StockMock

CS 407 - Software Engineering Senior Project
Sprint 2 Planning Document

Team 20:

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Sprint Overview

Our focus for this sprint will be implementing the majority of the remaining functionality of our project. The users of our application will be able to perform most of the functions that the application was advertised to support. Users can look at the top company shares purchased, number of unique companies, total users and the number of shares they have traded. They can also look at the leaderboards to find out the top users of our application and view their profile to understand how each of them trades by viewing their past transactions. They will also get recommendations on which stocks to purchase based off of the top users suggested by our in-app Bot. The Bot matches user preferences with top user picks and will pop up everytime a user tries to purchase a share of a trending stock.

Scrum Master: Harsh Parakh

Meeting Schedule: Monday and Thursday at 7:30 pm

Risks and Challenges:

There is a significant amount of work to be done during this sprint since we need to ensure that we complete a lot of user stories and are not at disadvantage going into sprint 3. One issue we face this sprint is making sure the transactions are implemented perfectly and work securely since our features such as statistics and leaderboard are built on top of them. We would also want to test our applications UI on devices with different resolutions and sizes.

Current Sprint Detail

User Story #23 - 1 hr
As a user, I would like my username visible to other users.

#	Task Description	Estimated Time	Owner
1	Make UI placeholder to hold the username	.5	Donald Bough
2	Run a query on Firebase to get the user's data and fill placeholder	.5	Donald Bough

Acceptance Criteria
- Given a user is logged in, the user should be able to view the usernames of other users on the application.
- Given a user has signed up, other users should be able to view the username of the user created.
- Given a user deletes their account, the username should no longer be visible to other users.

User Story #25 - 8 hrs
As a user, I would like to be able to view another user's profile.

#	Task Description	Estimated Time	Owner
1	Create the UI to display the profile info	1	Omar Raza
2	Retrieve attributes from Firebase for each user such as 'About me', 'username', history, etc.	3	Omar Raza
3	Display all attributes for the specific user on the profile page	2	Omar Raza
4	Make this non-editable for the viewers	2	Omar Raza

Acceptance Criteria
- Given a user is logged in, the user should be able to view profiles of other users on the application.
- Given a new user is created, the new profile should be viewable for all users.
- Given a user deletes their account, their profile should no longer exist on the application.

User Story #26 - 1 hr
As a user, I would like other users to not view my private information (email).

#	Task Description	Estimated Time	Owner
1	Make email of the users private and hide it from the places it being shown on the current application	1	Donald Bough

Acceptance Criteria
- Given a user is logged in, the user should be able to only view their own email.
- Given a user tries to view another user's profile, the email should not be displayed on the profile.
- Given a user deletes their account, the email associated with the user should be deleted.

User Story #27 - 8 hrs
As a user, I would like to view a leaderboard of users.

#	Task Description	Estimated Time	Owner
1	Implement Leaderboard page with necessary UI.	3	Harsh Parakh
2	Pull users from database to update leaderboard.	5	Harsh Parakh

Acceptance Criteria
- Given a user views the leaderboard page, a table containing users will be visible.
- Given there are many users on the leaderboard, the UI handles the list appropriately.

User Story #28 - 5 hrs
As a user, I would like to see the username of users with the most money.

#	Task Description	Estimated Time	Owner
1	Pull users from database and sort.	3	Donald Bough
2	Update UI with top 10 users.	2	Donald Bough

Acceptance Criteria
- Given a user views the leaderboard page, the leaderboard will show the users who have earned the most money.
- Given that users are listed on the leaderboard, their username will displayed.

User Story #29 - 1 hr
As a user, I would like to see the rank of the users in the leaderboard.

#	Task Description	Estimated Time	Owner
1	Implement count to track rank of users.	.5	Harsh Parakh
2	Update leaderboard UI with top 1-10 users.	.5	Harsh Parakh

Acceptance Criteria
- Given a user views the leaderboard page, the rank of a user on the leaderboard will appear near the listed user.
- Given a leaderboard user's position changes, the rank changes accordingly.

User Story #30 - 3 hrs
As a user, I would like to see the amount of money users have.

#	Task Description	Estimated Time	Owner
1	Pull user data data from firebase.	.5	Harsh Parakh
2	Display sum of money in UI	.5	Harsh Parakh

Acceptance Criteria
- Given a user views the leaderboard page, the amount of money a listed user has earned will be displayed next to them.

User Story #31 - 1 hr
As a user, I would like the leaderboard to be ordered numerically.

#	Task Description	Estimated Time	Owner
1	Use user ranks to sort top users.	1	Harsh Parakh

Acceptance Criteria
- Given a user views the leaderboard page, the leaderboard will be ordered 1 - 10 from highest earning users to the least.

User Story #32 - 3 hrs
I would like the leaderboard to be dynamic and change as the user accounts change.

#	Task Description	Estimated Time	Owner
1	Setup real time listeners for each Firebase node that affects leaderboard score	2	Donald Bough

#	Task Description		Owner
2	Allow UI to be updated when there are changes on profile elements	.5	Donald Bough
3	Change row positions based on changes	.5	Donald Bough

Acceptance Criteria
- Given a leaderboard user's profile changes, the leaderboard updates to show new changes on UI
- If changes in a leaderboard user's changes their position on the leaderboard, they are moved to the appropriate position.

User Story #33 - 3 hrs
I would like to click on a username and be able to see their profile.

#	Task Description	Estimated Time	Owner
1	Store username id in leaderboard database	2	Donald Bough
2	Create clickable link in UI on profile	1	Donald Bough

Acceptance Criteria
- Given a user appears on the leaderboard, their profile can be clicked to go to their profile

User Story #34 - 3 hrs
As a user, I would like to be able to view number of users on StockMock

#	Task Description	Estimated Time	Owner
1	Make UI thumbnail to hold the stat	.5	Rohan Kashuka
2	Run a count query on Firebase to get the total entries in user tree	1.5	Rohan Kashuka
3	Ensure the returned number is valid	.5	Rohan Kashuka
4	Fill the thumbnail with this information	.5	Rohan Kashuka

Acceptance Criteria
- Given a user is logged in, when the user views the statistics page it consists of analyzed data.
- Given a new user is created, the stat count displayed for total users increases.
- Given at any point, there always exists a single user count for this particular stat.

User Story #35 - 3 hrs

As a user, I would like to be able to view the total number of shares owned on StockMock

#	Task Description	Estimated Time	Owner
1	Make UI thumbnail to hold the stat	.5	Nicolas James
2	Run query on Firebase to go through each user and add their shares to our total	1.5	Nicolas James
3	Ensure the returned number is valid	.5	Nicolas James
4	Fill the thumbnail with this information	.5	Nicolas James

Acceptance Criteria

- Given a user is logged in, when the user views the statistics page it displays the analyzed data.
- Given a user makes any transactions, the stat count displayed for the total number of shares changes accordingly. Increases when 'buy' and decreases when 'sell'
- Given at any point, the total for this stat could be zero including the case where no users have purchased any shares on our application.

User Story #36 - 3 hrs

As a user, I would like to be able to view top shares owned on StockMock

#	Task Description	Estimated Time	Owner
1	Make UI list to hold the stat	.5	Nicolas James
2	Run query on Firebase to go through each user and analyze their shares owned	1	Nicolas James
3	Ensure the returned number is valid	.5	Nicolas James
4	Create a storage data structure on the backend that updates based on each user shares	.5	Nicolas James
5	Fill the thumbnail with this information	.5	Nicolas James

Acceptance Criteria
- Given a user is logged in, when the user views the statistics page it displays the analyzed data.
- Given a user buys or sells shares from a company present on the list, the list updates accordingly based on the transaction executed.
- Given at any point, the list displaying top shares owned on StockMock could be empty since no users may have purchased any shares on our application.

User Story #37 - 3 hrs
As a user, I would like to be able to see the number of unique companies traded on StockMock

#	Task Description	Estimated Time	Owner
1	Make UI thumbnail to hold the stat	.5	Nicolas James
2	Run a count query on Firebase to get and store unique companies found in user tree	1.5	Nicolas James
3	Ensure the returned number is valid	.5	Nicolas James
4	Fill the thumbnail with this information	.5	Nicolas James

Acceptance Criteria
- Given a user is logged in, when the user views the statistics page it consists of analyzed data.
- Given a new user buys one or more shares from a company that has not been traded previously, the stat count displayed for the number of unique companies increases.
- Given at any point, if no users have traded on the application, this stat will be zero.

User Story #38 - 8 hrs
I would like the bot to observe actions of users on the leaderboard and suggest stock that I could invest in, when I'm purchasing a trending stock

#	Task Description	Estimated Time	Owner
1	Setup trending stock data model	3	Abid Kaisani
2	Configure stock popularity count	2	Abid Kaisani

#		Estimated Time	Owner
3	Update trending stocks based of updated popularity count	2	Abid Kaisani
4	Layout list of trending stocks in a list to be presented to the client	1	Abid Kaisanii

Acceptance Criteria
1. Given that the current user is a leader in the leaderboard, the stock that the user buys should be logged as a trending stock.
2. Given that a leaderboard user has purchased a stock, the stocks popularity count should be incremented to update the purchase.
3. Given that the stock's popularity was updated, an updated list should be generated and displayed to the client when needed.

User Story #39 - 5 hrs
I would like the bot to provide suggestions for stocks I could invest in based off stocks I have already invested in, when I'm purchasing a trending stock

#	Task Description	Estimated Time	Owner
1	Setup leaderboard stock data model	2	Abid Kaisani
2	Configure stock relationships based of leaderboard user purchases	1	Abid Kaisani
3	Configure updates to stocks relationships	1	Abid Kaisani
4	Layout list of trending stocks in a list to be presented to the client	1	Abid Kaisanii

Acceptance Criteria
1. Given that the current user is a leader in the leaderboard, their purchase should be used as a suggestion.
2. When a leaderboard user makes a purchase, it should be added as a suggestion for every stock that the current user, one of the leaders from the leaderboard owns .
3. Given that relations between stocks have been made, they should be stored in a separate node on firebase so that they can be accessed by any user.

User Story #40 - 3 hrs
I would like the bot to become available whenever I go onto purchase stocks

#	Task Description	Estimated Time	Owner
1	Determine correct situation for the	0.5	Rohan Kashuka

#	Task Description	Estimated Time	Owner
	bot to be displayed		
2	Determine what information should be displayed by the bot during purchases	0.5	Rohan Kashuka
3	Provide the bot with context of current user action	1	Rohan Kashuka
4	Based of current context, present Bot	1	Rohan Kashuka

Acceptance Criteria
1. Given that the current user has attempted to purchase stocks, the bot should appear.
2. Given that the user is attempting to purchase a stock, the bot should display different information based off whether the user made an error or has initiated a purchase.

User Story #41 - 3 hrs
I would like the bot to provide suggested stocks in the form of a list

#	Task Description	Estimated Time	Owner
1	Decide and implement list layout for Bot suggestions	2	Rohan Kashuka
2	Setup for presenting generalised list layout for bot suggestions	1	Rohan Kashuka

Acceptance Criteria
1. Given that the user has done an action that should cause the bot to appear, the bot should look the same/have the same theme. An example would be attempting a purchase.

User Story #42 - 3 hrs
I would like the list of suggested stocks, if any, to have a few suggestions so that the presented list is easier to understand and navigate

#	Task Description	Estimated Time	Owner
1	Configure structure for storing suggestions on backend	1	Rohan Kashuka
2	Generate a refined list of suggestions	1	Rohan Kashuka
3	Prepare information to be displayed by the bot UI	1	Rohan Kashuka

Acceptance Criteria
1. Given that the current user has attempted to purchase stocks, the bot should be able to retrieve a list of suggested socks from the database.
2. Given that the bot was able to retrieve the list of suggested stocks, if the list is not already refined that is, its size is larger than 10 items, then the bot should refine it down to 10 suggestions.

User Story #43 - 1 hrs
As a user, I would expect the UI of the bot to have same layout regardless of on which page it's presented on

#	Task Description	Estimated Time	Owner
1	Decide on general layout for Bot	0.5	Nicolas James
2	Setup for presenting generalised bot layout	0.5	Nicolas James

Acceptance Criteria
1. Given that the user has done an action that should cause the bot to appear, for example, attempted the purchase, the bot should look the same/have the same theme.

User Story #44 - 1 hrs
I would expect the UI of the bot to have helpful titles with each list that indicate how the list was generated.

#	Task Description	Estimated Time	Owner
1	Identify sources of stock suggestions	0.5	Rohan Kashuka
2	Setup UI layout such that each list of suggestions has a title representing associated to it	0.5	Rohan Kashuka

Acceptance Criteria
- Given that the user has been presented with the bot and the bot is currently showing suggestions, the bot should display titles for both "Trending stocks" and "Leaderboard" suggested stocks.
- Given that the bot UI has displayed a title for each suggestion source, the bot should also display the suggestions in a list/table for each suggestion.

User Story #52 - 3 hrs

As a user, I would like to see the total invested into each company in my portfolio on my home page

#	Task Description	Estimated Time	Owner
1	Aggregate amount currently invested in companies	2	Nicolas James
2	Display amount in new UI element	1	Nicolas James

Acceptance Criteria
- Given a user has multiple companies purchased, each total should be displayed on my home page.
- Given a user has a single company purchased, its total should be displayed on my home page.

User Story #53 - 5 hrs

As a user, I would like to see my Portfolio Value displayed on my home page

#	Task Description	Estimated Time	Owner
1	Aggregate amount currently invested collectively in companies	3	Omar Raza
2	Display amount in new UI element	2	Omar Raza

Acceptance Criteria
- Given a user visits their home page, a total of all the sums from each company should be displayed

Backlog

Yellow was last Sprint. Green is this Sprint

*** 3 new user stories have been added, #10, #53, #54

As a user, I would like to,

News

1. I would like to access news related to the stock market.
2. I would like to access news from multiple sources.
3. I would like to find news articles about certain companies.
4. I would like to find the latest news articles.
5. I would like to know the source of the news articles.
6. I would like to get all the news articles by a source of my choosing.
7. I would like to find news articles in various languages.
8. I would like to access all news articles from the past thirty days.
9. I would like to be able to access the actual source of the news article.

Forums

10. I would like to be able to view all forums.
11. I would like to access and view a subtopic in an existing forum.
12. I would like to see the topic and the description for a post in the forum.
13. I would like to view the owner of a particular post.
14. I would like to be able to create a topic.
15. I would like to be able to respond to an existing post.
16. I would like to know the time when the post was created.
17. I would like to see the number of replies made to a post.
18. I would like to view all the members using the StockMock forum.
19. I would like to see the number of posts made on the forum.

Profiles

20. I would like to have my own username.
21. I would like to be able to edit my username.
22. I would like to be able to view my profile.
23. I would like my username visible to other users.
24. I would like to be able to edit my profile.
25. I would like to be able to view another user's profile.
26. I would like other users to not view my private information. (email).

Leaderboard

27. I would like to view a leaderboard of users.
28. I would like to see the username of users with the most money.
29. I would like to see the rank of the users in the leaderboard.
30. I would like to see the amount of money the users have.
31. I would like the leaderboard to be ordered numerically.

32. I would like the leaderboard to be dynamic and change as the user accounts change.
33. I would like to click on a username and be able to see their profile.

Statistics

34. I would like to be able to view number users on StockMock
35. I would like to be able to view total number of shares owned on StockMock
36. I would like to be able to view top shares owned on StockMock
37. I would like to be able to see the number of unique companies traded on StockMock

Bot

38. I would like the bot to observe actions of users on the leaderboard and suggest stock that I could invest in, when I'm purchasing a trending stock
39. I would like the bot to provide suggestions for stocks I could invest in based off stocks I have already invested in, when I'm purchasing a trending stock
40. I would like the bot to become available whenever I go onto purchase stocks
41. I would like the bot to provide suggested stocks in the form of a list
42. I would like the list of suggested stocks, if any, to have a few suggestions so that the presented list is easier to understand and navigate.
43. I would expect the UI of the bot to have same layout regardless of on which page it's presented on.
44. I would expect the UI of the bot to have helpful titles with each list that indicate how the list was generated.

Tutorial

45. I would like a tutorial that shows how to search for stocks, buy and sell stocks, and check my purchase history.
46. There should be a tutorial showing me how to transfer funds from a real stock app, how taxes with stocks work, and basic terminology from the stock market.
47. I would like a tutorial that shows how to search user profiles, check stock news, and use the Stock Mock forum.

Tech Debt

48. As a user, I would like an updated Menu bar with the new pages and with categorized drop downs that display relevant pages.
49. As a user, I would like a navigation bar in the glossary page that allows me to skip to the alphabetic letter of my choice.
50. As a user, I would like the fluctuations in the price of my shares to be dynamically updated in the database.
51. As a user, I would like my total amount of money to be dynamically updated based on the fluctuation of the values of my stock shares at the end of each business day.
52. As a user, I would like to see the total invested into each company in my portfolio on my home page.
53. As a user, I would like to see my Portfolio Value displayed on my home page

54. I would like to be able to see the thumbnail of the article on the news page