**Questions and Answers**

1. **What is time series data?**

Time Series Data is also called Time Stamped Data. Time Series data is recorded at consistent intervals of time.

1. **Is stock market data complicated? If so, why?**

Stock market data is complicated as it consists of various investors (small and large) making uncoordinated decisions about various investments. Stock values are not always linear as the value is not just time based but involves various factors.

1. **What are the time-series methods that have been used to predict stock prices?**

The following are the models used for time-series data prediction or forecasting:

* 1. Autoregression (AR)
  2. Moving Average (MA)
  3. Autoregressive Moving Average (ARMA)
  4. Autoregressive Integrated Moving Average (ARIMA)
  5. Seasonal Autoregressive Integrated Moving-Average (SARIMA).

1. **What is the ARIMA model?**

Autoregressive Integrated Moving Average (ARIMA) is a statistical mode that uses time-series data to predict or forecast future trends or better understand the data.

1. **Can we use any model other than the ARIMA model?**

As stock market data is time-series data, we can use any of the above-mentioned models (mentioned in question# 3)

1. **How to calculate the accuracy of time series models?**

As in other models, we cannot directly calculate the accuracy score. However, we can calculate Mean absolute percentage error (MAPE) and subtract that from 100 to get accuracy.

1. **Can we use this model implementation with datasets other than NYSE?**

We can use this model for any stock market data regardless of stock exchanges. However, it might need some tweaks to the implementation depending on the column names used.

1. **Do we have any APIs or sources which can provide the latest data instead of old data?**

There are many APIs available. Below are few APIs to name a few:

* 1. [YH Finance](https://rapidapi.com/blog/best-stock-api/%0ahttps:/rapidapi.com/belchiorarkad-FqvHs2EDOtP/api/yh-finance-complete)
  2. [Yahoo Finance](https://rapidapi.com/blog/best-stock-api/%0ahttps:/rapidapi.com/sparior/api/yahoo-finance15)

1. **Will these models withstand the vast datasets?**

To withstand vast datasets, we need to use hardware accordingly with higher configurations.

1. **What visualizations can be used, and how will they help?**

As this is time series data, per my knowledge, Line charts are the best.

1. **Can we implement an interface for the user to provide stock symbols and provide predictions?**

In the current implementation, I have provided an option to input the Stock symbol to get the prediction. We can implement this as an API and include the required details in response along with the URL for the prediction graph.