Midterm Exam: Mobile Computing

Objective: Design and develop an Android application that manages a collection of books. The application should allow users to search for books by title and view details of the book.

Specifications:

1. **Database Creation**:

   - Design a SQLite database with a table named "Books" to store book information.
   - The table should have columns: `book_id` (auto-incremented primary key), `title`, `author`, and `genre`.
   - Insert the following sample books into the table:
     - "The Great Gatsby" by F. Scott Fitzgerald, Genre: Novel
     - "To Kill a Mockingbird" by Harper Lee, Genre: Novel
     - "1984" by George Orwell, Genre: Dystopian

2. **UI Requirements**:

   - A search input (`EditText`) for the user to enter a book title.
   - A button (`Button`) to trigger the search.
   - A `TextView` to display the book details or a message if the book is not found.

3. **Functionality**:

   - On pressing the search button, the app should search the database for the entered book title.
   - If the book is found, display its title, author, and genre in the `TextView`.
   - If the book is not found, display a "Book not found" message.

Grading Rubric:

1. Database Design and Initialization (20 points)
2. UI Design (10 points)
3. Search Functionality (30 points)

Notes:

- Comment your code to explain your logic.
- Ensure the app doesn't crash if a user searches for a book not in the database.

Submission:

- Compress your entire Android Studio project folder into a `.zip` file.
- Upload the `.zip` file on to the Canvas under assignment → midterm folder.
- Ensure your submission contains all necessary files for the app to run.