TITLE: Stock Price Predictor

INTRODUCTION: Analysis of stocks using data mining is useful for new investors to invest in stock market based on various factors. Stock market includes daily activities like Sensex calculation, exchange of shares, etc. This exchange provides an efficient and transparent market for trading in equity, debt instruments and derivatives. The stock values of company depend on many factors, including *Demand and Supply*, *Corporate results*, and *Popularity*.

OBJECTIVE: This project aims to accurately predict the future closing value of a given stock across a given period of time in the future by analyzing previous stock data of companies, with help of certain parameters that affect stock values. The goal of this project is to:

1. Explore stock prices
2. Implement basic model using linear regression
3. Implement LSTM using Keras library
4. Compare the results and submit the report

SOFTWARE REQUIREMENTS: Python3, NumPy, pandas, Keras, Tensor-flow, Matplotib, Sklearn, Jupyter Notebook.

DATASET: I will be using the daily prices of Tata Consumer Products from January 2016 to March 2021. This is a series of data points indexed in time order or a time series. My goal will be to predict the closing price for future after training. All of the necessary data for the project will come from Yahoo Finance.

HARDWARE REQUIREMENTS:

Processor type:

- Minimum: Intel Core i3/ i5

- Recommended: Intel Core i7

- Monitor: VGA Monitor

RAM:
- Minimum: 4 GB

- Recommended: 8 GB or more

Processor speed: 3 GHz or higher

Hard disk*:* 40 GB or more

ESTIMATION: Approx. 1 month for completion.

CONCLUSION: We can see how the future prices of stocks can be predicted using the historical closing price and trading volume and visualize both the predicted price values over time and the optimal parameters for the model.