

# Online Stock Trading System

## Software Requirement Specifications

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# Software Requirements Specifications

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## Table of Contents.

1) <u>Introduction</u> .....	1
1.1) Purpose	
1.2) Scope	
1.3) Definitions, Acronyms, Abbreviations	
1.4) References	
1.5) Overview	
2) <u>Overall Description</u> .....	3
2.1) System Perspective	
2.1.1) Interfaces	
2.1.1.1) Software Interfaces	
2.1.1.2) Communications Interfaces	
2.1.1.3) Hardware Interfaces	
2.1.1.4) System Interfaces	
2.1.2) Operations	
2.1.3) Site Adaptation Requirements	
2.2) Business Objectives	
2.2.1) User Business Benefits	
2.2.2) Owner Business Benefits	
2.3) User Characteristics	
2.4) Product Functions	

2.5) Assumptions and Dependencies

### 3) Specific Requirements.....6

3.1) Functional Requirements

3.2) Performance Requirements

3.3) Logical Database Requirements

3.4) Design Constraints

3.5) System Attributes

3.5.1) Reliability

3.5.2) Availability

3.5.3) Security

3.5.4) Maintainability

3.5.5) Portability

### 4) Supporting Information.....13

# 1) Introduction

## 1.1) Purpose

This document comprises the detail specification that is required to be realized in actual for Online Stock management System.

By creating this document, the following purposes are to be served:

- This document work as guide to follow during the development process.
- This document can also be used by the set of friendly users in order to refine the requirement.
- This SRS also help to develop directly the software testing plan and the Design document and 'how to use system document'.
- This document can help in managing the project by reducing the misinterpretation and inconsistency.
- This SRS can be work as legal contract between customer and the companies.

## 1.2) Scope

The generic function of the system that is to be developed may reflect in this name:

"Online stock trading & management system".

The system provide interface to the user for buying and selling the stock of shares as well as to maintain portfolio and also provide information about the current tread of stock market. This system insure the quality of service and also reliability of the transaction that is to carried out.

Some of the major application/user of the system is:

This system can be used by individual stock broker or may be used by companies involved in stock trading business.

Benefits:

- The system provide unique platform to the user for buying and Selling stock.
- It also reduces time required in banking transaction by automating the whole process through online banking.
- User of system can get the update of market readily available.

### 1.3) Definitions, Acronyms, Abbreviations

Abbreviations/Acronyms:

1. SRS: Software requirement specification
2. IPO :Initial public offering
3. FPO:follow on public offering
4. E-mail : Electronic mail
5. GUI : Graphical User Interface

No Definitons for any entity is needed in this SRS.

### 1.4) References

Here are some the sites which may help to understand what the system is:

<http://www.moneycontrol.com>

<http://moneybhai.moneycontrol.com>

<http://www.stockscanner.com>

## 1.5) Overview

This SRS is divided into five modules.

- **Introduction:** This section provides purpose, scope, definition, references, acronyms and abbreviations.
- **Overall Description:** This section provides system perspective, it's different interfaces like hardware, software, system and communication. It also gives a business goal and its objectives. Also give user characteristics and brief overview of product functions. And assumptions made by owner and developers.
- **Specific Requirements:** This section provides functional as well as non-functional requirements. Like logical database requirements, design constraints, performance, availability, reliability, security, maintainability, portability.
- **Documents Approvals:** This section provides name of person or committee.
- **Supporting Information:** This section gives table of content.

## 2) General Description

### 2.1) System Perspective

This online stock trading system is aimed towards a person, who may be a share market trader, share broker, or who wants to invest his money in share market. You don't need to maintain history, log or any additional software. This website is quite user friendly, easy to learn and reliable.

OSTS is intended to be a stand-alone product and should not depend on the availability of other software.

#### 2.1.1) Interfaces

This is web based system. It interacts with user via GUI. Only interface between user and system is through Internet-Browser.

##### 2.1.1.1) Software Interfaces

This system has an interface with browser (e.g. Internet explorer, Mozilla Firefox, Opera, Google Chrome etc...)

##### 2.1.1.2) Communication Interfaces

User of the system is provided the facility of e-mail or to ask queries, in order to communicate to the system administrator. No other means of communication interface is necessary.

### 2.1.1.3) Hardware Interfaces

This web base system so there is no hardware interface.

### 2.1.1.4) System Interfaces

This web based system, so doesn't deal with system API's so it require no system interface.

## 2.1.2) Site Adaptation Requirements

User of this system must have following prior requirements:

- A working computer system
- An internet browser installed on that system.
- A flash player installed to view charts.
- Internet connectivity
- If user intended to use this site on mobile then he/she need to have GPRS connectivity.

## 2.2) Business Objective

Business objective of this site is to provide the following business objective to buyers, sellers and owners.

### 2.2.1) User Business Objective

Provide users facility to do trading on online platform. This platform gather the all traders under one platform that increases trading between them.

### 2.2.2) Owner Business Objective

Owner objective include following things:

- It earns money by creating the traffic on website.

- It also advertises different stock related companies in order to get financial support.

## 2.3) User Characteristics

Following are the users that are supposed to use the system:

- **Beginner:** this type of users may not possess the knowledge about stock trading system so system provides tutorials and videos to understand the stock market
- **Experience user:** This category of user may possess the all aspect of stock trading system and therefore able trade directly through the system.

## 2.4) Product Functions

Class of Entity	Requirements	Description of Functionality
Related to user account	Portfolio management	User can create, delete and modified his account
Related system authorization	Login	Site provide account login and also trading login with highly restrictions
Related to transactions	Transaction management	When user buy or sell shares it automatically reflect into transaction history as well as update portfolio
Related to information to display	General requirements	Site home page show top gain and loser shares also provide all necessary information(e.g. charts, ratios, update, news) ,also user can customize its homepage
Related to Administrator	Administrator management	Administrator verify new user account, send update, messages, e-mail to current users, It maintain user account, also lock, delete perform by admin
Related to new beginner user Which has a less knowledge of share market	Tutorials	Site provide highly qualify tutorials, expert advice, videos, site related information, glossary, ipo and fpo and mutual fund related information



## 2.5) Constraints

Following constraints system has:

- This system must be available to user during the stock market working time.
- User of the system must be above 18 ages.
- User must have sufficient bank balance.

## 2.6) Assumptions and Dependencies

Since this is a web based system and security is main concern so SRS assume that this website is register as secured site.

# 3) Specific Requirements

## 3.1) Functional Requirements

### R1) Profile Management

#### R1.1) Create

**Description:** By provision of this requirement user can register his profile on the site. This is the basic requirement that system should provide so administrator can keep track of user.

**Input:** Username, Sex, Bank account number, Pan card no, Address, Email id, Phone number, Birth date, Nationality, Trading market, Account password, Trading password.

**Output:** Create user account if all information is correct and all constraint is satisfied otherwise give error message.

**Remark:** Account can't be created until it is not verified by administrator.

#### R1.2) Modify

**Description:** Allow user to modify information of own account.

**Constraint:** User should not be allowed to change his/her PAN card no. and Username.

### R1.3) Delete

**Description:** Provide functionality to manually delete user's account and all related information from the administrator's database.

## R2) Login

### R2.1) Account login

**Description:** Compare user entered id and password with existing record in administrator's database.

**Input:** User name, Account password.

**Output:** Give access to user home page if validation criteria satisfies, otherwise display relogin message.

### R2.2) Trading login

**Description:** Compare user entered trading password with existing record in administrator's database.

**Input:** Trading password.

**Output:** Give access to user trading portfolio, if validation is successful, otherwise display relogin message.

**Remarks:** Trading login should be displayed during market time, and must allow three tries for trading password.

### R2.3) Logout

**Description:** This allows user to exit from his account safely so that no other user can access his account.

**Output:** Display message of successful logout.

**Remarks:** If user logout from portfolio then redirect to homepage.

## R3) Transaction Management

### R3.1) Buy

**Description:** This requirement allows user to buy shares of particular company. User should able to enter the quantity of the share that he wants of buy. System should display the total price of that selection.

**Input:** Company name, quantity of share, price.

**Output:** If all criteria are satisfied then allow transaction, otherwise make entry in pending request.

**Remarks:** If there is available balance in account then allow process request.

### R3.2) Sell

**Description:** This requirement allows user to sell shares of particular company. User should able to enter the quantity of the share that he wants of sell. System should display the total price of that selection.

**Input:** Company name, quantity of share.

**Output:** If all criteria are satisfied then allow transaction otherwise make entry in pending request.

**Remarks:** If market is ready to buy then allow transaction.

## R4) Portfolio

### R4.1) Transaction history

**Description:** This requirement is intended to display recent 10 transactions that is carried by user of that system on the screen. This history should include time and date of transaction, amount of money transfer, account balance.

**Remarks:** Display recent 10 transaction history.

### R4.2) User status

**Description:** This require shows the user how much gain and loss he\she made by selling the shares. These requirements also include total gain and loss of current day as well as total loss and gain of whole account.

**Remarks:** Net profit and loss.

## R5) General Requirement

### R5.1) Charts

**Description:** Show different charts related to top share and also display stock index chart and user can manually show any company's share charts, yearly or monthly share index chart.

### R5.2) Ratio

**Description:** Show different market related issues ratios and user can manually selected any company's different ratios.

### R5.3) Tutorials

**Description:** Show tutorials on different topic e.g. invest in IPO & FPO, Mutual Funds investment, and Wealth management.

### R5.4) News

**Description:** Show news about market, company news(like company quarter result), top news, most readable news, business news, upcoming ipo(initial public offering), fpo(follow on public offer, which is released after ipo by already listed company) ,personal finance, mutual funds, wealth management, market strategy.

### R5.5) Search

**Description:** Display search by which user can search videos, any types of news, tutorial, company information, messages, quotes, notices.

### R5.6) Calendar

**Description:** Show calendar and set alerts, events, message according to set by user.

## R6) Administrator

Following are list of activities that is responsibility of administrator:

### R6.1) Create

**Description:** Create user account, when user provides the necessary valid information.

#### R6.2) Verify

**Description:** Verify information entered by user for its validity before creating account.

#### R6.3) Delete

**Description:** Delete any unused account, if account has not been accessed for 3-4 months.

#### R6.4) Lock

**Description:** Lock user account if any illegal activity done by unethical source or user.

### 3.2) Performance Requirement

This system should support multi-transaction system means at a time many user should able to proceed their transactions. Transaction must be processed in less than 1 second. User should not have to wait for a transaction to be complete.

Website GUI is in such a way that it can be loaded quickly at client side. Means if client have low bandwidth internet then also performance should not much affected.

### 3.3) Logical Database Requirements

This web based system maintains following table in database:

- User Profile Table
- History Table
- Transaction Table
- User account Table
- Company Info Table

### 3.4) Design Constraints

- 1. Security:** The files in which the information regarding securities and portfolios should be secured against malicious deformations.

- 2. Fault Tolerance:** Data should not become corrupted in case of system crash or power failure.
- 3. Data naming:** You can easily identify data type and its work by showing data name.
- 4. Audit Tracing:** This is for trace processing activity. Such traces are needed for some applications to meet minimum regulatory or financial standards. An audit trace requirement may, for example, state that all changes to a payroll database must be recorded in a trace file with before and after values.

## 3.5) System Attributes (Non Functional Requirement)

### 3.5.1) Reliability

As the term suggests the entire website must be faultless logically. I.e. each transaction must not put the database in inconsistent state. Our design should be such that customers get satisfaction. It should provide trust to customers for their desired stuffs.

If a customer buy or sell the share the confirmation message should be displayed. And also new updated share quantity with company name and account balance should be displayed in portfolio.

### 3.5.2) Availability

Our system should run 24×7. Means our application should be available any time when internet connection is available.

At some stage checkpoint are placed so that checking of a system for consistency and redundancy is carried out.

After a power failure or after any undesired event, quick recovery of system should be carried out.

### 3.5.3) Security

System should keep history of transaction so that any illegal activity is running then it can be found.

Customer should not have access of all the parts of system. Some parts are restricted to use only for some people i.e. administrator. Ex. History of transaction, other customers account detail.

### 3.5.4) Maintainability

If any new update available then asks the user for upgrade. Like if any new portfolio version is available with new charts and representation (e.g. new GUI) then asks the user for upgrade. If user denied then continue with old version and if accept then upgrade.

If any new company will come in market which is not listed on system then it can be easily added to the system. In other case, if any bank bankrupt then suspends the accounts of all those customers who have account in that bank. When new bank account is available then continues with trading account.

### 3.5.5) Portability

This is a web-application. So it runs on any type of browser application (e.g. Mozilla Firefox, internet explorer, opera, Google chrome etc...). So it supports all operating systems (e.g. all windows platform, all UNIX flavour, Mac operating system).

## 4) Supporting Information

In this SRS, Table of content is provided at starting of this document.