

ASSIGNMENT 4

CS 522

Submitted By-

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Part-1 Book Store

In the previous assignment, you implemented a book store app that stored the contents of the shopping cart in a SQLite database. In this assignment, you will provide a similar app, but with the shopping cart instead stored in a content provider. This content provider should provide a single table, identified by the content path, books. Internally, the content provider will store the data using a SQLite database with two tables, one for the books and the other for authors. As before, assume a one-to-many relationship from books to authors, and assume eager retrieval of authors for a book, as a synthetic column in the result. You should again have subactivities for adding a book to the cart, for clearing the cart, and for viewing the details of a book (including seeing all authors). The last activity is started when the user presses the line for a book in the main list view. A long press (at least two seconds) should place the book activity into contextual action mode, where the user may select books for deletion, and the contextual action bar provides a single DELETE action. Allow multi-item selection: the user can select any number of books for deletion (not just a single book) before choosing the DELETE action

Solution 1 Book store content provider-

1. I defined a contract classes of books and author that defines the content uri, content path, and several other string literals. It also returns a uri for a given id.
2. Then I defined entity classes of book and author which returns books objects, getter and setter methods of their variables. Write to provider methods with parcelable and creator objects.

3. Using the cursor loaders and loader manager to populate the ui and to query the databases. When the insertion is done or any query is completed loader callback resets or finishes, the cursor is swapped.

Solution 2 Book store entity manager

1. The same is done for this solution but instead of the 3rd point above, this solution uses Async query handler, manager class of book. The purpose is to do all the above stuff but in background.
2. The insertion, deletion is supported and are done using the manager class asynchronously.

Part-2 Persistent Chat App

In this second part of the assignment, you will extend the chat server app from the previous assignment. As with the first part of the assignment, you are required to replace the use of a SQLite database with a content provider. Define a single content provider with two tables, visible to the app, and distinguished by their URIs that have the same authority but different content paths. One table stores the messages that have been received, while the second table stores information about the peers from whom we have received messages. As with the bookstore app, you should define a contract and a provider class for this content provider, as well as entity classes for messages and peers, and a manager class, using the same package structure as outlined above for the bookstore app.

Only one solution- Chat server content provider

1. The chat client is the same project from the previous assignment. In this assignment part, we modify the chat server app to add the peer and message into the databases using content provider class. This solution follows the guidelines of the second solution above while asynchronously adding the data into the database using asynchronous content resolver.
2. It also uses a simple asynchronous query to retrieve the details for a peer with whom we have been in communications.

Note-

The zip archive “Yugaank_Sharma” contains 5 folders and 4 files, BookStore Entity Manager Project Folder, BookStore Provider Project Folder, Chat Client, Chat Server and APKs folder which contains all the apk files, bookstore solution 1 and solution 2 videos, chat application video and README.pdf