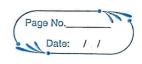
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	Assignment A4			
	FXPLUTION Pute: 17/03/2021			
	Submission Pate: 21/05/2021			
	and a partial of the second			
	Mitte: K-meon algorithm for clushring			
	the state of the s			
	Problem Stulement:			
	we have given a collection of & points:			
	P1 = [0.1, 0.0] P2 = [0.15, 0.71]			
2	P3 = [0.08, 0.9]			
	P5 = [0.2, 0.3] P6 = [0.25, 0.5]			
	P\$ = [0.24, 0.1] P8 = [0.13, 0.27			
	and the state of t			
	festorm Kimeon's clustering with initial centroids as			
£ 12.	m1=P1 = cluster#1 and m2=P8=cluster#2			
	Answer De following:			
	Answer De following:			
	i) what cluster does 16 belong to 3			
0	2) What is the population of cluster around mz?			
• 0. 15 11	3) What is the updated value of m1 and m2?			
	Later to the parties of the same time to			
	Objectif:			
	to understand and implement 1<-meurs algorithm.			
	the state of the s			
	Outone:			
	Students will leurn how K-meurs clustering algorithm			
-	works.			
,				



	Soltware Requirements:
160	- Supyer notebook
11	- PA 220
	- 64 bit operating system
	an product of the said and the said
	Mordware Requirements:
	- Computer with 64 bit processor
	The state of the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section in the second section is a second section of the second section of the second section is a second section of the section of the second section of the
	Theory: I see the desired and the second and the se
	K-meins clustering is one of the masimplest and
	popular unsupervised muchine learning algorithm.
	A cluster refers to the group of dota points
-	aggregated together because of certain similarities
	K-me uns clustering algorithm identifies K-number of
	controids and then allocate every data point to the neurost
4.	cluster while keeping the controlds as small as possible.
	To process the learning data, the Kimeons algorithm
	in data mining starts with the first group of randomly
	selected centrold, which are used as the beginning
	points for every cluster and then performs iterative culculations
-	to optimize the position of controlds.
	It hults and the creating and optimizing clusters when:
	And got to have the time to be set the state of the state
	- the centroids have stabilized
	- The defined number of iterations have been achieved.
7. T-1.	and the section of th



		2000	*	Date: / /			
		Algorithm:		1 11:15			
	Jan San San San San San San San San San S						
		) Choose K-objects from duta as initial clusters centers.					
	2)	2) Assign euch object to a closest cluster					
	3) Calculate mean of all objects in cluster and applote						
		Centroid,	1 1 1 1 (05 0 102.				
			N. T.				
	4)	Repeut.					
				247.5			
1 4		Example:					
	Ď.	Input Dotu = Data in					
		Pistunces		yourst. on the			
		Putu point	Olstonie (1	Distunce (2			
		(0.17,0.6)	ð	0.45			
		(0.15,0.71)	0112	0.53			
		(0.08 0.9)	0.30	0.73			
		(0.16, 0.85)	0.25	2001110.67			
		(0.2, 0.3)	0.32	0.14			
* .		(0.25, 0.5)	0.18 1 1010	0.30			
		(0.24,0.1)	0.51	0.12			
		(4.3, 0.2)	0.45	0			
		Assign clusters: Cluster 1:					
- Am							
	(0.1, 0.6) (0.88, 0.9) (0.25, 0.5)						
	(0.15, 0.71) (0.16, 0.85)						



Cluster 2	3 8	,		
(0.2	0.3)	(0.24.0.1)	(0.3	0.22

Calculate new values of centroids

 $m_1 = (0.148, 0.712)$ ,  $m_2 = (0.24672, 0.20)$ 

lest Coses:

	Pescription	Expected DIP	Actual OIP
	Aerform elustering with	Pinde duta into	Successfil
1	giren douta	2 clusters	
1	_		

Perform do

Conclusion:

we have studied the K-moons clustering algorithm