Programme	:	M.Tech MIA	Semester	:	Winter 23-24
Course	:	Exploratory Data Analysis	Code	:	CSE3040
Faculty	:	Dr.Bhuvaneswari A	Slot	:	F1+TF1/ F2+TF2
Date	:	23-Feb-2024	Marks	:	10

Digital Assignment II

Answer all the questions

1. Suppose you have data for five people, and each person vector has a Height, Age:

X   Y

Weight Age

64.0   29.0

36.0   13.0

58.0   37.0

19.0   6.0

73.0   55.0

Now suppose you want to know how far another person, v = (22, 44), is from this data using Mahalanobis Distance. Also , Find the outliers using manual computation and also R code.

Visualize and print the outliers

Apply K means clustering and DB Scan clustering algorithm manually and cross check ur answers using r code.

(2, 3)

(3, 3)

(2, 2)

(1, 3)

(8, 7)

(10, 6)

(9, 8)

(8, 6)

(9, 7)

(10, 19)

Visualize and print the outliers

A(0,2), B(3,0), C(1,4) and D(7,3) and K=2. Use LOF to detect one outlier among these 4 points (manually)

References:

https://towardsdatascience.com/local-outlier-factor-lof-algorithm-for-outlier-identification-8efb887d9843

https://www.statskingdom.com/cluster-analysis.html