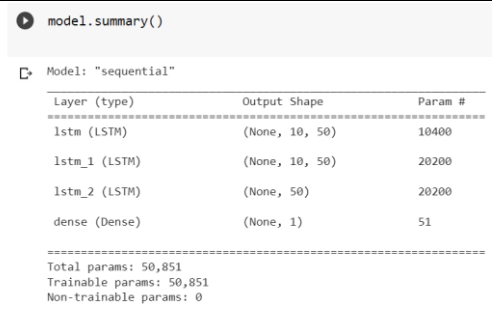
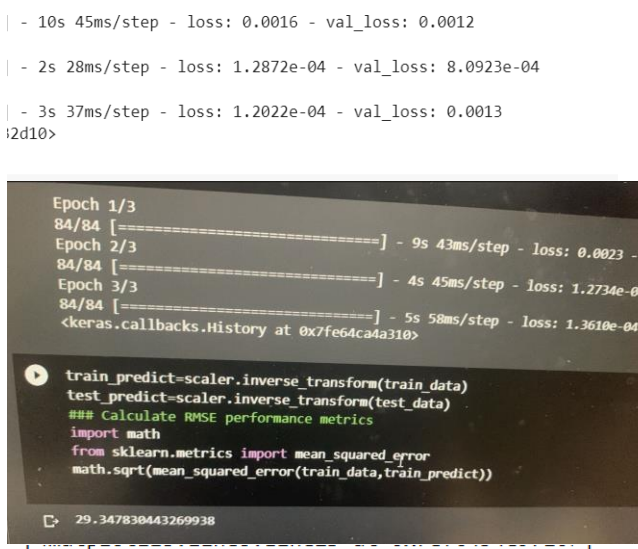
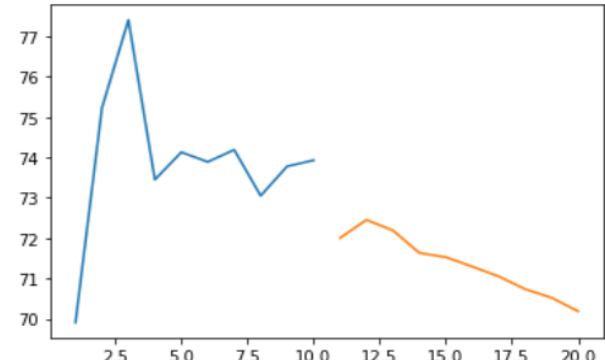


## Project Development Phase Model Performance Test

Date	17 November 2022
Team ID	PNT2022TMID52922
Project Name	Crude Oil Price Prediction

### Model Performance Testing:

S.No.	Parameter	Values	Screenshots
1.	Model Summary		 <pre> model.summary()  Model: "sequential" Layer (type)                Output Shape                Param # ----- lstm (LSTM)                  (None, 10, 50)             10400 lstm_1 (LSTM)                (None, 10, 50)             20200 lstm_2 (LSTM)                (None, 50)                 20200 dense (Dense)                (None, 1)                   51 ----- Total params: 50,851 Trainable params: 50,851 Non-trainable params: 0 </pre>
2.	Accuracy	<p>Training Accuracy - 0.99374382493</p> <p>Validation Accuracy – 2.201959455277266</p>	 <pre> - 10s 45ms/step - loss: 0.0016 - val_loss: 0.0012 - 2s 28ms/step - loss: 1.2872e-04 - val_loss: 8.0923e-04 - 3s 37ms/step - loss: 1.2022e-04 - val_loss: 0.0013 i2d10&gt;  Epoch 1/3 84/84 [=====] - 9s 43ms/step - loss: 0.0023 - Epoch 2/3 84/84 [=====] - 4s 45ms/step - loss: 1.2734e-04 Epoch 3/3 84/84 [=====] - 5s 58ms/step - loss: 1.3610e-04 &lt;keras.callbacks.History at 0x7fe64ca4a310&gt;  train_predict=scaler.inverse_transform(train_data) test_predict=scaler.inverse_transform(test_data) ### Calculate RMSE performance metrics import math from sklearn.metrics import mean_squared_error math.sqrt(mean_squared_error(train_data,train_predict))  29.347830443269938 </pre>  <p>The graph displays training accuracy (blue line) and validation accuracy (orange line) over 20 epochs. The training accuracy starts at approximately 70% and rises sharply to about 77% by epoch 3, then fluctuates between 73% and 74% until epoch 10. The validation accuracy starts at approximately 72% and gradually decreases to about 70% by epoch 20.</p>