Component Design
Online Book Store
Phase-III

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Master of Software Engineering

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1. Introduction

The goal of this document is to provide component design for the Online Book Store Project. Here all the components of the design are defined.

2. Class Diagram

The figure below shows the class diagram design for Online Book Store Project. There are total eleven classes.
2.1 Class Description

User

The User class is a super class of Customer and Administrator.

Attributes:
- UserID-The user’s ID to login to the website.
- Password-The password to login
- LoginStatus-The status of user login

Operations:
- VerifyLogin-Verifies user authentication.

Administrator

The Administrator class includes all the Admin attributes and operations. It inherits all the attributes and operations from User class.

Attributes:
- AdminID-The userID of Administrator
- Password-The password of Administrator to login.
- Name-Name of Administrator
- Email-Email of Administrator
- PhoneNo-PhoneNumber of Administrator

Operations:
- Add Category-Add a new book Category
- Delete Category-Delete existing Book Category
- Add Member-Add new member
- Delete Member-Delete existing member
- Add Book-Add new Book entry
- Delete Book-Delete existing Book.
Customer

The Customer class includes all the Customer attributes and operations. It inherits all the attributes and operations from User class.

Attributes:
- AdminID-The userID of Customer
- Password-The password of Customer to login.
- Name-Name of Customer
- Email-Email of Customer
- PhoneNo-PhoneNumber of Customer
- Address-Address of Customer.

Operations:
- Register-Register to create an account
- Login-Login using username and password.
- UpdateProfile-Update the account information.

Session Manager

The Session Manager class supports all the user operations.

Attributes
- UserID-The user’s ID
- CategoryName-Name of the Book Category.

Operations
- getCategory-Returns all the book categories information.
- getUser-Returns all the user information.

Category

The Category class handles all the book categories.

Attributes
- CategoryID-The ID of a book Category.
- CategoryName-The Name of the book Category.

Operations
- getCategoryBooks-Returns all books of a particular Category.
**Book Order**

This class defines the process of order made by user.

**Attributes**
- OrderId-The ID of the order.
- Price-Total price of order.
- CustomerId-The customer who placed the order.
- Quantity-Quantity of books in the order.

**Operations**
- Place Order-Order has been placed by Customer.

**Search**
This class describes the general search criteria.

**Attributes**
- BookTitle-The Title of the Book.
- CategoryId-The Category ID of the book searched.

**Operations**
- GetBookSet-Returns all the books which match the search criteria.

**AdvSearch**
This class describes the advanced search criteria.

**Attributes**
- BookTitle-The Title of the Book.
- CategoryId-The Category ID of the book searched.
- BookAuthor-The Author of the Book.
- BookLowCost-Low Price used in Advanced Search.
- BookHighCost-High Price used in Advanced Search.

**Operations**
- AdvBookSet-Returns all the books which match the Advanced search criteria.
**Book**

This class describes the Book Attributes and Operations.

Attributes
- BookTitle-The Title of the Book.
- CategoryId-The Category ID of the book.
- BookAuthor-The Author of the Book.
- BookName-The Name of the Book.
- productURL-The URL to the book link in Amazon website.
- ImageURL-The URL of Book Image.
- Notes-The notes about book description.
- Rating-The rating given by user.

Operations
- GetBook-Returns all the available books.

**ShoppingCart**

This class defines the process of adding book to a Shopping Cart.

Attributes
- OrderId-The ID of the order.
- Price-Total price of order.
- CustomerId-The customer who placed the order.

Operations
- Add Cart-To add an item to the shopping Cart.
- DeleteCart-To delete an item from the shopping Cart.
- UpdateCart-To update the shopping Cart