



Sprint 3 Planning Document

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Sprint Overview

In this last sprint, we want to put the finishing touches on FINEX and make sure it's polished and ready to be hosted on the internet. With our main two services, personal finance and stock tracking, we have a few new features to add. We aim to expand our stock tracker's capability to include simulating a stock portfolio, comparing stocks, and information for making better investment decisions. For our personal finance service, we wanted to focus on adding features that gave the user a good idea of what their finances look like, such as providing budget summaries and risk management tips. We hope that these features will make it easy to get all the information the user needs through FINEX.

Scrum Master: Hugh Bromund

Meeting Plan: MWF @ 12:00

Risks and Challenges

The largest risk this sprint is the reorganization of some of our team members. We are moving more of the team to the frontend and bringing them up to speed with the technologies we are using poses a challenge. We are confident in our team's ability to tackle this challenge and produce an extremely high-quality final product.

Current Sprint Details

User Story #1

As a user, I would like to be able to add a profile picture

Description	Estimated Time	Owner
Update database to be able to store an image	3 hours	Niyati
Create endpoints to update existing profile picture	2 hours	Niyati
Create endpoint for frontend to load image to and from backend	2 hours	Niyati
Create method for front end to load a local image	3 hrs	Hugh
Display profile picture on account page	2 hrs	Hugh
Create a button for updating profile picture	1 hr	Hugh
Testing	1 hr	Hugh, Niyati

Acceptance Criteria:

- Given that the user is on their account page, when they wish to change their profile picture, then the application should allow them to choose an image from their device
- Given that the user has set their profile picture, when the user navigates to their account page, their profile picture is displayed
- Given that the user has set their profile picture, when the user wishes to change their image, then their new profile picture is displayed in place of the old one
- Given that the user has not set a profile picture, when they navigate to their account page, then a default image will appear

User Story #2

As a user, I would like to be able to view personalized advice on how to manage my money so that I can make informed decisions

Description	Estimated Time	Owner
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Add a section to the finance overview page that shows advice	3 hrs	Hugh
Backend can generate advice based on saving and spending data	5 hrs	Peyton
Update Budget Endpoint	2 hr	Peyton
Backend passes the data to the frontend	2 hrs	Peyton
Testing	1 hr	Hugh, Peyton

Acceptance Criteria:

- Given that the backend is finished, the users income and expenses are used to determine advice
- Given that the backend is finished, if the user doesn't have enough data, the frontend is informed and shows an alert
- Given that the advice suggests changing their budget, the user is prompted to update their budget

User Story #3

As a user, I would like to generate a savable document of my finances so that I can access the information offline

Description	Estimated Time	Owner
Find appropriate React library to generate savable document	1 hr	Aditya
Create button allowing user to save a document	0.5 hrs	Aditya
Parse current user/page data into document format	4 hrs	Aditya
Testing	0.5 hrs	Aditya

Acceptance Criteria:

- Given that the user has a dashboard of finances and the user wants to save a document, the frontend services the request
- Given that the user makes the request, the document will be easy to read
- Given that the user makes the request, the frontend will show an error if something goes wrong

- Given that the user makes the request for the document, all necessary data will be pulled from the backend

User Story #4

As a user, I would like to view my overall financial summary so that I can track my budgeting more closely

Description	Estimated Time	Owner
Create backend endpoints to provide financial data to frontend	1 hr	Peyton
Update page to display summary of user's spending within categories	3 hrs	Aditya
Display comparison of current spending against allotted spending	2 hrs	Aditya
Create a graphical representation of spending within categories	2 hrs	Aditya

Acceptance Criteria:

- As a user, when I navigate to the correct page, when I load the page, I should be able to view my spending within a given category
- As a user, when I wish to view switch which category I am viewing, then I should be able click a toggle button to update the current info I am looking at
- As a user, when I add a transaction to a category, the graphical representation of that category should update as well
- Given that the user views spending for a category, that data will be appropriately pulled from the database.

User Story #5

As a user, I would like to be able to be educated on how to create a budget so that I can make more responsible decisions in my daily life

Description	Estimated Time	Owner
Identify common trends in a user's spending habits	2 hrs	Hugh
Decide on a list of advice to give the user depending on these trends	1 hr	Hugh

Display advice for the user as part of the create budget page	3 hrs	Hugh
Testing	1 hr	Hugh

Acceptance Criteria:

- Given that the user does not know how to create a good budget and wants information on how to create a good budget, the frontend will display that information to the user.
- Given the user is making a decision considered unwise, they will be informed of it during budget creation.
- Given that the user is not budgeting enough money into savings, the user is prompted to move more money into savings

User Story #6

As a user, I would like to be able to compare one stocks data to another's

Description	Estimated Time	Owner
Change the lower display for stock information	3 hrs	Nate
Display a second stock's graph	3 hrs	Nate
Generate a comparison between the two stocks	3 hrs	Nate
Testing	3 hrs	Nate

Acceptance Criteria:

- Given that the stock page is selected, the user will see two graphs of the stocks they want to compare
- Given that the user is comparing two stocks, they will see both of the stock's information displayed separately
- Given that the user is on the comparison page, they can select a new stock to compare against
- Given that the user is on the comparison page, they can see the breakdown between each stock's information

User Story #7

As a user, I would like to be educated on building a strong stock portfolio so that I can make more informed purchases

Description	Estimated Time	Owner
Display information to users	2hrs	Daniel
Provide common investing tactics	5hrs	Daniel
Give example portfolios	2hrs	Daniel
Create page for viewing personal stocks	5hrs	Daniel
Testing	0.5 hrs	Daniel

Acceptance Criteria:

- Given the user is on the my stocks page, they will be prompted to learn more about building a strong portfolio
- Given the user clicked the prompt, they will be provided common investing tactics which are used widely.
- Given the user is following the prompt, they will be shown examples of strong portfolios
- Given the user is shown portfolios, they will be able to favorite and visit the stocks listed

User Story #8

As a user, I would like to be informed of the risks involved in financial investments so that I can make informed decisions.

Description	Estimated Time	Owner
Create frontend page to display educational data	2 hrs	Hugh
Create a separate section on that page that clearly outlines the risks involved	1 hr	Hugh
The backend supports logging that the user has accepted the warnings	2 hrs	Niyati
Testing	1 hr	Hugh

Acceptance Criteria:

- Given that the educational data page is routed correctly, it can be navigated to through the navigation bar
- Given that the education page is built correctly, the risks involved are clearly marked and easily visible
- Given that the user accepts these risks, they should not show up again unless the user wants, or the risks change
- Given that the user does not accept these risks, they cannot see the rest of the education page, unless they change their answer

User Story #9

As a user, I would like to be educated on risk management for investing so that I can make safer decisions

Description	Estimated Time	Owner
Create frontend page to display education data	5hrs	Daniel
Create a separate section on that page to display facts about investment risk	4 hrs	Daniel
Testing	0.5 hrs	Daniel

Acceptance Criteria:

- Given that the educational data page is routed correctly, it can be navigated to through the navigation bar
- Given that the educational data page is built correctly, there is a list of different risks that could happen when investing
- Given that the educational data page is built correctly, there are tips on how to avoid these risks
- Given that the educational data page is built correctly, there are examples of different situations that the user should avoid and strive for

User Story #10

As a user, I would like to be able to simulate stock investments so I can see how much net gain or loss I would incur before investing in the actual market

Description	Estimated Time	Owner
Calculate the net gain or loss for a particular stock with a certain investment amount	3 hrs	Peyton
Add net gains/losses for all stocks in a particular time period	3 hr	Peyton
Backend endpoints for buying/selling stocks	2 hrs	Peyton
Store bought stocks and wallet in database	3 hrs	Peyton
Create buttons for buying and selling stocks	2 hrs	Daniel
Implement backend endpoints for calculations	2 hr	Peyton
Display total loss or gain on the finance dashboard	3hrs	Daniel
Page for viewing current portfolio and updating investments	4 hrs	Aditya
Testing	1 hr	Aditya/Daniel/Peyton

Acceptance Criteria:

- Given that the user chooses to invest a particular amount in a certain stock, their net gains and losses will be displayed on their finance dashboard
- Given that the backend is able to communicate with the API, net gains and losses will update when the user views their dashboard.
- Given that the user wants to simulate an investment, they can choose to invest in and stop investing in particular stocks

User Story #11

As a user, I would like to be able to share my stocks to social media outlets

Description	Estimated Time	Owner
Allow the user to share a stock to Facebook	2 hrs	Nate
Allow the user to share a stock to Twitter	2 hrs	Nate
Allow the user to share a stock to Reddit	2 hrs	Nate

Perform appropriate error handling	2 hrs	Nate
Testing	2 hrs	Nate

Acceptance Criteria:

- Given that the user wants to share a stock to Facebook, the frontend will service the request.
- Given that the user wants to share a stock to Twitter, the frontend will service the request.
- Given that the user wants to share a stock to Reddit, the frontend will service the request.
- Given that the user makes the request to any social media, the frontend will show an error if something goes wrong.

User Story #12

As a user, I would like to be able to view the website on my phone and have it format correctly so that I can view my information from multiple devices

Description	Estimated Time	Owner
Make all pages on the frontend responsive and dynamic	4 hrs each	Frontend Team
Create new layouts for pages that do not format well on smaller screens	2 hrs each	Frontend Team
Testing	0.5 hrs total	Frontend Team

Acceptance Criteria:

- Given that the user views the webpage on their phone, the frontend will adapt to provide a good experience.
- Given that the user views the webpage on their phone, the frontend will handle possible errors in viewport.
- Given that the user views the webpage on their phone, the frontend will provide most of the same features as the desktop equivalent.
- Given that the user views any page on the frontend, it will be adapted well to the given viewport.

User Story #13

As a developer, I would like the code to be open source and licensed

Description	Estimated Time	Owner
Add License	.5 hrs	Niyati
Remove passwords and keys from source code	1 hr	Daniel/Niyati
Additional Documentation	2 hrs	Niyati

Acceptance Criteria:

- Given that the code is open-source ready, all passwords and keys related to any account will be removed from source code and placed in a params file.
- Give that the project is open-source ready, it will have a license properly attached to it.
- Given that the project is open-source ready, documentation to introduce a developer to the project will be written.

User Story #14

As a developer, I would like the backend to be secure when hosted on a web server

Description	Estimated Time	Owner
Setups CORS	2 hrs	Peyton
Ensure only frontend server can access backend server	2 hrs (each)	Daniel/Peyton

Acceptance Criteria:

- Given that the backend is hosted, its api key's are not visible in the source code
- Given that the backend is hosted, requests have to come from users of the website
- Given that the backend is hosted, the console will print a message when a non-authorized request is made

User Story #15

As a developer, I would like the front end and back end to be hosted on a web server

Description	Estimated Time	Owner
Host the front end	2 hrs	Niyati
Host the backend	2 hrs	Niyati
Connect the two services	1 hr	Niyati
Get a domain to serve as the address to the website	1 hr	Niyati
Determine how Mongo interacts with hosted service	2 hrs	Niyati

Acceptance Criteria:

- Given that the frontend is hosted, you should be able to navigate to it in your browser without starting it locally
- Given that the backend is hosted, you should be able to make requests without starting it locally
- Given that everything is hosted on a web server, you should be able to navigate to the website via an official domain
- Given that the website is hosted, MongoDB should be able to store requests without having to be booted locally

User Story #16

As a developer, I would like the frontend to support long term growth

Description	Estimated Time	Owner
Separate Pages into their own directories that store JS, CSS, and tests	4 hrs each	Frontend Team
Rename constants to make them more clear	1 hr each	Frontend Team
Remove unused code and dependencies	1 hr each	Frontend Team

Acceptance Criteria:

- Given that the frontend is refactored, all pages will have their own directory that holds all of their data, CSS, and tests
- Given that the frontend is refactored, constants will follow a consistent naming scheme that makes them easier to understand
- Given that the frontend is refactored, all code will be formatted in a consistent way, using a code formatter or style checker

Remaining Backlog

Functional Requirements

1. User Account

- ~~a. As a user, I would like to be able to register for an account.~~
- ~~b. As a user, I would like to be able to login to my account.~~
- ~~c. As a user, I would like to be able to reset my password if I forget it.~~
- ~~d. As a user, I would like to be able to edit my personal information~~
- ~~e. As a user, I would like to be able to change my associated email address~~
- ~~f. As a user, I would like to be able to sign in with my social media accounts so that I can have other ways of creating an account~~
- g. As a user, I would like to be able to add a profile picture (Sprint 3, User Story #1)**

2. Budget Tool

- ~~a. As a user, I would like to be able to create a monthly budget~~
- ~~b. As a user, I would like to be able to get personalized financial budgeting information~~
- ~~c. As a user, I would like to be able to add income to my finances so that I can manage my budget effectively.~~
- ~~d. As a user, I would like to be able to add transactions to my finances so that I can manage my budget effectively.~~
- ~~e. As a user, I would like to be able to have a dashboard of all of my personal finances.~~
- ~~f. As a user, I would like to view commonly used budgets from other users~~
- g. As a user, I would like to be able to view personalized advice on how to manage my money so that I can make informed decisions. (Sprint 3, User Story #2)**
- h. As a user, I would like to generate a savable document of my finances so that I can access the information offline (Sprint 3, User Story #3)**
- ~~i. As a user, I would like to keep track of my actual spending as compared to my projected budget plan~~
- ~~j. As a user, I would like a monthly analysis of where I am spending the most money (food, transportation, rent, etc.)~~
- k. As a user, I would like to view my overall financial summary so that I can track my budgeting more closely (Sprint 3, User Story #4)**
- l. As a user, I would like to be able to be educated on how to create a budget so that I can make more responsible decisions in my daily life (Sprint 3, User Story #5)**

3. Stock Tool

- ~~a. As a user, I would like to be able to search for a stock~~

- ~~b. As a user, I would like to be able to view information about a stock~~
 - ~~c. As a user, I would like to be able to view a stock's volume~~
 - ~~d. As a user, I would like to be able to view a stock's volatility~~
 - ~~e. As a user, I would like to be able to view a stock's trend/range~~
 - ~~f. As a user, I would like to be able to save the stocks I'd like to watch so that I can quickly access the stocks that I have interest in.~~
 - ~~g. As a user, I would like a graphical representation of stock prices and how they are changing over time.~~
 - ~~h. As a user, I would like a list of the top 5-10 stocks that increased most in value on a day-to-day basis~~
 - ~~i. As a user, I would like to be able to change the time frame on stocks I'm viewing~~
 - j. As a user, I would like to be able to compare one stocks data to another's (Sprint 3 User story #6)**
 - ~~k. As a user, I would like to be able to view a cryptocurrency's current price~~
 - ~~l. As a user, I would like to view the exchange rate between various currencies so that I can better estimate the financial impact of certain purchases~~
 - ~~m. As a user, I would like to change the timeframe over which my financial summary applies so that I can track the effectiveness of changes I am making~~
 - ~~n. As a developer, I would like the stock service and controllers to be prepared for being hosted on a web server~~
4. Analytics and Education
- a. As a user, I would like to be educated on building a strong stock portfolio so that I can make more informed purchases (Sprint 3, User Story 7)**
 - b. As a user, I would be informed of the risks involved in financial investments so that I can make informed decisions. (Sprint 3, User Story 8)**
 - c. As a user, I would like to be educated on risk management for investing so that I can make safer decisions (Sprint 3, User Story 9)**
 - ~~d. As a user, I would like to be educated on common stock trend graphs so that I can make more informed decisions~~
 - e. As a user, I would like to be able to simulate stock investments so I can see how much net gain or loss I would incur before investing in the actual market (Sprint 3, User Story 10)**
 - ~~f. As a user, I would like to receive recommendations on what stocks to buy and sell~~
 - ~~g. As a user, I would like to be able to view breakout boundaries on the stock's graph~~
 - ~~h. As a user, I would like to be able to view predictions of a stock's future price so that I can better make buying and selling decisions~~

- i. As a user, I would like to be able to learn more about cryptocurrency so that I can understand different aspects of the financial markets
- 5. Communication and Sharing
 - a. As a user, I would like to receive email or text notifications when the stocks I am following increase or decrease in price beyond a certain threshold`
 - b. As a user, I would like to be able to share my stocks to social media outlets (Sprint 3, User Story 11)**
 - c. As a user, I would like to email a document containing my finances so that I can move my information
 - d. As a user, I would like to be able to share stocks with another user.
 - e. As a user, I would like to be able to share my budget plan with other users

Non-Functional Requirements

- 1. Usability
 - ~~a. As a user, I would like to be able to switch between dark mode and a light mode so that I can have an easier time viewing the application~~
 - b. As a user, I would like to be able to use the application on a tablet
 - c. As a user, I would like to be able to view the website on my phone and have it format correctly so that I can view my information from multiple devices (Sprint 3, User Story 12)**
 - d. As a user, I would like to be able to get help on how to use specific features of the application.
 - ~~e. As a user, I would like the application to have an easily navigable UI~~
 - ~~f. As a user, I would like the application to be aesthetically pleasing~~
 - g. As a developer, I would like the code to be open source and licensed (Sprint 3, User Story 13)**
- 2. Security
 - ~~a. As a developer, I would like user password and personal info to be encrypted to protect the privacy of the user.~~
 - b. As a developer, I would like the backend to be secure when hosted on a web server (Sprint 3, User Story 14)**
- 3. Server
 - ~~a. I would like the server to support fast server-client communication~~
 - ~~b. I would like the server to be able to store users data in a database~~
 - c. As a developer, I would like the front end and back end to be hosted on a web server (Sprint 3, User story 15)**