Software Requirements Specification (SRS)

Project Title:
 Development of a Trading Dashboard for FnO Stocks (NSE)

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1. Introduction

1.1 Purpose

This document outlines the software requirements specification for a Trading Dashboard application focused on FnO (Futures and Options) stocks listed on the National Stock Exchange (NSE). This system is intended for personal use, research, trade logging, and potential compliance support.

1.2 Intended Audience

- Project stakeholders

- Developer(s)

- Tax consultants (for reference during IT return queries)

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2. Scope

This project involves the development of a custom trading dashboard capable of:

- Scanning all FnO stocks on the NSE

- Collecting and logging real-time trading data

- Visualizing key indicators in a live dashboard

- Storing tick data locally for compliance and analysis

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3. System Overview

3.1 Modules

3.1.1 Live Data Collector

- Real-time data fetch using **SmartAPI (Angel One)** WebSocket

- Parameters captured: **LTP, Volume, OI, VWAP**

3.1.2 Database System

- Local storage using **SQLite** or **PostgreSQL**

- Structured schema to store live and historical tick data

- Backup/export options in CSV or JSON

3.1.3 Live Dashboard

- Built using **Dash (Python Framework)**

- Displays:

  - Current trends and price movement

  - Volatility alerts

  - Real-time metrics and charts

  - Active trade logs

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4. Functional Requirements

Requirement ID	Description
FR-001	System must connect to Angel One SmartAPI for real-time data
FR-002	Store real-time data into local database
FR-003	Dashboard must update every few seconds with new values
FR-004	Enable sorting/filtering of FnO stocks by volume, OI, VWAP
FR-005	Export data for backtesting in CSV/JSON format

5. Non-Functional Requirements

Requirement ID	Description
NFR-001	System should work on standard desktop/laptop
NFR-002	Must handle at least 200 tick updates per second
NFR-003	Dashboard must refresh within 2 seconds of each tick
NFR-004	Lightweight design; No heavy cloud dependencies

6. Technology Stack

- **Backend:** Nodejs , python

- **Data API:** Angel One SmartAPI

- **Database:** SQLite / PostgreSQL

- **Frontend:** React

- **OS Compatibility:** Windows/Linux

7. Budget and Timeline

- **Total Cost:** ₹22,000 INR

- **Timeline:** 1 to 3 months

Payment Terms

- **50% Advance:** ₹11,000 INR before development begins

- **50% Final Payment:** Upon delivery and review of the complete project

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8. Terms and Conditions

1. **Project Duration:** Estimated between **1 to 3 months** from the date of advance payment.

2. **Data/API Access:** Client must provide valid Angel One API credentials for integration.

3. **Testing and Debugging:** Up to **2 rounds of bug fixes** are included in the budget.

4. **Source Code Ownership:** Delivered after final payment.

5. **Scope Changes:** Any major change in functionality or new module beyond this SRS will require a **separate quotation**.

6. **Maintenance & Support:** Post-delivery support limited to **7 days**; extended support available at extra cost.

7. **Termination Clause:** If the project is terminated mid-way by the client, the advance will **not be refunded**.

8. **Deployment:** Client is responsible for setting up the execution environment unless agreed otherwise.

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9. Deliverables

- Database schema with sample entries

- Deployment guide / README

- Exported datasets for reference

- Source code (post full payment)