Software Requirements Specification (SRS) - Macedonian Broker Bot

# 1. Introduction

The Macedonian Broker Bot is a web application designed to help analyze stock data from the Macedonian Stock Exchange. The application allows users to select a company and visualize its historical stock data, along with various key indicators.

# 2. Functional Requirements

## 2.1 System Functionality

The system should allow users to interact with the following functionalities:  
1. Company Selection: The user should be able to select a company from a list of available companies.  
2. Stock Data Analysis: After selecting a company, the system should display its stock performance, including visual graphs for stock prices, volumes, and other key data.  
3. Historical Data: The system should show historical stock data such as the last trade price, max price, min price, and total turnover in a graphical format.  
4. Data Presentation: The system should display data in a visually appealing and easy-to-understand manner, using charts and other data visualizations.

## 2.2 Views

The system consists of the following primary views:  
1. Home View: The user is presented with the homepage, which introduces the application and includes a button to proceed to the company selection view.  
2. Select Company View: The user can choose a company from a dropdown list of available companies.  
3. Dashboard/Analysis View: Once a company is selected, the system displays the stock data with a visual representation such as graphs and charts.

## 2.3 Navigation and User Interaction

The user will navigate through the system using the following key features:  
1. Navigation Bar: The system includes a navigation bar with links to the home page, the analysis page, and the option to go back to the select company page.  
2. Footer: Each page contains a footer with information about the creators.  
3. Buttons and Forms: The user will interact with buttons for navigation and forms to select companies for analysis.

# 3. Non-Functional Requirements

## 3.1 Performance

The system should be able to handle multiple users and provide quick responses, especially when rendering stock data and visualizations. It should be optimized for use on both desktop and mobile devices.

## 3.2 Security

The system must ensure the privacy of user data and should be secured against unauthorized access. Sensitive information should not be stored, and all data should be transferred securely using HTTPS.

## 3.3 Usability

The user interface should be intuitive, allowing users with minimal technical knowledge to easily interact with the application. It should be visually appealing, responsive, and easy to navigate.

# 4. System Architecture

## 4.1 Technical Architecture

The system is a web-based application that uses the following technologies:  
1. Frontend: HTML, CSS, JavaScript (Bootstrap framework for responsiveness, Plotly for data visualization).  
2. Backend: Python Flask for handling web requests and rendering views.  
3. Data Handling: Pandas for managing and analyzing the stock data from the database.  
4. Database: SQL database for storing the stock data and company information.

# 5. Conclusion

The Macedonian Broker Bot is a comprehensive solution for analyzing stock data from the Macedonian Stock Exchange. With its user-friendly interface and powerful data visualization capabilities, it aims to make stock analysis more accessible to all users.