

Assignment 2

Interactive Sensor / Mobile App

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Description of the Application

The application that we created is called “Fitness Tracking” and it is represented with a unique app icon created in Inkscape using vector graphics. It will be of use to people that go to the gym or just like the workout in the nature. This is a mobile app that uses a chronometer to measure the time of the workout. It uses sensors that measure the steps, calculate the distance and the calories burnt and it shows this information in the Text View field. If the users want to save the data of their workout, they can press the button “Save” and the information about the steps, distance and calories will be saved in the SQLite database. To create this database we used a List View field and Text Views inside the List View to show the data. If one day the users want to check this saved information, they can just press the “History” button that will take them to another activity. This app uses two activities, one for the interaction with the user and the other one for the stored data in the database. It provides five buttons, each with a different function. Two of them, already mentioned are related to the database. The last three control the time in the chronometer field. The button “Start Workout”, if pressed will start the chronometer. In addition, the button “Pause” if pressed will pause the time and the button “End” will erase the time data from the chronometer field. The button “Pause” is represented by the well-known pause icon. We even placed icons in the database activity. One of the most important features of our app is its availability in two different languages, English and German and it is even available in portrait and landscape modes.

Difficulties Encountered While Developing the Application

It was not the simplest of the applications that we developed, but it was so pleasing to get the results we wanted. Although, we encountered some problems with the creation of the database. This, because Android Studio is very sensitive, as every programming software when it comes to syntax errors, including “spaces” that made our program not function properly until we fixed them. In general, we didn’t encounter other difficulties while developing this application.

Potential Extensions to the Application

This fitness app can be extended in a lot of ways. It can include diet programs for the users that train a lot so that they know what is the best for their health, related to the calories and proteins needed in their body. It can provide specialized playlists of songs that users can listen while they are running or practicing yoga. It can make use of Internet connectivity to become an app that creates profiles for every user and motivates the users to exercise by creating competitions with each other. Not only this, but it can even make use of other applications’ data to learn more about the user’s lifestyle. It can also use GPS location to verify whether you managed to go to the gym and use reminders in case you didn’t. The app can even provide some examples of workout exercises that the users can follow. It can totally replace your fitness instructor. All of these can be made real if we make proper use of a lot of advanced Android techniques.

Discussion of any issues relevant to the application

When it comes to diet and exercise, research shows that having the ability to track progress can lead to more motivated people. Fitness tracking apps in general can encourage people to live a more active lifestyle.

You have an app that unlike a simple diary or journal, it accurately records objective data about your workout like the distance and the duration. This may help a person track his progress based on these measures. It is proven that if you can see in real time while you are working out information about, for example the calories you are spending or your progress, it motivates you to keep building on what you've accomplished.

So a fitness tracking app can help people who have already started to live a healthy lifestyle and maybe also encourage the others to start living one.

Git repository URL: <https://github.com/leaceliku/Second-Assignment>