REPORT
SML
ASSIGNMENT 4

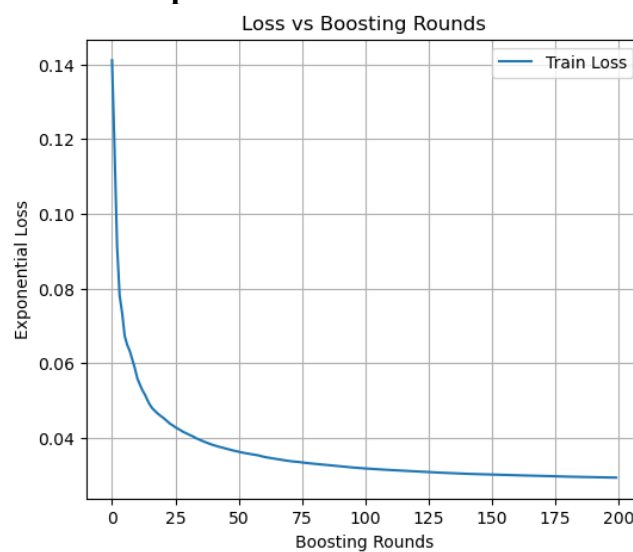## Q1. AdaBoost

For Train Set → randomly selected 1000 samples per class for label 0 and label 1.
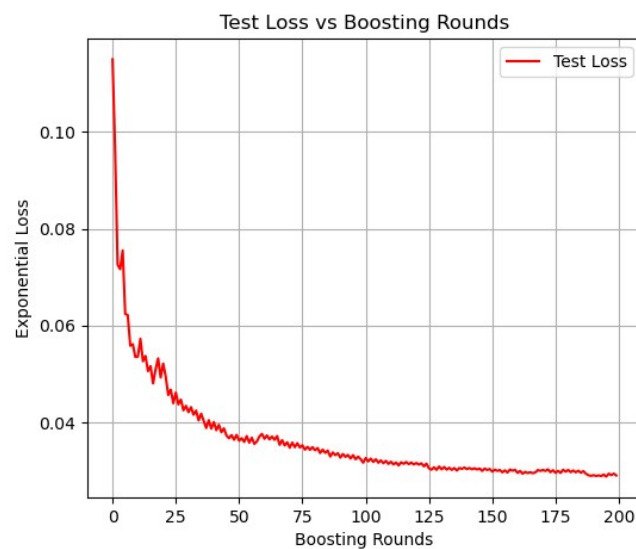For Test Set → all samples with label 0 and all samples with label 1 are used.

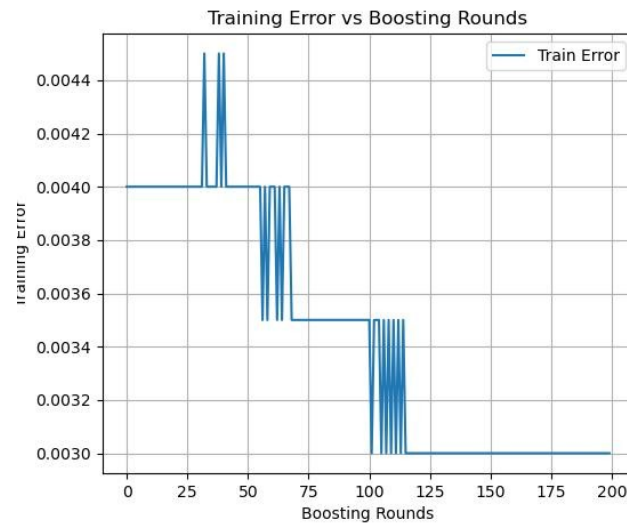Final Test Accuracy on MNIST 0 - 1: 99.76%

Train Loss vs Boosting Rounds Graph :
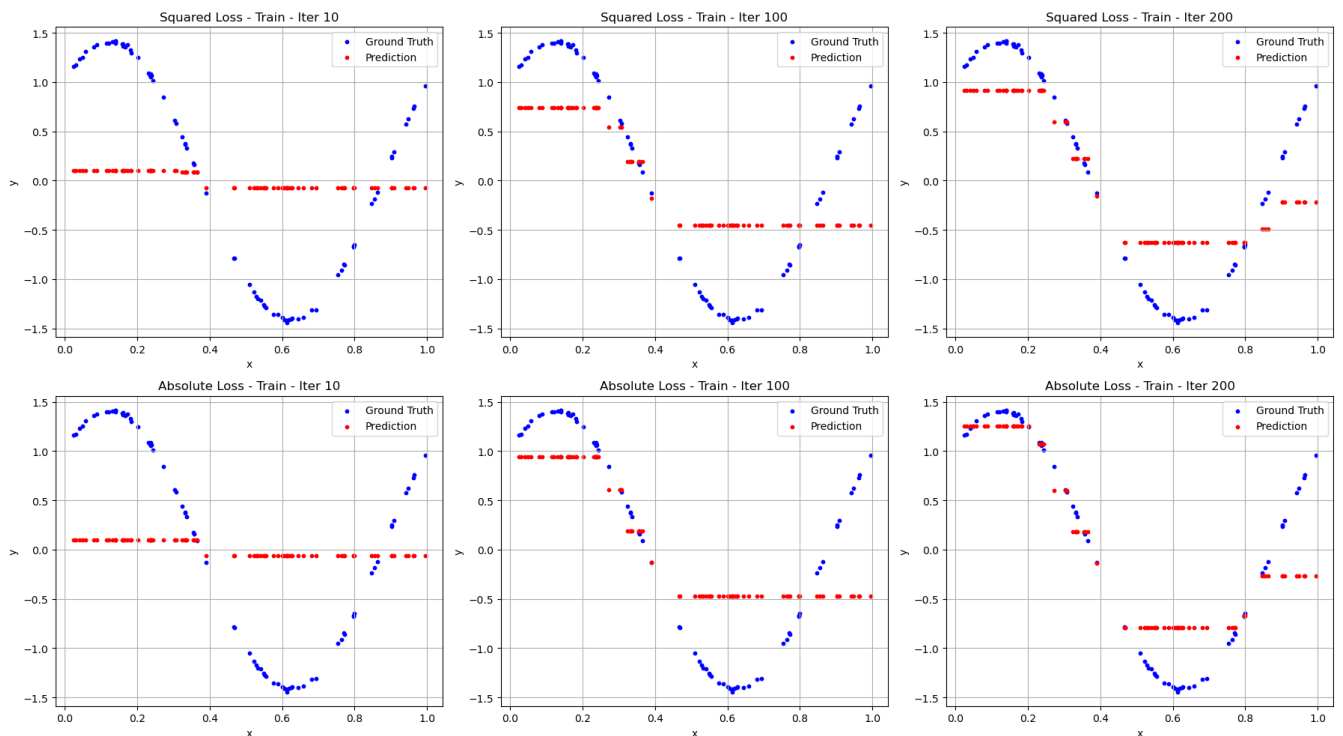

Test Loss vs Boosting Rounds Graph :
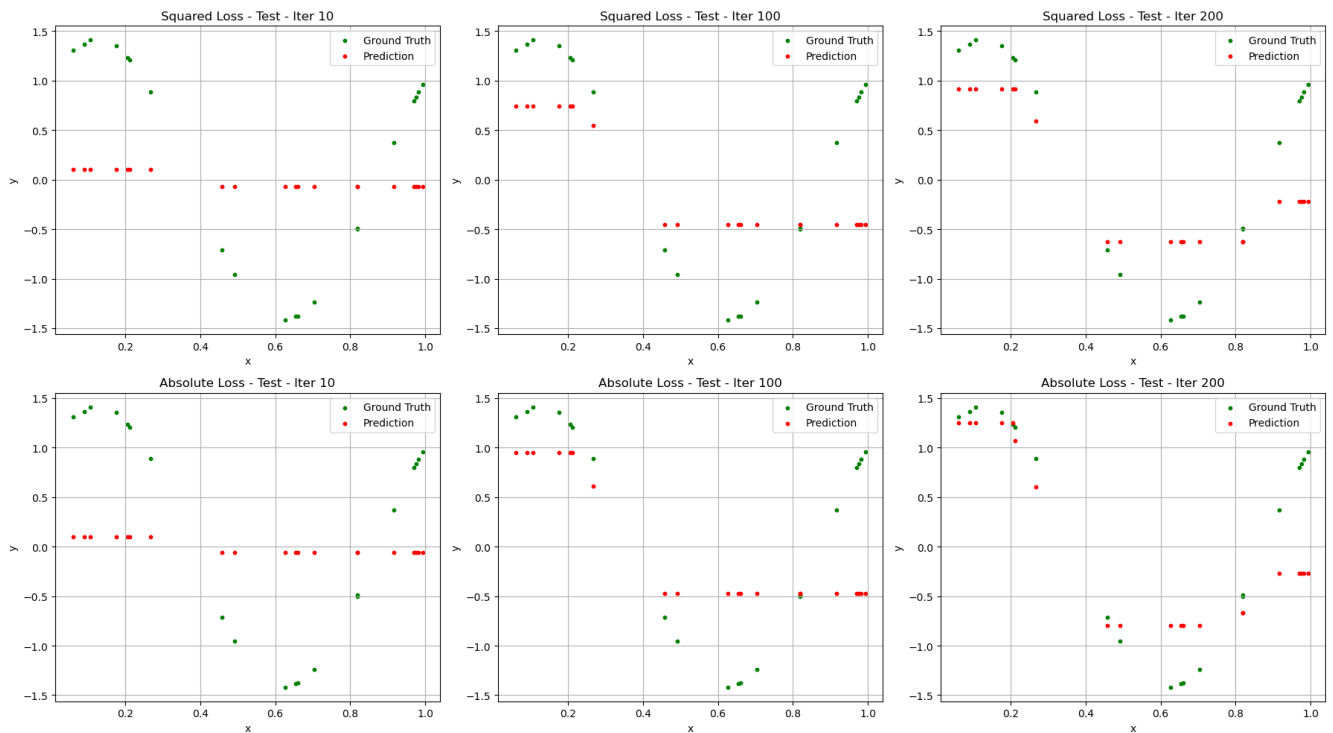
Training Error vs Boosting Rounds :

(accuracy values and graph varies slightly at every run due to randomisation)
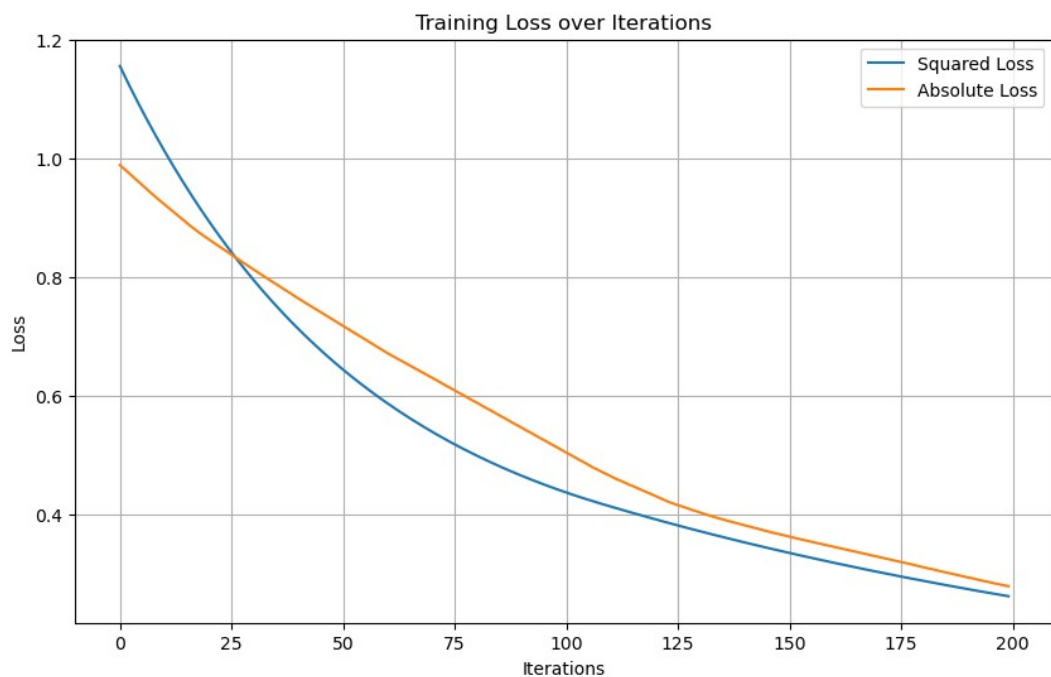
Q2. Gradient Boosting for Regression

Predictions and ground truth vs. iterations for squared error loss and absolute loss for train set :

Predictions and ground truth vs. iterations for squared error loss and absolute loss for test set :

Training loss vs iterations :

Q3. Neural Network for Binary Classification

Test MSE: 0.040056105526206275

(MSE value may vary slightly due to randomisation)