1st TASK

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Import pandas as pd
Import numpy as np
From sklearn.model_selection import train_test_split
From sklearn.linear_model import LinearRegression
Import yfinance as yf

# Replace ‘AAPL’ with the stock symbol you want to predict
Stock_symbol = ‘AAPL’

# Download historical stock data from Yahoo Finance
Data = yf.download(stock_symbol, start=’2020-01-01’, end=’2023-01-01’)

# Create a new dataframe with only the ‘Close’ prices
Df = pd.DataFrame(data[‘Close’])

# Create a new column ‘Prediction’ with shifted ‘Close’ values
Df[‘Prediction’] = df[‘Close’].shift(-1)

# Drop the last row as it has a NaN value (due to shifting)
Df.dropna(inplace=True)

# Define the features (X) and the target variable (y)
X = np.array(df[‘Close’]).reshape(-1, 1)
Y = np.array(df[‘Prediction’])

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
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# Create and train the linear regression model
Model = LinearRegression()
Model.fit(X_train, y_train)

# Predict the stock prices for the test set
Y_pred = model.predict(X_test)

# Evaluate the model (you can use other metrics for evaluation)
From sklearn.metrics import mean_squared_error, r2_score
Mse = mean_squared_error(y_test, y_pred)
R2 = r2_score(y_test, y_pred)

Print(f”Mean Squared Error: {mse}”)
Print(f”R-squared: {r2}”)
```