DBIS Project Report

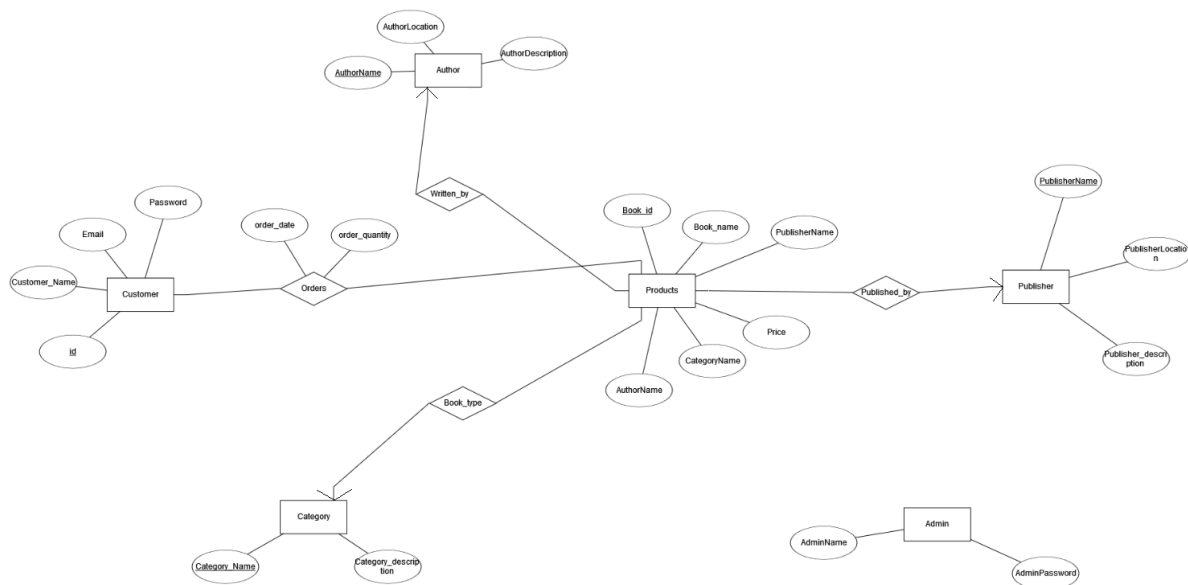**Project Title : Online BookStore**

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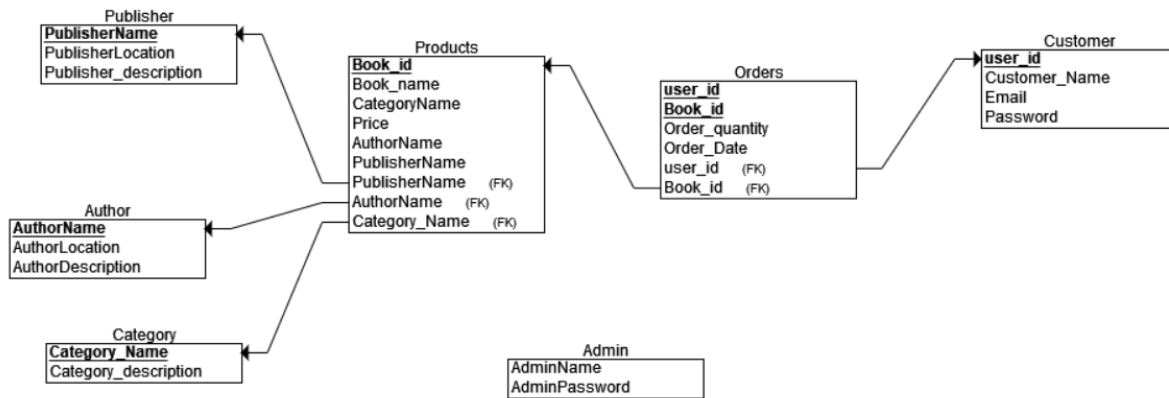Pranav Kanire - 190010033

Introduction

As the name suggests, we are making a web application that will contain a wide variety of books. Each customer is allowed to choose a book from the list of the books available on the shopping list. Objective of this application is to provide a user friendly system that is easier to manage, maintain and query. This paperless and user friendly system will allow a customer to add books to the cart, buy the books, etc once after a user had logged in. Also, new users are allowed to register so that they can login later.

ER Model Diagram

Relational Schema

```
                                                                                            Customer
          Publisher                                                                      ┌──────────────┐
      ┌──────────────────┐         Products                                              │ user_id      │
      │ PublisherName    │     ┌─────────────────────┐              Orders               │ Customer_Name│
      │ PublisherLocation│     │ Book_id             │         ┌─────────────────┐       │ Email        │
      │ Publisher_description│  │ Book_name           │         │ user_id         │       │ Password     │
      └──────────────────┘     │ CategoryName        │         │ Book_id         │       └──────────────┘
                               │ Price               │         │ Order_quantity  │
                               │ AuthorName          │         │ Order_Date      │
                               │ PublisherName       │         │ user_id   (FK)  │
                               │ PublisherName   (FK)│         │ Book_id   (FK)  │
          Author               │ AuthorName      (FK)│         └─────────────────┘
      ┌──────────────────┐     │ Category_Name   (FK)│
      │ AuthorName       │     └─────────────────────┘
      │ AuthorLocation   │
      │ AuthorDescription│
      └──────────────────┘
                                                              Admin
          Category                                       ┌──────────────┐
      ┌──────────────────┐                               │ AdminName    │
      │ Category_Name    │                               │ AdminPassword│
      │ Category_description│                            └──────────────┘
      └──────────────────┘
```

Tables

1)Customer

```
        Customer
┌──────────────────┐
│ id               │
│ Customer_Name    │
│ Email            │
│ Password         │
└──────────────────┘
```

2) Products

```
        Products
┌──────────────────┐
│ Book_id          │
│ Book_name        │
│ CategoryName     │
│ Price            │
│ AuthorName       │
│ PublisherName    │
└──────────────────┘
```

3) Author

```
        Author
┌──────────────────┐
│ AuthorName       │
│ AuthorLocation   │
│ AuthorDescription│
└──────────────────┘
```

4)Category

```
              Category
Category_Name
Category_description
```

5)Publisher

```
              Publisher
PublisherName
PublisherLocation
Publisher_description
```

6)Admin

```
              Admin
AdminName
AdminPassword
```

Integrity Constraints

Table	Integrity Constraints
Customer	• Attribute id is acting as the primary key here.
Products	• Book_id is acting as the primary key. • AuthorName is a foreign key which is acting as the primary key for Author table. • Category_Name is a foreign key which is acting as the primary key for Category table. • PublisherName is a foreign key which is acting as primary key for the Publisher table.
Author	• AuthorName is acting as the primay key in this table
Category	• Category_Name is acting as the primay key in this table
Publisher	• PublisherName is acting as the primary key in this table.
Admin	• This is a separate table which just

	stores the login credentials of the Admin

Languages And Technologies Used

- Java
- JSP
- JDBC
- Bootstrap
- HTML
- CSS
- Apache Tomcat Server

Interface Design

We have used CSS and Bootstrap in this project for making the UI interface.

Workflow And Pages with Screenshots

After clicking on 'run on server' button, the web application loads and starts. First, the homepage loads with the list of items in it, as shown in the picture below.Here, we can see that we have a list of the books which a customer can buy. In each of the item, we can see that the name of the publisher is written there at the top of each book. Name, Price, Author and the category of each book is written in the white space. Also, we can either add a book to our cart by clicking on 'Add To Cart' button or we can just click on the buy now button. Also, we can see various options like Login, Register, Add Book etc which are going to be explained later.
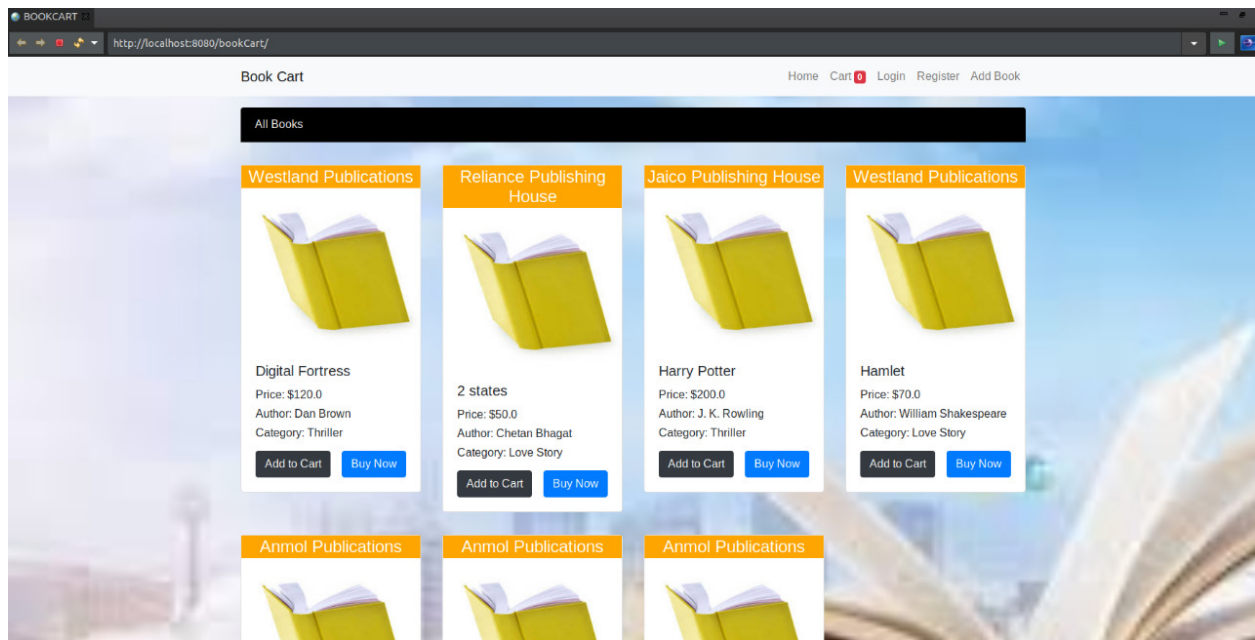
However, before we can add items to the cart or before we can actually place order by directly clicking on the 'Buy Now' button, we need to login first as a customer, the option for which is there at the top of the navbar. After clicking on the login button, it redirects to the following page where a customer can log in after which we can easily add items to the cart or can buy books directly. The login Page looks like this-
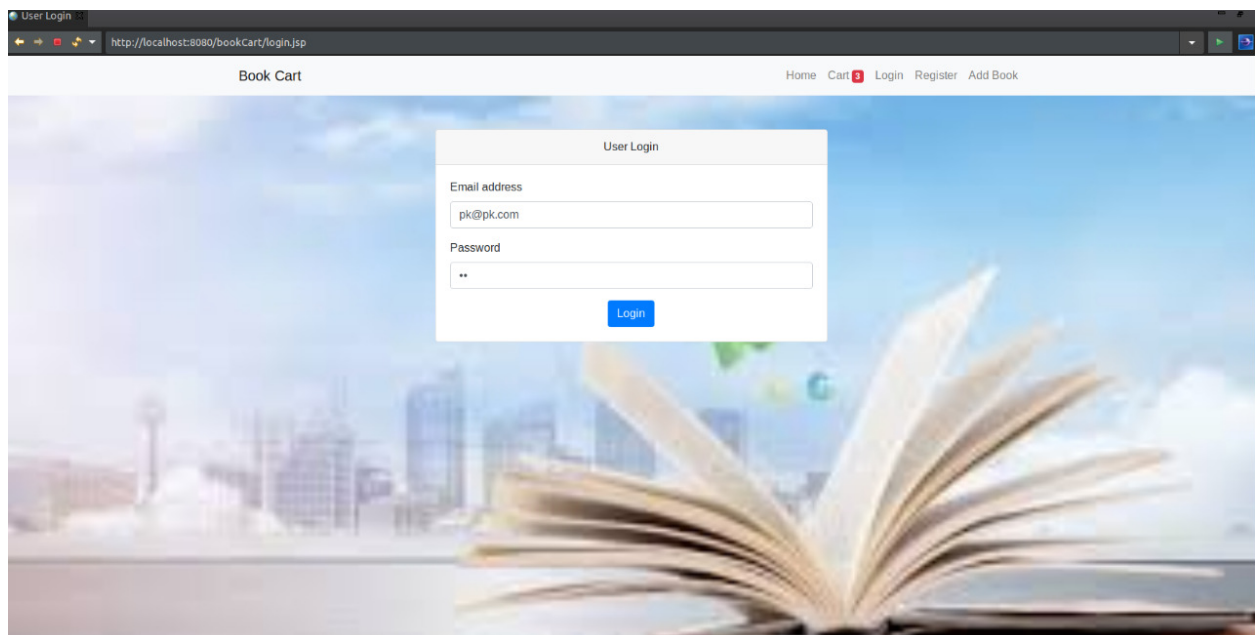
Also, suppose if we are not able to log in, we would then have to click on the register button on the navbar. There, a new user can register after which he would be able to login and

then order the books. The register page looks like below-

If we had clicked on the Cart button on the navbar, then it would redirect us the cart where all the items which we had added to the cart can be shown and where we would be able to increase the quantity of items as per our needs. The cart block looks like this-

Here, we can increase the quantity of each items on the cart by clicking on the '+' button, decrement the quantity of the items by clicking on the '-' button, or can even delete the items by clicking on the red colored 'remove' button.

If we click on the the topmost part of the page above, the items in our cart will get placed and we will get a summary of our orders like the image shown below. Also we can cancel an order anytime after placing the order, as shown in the picture below.
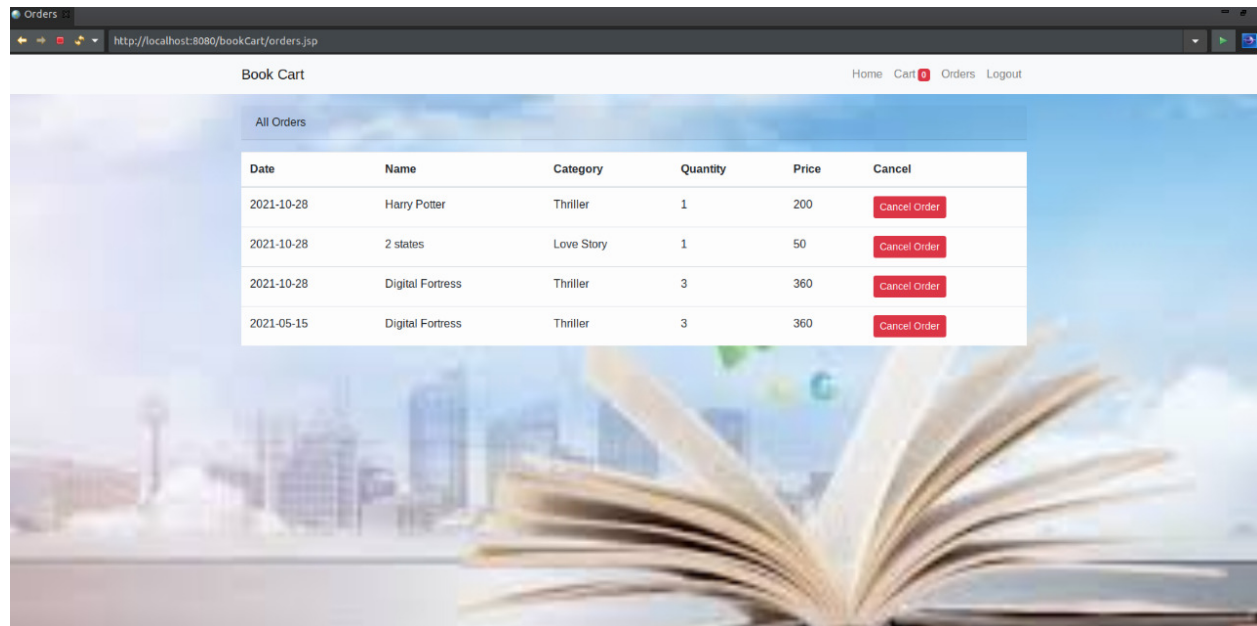
One more functionality is that, if we get logged in as the admin instead of customers, we would then be able to add a book to the shopping list of items where we add the book title of our choice and select the author and publisher name from the drop down menu as seen in the screenshot below -
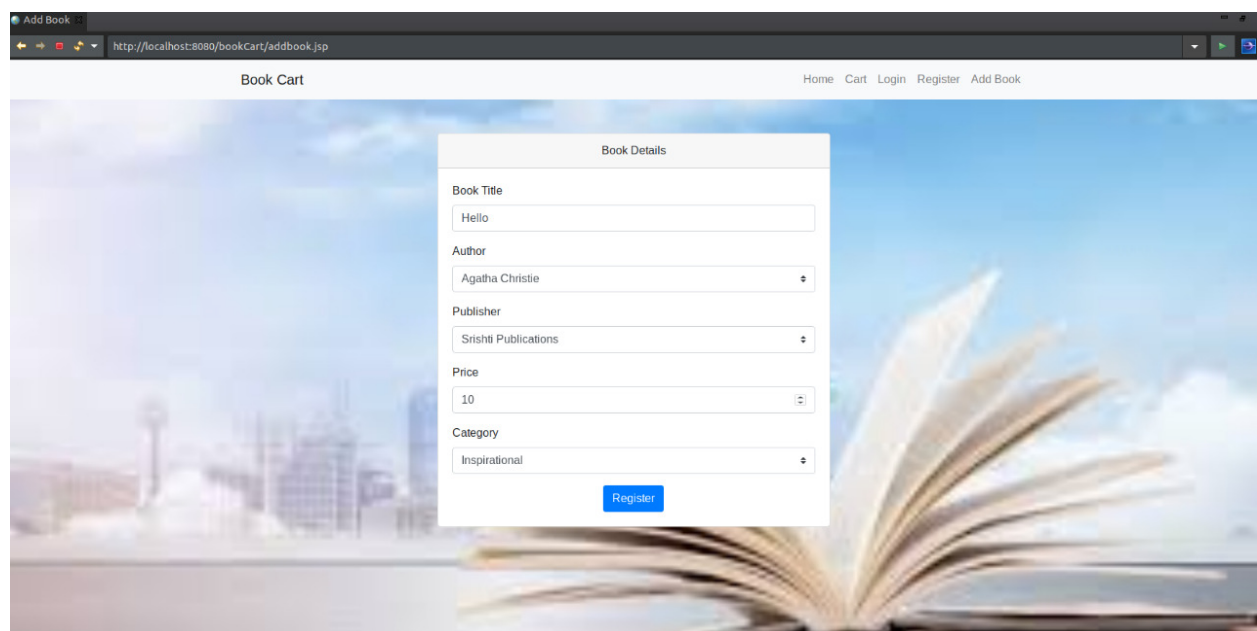
Conclusion

This project was made using java and its frameworks. For making the UI we have user Bootstrap and CSS. We have tried to add as much functionalities as we can. Various concepts of Database systems were used. This project was a part of our DBIS course project.