MyStock

Software Requirements Specification

Version 1.1

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Revision History

Date	Description	Author	Comments
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Document Approval

The following Software Requirements Specification has been accepted and approved by the following:

Signature	Printed Name	Title	Date
	Jasmin Valgotar	Lead Software Eng.	10/25/2017
	Dr. Mei Hwa Chen	Instructor, CSI 518	

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1 Introduction

This section gives a scope description and overview of everything included in this SRS document

1.1 Purpose

Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

The intended audiences of this document are professor Mei-Hwa Chen, teaching assistants of ICSI51 as well as other students who are interested in this software system document.

1.2 Scope

The "MyStock" is a web based stock management system. Which helps users of system to manage their stock. There are mainly three actors in system User, Manager and Administrator.

Using the system User will be able to buy and sell stocks themselves or can request to buy stocks on their behalf to Manager.

While manger can buy stock on behalf of their client the can also see the gained commission from the trading of stocks.

Also in the system administrator will be able to see user and manager activities and will be able to authenticate their registration.

1.3 Definitions, Acronyms and Abbreviations

Term	Definition
User	The person who wants to buy or sell stock or invest in a stock
Manager	Person who will manage stocks on behalf of his client(User).
Administrator	Person who will authenticate registrations of manager and is able to view activity records of manager and users.
SRS	Software requirement specification.
Admin	Administrator.

1.4 References

Below example SRS is used for some references from UNIVERSITY OF GOTHENBURG:
http://www.cse.chalmers.se/~feldt/courses/reqeng/examples/srs_example_2010_group2.pdf

1.5 Overview

This SRS is basically divided in five sub section named Introduction, General description, Specific requirements, Analysis models and Change Management Processes. Apart from this it also includes appendices

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2 General Description

This section describes General information about "MyStock" system.

2.1 Product Perspective

"MyStock" is a web based system which will provide functionalities for buying and selling of stock to its Users and Managers. This System can replace offline based buying and selling of stock and will be able to give Realtime information about stocks to its user and will simplify the process of buying and selling of stocks.

2.2 Product Functions

This system will provide different functionalities to different users depending upon their role. Main Functionalities for Users will be as following:

For Users and Manager: They will be able to,
  ➢ Register themselves as user of system
  ➢ Login and Logout from the System.
  ➢ Watch stocks and be able to view its history.
  ➢ Add stocks to watch list and see its current price and its history.
  ➢ Update their respective profiles.

For Users: User will be able to,
  ➢ View Manager's Profile.
  ➢ Select manager to manage their account.
  ➢ Contact their respective manager.
  ➢ Buy and sell stock.
  ➢ Request Manager to buy or sell stock on their behalf.
  ➢ See account balance and account history.

For Managers: Manager will be able to,
  ➢ Sell/purchase stocks on behalf of their clients.
  ➢ Contact clients.
  ➢ View their account commission

For Administrator: Administrator will be able to,
  ➢ Login and logout from the system.
  ➢ Approve/decline managers' registration requests.
  ➢ View users'/managers' activity records

2.3 User Characteristics

There are three group of users using "MyStock" system;

User:
The User of the system is entity who wants to buy or sell stock or wants to have manager to manage their money in stock market on their behalf.

Manager:
The Manager in the system is entity who will be able to buy or sell stock on behalf of their client and will get commission on that, which he will be able to see how much commission he has gain.

Administrator:
The Administrator has highest privilege level as it can validate requests of registration from managers. Also, Admin will be able to track activities of users and managers.

2.4 General Constraints

The Internet connection is also a constraint for the application. Since the application fetches data from the database over the Internet, it is crucial that there is an Internet connection for the application to function.

This application will also be constrained by the capacity of the database as all the information are needed will be stored in the database.

2.5 Assumptions and Dependencies

One assumption is that User who wants to use this application have hardware and software that can run compatible browser.

One dependency is on third party API named "Alpha Vantage" which will be used to get Realtime and historical data regarding Stocks.

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3 Specific Requirements

This section will describe specific requirements of the system in brief.

3.1 External Interface Requirements

3.1.1 User Interfaces

➢ All pages of the system are following a consistent theme.
➢ Error message should be located beside the error input which clearly highlight and tell user how to solve it.

3.1.2 Hardware Interfaces

➢ The system must basically support certain input and output devices. Their descriptions are as follows:

	Description of Purpose	Source of Input/output
Mouse	To Use clickable components	Input
Display/Monitor	To Display all information	Output
Keyboard	To enter Information as per required modules	Input

Moreover, the system will use basic Hardware such as processor, hard disk, internet connection, etc. which are able to run compatible browser.

3.1.3 Software Interfaces

➢ The System will use MSQL database for storing the information.
➢ The system will use "ALPHA WANTAGE" API to retrieve Realtime and history information of stock.
➢ Apache tomcat server will be used to deploy the application.

3.1.4 Communications Interfaces

➢ HTTP protocol will be used to communicate requests with server.
➢ Web browser will be used to run this web application which can communicate with server using internet.

3.2 Functional Requirements

1. User/Manager/Admin shall login
➢ Input: Username and password of the user/manager/admin
➢ Output: Respective home page of user/manager/admin

2. "User" shall be able to register as "User"
➢ Input: User details entered by the user
➢ Output: Successful registration message and redirect to login page

3. "Manager" shall register as "Manager"
➢ Input: Manager details entered by the manager
➢ Output: Successful registration message and redirect to login page

4. User/Manager shall update profile
➢ Input: Updated user/manager details entered by user/manager respectively
➢ Output: Successfully update message.

5. User shall view managers profile
➢ Input: User will click on view managers component
➢ Output: manager profile will be displayed to the user

6. User shall select manager
➢ Input: User will select manager
➢ Output: Manager will be assigned to that user.

7. User shall contact manager
➢ Input: Contact manager UI component will be clicked
➢ Output: Manager's contact details will be displayed

8. User/Manager shall select stock to watch
➢ Input: Select stock from the stock list
➢ Output: Stack Details will be displayed

9. User/Manager shall select stock to add to watchlist
➢ Input: Select stock from the stock list
➢ Output: Stock will be added to user's/manager's watchlist

10. User/Manager shall view current price of stock from watchlist
➢ Input: Select stock from watchlist
➢ Output: Stock current price will be displayed

11. User/Manager shall view price history of stock from watchlist
➢ Input: Select stock from the watchlist
➢ Output: Stock price history will be displayed

12. User/manager shall sell/purchase stocks
➢ Input: Select stock to sell/purchase
➢ Output: Sell/purchase acknowledgement

13. User shall be able to request manager to sell stock on his behalf
➢ Input: Select amount of stock to buy.
➢ Output: Request to Manager will be sent to buy stock on behalf of user.

14. User shall be able to see account balance
➢ Input: Select account
➢ Output: Account details

15. User shall be able to view account's history
➢ Input: Select account history
➢ Output: Account details

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16. Manager can sell/purchase on behalf of clients
 ➢ Input: Select stock to sell/purchase of a client
 ➢ Output: Success message

17. Manager can contact clients
 ➢ Input: Select client to contact
 ➢ Output: Message to client will be send

18. Manager shall be able to view account details
 ➢ Input: Select account
 ➢ Output: Account Details

19. Admin can approve/decline manager registration request
 ➢ Input: approve/decline manager request
 ➢ Output: Success message and status of registration will be changed.

20. Admin can view users/managers activities
 ➢ Input: Select user/manager
 ➢ Output: User/manager activity record will be visible

21. User/Manager/Admin can logout from system
 ➢ Input: Click on logout button
 ➢ Output: Logout message will be displayed, and user's session will be invalidated.
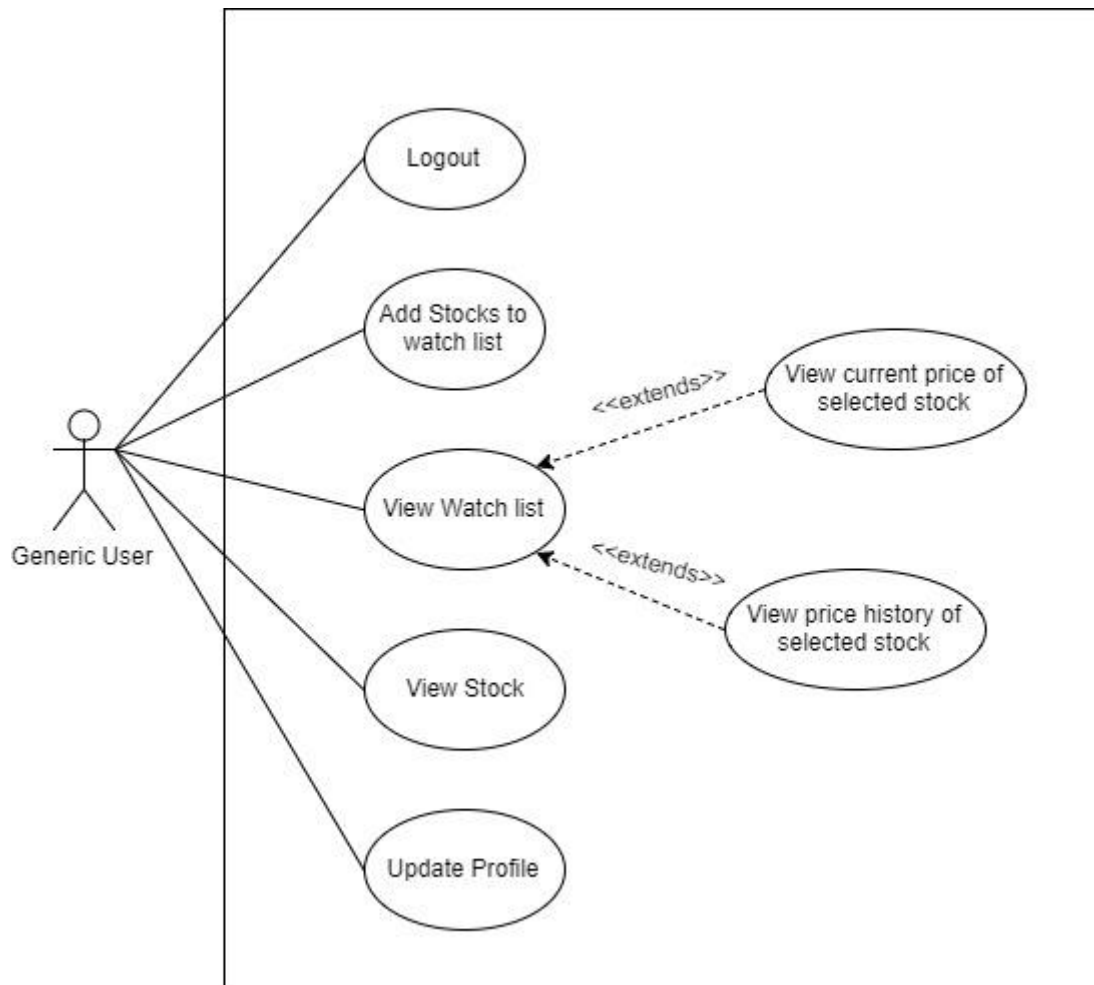
3.3 Data Requirements

 ➢ Data required to login into system is login Username and password.
 ➢ Stock will be represented Using an icon, company name, volume and current price.
 ➢ To buy or sell stock user will need to specify its company name, and volume of how much user wants to buy or sell.
 ➢ To contact Manager user will need to first select the Manager of its choosing.

3.4 Use cases

For simplicity it is assumed that all action are performed after Successful login and each user has login functionality

Generic User Use-case: This user will be inherited by Manager and User of system

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User and Manager Use-case: (they inherit Generic user as shown in diagram.)

Administrator Use-case:

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