

\$GROUP

Initial Project Proposal

RailedSwasthika

\$GROUP
3/15/2013

Table of Contents

Importance of the project..... 3

Objectives 4

Scope..... 4

Deliverables..... 4

Assumptions/ Limitations 4

Project plan 5

Team 7

Abbreviations..... 7

Importance of the project

Capital market related investing is gaining popularity day by day all over the world. Even in Sri Lanka, there are many prospective investors who are willing to invest in the capital market. They are attracted towards the capital market related investing due to reasons such as higher returns on their investments, and the ability claim an ownership to a company with a limited amount of money. Also the governments and the related regulatory bodies all around the world encourage these prospective investors to enter the capital market investing due to the economical benefits that it provides to the respective country.

Most of the prospective investors refrain from investing in the capital market since they lack proper knowledge about the capital market. They are under the impression that investing in the capital market is a very complex procedure that requires expertise knowledge in economics and accounting. Some of them see the capital market investing as a method of gambling. Reasons like this prevent most of the investors who has the ability to perform well in the capital market from investing in it.

Therefore government authorities have taken various initiatives to make potential investors make aware of the real situation on the capital market. There are loads of tutorials, study materials, and stock market simulators that are created by various organizations which are available for the general public to gain knowledge from. Even in Sri Lanka, the Securities and Exchange Commission (SEC), which regulates the Colombo Stock Exchange (CSE), puts high effort to make the general public aware of the realistic situation of investing in capital markets.

Even though there are various solutions provided by various parties to educate the investors, each of them has their own set of weaknesses.

- Most of the available resources tackle only a single aspect of the problem. Some provide simulators to simulate a stock market, some provides games to compete with others in a stock market, and some provide just the learning materials.
- Most of them are in English language. So this gives the impression to an ordinary investor that the English knowledge is essential to invest in a capital market.
- Most of them target investors with no or a very limited knowledge of capital markets. There are not enough tools for a somewhat educated investor to test their knowledge and expertise in a virtual environment.
- Each tool has their own environment which comprises of their own set of companies representing a stock exchange of their own choice.

Even if a person needs to set up his own game (up on seeing these problems) it's very difficult. Upon seeing these limitations, certain people might need to set up their own learning environment for educating about the capital market. But creation of such a learning environment introduces many problems since everything that is needed for the learning environment should be built from the scratch.

Also certain individuals/companies need custom simulation environments that represent the environment of the capital market they are dealing with to simulate various business decisions that they'd be taking. Creating such environments also is a very painstaking process under the present circumstances due the lack of an existing extensible solution.

Objectives

- Increasing awareness about the benefits of investing in capital markets among prospective investors.
- Developing a highly customizable capital market simulation framework which can be used to create various capital market simulation environments up on need.
- Providing the capabilities which are required for fundamental analysis, technical analysis and technological analysis methods associated with the capital market domain in a single place.

Scope

The major focus of the project is to develop the simulation framework and initially develop plugins for Moodle and Wordpress, which are used by the SEC.

The capital market simulation environment should facilitate to have the capability to create customized games/simulations under different scenarios using real time and simulated data with predictions and forecasting.

The framework should include:

- Integrated automated trading system
- Tools to assist in making informed decisions with respect to the theory of fundamental analysis.
- Tools to predict market behavior with changing a set of selected variables.(we are planning to apply methods of financial analysis and technological methods)
- Ability to customize and create simulations for different scenarios without deep technical expertise

Deliverables

- Capital market simulation framework
- Plugins for popular CMS's (ex- Wordpress, Moodle)
- A set of customizable simulations/games for the SEC

Assumptions/ Limitations

Framework

- Predictions about the Capital market behaviour would not be 100% accurate, but we are hoping to improve the prevailing accuracy (at least in certain scenarios).
- SEC will be aiding us to gain the necessary domain knowledge and will extend their help when we need more information on certain scenarios in a capital market.
- SEC will provide the necessary data to test our product.

SEC's deliverables

- Non availability of formatted data which is required for fundamental analysis
- The types of game models that can be provided depend on the amount of data that is provided, the format of the data, and the delay in providing data.
- The companies in the CSE do not use a unified format to present their data in the market reports.

Project plan

Task	Duration
Gain domain knowledge	09.03.2013 – 03.05.2013
Studying the existing capital market analyzing and prediction systems	09.03.2013 – 03.05.2013
Prepare the initial chapters of the project report	18.03.2013 – 03.05.2013
Prepare for the poster presentation	22.03.2013 – 26.03.2013
Technological research on Capital Markets <ul style="list-style-type: none">• Refer the research material available for capital market analysis and prediction• Research about currently available capital market related frameworks and libraries	15.03.2013 – 03.05.2013
Learning developing extensions for the selected CMS in the initial phase	01.05.2013 – 03.05.2013

Team

Supervisors

- Dr. Shantha Fernando – Internal Supervisor
- Prof. D.B.P.H. Dissabandara – External Supervisor

Members

- R.P.I.T. Somasiri (090498L)
- S.A.H.B. Surasinghe (090509B)
- T.W.R.O. Siriwardana (090495B)
- K.H.A. Surendra (090511A)

Abbreviations

SEC - Securities and Exchange Commission

CSE- Colombo Stock Exchange