**Exercise #2**

In Exercise 1, the single-layer feed-forward neural network was trained for 495 epochs, achieving a final training error of 0.04477200082565811. When tested with the input [0.1, 0.2], it produced an output of 0.408845.

While in Exercise 2, a two-layer feed-forward network was trained using a gradient descent backpropagation for 1000 epochs, with a final error of 0.09679992618680057. Testing the same input gave an output of 0.50169851.

The results show that the more complex network architecture in Exercise 2 were more effective in learning the underlying pattern in the data compared to the simpler single-layer network architecture in Exercise 1.