Exp 14 K-Means

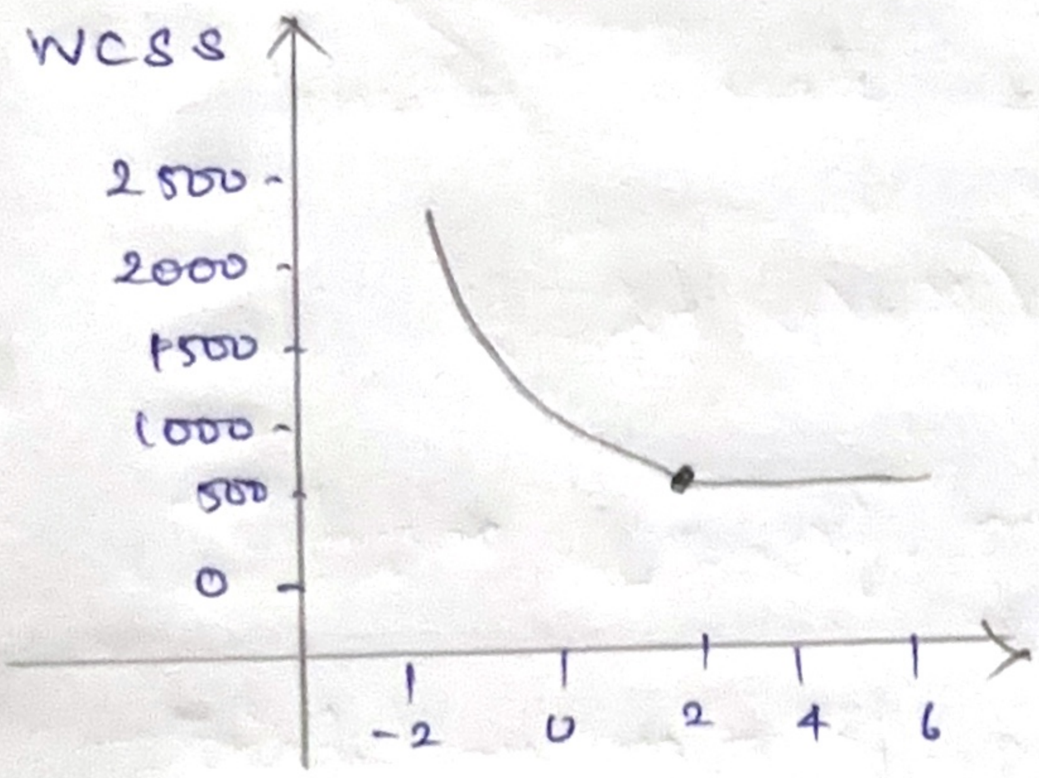
Aim:

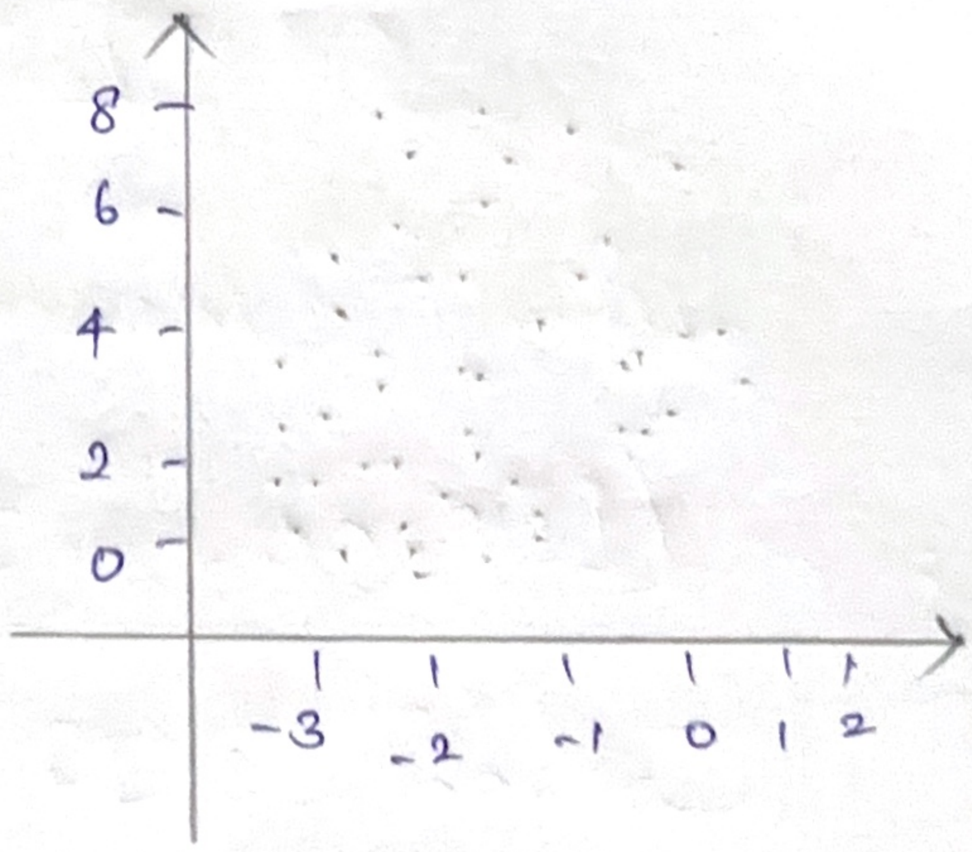
To implement a K-means clustering technique using python language

Code:

```
import numpy as np
import panda as pd
from matplotlib import pyplot as plt
from sklean dataset ... samples ... generator
import from sklean cluster import K-means.
X, y = make-blobs (n sample =300, Center =4,
                   cluster-slot =0.60, random=0)
Plt. scatter (x [:,0], x [:,1])
WCSS[]
for C in range (1,11);
K means = )K means (n-cluster =1, unit =
                                "K-means++"
Max-iter =300, n-iter =10, random=0)
K-means = fit (x)
wcss. append (K-means. intra-)
Plt. plot (range (1,11), wcss)
Plt. title ("Elbow method")
```

```
plt.xlabel ('cluster')
plt.ylabel ('wcss')
plt.show()
kmeans = kmeans (n-cluster = 4, unit =
                                'k-mean+1'
max-iter = 300, n-init = 10, random-state = 0)
Pred-y. kmeans. fit-predit (x)
Plt. scatter (x[:,0], x[:,1])
plt. scatter (kmeans, cluster. cluster-[:,0],
                S=30, c='red')
plt.show()
```





Result :

k means clustering technique using python language is successfully executed & output verified.