Sprint 3

CSCI-310 Software Engineering

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Preface

This document outlines the our daily Scrum meetings for the third sprint for the Android application "Sanity." The document is intended for the software engineers who developed the system as well as the stakeholders who will be reviewing our scrum process.

Daily Scrums

1. ## Date: 11/22/17

   Time: 5:00 PM - 5:30 PM

   Location: Discord

1. ## Date: 11/22/17

   ### Tri Nguyen:

   - **Yesterday:** Brainstormed on what needs to be done in the final sprint.
   - **Today:** Work on improving the analytics and displaying the total spending over a single budget period
   - **Problems:** Displaying budgets in the overall analytics screen will be difficult if the budget periods do not match up or if the user changes the budget period.

   ### Ang Li:

   - **Yesterday:** I looked at commercial apps to see how our analytics screen can be improved.
   - **Today:** I will work on adding an option to view transactions and analytics one budget period at a time, instead of showing the complete history.
   - **Problems:** It may cause problems if the user changes the budget period from the settings.

   ### Utsav Thapa:

   - **Yesterday:** Brainstormed on ideas and divided parts of the project.
   - **Today:** Add database functions to help both analytics and search.

- **Problems:** Coordinating with other group members to add the functions they need.

Andre Takhmazyan:

- **Yesterday:** Brainstormed on what need to be added to implement this sprint's features.
- **Today:** Add a search button to the main menu screen and add a search screen activity.
- **Problems:** Coordinating what new database functions need to be added.

Kevin Nguyen:

- **Yesterday:** Brainstormed on what tasks needed to be done during this final sprint.
- **Today:** Began planning and implementing recurring payments to automate the tracking of monthly bills that would otherwise be a tedious task for the user.
- **Problems:** Dealing with the Java.util.date library is always asking for problems.

2. Date: 11/24/17

Time: 6:00 PM - 6:40 PM

Location: Discord

Tri Nguyen:

- **Yesterday:** Looked into different ways to implement the Analytics screen to meet our objectives.
- **Today:** Work on enabling the Analytics screen to display total spent rather than individual transactions.
- **Problems:** The Analytics screen source code that we use is not well documented.

Ang Li:

- **Yesterday:** Added a button to analytics and transaction screen to choose different budget periods. I studied Utsav's database functions to get budget periods.
- **Today:** I will continue working on the transaction screen to implement the database functions. The transaction screen should only show the transactions that occurred in the selected budget period.
- **Problems:** There is still some database changes that need to be made to complete functionality. We have some disagreements about how to count the budget periods.

Utsav Thapa:

- **Yesterday:** Added a few helper functions for the database for search.
- **Today:** Completed the search functions and fixing category periods.
- **Problems:** Bug testing the database, as it is difficult to unit test.

Andre Takhmazyan:

- **Yesterday:** Added a search button to the main menu screen and added a search screen activity.
- **Today:** Add backend functionality to the search screen.
- **Problems:** Deciding exactly what the search function should do.

Kevin Nguyen:

- **Yesterday:** Added checkbox options to transaction input view so that the user can select whether the transaction is recurring or not.
- **Today:** Will work on writing the logic for the checkbox to take the correct action based on user selection.
- **Problems:** Figuring out which widget element to use to achieve my goals

3. ## Date: 11/25/17

Time: 6:00 PM - 6:30 PM

Location: Discord

Tri Nguyen:

- **Yesterday:** Started working on functionality for Analytics to display total spending rather than individual transactions.
- **Today:** Finish writing up Analytics functions to display total spent rather than individual transactions and also to display for the current budget period.
- **Problems:** Analytics can cause nullPointerExceptions which are hard to find beforehand if the transactions are not ordered by date.

Ang Li:
- **Yesterday:** I debugged work of others since I was still waiting on database functions. I tried resetting dates in emulator so that the category periods should reset.
- **Today:** I will work on category periods again when the database is updated.
- **Problems:** I'm not sure if resetting date in emulator properly simulates normal passage of time. I get frequent crashes of the emulator.

Utsav Thapa:
- **Yesterday:** Fixing Category period and settings in the database.
- **Today:** Bug testing as well as adding functions as necessary for other parts of the project.
- **Problems:** Making sure that the functions works exactly as intended.

Andre Takhmazyan:
- **Yesterday:** Added backend functionality to the search screen.
- **Today:** Add more backend functionality to the search screen such as clicking on a budget and category.
- **Problems:** Some data from the category class need to be added to get the functionality we want.

Kevin Nguyen:
- **Yesterday:** Added checkbox options to transaction input view so that the user can select whether the transaction is recurring or not.

- **Today:** Adding frequency picker for recurring transactions and tying in and extending functionality with existing check box logic.
- **Problems:** Learning how to use a new widget can be difficult at times.

4. Date: 11/26/17

Time: 8:00 PM - 8:30 PM

Location: Discord

Tri Nguyen:

- **Yesterday:** Improved Analytics to display each category by budget period instead of all transactions from the beginning of time.
- **Today:** Continue to improve Analytics and add the budget name into the notifications.
- **Problems:** Analytics can easily cause exceptions if the transactions are not handled properly.

Ang Li:

- **Yesterday:** I kept working on the transaction screen for multiple budget periods. I created an adapter for multiple periods.
- **Today:** I will finish the transactions screen.
- **Problems:** It is hard to test if it is working or not because it is difficult to set up multiple budget periods within the app.

Utsav Thapa:

- **Yesterday:** Bug tested a lot of the newly added function.
- **Today:** Do more bug testing on edge cases.
- **Problems:** Coming up with edge cases for bug testing.

Andre Takhmazyan:

- **Yesterday:** Added more backend functionality to the search screen such as clicking on a budget and category.
- **Today:** Database side bug testing and adding a second category period for the demo and add transactions for it.

- **Problems:** Mixing up what part of the project each person is doing.

Kevin Nguyen:
- **Yesterday:** Decided not to use a picker to select date and instead use a default interval for recurring transactions.
- **Today:** Tied in AlarmReceiver functionality with recurring transaction logic and tested feature functionality.
- **Problems:** Manipulating the date manually always presents a problem.

5. Date: 11/27/17

Time: 11:20 AM - 11:50 AM

Location: Lecture Classroom

Tri Nguyen:
- **Yesterday:** Fixed bugs with displaying budgets by period by sorting transactions before they are added to the chart.
- **Today:** Continue to improve analytics such as changing the X-axis format
- **Problems:** The API used for Analytics has confusing documentation on how to make changes to the formatting

Ang Li:
- **Yesterday:** I finished the transaction screen for different category periods. Now the transactions are updated when a different period is selected.
- **Today:** I will work on implementing the multiple period logic for analytics screen.
- **Problems:** The analytics screen shows all budgets, but the categories within can have different periods.

Utsav Thapa:
- **Yesterday:** Did some bug testing as well as added functions as necessary for other parts of the project.
- **Today:** Fix the category bug period, where it doesn't update.

- **Problems:** Finding out why it isn't updating.

Andre Takhmazyan:

- **Yesterday:** Database side bug testing and added a second category period for the demo and added transactions for it.
- **Today:** Add more error checking for dates of transactions and category.
- **Problems:** Thinking of other things to add to the app.

Kevin Nguyen:

- **Yesterday:** Tied in AlarmReceiver functionality with recurring transaction logic and tested feature functionality.
- **Today:** Debugging and continued refactoring and testing of the recurring transaction feature.
- **Problems:** Again, dealing with dates always presents a problem.

6. **Date:**

Time: 8:00pm - 8:30pm

Location: Discord

Tri Nguyen:

- **Yesterday:** Added dates on the X-Axis for Analytics and current budget period for the default Analytics screen. Also added budget name to Notifications.
- **Today:** Make sure that none of the program has any bugs or crashes.
- **Problems:** There are a lot of code pushes today for the last review giving us a decent amount of things to test.

Ang Li:

- **Yesterday:** I made the select period button invisible in the analytics screen until the user selects a category. I did some bug testing and found one with category periods showing up out of order. Also, the transactions are appearing in the reverse order.
- **Today:** I will fix the bugs with the dates and keep bug testing.

- **Problems:** My teammates cannot reproduce the bugs I have. There may be a problem with my emulator because it often crashes.

Utsav Thapa:
- **Yesterday:** Fixed the update category budget period.
- **Today:** FIx the recurring transaction so it occurs every one month on the same day rather than exactly 30 days after.
- **Problems:** Learning up the Calendar objects and find the right function.

Andre Takhmazyan:
- **Yesterday:** Added more error checking for dates of transactions and category.
- **Today:** Bug testing and overall app testing as well as finalizing search functionality and UI tweaks.
- **Problems:** Making sure all functionality is as it should be especially the notifications.

Kevin Nguyen:
- **Yesterday:** Debugging and continued refactoring and testing of the recurring transaction feature.
- **Today:** Finalizing recurring transaction functionality.
- **Problems:** Small date related errors.

Sprint Review

Date: 11/29/17

Time: 9:00 PM - 9:35 PM

Location: Discord

Summary:

In Sprint 3 we implemented category rollover, recurring transactions, category history, and search.

Relatively speaking, this Sprint did not go as smoothly as the previous ones. We found a lot of bugs at the end of the sprint. Some bugs were leftover from the first implementation of Sanity that our initial tests had missed. For example, overall budget limits were changing between periods when they should have stayed constant. In addition, it was difficult to organize scrums over Thanksgiving break as we all had family obligations and sometimes team members were on a flight.

We implemented category rollover, so when a category period was finished, any extra spending that went over the limit of the budget was added to the next period in that same category. We also implemented recurring transactions so every month that transaction would be added to the category. We implemented category history so when a category period was over, all transactions were saved and could be viewed in both the transaction screen and the analytics screen. We also implemented search so you could search for budgets, categories, and transactions. We also made all the UI screens scale with screen size so our app would work on any phone. We wished to add more cool features such as Venom integration but did not have enough time to.