

# Online Book Store

## **1. Business Scenario**

Gupta Book Store is a large and very popular book store which has large number of customers in the city. Gupta Book Store currently maintains stock for all categories of books. But the store is now popular in only one city. The owner of the store wants to grow his business of books and wants to make the store popular all over the country. He wants an online application for his store, where people from the whole country can search and purchase the books.

Nowadays people come to the store to buy the books. Sometimes when the store is crowded, people wait for a long time as it is very difficult to entertain all the customers at the same time. Therefore the owner of the store wants automation in the sale and purchase of books. It will save the time of the customers and will reduce the overhead in selling of books. Customers from all over the country can easily search the books of their interest and purchase it online. Also online selling of books will reduce the number of employees in the store.

Customers can find a wide variety of books in this store. By using online store user can put details of the books, can search it, can be member of site, buy online books and see other related books of same author or same category. Customer will feel comfortable as now there is no need to go anywhere to purchase the books. User can view online book details from anywhere through internet and purchase it.

The online store book store application enables vendor to setup online book store, customer to browse through the books and a system administrator to approve and reject requests for new books and maintain list of book categories

Key Features of Online Book Store:

- Different categories of books are available for the users.
- Users will have multiple options to search a book. Users can search books subject wise or author wise.
- User can add books to his wish list which he want to purchase later.
- Information is displayed on latest released books.
- User can give book reviews.
- User can give comments and rating on a particular book.

Online book store will give following advantages to the customers:

- Cost saving
- Time saving
- Fast purchasing
- View books of all categories

## **2. Problem statement:**

### **2.1 Assumption**

We assume that there is just one branch of the store.

### **2.2 Objective of the project**

The objectives of this project are as follows:

- To ensure prompt availability of the books to the customers.
- The online store application is to assist the customers in purchasing the books online, which will save their time.
- To reduce number of employees in the store.
- Reduce overhead in selling and purchasing of books.

### **2.3 Business Process in the application:**

1. This application will be designed for the users who want to buy the books online. Users can access the application through World Wide Web. Users will be able to search the database to find the books they want check the availability and place the order to buy the book online.
2. User can get information about any book through this application. Expected impact of the application is to automate existing manual processes of selling and purchasing of books.

### **2.4 Sample Business process for online book store Case study**

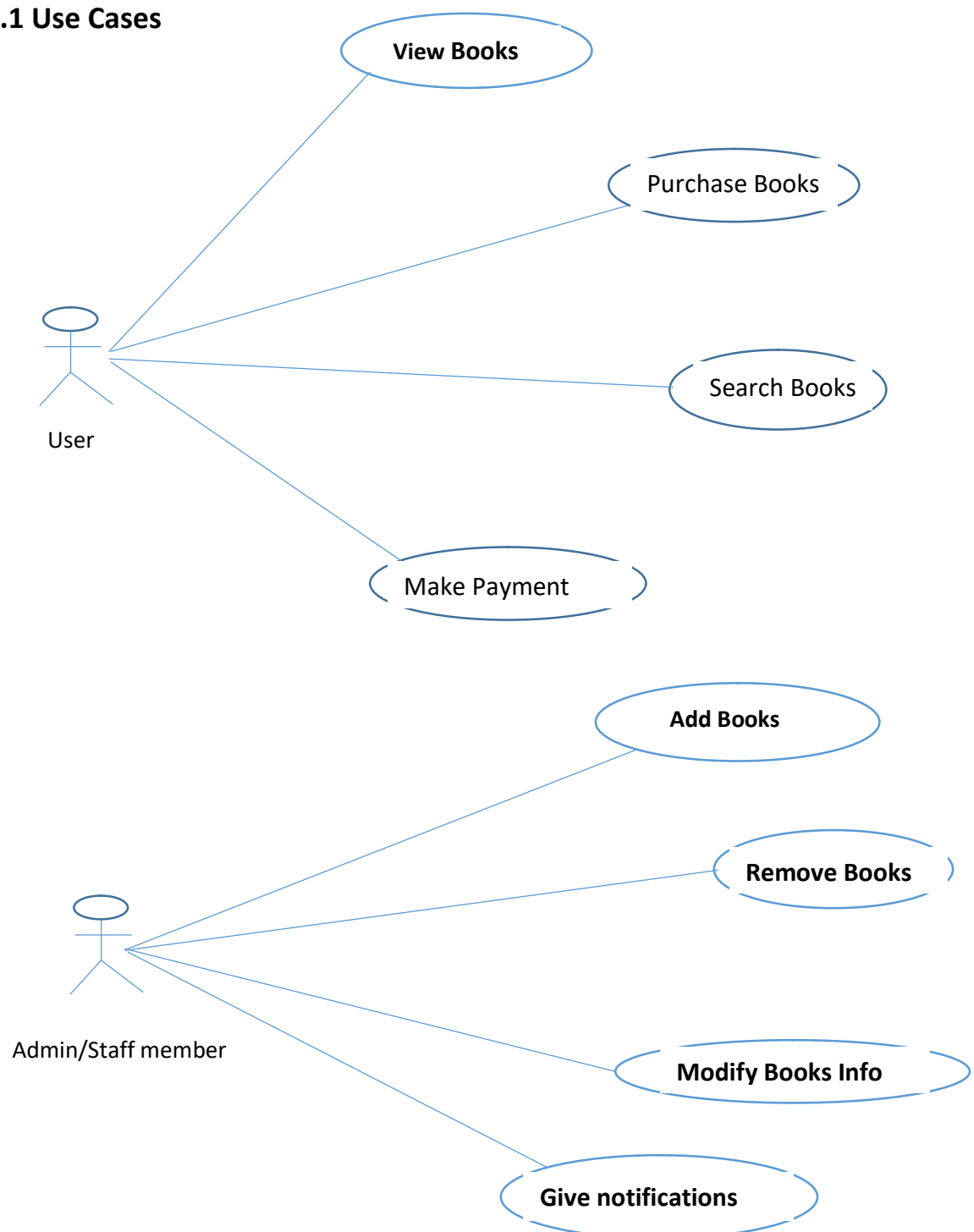
1. Users can search the books of their interests online and place order.
2. User can get the information about the status and price of the books.
3. If the book is not available in the stock, then the customer will get the information that the book is not currently available for some days. The book can be added to the stock later on.
4. The records of the books will be maintained in the database.
5. User can get any type of information related to availability of the books.
6. The staff members of the store can also use this application to view the status of all books.
7. Staffs members can add, delete or modify the information of the books.

## **3. Tools to be used for development:**

- Oracle Database or any other alternative database
- JDK 1.7 or later
- Eclipse IDE or any other alternative IDE
- Hibernate and Spring or any other alternative technology
- JSP or any other view technology

#### 4. Activities to be done by the students

##### 5.1 Use Cases



## 5.2 Activities to be done in Java

- Student will make different classes to write the business logic to perform different operations in the application.
- Students will make Login page and Registration page for the application. If a user wants to purchase books, he has to register himself with the application first. Before making payment for the books, a user has to login first.
- When user will click on any book, details of the books will be displayed to the user. User can add the books in the cart and can make payment later on.
- When the user logs out, he is logged out of the application and home page of the application should be displayed
- Students will also maintain customer's information in the database.
- If a new book is added in the store, a notification should be displayed on the home page.
- Employees of the store can login to the application and can add, remove and modify books information.

## 5. 3 Activities to be done in Advanced Java

- Students have to create the database for the application.
- Students have to maintain login information of all the users of the application in the database.
- User interface for the application will be designed by using JSF and JSP wherever required. Validation for the fields can be implemented by using JSF validators.
- Student can also use EJB for business logic wherever required.
- By using web services the bookstore can display the information of the books on other websites also.
- Students will implement Role Based Security for the application with following roles.
  - a. User
  - b. Admin

- c. Employee
- Following reports will be generated for the management.
  - Daily Report for the list of customers who purchased the books in a day.
  - Total revenue generated from all the books sold every day.

## **Guidelines to the instructors:**

### **Step 1**

After teaching them the basics of classes and objects, Let them design class diagram for the above problem.

Explain 3 tier architecture & layered architecture. Explain different UML models and their understanding in design & development. Now ask team members to design Business Model for given case study. Validate model once done to be self-explanatory.

### **Step 2**

Once the basic design is approved by the facilitator, the team can go ahead and create classes required. Components to be monitored

- Creation of classes
- Various fields required for classes
- Design of tables required to store the data
- Creation of other modules
  - Views
  - Model
  - Controller
  - Services

Review to be done by the facilitator at this stage (it goes in cycle, till it reaches the expected out cum)

### **Step 3 – Role Play**

- Let the team present their design.
- Note Down comments/ideas by other team and facilitator
- Keeping these ideas as base, team has to list down the operations that can facilitate.

- Write queries to solve all above problems

#### **Step 4 – Validate**

All module developed must be validated with input verification, user authentication and access privileges.

#### **Step 5 – Continue with Java and Advanced Java Learning Objectives**

All learning objectives defined above for the Java SE and Java EE should have been met. If not revisit and ensure the learning objectives are met for the course.

#### **Step 6 - Extension of Project work**

If student completes the above task well in advance trainer has flexibility to add additional functionalities to the existing components. The students can add the functionality to keep track of all the customers and give discount to the regular customers of the store. **Students can also localize this application into different languages.**

#### **Step 7 – Pre Assessment and Post Assessment during the workshop**

The trainer has to ensure pre assessment exam must be completed on the first day of the workshop and post assessment after the completion of the workshop without fail.

#### **Reference Material:**

- **Reference links to You Tube:**

- <https://www.youtube.com/watch?v=j-KjGdPnDnU>
- <https://www.youtube.com/watch?v=aRVFdqKLsWY>

- **Reference links to Website:**

- <http://www.codewithc.com/online-book-store-project-java/>  
[https://docs.google.com/file/d/0B\\_c-09UJNzKBTF9kZW1GS0Nud1E/edit?pli=1](https://docs.google.com/file/d/0B_c-09UJNzKBTF9kZW1GS0Nud1E/edit?pli=1)