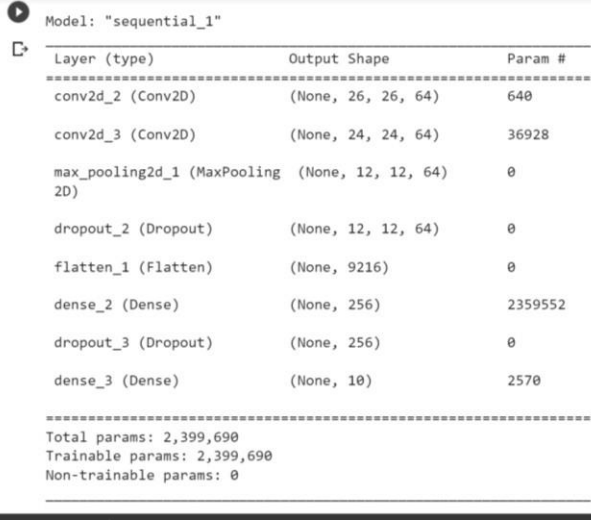


## Model Performance Test

Date	14th November 2022
Team ID	PNT2022TMID01309
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	10 Marks

### Model Performance Testing:

S.No	Parameter	Values	Screenshot
1.	Model Summary		 <pre> Model: "sequential_1" Layer (type)                Output Shape              Param # ----- conv2d_2 (Conv2D)           (None, 26, 26, 64)        640 conv2d_3 (Conv2D)           (None, 24, 24, 64)        36928 max_pooling2d_1 (MaxPooling (None, 12, 12, 64)        0 2D) dropout_2 (Dropout)         (None, 12, 12, 64)        0 flatten_1 (Flatten)         (None, 9216)              0 dense_2 (Dense)             (None, 256)              2359552 dropout_3 (Dropout)         (None, 256)              0 dense_3 (Dense)             (None, 10)               2570 ----- Total params: 2,399,690 Trainable params: 2,399,690 Non-trainable params: 0           </pre>
2.	Accuracy	Training Accuracy –  79.58  Validation Accuracy -  87.76	<pre> Epoch 1/5 3000/3000 [=====] - 249s 82ms/step - loss: 2.0980 - accuracy: 0.3602 - val_loss: 1.7692 - val_accuracy: 0.7317 Epoch 2/5 3000/3000 [=====] - 246s 82ms/step - loss: 1.4854 - accuracy: 0.6373 - val_loss: 1.0263 - val_accuracy: 0.8171 Epoch 3/5 3000/3000 [=====] - 240s 80ms/step - loss: 0.9836 - accuracy: 0.7249 - val_loss: 0.6623 - val_accuracy: 0.8475 Epoch 4/5 3000/3000 [=====] - 238s 79ms/step - loss: 0.7668 - accuracy: 0.7679 - val_loss: 0.5210 - val_accuracy: 0.8662 Epoch 5/5 3000/3000 [=====] - 240s 80ms/step - loss: 0.6590 - accuracy: 0.7958 - val_loss: 0.4510 - val_accuracy: 0.8777           </pre> <p>OBSERVING THE METRICS</p> <pre> [ ] metrics = model.evaluate(x_test, y_test, verbose=0)     print("Metrics(Loss and Accuracy):")     print(metrics)  Metrics(Loss and Accuracy): [0.45104262232780457, 0.8776999711990356]           </pre>