

PROJECT REPORT
UTD ONLINE BOOK STORE
TEAM 20 - SPRING 2020

Submitted By:

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PROJECT DEMO

The Demo Video is uploaded in the Google Drive and the link is provided below.

https://drive.google.com/file/d/1hFRSuk5jnZ4g_7MEInebgGB3uf6n9bC3/view

DOCUMENT OVERVIEW

This document describes the architecture of UTD Online Bookstore Application.

(Users: Admin, Customers)

- Description of the Online Book Store System
- Software employed to design the system
- Architecture Design of the System
- Assumptions and Schema design
- Database Schemas involved and design of DB
- Screenshots

DESCRIPTION OF THE SYSTEM

The System consists of GUI which is built for the user to interact with it, view the availability of the books and order the books they like to read. The Webpage starts with the Login page for the revisiting users and the Register page for the first-time users. After Login page we provide them access to all their previous transactions and orders made by that user. It is a multi-page web application which provides the best user experience. The user can use the filter options to view their desired book or the books from their desired genre. Partial Filter is also available so that the user needs to search the full title of their desired book. Each page is designed with a header where you can navigate to Home page, Cart page and User Account easily. Each page has book items available with their details visible once expanded. The Home page holds a certain number of books and the pagination has been used to split the number of books and order it in each page for fast and responsive user webpage.

SOFTWARE REQUIRED

The below applications are required to run the application successfully

- NodeJS Server
- Nodemon
- Monk
- Express JS
- MongoDB Community Server.
- Browser

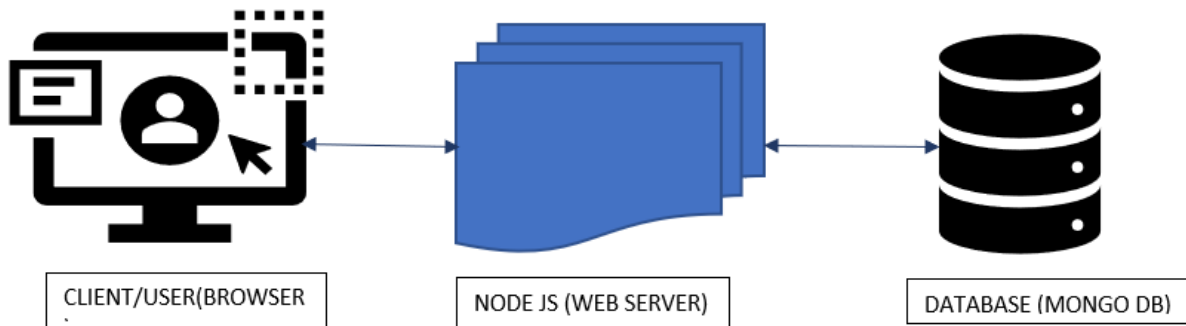
TECHNOLOGIES USED

The below technologies were employed to design the application

- MongoDB (Studio 3T - RoboMongo)
- ExpressJS, NodeJS, PassportJS, MongooseJS.

- HTML, CSS, Bootstrap
- JQuery and Ajax

SYSTEM ARCHITECTURE



DESIGN & ASSUMPTIONS

❖ USER REGISTER/LOGIN:

- The Web Application initially opens with the Login Page.
- If the user is new, he/she needs to create an account with appropriate Username and Password.
- The Username should not already exist in database and the password must be a strong password with a minimum number of 8 characters.
- These passwords are encrypted using hashing twice and then stored in the database.
- If the user has an existing account, then he/she can use the web application by directly logging in with their Username and Password.
- The Register/Login page has a video clip in the background which shows the inside of our Book Store. The video gives a tour to our bookstore to the user.

❖ INDEX PAGE

- After logging in or registering into the website the user can see the list of books available in UTD Online Bookstore.
- Each page has a limited number of books and the count is maintained by using pagination property. The user can navigate through the pages.
- The books are categorized as Fantasy Genre, Horror Genre, Science-Fiction Genre, Children's Literature and Adventure Genre.
- The user can search any book by using the title or do a partial search by using a part of the title. They can also search by genre/category. They can also search using both filters and type search. Corresponding results will be shown.
- The search results are also shown in the paginated property. If there are more than 10 books resulted from the search, then the next set of books will be available in the next page.

❖ BOOK DETAILS

- The user can see the detailed information of each book through "More Information" button available below each book listed in the index page.

- The detailed information includes Book title, Book Image, Book Description, Book Author, Book Genre and Book price in USD.
- The user is provided with “Add to Cart” button initially. Then after adding one if he/she wants to add more than one quantity of book then two buttons show up “Add 1 more item to Cart” and “Remove 1 Item”.
- The user can add any number of the same book. This can also be modified in the cart page.
- The total price is updated along with updating the number of quantities of that book. The quantity*price of the book = total price.
- This book details, price and quantity is stored in the cart.

❖ CART PAGE

- The cart page can be visited by clicking on the cart symbol to the right corner of the navigation bar.
- Once the user added all the books, he/she wanted to order, then they can proceed to cart section.
- In this they can finally again update or do any modification he/she wanted to change.
- The user can increase or decrease the number of books, remove any book from cart, check total price of the books ordered and finalize his/her order before proceeding to checkout.

❖ CHECK-OUT & ORDER HISTORY

- The user must choose his/her card type i.e. bank name and can proceed to checkout.
- Once clicked on the checkout button, the user is redirected to the checkout successful page.
- The checkout successful page shows the user payment details as a confirmation.
- The Order History page of that particular user can be visited by clicking on the Username => Order history tab in the dropdown.
- The Order History page includes the details of all the orders placed by that user till now.
- Each order details will include Unique order ID, Title of the books, Book Genre of the books, Author of the books and Total price of each order.

❖ ADMIN FUNCTIONALITY

- The Functionalities of admin are Adda New Book, Edit an Existing Book, and Delete a Book.
- In the Index page the admin can see all the existing books and Add a New Book by using the “Add New Book” button.
- The Admin also has “Edit Book” button in the Details page of the book where admin can edit the details of the existing book.
- The “Delete Book” button is also available in the Details page of the book where the admin can delete that particular book from the Web page.
- But the Book details will still be available in the Database. This functionality is implemented using soft-delete.
- The Search, Filter, Pagination, even the admin can buy book using Add to Cart, Cart and Order History same as users.

DATABASE STRUCTURES

1. Account :

The Account Schema consists of the users and admin details such as Username and encrypted Password.

```
var Account = new Schema({
    username: String,
    password: String,
    type: String
});
```

2. Items :

The Items Schema consists of the details of the book.

```
var ItemSchema = new Schema({
  "price": {
    "value": {
      "type": "Number"
    },
    "currency": {
      "type": "String"
    }
  },
  "image": {
    "type": "String"
  },
  "title": {
    "type": "String"
  },
  "bookgenre": {
    "type": "String"
  },
  "description": {
    "type": "String"
  },
  "author": {
    "type": "String"
  },
  "is_deleted": {
    "type": "Boolean"
  },
  "booktype":{
```

```
        "type": "String"
    }
});
```

3. Order :

The Order Schema consists of the details of the order.

```
var OrderSchema = new Schema({
  "user_id": {
    "type": mongoose.Schema.ObjectId
  },
  "cart_list": {
    "type": [
      mongoose.Schema.ObjectId
    ]
  },
  "title_list":{
    "type":[
      "String"
    ]
  },
  "genre_list":{
    "type":[
      "String"
    ]
  },
  "author_list":{
    "type":[
      "String"
    ]
  },
  "card":{
    "type": "String"
  },
  "total_price": {
    "type": "Number"
  },
  "currency": {
    "type": "String"
  }
});
```

}

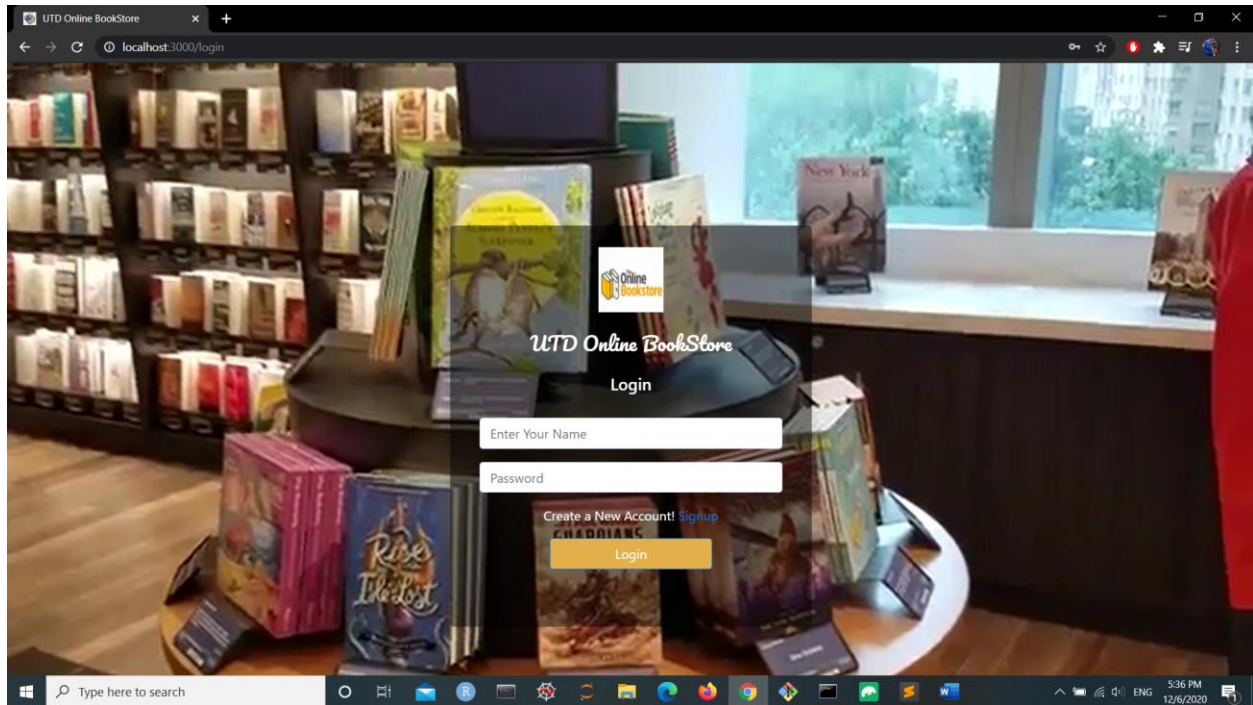
4. Cart :

The Order Schema consists of the details of the cart.

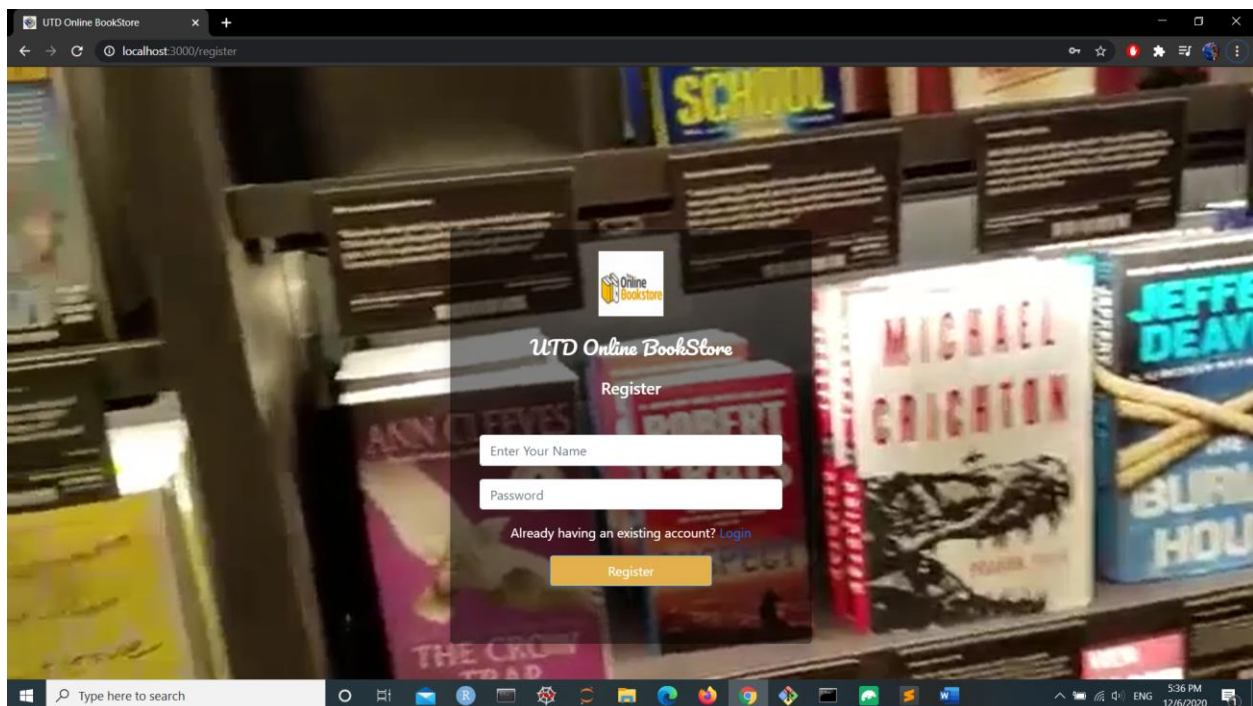
```
var CartSchema = new Schema({
  "user_id": {
    "type": mongoose.Schema.ObjectId
  },
  "item_id": {
    "type": mongoose.Schema.ObjectId
  },
  "title":{
    "type" : "String"
  },
  "bookgenre":{
    "type":"String"
  },
  "author":{
    "type":"String"
  },
  "is_deleted": {
    "type": "Boolean"
  },
  "quantity": {
    "type": "Number"
  }
});
```


SCREENSHOTS

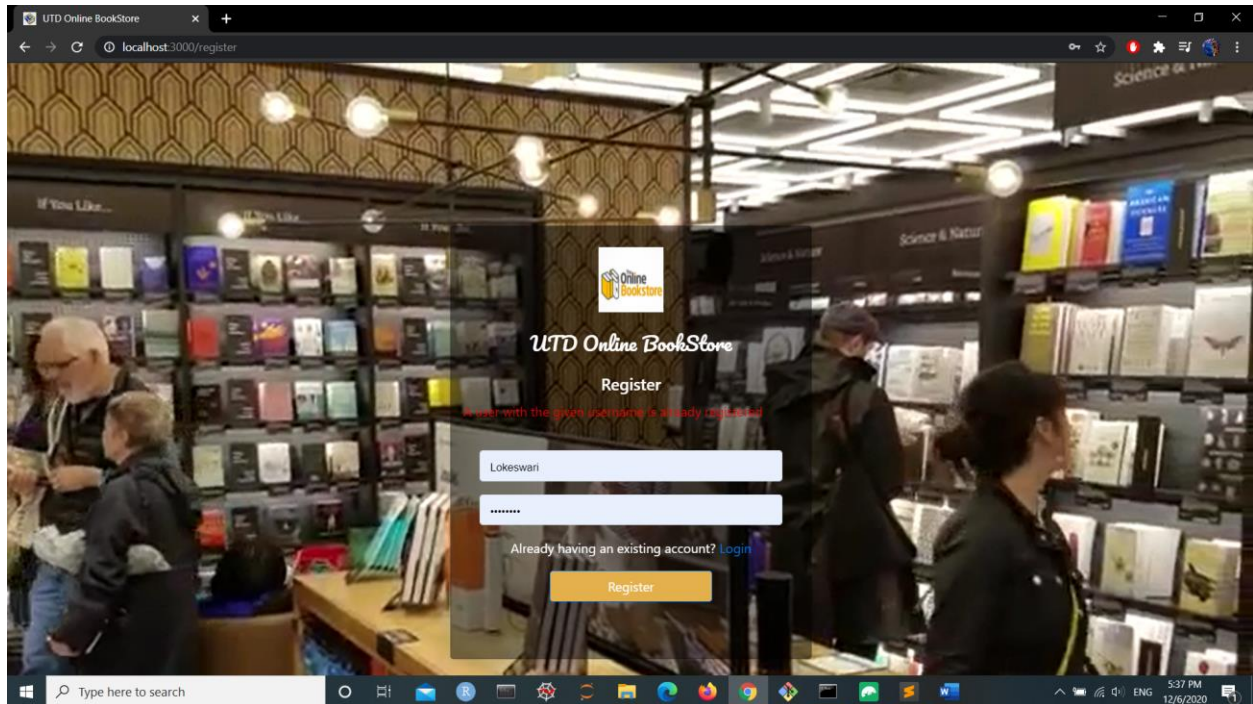
Home Page/Login Page



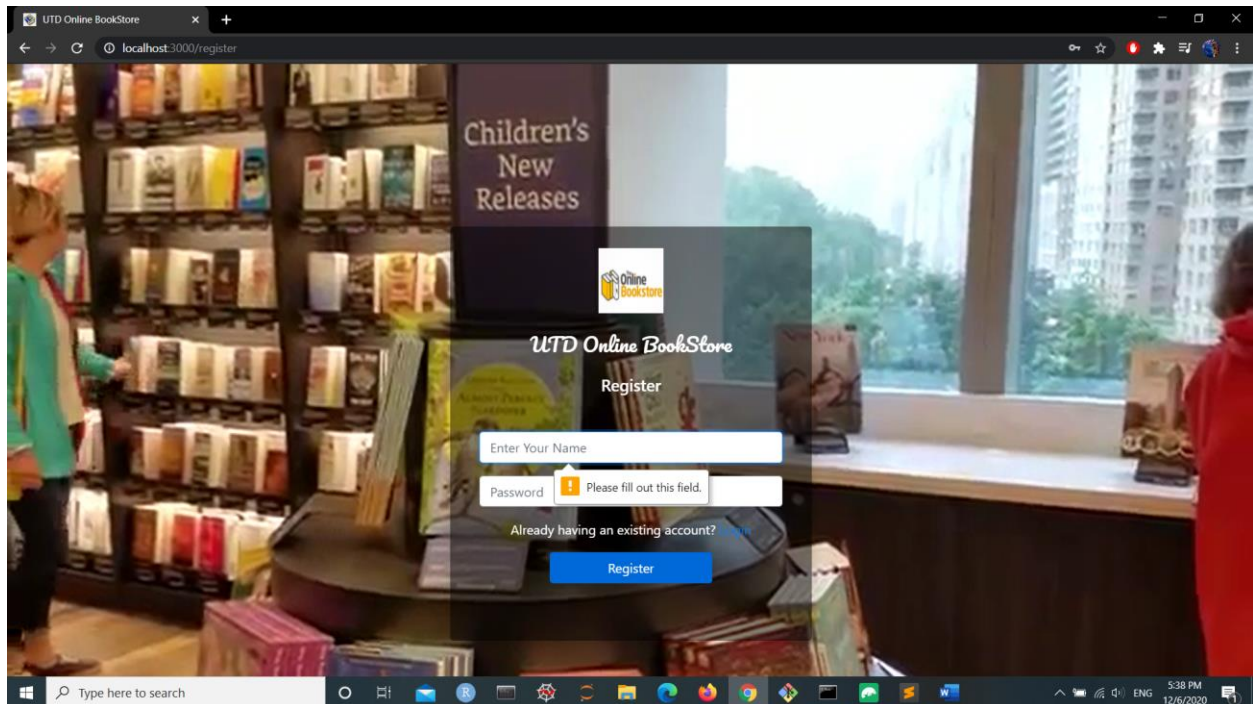
Register Page



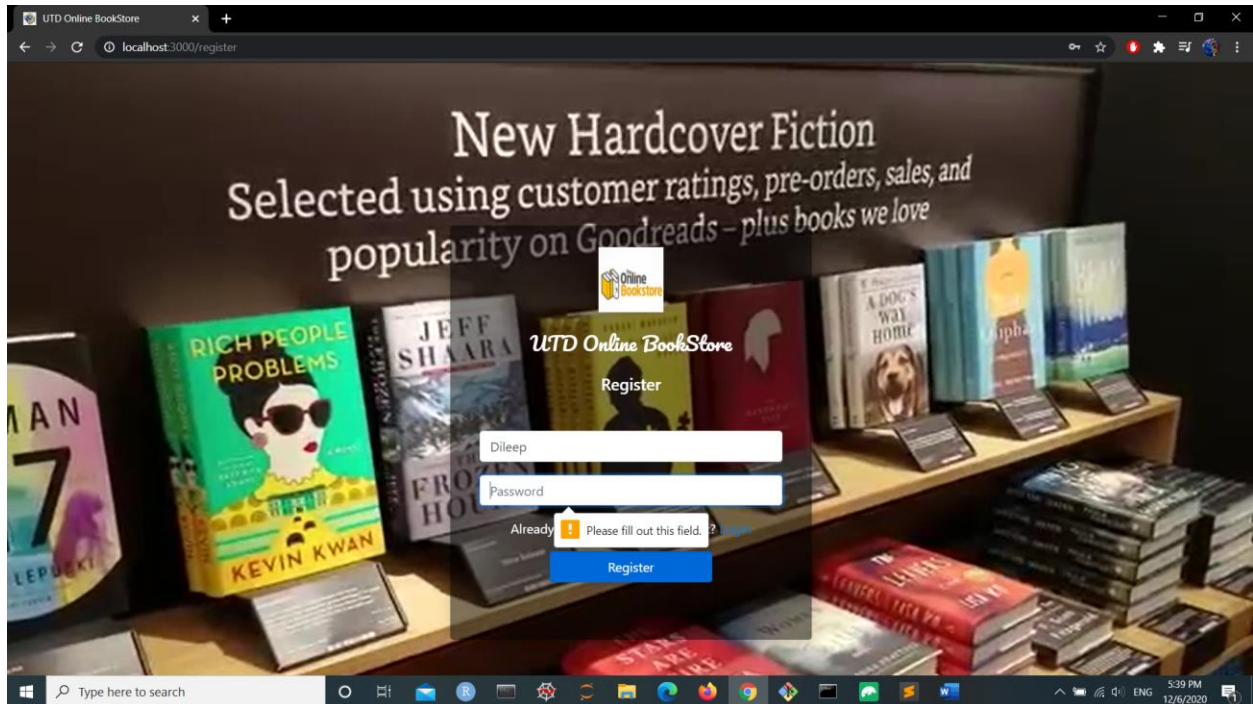
Register with Existing Username



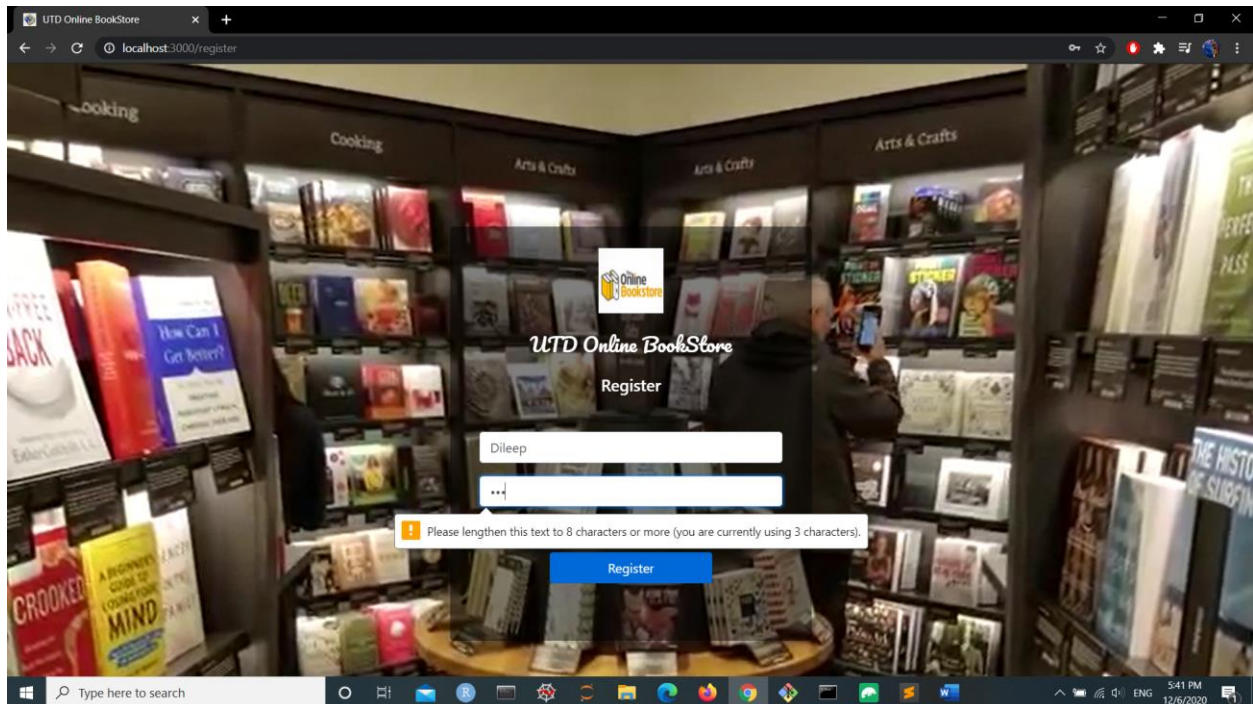
Validation for Empty Username



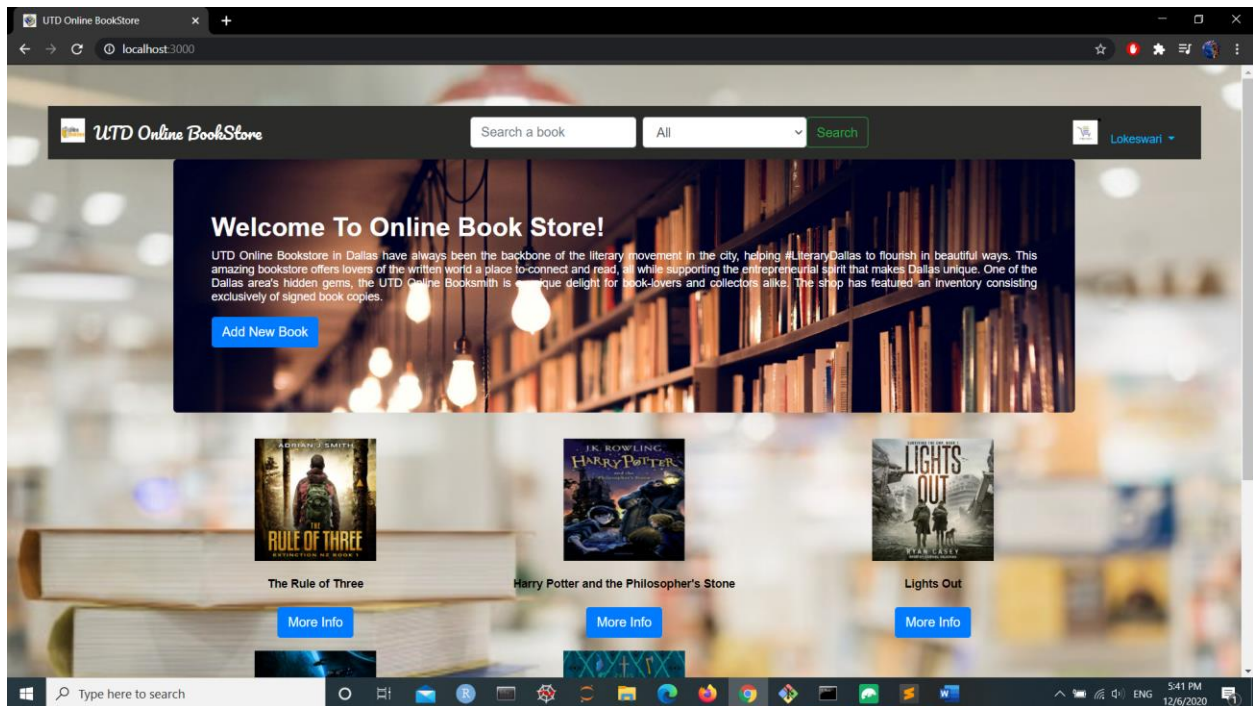
Validation for Empty Password



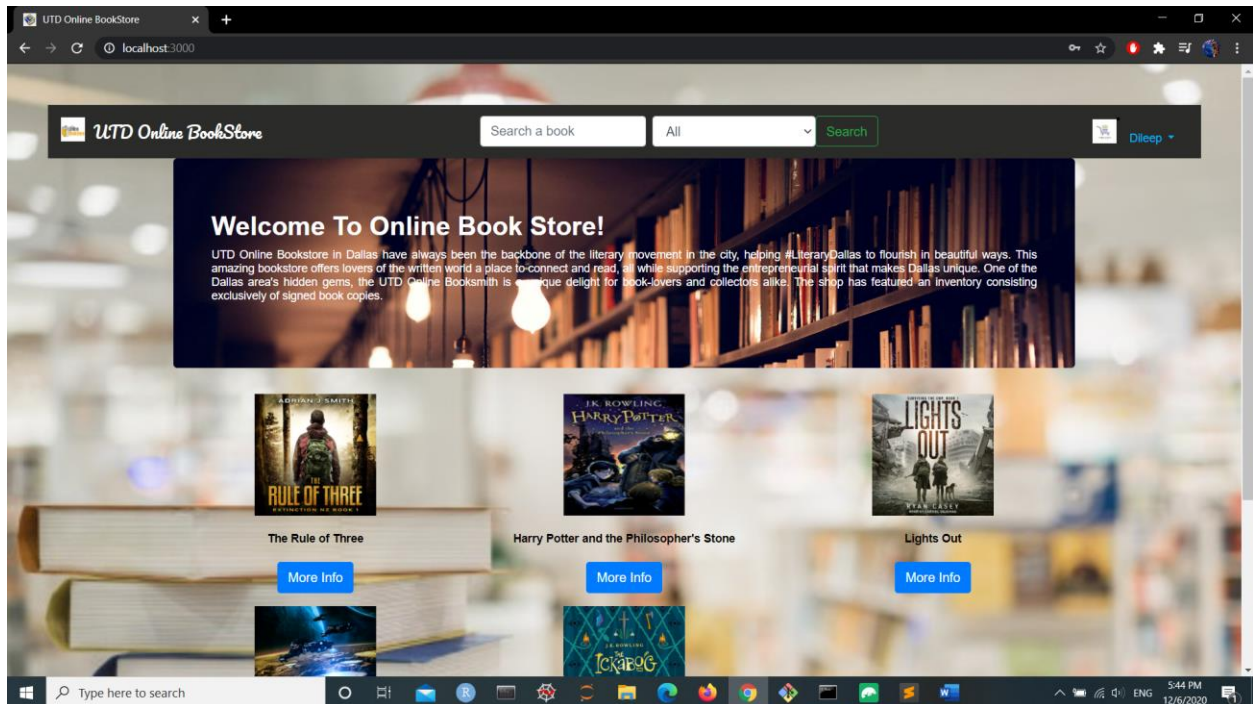
Validation for Password Length



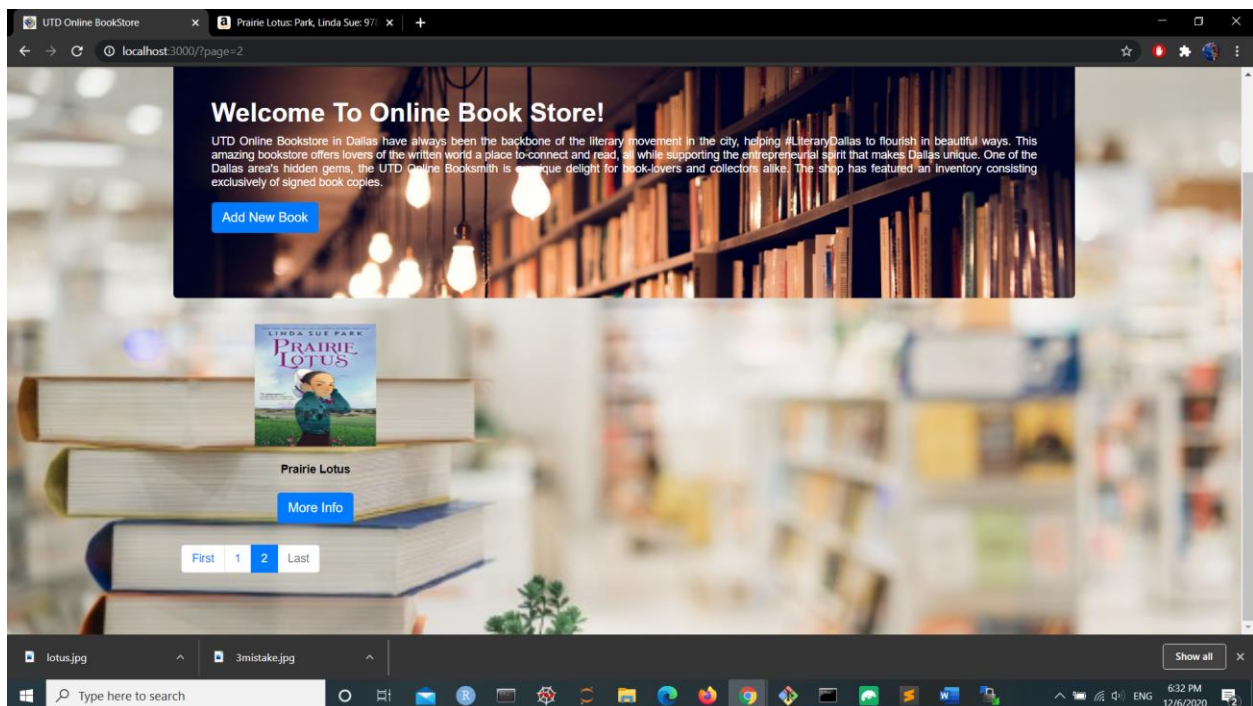
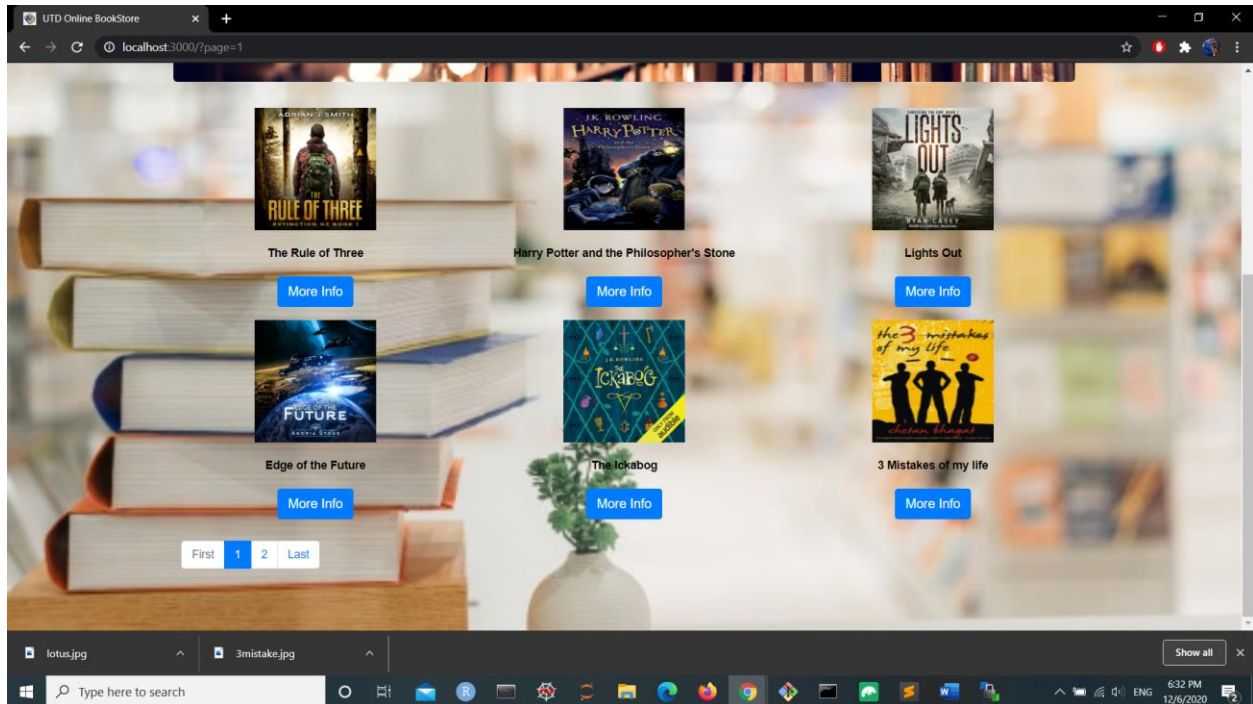
Index Page For Admin



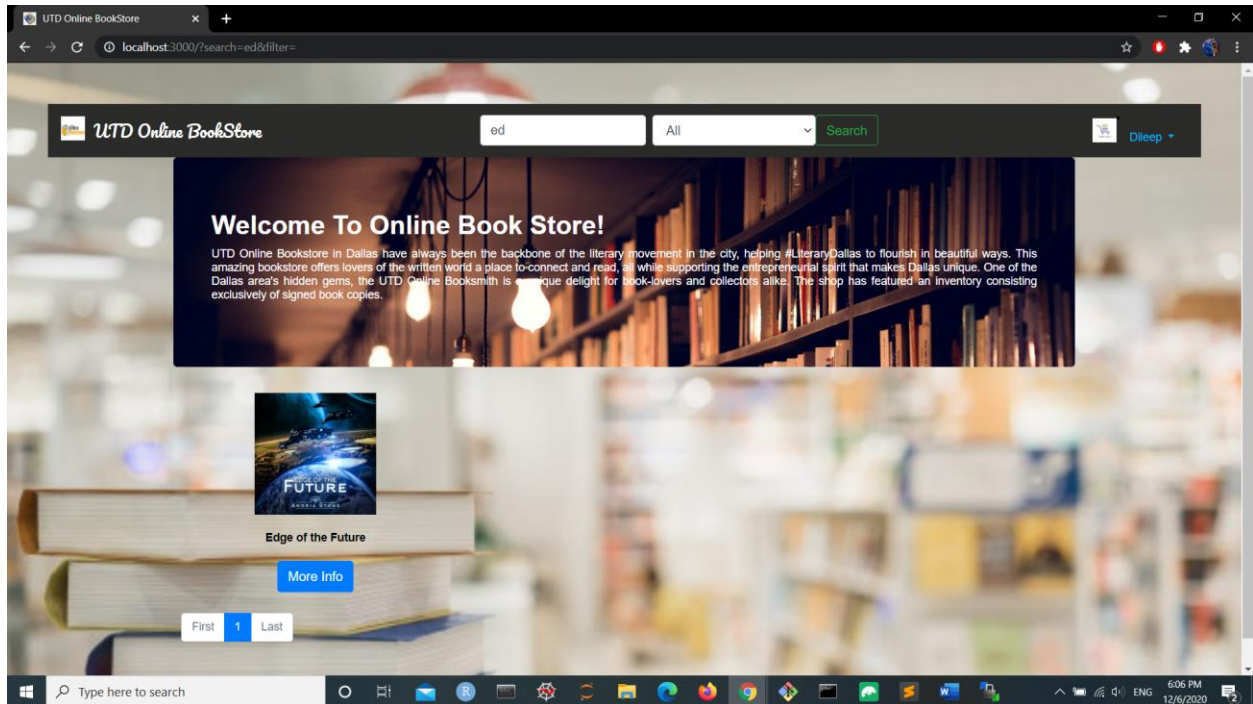
Index Page for Users



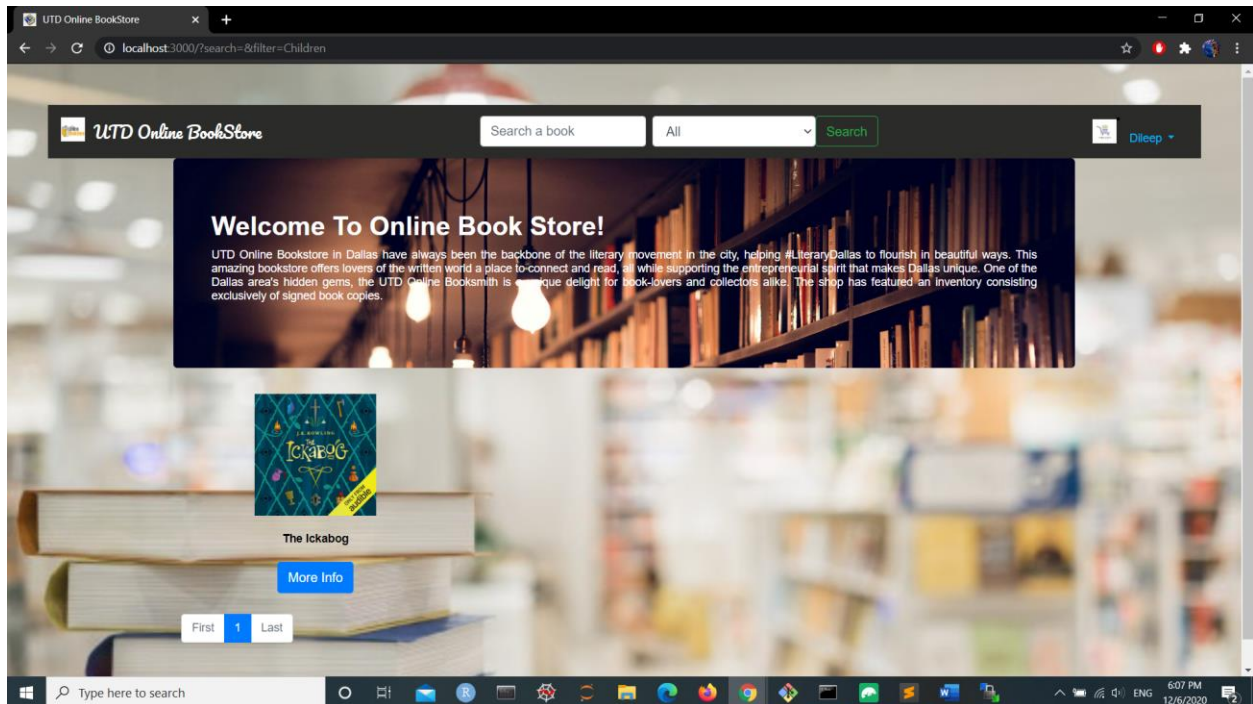
Pagination Functionality



Search Results



Filter Results



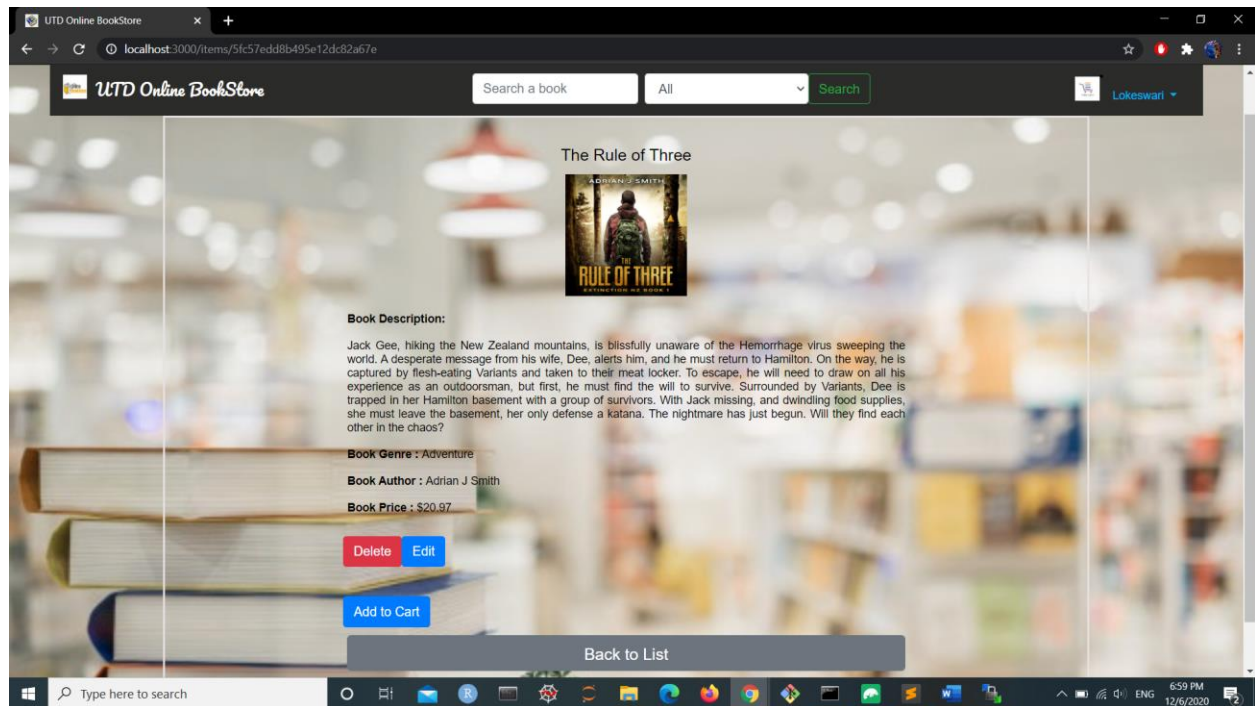
Admin Functionality - Add New Book

The screenshot shows a web browser window with the URL `localhost:3000/items/new`. The page header includes the 'UTD Online BookStore' logo, a search bar, a category dropdown set to 'All', and a 'Search' button. A user profile icon for 'Lokeswari' is in the top right. The main heading is 'Add a New Book'. The form contains the following fields: 'Title', 'Image', 'Description', 'Book Author', a category dropdown (set to 'All'), 'Price Currency (USD)', and 'Price Value'. At the bottom of the form are two buttons: a blue 'ADD!' button and a grey 'Back to List' button. The background of the page is a blurred image of a bookstore interior.

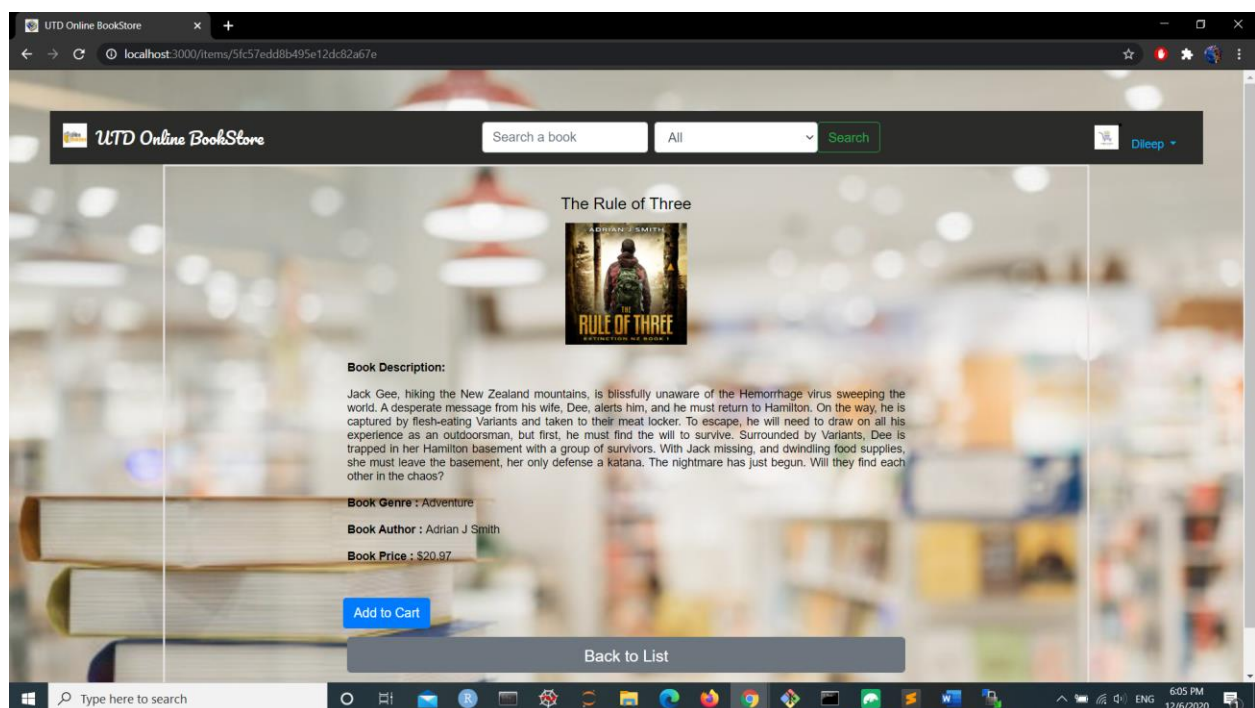
Admin Functionality – Edit An Existing Book

The screenshot shows a web browser window with the URL `localhost:3000/items/edit/5fc57f5ead234927588d2d7d`. The page header is identical to the previous screenshot. The main heading is 'Edit Book Details'. The form displays pre-filled information for an existing book: 'Harry Potter and the Philosopher's Stone' for the title, 'harrypotter.jpg' for the image, a description of Harry Potter, 'J. K. Rowling' for the author, 'Fantasy Genre' for the category, 'USD' for the currency, and '12' for the price. At the bottom of the form are two buttons: a blue 'EDIT!' button and a grey 'Cancel' button. The background is the same blurred bookstore image.

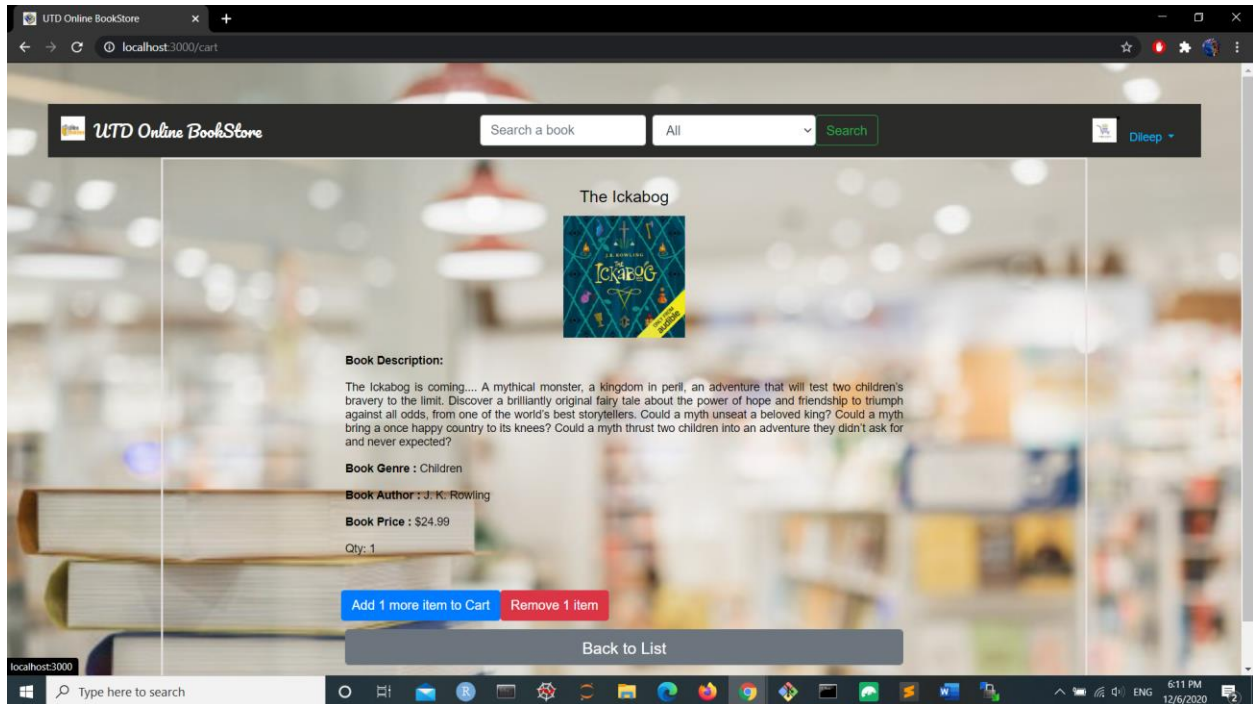
Details Page of Each Book For Admin



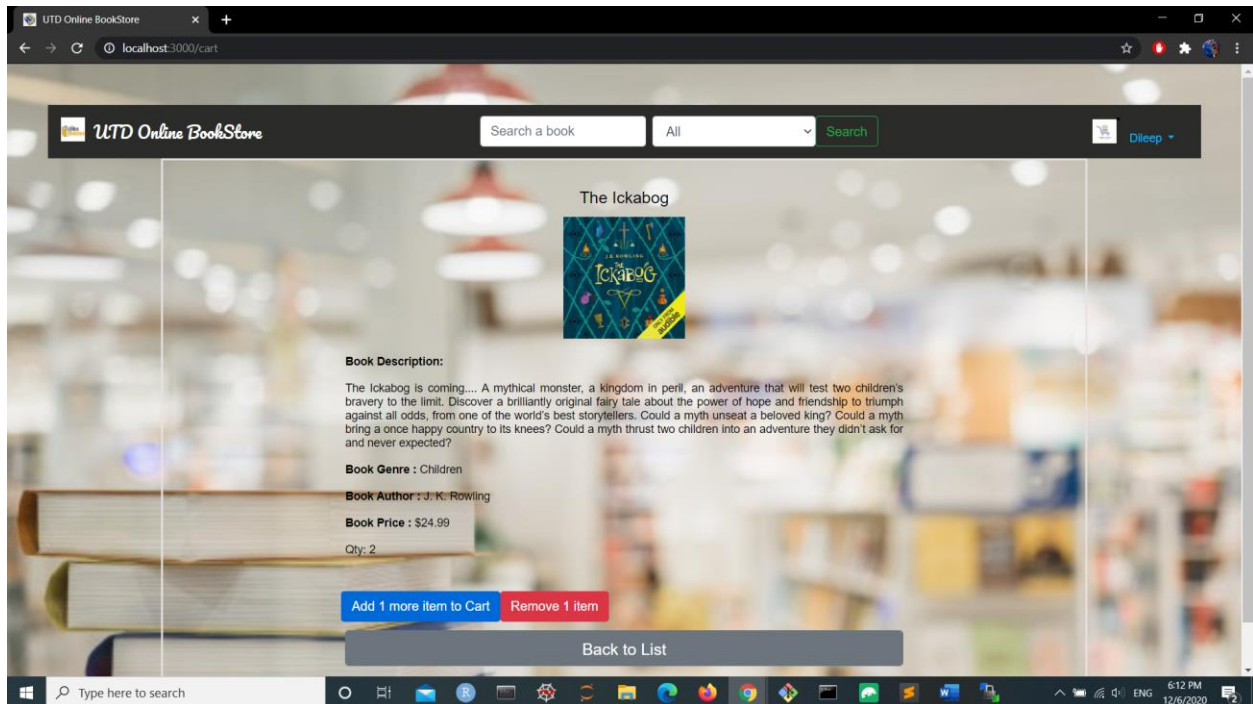
Details Page of Each Book for Users



Add a book to Cart



Add/Remove more quantity of the book



Cart Page

UTD Online BookStore


localhost:3000/cart

Search a book

All

Search

Deep



The Ickabog

Book Description: The Ickabog is coming.... A mythical monster, a kingdom in peril, an adventure that will test two children's bravery to the limit. Discover a brilliantly original fairy tale about the power of hope and friendship to triumph against all odds, from one of the world's best storytellers. Could a myth unseat a beloved king? Could a myth bring a once happy country to its knees? Could a myth thrust two children into an adventure they didn't ask for and never expected?


Author: J. K. Rowling

Book Genre: Children

Price: \$24.99

Qty: 2

Add to Cart - Plus One Quantity Remove 1 item



The Rule of Three

Book Description: Jack Gee, hiking the New Zealand mountains, is blissfully unaware of the Hemorrhage virus sweeping the world. A desperate message from his wife, Dee, alerts him, and he must return to Hamilton. On the way, he is captured by flesh-eating Variants and taken to their meat locker. To escape, he will need to draw on all his experience as an outdoorsman, but first, he must find the will to survive. Surrounded by Variants, Dee is trapped in her Hamilton basement with a group of survivors. With Jack missing, and dwindling food supplies, she must leave the basement, her only defense a katana. The nightmare has just begun. Will they find each other in the chaos?

Author: Adrian J. Smith

Book Genre: Adventure

Price: \$20.97

Qty: 1

Add to Cart - Plus One Quantity Remove 1 item

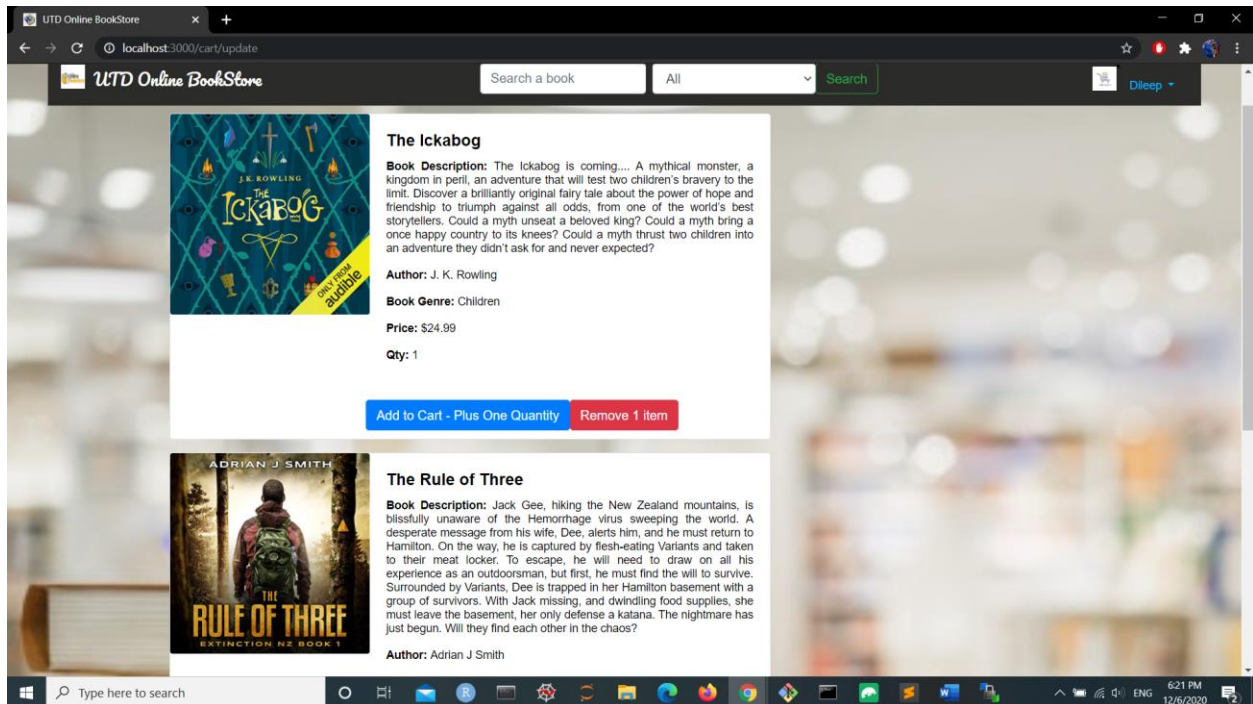
Total Price: \$70.95

Please select your Payment Method:

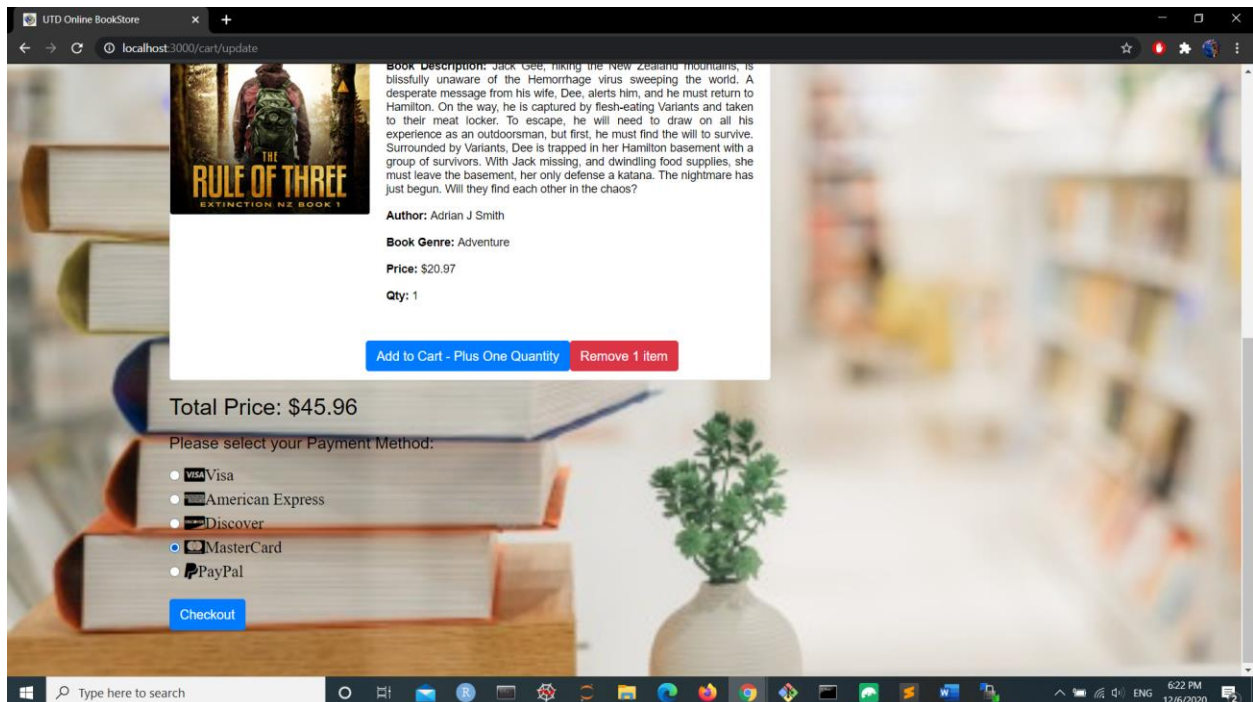
- ☐ Visa
- ☐ American Express
- ☐ Discover
- ☐ MasterCard
- ☐ PayPal

Checkout

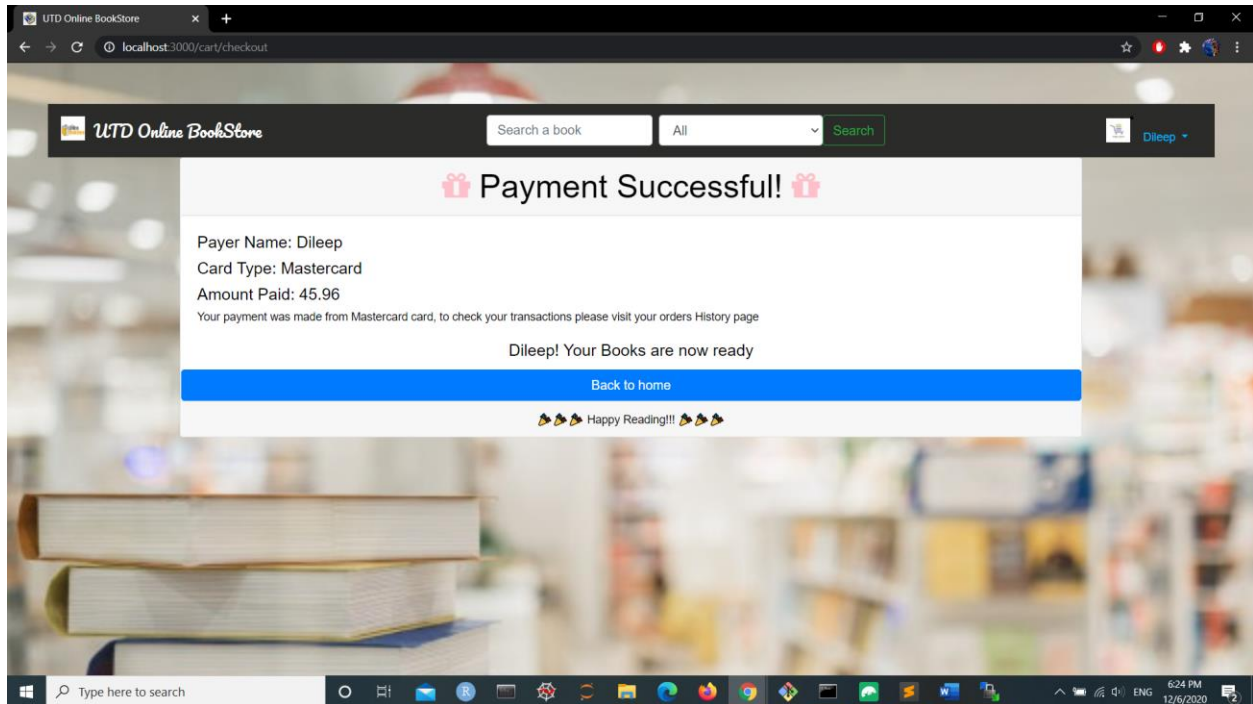
Update Items in Cart Page (Removed one quantity of The Ickabog book)



Proceed to Checkout Page by Selecting your card type



Checkout Page



Order History Page

