**Aim:**

Our aim is to create software that analyzes previous stock data of certain companies, with the help of certain parameters that affect stock value. We are going to implement these values in data mining and learning algorithms to determine the values that particular stock will have in near future.

**Statement about the problem:**

For investing money in share market, one should have complete knowledge about the stock market and for proper investing, high skills in both fundamental and technical analysis is required,

which take more efforts and time. Moreover if we do not want to invest our precious time,we rely on some stock broker. In doing so we have to give commission to them which reduces our profit as well as a lot of risk is involved as they might lead to some false decision in investing.

Today, there are a number of companies which are listed in the stock market as a consequence each day the data is growing exponentially. In technical analysis we need high skills for pattern recognition which requires analyzing huge amount of previous data that follows some type of trends, which can’t be analyzed and maintained by a human.

To overcome this type of situation we need a computer based software for maintaing and analyzing such huge amount of data and predicting the estimated future price.

**Introduction:**

The stock market analyser and predictor are the computer based software which is used to analyze and predict the future performance of the stocks. It is mainly concerned with the study of historical price movements of the stocks and on its volume of trade in the market to predict the future trend movements of the stocks. It first predicts the future trend movements of the stocks by using historical data and can predict a buy, sell or a stay decision accordingly.

**Scope:**

Analysis of stocks using data mining will be useful for investors to invest in stock market based on the various factors considered by the software and some information given by the user.   
Stock market includes daily activities like sensex calculation and exchange of shares. The exchange provides an efficient and transparent market for trading in equity.

**Features:**

* The system shall allow user to register and login.
* It shall display portfolio of the user.
* It shall provide graphs and charts of shares price and volume of the company.
* It shall predict the share price on the basis of historical data.
* It shall give guidlence to the investor that in which company they should invest.
* It shall give guidlence to investor when to buy and sell particular company’s shares and what amount which maximizes profit.
* It take data from the investor which give detail to the system about its risk tollerence,duration of investment and preferences.
  + Exchange
  + Average Volume
  + Market Capital
  + Institutional Ownership
  + P/E ratio
  + Diluted EPS
  + Forward annual dividend yield
  + Quaterly Dividend Amount
  + Closing Price at year end.
  + 52 week High and Low Price
* It will take large amount of data per unit time from stock exchange of each listed companies. This data will include
  + Date
  + Open price
  + High
  + Low
  + Close price
  + Volume
* The taken data will be stored in a distributed file system in number of PC.
* The analysis of this large data set wil be performed through map-reduce algorithm.
* The technical and statisctical analysis will be performed by making charts and graph of the acquired data.
* Morever, the software can pedict the nature of market such as
  + Rally
  + Volatility
  + Volume
  + Yield etc
* The number of parameters which will be calculated are:-
  + RSI (Relative Stength Index)
  + Sensex
  + Nifty
  + Support and Resistance Lines
* It will provide an simpistic interface where the users can account their portfolio.
* It will provide guidlence for proper investment strategies.

* **TECHNICAL DETAILS(Hardware/Software Used)–**

**At the Developer End:**

**1) Hardware Requirements –**

* + - * Server
    - PC
    - RAM (min 4 GB requirement)
    - ROM
      * + Modem
    - Ethernet Cross-Cable

**2) Software Requirements**-

* + - * Web Browser
      * Operating System (Windows, Linux, OSX)
      * Net Bean IDE,Eclipse
      * Hadoop(Map-Reduce)
      * Pig,Hive,MangoDB,Rhadoop,Mahout
      * Java Script,JSP,Java Servelet,JSON
      * Oracle/My-SQL database

**At the Deployment End:**

**1) Hardware Requirements –**

* + - * Modem
      * WAN-LAN
      * Ethernet Cross-Cable
      * PC
      * RAM (min 1 GB requirement)
      * ROM

1. **Software Requirements**-
   * + - Web Browser
       - Operating System(Windows, Linux,OSX)

**Innovativeness and Usefullness:**

It guides the investor to make better portfolio by providing details about market value of the company and running trend.

It reduces commision cost which can increase in the investment .

**References:**

[http://www.investopedia.com](http://www.investopedia.com/)

[https://www.colfinancial.com](https://www.colfinancial.com/)

<http://www.stockmarketforpinoys.com/wpcontent/uploads/2013/02/TheStockMarketJumpstarterV2.0.pdf>