SOFTWARE DESIGN AND ARCHICETURE
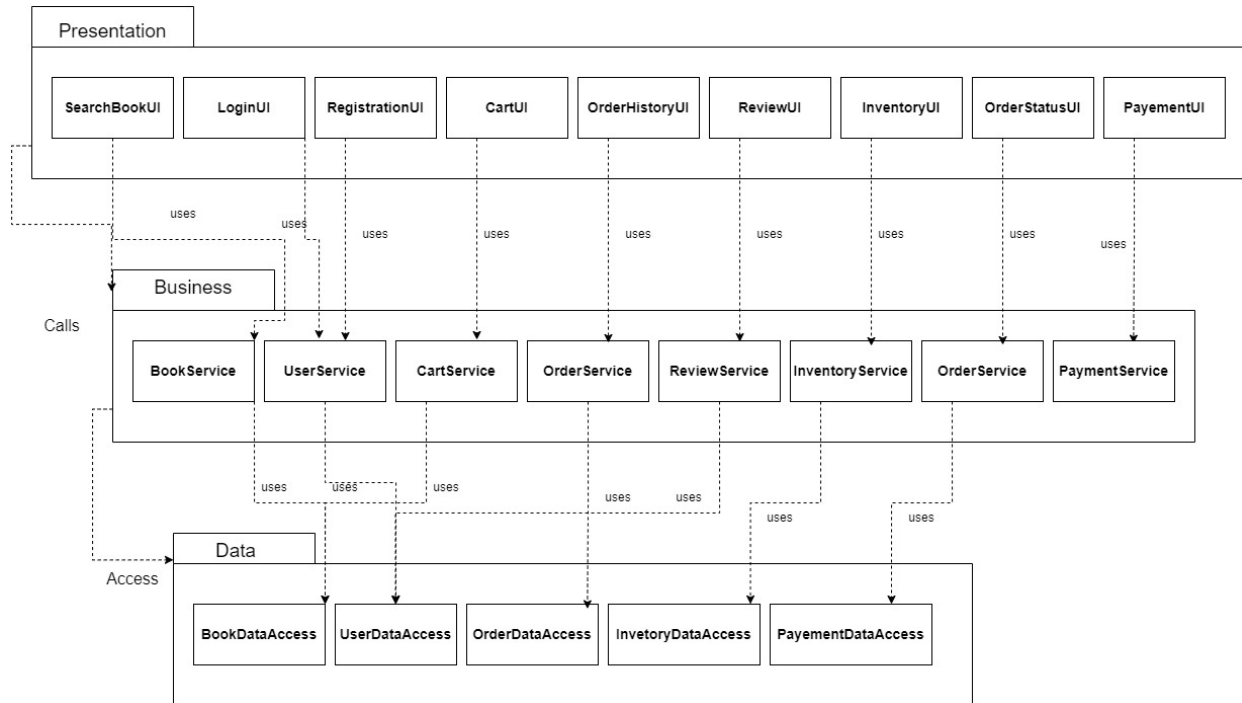
**SUBMITTED BY**

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**PROJECT BOOKSTORE:**

**PACKAGE DIAGRAM:**

**USE CASE PACKAGE BOOKDETAIL:**

## PACKAGE DIAGRAM OF BOOK STORE:



## ARCITECTURE PRINCIPLE FOR LAYER:

### 1. Separation of Concerns:

- **Meaning**: Each layer (UI, Business Logic, Data) handles a specific task.
    - **UI**: User interaction (e.g., adding books).
    - **Business Logic**: Processes rules (e.g., book validation).
    - **Data Layer**: Manages data storage (e.g., saving books).
- **Benefit**: Easier maintenance and scalability.

### 2. Encapsulation:

- **Meaning**: Each layer hides its internal workings.
    - **UI** interacts with Business Logic but doesn't know how data is stored.
    - **Business Logic** interacts with Data Layer but doesn't know how data is saved.
- **Benefit**: Reduces complexity; changes in one layer don't affect others.

### 3. Abstraction:

- **Meaning**: Higher layers use interfaces to interact with lower layers.
  - o **UI** calls methods in Business Logic without knowing internal logic.
  - o **Business Logic** calls Data Layer without knowing how data is stored.
- **Benefit**: Flexibility to change or replace layers without affecting others.