

## EXP : 8

### 3 Programs on Planning and Learning e Implementation of K-mean algorithm

#### AIM:

To solve K-mean algorithm

#### CODE:

```
from sklearn.cluster import KMeans

# Sample 2D data points
data = [
    [1, 2],
    [1, 4],
    [1, 0],
    [10, 2],
    [10, 4],
    [10, 0]
]

# Create KMeans object with 2 clusters
kmeans = KMeans(n_clusters=2, random_state=0)

# Train the model
kmeans.fit(data)

# Show results
print("Cluster Centers:", kmeans.cluster_centers_)
print("Labels for each point:", kmeans.labels_)
```

## **OUTPUT:**

Cluster Centers: [[10. 2.]

[ 1. 2.]]

Labels for each point: [1 1 1 0 0 0]

## **RESULT:**

Thus the program is compiled and run successfully.