Book Shelf

Final Year Project

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Project Report

BookShelf

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
Hassan	1.0	11-03-2022	<Original Draft>	
Hassan	1.1	14-04-2022	<Changes Based on Feedback from Supervisor>	
Hassan	2.0	18-07-2021	<Changes Based on Project Supervisor>	
Hassan	3.0	20-07-2021	<Final Project>	

APPROVAL

PROJECT SUPERVISOR

Comments: _____

_____

Name:_____

Date:_____ Signature:_____

PROJECT MANAGER

Comments: _____

_____

Date:_____ Signature:_____

HEAD OF THE DEPARTMENT

Comments: _____

_____

Date:_____ Signature:_____

Dedication

"World Class online book shop for Schools and universities and to provide an exclusive shopping experience to our customers" which are the vision is to serve Millions of loyal customers and consists of well experienced and energetic professionals. We are dedicated to customer satisfaction through best products, online shopping experience and other delivery. The service provide by the business can be categorized as Local and International text books, other books, stationary and other educational products. Bookshop Service provide to their customers in all levels like as Primary, Secondary, Local, (O/L, A/L) and other International Exams

Acknowledgements

I would like to thank my supervisor, Ma'am Faiqa, for the patient guidance, encouragement And advice she has provided throughout my time as his student. I have been extremely lucky to have a supervisor who cared so much about my work, and who responded to my questions and queries so promptly. I would also like to thank all the members of staff at Superior Universities who helped me in my supervisor's absence

Executive Summary

Book Store Management System is the web application to automate all kinds of operations in the book shop. The purpose of this software is to manage the books in the book store. Generally, it includes the Order Processing, Stock Management and Accounts Management. We developed this software to maintain records of sales, purchase and staff records. This project developed using vue.js as front end and SQL Server as Back end. 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. 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 than one type of books there and then he/she can choose the specific book from there. And then purchase it by paying price on bookshop cash counter and receives its invoice.

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Chapter 1

Introduction

Chapter 1: Introduction

Book Store Management System is the web application to automate all kinds of operations in the book shop. The purpose of this software is to manage the books in the book store. Generally, it includes the Order Processing, Stock Management and Accounts Management. We developed this software to maintains records of sales, purchase and staff records. This project developed using java as front end and file handling as Back end.

1.1. Background

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. When 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. If the changes in the customer profile (like Phone no. , Address) occur, excel file must be updated.

1.2. Motivations and Challenges

Online shopping behavior is the process of buying products or services through the Internet. What drive a person to shop are the reasons or needs, namely shopping Motivation, and the motivations drive an individual to shop online are online shopping motivations. We have faced difficulties to produce a good looking and user-driven interface.

1.3. Goals and Objectives

The main objective of the project is to create an online book store that allows users to search and purchase book online based on title, author and subject.
The objective and scope of my Project Book Shop Management System is to record the details various activities of user. It simplifies the task and reduce the paper work.

1.4. Literature Review/Existing Solutions

Electronic Commerce (e-commerce) applications support the interaction between different parties participating in a commerce transaction via the network, as well as the management of the data involved in the process. The increasing importance of e-commerce is apparent in the study conducted by researchers at the GVU (Graphics, Visualization, and Usability) Center at the Georgia Institute of Technology. In their summary of the findings from the eighth survey, the researchers report that "e-commerce is taking off both in terms of the number of users. Shopping as well as the total amount people are spending via Internet based Transactions". There are many existing solutions of book shop system. But this one is better than other because of its easily accessibility.

1.5. Gap Analysis

The system which we are developing is much better than other systems. As it is providing a wide range of payment methods which makes it different from other systems.

1.6. Proposed Solution

Customer can find any type of book online easily. Customers have no need to go to market and search for specific books

1.7. Project Plan

We are planning to build an app using java and also using angular as these languages are easy and best for app development we will check all the issues book shop owners' faces in daily basis.

1.7.1. Work Breakdown Structure

- Initiating
    - Select project manager
    - Form project plan
    - Develop project charter
- Planning
    - Develop scope statement
    - Create WBS
    - Develop and refine other plan
- Executing
    - Define requirements
    - Define user requirement

- Define content requirements
- Define system requirements
- Define server requirements
- functionality
- Develop project plan

- Testing
  - Monitoring and controlling
  - Closing

1.7.2. Gantt Chart

Sr. No.	Task	start	Finish	Duration (Days)
1	Understanding current system	01-02-2020	06-02-2020	07
2	Problem definition	07-02-2020	09-02-2020	03
3	Information gathering	10-02-2020	19-02-2020	10
4	System Analysis	20-02-2020	21-02-2020	02
5	Database design	01-02-2020	06-02-2020	17
6	Form design	07-02-2020	09-02-2020	06
7	coding	10-02-2020	19-02-2020	23
8	Modification of form	20-02-2020	21-02-2020	12
9	Testing	07-02-2020	09-02-2020	3
10	Implementation	10-02-2020	19-02-2020	07

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

The purpose of this Software Requirements Specifications (SRS) is to fully document the specifications and requirements for the BSU Online Bookstore. The audience of this SRS will be the clients who want the software to be built and the technical professionals developing the software.

2.1.2. Document Conventions

1. Bold
2. Italic
3. Calibri
4. Most Prioritized will be highlighted
5. Underline the inherited requirement

2.1.3. Intended Audience and Reading Suggestions

While the software requirement specification (SRS) document is written for a more general audience, this document is intended for individuals directly involved in the development of project. This includes software developers, project consultants, and team managers. This document need not be read sequentially; users are encouraged to jump to any section they find relevant.

2.1.4. Product Scope

The Online Book Store is an easy to maintain, ready to run, scalable, affordable and reliable cost saving tool from Software Associates suited for small, medium, and large shopping complex and shopping malls.

The proposed system can be used even by the naïve users and it does not require any educational level, experience, and technical expertise in computer field but it will be of good use if the user has the good knowledge of how to operate a computer.

2.1.5. References

www.oxfordbookstore.com, http://google.com

2.2. Overall Description

2.2.1. Product Perspective

The Product is a web-based product, which will be used by multiple users i.e. the administrator, registered user and guest. Administrator will be provided with the Interface, with the help of which administrator can manage accounts and UI. Registered users can edit their information using their login credentials. Customer can generate the cart according his requirement. Guest can search the record according to requirement

As far as the future perspective is concerned, the scope of improvement would be development in UI, better searching facilities.

2.2.2. Product Functions

1) A Home page with product catalog

This is the page where the user will be navigated after a successful login. It will display all the book categories It also includes some special sections like recent arrival, about us and contact us.

2) Book Description

If the user would like to know details about a book he can click on the title from where he will be directed to a Book description page.

3) Shopping Cart

The user can manage a shopping cart which will include all the books he selected. The user can edit, delete and update his shopping cart. A final shopping cart is a summary which includes all the items the user selected and the final total cost.

4) Managing User Accounts

Each user should have an account to access all the functionalities of website. User can sign in using login page and sign out using the logout page. All the user sessions will be saved in the database.

5) Administration

The Administrator will be provided with special functionalities like

- Add or delete a book category
- Add or delete a member.
- Manage member orders.

This product is mainly designed to keep the information about the alumni and event organized for alumni. There will be 4 users of the system-administrator, counselor, placement officer, and alumni. Each user will be provided a login id and password to interact with the system.

2.2.3. User Classes and Characteristics

The main users of this system will be Administrator, Registered User and Guest who are literate with the computers and can use the programs such as Internet explorer, editors and text processors.

2.2.4. Operating Environment

The “Online Book Store” should run on all Java software which supports the Java Jframe and my sql.

2.2.5. Design and Implementation Constraints

The “Online Book Store” should run on all Internet Browser and all processors which supports the Internet Browser.

2.2.6. User Documentation

First, we will try to make our system User Friendly but even then, we will make a user manual so he/she can understand it clearly

2.2.7. Assumptions and Dependencies

It is assumed that alumni data will be made available for the project in some phase of its completion. Until then, test data will be used for providing the demo for the presentations. It is assumed that the user is familiar with an internet browser and also familiar with handling the keyboard and mouse.

Since the application is a web-based application there is a need for the internet browser. It will be assumed that the users will possess decent internet connectivity

2.3. External Interface Requirements

2.3.1. User Interfaces

The member has to register using a form provided on the website. The user can input data with \the help of the keyboard or click with the mouse wherever necessary. The package provides pull down menus from which the user can select and links and icons to navigate among the webpages.

2.3.2. Hardware Interfaces

Clients:
Intel Pentium III 300 MHz or 1.0 GHz Athlon or faster
At least 20 MB RAM
At least 200 MB freed hard disk space.
Database Server:
Use the available oracle database server.

2.3.3. Software Interfaces

Web:
Internet Explorer or console

2.3.4. Communications Interfaces

This project supports all types of web browsers. We are using simple electronic forms for the reservation forms, purchasing etc.

2.4. System Features

2.4.1. System Feature 1

2.4.1.1. Description and Priority

The book shop system maintains information on buying, selling, payment etc. Of course, this project has a high priority because it is very difficult to buy across countries without prior reservations.

2.4.1.2. Functional Requirements

There is an entry interface that is intended to facilitate the user (Administrator, Alumni) to enter record in the Alumni database. User has to enter various fields information (Name, Parents address, current location, email Id etc.)
Scenario 1: Mainline Sequence
1. Administrator/Alumni: select record entry option.
2. System: Display form to enter the records.
3. Administrator/Alumni: Enter the necessary records.
4. System: Put the corresponding records in Alumni database.

5. Administrator: select the event generation option
6. System: Store event in the database.
Follow up based on result of search Engine and Event
Depending on the event, Counselor fire query on the Alumni database to get the list of the Alumni to inform them about the event and mark the follow up. Counselor can search the records according to batch, location etc.

U3: Fire query for search<Placement Coordinator>
Depending upon the requirement, The Placement Co-Ordinator will fire the query on the Alumni Database. The searching criteria depend on company requirement. The Placement Co-Ordinator search depending upon Experience, Key Skills.
Scenario 1: Mainline Sequence
1. Placement Coordinator: Select the search criteria.
2. System: Display the Alumni records as per the search criteria.
3. Placement Coordinator: Save the Alumni record in XML or in Excel and Send the information to the respective Company.

2.5. Other Nonfunctional Requirements

2.5.1. Performance Requirements

If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.

2.5.2. Safety Requirements

There are no precaution for safety as it's an computer based software so it can't harm you in an ways. There is no access of software to any unauthorized user.

2.5.3. Security Requirements

Security requirements ensure that the software is protected from unauthorized access to the system and its stored data. It considers different levels of authorization and authentication across different users' roles. For instance, data privacy is a security characteristic that describes who can create, see, copy, change, or delete information. Security also includes protection against viruses and malware attacks.

2.5.4. Software Quality Attributes

Usability: This code easy to use and easy to learn how to operate.

Correctness: When user search something but spellings are not right the system search related to that spelling or give auto-complete search.

Portability: This code can be used on different devices like tablets, mobiles, laptops etc.

Flexibility: The functionality of this code can be increased after development because documentation is available.

2.5.5. Business Rules

These include high-level statements of goals, objectives, and needs.

2.6. Other Requirements

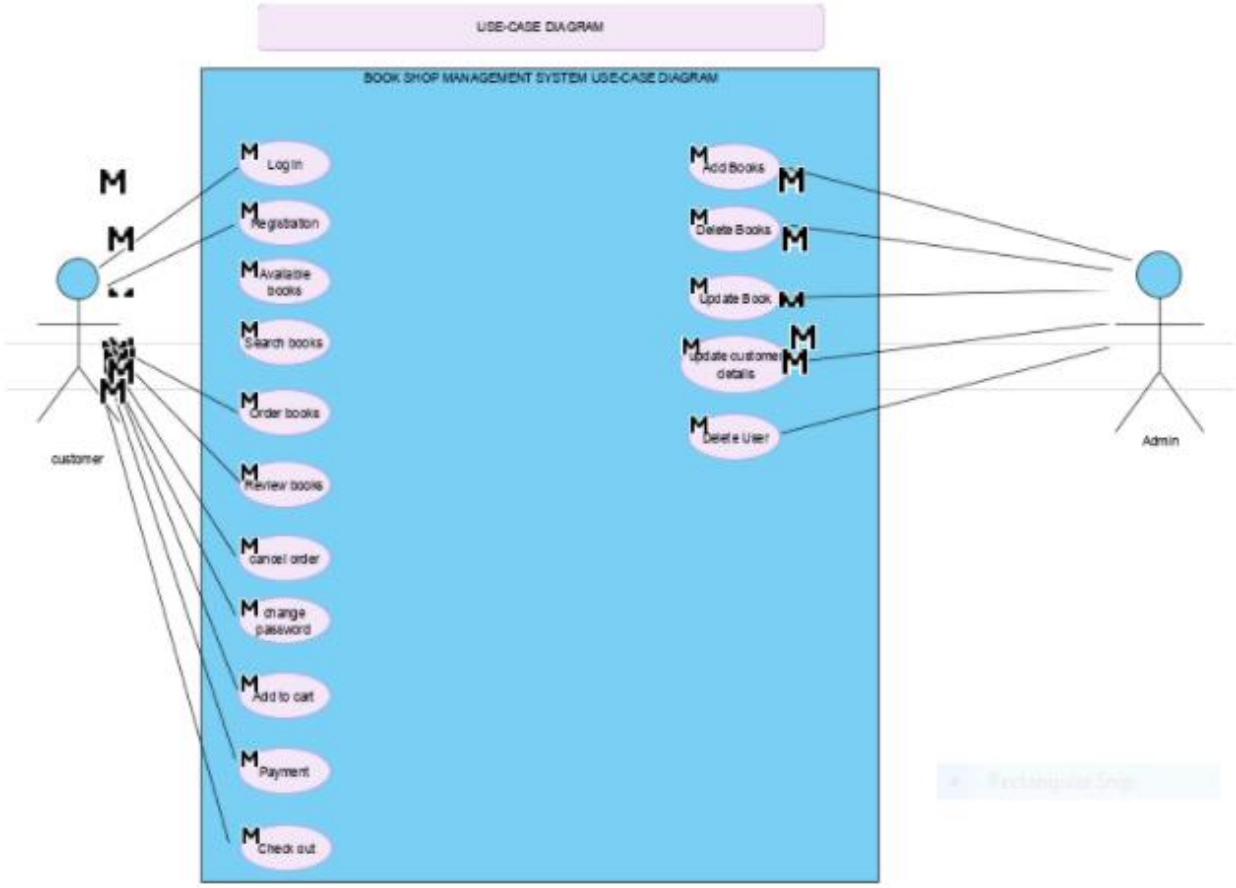
Our project need an my sql database to store all the information it will store all the data online Php my admin we can also use sql server for this purpose

Chapter 3

Use Case Analysis

Chapter 3: System Analysis

3.1. Use Case Model



3.2. Use Case Descriptions

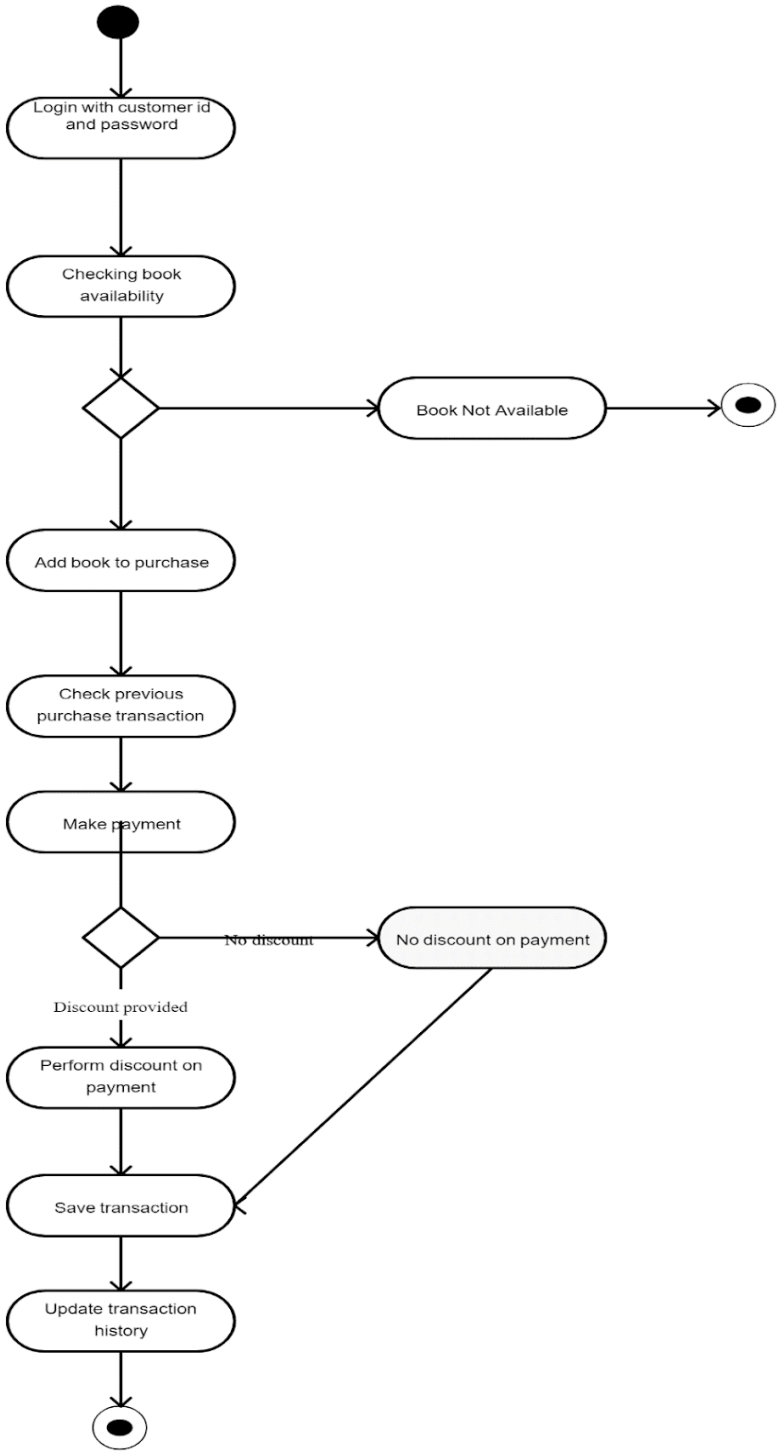
ID:	01
Title:	Book Shop Management system
Description:	System is used to manage every working inside a book shop we made it an general purpose we can install it by changing a little bit requirement
Primary Actor:	Our primary actor is the admin or head of the book shop and also worker who can mark attendance or make bill
Preconditions:	At pre stage the admin will enter his username or password to login in system
Postconditions:	After all the event take place a crud will be perform on book or worker table
Main Success Scenario:	If admin is using he /she can change anything in the database but worker can only perform some restricted things
Extensions:	It may give error if database is not working or corrupted
Frequency of Use:	5 it will be a daily usable system
Status:	High status
Owner:	Hassan and Hussnain
Priority:	5

Chapter 4

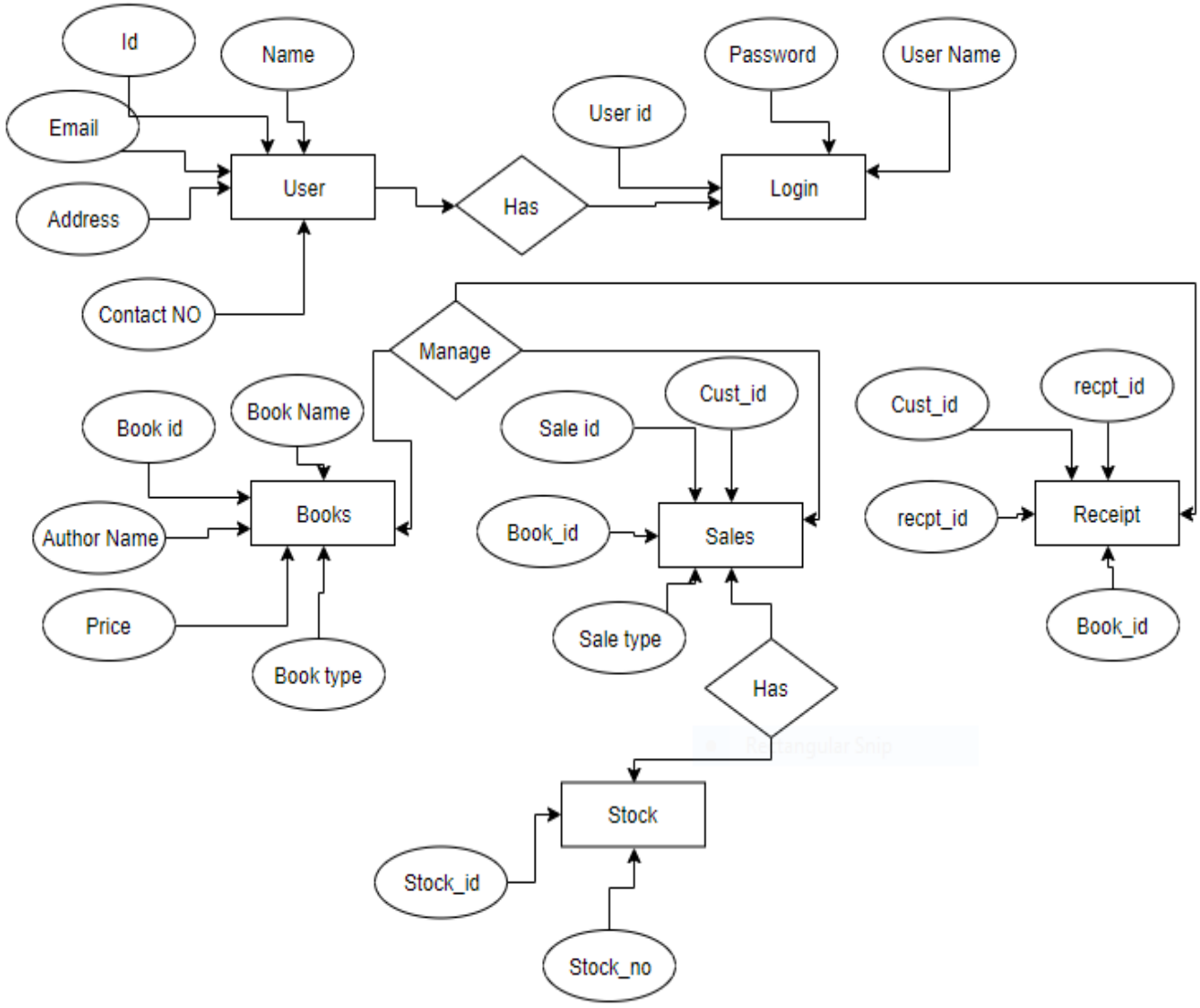
System Design

Chapter 4: System Design

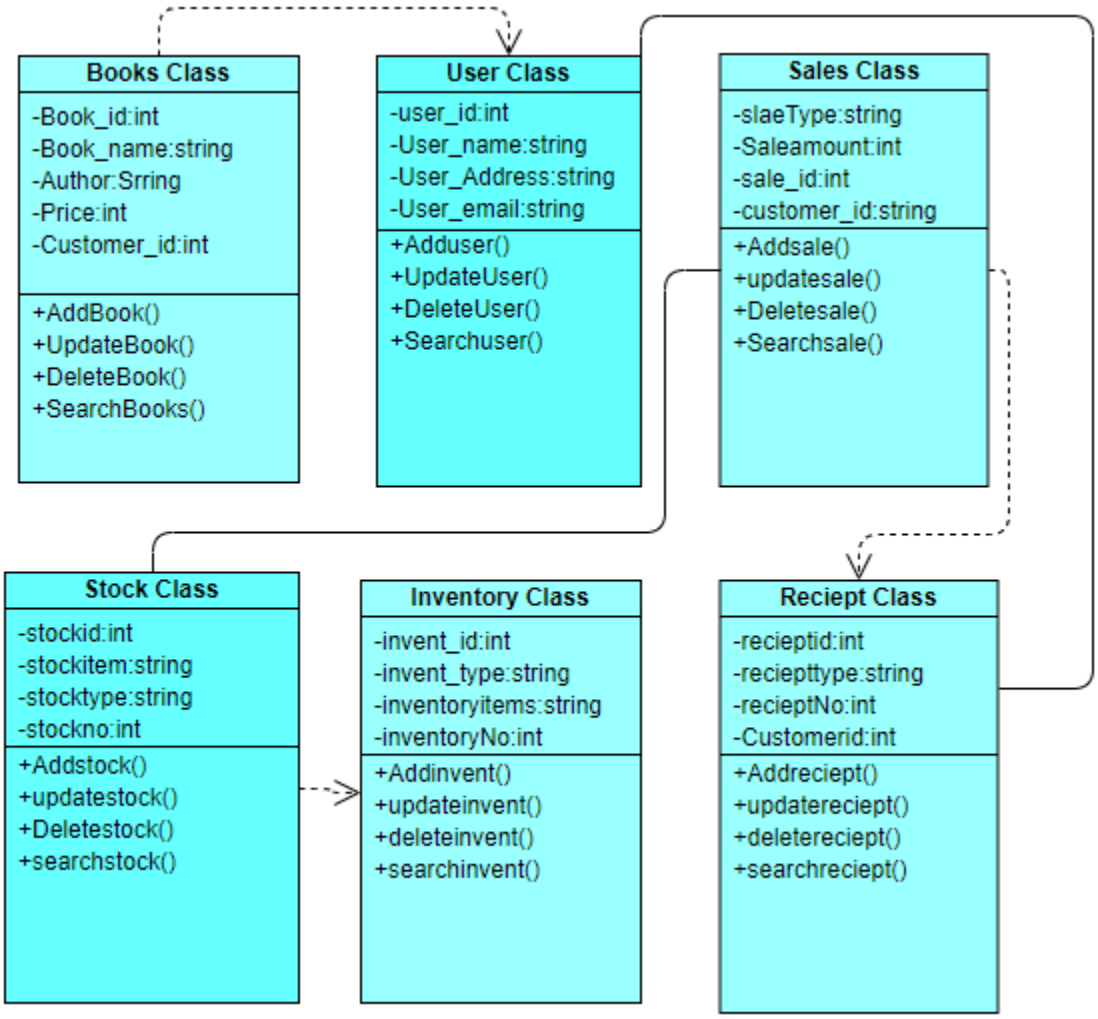
1. Architecture Diagram



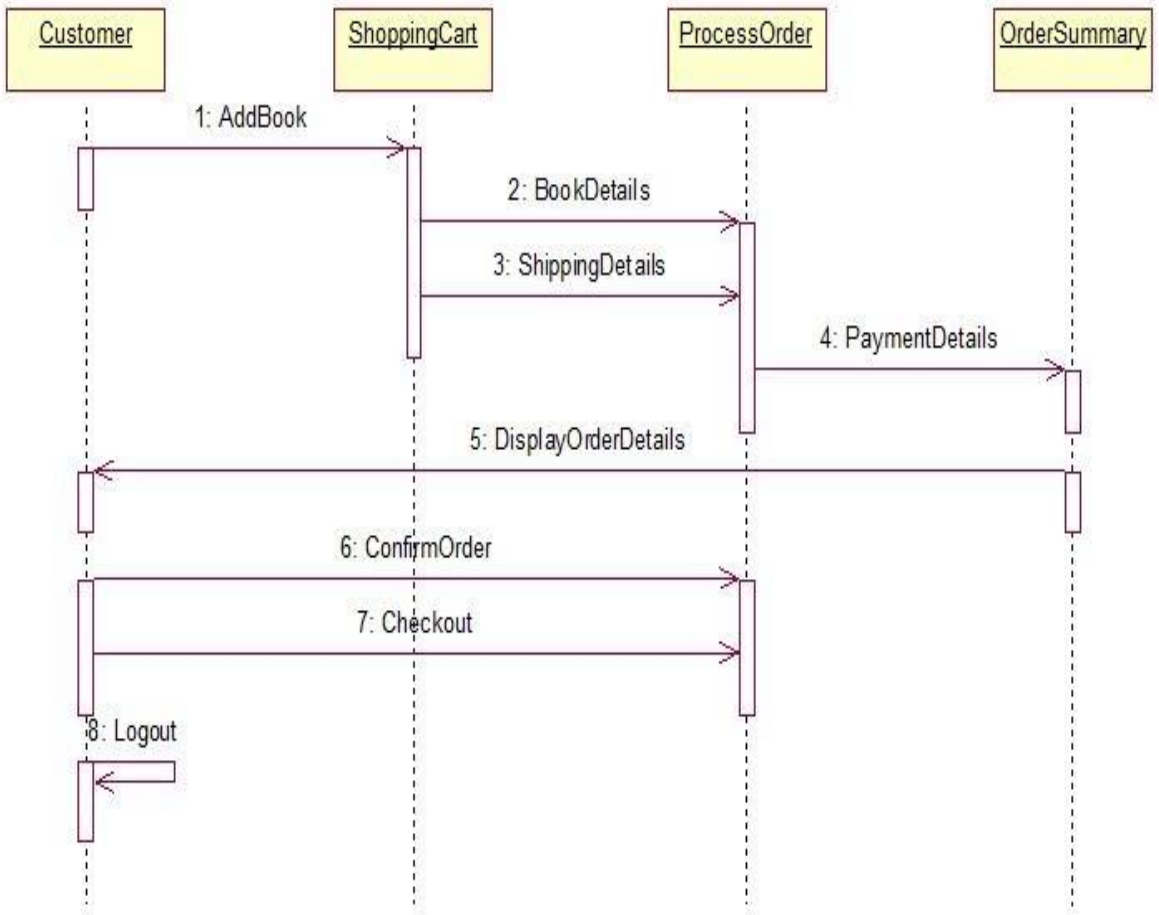
2. Entity Relationship Diagram with data dictionary



3. Class Diagram

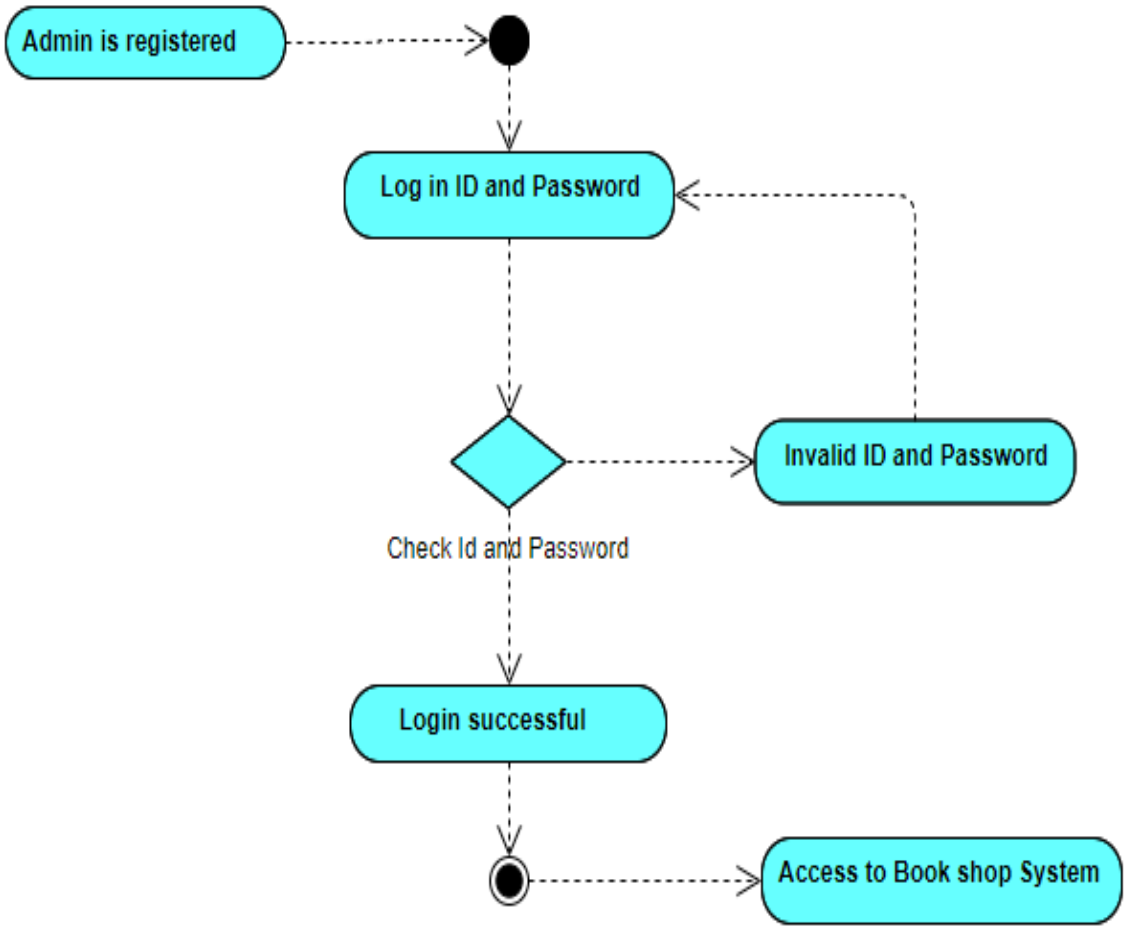


4. Sequence / Collaboration Diagram

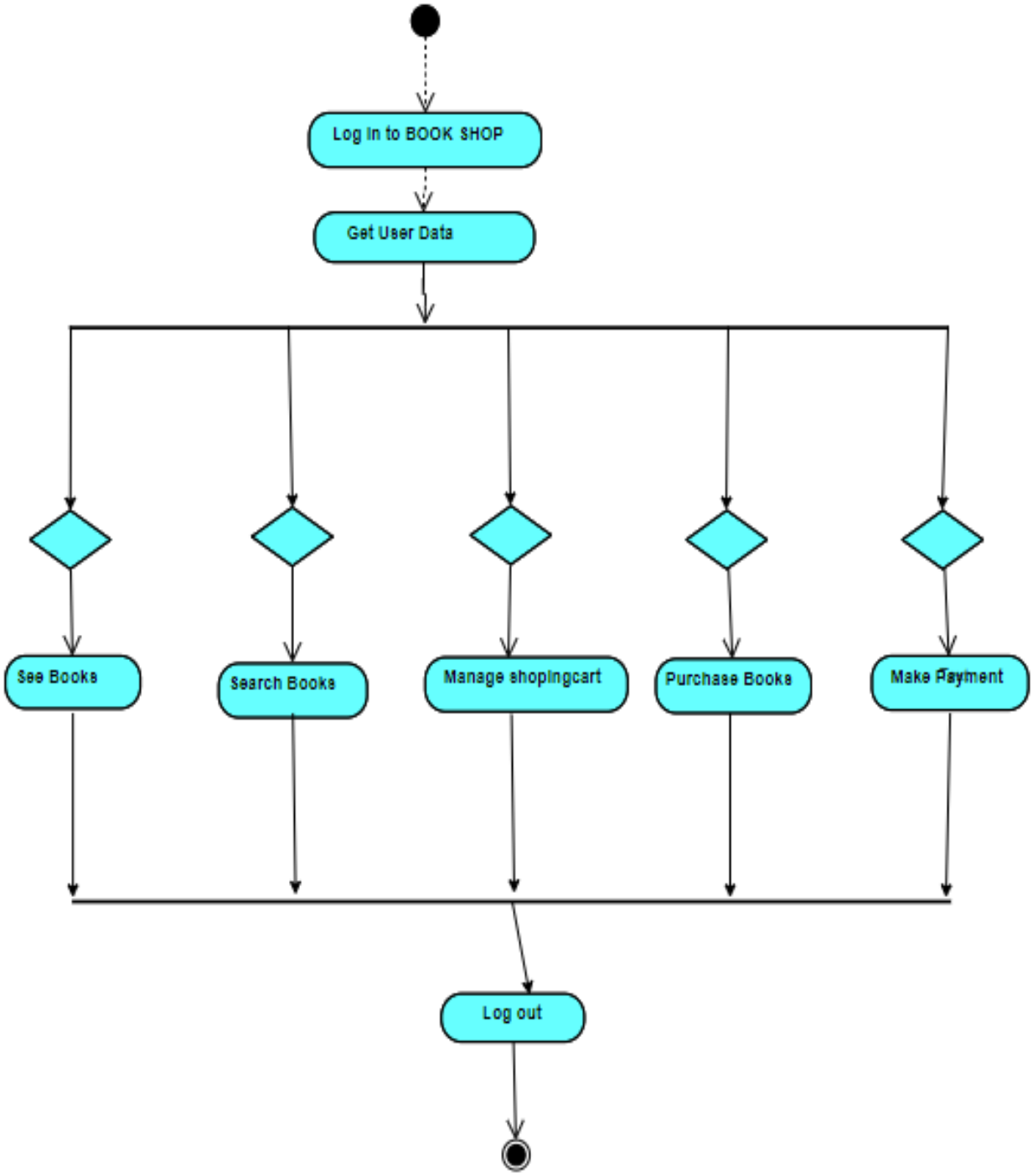


5. Activity Diagram

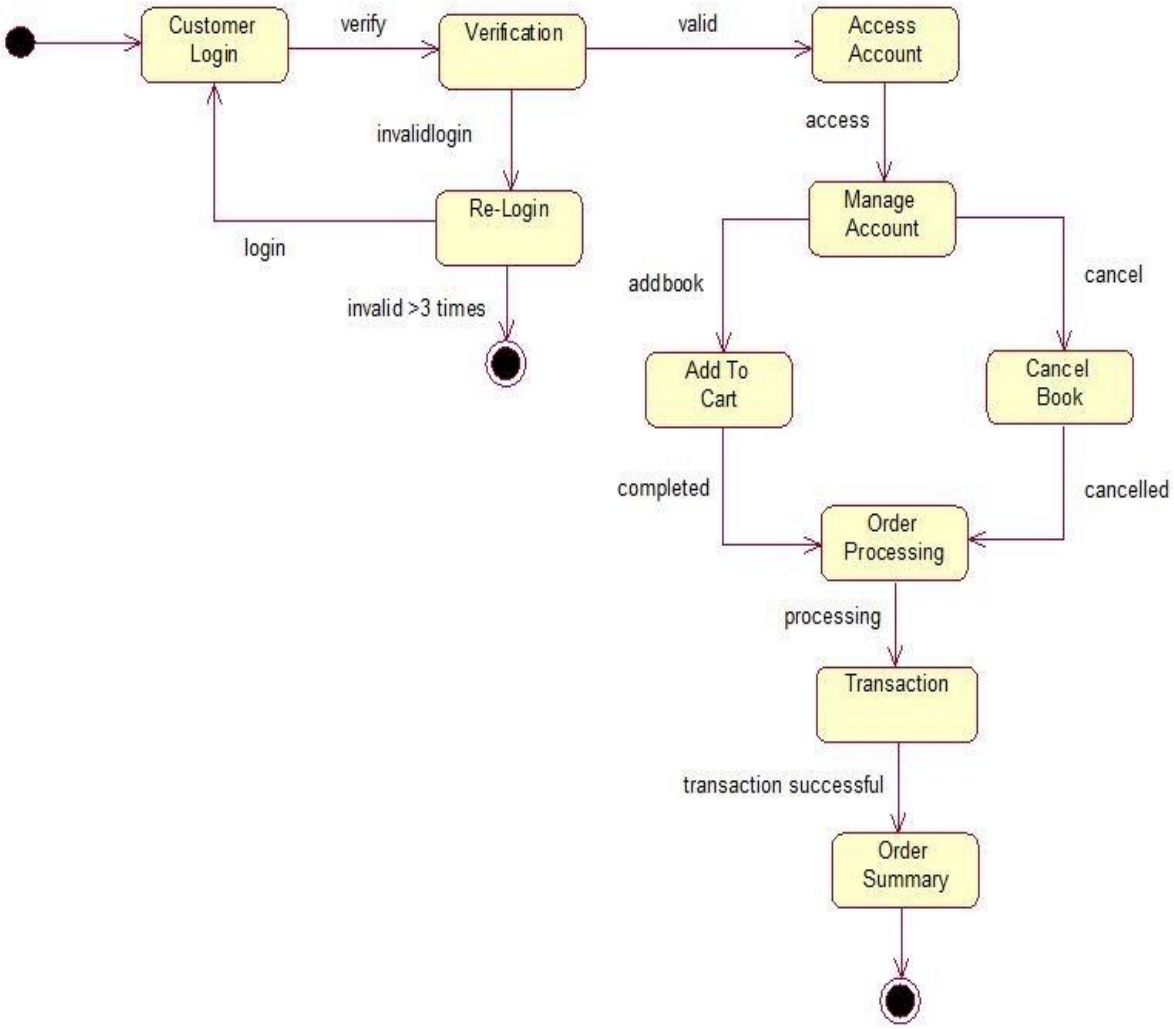
Admin Activity Diagram:



User Activity Diagram:

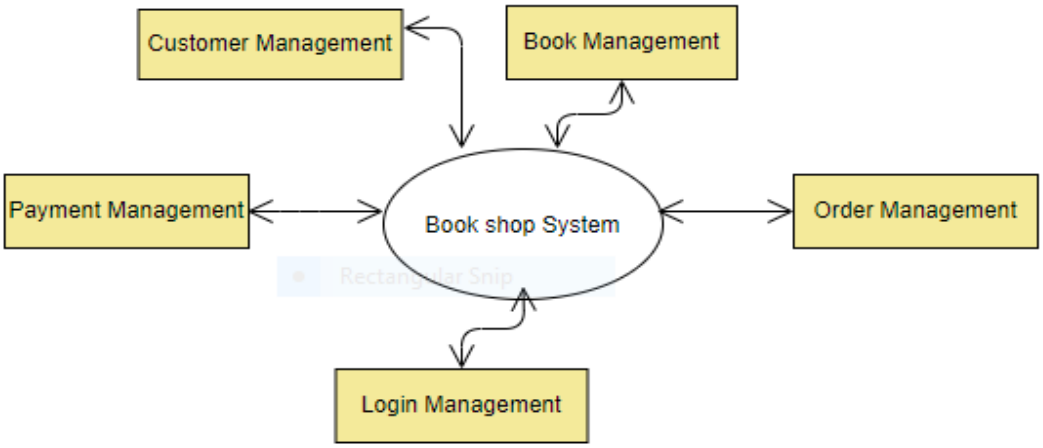


6. State Transition Diagram

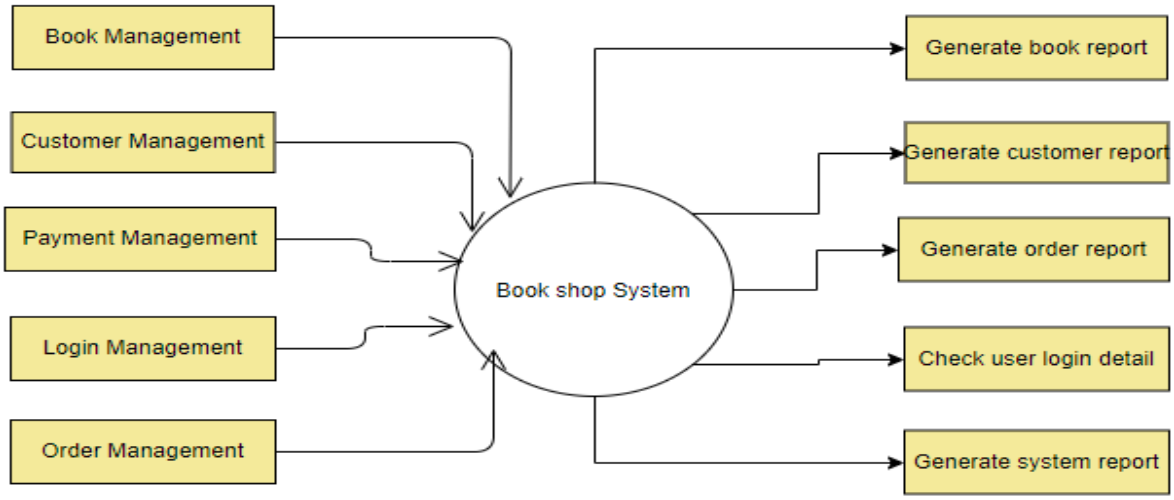


7. Data Flow diagram [*only if structured approach is used - Level 0 and 1*]

Zero Level:



Level 1:



Chapter 5

Implementation

Chapter 5: Implementation

Software design and implementation is the stage in the software engineering process at which an executable software system is developed.

• Software design and implementation activities are invariably inter-leaved.

– Software design is a creative activity in which you identify software components and their relationships, based on a customer's requirements.

– Implementation is the process of realizing the design as a program.

1. Important Flow Control/Pseudo codes

1. User have two option (Admin and Worker).
2. If user click Admin.
3. He has to enter Login user and password.
4. If Name and Password = correct user logged in.
5. Admin can Perform CRUD operation o the books table and Worker Table.
6. If worker logged in he can generate bill and also mark attendance

2. Components, Libraries, Web Services and stubs

We will use Java libraries that are used to connect with my sql or making a Frame to show a gui interface web services are not very important in this project as we can use it offline. All the components we need is an eclipse software and an xammp server

3. Deployment Environment

It can be deployed on any Personal computer which can support the working of eclipse and xaamp server it is easy to install in any device no need of any external devices

4. Tools and Techniques

We will use Html css and bootstrap to cover this task

5. Best Practices / Coding Standards

Coding Standards for Components: It is recommended to write components name by its purpose. This approach improves the readability and maintainability of code.

Coding Standards for Classes: Usually class name should be noun starting with uppercase letter. If it contains multiple word than every inner word should start with uppercase.

Coding Standards for Interface: Usually interface name should be adjective starting with uppercase letter. If it contains multiple word than every inner word should start with uppercase.

And many others

6. Version Control

We can change version at any time easy for client if he wanted because of easy changing abilities of the software

7. Code:

```
<header>
        <nav class="navbar navbar-expand-lg navbar-light nav-color">
          <div class="container-fluid container-width">
            <div class="logo">
              <a class="navbar-brand" href="#">
                <!-- <img src="images/logo.png" class="image-fluid"> -->
              </a>
            </div>
            <button class="navbar-toggler" type="button" data-bs-toggle="collapse"
              data-bs-target="#navbarSupportedContent" aria-
controls="navbarSupportedContent" aria-expanded="false"
              aria-label="Toggle navigation">
              <i class="fa fa-bars navbar-toggler" aria-hidden="true"></i>
            </button>
            <div class="collapse navbar-collapse justify-content-end"
id="navbarSupportedContent">
              <ul class="navbar-nav ul-center mb-2 mb-lg-0">
                <li class="nav-item"> <a class="nav-link active" aria-current="page"
href="#">Home</a> </li>
                <li class="nav-item"> <a class="nav-link" href="#">Products</a> </li>
```

```
                <li class="nav-item"> <a class="nav-link" href="#">Add to Cart</a> </li>
                <li class="nav-item"> <a class="nav-link" href="#">About Us</a> </li>
              </ul>
              <!-- <form class="d-flex header-input m-0">
                <div class="header-input-border">
                  <input class="form-control" type="search" placeholder="Search" aria-label="Search">
                  <i class="fa fa-search" aria-hidden="true"></i>
                </div>
                <button class="btn btn-one" type="submit">WALLET</button>
              </form> -->
            </div>
          </div>
        </nav>
      </header>
```

7. FRONT END:

a) C#; this was used in front end design and development i.e. for user interface development because it uses HTML5, CSS and JavaScript that support good graphics (text, static and dynamic images), navigation (through hyperlinks) and data manipulations.

b) **XML**is scripting programming language that works with HTML to enhance web pages, make them more interactive and add more functionality to html pages

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

6.1. Use Case Testing

This was to ensure that the whole system functioned as expected with the various functions and modules coordinating with each other in order to achieve the system goal. System malfunctions were corrected.

6.2. Equivalence partitioning

This was carried out with chosen users to check whether the system met the purpose for which it was developed and thus satisfy student needs.

6.3. Boundary value analysis

This was met to ensure that we built the right system, this was done by allowing selected users to use the system and to check whether the system satisfies students' needs and meets specified requirements, checking for correct system input data and output to ensure that it is complete and accurate.

Validation checks that were done to the system included the following;

6.4. Data flow testing

Each input data item was checked to ensure that it does not contain invalid characters. For example, an input name might be checked to ensure that it contains only letters of the alphabet, or an input six-figure date might be checked to ensure it contains only numbers.

6.5. Unit testing

This was to ensure that the system functionalities and modules were performing as expected and any existing errors were rectified. It was achieved by testing the various functionalities such as;

- Clearing students by the department.
- Assigning users by the systems administrators.
- Students check for their results online.

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

The use of computer software based online clearance system forms the basis of the school management decision. It aims at providing the management with adequate, effective, well documented up-to-date and formatted output. To help as a tool in planning and decision making/based on the student clearance form.

The lack of learner outcome variation of the online system signals the establishment of concurrency between the two measures even though they are measures of same construct. This investigation supports the use of the online system structure to broaden the instruction audience in technology education program.

7.2. Achievements and Improvements

Research and development are continuous processes; this is same in computer and software development. However the effectiveness and efficiency of this new system provide room for further improvement. As early mentioned some of the objectives of this project were not actualized due to some limitation. The outline clearance system developed will offer greater opportunity in school management. All transaction or payment with regards to student's clearance can be carried out online.

7.3. Critical Review

The research work carried out is limited to online clearance only. It would be better if a full portal is developed for effective and wholesome of information management technology in our universities. When this is done the following modules are recommended to include in the portal.

1. Developing an online student's admission system to enable full tracking of student records
2. Automation of student academic record to enable the management to have access to student academic performance.

3. Maintaining a central database for accessing information relating to student.

7.4. Lessons Learnt

The use of clearance system in technology education at the university remain at the minimal level as suggested by the 80 percent of the online student participant, predominantly technology education measures who report that they have not done online clearance previously. Also 75 percent of online student participant report that they have not used computer software base online clearance system previously. Having come to completion of this project work a lot of achievement was made and they include;

1. The replacement of error prone manual system with new automated online clearance system.
2. Data can now be processed with great speed and efficiency.
3. The application has the ability to update record in various files automatically there relieving the university staff the stress from working from file to file.
4. The security of data is ensured.
5. The use of database server was implemented.

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