Finance Friend

-Sprint One Retrospective-

Team 5:

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1.) What went well?

Henry:

I think that user story #12 and the calendar features went very well. While the documentation was not as in-depth as I could have hoped for the flutter table calendars, it was of a high enough quality that I could figure out how to create custom events and modules on my own. I was even able to dynamically update the page whenever a new date was clicked on the calendar due to my learning of stateful widgets with override capabilities.

John:

Overall, developing the UI for user stories 16 and 17 went very well. Splitting everything up into widgets such as the input fields and the styled containers that can accept inputs worked very well and was reminiscent of React Components. I made many reusable custom widgets for whatever I needed throughout developing the UI.

Wes:

I have been very happy with the flow of our application so far. Learning Flutter was our biggest challenge and risk going into the Sprint, but I feel really good about the amount that we did and the quality it was all done at even though we needed to learn an entirely new sdk and language. I think we have a great base to build off of in the next sprints that will end up with a professional, clean, and useful app.

Patrick:

Learning Flutter and learning how to use the database was what went well for me this sprint. I successfully created both a page that tracks a user's bills and a homepage with the functionality to allow a user to alter their default landing page. I managed to learn how building widgets in Flutter worked with little difficulty and feel good about using it in upcoming sprints.

2.) What did not go well?

General:

The first Sprint went mostly smoothly without too many hiccups. Our biggest issue was the lack of knowledge about Flutter, firebase, and the integration between the two. The sprint ended very well without any stories not being finished and we even added/adjusted a story to give us a little bit more of a base to work off of for the rest of the sprints. As time goes on, we also now have way more knowledge about flutter than

we did previously, so it should be relatively smooth sailing to the end of the semester with flutter.

Henry:

While I completed every user story satisfactorily, user stories #13 and #15 were far trickier than I had anticipated. Since these stories primarily depended on getting accurate stock market data via API calls, I figured it would not be easy. However, I was shocked by the lack of support for Flutter. Even when I went with one of the most popular open-source NYSE API environments, Alpha Vantage, it was not fully supportive of Flutter and only returned in JSON. That meant that I needed to create custom methods to convert this data into a usable format for flutter/dart code. Furthermore, I only had 100 free API calls a day. To overcome this limit, I needed to create a custom API via Postman to get all the data I wanted in one call. This was definitely more of a headache than I had anticipated, and while I got it all working, I did not have enough time to make my features and pages look nice.

Wes:

Most things went smoothly except for adding in the database usage to the UI elements. I could update the database and I could update the UI, but I had a lot of issues with updating the database, which then updates the UI or, at the start of a session, setting up the UI based on data in the database. Despite that, all of my user stories were completed and passed all of the acceptance criteria, I just wish the process of getting there was a bit smoother. Another issue I ran into was learning flutter and ending up with way too many lines of code. This could not only lead to confusion for teammates when they make changes to my pages, but also is a bit confusing even for me when I look at it. This will take some time and cleaning up and commenting to get it to a place where I'm comfortable with it.

John:

Agreeing with Wes, getting data from the database to our widgets was pretty painful. This was mainly due to an incompatibility of types, but it certainly wasn't impossible to get working. I was able to get everything done and synced up to the database, it was just clunky in some spots. Aside from that, the fact that we needed to work with multiple Firebase plugins got a bit frustrating. On my end, getting the profile picture into Firebase Storage opposed to the database and using Firebase Authentication to retrieve the link, *and then* getting it to work with my widgets took much, much more time than I initially thought. Therefore, working on user stories 18 and 19 became quite a chore.

Patrick:

Although I think sprint 1 went well for us overall, there were a few issues we had to resolve both as a team and individually. As previously mentioned, a sore spot for the entire team was learning how to use both Flutter and Firebase for our project. I personally did not struggle much with Flutter, primarily due to the simplicity of the UI parts of my user stories, but I did have some problems figuring out how to effectively make use of Firebase's database because the way it is set up is unlike any database I've previously worked with. I did not fail to complete any user stories but found myself unable to fully realize my initial vision for some of my user stories due to time constraints.

3.) How should you improve?

Henry:

I think some of the big things that I can improve upon, are focusing on the UI experience and making it seem more sleek and professional as this was severely lacking from most of my features in Sprint 1. This would include updating the spacing and layout of buttons, adding backgrounds to add contrast to DataTables, smoother and more consistent graph generation, and more. I also think that there are some features that weren't added to the backlog that would make a lot of sense that I realized while developing. For example, the generated graphs for investments are only based on stock price, and do not currently factor in the amount of shares the user has of the stock price. These are little details, but there are enough of them that I feel like I can create at least 1 or 2 new user stories to improve the currently existing functionality for users.

Wes:

I think there is some standardization we can work on in terms of making sure every page feels connected and like it is part of the same application. I think, related to that, more frequent and in-depth communication about how our stories are coming along individually, but also (more importantly for this) how our stories interact with each other and how we can collaborate when we need to. This was not a problem on the first Sprint, but I could see it being more important for us to stress as our stories get both more complicated and more detailed.

John:

The team generally agrees that the first priority of improvement that FinanceFriends needs is a cohesive UI. The second priority, in my opinion, is to make our code cleaner and more reusable. This goes hand-in-hand with making a cohesive

UI since we can each use the same widgets and just pass child widgets into them to have it suit more of our needs. In order to fix our database issues, (if time allows) I will be implementing the server logic we initially discussed in our design doc to handle database queries. While everything can be done straight from our widgets in Dart, it will be beneficial to pass that off to a Go server or even a simple Dart implementation.

Patrick:

For the next sprint, we should be able to improve our output simply because we now have the setup out of the way and a basic understanding of the tools we are using. As for specific improvements, I know that I will need to start working on my user stories sooner so that I can be fully aware of how long each will take. As a team, we also will need to improve our UI because for this sprint, although our UI was not horrendous, we could benefit greatly from an increase in cohesion and by adding general stylistic enhancements.