PARSHVANATH CHARITABLE TRUST'S

A.P. Shah Institute of Technology

Thane, 400615

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Department of Computer Engineering

CSL605 SKILL BASED LAB COURSE: CLOUD COMPUTING

Mini Project Report

- **Title of Project** : **BookStore System On AWS Cloud**
- **Year and Semester** : **T.E. (Sem VI)**
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Chapter 1

Abstract

The main purpose of a Book-store Management System is to focus on the solution of all the problems related to the paperwork for different reasons. It provides a facility to handle all the activities in one place. With the help of this application, the admin can perform different kinds of operations at the same time and place. Bookstore management System has the ability to keep records safe related to Books. We provide the best service on our website or focus on user choice. We will improve the new feat so users can easily understand and trust our system.The BookStore System is a web-based application that aims to manage book inventory.
The platform is built using modern web technologies and is deployed on the Amazon Web Services (AWS) cloud. By utilizing the AWS cloud, the platform can easily scale up or down based on traffic, and ensure
high availability and reliabilityAdditionally, the platform is designed to be scalable and reliable, with features such as load balancing, auto-scaling, and database backups, ensuring that the platform is always available to users.This ensures that all communication between users is encrypted and secure, protecting users' privacy and preventing any unauthorized access to the platform .This system utilizes technology to store and manage Book details, book records, and updates the genre regarding the different types of the books .The website serves as a central repository for books inventory information, allowing users and admin to easily access and update records.Additionally, the system provides real-time information, reducing the risk of equipment breakdown and optimizing laboratory operations. Overall, the Bookstore system is a valuable tool for improving book purchasing experience for the users and which would save time and also users can easily navigate through various books. Deploying the platform on AWS cloud provides an opportunity for individuals to gain valuable experience in cloud computing and DevOps methodologies, making it a great project for those interested in the field.

Keywords : BookStore System, Amazon Web Services (AWS), cloud computing, reliability, security, EC2 instances, security groups

Chapter 2

Introduction

The BookStore System is to automate all operations in a bookshop which includes the Order Processing, Stock Management and Accounts Management.
The purpose of the BookStore System is to manage the books in the bookstore. Generally, it includes the Order Processing, Stock Management and Accounts Management.We developed this software to maintains records of sales, purchase and staff records. Here we are try to develop such type system which is provide the automation on the any type of the bookshop. That means a shop which has the type system which provides the facility to the customers of the shop to purchase the books from the shop without any complexity.

At the start of the business, the books store owner buys the book from the dealers. All the name of the books is noted down in the software along with rate. In the present system user has to do all work manually. In present system During issuing order of more stock, the product register is required to check to availability of stock in hand. And it takes time to check records.

The amount paid to a particular dealer from whom the book was bought is also saved in the dealers tab. In present book store management system, To generate the reports based on the management requirement, will require extensive searching of records. In case of Supplier and Staff Record Management, the registers need to be updated time to time as information (like Phone No., Address) changes frequently. The stock section gives the total number of book stocks available in the store. When a customer buys a book from the store, a bill is generated.

At present, the Wholesale and Retail outlets are working under manual management. The client uses MS Excel, All records related to Products, Sales, Suppliers, Orders, Payment are stored in excel files. there is lot of duplicate work, and chance of mistake.The records are changed they need to update each and every excel file. In case of Customer records, all information related to customers and the product which the customer has purchased is to be stored in the Customers excel files.

The bill contains the name of the book purchased, rate per book, quantity, total rate and the total amount. For example any customer want to purchase any book from the shop than first of all customer just choose the stream of the book than he/she can see the more then one type of books there and than he/she can choose the specific book from there..In proposed system all records are saved in the database for report generation. Depending upon the number of books purchased, the number of books from the stock will be deducted.

Chapter 3

Problem Definition

BookSore System ensures in providing different activities such as tracking inventory, maintaining equipment, and recording book types can be a daunting task. Manual methods of book record-keeping and management can be time-consuming, error-prone, and inefficient. Therefore, there is a need for a BookStore Management System that can automate these tasks and streamline all the inventory operations.

The BookStore System aims to provide a centralized platform that can manage all the activities in a store/inventory efficiently. The system should allow lab administrators to manage equipment and supplies, schedule experiments, record data about the books added, and generate reports about various genre of the books. Moreover, it should also allow users to check book availability, and record experimental data.

Managing and maintaining a book shop could also be controlled by efficient software. This project focuses attention on designing efficient and reliable software In real world, it tends to associate with automated systems as they provide many benefits than doing the same thing in manually. As above mentioned, here we have introduced a system which can be used to maintain a bookstore.When we are concerning the manual process of a bookshop, the major problem is the waste of time. A customer has to waste his/her valuable time when he needs to buy a book as all the events such as searching, purchasing are done by members.

The BookStore System should be user-friendly, intuitive, and accessible from anywhere with an internet connection. It should also be secure, reliable, and scalable to accommodate the growing needs of the customer.

Chapter 4

Objective and Scope

This BookStore System is used to overcome the entire problem which they are facing currently, and making manual systems to computerized systems.

Objective:

The Proposed Book shop management system should help the customers query whether a book is in stock. The user can query the availability of a book either by using the book title or by using the name of the author. The objective and scope of my Project Book Shop Management System is to record the details of various activities of the user. It simplifies the task and reduces the paperwork. Book store management system should generate sales statistics (book name, publisher, ISBN number, number of copies sold and the sales revenue) for any period.

Scope:-

1.Facilitates easy shopping online anywhere with easy to use interface
2.Provides information about the products in categories
3.Can avail the facility of purchasing second hand products
4.Can reserve or order if the particular product is not available
5.Customers are provided #ith up to date information on the products available
6.Provides email facility for future correspondence
7.Provides backup facility to the data.

The customer requests a book and the book is not currently sold by the bookshop, then the customer is asked to enter the full detail of the book for procurement of the book by the bookshop. If the requested book is in stock, the exact number of copies available and the rack number in which the book is located should be displayed. If a book not in the stock, the query for the book is used to increment a request field for the book.

Chapter 5

Description About AWS Services Used

The Bookstore System is developed and deployed on the Amazon WebServices (AWS) cloud. AWS provides a robust and scalable cloud infrastructure that can handle the project's requirements.

Cloud Services used in this project are as follows:

1. AWS Elastic Compute Cloud -

EC2 is a cloud-based computing service provided by Amazon Web Services (AWS) that allows users to create and run virtual servers, known as instances, in the cloud. It provides a scalable, flexible, and cost-effective way to host applications and services. Users can choose from a variety of instance types, optimized for different use cases, and launch instances in a matter of minutes. EC2 also provides a range of security features to ensure the protection of user data.

2. AWS Security Groups –

AWS Security Groups are a cloud-based service provided by Amazon Web Services (AWS) that act as virtual firewalls for EC2 instances. They control inbound and outbound traffic to and from the instance, providing an additional layer of security. Security Groups operate at the instance level, allowing users to apply different rules to different instances. They use stateful traffic filtering, which means that responses to outbound traffic are allowed, regardless of the inbound rules. Overall, AWS Security Groups provide a flexible and scalable way to manage network security in the cloud.

3. AWS VPC -

With AWS VPC, users can create and manage a virtual network topology that closely resembles a traditional on-premises network infrastructure. Users can define and control network addressing, subnets, and routing tables, as well as configure network gateways, security groups, and network access control lists (ACLs).

Software requirements:

Deploying a project on AWS cloud requires certain software and tools to ensure a successful deployment.

Below are the software requirements for deploying the Bookstore System on the AWS cloud:

- Operating System: The anonymous chat room platform will require an operating system to run on the EC2 instances. A popular choice for web applications is Linux-based operating systems such as Ubuntu or Amazon Linux.

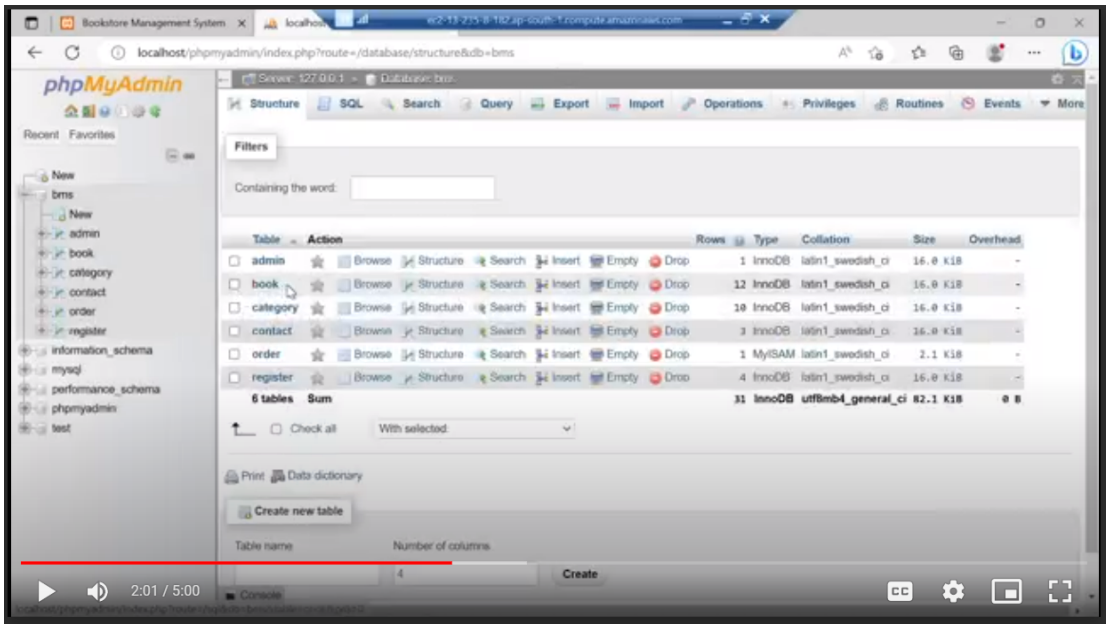
- Web Server Software: A web server software such as Apache or Nginx will be required to serve the web pages to users' browsers. The web server software will be installed on the EC2 instances running the anonymous chat room platform.

- Database Software: The BookStore will require a database to store the user information and chat messages. A popular choice for web applications is a relational database such as MySQL or PostgreSQL.

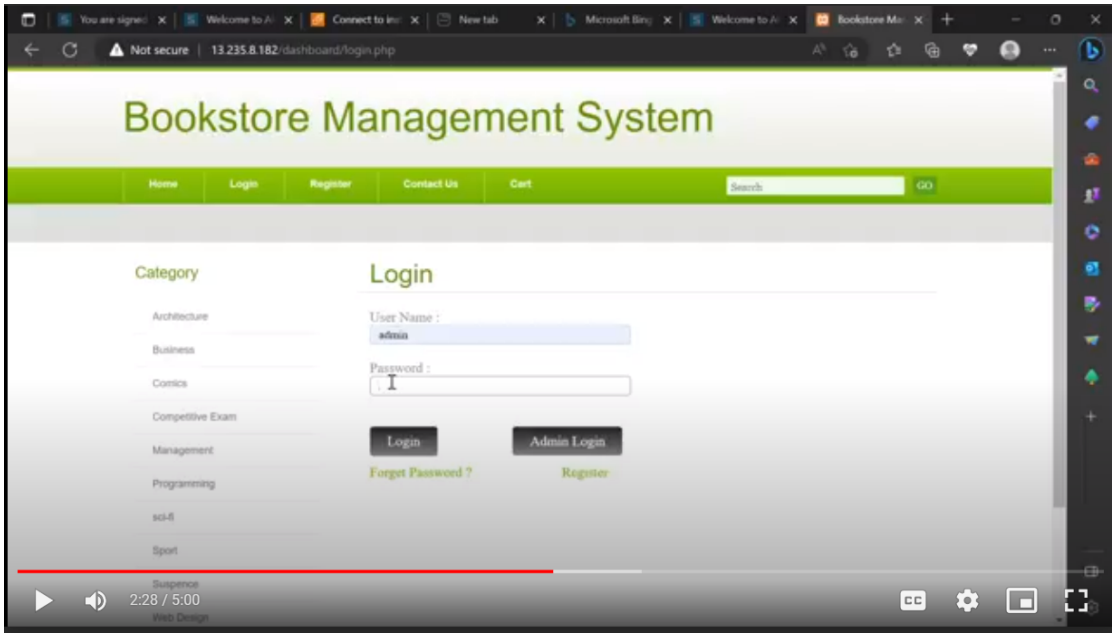
- AWS Services: The anonymous chat room platform will rely on various AWS services to operate successfully. These services include EC2 instances, VPC, IAM, Load Balancer.

Chapter 6

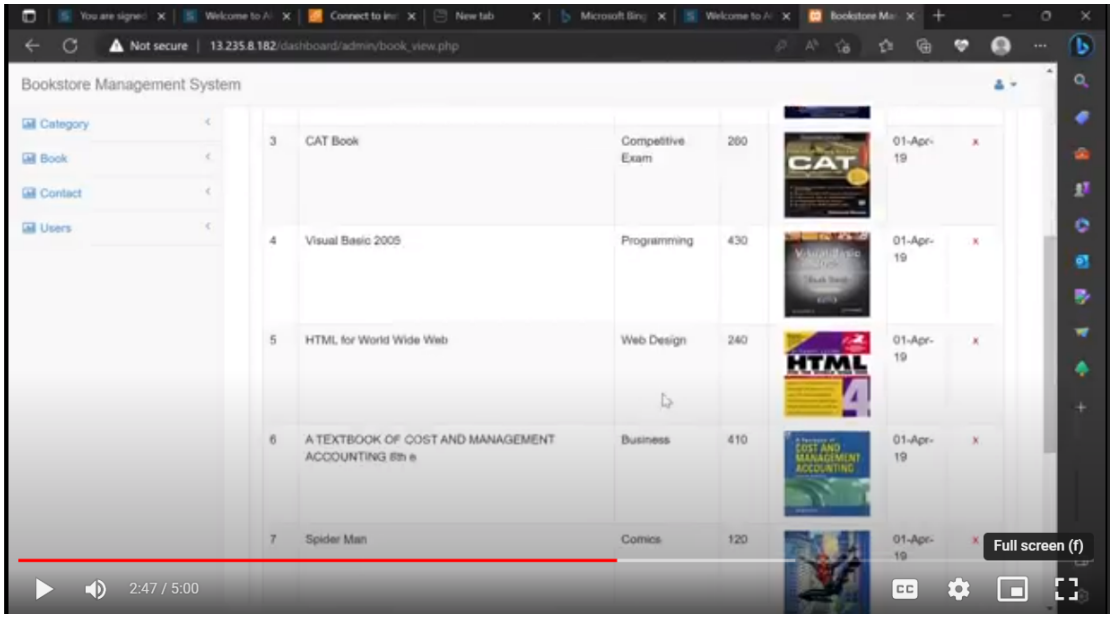
Implementation



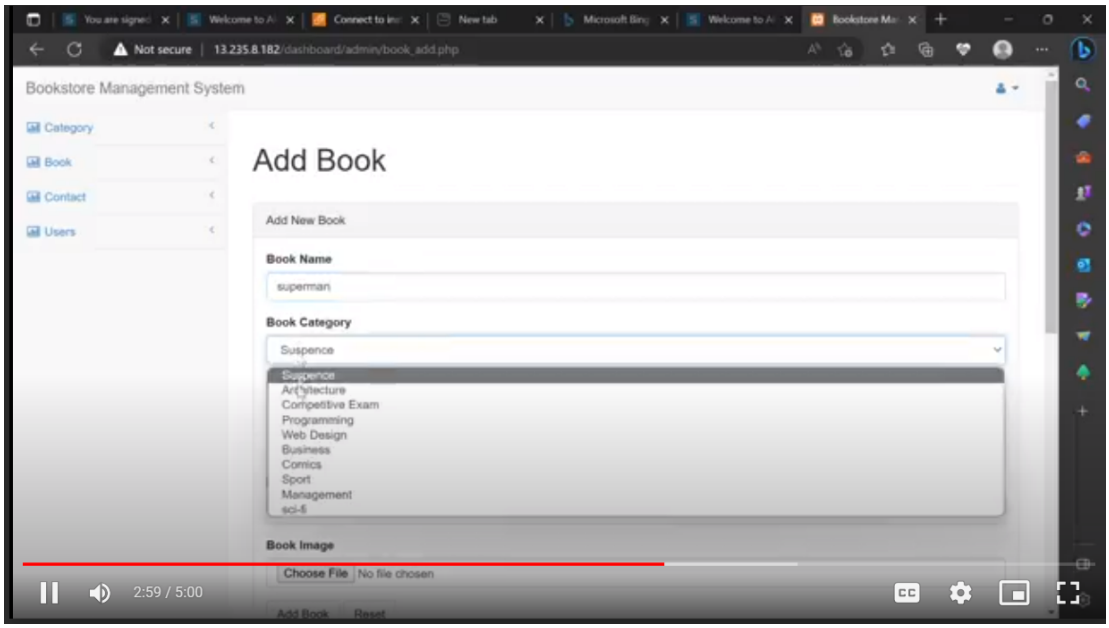
MySQL Database:- For the Bookstore System in XAMPP to store and fetch values



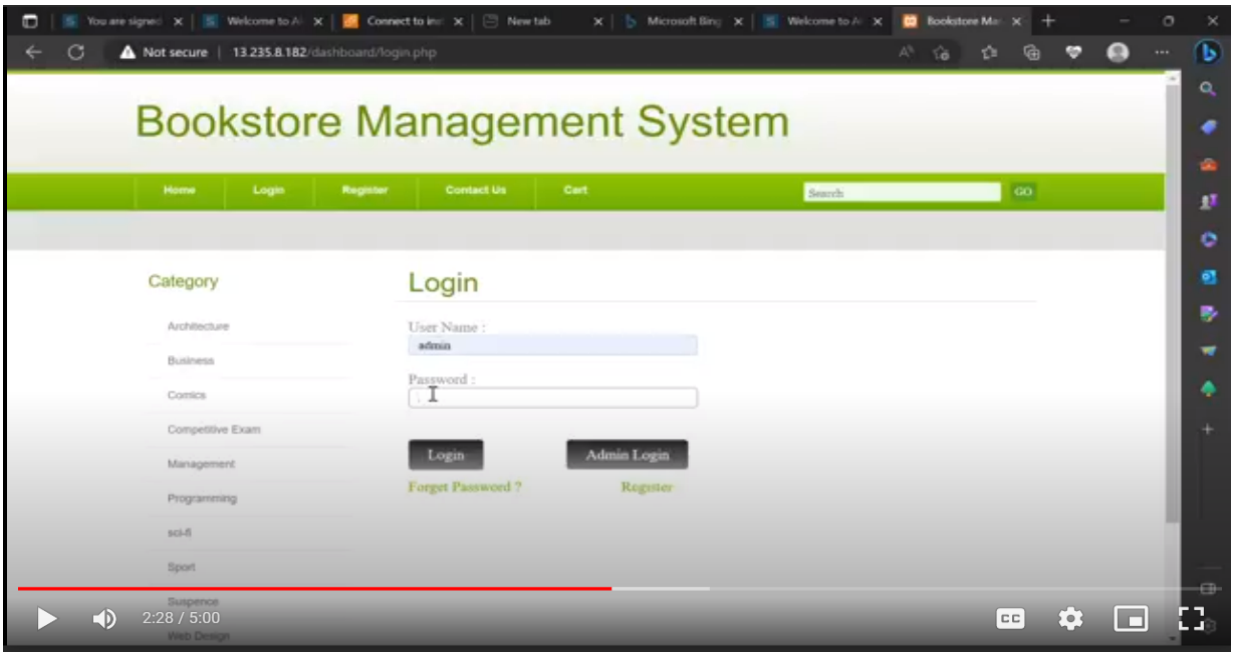
User Login :- To login for user to perform various tasks in the BookStore System



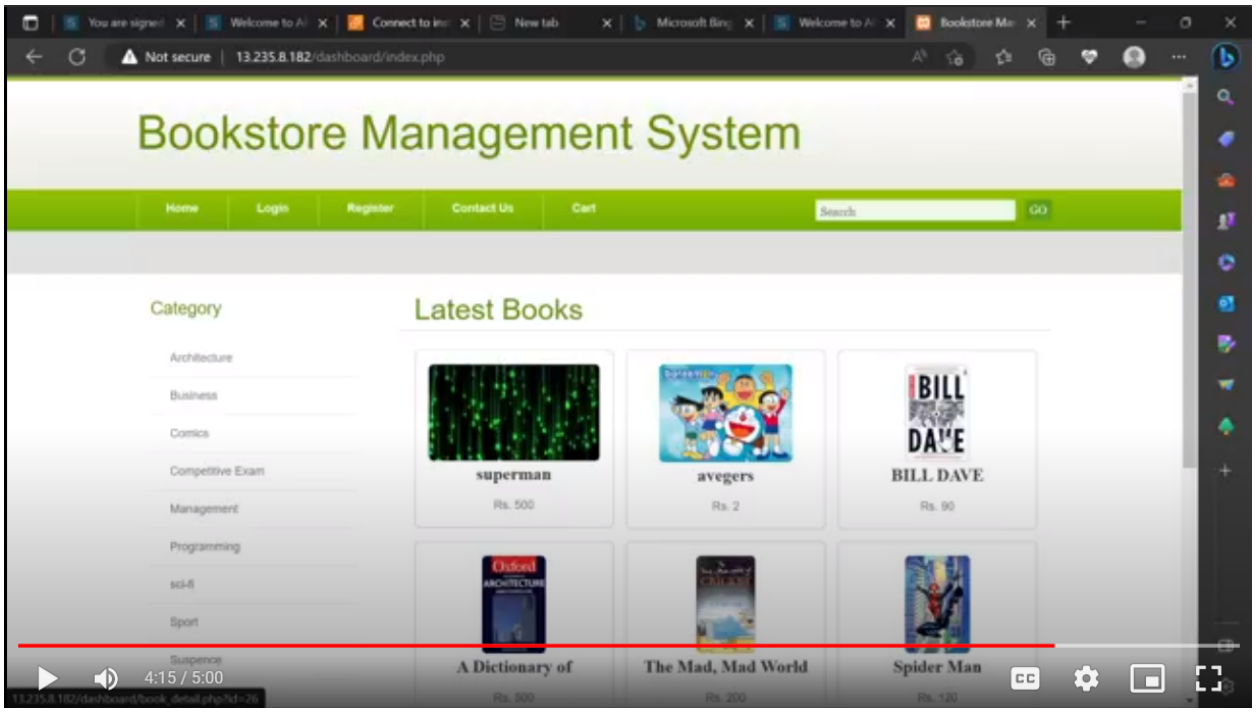
Admin :- To view different genre of books and types of perform various functions



Add Books:- Admin can add different types of books into the system



User Login :- Here User can perform certain actions in the System.Data gets stored in the mysql database



View Books:- Here the Users can view the books according to their preference types.

Chapter 7

Learning Outcome

The BookStore System project hosted on AWS EC2 instances and security groups requires a strong understanding of cloud computing and web development concepts. By working on this project, users can learn how to set up and manage EC2 instances, security groups, and other AWS services. They can also gain experience in developing web applications using PHP and MySQL and deploying them on a cloud-based platform.

Users can develop their skills in designing and implementing secure web applications by incorporating security measures such as user authentication and role-based access control. They can also learn how to optimize application performance by selecting the appropriate instance types for specific use cases.

Overall, the BookStore System project can help users to develop a comprehensive understanding of cloud computing, web development, and security concepts and gain practical experience in deploying web applications on the cloud.