

Team Assignments Project Overview

Developer Roles / Contact Information

- Lee Scroggins
 - Provided support to all team members both front end and back end, documentation / javadocs lead including technology stack.
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- Marshall Eldridge – Android application, fragment / activity navigation, adapters, view models, and REST Endpoints.
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- Jonathan Rodrigues – Server, spring jpa, web service proxies, repositories, orm mapping, PDF overview, google sign in, and javadocs support.
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- Dagoberto Garcia – UI color schemes, fragment / activity navigation support, and legal documentation.
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Summary

Team assignments provides a convenient tracking system for tasks that need to be completed within a group. Team leaders are able to assign tasks to groups for any member to see. 1

Once a user has created a group they are automatically assigned the owner of that group, and are then able to invite others to join that group. The group owner can then create tasks within that group and assign those tasks to group members. Group members have the ability to report tasks they have been assigned as completed. All completed reports will then be available for review by group owners.

Current State

Currently the Team Assignments project has been making great strides in its development process. It is able to load all groups in the designated home tab, and if you click on that group you will be able to view all the groups tasks. Under the management tab you can add groups as an owner as well as add tasks to a group. The entities and spring build are structured where we can populate additional queries when the need arises.

Current Bugs

At this point in the development process there are some bugs to mention. In order to populate the groups on the home screen you must close and reopen the app, in order to populate the groups on the management tab you must switch to the home tab and back to management tab. The app will crash if a Group or Task has not been cleared from the application, and it has been deleted from the server and is selected on the app. In Add Task, if the Task Title input is selected, the keyboard cannot be dropped to access the description box or the calendar spinners.

Future State

While we are proud of our work thus far, there are additional implementations we can make. The ability to add users to groups and tasks to users are the logical next steps in development. From there we can add the ability to delete groups, and members from groups. From a UI perspective, we would like to eventually change the overall approach to user interaction which would streamline the navigation. Generally this would include making any group management inside of the group itself after selected instead of it being its own tab.

Technology Stack

Back end

- Ubuntu Linux OS
- Apache HTTP server configured as reverse proxy
- JRE 8
- Apache Tomcat Java application server
- Web service application, incorporating:
 - Data model
 - Embedded Apache Derby database
 - Hibernate ORM
 - Custom entity classes
 - Spring boot Data
 - Custom data repository interfaces
 - Service controllers
 - Spring MVC
 - Custom controller classes
 - View composition & serialization
 - Jackson JSON
 - Custom view classes & interfaces
 - Authentication
 - Spring Security

- Google Sign In (external service; see <https://developers.google.com/identity>)
- Custom authentication verifier method for audience (client ID)

Front end

- Android OS
- Data model
 - SQLite
 - Room ORM
 - Custom entity and other model classes
 - Data access object (DAO) interfaces
- Remote service interfaces
 - Retrofit
 - ReactiveX
 - Gson
- Viewmodel components
 - Android Lifecycle framework (ViewModel & LiveData)
 - Custom viewmodel classes
- View
 - Custom RecyclerView.Adapter and RecyclerView.Holder classes
 - Custom layouts
- Controller
 - Custom activity and fragment classes
- Authentication
 - Google Sign In (external service; see <https://developers.google.com/identity>)
 - Custom sign in service class
- Formatting and UI
 - Custom images