

Fall 2021 Term Project

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SEG 2105 [A]  
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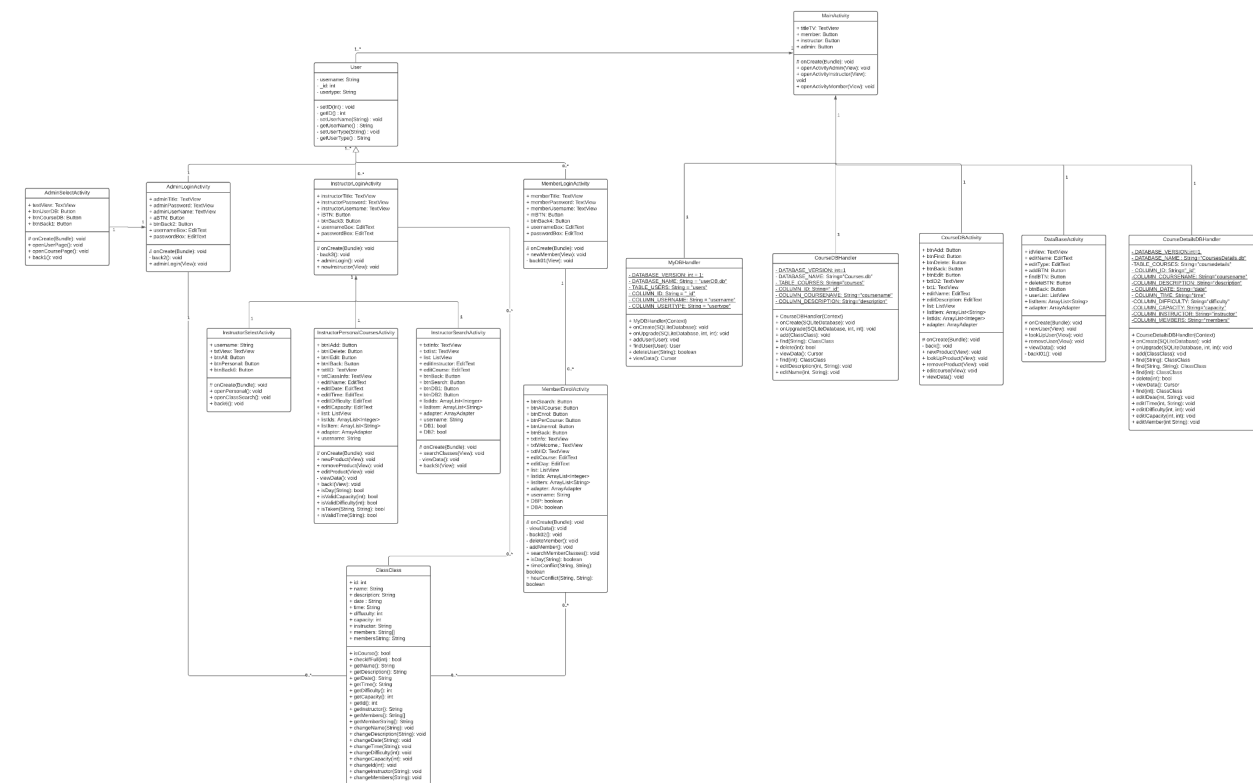
University of Ottawa

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# INTRODUCTION

This project was completed throughout the term in groups of five. The task was to design and implement a Fitness Class Booking app using Android Studio. The project contained three types of users all with different actions available to them. The first type of user is the admin. The admin is able to view all members, instructors and classes. The admin can remove members, instructors and classes. The second type of user is the instructor. Instructors are able to create, view and delete classes that they are instructing. The last type of user is the member. Members are able to view all available classes, enroll in available classes and unenroll from classes.

## UML CLASS DIAGRAM



*Figure 1.0: the Final UML (For better quality look at attached files).*

# TEAM CONTRIBUTIONS

## Summary

Throughout the semester group, 17 developed a properly fixed plan to remain on top of our distributed tasks. Every Thursday during the designated 4:00-5:30 pm period, we would meet to overlook the distributed tasks. If necessary, we would hold additional meetings on the weekend to stay on track closer to deadlines. Furthermore, we used discord to engage in conversation to cover weaknesses or request help. We would prioritize and distribute the functions according to our strengths. Overall, all the jobs have been completed equally, and everyone used their strengths to deliver the best product.

## Deliverable I

Daniel Andreev	<i>Contributed everywhere, priorities class coding and UML creation. Took charge of UML diagrams. Contribution to logic coding.</i>
Brett Athaide	<i>Contributed everywhere and took charge of main coding. Took charge of login activities for admin, instructor, member. Took charge of .xml design.</i>
Natasha Tremblay Daszkiewicz	<i>Contributed everywhere and took charge of debugging. Contribution to testing and application.</i>
Leo Fraser	<i>Contributed everywhere and took charge of Databases. Contribution to testing and application.</i>
Diyar Amjadi	<i>Contributed everywhere, priorities class coding and UML creation. Took charge of UML diagrams.</i>

## Deliverable II

Daniel Andreev	<i>Contributed everywhere, priorities class coding/testing and UML creation.</i>
Brett Athaide	<i>Contributed everywhere and took charge of main coding database integration. Took charge of first implementation of Admin (User) database, and xml design.</i>
Natasha Tremblay Daszkiewicz	<i>Created course Databases (CourseDB and CourseDetailsDB). Designed and coded Instructor Activity functions for adding, editing, and removing classes, viewing all courses (in both databases) and validated class variables to ensure proper format and no same classes booked on the same day (displaying name of instructor who already booked course along with other error messages). Coded admin course activity buttons and ensured no multiples of a class name could be entered in CourseDB.</i>
Leo Fraser	<i>Contributed everywhere and took charge of Databases and main code edits. Major contribution to debugging Admin (User) database. Coded instructor search by instructor name and/or course name.</i>
Diyar Amjadi	<i>Contributed everywhere, priorities class coding/testing and UML creation.</i>

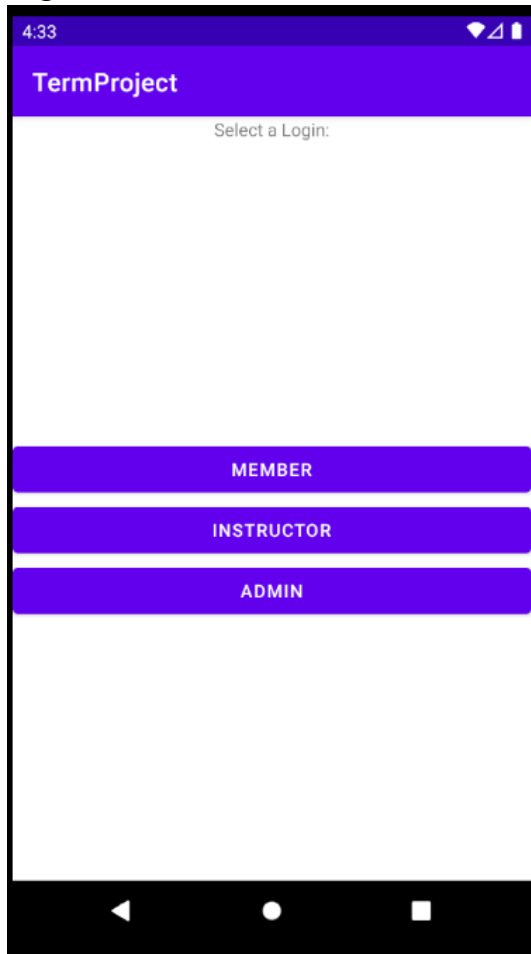
## Deliverable III

Daniel Andreev	<i>Contributed everywhere, class coding/testing and UML creation and report writing.</i>
Brett Athaide	<i>Contributed everywhere and took charge of main coding and debugging. Took charge of JUnit testing.</i>
Natasha Tremblay Daszkiewicz	<i>Designed and coded functions in Member Activity such as viewing all instructor courses and enrolling, viewing personal courses and unenrolling (error messages for enrolling in</i>

	<i>courses that cause time conflicts, are at full capacity, and unenrolling from courses that members aren't in yet), and searching by course name or day of week. Updated instructor to validate course time using period format '6:00-10:00' instead of '6:00'. Instructor also sees the member list when selecting a personal course for its details.</i>
Leo Fraser	<i>Contributed everywhere and took charge of Databases &amp; reports.</i>
Diyar Amjadi	<i>Contributed everywhere, class coding/testing and UML creation and report writing.</i>

# SCREENSHOTS OF APPLICATION

*Login Screen*



4:33

TermProject

Select a Login:

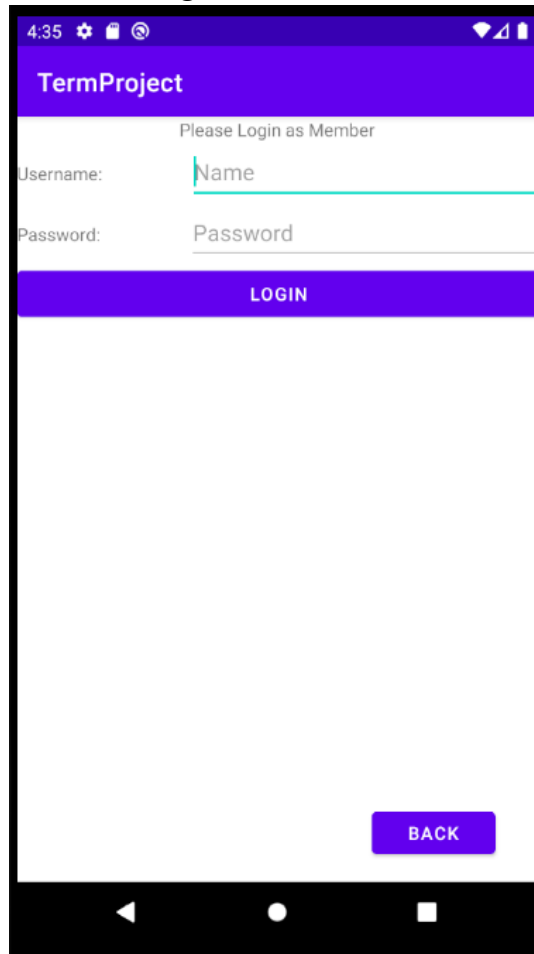
MEMBER

INSTRUCTOR

ADMIN

This screenshot shows the initial login screen of the TermProject application. The status bar at the top displays the time as 4:33 and standard Android icons. The app's title bar is blue with the text 'TermProject'. Below the title bar, the text 'Select a Login:' is centered. At the bottom of the screen, there are three blue buttons with white text: 'MEMBER', 'INSTRUCTOR', and 'ADMIN'. The bottom of the screen shows the standard Android navigation bar.

*Member Login Screen*



4:35

TermProject

Please Login as Member

Username: Name

Password: Password

LOGIN

BACK

This screenshot shows the member login screen. The status bar at the top displays the time as 4:35 and standard Android icons. The app's title bar is blue with the text 'TermProject'. Below the title bar, the text 'Please Login as Member' is centered. There are two input fields: 'Username:' with the text 'Name' and 'Password:' with the text 'Password'. Below these fields is a blue button with white text labeled 'LOGIN'. At the bottom right of the screen, there is a blue button with white text labeled 'BACK'. The bottom of the screen shows the standard Android navigation bar.

### Member Enrol Screen

5:06

**TermProject**

Welcome Raniel! You are logged in as Member.  
Search all courses offered by the gym

**BACK** **SEARCH**

Course ID:  
By Course Name: \_\_\_\_\_  
By Day of the Week: \_\_\_\_\_

To enroll: View 'all courses', select course from list and 'enroll'

**ALL COURSES** **ENROLL**

To unenroll: View 'Personal Courses', select course from list and 'unenroll'

**PERSONAL COURSES** **UNENROLL**

Please select course for more information.

### Instructor Login Screen

4:39

**TermProject**

Please Login as Instructor

Username:

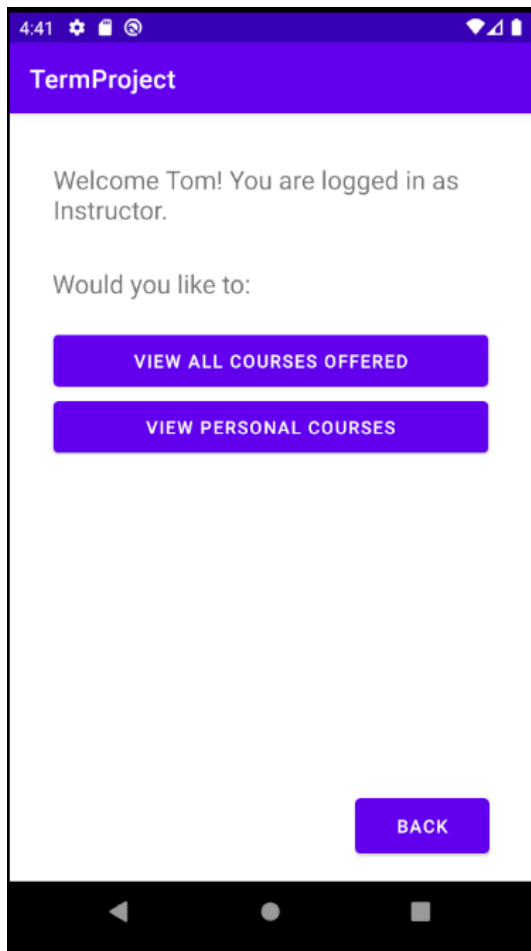
Password:

**LOGIN**

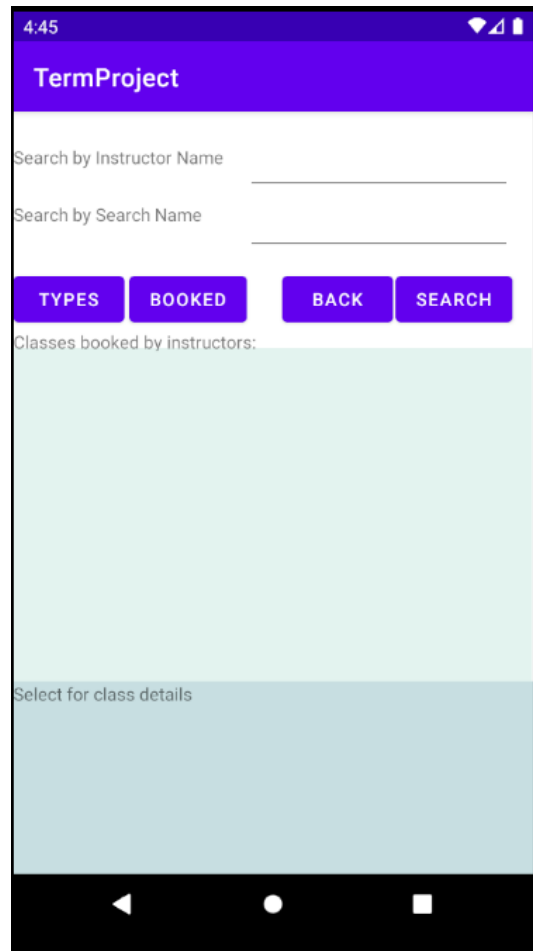
**BACK**



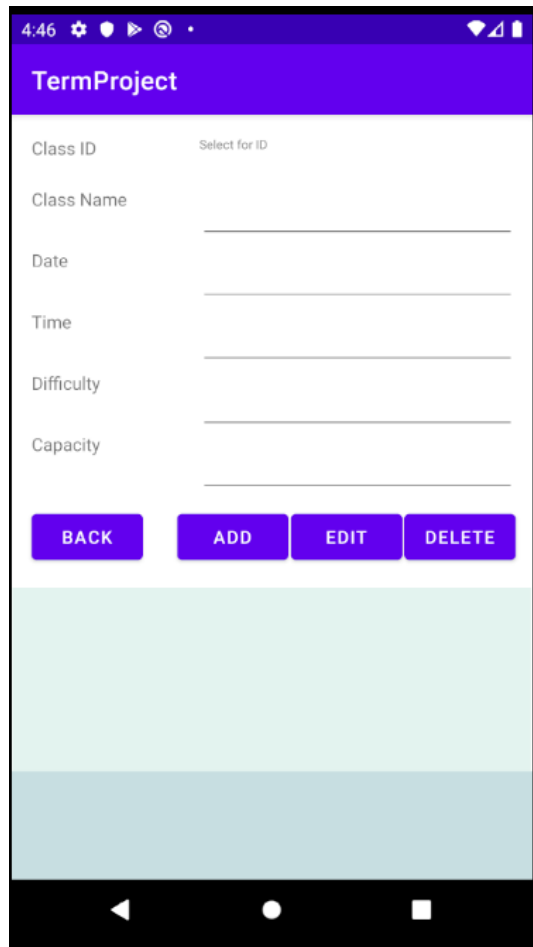
*Instructor Select Screen*



*Instructor Course Search Screen*



*Instructor Person Courses Screen*



This screenshot shows the 'TermProject' screen for an instructor. The status bar at the top displays the time 4:46 and various icons. The app title 'TermProject' is in a blue header. Below the header, there are input fields for 'Class ID' (with a dropdown arrow and the text 'Select for ID'), 'Class Name', 'Date', 'Time', 'Difficulty', and 'Capacity'. At the bottom, there are four blue buttons: 'BACK', 'ADD', 'EDIT', and 'DELETE'. The bottom of the screen features a light blue gradient bar and an Android navigation bar.

4:46

TermProject

Class ID Select for ID

Class Name

Date

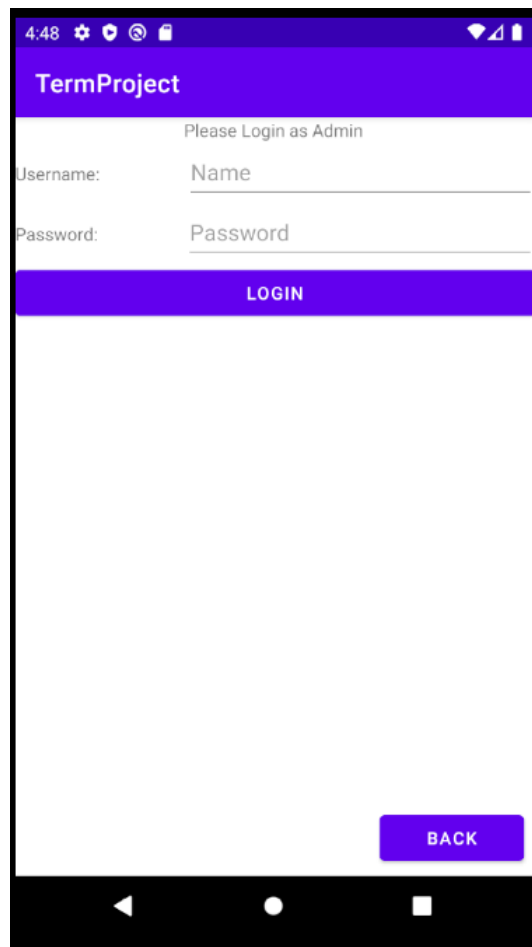
Time

Difficulty

Capacity

BACK ADD EDIT DELETE

*Admin Login Screen*



This screenshot shows the 'TermProject' admin login screen. The status bar at the top displays the time 4:48. The app title 'TermProject' is in a blue header. Below the header, the text 'Please Login as Admin' is displayed. There are two input fields: 'Username:' with the placeholder 'Name' and 'Password:' with the placeholder 'Password'. A blue button labeled 'LOGIN' is positioned below the password field. At the bottom right, there is a blue button labeled 'BACK'. The bottom of the screen features an Android navigation bar.

4:48

TermProject

Please Login as Admin

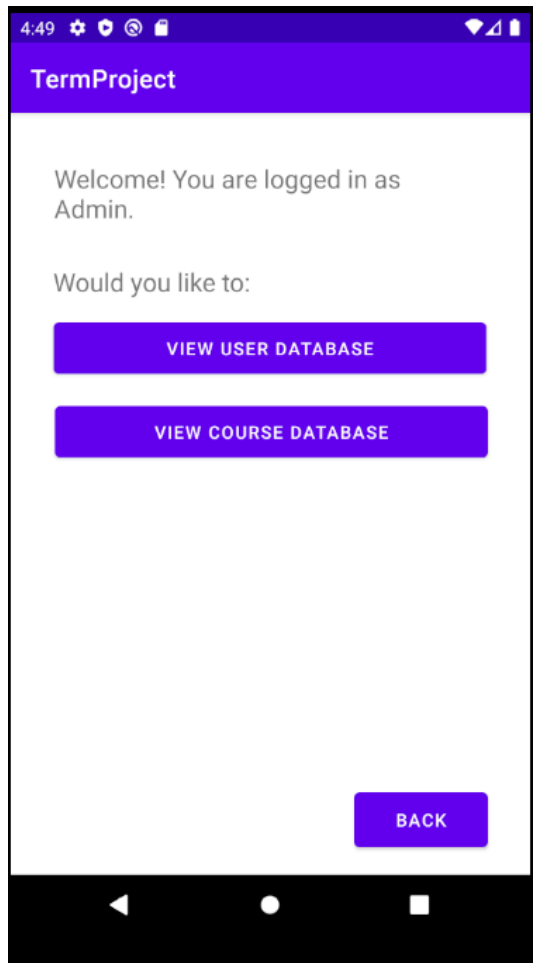
Username: Name

Password: Password

LOGIN

BACK

*Admin Select Screen*



4:49

TermProject

Welcome! You are logged in as Admin.

Would you like to:

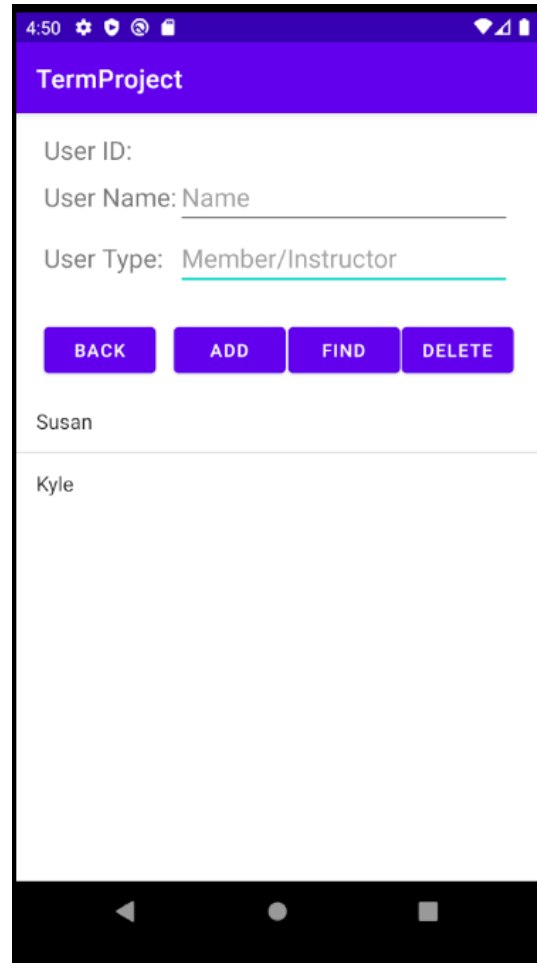
VIEW USER DATABASE

VIEW COURSE DATABASE

BACK

This screenshot shows the 'Admin Select Screen' of the 'TermProject' application. The status bar at the top displays the time as 4:49 and various system icons. The app's title bar is blue with the text 'TermProject'. The main content area has a white background. It starts with a welcome message: 'Welcome! You are logged in as Admin.' Below this, it asks 'Would you like to:'. There are two large blue buttons: 'VIEW USER DATABASE' and 'VIEW COURSE DATABASE'. At the bottom right, there is a smaller blue button labeled 'BACK'. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

*Admin User Database Screen*



4:50

TermProject

User ID:

User Name:

User Type:

BACK ADD FIND DELETE

Susan

Kyle

This screenshot shows the 'Admin User Database Screen' of the 'TermProject' application. The status bar at the top displays the time as 4:50 and various system icons. The app's title bar is blue with the text 'TermProject'. The main content area has a white background. It contains form fields for 'User ID:', 'User Name: ', and 'User Type: '. Below these fields are four blue buttons: 'BACK', 'ADD', 'FIND', and 'DELETE'. Underneath the buttons, there is a list of user names: 'Susan' and 'Kyle'. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

### *Admin Course Database Screen*

4:53

TermProject

Course ID 1

Course Name

Description

ADD EDIT FIND DELETE

cardio

Description: Cardio Beginners Course

BACK

## **LESSONS LEARNED & CHALLENGES OVERCOME**

At the beginning of the semester, we were asked to build a gym application. This application would run with the help of development on android studio and have its backend micromanage its operations. Unfortunately, for group 17 members, it was the first time for many of us to develop an application on this platform. We were not familiar with the technology, nor its execution. The first significant issue occurred during deliverable one. Our group lacked database experience and not having the database lab first proved difficult as we struggled to make a proper backend. This caused us to lose a lot of marks; however, after participating in the database lab we easily migrated to a working version. A similar issue occurred during deliverable two as we had to create unit tests. As we lacked the experience in android studio to develop them, we had to use external resources to teach ourselves to deliver the product. The biggest lesson we took away from this development process is to properly rely on group mates and use everyone's strength to cover each other's weaknesses. Every person is well versed in one aspect of technology and combining our abilities lets us develop the best possible product. They say every project comes with its own set of problems. This project is no different and forced us

to overcome these challenges not only to complete this project but grow as developers. I hope others can see our experience and create better products.