# Assignmnet # 4: Neural Networks

In this assignment you have to implement a neural network using numpy. You are required to implement feed forward and backward propogation for XOR gate. Requirements are as follows:

1. Input size will be 2
2. Output size will be 1
3. Initialize the weights randomly
4. Number of hidden layers and N(number nodes in a hidden layer) will be parameters and set during initialization.
5. Activation Function will be Sigmoid

Use this neural network to predict the output of XOR. The following table shows the correct output of XOR:

X	Y	Output
0	0	0
0	1	1
1	0	1
1	1	0

Example:

Hidden Layers = 1, N = 3
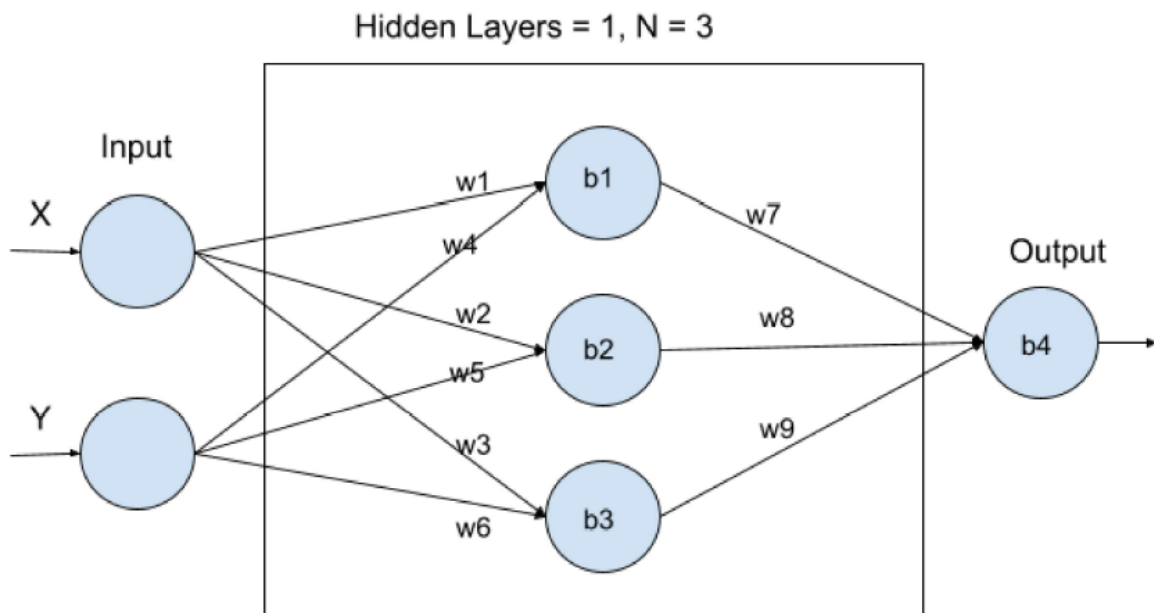
Hint:

Weights and biases for the above example can be stored in matrices as:

W1 =

w1	w2	w3
w4	w5	w6

B1=

b1
b2
b3

W2 =

w7
w8
w9

B2 =

b4