

## LAB 2: (b) STOCK MAINTAINANCE SYSTEM

### 1. Introduction :

#### 1.1 Purpose :

The purpose of this document is to define the requirements of stock maintainance system. The system is designed to manage stock levels, track product movement, and provide inventory reports for a business. It aims to streamline stock management process, reduce human error and improve decision making related to stock purchasing and sales.

#### 1.2 Scope :

This system will automate inventory management processes allowing for accurate tracking of stock levels, product owners, sales and deliveries. It will be used by warehouse staff, managers and store owners. A normal people as well users will be able to view live stock prices, execute trade and view portfolio performance.

#### 1.3 Overview :-

This SRS outlines the requirements for building a fully functional stock trading system. This document contains all system requirements, design constraints and budget.

2.

General Description:-

This system will integrate with multiple stock exchanges to provide real time stock data. It will support multiple asset types, including shares, bonds and options. The system will allow users to execute trades, manage portfolios and track the performance of various financial instruments. It will be a web based system with mobile app support.

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Functional Requirements:3.1 Real Time Market Data:-

- display real time stock prices, with updates every second.
- provide charts to display stock performance
- filter stocks by various criteria.

3.2 Stock Trading:

- allow users to execute market (buy/sell) orders.

• update user's portfolio and balance immediately after buying/selling of stocks.

• notification for successful transactions.

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Alerts and notifications:

- alert when stock price drops or rises.

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Portfolio and Account management:



#### 4. Interface Requirement :-

##### 4.1 User Interface :-

(a) web interface :- A user-friendly interface accessible from any web browser, allowing users to view stock data, manage portfolios, and place orders.

(b) mobile app :- to allow users to trade

##### 4.2: Hardware interfaces :-

device compatibility: system must work on desktop, tablets, and mobile devices.

#### 5. Non Functional Requirements :-

##### 5.1: Performance :-

- minimum latency.
- quick updates
- efficient

##### 5.2: Security :-

- sensitive data is encrypted
- shall support 2 Factor authentication
- log all transactions.

##### 5.3: Usability :-

- intuitive and usable.
- multiple language support
- device compatible.

##### 5.4: Availability :-

- realtime 99.9% of time
- If system fails, recovery process within 1 hour.

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Performance Requirement

- system shall handle 100,000 concurrent users
- stock price updated in real time with minimum latency.
- order execution with 1 second of submission.

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Design constraints:-

- system should comply with financial regulations.
- established API's for stock exchange.
- Data backup every 12 hours.

8. Budget and Timeline Estimate:8.1 Timeline:

Requirement : 2-3 weeks

Development : 10-12 weeks.

Testing : 3-4 weeks

Maintenance : on going

8.2 Budget:

• Development cost : \$50,000

• security : \$8,000

• API integrations : \$15,000