University of Stirling
Computing Science
Mobile App Development

Android Practical 5

Android Databases

Overview

This practical is for you to create and experiment with a SQLite database on Android. Feel free to use the code from the lecture slides (databases). This should give you a good starting point with this practical.

Step 1: Create the classes you need

Create a new Android Project (empty activity) and create a second class for the DatabaseAdapter class. The example in the lectures is for a database to store details of books

- In the DatabaseAdapter class set up the class variables, the companion object and the init function to create the DatabaseHelper class.
- Next create the inner class DatabaseHelper extending the base class SQLiteOpenHelper. This will need to overwrite the onCreate and onUpgrade functions
- Then add the necessary functions to your DatabaseAdapter class, such as open, close, insertBook, getBook, deleteBook, updateBook
- Finally, edit your Activity class (in onCreate function) to instantiate the DatabaseAdapter, and then open the database, and insert a book. Try to retrieve the details (using getBook from the adapter) and output to the screen (just use a TextView initially). Try to use the other DatabaseAdapter functions too (deleteBook and updateBook).

Checkpoint!

You have now reached a checkpoint. Please record a short video showing your app working and upload it to Canvas for Checkpoint 5.

- Can you change your application to store data for University of Stirling modules and output these in a ListView? For how to use a ListView, please see https://abhiandroid.com/ui/listview (general overview on the components needed for ListViews) and https://www.tutorialspoint.com/android/android_list_view.htm (Linking a ListView with a Cursor object as you get when retrieving data from SQLite).