University of Asia Pacific
Dept. of Computer Science and Engineering
Assignment on Back propagation Neural Network (BPNN)
CSE 403, Spring 2022

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1. For the following Back-propagation Neural Network, assume that the feature vector, X = [1, 0] and desired output vector, Y = [0, 1], the threshold value $\theta_3 = \theta_4 = \theta_5 = \theta_6 = \theta_7 = 0.2$ and learning rate $\alpha = 0.1$. Consider the initial weights as: $W_{13} = 0.3$, $W_{14} = -0.5$, $W_{15} = W_{37} = 0.5$, $W_{23} = W_{24} = -0.2$, $W_{25} = 0.2$, $W_{36} = W_{56} = -0.4$, $W_{46} = W_{47} = -0.3$ and $W_{57} = 0.1$. [5+5]
   i) Determine the predicted output of the hidden layer (neuron 3, 4 and 5) after one iteration and
   ii) Determine the predicted output of the output layer (neuron 6, 7) after one iteration.