

# ASSIGNMENT 3

CS 522

Submitted By-

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## Part-1 Book Store

*In the previous assignment, you developed a book store app that saves the contents of a shopping cart in an in-memory array. For this assignment, you will modify the app to store the shopping cart in a SQLite database*

For the book store application-

1. We defined a Simple Cursor Adapter, database adapter and a cursor that is used to display the fields of a book entity object in each row of the list view.
2. We defined Book contract and author contract class that defines the names of the columns and functions through which data can be read through those columns using cursors or can be write onto them using content values
3. Also defined constructors in book and author classes. Book constructor takes in cursor as argument and author takes a string for an author name and parses it as author object.
4. In the database package, defined adapter class that defines several of the functions like open, fetch, close etc.
5. Two tables created, one for books and one for authors. There is a one to many relationships between both.

## Part-2 Basic Chat App

*In this second part of the assignment, you will extend the chat server app from the previous assignment. The previous app just saves messages received in an array in the activity UI. If the user navigates away from the activity, and then returns to it, there is a good chance that the messages already received will have been lost, due to the way that Android manages resources in the activity life cycle. Another motivation is that we are so far violating one of the most basic tenets of Android programming, that no blocking operations should be performed on the main UI thread. In preparation for moving receipt*

***of messages to background processing, we will in this assignment persist both messages received, and information about people that have sent us messages, to a database.***

For Chat application-

1. We defined entity classes, contract classes and a database adapter for this part of the assignment.
2. Chat client sends the packet from chat client applications and chat server catches that packet and extracts the information like sender name, address, port, timestamp and message.
3. Some information is persisted into the database using database function called persist defined in database package of this assignment. Sender information is stored into the peers table while, sender id which is a foreign key referencing peers table, is stored into the messages table.
4. When the message is received, there is a option on top of the application called view peers, which on click shows the names of the clients that sends the messages. Clicking on any one of the client shows the information regarding that client which is stored into the database.
5. Exiting the app doesn't delete the data as it had in previous assignment because here we are using databases, not storing them in data structures like previously.

Note-

**The zip archive "Yugaank\_Sharma" contains 5 files, BookStore Project Folder, two Chat Application Folders, chat client and chat server project folders, bookstore video, chat application video and README.pdf**