**A**

**Project Report**

**ON**

**Evergreen Bookstore Website**

**Submitted to**

**Savitribai Phule Pune University**

**In Partial Fulfillment of**

**Master of Computer Application (MCA)**

**Submitted by**

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**Under the Guidance of**

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**CERTIFICATE**

**This is to certify that the summer internship project titled “Evergreen Bookstore Website.” an academic work done by “Aakanksha Avadhut Mujumdar” II Year Student, submitted in partial fulfilment of the requirement for the award of the degree of Master of Computer Application (MCA) from Savitribai Phule Pune University, Pune. This is an original work done by him/her**

**This work is not submitted earlier in part of full to this or any other institute / University for any degree / diploma**

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| **Project Guide** | **HOD** | **Director**  **DYPCMR** |

Date: -

Place: -

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**Aakanksha Avadhut Mujumdar**

**Company Certificate**

# Declaration by Student

I, **Aakanksha Avadhut Mujumdar** the undersigned solemnly declare that the project report is based on my own work carried out during the course of **“Master in Computer Applications”** study under the supervision of **Prof. Prajali Patil** I assert the statements made and conclusions drawn are an outcome of my work. I further certify that

1. The work contained in the report is original and has been done by me under the general supervision of my supervisor.
2. 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.
3. I have followed the guidelines provided by the SPPU University while writing the report.

**Aakanksha Avadhut Mujumdar**

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**INTRODUCTION**

* 1. **Company Profile**
  2. **Introduction of the Project :**

Discover a world of literary wonders at Evergreen Book Store, where technology meets literature to create an immersive and seamless reading experience. Oure website is meticulously crafted using Java technologies such as Spring Boot, Hibernate, Servlets, and JSP, supported by the power of JSTL (JavaServer Pages Standard Tag Library). This robust technological foundation ensures a smooth and efficient browsing experience for book enthusiast.

At Evergreen Book Store, we invite you to explore a diverse collection of literary treasures, engage with a user-friendly interface, and enjoy the seamless integration of technology and literature. Weather you are casual reader or a dedicated bookworm, our platform is designed to enhance your reading journey and make discovering new books a delightful experience.

**Embark on literary adventure with Evergreen Book Store - Where every page turns into a new Chapter of discovery!**

**OBJECTIVES**

1. **Enhance User Experience:** The primary objective of the Evergreen Book Store is to provide users with a seamless and enjoyable online shopping experience. This involves creating an intuitive and user-friendly interface that allows customers to easily navigate through the website, discover new books, and make hassle-free purchases. Features such as personalized recommendations, user reviews, and efficient search functionality contribute to an enhanced user experience.

**Efficient Book Management and Ordering:** Another key objective is to streamline the management of the book catalogue and ordering process. The website should provide administrators with a robust backend system, powered by technologies like Spring Boot and Hibernate, to efficiently manage book details, inventory, and order processing. This includes real-time updates on stock levels, secure payment processing, and order tracking to ensure timely delivery of purchased books.

* 1. **Existing System and Need for System**

**1.3.1 Overview**

The existing system of Evergreen Bookstore comprises a Java-based web application developed using JSP, Servlet, HTML, CSS, JavaScript, jQuery, and JSP Standard Tag Library (JSTL). The system utilizes a MySQL database for storing data related to books, customers, orders, and transactions.

**1.3.2 Components**

**1. Frontend components:**

* **HTML**: Provides the structure of web pages.
* **CSS**: Styles the HTML elements for better presentation.
* **JavaScript**: Adds interactivity to the web pages.
* **jQuery**: Simplifies DOM manipulation and AJAX requests.

**2. Backend Components:**

* **Java:** Core programming language for server-side logic.
* **JSP** **(JavaServer Pages):** Dynamic web pages with Java code embedded within HTML.
* **Servlet**: Handles client requests, processes data, and generates responses.
* **JSTL** **(JavaServer Pages Standard Tag Library):** Provides a set of tags for JSP to simplify web development.

**3.Database:**

* **MySQL:** Relational database management system (RDBMS) used for data storage.

**1.3.3 Functionality**

The existing system facilitates the following functionalities:

* User authentication and authorization.
* Browse books by category, author, or title.
* Search functionality for finding specific books.
* Add books to the shopping cart.
* View and manage the shopping cart.
* Place orders and complete transactions.
* Admin functionalities such as managing inventory, adding new books.

**1.3 Need For System**

**1.3.1 Business Requirements:**

* **Enhanced User Experience:** Improve the user interface for a more intuitive and engaging shopping experience.
* **Scalability:** Design a scalable architecture to accommodate a growing number of users and transactions.
* **Mobile Compatibility:** Ensure compatibility across various devices, including smartphones and tablets.
* **Security:** Implement robust security measures to safeguard customer data and prevent security breaches.
* **Performance Optimization:** Optimize system performance to minimize response times and enhance overall efficiency.

**1.3.2 Technical Requirements:**

* **Modernized Technology Stack:** Update technology stack to leverage modern frameworks and libraries for improved development efficiency and maintainability.
* **API Integration**: Integrate with third-party APIs for features such as payment processing, shipping, and book recommendations.
* **Automated Testing:** Implement automated testing frameworks to ensure software quality and reduce the risk of regressions.
* **Documentation:**Maintain comprehensive documentation covering system architecture, APIs, database schema, and deployment procedures for ease of maintenance and future enhancements.
  1. **Scope of System**
     1. **Enhanced User Experience**
* Design an intuitive and visually appealing user interface (UI) to facilitate easy navigation and seamless browsing of books.
* Implement features such as advanced search, book recommendations, and personalized user recommendations to enhance user engagement.
* Optimize the shopping cart and checkout process for a smooth and frictionless purchasing experience.
  + 1. **Scalability**
* Architect a scalable system capable of handling a large number of concurrent users and a growing volume of transactions.
* Employ cloud-based infrastructure and distributed computing techniques to accommodate increased load and ensure high availability.
  + 1. **Mobile Compatibility**
* Develop a responsive design that adapts to various screen sizes and resolutions, ensuring a consistent user experience across desktop and mobile devices.
* Utilize mobile-first design principles to prioritize mobile usability and performance.

**1.4.4 Security:**

* Implement robust security measures to protect sensitive user data, including encryption of data in transit and at rest.
* Guard against common security threats such as SQL injection, cross-site scripting (XSS), and cross-site request forgery (CSRF).
* Enforce proper authentication and authorization mechanisms to control access to sensitive functionalities and data.

**1.4.5 Performance Optimization:**

* + Optimize front-end and back-end performance to minimize page load times and response times.
  + Utilize caching mechanisms, CDN (Content Delivery Network) integration, and efficient database queries to improve overall system performance.
  1. **Operating Environment – Hardware and Software**
* **Hardware Requirements:**
* Processor 🡺 Intel Core i3
* Hard Disk 🡺 512GB
* RAM 🡺 04GB
* **Software Requirements:**
* Operating System 🡺 Windows 7 or Later
* Frontend 🡺 Html, CSS, Js, jQuery, Bootstrap
* Backend 🡺 Servlet, MySQL, JSP, JSTL, Hibernate
* Tools/ IDE 🡺 Eclipse
  1. **Module Description**

1. **Users:**
   * **Description:** This table stores information about users who have accounts on the Evergreen Bookstore platform.
   * **Columns:**
     + **user\_id:** Unique identifier for each user.
     + **email**: Email address of the user.
     + **password:** Password associated with the user's account**.**
     + **full\_name:** Full name of the user.
   * **Purpose:** The Users module manages user authentication and authorization, allowing users to log in, register, and update their account information.
2. **Category:**
   * **Description:** This table holds information about different categories or genres of books available in the bookstore.
   * **Columns:**
     + **category\_id**: Unique identifier for each category.
     + **name**: Name of the category (e.g., Fiction, Non-fiction, Mystery, Romance, etc.).
   * **Purpose:** The Category module categorizes books based on their genre or subject matter, facilitating organized browsing and search functionalities.
3. **Book:**
   * **Description:** This table contains details about individual books available for purchase in the bookstore.
   * **Columns:**
     + **book\_id**: Unique identifier for each book.
     + **title**: Title of the book.
     + **author**: Author of the book.
     + **description**: Description or summary of the book.
     + **isbn**: International Standard Book Number (ISBN) of the book.
     + **image**: Image of the book cover (stored as a blob).
     + **price**: Price of the book.
     + **publish\_date**: Date when the book was published.
     + **last\_update\_time**: Timestamp indicating the last update time of the book record.
     + **category\_id**: Foreign key referencing the category to which the book belongs.
   * **Purpose:** The Book module manages information about books available for purchase,enabling users to browse, search, and view detailed information about each book.
4. **Customer:**
   * **Description:** This table stores details about customers who have registered accounts on the Evergreen Bookstore platform.
   * **Columns:**
     + **customer\_id**: Unique identifier for each customer.
     + **email**: Email address of the customer.
     + **fullname**: Full name of the customer.
     + **address**: Address of the customer.
     + **city**: City where the customer resides.
     + **country**: Country where the customer resides.
     + **phone**: Phone number of the customer.
     + **zipcode**: Zip code of the customer's location.
     + **password**: Password associated with the customer's account.
     + **register\_date**: Date when the customer registered on the platform.
   * **Purpose:** The Customer module manages customer accounts and details, including registration, profile updates, and order history.
5. **Review:**
   * **Description:** This table records reviews submitted by customers for individual books.
   * **Columns:**
     + **review\_id**: Unique identifier for each review.
     + **book\_id**: Foreign key referencing the book being reviewed.
     + **customer\_id**: Foreign key referencing the customer who submitted the review.
     + **rating**: Rating given by the customer (e.g., on a scale of 1 to 5).
     + **headline**: Headline or title of the review.
     + **comment**: Textual comment or review content.
     + **review\_time**: Timestamp indicating when the review was submitted.
   * **Purpose:** The Review module allows customers to share their opinions and ratings for books, providing valuable feedback to other users and influencing purchasing decisions.
6. **Book Order:**
   * **Description:** This table stores information about orders placed by customers.
   * **Columns:**
     + **order\_id**: Unique identifier for each order.
     + **customer\_id**: Foreign key referencing the customer who placed the order.
     + **order\_date**: Date and time when the order was placed.
     + **shipping\_address**: Shipping address for the order.
     + **recipient\_name**: Name of the recipient who will receive the order.
     + **recipient\_phone**: Phone number of the recipient.
     + **payment\_method**: Payment method used for the order.
     + **total**: Total amount of the order.
     + **status**: Current status of the order (e.g., Pending, Shipped, Delivered).
   * **Purpose:** The Book Order module manages the ordering process, including order placement, payment processing, and order status tracking.
7. **Order Detail:**
   * **Description:** This table stores details about individual book items included in each order.
   * **Columns:**
     + **order\_id**: Foreign key referencing the order to which the item belongs.
     + **book\_id**: Foreign key referencing the book being ordered.
     + **quantity**: Quantity of the book item ordered.
     + **subtotal**: Subtotal amount for the book item (price multiplied by quantity).
   * **Purpose:** The Order Detail module maintains a record of book items included in each order, facilitating order fulfillment and inventory management.

* 1. **Brief Description Of Technology Used**

**1.7.1 Operating systems used (Windows)**

**Overview**

Windows is a widely-used operating system developed by Microsoft Corporation. It provides a graphical user interface (GUI) and a wide range of features and functionalities suitable for both personal and professional use. Windows offers various editions tailored to different user needs, including home users, businesses, and enterprises.

**Key Features**

* **Graphical User Interface (GUI):** Windows features a user-friendly interface with icons, windows, menus, and buttons, making it easy for users to interact with the system.
* **Multitasking:** Windows supports multitasking, allowing users to run multiple applications simultaneously and switch between them seamlessly.
* **File Management:** Windows includes a built-in file explorer for managing files and folders, organizing data, and performing file operations such as copying, moving, and deleting.
* **Security:** Windows provides built-in security features such as Windows Defender antivirus, Windows Firewall, and User Account Control (UAC) to protect against malware, viruses, and unauthorized access.
* **Networking:** Windows supports networking capabilities for connecting to local networks, the internet, and other devices. It includes features such as Wi-Fi connectivity, Ethernet support, and network sharing options.
* **Device Support:** Windows offers broad hardware compatibility, supporting a wide range of devices including desktops, laptops, tablets, and peripherals such as printers, scanners, and external storage devices.
* **Productivity Tools:** Windows includes a suite of productivity applications such as Microsoft Office (Word, Excel, PowerPoint), web browsers (Microsoft Edge), email client (Outlook), and multimedia software (Windows Media Player).
* **Updates and Support:** Windows receives regular updates and patches to improve performance, fix security vulnerabilities, and add new features. Microsoft provides technical support and assistance for Windows users through online resources, forums, and customer service channels.

**1.7.2 Technology Description**

**1. HTML (Hypertext Markup Language)**

**Description:** HTML is the standard markup language used to create the structure and content of web pages. It defines the layout and elements of a web page using tags and attributes.

**2. CSS (Cascading Style Sheets)**

**Description:** CSS is a style sheet language used to define the presentation and appearance of HTML elements on a web page. It allows developers to customize the layout, colors, fonts, and other visual aspects of the content.

**3. JavaScript (JS)**

**Description:** JavaScript is a programming language commonly used for adding interactivity and dynamic behavior to web pages. It enables developers to manipulate HTML elements, handle events, and perform client-side scripting tasks.

**4. jQuery**

**Description:** jQuery is a fast, lightweight JavaScript library that simplifies the process of traversing and manipulating HTML documents, handling events, and adding animations and effects to web pages. It provides a concise and efficient way to write JavaScript code.

**5. Bootstrap**

**Description:** Bootstrap is a popular front-end framework that provides a collection of pre-designed HTML, CSS, and JavaScript components, as well as responsive layout templates. It allows developers to create responsive and mobile-friendly web interfaces with minimal effort.

**6.Servlet**

**Description:** Servlets are Java-based server-side components that handle requests and generate dynamic responses in Java web applications. They run on the server and interact with client requests, processing data, and invoking business logic.

**7. MySQL**

**Description**: MySQL is an open-source relational database management system (RDBMS) that stores and manages structured data. It provides a reliable and scalable platform for storing application data and supports SQL queries for data manipulation and retrieval.

**8. JSP (JavaServer Pages)**

**Description:** JSP is a technology used for creating dynamic web pages in Java web applications. It allows developers to embed Java code within HTML pages, enabling the generation of dynamic content based on server-side logic and data.

**9. JSTL (JavaServer Pages Standard Tag Library)**

**Description:** JSTL is a set of custom tags provided by JavaServer Pages (JSP) technology for performing common tasks such as iteration, conditionals, formatting, and internationalization. It simplifies JSP development by providing reusable tags for common tasks.

**10. Hibernate**

**Description:** Hibernate is an object-relational mapping (ORM) framework for Java applications, used to map Java objects to relational database tables and vice versa. It simplifies database interaction by providing a high-level abstraction layer and handling database operations transparently.

**2.PROPOSED SYSTEM**