SOFTWARE ENGINEERING (Spring 2025)

Written Portfolio (Draft)

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Chapter Index

1: Aim Statement……………………2

2: Personas............................................4

3: User Stories..........................................7

4: Value Propositions..................................8

**CHAPTER ONE: AIM Statement**

**I.**               **Statement**

**Statement:**

At WAC Systems we will deliver an application that is to the customer’s specifications, is easy to use for a customer of any age and has technological expertise and is successful in the market.

**Brief Overview**

At WAC Systems, for our potential product to any customer, we would like to deliver something that is fresh and polished. An application or program which is to the user’s specifications won’t break under any circumstances. For our most recent project that we have signed on to, we are delivering a stock ticker application.

**II.**             **Statement Breakdown**

**What Are We Trying to Accomplish with The Application**

         The application will house several features which we believe are crucial for success. We want to show our users all currently available stock options. This will allow our customers to have the most success in an ever-changing market and hopefully make our app the go to for all stock buyers. As such, we want to update the stock market frequently and with current events to show price changes and market fluctuations. To be the best, you must be the fastest in the market, and if we can update our customers on losses or better yet price increases, then we will certainly be one of the best applications on the market. However, even with stock prices that rise and fall, how will our customer know what to buy? We will give them overviews of each company and a detailed description of the stock’s history, big news story of the company and an indicator of whether this is a safe stock to purchase. We love to incorporate features that will make our client’s eyes light up, but that is not everything for us. Being successful is, but what does that mean?

**What will Overall Success Look Like:**

Success to us at WAC systems is an application that not only benefits us but is up to the specifications of the user and can be used by anyone. We try to develop our products in a tailored fashion to the needs of the original investor, but as it goes on we may need to adjust the platform for more public use. In any case, customer satisfaction is our most important goal and if we must meet without a customer every day, then so be it. Success in the application will specifically look like a simple and understandable UI especially for all our first time users. Accessibility is a huge measure of success as it can make or break potential customers’ experience of the application, thus having an easy on the eyes simple UI that guides new users to what they are looking for is what success may look like for us. Furthermore, we don’t want to bite off something bigger than we can chew. A polished product within the time frame we are given is far more important than half baked features and something that doesn’t look as nice in the same time frame. Thus, a success would be the full implementation of over half the features we want. However, what are some measurables for our success?

**How Will We Measure Success:**

         Success as a completed product internally was ease of access and customer satisfaction, but we want to outline how we measure success a little bit more. Having places for a stock portfolio, livestock updates, and allowing people to get and use the app with ease are easy measures of what success looks like to us. Other things include good ratings, customer services being swift and solving issues with gusto, and active interest from other companies.

**CHAPTER TWO: Personas**

**Persona 1: Senator**

1. **Bio**

Bob is a 65-year-old Senator who has been trading stocks for over 20 years. He comes from a long line of wealthy stock traders and is looking to continue this trend. Bob typically traded with an older app, but the app has stopped updating and Bob is looking for an app that suits his technological abilities and can handle his high-profile portfolio Furthermore, for his job Bob moves around a lot, and he wants an app that will accurately and quickly display stock trends wherever he is.

1. **Think/See, Feels, Does**

Bob thinks that he may have a hard time switching over to a new app that he is not used to, and that the conversion of all his data to this new app will be incredibly difficult. Bob sees That there are many apps on the market, but he wants to see simplicity and ease of use for the app. Not any fancy features.

Bob, despite his confidence in his stocks, feels lost after using the same app for such a long time and just wants certainty that he can trade his assets with security and effectiveness.

Bob does his research and asks his colleagues what stock they trade and what apps they use.  At the beginning of every office day, he checks the market but would like this process to be more streamlined in an app to save him time.

**Persona 2: Remote Worker**

1. **Bio**

Billy is a 24-year-old man who has just started his new job where he works at home. He is a quality control expert for Denny’s and has to travel every so often to plants to check for quality. Otherwise, he will be at home writing reports for the company. Billy is currently supporting a wife (Mandy) and a daughter and would like to make more money to make life easier. His wife and him would like to pull cash from each of their paychecks and invest it in stocks and have a side IRA fund for themselves and their daughter. Billy and his wife are excited about the opportunity, but don’t know where or how to start investing and how they should go about allocating money.

1. **Thinks/Sees, Feels, Does**

Billy and Mandy think they will have a difficult time entering the market and getting a good return on their investment. They see that many of their friends and richer people in the world hold stocks and would like to enter the market themselves.

Billy and Mandy feel like they will be giving their daughter and themselves a better future if they do this.

Billy and Mandy ask around and read articles on how the big guys are investing and what their friends think are good companies.

**Persona 3: College Student**

1. **Bio**

Mike is a 21-year-old business major attending Washington College. Mike is a part of the Brown Advisory program which deals with the investments of the school. He is interested in starting to invest on his own. As a junior in college, he is taking 4 classes which take up most of his time. In his free time, he enjoys going to different athletic events on campus and playing video games. Mike has an on-campus job at the library where he can focus on his homework and make some extra money.

1. **Thinks/Feels, Sees, Does**

Mike has heard of the stock market to make money or to increase his savings. He believes starting a portfolio will be a good thing to do soon. Some of his friends have some investments which are making them money. With the Brown Advisory course, he sees how some stocks have a steady increase in value over time.

He feels since he is going to graduate in the next 2 years that he should begin to start investing to maximize his money post-graduation.

He talks to his friends about stocks and potential investing. He talks to his parents about stocks that they have invested in the past.

**Persona 4: Day Trader**

1. **Bio**

Lindsey is a 25-year-old day trader for a company. She is very driven in her job and she finds joy in doing it. She lives alone in a comfortable apartment. Lindsey brings her job home with her on occasion to try and learn more about how to predict stock trends. She is focused on finding these quick trends so she can gain the most value in the stocks. Lindsey has ambitions to own her own day trading firm in the future and is gaining valuable experience with each day. On occasion she likes to go to bars with friends to meet new people.

1. **Thinks/Feels, Sees, Does**

Lindsey thinks about stocks to make short term gains. She is not focused heavily on long-term investment stocks. Lindsey sees news articles and new company innovations that will impact the stock market. Daily she sees trends in stocks in her job.

Lindsey feels like she is very good at her job. She feels there may be a better way to track all the stocks at once but doesn't mind the extra work.

Lindsey makes her money by predicting the short peaks and valleys. She checks stocks very frequently to buy and sell them at the best possible price point.

**Persona 5: Farmer**

1. **Bio**

Sam is a 50-year-old farm owner. He owns a livestock farm that has been passed down through many generations of his family. Sam has a wife and 2 daughters. Sam’s day consists of waking up when the sun rises until the work on the farm is completed. When he is done with the work on the farm, he plays with his daughters. Sam does not have a lot of free time in his day but owns a few low-risk stocks. His goal is to increase his savings and potentially grow a college fund for his daughters. Sam checks his investments infrequently and different ones at different times. He does not have an organized way to check all his investments at one time. Sam is more worried about the long-term investment value of stocks instead of short-term gains.

1. **Thinks/Feels, Sees, Does**

Sam feels the stock market is a good place to put money into to grow his investments and savings over time. He thinks the best stocks are the conservative ones since they have a smaller chance of tanking in value. In his checks of the stocks, he sees the daily change of the stocks and their current value.

He feels he should be able to check all his stocks and their progress from one spot. He feels overwhelmed trying to keep up with his investments while maintaining his farm and taking care of his family.

Sam checks his investments infrequently and different ones at different times. He does not have an organized way to check all his investments at one time.

**CHAPTER THREE: User Stories**

User stories are used to describe the perspectives of potential and current clientele that would help our company understand what we need in our product. We create this story based on edge cases and personas that we create. Edge cases are the outliers of our clientele and the things that we may need to focus on to make a well-rounded product. For example, we may have a few partially blind customers, thus we may need to add a setting to our that would increase text size making it easier to view. While we may do something like that in cases, for most of our clients, we must outline what their needs are and accommodate. In most of our people, we had to see problems from their perspectives and create solutions that would draw them to our app. For example, the problem scenarios for out senator persona can be seen in figure 1 below:

*Figure.1*

*A screenshot of a black screen

AI-generated content may be incorrect.*

As can be seen here the persona we created has problems that we have to integrate into our app to satisfy a large majority of customers but more specifically this one. An app that is user friendly and very accessible making things as clear as possible to the user about their current and potential stocks is something that we consider to be very important. Yet, there is a possibility that we may not have seen this accommodation without viewing our user stories. For a much larger company, they may go through hundreds of personas and edge cases to explore the app requirements and to update their value propositions.

**CHAPTER FOUR: Value Propositions**

A value proposition is a statement that explains the benefits of a product or service to a consumer. It's a way to convince consumers that a product or service is better than its competitors. Because we are so good here at WAC systems, we don’t have any competitors, thus we must entice our clients with new features that they haven’t seen before -or at least some really nice and basic features- Value propositions play a distinct role in the business model of software companies as they are competing against one another for clients and whoever has the best system is going to be the one that is selected by clients. As you saw before in our user stories, we generate value propositions through exploring many personas and edge cases. What is so valuable about using personas and edge cases is we can generate realistic value propositions that we can provide for our clients in a reasonable amount on time. Our overarching value propositions can be seen below, and they are the ones that we want to focus on the most:

1. Secure app with login capabilities.
2. Easy to use app with nice UI
3. The ability to buy and sell stocks
4. News about stocks
5. Ability to access your stock portfolio from anywhere
6. Search bar for stocks
7. Stock grades

These are the things that most of the customers need in a stock portfolio app. While there are more value propositions for smaller items, we flesh those out the further we go on in the production of our app. Because we only have so much time to produce this app, focusing on larger goals is key, then finding time to implement smaller value propositions down the line can be very profitable.