Team 4: Sprint 1 Retrospective
Project Name: NewsLog

Stephen Motherwell
Paul Heldring
Joe Nathan
Misha Malik
Akshit Kandi
Dhruv Subramanian
Austin Dewey

What went well:

- Learned Android Programming:

  Most of the members in our group had little to no experience with Android programming prior to starting the last sprint. Throughout the sprint several team members worked on the client side of the project and gained experience in building software for Android devices. This experience allowed us to learn how layout pages interact with their corresponding Java classes, a crucial aspect of Android programming. Another key skill gained was learning how to create background tasks in Android, which are needed for our client-server architecture. Having this foundation understanding of Android will benefit us greatly in the next sprint.

- Server Setup:

  Prior experience with the cs252 http server came in handy when creating the server side in Java. The threading for each client socket was easy with the Java built in functions for threading and client socket handling. The JSON packaging library allowed easy transfer from client to server and database to client. Using the telnet client program found on the lab machines made testing the server an easy task.

  There is still room for further development of the server. The server doesn't handle user registration particularly well with the database and doesn't check if the user's account is already created. The server will also have to become smarter and fetch articles from the database that are based on the category the user wants.

- Login and Registration :

  We were able to get a login and registration page as a part of our layout. In addition to this, we have an account management page to allow users to edit account information. We also successfully integrated the login page with our database so that a new user is created and saved to our server.

- Category Selection :

  Implemented a category selection page which will prompt the user to begin the app by sending our news feed a category to begin our news filtering process. We have six categories for the user to choose from, this generalized all of the spectrums of news that we currently want to offer.

- News Feed page :

  The news display is implemented which will provide the user with a news view. We met our goals for the page to pass it a new article from the database when the user logs in. The page has extended what we set out to achieve for the sprint by having incorporated a basic swipe feature.

- Fetching Web URL:

At the beginning of the of the sprint we had trouble finding sources for articles. But with the help of New York Times API we were able to fetch hundreds of articles with specific categories and the date and time when it was published. We were also successful to obtain keywords which will be used to make an AI in the next sprints.

- Built a user class:

  Implemented a class that handled user values. Gave the project a structure to base user objects off of throughout

- Learning PHP:

  this was difficult at first, but it became much easier after research. Prior SQL experience also helped to significantly lessen the PHP learning curve. PHP was implemented so far to get and insert articles and users to and from the database.

- Database design/layout:

  Spent a couple hours planning, implementing, and documenting the database design. The database was made to be changed easily as our project evolves.

What Went Poorly

- Location of our database:

  The server and the database are currently running on different systems, which is not a setup that we plan on keeping. This happened because we had different team members working on the server and the database, and we had the database set up before we started working on the server. This is something that we plan on correcting in the next sprint.

- Repository Commits:

  In the beginning of the sprint we wasted a lot of time trying to debug errors in our build.gradle file that was caused by team members pushing changes to the repository without specifying individual files that they were working on. As a result, members were pushing code that was specific to their local development environment, which caused errors for the rest of the team when they pulled. Now that we are aware of this issue, we are much better at avoiding it. This cause of error is something that we plan to completely eliminate in the next sprint. Branching from the main branch could also help settle some of the merge conflicts we had as well.

- Time Coordination:

  Having a larger number of people in our group made coordinating times to meet more difficult. Next sprint we should set a couple of days in the week to work on the project together. Early on it was more important for all of us to meet together to work on the project, but now that the tasks have become more divided we could work from home more and push to the repository.

- Hamburger button and Drawer Layout:

  It was tough to understand how to add buttons to the already existing templates we were using. The idea of implementing the Navigation Drawer Layout was difficult given our current setup. During sprint 2, we are going to figure out how to include the button in layout and do enough research about how to link that with the other pages we currently have .

- Category and Article Pairs

  The category and articles pairs do not always match up or make sense. For example, sometimes a sports article is stored as a political article.

- Implement a complete user account management feature

  We were unable to access the page because we did not account for the user menu button in our first sprint. This isn't a big deal because we were still able to test functionality, however we were not able to completely manage accounts in the user menu, and the page is missing some functionality which we will have to consider in our next sprint.

HOW CAN WE IMPROVE

- Branching In Version Control:

  Branching will definitely help us improve our push, and pull conflicts. This will allow to avoid the garbage we get whenever someone commits a conflicted file. It will also enable us to fully utilize the advantages of having version control at the lowerarchy of the team.

- Merge the Database and Server onto one Machine:

  In this upcoming sprint we plan to move the database onto the "data" server provided by Purdue. This is where our server currently runs. We do not anticipate that this will be a particularly difficult task.

- Obtain android device to test on

  We used the built in emulators for android studio to test our android client. The problem with this is the incredibly slow start up time to test our code. If we use Android based hardware it would allow faster testing for all members of the group. We will contact the project coordinator to see how we can obtain android devices from Purdue.

- Pass More than one Article to the Client:

  Currently we are only able to pass one article to the client, it is crucial that we figure out how to pass as many articles as are requested without crashing because this is a basic functionality

of our application. We plan on devoting as much time as is necessary to correct this issue during the next sprint.