

Vanier College – Computer Science & Technology

Local Game Match Machine

Final Project

Anthony Nadeau - 2058983

Giuliana Bouzon - 1940108

Shahe Bannis - 2051001

Application Development 2 (420-431-VA) sect. 00003

Adin Ashby

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Table of Contents

| | |
|---|----------|
| Table of Contents | 1 |
| Project Aim and Description | 2 |
| Functional and Non-Functional Requirements | 2 |
| User Stories | 3 |
| Test Cases | 3 |
| Individual's Role and Responsibilities | 5 |

Project Aim and Description

The general aim of the project was to create an application that would allow fans of older offline multiplayer games to have a simple way to meet and play with other fans of said games. With geolocation to find other players in the local areas, as well as a friend system and fully implemented chat, the LGMM application allows the user to communicate with others entirely within the app. Every user must create an account, and the options for registration are signing up with an email and password, signing up with a Google account, or signing up with a Github account. There are a total of 13 screens, with each one having a clearly defined purpose within the application.

Functional and Non-Functional Requirements

In our application, the following project requirements are fully functional:

- API calls (Using the CometChat API as well as the Google Maps SDK for Android)
- Notifications (Within the app, messages sent to the user send notifications)
- Authentication (Using Firebase Authentication, our app allows users to sign up using an email and password, Google account, and also a Github account)
- Location Awareness (This is done using the Google Maps SDK, inside our home page)
- Database Operations (We've opted to use the Firebase Realtime Database to store information about our users, and images are stored using Firebase Storage)
- RecyclerView implementation (The list of users in the chat portion of the application)

Other features we implemented that were outside the scope of the requirements were:

- Email changing for users signed in with an email and password
- Password reset emails for users signed in with an email and password
- Deleting user accounts
- Profile image storage and uploads
- Image and file transmission through the chat
- Email verification for users signed in with an email and password that is required to access key features

There were features however that we were unable to complete before the final deadline:

- Friends Lists - We didn't get the chance to fully implement the friend list as we originally planned.
- Enable/Disable location within the app - The button in the settings page does not work at the moment, so these permissions can only be modified in the device settings.
- Setting the current game of the user - The current game the user is interested in playing is not displayed
- Viewing Nearby Players - We were unable to store the location data of the user before the final due date, thus we were unable to display the nearby players based on location

User Stories

As a User, I want to be able to message other users, so that we can plan our next meeting.

As a User, I want to be able to register and login to the app in different ways, so that I can start using it.

As a User, I want to be able to create a profile to access the chat functionality.

As a User, I want to be able to update my profile, so that I can keep my information up to date.

As a User, I want to be able to logout of the app so that I can keep my account safe.

As a User, I want to be able to delete my account, in case of emergencies.

As a User, I want to be able to see my location, so that I can potentially see other people around me.

As a User, I want to be able to see notifications, so that I know when I'm getting a message.

Test Cases

Feature: registration

Scenario: enter registration information

Given that I enter an email and a password

When I click "Register"

Then I see "Success"

Scenario: enter registration information for a user that already exists

Given that I enter an email and a password

When I click "Register"

Then I see "Registration Error"

Feature: login

Scenario: try logging in with an existing account

Given that I enter an email and a password

When I click "Login"

Then I see "Success!"

Scenario: try logging in with a nonexisting account

Given that I enter an email and a password

When I click "Login"

Then I see "User does not exist."

Feature: create profile

Scenario: logging in for the first time

Given I don't have a profile

When I click "Login"
Then I see "CreateProfileActivity" page

Feature: message other users

Scenario: try messaging other users
Given that I am logged in with my account
And am on Home page
When I click "View Your Messages"
And click on a user
And write a message
And click the send button
Then I see the updated chat with the message I just sent

Feature: update profile

Scenario: try updating profile
Given that I am logged in with my account
And am on Edit Profile page
When I enter the information I would like to update
And click "Finish"
Then I see my updated profile

Feature: logout

Scenario: Logging out
Given I am logged in
And on the profile settings page
When I press "logout" button
Then I see "successfully logged out"
And I am logged out of my account

Feature: notifications

Scenario: Receiving a notification
Given I am logged in
And I receive a message
Then I see the contents of the message
And the username of the person who sent it
As a notification

Feature: location

Scenario: Seeing my location

Given I am logged into my account

When I am on the Home page

It shows my location with a blue dot on the map

Feature: delete account

Scenario: try deleting my account

Given that I am logged in with my account

And am on Settings page

When I click "Delete Account"

And click "Delete Account in the dialog"

Then I see "Account Deleted"

Individual's Role and Responsibilities

Throughout the project, we each focused on different parts of the application. For starters, Anthony focused primarily on things related to firebase, such as authentication, changing the emails, sending the password reset, deleting the user accounts, and storing the users in the realtime database. Anthony also aided in the general application navigation flow and the UI design. Shahe focused more heavily on the image uploads to firebase storage for the user accounts, some UI elements, and implementing the Google Maps API to allow the user to have their location displayed in the home page. Shahe also developed the functionality behind the user profile and editing it. Last but not least, Giuliana was the driving force in making the CometChat API work, as well as the notifications associated with them. She was also very involved in the general debugging, and she solved a lot of issues to make the app run smoother overall. We each took part in the documentation process for this document, and any previously made documentation for this project.