**Data Mining and Warehousing Lab Sheet**

**Lab1**

1. Write a Python program to implement Standard Scalar.
2. Write a Python program to implement Min-max Scalar.

**Lab 2**

1. Write a python program to implement K-means Clustering algorithm
   * Generate 1000 2-D data points in the range 0-100 randomly.
   * Divide data points into 3 clusters.
2. Write a python program to implement K-means++ Clustering algorithm.
   * Generate 1000 2-D data points in the range 0-200 randomly.
   * Divide data points into 4 clusters.

**Lab 3**

1. Write a python program to implement K-means Clustering algorithm
   * Generate 10000 2-D data points in the range 0-100 randomly
   * Divide data points into 5 clusters
   * Find time taken by the algorithm to find clusters
2. Write a python program to implement Mini-batch K-means Clustering algorithm
   * Generate 10000 2-D data points in the range 0-100 randomly
   * Divide data points into 5 clusters
   * Find time taken by the algorithm to find clusters
   * Vary the batch size from 100 to 1500, find time taken by the algorithm in each case and find best value of the batch size.

**Lab 4**

1. Write a python program to find clusters of Iris Dataset using KMedoids Algorithm
2. Write a python program to find clusters of Iris Dataset using Agglomerative Clustering Algorithm
3. Compare both algorithms in terms of different performance measures

**Lab 5**

1. Write a python program to predict diabetes using Naive Bayes Classification.
2. Write a python program to predict diabetes using ID3 Decision Tree Classifier.
3. Compare Performance of both classifiers.

**Lab 6**

1. Write a python program to classify breast cancer data using support vector machine
2. Write a python program to classify breast cancer data using multilayer perceptron
3. Compare the performance of both classifiers.

**Lab 7**

1. Write a python program to classify Iris Dataset (Multi-class Classification).

**Lab 8**

1. Write a python program to implement Apriori algorithm to find association rules.