

EE / CPR E/ SE 491 - Bi-Weekly Report #3

Dates: 9/15/2020 - 9/28/2020

Group Number: sddec20-13

Project Title: My (Musical) Life

Client & Advisor: Dr. Henry Duwe

Team Members:

Christian Hernandez - Project Manager

Chaz Clark - iOS Developer

Daksh Goel - Backend Developer

Vatsal Bhatt - Backend Developer

Vignesh Krishnan - Frontend Developer

Weekly Summary

In summary, the team continues to make great progress. The team has been working on fixing bugs in the front end, API authentication and security, creating the bins for the users, integrating Spotify into the app, and the creation of tests. The team is currently able to connect to Spotify and sign in. However, there is still more work for the integration of Spotify. The front end is coming along nicely with the addition of new pages and the functionality of the sign-up and log-in. Data for the user is being stored to the backend. As for the backend, the backend is coming along nicely as well. The team is moving on to the algorithm needed to create bins for the user. The bins will be unique to each user. Additionally, for the backend, many lambda functions are being created by the backend folks. Lastly, the iOS calendar has been added to the

bin model and is added to the frontend. The frontend is also now able to retrieve the time, location, and calendar details from the user

Past Week Accomplishments

- Christian
 - Successfully integrated the iOSSnapshotTestCase into the app
 - Wrote more UI unit test cases
 - Fixed compile errors when trying to test different view controllers. This was as a result of having to adjust the targets for some of the view controllers
 - Fixed issue with the unit tests not identifying some of the AWS pods. This was fixed by modifying the podfile. This took a while to figure out.
 - Still learning how to test different aspects of the app right now
 - Began modifying the team's design document
- Chaz
 - Restructured log in architecture
 - Implemented User Data objects such as time, date, location, and calendar
 - Added Calendar objects and permissions into application
 - Derived location data from calendar objects
 - Bug fixes
- Daksh
 - Fixed bug with recommendations
 - Added Spotify API credentials to AWS Secrets
 - Looking more into how we can get better recommendations
 - Began looking into the Bin Selection Algorithm

- Vignesh
 - Researched into authorization methods for Lambda REST Api
 - Compared using JWT vs Lambda to authenticate to API
 - Ran into many roadblocks regarding new AWS API Gateway v2
 - Decided to go with OAuth provider and JWT rather than our own lambda function
 - Began implementing and testing with Postman on frontend

- Vatsal
 - Worked on getting and storing Spotify User Session
 - Safely storing and using Spotify user credentials so that users do not have to log in to Spotify every time.
 - Began implementing Spotify player with swift and into our app
 - Troubleshooting issues with getting and displaying the Spotify player
 - Looking into collaborative filtering methods for music bin selection.

Pending Issues

There are currently no pending issues.

Individual Contributions

NAME	INDIVIDUAL CONTRIBUTIONS	HOURS THIS WEEK	HOURS CUMULATIVE
Christian Hernandez	1. Completed the integration of the iOSSnapshotTestCa se framework. Also, this included some creation of new snapshot tests 2. Wrote many UI unit tests.	6	13

	<ol style="list-style-type: none"> 3. Fixed many issues with the compilation of the unit tests 4. Explored memory leak testing. Not sure if a framework will be used for this 5. Modified the team's design document 		
Chaz Clark	<ol style="list-style-type: none"> 1. Implemented User Data objects 2. Derived sensor data from User data objects to help determine song prediction for application 3. Reconstructed login architecture 	6	12
Daksh Goel	<ol style="list-style-type: none"> 1. Added Spotify API credentials to Secrets 2. Began Bin Selection Algorithm 3. Researched ways to get better recommendations 	6	12
Vatsal Bhatt	<ol style="list-style-type: none"> 1. Began implementing Spotify player 2. Developed method to Secretly store Spotify user credentials 3. Troubleshooting Spotify player implementation with swift. 	6	12
Vignesh Krishnan	<ol style="list-style-type: none"> 1. Researched into authorization for 	6	12

	lambda REST api 2. Tested authorization with Postman 3. Implementing on frontend		
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Comments and extended discussions (Optional)

N/A

Plans for the Upcoming Week

- Christian
 - Continue to write more UI tests
 - Figure out the issue with snapshot tests failing. Right now, the tests are failing due to the pixels differing between the reference image and the screenshot from the simulator.
 - Write more unit tests to test the functionality of the app
- Chaz
 - Send User sensor data to backend for processing
 - Help develop spotify player for music integration
 - AWS Amplify API development
- Daksh
 - Rank bins based off location
 - Incorporate Calendar data into location and Bin Selection
- Vatsal
 - Help pipe user data from frontend to backend
 - Get music playing in the app with the Spotify player

- Research into Collaborative filtering for better music recommendations.
- Vignesh
 - Continue working on authorization and the implementation on frontend

Summary of Weekly Advisor Meeting

Both meetings with Dr. Duwe during the past two weeks went really well. Dr. Duwe continues to help steer the team in the right direction. Dr. Duwe continues to ask the team questions and give guidance/feedback on different features of the app. Dr. Duwe would also like the team to begin making some changes to the design document since the final document is due at the beginning of November.

Moving on, Dr. Duwe and the team began discussing the deadline of the project. He advised the team to work backward from the deliverables. This will ensure that the team completes the app on time. Furthermore, Dr. Duwe would like the team to break the current tasks in Gitlab into smaller tasks. The cards should be more detailed as well. Lastly, the team discussed the bin selection algorithm with Dr. Duwe as well.