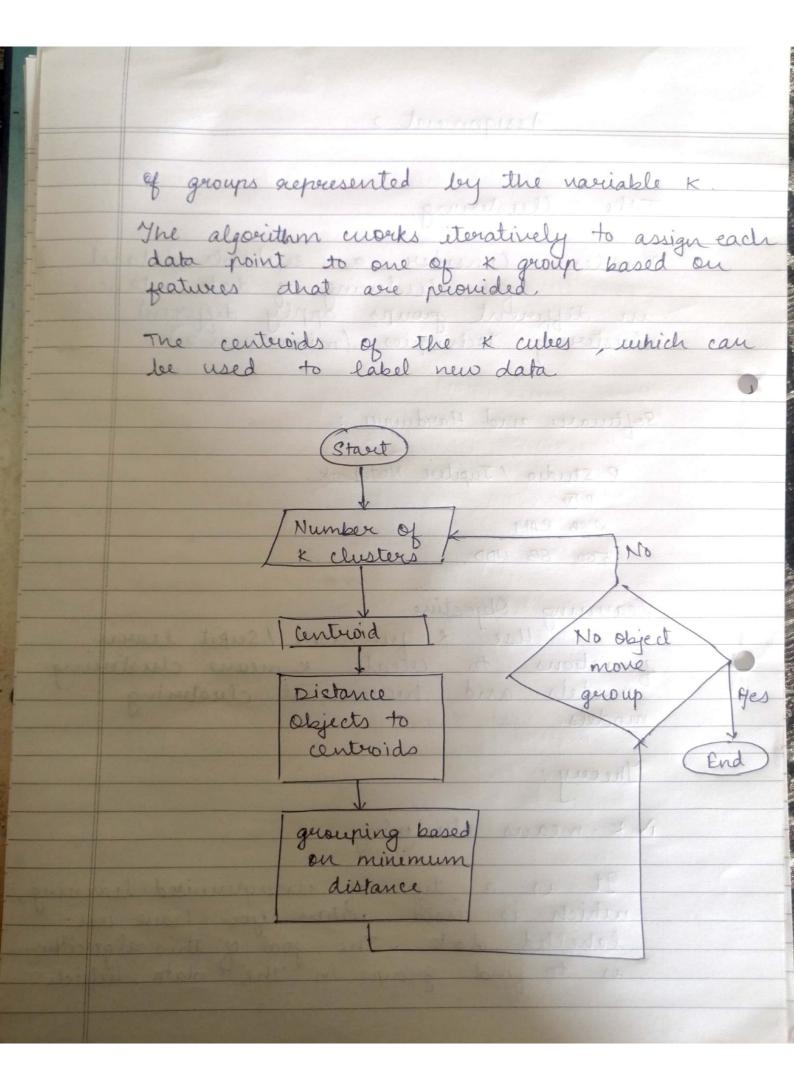
Assignment 2 Title: Clustering Puddern: Consider a suitable dataset in different groups apply different clustering techniques (minimum 2) Software and Hardmare: R Studio / Jupiter Notebook 500 GB HDD Learning Objective:

Use & functions / Scikit learn

femotions to create k means clustering

models and hierarichal clustering

models. Theory: 1) K-means clustering It is a type of unsupervised learning which is used when you have unlabelled data. The goal of this algorithm is to find groups in the data, which



of groups supresented by the variable K The algorithm cubrks iteratively to assign each data point to one of x group based on features that are provided The centroids of the K cutes, which can be used to label new data (Start) redigit \ ophistz 9 Number of K clusters No object Centroid wood more geroup Distance Objects to centroids on minimum distance

K-nearest neighboure (KNN) clustering - It is a superiised classification algorithm - It takes bunch of labelled points and uses there to leave now to label other points . The Terminage of - To label a new point, it looks at the labelled points closet that new point has those neighbours note.
Here k in KNN is number of neighbour it checks. (Staret) Month days Determine value Calculate distance bet new input and all training data Compare Analyse sout distance and End determine Knearest mitte majority neighbour based on minimum distance

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Test	Cases (2013) septendal grow	Janson 7	P
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Salay W	materix & classification seport based on Euclidian distance K	nendered = 5	3
	clusters are formed	1 0505(1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2	Visuals cluster using	Christers	
	single, complète and average linkages	displayed dry means	success
	July Ossikazala	of scatter plot	
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3	While fitting k means	or fresherm	
	to dataset put random state = 42	success	success
	+/-		
Conclus	implemented hiera	vichal du	stering
Spire of Alexander	and k means cl in python usi	ing jupyter	notebooks
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