**War Room Assignment 1**

Use following code snippet to generate data . Detect outliers using Euclidean distance and Mahalanobis Distance . Compare both these set of outliers. Note down your observations in the comments below the code. As part two of this assignment develop a function that creates outliers that Mahalanobis distance can detect but Euclidean distance can not!

*import numpy as np*

*import matplotlib.pyplot as plt*

*num\_samples = 1000*

*x = np.random.normal(5, 3, num\_samples)*

*y = 0.3\*x + np.random.normal(2, 1, num\_samples)*

*plt.scatter(x, y)*

*plt.show()*

**War Room Assignment 2.**

You are provided with a code that implements three univariate classifiers. You task is to analyse impact of outliers on performance of these three classifiers. You can increase 50 largest hights of female sample by certain amount( say 10 cm) . Treat this altered data as you original data. To understand impact of outliers on classification you will have to use a test train split. Try outlier detection and removal methods and run classification before and after outlier removal. Feel free to change the provided code as you deem fit. Note down your observations in the comments below the code**.**