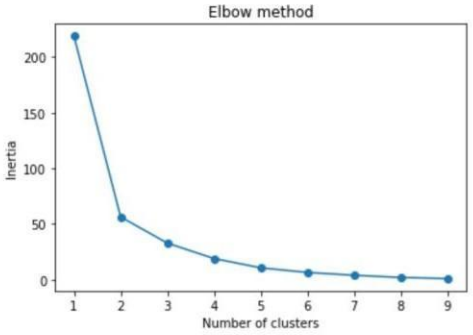
plt.show()

```
In [1]: import matplotlib.pyplot as plt

        x = [4, 5, 10, 4, 3, 11, 14 , 6, 10, 12]
        y = [21, 19, 24, 17, 16, 25, 24, 22, 21, 21]

        plt.scatter(x, y)
        plt.show()
```



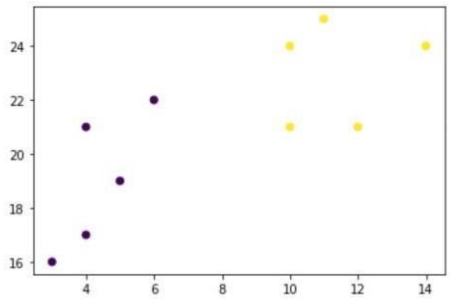

```
from sklearn.cluster import KMeans
data = list(zip(x, y))
inertias = []

for i in range(1,10):     kmeans =
KMeans(n_clusters=i)
kmeans.fit(data)
inertias.append(kmeans.inertia_
)

plt.plot(range(1,10), inertias, marker='o')
plt.title('Elbow method')
plt.xlabel('Number of clusters')
plt.ylabel('Inertia') plt.show()
```

In [2]:
```
from sklearn.cluster import KMeans

data = list(zip(x, y))
inertias = []

for i in range(1,10):
    kmeans = KMeans(n_clusters=i)
    kmeans.fit(data)
    inertias.append(kmeans.inertia_)

plt.plot(range(1,10), inertias, marker='o')
plt.title('Elbow method')
plt.xlabel('Number of clusters')
plt.ylabel('Inertia')
plt.show()
```




```
kmeans = KMeans(n_clusters=2)
kmeans.fit(data)

plt.scatter(x, y, c=kmeans.labels_)
plt.show()
```

In [3]:
```
kmeans = KMeans(n_clusters=2)
kmeans.fit(data)

plt.scatter(x, y, c=kmeans.labels_)
plt.show()
```



Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1			
2			
3			
4			