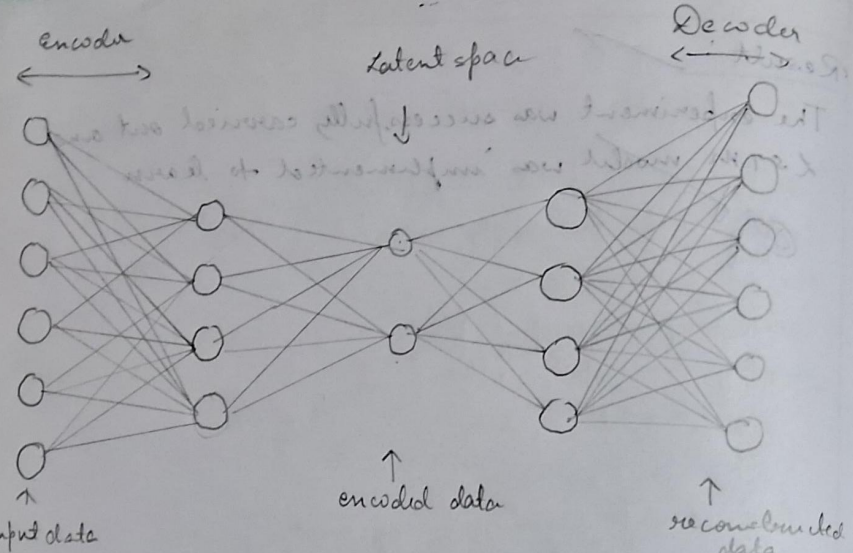
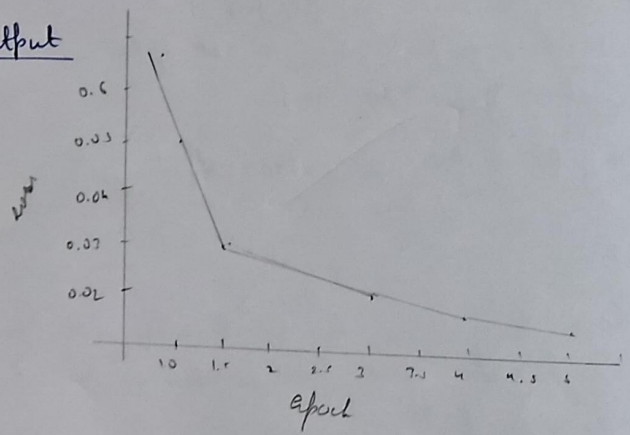


Output



Output :

Epoch [1, 5], Loss : 0.0621,
Epoch [2, 5] Loss : 0.0324
Epoch [3, 5] Loss : 0.0248
Epoch [4, 5] Loss : 0.0218
Epoch [5, 5] Loss : 0.0197

Accuracy : 98.16 %

2-10. Perform Compression on mnist dataset using auto encoder

AIM: To implement an Autoencoder neural network for compressing and reconstructing images from MNIST dataset.

Pseudocode :

- Import Req. lib
- Load the MNIST dataset
- Normalization of pixel values
- Flatern the images into 1D vectors
- Define the Auto encoder model
- Compile the model with optimizer
- Train the model
- Use encoder part to compress images
- Use decoder part to reconstruct image
- Visualize

(Observation)

- The auto encoder successfully learns to reconstruct MNIST digits after several epochs
- The training loss decreases gradually.
- The compressed representation is much smaller in size compared to original
- The compression ratio depends on the bo layer size

Result