Quiz; 22/08/2024

1. Briefly explain four applications of the clustering approach.
2. Use the dataset presented in the following table to create TWO (02) clusters using the **k-mean** clustering algorithm by considering the **A** and **C** data points as initial cluster centers. Show the steps you used to cluster the dataset.

|  |  |  |
| --- | --- | --- |
| **Data Point** | **F1** | **F2** |
| A | 1 | 5 |
| B | 1 | 7 |
| C | 1 | 8 |
| D | 2 | 7 |
| E | 3 | Y |
| F | 4 | 17 |
| G | 5 | 17 |
| H | 6 | X |

**Note:** Calculate the value of X using the last **four** digits of your registration number

If you registration number is 20APC3421,

Then X= 3 +4+2+1 = 10.

Y = total number of English characters in your last name

If cluster centroid is changing after fourth iteration also, then you can take four iterations as the stopping criteria.