

Stock Tracker Software Requirements Specification

Version 0.0.1

Repository: <https://github.com/bucs445fall2025/project-team>

Revision History

Date	Version	Description	Author
10/03/2025	0.0.1	Making the framework	Gavin, ...

Table of Contents

1. Requirements
2. Introduction
 - a. Team
 - b. Purpose
 - c. Definitions, Acronyms and Abbreviations
 - d. References

SRS Diagram Link:

https://lucid.app/lucidchart/e72113d0-29ee-4551-8cea-f7ab87a62757/edit?viewport_loc=-645%2C-88%2C4405%2C2345%2C0_0&invitationId=inv_7ff8215e-5183-4a33-89de-589acaf0ccfd

Software Requirements Specification

1. Requirements

- ***A fast way to quickly view what you should do - Intuitive***
 - ***We retail investors do not have a lot of time, so we should, with a quick glance at a company, be able to determine if we should buy or sell that stock, or do whatever option trading suggestion. If we can look at the screen and can quickly determine what we should do, we pass this test.***
- ***It needs to be accurate - Accuracy***
 - ***When we invest money, it should at least make some money. We don't want to give suggestions that lose money (if that's the case, maybe we can just do the opposite of our strategy). We can test this by seeing if >50% of our***

predictions are accurate.

- **A way to predict future stock movements - Data Analysis**
 - *We need a way to find out if we should invest in a company or not, and depending on what the future stock price is, we should follow that. A test case for this would be if we open a stock, we can see something that tells us the forecasted price (kind of like how weather apps work).*
- **Data that is constantly required shouldn't cost too much - Cost**
 - *Info such as stock price and company name shouldn't need to be called again when that information is the same for all users at a specific time. Therefore we should implement some sort of caching where we can just return the same information for the users requesting the same thing.*
- **Store our own data so we can depend less on 3rd parties - Reliance**
 - Sometimes servers go down and we can't control it, so we should be able to get the data even when the world implodes. We can test this by seeing if we can get our data without using google.
- **Personalize the experience - Personalization**
 - I should be able to see different things or set up my view in a certain way that I like it. Since what I like could be different from what someone else like.
- **Secure user data - Security**
 - This personalization should not be publicly available. My preferences/models should not be given to other people who didn't create it. My password too obviously.
- **Cleanliness**
 - It should be easy to update what we need later on. It should not take a rocket scientists to be able to update something when we need to change it later on. We can test this by later choosing some random thing we want to change, and seeing how fast it is to change it.
- **Update website automatically**
 - New data should be automatically updated, as well as text on the screen can be updated automatically using ChatGPT. We should be able to see throughout the day the information on the screen change without us doing anything
- **Upkeep**
 - The website should be up >99% of the time, it shouldn't crash because one user did some unintended action. We can test this by just seeing how often the website is up compared to when the website is down.

2. Testing Section

```
a. "/api/v1/company/{company}"
```

- i. Should return the ticker symbol of a company, for example

"Apple" returns "AAPL"

b. `"/api/v1/stock/{symbol}"`

i. Should return all the company info based on the ticker symbol

c. `"/api/v1/stock/{symbol}/{field}"`

i. Should return the specific field within the provided company

3. User Interface

- a. Website should bring you to a landing page**
- b. You can log in and sign up using the button on the top right**
- c. If you are logged in, you should see a "Hello user" instead of the login button**
- d. Overview page should be customized to you liking (card for graph, stock overview, news, etc...)**
- e. Stock individual page should include stock graph, stock info, ai predictions, highlighted important fields, etc.**

4. Introduction

a. Team

- i. Michael Zheng*
 - 1. Team Lead, Frontend Development*
 - 2. Skills*
 - a. Project Idea;*
 - b. HTML, CSS,*
- ii. Gavin Suber*
 - 1. Developer*
 - 2. Databases, SQL, Python, C/C++*
- iii. Brendon Paolino*
 - 1. Developer*
 - 2. Python*

b. Purpose

- i. Currently, for the average investor, information is very abundant but not formatted in a user friendly way, and costs a lot of money. You currently need to have knowledge of how the stock market works to know which data points to look out for. We aim to simplify that by being able to give retail investors a quick way to absorb the important information fast and make a decision.*

c. Definitions, Acronyms, and Abbreviations

- i. <This subsection should provide the definitions of all terms, acronyms, and abbreviations required to properly interpret the **SRS**.>*

d. References

- i. <This subsection should provide a complete list of any external resources referenced by the rest of the document.*