

Propose End-to-End **Book Store application Architecture:**

The end-to-end architecture of the Book Store application involves different components that work together to provide the required functionalities. Here's a **high-level overview:**

1. **Command-Line Interface (CLI):**
 - The primary user interface for the application.
 - Allows customers to interact with the system through commands.
2. **Catalog Service:**
 - Responsible for fetching book information from various catalogs.
 - Communicates with both the local database and external publishers' catalogs.
3. **Local Database:**
 - Stores detailed information about the books available in the store.
 - Allows quick access to book details without the need for external catalog searches.
4. **Book Store Application:**
 - Orchestrates the flow of information between the CLI, Catalog Service, and Local Database.
 - Handles user commands, searches, and order placements.
5. **External Publishers' Catalogs:**
 - Online catalogs provided by publishers.
 - Accessed by the Catalog Service when a book is not found in the local database.

High-Level Flow:

1. **User Interaction:**
 - Users interact with the system through the CLI, providing search queries, book details, etc.
2. **Catalog Search:**
 - When a user searches for a book, the Book Store Application checks the local database first.
 - If the book is not found locally, the Catalog Service is used to search external publishers' catalogs.
3. **Display Information:**
 - The application displays detailed information about the book, including availability and price.
 - Users can choose to buy the book (if available) or place an order (if not available).
4. **Order Placement:**
 - For books not in stock, users can place orders, and the system records the order details.

Technologies:

- **Language:** Ruby (for CLI application)
- **Communication:** HTTP/REST for external catalogs
- **Database:** SQLite (for simplicity in a small-scale application)

This architecture allows for scalability by easily integrating new publishers' catalogs and expanding the local database.

