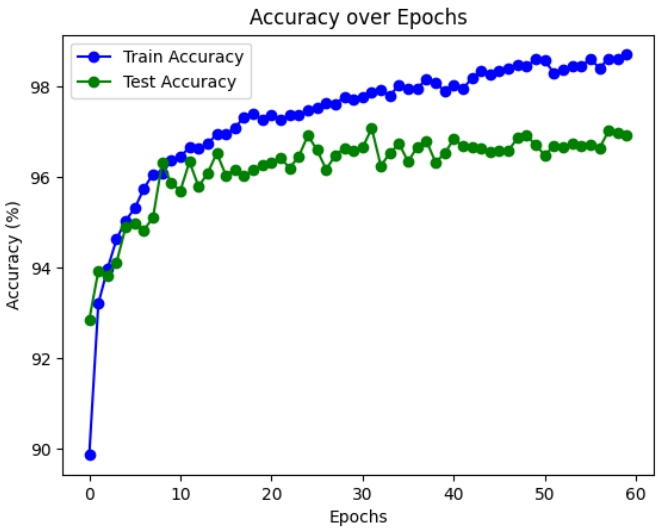
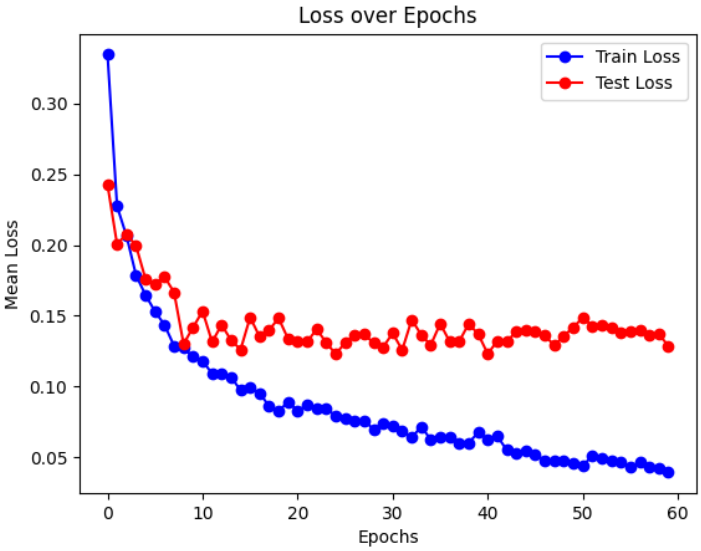
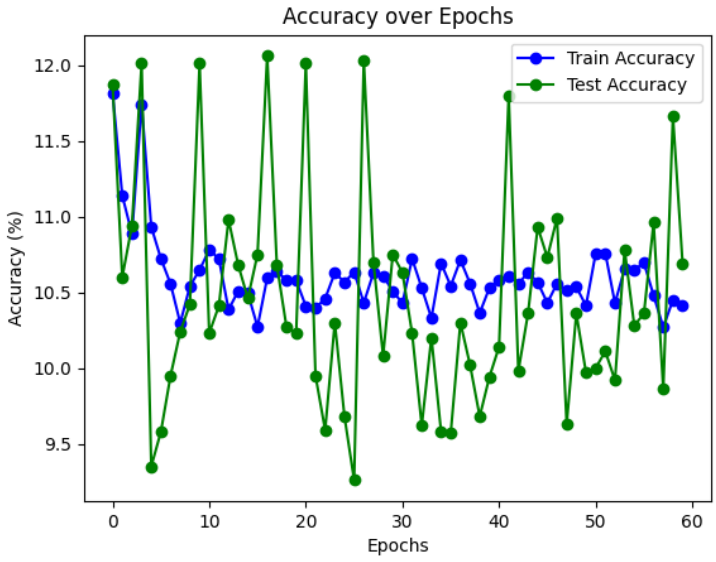
MNIST CLASSIFICATION RESULTS

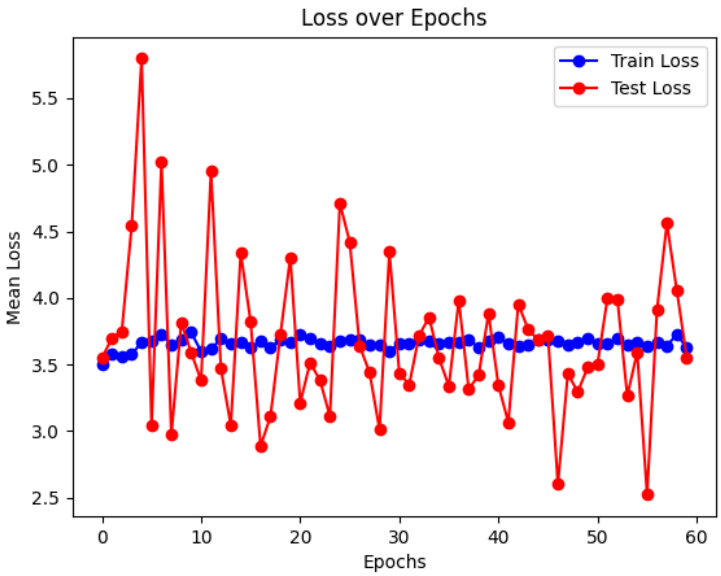
Mode1:



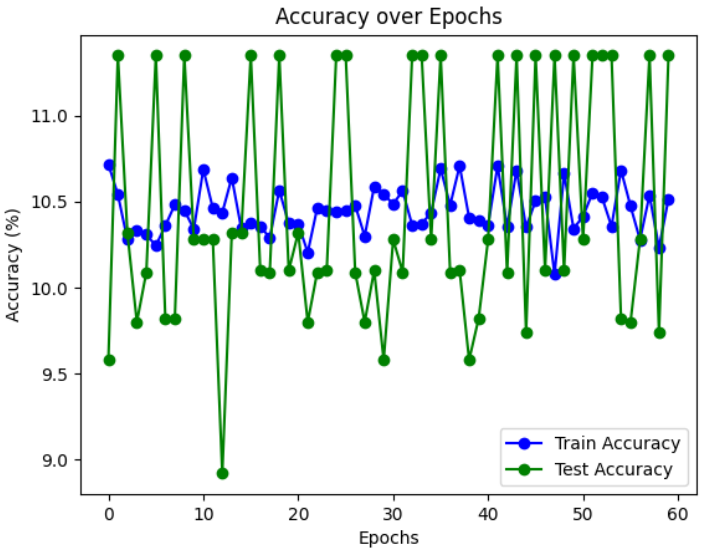


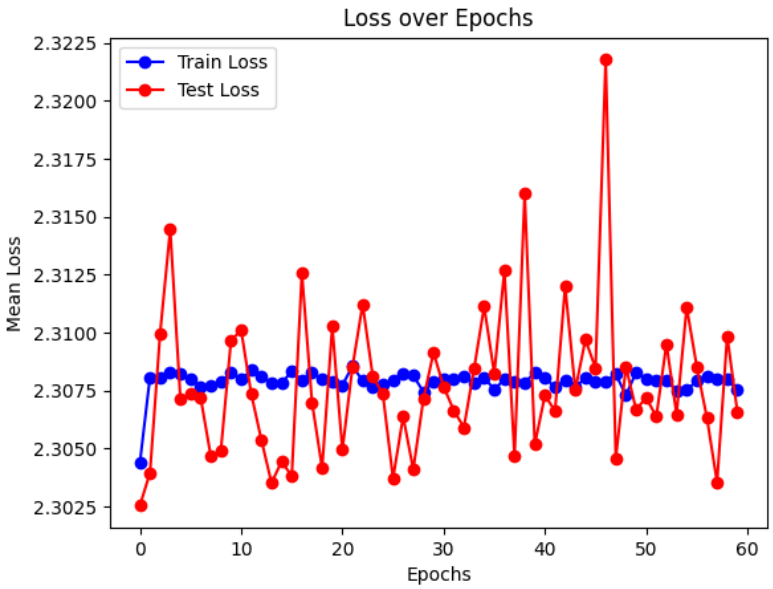
Mode 2:



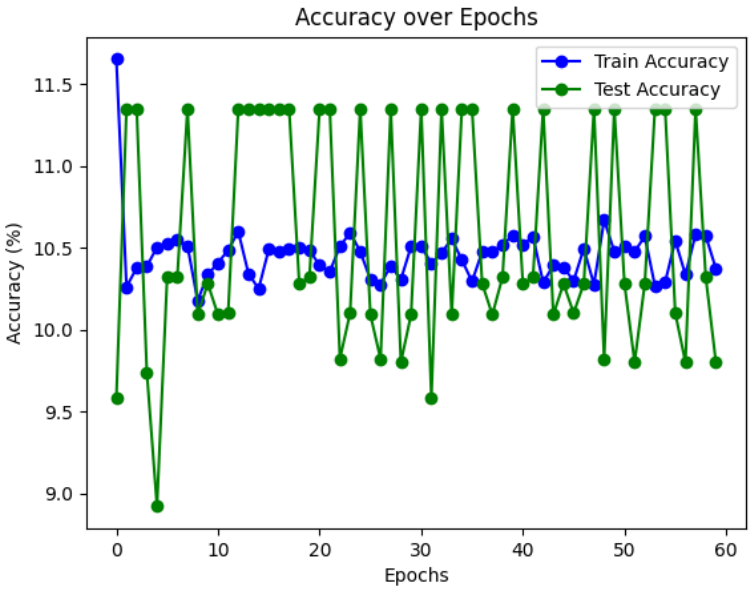


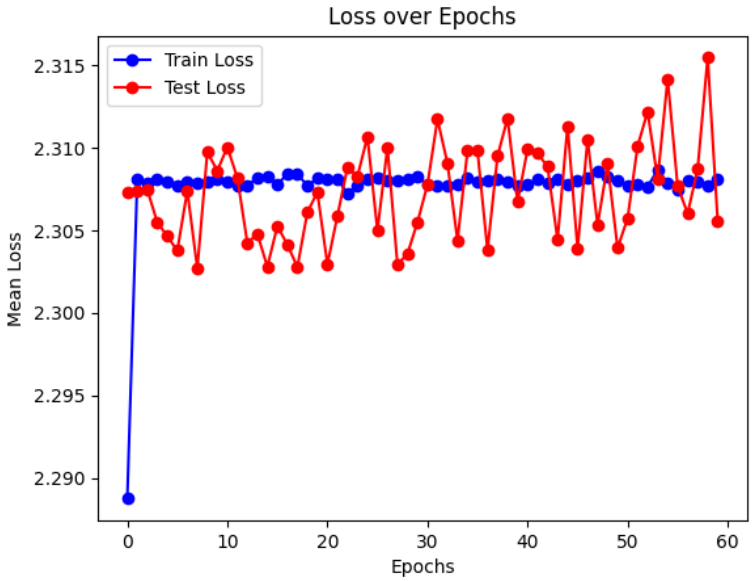
Mode 3:


Accuracy over Epochs
Accuracy (%)
Epochs
Train Accuracy
Test Accuracy

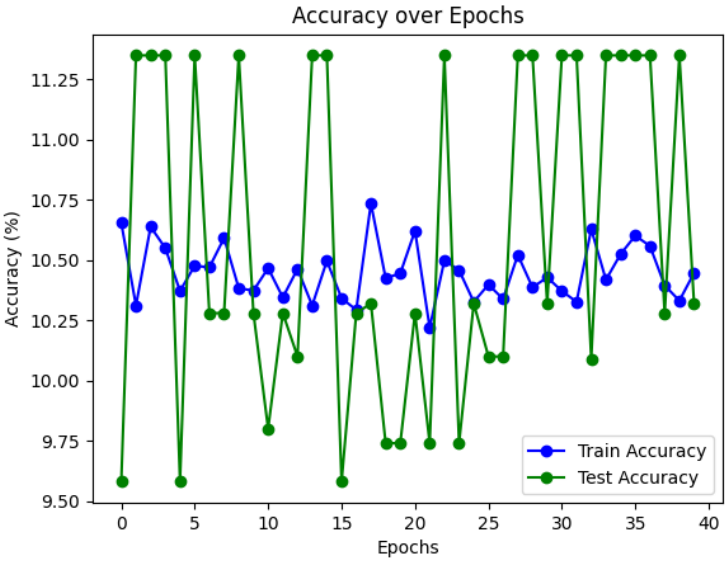

Loss over Epochs
Mean Loss
Epochs
Train Loss
Test Loss

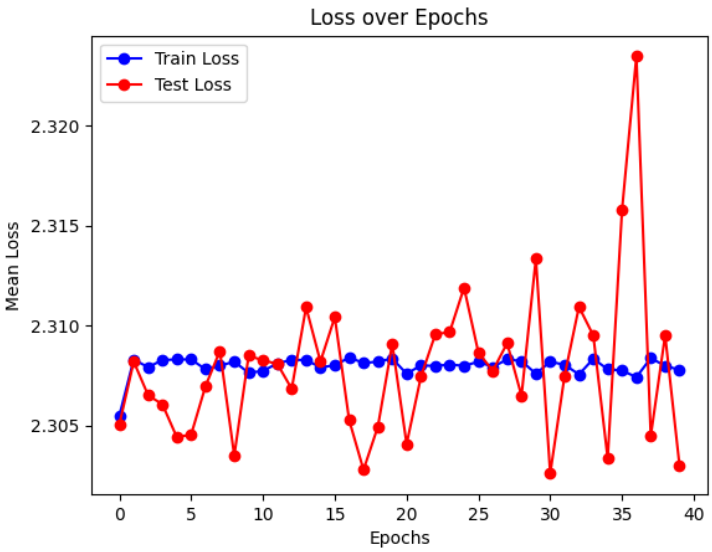
Mode 4:


Accuracy over Epochs
Accuracy (%)
Epochs
Train Accuracy
Test Accuracy


Loss over Epochs
Mean Loss
Epochs
Train Loss
Test Loss

Mode 5:





Analysis:
For mode 1 the loss descended for each epoch and accuracy got better, as expected but for every other mode which had an added convolution layer didn't converged. For different optimisers and loss functions, mode 2-5 didn't let the model converge and the loss and accuracy didn't show improvement as the model was trained with the given settings.

Conclusion: MNIST is a simple dataset and single fully connected layer with sigmoid does good but the other complex architectures were not converging because of a possible bug in implementation or some other logical cause.