**Stage 2. Capstone Project Use Cases**

1. **Objects and their relationships**
2. **eBook:**

* **Represents a digital book available on the online platform.**
* **Contains attributes such as title, author, genre, description, and file path.**
* **May have additional properties like, cover image, and language.**

**2. User:**

* **Represents a user of the online eBook system.**
* **Has attributes such as username, email, password, and user type.**

**3.** **ShoppingCart:**

* **Represents a user's shopping cart that stores eBooks they intend to purchase.**
* **Contains a list of eBook objects.**
* **Supports operations like adding eBooks, removing eBooks, and calculating the total price.**

**4.** **Purchase:**

* **Contains details such as the purchased eBooks, purchase date, total price, and user information.**

**5. Author:**

* **Represents the author of an eBook.**
* **Contains attributes such as name, and a list of eBooks authored by them.**

**6. Genre:**

* **Represents genre in which eBooks can be classified.**
* **Contains attributes like name and description.**
* **Allows organizing eBooks based on their genre.**

**7. Library:**

* **Represents the online library that manages and provides access to eBooks.**
* **Contains a collection of eBook objects.**
* **Supports operations like adding eBooks, searching by various criteria, and retrieving eBook details.**

**Relationships:**

1. **eBook-Genre Relationship:**

* **An eBook can belong to one or multiple genres.**
* **Allows organizing and categorizing eBooks based on their genres.**

1. **eBook-Author Relationship:**

* **An eBook can be authored by one or multiple authors.**
* **Associates’ authors with their respective eBooks.**

1. **User-Purchase Relationship:**

* **Links users with their purchase history.**
* **A User can have multiple Purchase transactions.**

1. **Functional and non-functional requirements**
2. **User Registration and Authentication:**

* **Users should be able to create accounts and log in securely.**
* **User authentication mechanisms should be implemented to ensure secure access to personal information and prevent unauthorized access.**

**2. eBook Catalog:**

* **The system should maintain a comprehensive catalog of ebooks.**
* **Users should be able to browse, search, and filter ebooks based on various criteria such as title, author, genre, or keywords.**
* **The catalog should provide detailed information about each ebook, including title, author, description, cover image.**

1. **eBook Purchase and Borrowing:**

* **The system should handle the process of purchasing and borrowing ebooks, including managing transactions, generating invoices/receipts, and updating user accounts.**

**3. Reading Interface and Features:**

* **Navigation options like table of contents and page scrolling should be provided.**
* **The system should provide a user-friendly interface for reading ebooks online.**

**4.** **User Interactions and Social Features:**

* **Users should be able to rate, review, and provide feedback for ebooks.**

**5.** **User Profile Management:**

* **Users should be able to manage their profiles, update personal information, and view their purchase history.**

1. **Use cases**
2. **User Registration: Users can create an account on the ebook site by providing their details such as username, age, email, and password. This allows them to access personalized features and maintain a reading history.**
3. **Browsing and Searching: Users can browse through the collection of ebooks available on the site. They can search for ebooks based on various criteria such as title, author, genre.**
4. **Ebook Preview: Users can view a preview of ebooks to get a glimpse of the content before making a purchase or borrowing decision.**
5. **Ebook Purchase: Users can purchase ebooks directly from the site. They can add ebooks to their cart, proceed to checkout, and make payment.**
6. **User Profile Management: Users can manage their profiles, update personal information, and view their purchase or borrowing history.**
7. **Account Security: The site should ensure the security of user accounts and sensitive information by implementing measures like encryption, secure authentication, and protection against common security vulnerabilities.**
8. **Admin Dashboard: The site may have an administrative dashboard for site administrators to manage ebooks, user accounts, content moderation, and generate reports.**