Exhority Date:

## Implementation of clustering

Technique K. Hears.

Amos + home - 1 first + - entire 1 month month

To implement a K. Means chustering techniques using Python language.

Explanation? (a) refuse the subsect of

\* Import whears from sklaven, cluster

\* Astign x and 4

\* Call the function Kelleans ().

\* Peyorm scatter operation and display the output.

source code:

Propert numpy as ho

9mport pardas as pd

from matphotlib import pyplotas plt

from sklown.datasets-samples\_generator import make\_blobs

() walk the

from Skleain. cluster import Kileans

X,y: make\_blobs (n-sample = 300, centro = 4, cluster\_std=0-60,

sandom\_state=0)

PH. scatter (x: C:pJ, XC:11)

mc85 > [7]

for 9 Pn range (1,11):

Rmeans = K Means &-clusters=1°, Phil=1 K-mount+1, maxiter=300, 12-11-10, random\_state=0)

Rmeans; fit(x)

wiss append (Rmeans, Priertia)

Plt. plot (range (1,11), wess) to the

plt. Fifte ( 'Elbow Hethod')

Plt. x lakel ('Number of cluster') iaupintar" plt. ylabel ("w cs 3") plt. show () kmeans = KHeans (n\_duters = H, Phit=1k-many++1 mexster=300, n-init-10, vandom-state=0) Pred-y = kinean . fft-predict(x) recovered parting plt. scatter (x (:, o], x (1, 1) plt. Scatter (Rmeans, cluster-centers [:, o], kmeans, cluster -centers - [:, 1], s=300, C> red ) plt. Slow () + Peridu x ought + Call the purction Wears ()

entput:

Folgern scalter operation and display the output J WILLOW 109 M stable sto man mon 01-0-06/2 10/1

> (0 stds industry of fint a to Thus the result was successfully executed and the output was executed, by the

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( bottet woder ) stil. they

2(11,1) 2800 42 2 rd