```
/usr/local/bin/python3 "/Users/vijayreddy/ Stock Price Prediction using LSTM/ stock_lstm.py"
vijayreddy@MacBook-Air  Stock Price Prediction using LSTM % /usr/local/bin/python3 "/Users
/vijayreddy/ Stock Price Prediction using LSTM/ stock_lstm.py"

/Users/vijayreddy/ Stock Price Prediction using LSTM/ stock_lstm.py:11: FutureWarning: YF.download() has c
hanged argument auto_adjust default to True
   data = yf.download('AAPL', start='2018-01-01', end='2023-12-31')
[*********************100%***********************]  1 of 1 completed
Data head:
 Price           Close
Ticker           AAPL
Date
2018-01-02  40.341873
2018-01-03  40.334862
2018-01-04  40.522209
2018-01-05  40.983574
2018-01-08  40.831352
X_train shape: (1159, 60, 1), y_train shape: (1159,)
X_test shape: (290, 60, 1), y_test shape: (290,)
/Library/Frameworks/Python.framework/Versions/3.12/lib/python3.12/site-packages/keras/src/layers/rnn/rnn.p
y:200: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a layer. When using Sequential mo
dels, prefer using an `Input(shape)` object as the first layer in the model instead.
   super().__init__(**kwargs)
Model: "sequential"
```

Layer (type)	Output Shape	Param #
lstm (LSTM)	(None, 60, 50)	10,400
dropout (Dropout)	(None, 60, 50)	0
lstm_1 (LSTM)	(None, 50)	20,200
dropout_1 (Dropout)	(None, 50)	0

```
Total params: 30,600 (119.53 KB)
Trainable params: 30,600 (119.53 KB)
Non-trainable params: 0 (0.00 B)
Epoch 1/50
```

Layer (type)	Output Shape	Param #
lstm (LSTM)	(None, 60, 50)	10,400
dropout (Dropout)	(None, 60, 50)	0
lstm_1 (LSTM)	(None, 60, 50)	20,200
dropout_1 (Dropout)	(None, 60, 50)	0
flatten (Flatten)	(None, 3000)	0
dense (Dense)	(None, 1)	3,001

Total params: 33,601 (131.25 KB)
Trainable params: 33,601 (131.25 KB)
Non-trainable params: 0 (0.00 B)
Epoch 1/20
33/33 ━━━━━━━━━━━━━━━ 2s 20ms/step - loss: 0.0503 - val_loss: 0.0076
Epoch 2/20
33/33 ━━━━━━━━━━━━━━━ 1s 16ms/step - loss: 0.0031 - val_loss: 0.0092
Epoch 3/20
33/33 ━━━━━━━━━━━━━━━ 1s 16ms/step - loss: 0.0029 - val_loss: 0.0077
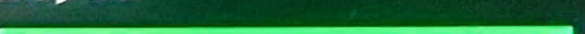Epoch 4/20
33/33 ━━━━━━━━━━━━━━━ 1s 17ms/step - loss: 0.0028 - val_loss: 0.0081
Epoch 5/20
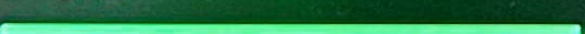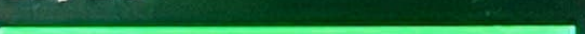
```
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0019 - val_loss: 0.0039
Epoch 13/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0018 - val_loss: 0.0037
Epoch 14/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0017 - val_loss: 0.0035
Epoch 15/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0020 - val_loss: 0.0034
Epoch 16/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 18ms/step - loss: 0.0018 - val_loss: 0.0036
Epoch 17/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0014 - val_loss: 0.0032
Epoch 18/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0017 - val_loss: 0.0029
Epoch 19/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0016 - val_loss: 0.0028
Epoch 20/20
33/33 ━━━━━━━━━━━━━━━━━━━━━━━━━  1s 17ms/step - loss: 0.0016 - val_loss: 0.0033
10/10 ━━━━━━━━━━━━━━━━━━━━━━━━━  0s 14ms/step
1/1 ━━━━━━━━━━━━━━━━━━━━━━━━━  0s 22ms/step
Next day prediction: 182.07741
vijayreddy@MacBook-Air  Stock Price Prediction using LSTM % 
```

Apple Stock Price Prediction using LSTM