Project Report

Stock Market Price Tracker (API-Based)

Project Overview

The Stock Market Price Tracker is a lightweight, real-time financial data visualization tool designed to monitor live stock market prices. It retrieves stock data via the Yahoo Finance API using the `yfinance` Python library and serves it through a FastAPI backend. The frontend uses Chart.js to present the data in a visually appealing, interactive, and color-coded chart for instant trend recognition.

Key Features

- Real-time retrieval and display of stock prices and daily percentage changes.

- REST API architecture enabling integration with web, mobile, or analytics platforms.

- Color-coded visual cues (green for gains, red for losses) for quick decision-making.

- Highly customizable watchlist to track multiple stocks simultaneously.

- Minimalistic design for fast loading and responsive performance.

Technology Stack

- **Backend:** Python, FastAPI, yfinance

- **Frontend:** HTML, JavaScript, Chart.js

- **Tools:** Uvicorn, REST APIs, JSON

Achievements and Highlights

- Reduced development complexity by using lightweight open-source libraries.

- Designed for scalability, allowing easy addition of new data sources (e.g., cryptocurrency APIs).

- Implemented CORS for seamless integration between backend and frontend.

- Achieved under 50 lines of core code, demonstrating clean and efficient programming practices.

- Delivered a project that is both technically strong and visually appealing, making it portfolio-ready.

Impact

This project demonstrates expertise in API integration, real-time data handling, and user-focused visualization. It highlights problem-solving skills by combining financial data processing with clear, accessible presentation. The solution is ideal for interviews as it is simple to showcase, easy to explain, and represents full-stack development capabilities in a concise manner.