Project Proposal: Stock Portfolio Tracker

1. Introduction:
The Stock Portfolio Tracker is a web-based application that allows users to create and manage their stock portfolios. The system connects to a stock market API to provide real-time stock data, enabling users to track the performance of their portfolios, set up alerts for specific stocks, and access relevant financial information. This proposal outlines the features, implementation plan, and technologies required to develop the Stock Portfolio Tracker.

2. Objectives:
- Connect to a reliable stock market API to fetch real-time stock data.
- Enable users to create and manage their stock portfolios.
- Provide portfolio performance tracking with visualisation of gains/losses.
- Implement stock alerts to notify users of specific stock price movements.
- Integrate relevant financial information such as news articles and company profiles.
- Design a responsive and user-friendly interface for seamless user experience.
- Thoroughly test the system to ensure functionality and debug any issues.
- Deploy the website to a hosting platform and create documentation for future reference.

3. Technologies:
The Stock Portfolio Tracker will be developed using the following technologies:
- Web Framework: Flask or Django (Python)
- Database: PostgreSQL or MySQL
- Front-end: HTML, CSS, JavaScript
- Stock Market API: https://data.nasdaq.com/?ref=apilist.fun
- Hosting: Heroku, AWS, or similar platform

4. Implementation Plan:
The development of the Stock Portfolio Tracker will be divided into the following phases:
Phase 1: Project Setup and User Authentication
- Set up the development environment and project structure.

- Implement user registration and authentication using secure password storage techniques.
- Design and create the necessary database models for user management and portfolios.

Phase 2: Stock Market API Integration

- Research and select a suitable stock market API that provides real-time stock data.
- Integrate the chosen API into the system and implement API authentication.
- Create functions to fetch stock data based on user requests and display it on the website.

Phase 3: Portfolio Management

- Enable users to create and manage their stock portfolios.
- Implement functionality to add, edit, and delete stocks in the portfolio.
- Develop the necessary database operations to store and retrieve portfolio data.

Phase 4: Portfolio Performance Tracking

- Calculate and display the performance of each portfolio, including gains/losses and percentage change.
- Provide visualisation of portfolio performance using charts or graphs.
- Implement historical data analysis to track performance over time.

Phase 5: Stock Alerts

- Allow users to set up alerts for specific stocks based on predefined conditions (for example: price thresholds).
- Send notifications or emails to users when the conditions for their alerts are met.

Phase 6: Financial Information Integration

- Integrate relevant financial information such as news articles, company profiles, and financial statements.
- Display the information alongside stock data to provide comprehensive insights to users.

Phase 7: User Interface and Testing

- Design a responsive and intuitive user interface using HTML, CSS, and JavaScript.
- Conduct thorough testing of all functionalities to ensure the system performs as expected.
- Debug any issues or errors that arise during testing.

Phase 8: Deployment

- Deploy the Stock Portfolio Tracker to a hosting platform such as Heroku or AWS.

5. Conclusion:

The Stock Portfolio Tracker project aims to provide users with a reliable platform to create and manage their stock portfolios. By connecting to a stock market API and incorporating portfolio performance tracking, stock alerts, and relevant financial information, the system will empower users to make informed investment decisions. With a responsive user interface and comprehensive testing, the Stock Portfolio Tracker will offer a seamless and efficient solution for tracking and managing stock portfolios.