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CS 443 Fall 2021
Prof. Sheng

Project Description: Say No to Rhabdo Hardbody Software

1. PROJECT STATEMENT:

Say No to Rhabdo Hardbody Software is a workout app that keeps track of your workouts and guides you through safe exercise day by day.

The purpose of this app is for improving one's health through safe physical fitness, specifically strength training. The app I wished to develop was one of many tools used as proper guidance for healthy living. Trying to workout during a global pandemic can be a challenge. Working out can help keep you strong and slim, which can protect you from real bad effects of COVID-19. But sometimes seeking to improve your health by exercising can actually make you sick and this is why I came up with this app. I call it, Say No to Rhabdo Hardbody Software.

In this app I have covered more than 100 exercise combinations. This app will be especially useful for those who have busy schedules. With the resurgence of COVID-19 and the new Omicron variant, the risk of another shutdown of Boston gyms is a possibility. The gym shutdown of last year was very difficult as most of us at UMass do not have money or space in our rooms for home gym equipment. Not only that, most of the small equipment was sold out when the shutdown occurred. It is this new news about Omicron and a story I read a month ago in the Boston Globe about a UMass student named Kaelyn Franco that caused me to tweak my project. Kaelyn got the same sickness that I got from unsafe exercising. My app is no longer just an equipment-based training app, it is now a safe strength training you can do both at the gym with equipment and at home without it. There are many, many fitness apps available such as *Freeletics*, *Strava* and *Openfit*; but none of them have been especially designed to protect your body from muscle breakdown. My app, Say No to Rhabdo Hardbody Software, is uniquely modeled after what has been successful and safe for me after a particularly bad experience when I first started working out.

I have designed my app for rotating body parts because it can be dangerous if someone works on one area too much at one time while neglecting other areas, especially when they are just starting out. I experienced this personally when, as a new fitness trainee, I got rhabdomyolysis and had to be in the hospital for a long time during my early college experience. The only special requirements needed for the Say No to Rhabdo Hardbody Software App is a mobile

device, a little floor space, and a water bottle (preferably electrolyte water!). Say No to Rhabdo Hardbody Software is a workout app that keeps track of your workouts and guides you through safe exercise day by day. It has an interface showing different body parts for exercises (chest, back, shoulders, legs). It has a sub menu for different exercises depending on which corresponding body part you pick. Each sub menu has a list of your weeks by date and your stats (scrollable), along with a button at the bottom where you can enter in your new stats.

With the help of this app, users can get proper and safe guidance for a healthy life. This app will be more useful for those who have busy schedules and can't afford too much time in the gym or have to work out from home. They can improve their life with the exercises covered in the app while keeping safe from overworking muscles that can land you in the hospital. At first I tried to make the regiment myself, all about lifting, but then thought it would be more beneficial to collect information from various trainers/healthcare and fitness websites to create a routine with the best physical exercises that can affect a wider range of people and can be done at home. I then divided the exercises, each according to different body parts; biceps, chest, legs, etc. I have arranged exercises in modules so users can easily get the proper content related to exercises like a daily workout plan, 30 day exercise plan and other exercises. With the help of the Say No to Rhabdo Hardbody Software app, users can easily start exercises without any special equipment and safely strengthen their body parts one part at a time.

2. APPLICATION DESIGN:

My app, Say No to Rhabdo Hardbody Software, is designed to be easy functioning and visually creative. I used XML format to design this app. I used transitions, cards, and appealing images to make my app more attractive. In my app tour the first page is a splash screen designed using images, relative layouts, and custom buttons.

On the main page I have distributed the app in three sections using bottom sheet navigation 1 home, 2 exercises, and 3 calendars. The First option is the home page and I have partitioned it in fragments for changing pages through animation. First, all three options were covered in one activity with 3 fragments and with effective adapter designs. The application is working offline, but I have covered all data in an array list so I can use it to display to users as well formatted. The homepage design is a combination of bottom navigation and cardviews with set up transitions.

The second page contains all exercises like basic crunches, push-ups, jumping jacks, and more. There are many other modules for particular exercises within exercises as well. There are submodules too for daily exercises such as Day 1, Day 2, Day 3, etc. These modules will be useful for encouraging users to vary exercises related to their interest as well as avoiding overuse of one body part.

The third page contains a calendar which shows the current date by retrieving the date of device and the set.

This app will work fine on android mobile devices as well as tablets in portrait mode. In some modules I used picasso and glide to load images online to reduce the app sizes, and made the app lightweight for exercise animation. I used lottie animation and loaded it by using retrofit. For open particular modules I have set code in java inside the adapter so specific detail activity can be located.
*please see bottom for screenshot examples

3. APPLICATION IMPLEMENTATION AND EVALUATION:

Say No to Rhabdo Hardbody Software was implemented to help guide people through safe workouts by use of an application accessible on a portable device. The app was developed in a screen by screen structure, similar to many professional apps. I used a minimum sdk of 21 and a maximum sdk level of 30. Inside the app I created packages for utils, activities, fragments, models, adapter to keep clear code, and code developed by using indentation, declaration, initializations and activity life cycles too. In terms of issues I had difficulties with the overlapping layouts messing up.

4. REFERENCES

1. Freeletics
https://www.freeletics.com/en/

2. Strava
https://www.strava.com/

3. Openfit

https://www.openfit.com/

30 Moves to Make the Most of Your At-Home Workout:
https://www.healthline.com/health/fitness-exercise/at-home-workouts

33 of the Best Beginner Exercises to Sweat Through During Home Workouts:
https://www.menshealth.com/uk/building-muscle/a754099/the-15-best-beginners-exercises-to-do-at-home/

Boston Globe Article
https://www.boston.com/news/local-news/2021/11/19/kaelyn-franco-spin-class-rhabdomyolysis/

5. EXPERIENCES AND THOUGHTS:

By developing this app, Say No to Rhabdo Hardbody Software, I learned about the structure of coding and how to manage a large code in proper format. I also learned some about how to link modules with each other. After completing the front-end and back-end of the app I found an issue of changing fragments rapidly. This caused the app to keep crashing. Something else that was messing up at first was recyclerview on the scroll. I enjoyed the flow of the class. I enjoyed the homeworks, especially homework 2 because I like the idea of creating a game. I like the creative aspects of this course.

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2.70 KB/s
42
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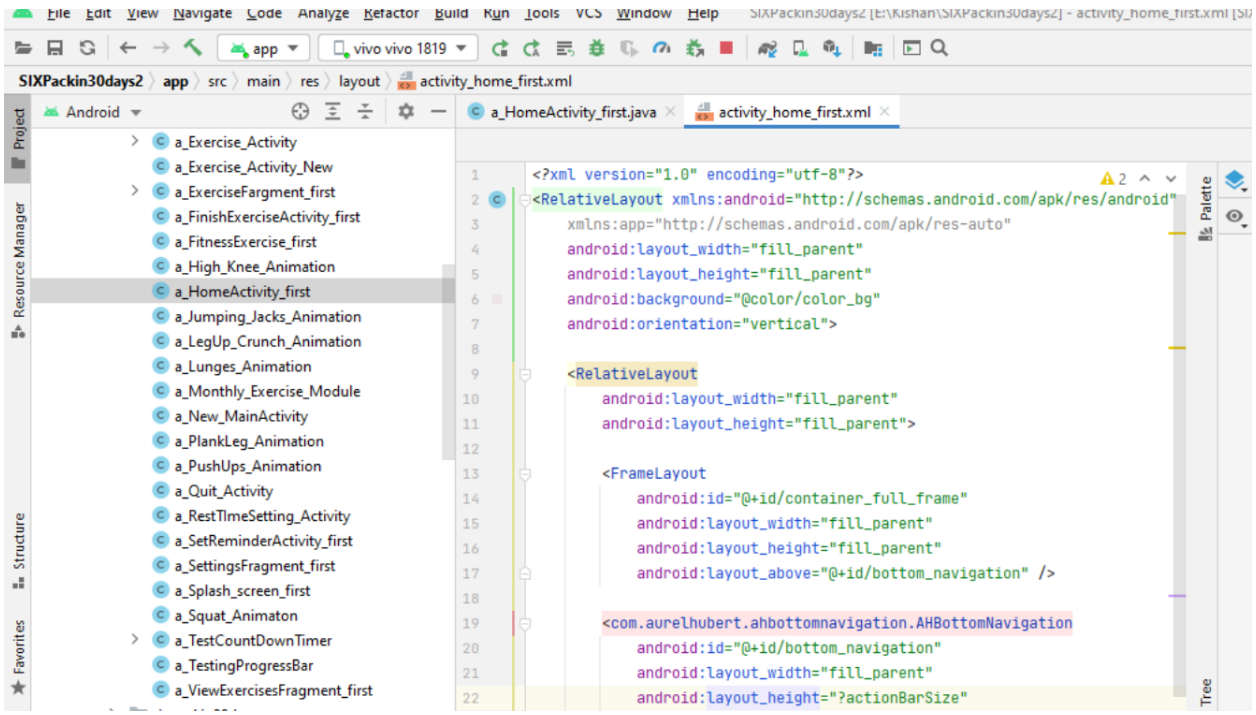
5:00 minutes
30 Days Exercise Plan
10 Workouts
7:00 minutes Daily
Exercises
Basic Crunch
20 Basic Crunches
0:30 minutes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a_RestTImeSetting_Activity
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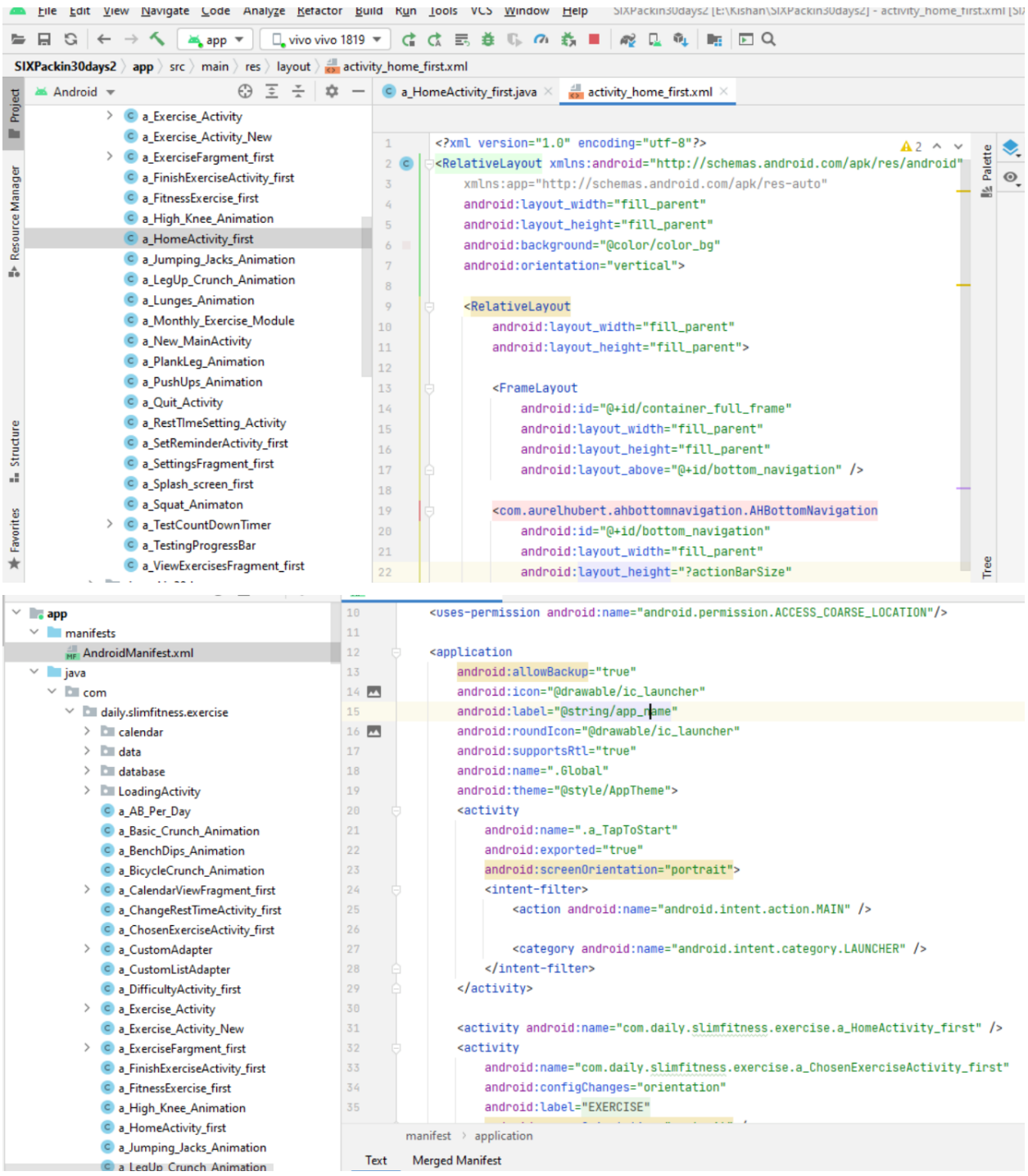
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SIXPackin30days2 app src main res layout activity_home_first.xml
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Palette
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