

Major Project Synopsis  
On  
**Evergreen BookStore Platform**  
BACHELOR IN TECHNOLOGY  
In  
COMPUTER SCIENCE AND ENGINEERING



University School of Information, Communication and Technology

(GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY)

**SUBMITTED TO:**

Dr. Jaspreeti Singh

(Assistant Professor)

USICT, GGSIPU

**SUBMITTED BY:**

Mohit Kumar

02116403217

(8<sup>th</sup> Semester)

# Mentor Approval Screenshot

—

✉

✕

↩ Reply

↩ Reply all

→ Forward

📁 Archive

🗑 Delete

⋮

**Re: Major Project Synopsis For The Approval**

JS

jaspreeti singh <jaspreeti\_singh@yahoo.com>

12:10 PM

✉

To: mohitkt2247@gmail.com

Approved fr submission.

Best wishes  
Dr. Jaspreeti Singh

[Sent from Yahoo Mail on Android](#)

On Wed, 5 May 2021 at 6:14 am, Mohit Kumar <mohitkt2247@gmail.com> wrote:

Kindly ma'am approve my Synopsis with a message stating that "title of synopsis is approved".

Name - Mohit Kumar  
E. No. - 02116403217

B. Tech CSE 8th Semester

## Declaration

I the undersigned solemnly declare that the Synopsys report “Evergreen BookStore Platform” is based on my own work carried out during the course of our study under the supervision of Dr. Jaspreeti Singh.

I assert the statements made and conclusions drawn are an outcome of my research work. I further certify that:

I. The work contained in the report is original and has been done by me under the general supervision of my supervisor.

II. The work has not been submitted to any other Institution for any other degree/diploma/certificate in this university or any other University of India or abroad.

III. I have followed the guidelines provided by the university in writing the report.

IV. Whenever I have used materials (data, theoretical analysis, and text) from other sources, we have given due credit to them in the text of the report and giving their details in the references.

A small, rectangular image showing a handwritten signature in black ink. The signature appears to be the name 'Mohit' written in a cursive style.

02116403217

# Problem Statement

Let suppose XYZ is a company that sells various kinds of paper books via its chain of several bookshops throughout the country. With the popularity of Internet and the current scenario of the pandemic situation (due to of the covid-19) customer's shopping habit has shifted to online and due to of the above reasons company sees a future opportunity to digitalize the entire process .The company's director board decides to expand its business to serve those online customers. A key strategy of its business movement is building a website (using Java technology and its framework) that allows their customers to order the books they want while sitting at home. The ordered books will be shipped to the customer's address in few days, and the customers pay cash upon receiving the books (Cash on Delivery or COD) also we will try to integrate complete online mode of payment methods so that everything is cashless or we can say to digitalize the entire process.

In the backend, the company needs to maintain a group of people who put book's information on the website and manages customer's information along with their orders.

## Requirements for Website's Front End

Customer can browse/search the online BookStore by category (e.g. Health, Success, Business, Programming, etc) or they can search books by providing a specific keyword e.g. 'success habits'. The customer can view basic information about a book like title, author, description, ISBN number, publish date and price (in USD). In addition, he or she can read reviews of other customers as well as average rating of a book, which can be ranged from 0 to 5 stars.

The website must provide a small image for each book, which is typically the front cover of the book. The customer can write a review for a book but he or she needs to login first. Then he or she needs to specify rating (from 0 to 5 stars) along with a short headline and more details in the comment. A customer can made only one review for a particular book. If the customer already made a review, the website will show that review if he or she tries to make a review again. Note that the customer can't edit the review they already made.

Before logging in, the customer must register an account by providing their personal information like full name, e-mail address, password, phone number, and the information required for shipping such as address, city, zip code and country. Then he or she can login by providing email and password.

The website lists all categories in the top menu, which allows the customer to browse books in a specific domain. On the home page, the customer can see the most recently published books (based on the publish date, not by the date on which the book is put onto the website). Then he can see the best-selling books (based on the number of orders have been made through the website), and the most favorite books (based on their rating and number of reviews).

When reading the details of a book, the customer can add the book to his shopping cart by hitting the button 'Add to Cart'. Then he/she can see her shopping cart listing all the books that have been added. Note that adding a book multiple times to the shopping cart will increase the quantity (number of copies). The shopping cart page allows the customer to edit the quantity, remove books and even empty the cart.

The information in shopping cart is maintained during the customer's session, which means that she can continue navigating the site before placing an order. The website also provides a menu that allows the customer to see her shopping cart quickly and for convenience, she doesn't have to login first to use the shopping cart.

To place an order after adding books into shopping carts, the customer needs to review all books in the cart (he/she can modify quantity or remove some books) before hitting 'Check Out'. The checkout process requires the customer to login. If not, he/she is redirected to the login page, and the site proceeds to the check out page upon successful login.

On the Check Out page, the customer can review the books he/she wants to order again, and confirm the shipping information. By default, the shipping information is filled with customer's registered information (name, phone, address, city, zip code and country). The customer can update this information if needed and this beginning stage, the website accepts only payment by COD (Cash on Delivery).

The customer clicks "Place Order" button to submit the order to the company's staff, and then he/she can check the order status via "My Orders" menu. The default status of an order is 'Processing' and only the company's staff can update the order status.

On the My Orders page, the customer can see all orders he/she made through the website. The most recent orders are shown first and he/she can click to see the details of each order. At this time, the customer can't edit their orders once they are submitted.

The website also allows the customer to view their registered information (profile details) and edit it. Note that the customer cannot change their registered e-mail address, and their password won't be changed if left blank in the edit form.

Also note that when the customer logs out, the information in their shopping cart is cleared.

At any time, the customer can search the books they want by typing a keyword in the search box at the top of the site. The search result shows books that have either title or description contain the specified keyword. The customer can add the book to cart directly in the search result.

## Requirements for Website's Back End

In the back end, the company hires a group of employees that are responsible to manage information for the website (they are called admin).

Generally the backend allows an admin to manage information about categories, books, customers, reviews and orders with fundamental operations like view items (listing and detail); create, update, and delete an item. But he or she cannot create new review or new order. In addition, an admin can create account for another admin user and of course, manage those users.

The admin can manage all categories that are used to classify the books on the website. The only information needed for a category is the category name. He cannot delete a category if it contains books. He can delete only empty one.

For putting a book onto the website, the admin can upload an image file that is used as the book's thumbnail. When editing a book, he can choose to update the thumbnail or not. And if

not, the old image is kept. Note that the admin cannot remove a book if there are reviews and orders on it.

For managing customers, customer's email is unique. He can change a customer's email, but not to another customer's email. And a customer cannot be deleted if he or she already made reviews or purchased books from the site.

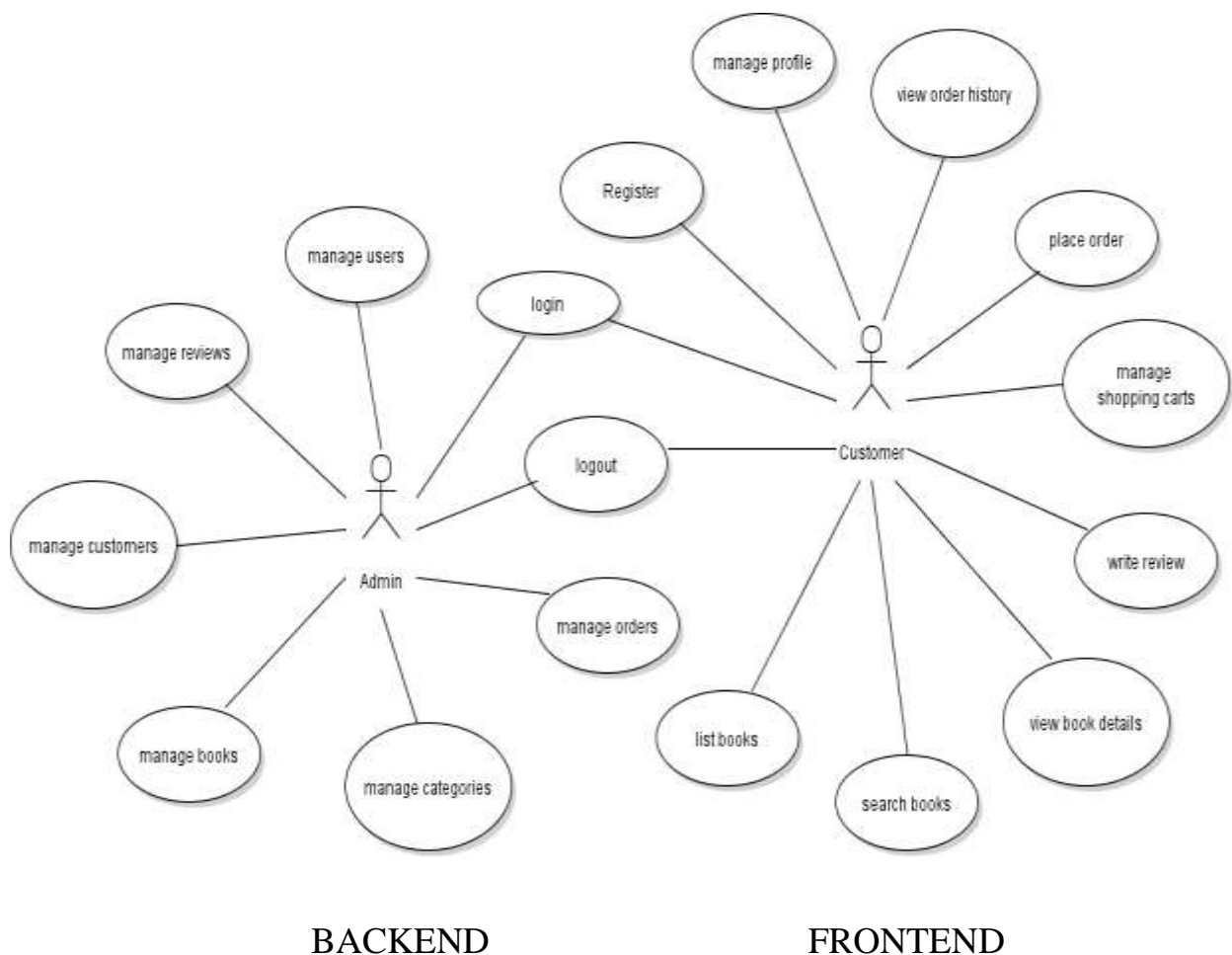
For managing reviews, the admin cannot create a new one. Only customer can write a review. The admin can edit the headline and comment, but not rating, book or customer. Of course he can delete any review if it is inappropriate or violates company's policy.

For managing orders, the admin can update shipping information and status of an order (there will be more options for payment method in future, but there's only one "Cash on Delivery" option at this stage). In addition, the admin can manage the books picked by the customer. He can update quantity, remove or even add other books to the order.

And lastly, an admin can create another admin user with information like email, full name and password. Then the new user can use his email and password to login to the backend for managing information.

An admin can also edit information and delete other admin users if needed.

## Use Case Diagram



# Data Requirements

## 1. Customer Information

Visitors need to register as a customer to be able to post reviews and place order. A customer must provide the following information:

- Full name: text, 8-30 characters
- E-mail address: text, 10 to 64 characters
- Password: text, 8 - 16 characters
- Phone Number: text, 10-15 characters
- Address: text, 10-128 characters
- City: text, 3-32 characters
- Zip Code: text, 3-24 characters
- Country: text, 3-64 characters

A customer uses his email and password to login to the site. In addition, the system automatically assigns a unique customer ID and sets the register date for a new customer.

## 2. Category Information

A category is used to group books in a specific domain. An admin supplies category name, and the system automatically assigns a unique ID for a new category.

- Category name: text, 5-30 characters

## 3. Book Information

When an admin puts a new book onto the website, he must enter the following information:

- Category
- Title: text, 10-128 characters
- Author: text, 5-64 characters
- Description: text, 200-2000 characters
- ISBN number: text, 10-15 characters
- Thumbnail image: image data
- Price: float number, e.g. 32.99
- Publish date: date

In addition, the system automatically creates a unique ID and sets the last update time for a new book.

## 4. Customer's Review Information

A customer must provide the following information when writing a review for a particular book:

- Rating: number, ranging from 1 to 5
- Headline: text, 20-128 characters
- Comment: 100-300 characters

In addition, the system automatically associates the book and the customer with the review, and assigns a unique ID.

## 5. Order's Information

When a customer places an order, he or she can update the shipping information as below:

- Recipient name: same as customer's full name
- Recipient phone: same as customer's phone
- Street address: same as customer's address
- City: same as customer's city
- Zip Code: same as customer's zip code
- Country: same as customer's country

By default, the website fills the shipping information with the information provided by the customer at registration. And of course the customer can change it, e.g. in case of he or she wants to ship the books to different address.

Shipping address = Street address + City + Zip Code + Country

For each book added to the order, the customer must specify quantity (number of copies), and the website automatically calculates the subtotal for each book and the total for the whole order.

- quantity: integer number
- subtotal: float number
- total: float number

The system sets "Processing" status for every new order. The admin then can update this status to one of the following values: Shipping, Delivered, Completed, and Cancelled. The system also records the date and time when the order is placed.

- order status: text, 5-20 characters
- payment method: 5-20 characters

## 6. Admin's Information

An admin can create another admin user by providing the following information for a new user:

- E-mail address: text, 10 to 64 characters
- Full name: text, 8-30 characters
- Password: text, 8 - 16 characters

The system automatically assigns a unique ID for every new user.



## Software Requirements

- Java JDK version 8.
- Eclipse IDE (Integrated Development Environment).
- Apache Tomcat 9 Server.

## Pre-requisites

- Have basic knowledge in Java, JSP, Servlet and Hibernate.
- A little knowledge about HTML, CSS, Javascript and jQuery.

## BookStore Platform Breif Overview

# Program a complete e-commerce website that sells books using Java, Servlet, JSP and Hibernate framework.

# Build a Bookstore website that allows the customer to browse books, view details, search books, write reviews and register account and purchase books.

# PayPal payment integration (including credit card payment).

# Build the admin panel that allows managers to manage books, customers, reviews and orders.

# Use Hibernate framework with JPA for the data access layer.

# Use Java Servlet for the controller layer.

# Use JSP and JSTL for the view layer.

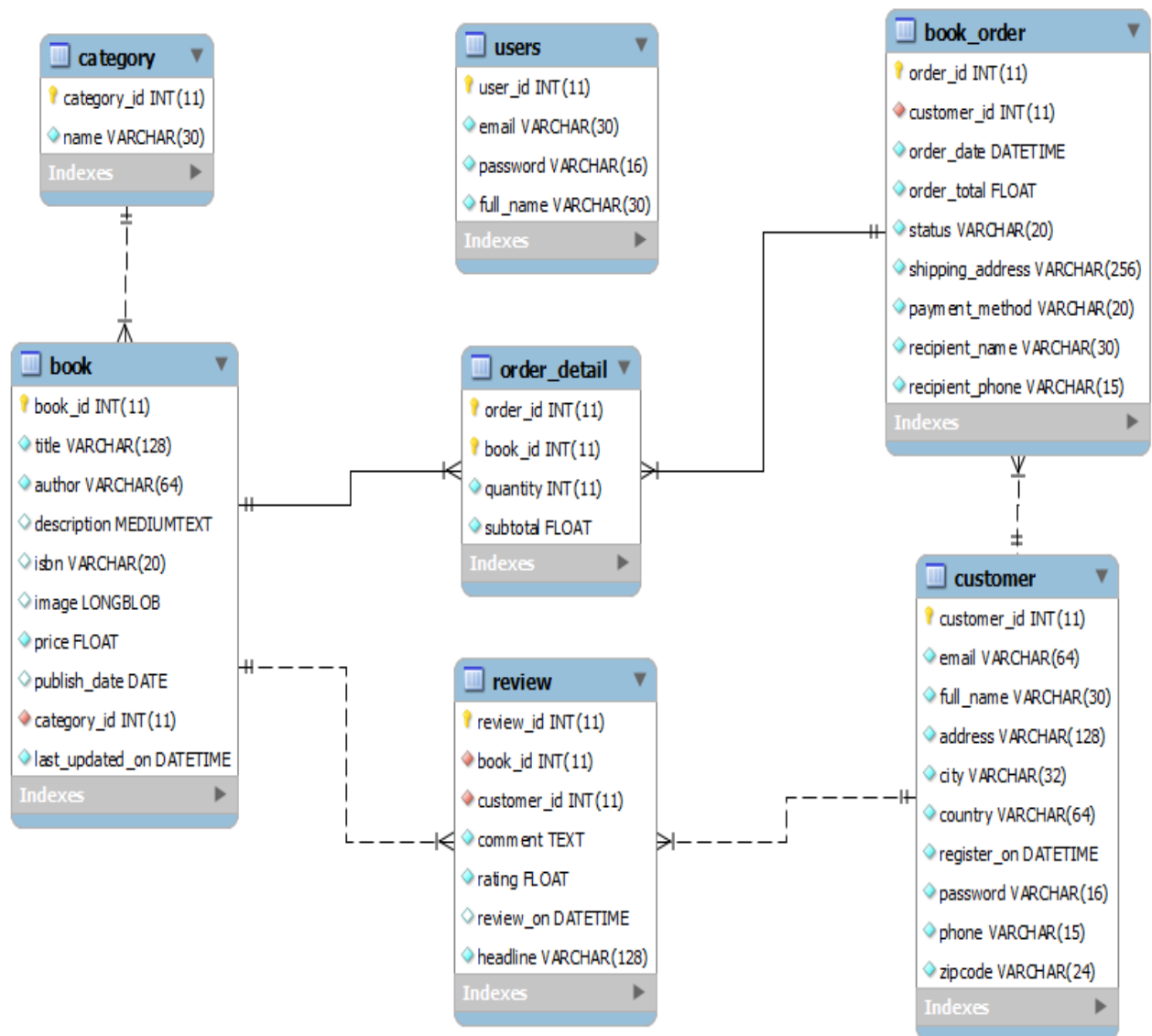
# Use HTML, CSS, Javascript and jQuery for the view layer.

# Design and manage Database with MySQL.

# Code unit tests with Junit.

# Package and Deploy the website with Tomcat server.

# Entity Relationship Diagram



## Gantt Table

Task	Start Date	End Date	Duration
Requirement Analysis	1st May 2021	5 <sup>th</sup> May 2021	5 days
Design	6 <sup>th</sup> May 2021	12 <sup>th</sup> May 2021	7 days
Setup Software Programs	13 <sup>th</sup> May 2021	14 <sup>th</sup> May 2021	2 days
Create Database	15 <sup>th</sup> May 2021	21 <sup>th</sup> May 2021	7 days
Coding Phase (frontend and backend part)	22 <sup>nd</sup> May 2021	11 <sup>th</sup> June 2021	21 days
Code Review	12 <sup>th</sup> June 2021	16 <sup>th</sup> June 2021	5 days
Testing	17 <sup>th</sup> June 2021	23 <sup>rd</sup> June 2021	7 days
Final Evaluation of Project	24 <sup>th</sup> June 2021	30 <sup>th</sup> June 2021	7 days
Final Report and Documentations	1 <sup>st</sup> July 2021	6 <sup>th</sup> July 2021	7 days