St. Francis Institute of Technology, Mumbai-400 103

**Department Of Information Technology**

A.Y. 2024-2025

Class: TE-ITA/B, Semester: VI

Subject: **Business Intelligence Lab**

**Experiment – 6: To Implement K Means**

**clustering algorithm using Java/Python**

1. **Aim: :** To Implement K Means clustering algorithm using Java/Python
2. **Objectives:** After study of this experiment, the students will be able to implement K Means Algorithm
3. **Outcomes:** After study of this experiment, the students will be able to

**CO 4:** Design andImplement various clustering data mining techniques such as Partitioning methods, Hierarchical Methods, Density - Based methods along with identification and analysisof outlier.

1. **Prerequisite:** Introduction to all the three clustering algorithms & Problem solving approach.
2. **Requirements:** Personal Computer, Windows XP operating system/Windows 7, Internet Connection, Microsoft Word, WEKA tool.
3. **Theory:**
4. What is Clustering in Data Mining?
5. Explain K-means clustering algorithm
   1. **Laboratory Exercise:** Implementation of K means Classification Algorithm using Java/Python, Printout of implementation along with coding and snapshot
6. **Post-Experiments Exercise**
7. **Questions:**
   * In form of MCQ type test
   * K means solved numerical
8. **Conclusion:**
   * Summary of Experiment
   * Importance of Experiment
   * Application of Experiment

1. **Reference:** Data Mining: Concept & Techniques, 3rd Edition, Jiawei Han, Micheline  Kamber, Jian Pei, Elsevier.