CSCI 5211 Project Report:

**Project Title:** Workout Companion

**Project Description:**

The proposed project aims to develop a workout application for Android that provides users with a customizable and interactive fitness experience.

The users can create and customize multiple workouts lists where they will be able to select from given exercises from a database. They can also select/create multiple workout lists.

For the exercises there will be descriptions of the exercise and other additional information. In the workout lists the exercises can also have information such as weights and reps. In addition, the user can add their own exercises with descriptions and information which will be added to the database.

The user can keep track of their workout by marking their given exercises as “complete” or in progress. This resets once the user is done with their workout.

**Requirement Specifications:**

We are implementing a workout aid. It will have the following functionalities:

Menu Bar:

1. This is the navigation to the other activities:
   1. Button to go to All Workout list.
   2. Button to go to Exercise List.
   3. Button to go to the home screen.

Home Screen (Main activity):

1. Has three buttons, Workout Lists, Exercise Lists, and New Workout along with the menu bar
2. Each button flips to that activity.

Workout Activity

1. Will display a list of chosen exercises for a selected workout.
2. Each exercise shows reps, sets, and weights.
3. Each exercise in the list will have a switch selection for completion of that exercise.
4. There is a button to finish the workout and go back to the main screen activity.
5. There is also the menu bar at the bottom of the screen to lead to the three menu locations.

Workout List Activity

1. This is a list of Workout lists.
2. Each workout list has a name and clicking on it will go to the workout activity with that information.
3. There is also the menu bar at the bottom of the screen to lead to the three menu locations.

New Workout Activity:

1. This creates new workout list with a name and series of exercises.
2. A user will be able to add exercises from an add exercise activity, where they name the exercise, the reps, sets, and weights they want for that specific exercise.
3. Once done there will be a button to save the information as a new workout list.
4. There is a button to cancel the creation of the list.
5. There is a button to add the exercises.
6. There is also the menu bar at the bottom of the screen to lead to the three menu locations.

Exercise List Activity

1. Will list exercises and their descriptions.
2. There is also the menu bar at the bottom of the screen to lead to the three menu locations.

**Technical Description:**

The primary home screen is a three-button system which leads into different activities. The activities it leads to are Workout Lists, Exercises, and New Workout. Along with this there is a menu bar that leads to the Home Screen activity, the Workout List, and the Exercise activity.

By selecting the Workout List button, it brings the user to the Workout List activity. This activity uses a recycler view and information from the ROOM library database to fill the recycler view of already made Workouts. From this screen the user can then click on a given Workout which will bring them to a page that showcases the exercises for that workout with another recycler view and filled in with the data from the database. On this screen the user can see the exercise name, the reps, sets, and weights assigned to that exercise from their creation of that workout. In addition to this there is a switch button to aid in the checking of completion for each exercise. After the Workout is complete, a button at the bottom of the Workout screen will direct the user to the Home Screen activity.

By selecting the New Workout button, it spawns off the New Workout Activity where it starts to add a new workout to the database. With this there is a Edit Text box to assign the Workout Name which gets displayed in the Workout List and Workout activities. In addition to this, by selecting the add exercise button, it triggers another dialog/activity where in the user can add the name of an exercise, define the weights, the reps, and the sets for that exercise and this will be added to the workout with the done button being clicked. After given exercise are added, the Done button finishes the addition to the database and brings the user back to the main Home Screen activity. The Cancel button brings the user back to the Home Screen.

By selecting the final button Exercise List, will trigger the Exercise list activity where in it shows data from the exercise database in a recycler view. This showcases the exercise name and the exercise description simultaneously.

The main menu bar stays a relative constant only absent from the New Workout List, and the New Exercise activities. The main menu bar has three icons which go to the Workout List activity, the Exercise list activity, and the Home Screen activity.

The way the majority of this was implemented was with spawning an activity then creating a recycler view that filled that activity where that activity was fed information from the applicable database. For instance, the Workout List activity was filled with information from the Workout database, and the Workout activity was filled with information from the Workout\_Exercise\_bridge database.

![A cellphone with purple ovals

Description automatically generated]()

(Home Screen activity)

![A screen shot of a cell phone

Description automatically generated]()

(Workout List activity)

![A black cell phone with a white screen

Description automatically generated]()

(Workout activity)

![A cell phone with text on it

Description automatically generated]()

(Exercise List activity)

![A screenshot of a cell phone

Description automatically generated]()

(New Workout activity)

![A screenshot of a cell phone

Description automatically generated]()

(New Exercise activity/dialog)