Assignment 2

1. From the data below find the class which it belongs for the value x1 = 2.81 & X2 = 5.46 using LDA

class	X1	X2
1	2.95	6.63
1	2.53	7.79
1	3.57	5.65
1	3.16	5.47
2	2.58	4.46
2	2.16	6.22
2	3.27	3.52

2. Transform the given value of X & Y data (aside) using PCA and find the new data again transform back to original data (with relevant plot details)

x	y
2.5	2.4
0.5	0.7
2.2	2.9
1.9	2.2
3.1	3.0
2.3	2.7
2	1.6
1	1.1
1.5	1.6
1.1	0.9

3. Prove the XOR function using perceptron in details.

4. The input and target values for this problem are X1 =1, X2 =4, X3 =5 and t1 = 0.1 and t2 = 0.05. Initialize weights as shown in the diagram below. using back propagation analyze with three iterations (epochs)