

# Book Search app



## Project: Book Search App (Jetpack Compose Edition)



### Core Features

- **Book Search:** Users can search for books by title, author, or keyword using the **Google Books API**.
  - **Search Results:** Displays a list of matching books with titles, authors, cover thumbnails, and brief descriptions.
  - **Book Detail Screen:** Shows detailed information like full description, publisher, publication date, etc.
  - **Favorites:** Users can mark and save favorite books for later viewing.
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### Tech Stack & Components

- **Retrofit (Network Layer):**
  - Connects to the **Google Books API**.
  - Parses JSON responses into Kotlin data classes using **Moshi** or **Gson**.
  - Handles queries for book searches and retrieves relevant book data.
- **Room Database (Local Storage):**
  - Stores **favorite books** with key information such as title, author, and thumbnail URL.
  - Enables offline access to saved books.
- **Jetpack Compose UI:**
  - **Composable functions** create the search input, list view, and detailed view.
  - **LazyColumn** displays the list of books efficiently.
  - Integrates **Coil** or another image-loading library for displaying book covers.
- **Navigation Compose:**
  - Handles screen transitions:
    - **Search Screen**
    - → **Results List**
    - → **Book Detail Screen**
- **ViewModel + LiveData / StateFlow:**
  - Maintains state across screens and manages data flow.
  - Ensures reactive updates to the UI as search results or favorites change.

- **Optional: Data Binding (in Compose):**
    - While traditional data binding isn't directly used in Jetpack Compose, similar behavior is achieved through **state hoisting**, **remember{}**, and **ViewModel observation**.
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## **Why It's a Great Project**

- Combines **networking, local storage, and UI**—a full-stack mobile app experience.
- Perfect for practicing:
  - **Retrofit integration**
  - **Room and Compose interop**
  - **State management and reactive UI updates**
- Expandable with features like:
  - Pagination
  - Book categories or filters
  - Integration with user accounts for syncing favorites