FL#7
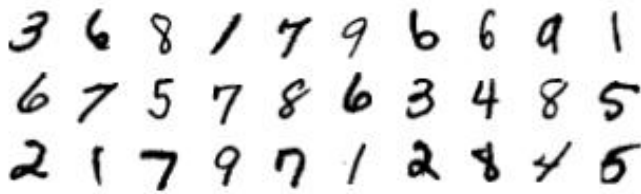
1. Prepare the well-known dataset for hand-written digits (MNIST) and flowers (IRIS).

   A. Use python library to extract images.

   B. Separate them into test and training set.

	A	B	C	D	E
1	Sepal Length	Sepal Width	Petal Length	Petal Width	Class
2	5.1	3.5	1.4	0.2	Iris-setosa
3	4.9	3	1.4	0.2	Iris-setosa
4	4.7	3.2	1.3	0.2	Iris-setosa
5	4.6	3.1	1.5	0.2	Iris-setosa
6	5	3.6	1.4	0.2	Iris-setosa

2. Design a feed-forward single layer perceptron (SLP), and check the classification accuracy with random weights.

   A. Input : IRIS dataset (4x1 vector)

   B. Output : Classification prediction (binary value, scalar)

   C. Functions for implementation

      i. Feedforward operation function

      ii. Sigmoid function

3. Design a feed-forward multilayer perceptron (MLP), and check the classification accuracy with random weights.

   A. Input : MNIST Image (784x1 vector)

   B. Output : Classification prediction (10x1 vector)

C. Functions for implementation

    i. Feedforward operation function

    ii. Sigmoid function

    iii. Softmax function