Assignment 5

In this assignment, you will complete your previous assignment by saving task data in database instead of keeping them in memory temporarily.

Main Requirements:

The UI and the general functionality of this application does not change significantly from the previous assignment; The main change is using database for storing the user and task data.

You should change your code so that when a new user signs up, his/her data is saved to database instead of SharedPreferences. Also when a user signs in, the entered username and password should be found and checked in database before allowing the user in.

When each of the task list pages are opened, the list of tasks should be loaded from database and then displayed. Note that because multiple different users may sign up and use the app, only the list of tasks of the current user should be loaded and displayed.

When adding a new task, the task data should be first saved to database, and only if the operation is successful should be displayed in the view of the list.

Also when an existing task is updated or removed, the changes should be saved to database successfully before showing the changes in the list view.

Notes about Implementation:

You should respect common implementation notes mentioned in your previous assignments in this assignment too. In addition:

1. Before working on this assignment, make sure the main functionalities of your Assignment 4 app work as expected, because in this assignment you should complete your code for the previous assignment. You should also fix the problems in your code for Assignment 3 based on the feedbacks you received.

2. For database operations, you should use the Room library. For this you need to create proper Entity classes to define the user and task table properties, DAO interfaces for the queries and operations on users and tasks, and a general Database abstract class for declaring all the entity DAOs.

3. All database operations should be done in a different thread than the UI thread. AsyncTask class should be used for this requirement.

Notes about Submission:

1. You should submit a zipped file which includes both your root project folder and the final APK file of your project. You can find the generated APK file of your project in the path *YOURPROJECT/app/build/outputs/apk/* on disk.

2. In order to reduce the size of the project for submission, you can remove the two folders called *build* in your project folders, one is in the path *YOURPROJECT/build* and the other in the path *YOURPROJECT/app/build*. Make sure to get out the APK file before removing these folders.