

**BdBookBazzar**

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This Report Presented in Partial Fulfillment of the Requirements for the  
The level of Bachelor of Science in Computer Science and Engineering.

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This Project titled "**BdBookBazaar**", submitted by Tommoy Saha Opi, ID No: 152-15-5932 and Tithee Chakma Mama, ID No:143-15-4657 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 02-05-2019.

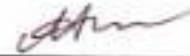
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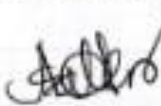
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## DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Nusrat Jahan, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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## **ABSTRACT**

“BdBookBazaar” 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 customer’s shopping habit has shifted to online, 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 that allows their customers to order the books they want while sitting at home. BdBookBazaar is the first online stage which deals with new and old books and late selling books, most selling books, most investigated books in all fields which directly show in the home page. Using this Website, the customer can purchase a book online instead of going out to a book store and wasting time. It makes easier for the customer to choose the best books based on the most selling books list, most investigated books. 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). 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 and book information, Category information, review information. After all, this Website is without mistake. Any client can utilize this site neighborly.

# TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
Acknowledgement	iv
Abstract	v
List of Figures	viii
List of Tables	ix
<b>Chapter 1: Introduction</b>	<b>1-3</b>
1.1 Introduction	1
1.2 Motivation	2
1.3 Objectives	2
1.4 Expected Outcome	2
1.5 Report Layout	3
<b>Chapter 2: Background</b>	<b>4-6</b>
2.1 Introduction	4
2.2 Related Works	4
2.3 Comparative Studies	4
2.4 Scope of the Problem	5
2.5 Challenges	6
<b>Chapter 3: Requirement Specification</b>	<b>7-39</b>
3.1 Business Process Modeling	7
3.2 Requirement Collection and Analysis	14
3.3 Use Case Modeling and Description	37
3.4 Logical Data Model	37
3.5 Design Requirements	37
<b>Chapter 4: Design Specification</b>	<b>4 - 47</b>
4.1 Front-end Design	40

4.2 Back-end Design	42
4.3 Interaction Design and UX	46
4.4 Implementation Requirements	47
<b>Chapter 5: Implementation and Testing</b>	<b>48 - 66</b>
5.1 Implementation of Database	48
5.2 Implementation of Front-end Design	51
5.3 Implementation of Interactions	56
5.4 Testing Implementation	60
5.5 Test Results and Reports	60
<b>Chapter 6: Conclusion and Future Scope</b>	<b>67 - 68</b>
6.1 Discussion and Conclusion	67
6.2 Scope for Further Developments	67
<b>References</b>	<b>68</b>
<b>Appendices</b>	<b>69</b>

## LIST OF FIGURES

<b>FIGURES</b>	<b>PAGE</b>
Figure 3.1.1: Business process model for Admin	8
Figure 3.1.2: Business process modeling for Admin	8
Figure 3.1.3: business process modeling for client/customer	9
Figure 3.2.1: Requirement collection and analysis	10
Figure 3.2.2: Data flow diagram symbol	12
Figure 3.2.3: Data Flow Diagram.	13
Figure 3.3.1: Use Case Model for Administration	14
Figure 3.3.2: Use case model for Client/customer	15
Figure 3.4.1: Logical Data Model	37
Figure 3.5.1: Architecture Design	39
Figure 4.2.1: Hibernate Structure	44
Figure 4.2.2: JPQL Code Format	45
Figure 4.3.1: Interaction design and UX	46
Figure 5.1.1: Database Table Design	48
Figure 5.2.1: Homepage	51
Figure 5.2.2: Client Login page	51
Figure 5.2.3: Client Registration page	52
Figure 5.2.4: Search page	52
Figure 5.2.5: Book details and Client review page	53
Figure 5.2.6: Admin login page	53
Figure 5.2.7: Book management page	54
Figure 5.2.8: Category management page	54
Figure 5.2.9: Customer management page	55
Figure 5.2.10: Review management page	55
Figure 5.2.11: Admin user management page	56
Figure 5.3.1: Frontend	58
Figure 5.3.2: Backend	60



## LIST OF TABLES

<b>TABLES</b>	<b>PAGE</b>
Table 3.3.1: Use case description of create employee	16
Table 3.3.2: Use case description of Delete employee	16
Table 3.3.3: Use case description of Update employee	17
Table 3.3.4: Use case description of List of all employee	18
Table 3.3.5: Use case description of Create category	19
Table 3.3.6: Use case description of Delete category	19
Table 3.3.7: Use case description of List of all category	20
Table 3.3.8: Use case description of Update category	20
Table 3.3.9: Use case description of Create Book	21
Table 3.4.10: Use case description of update Book	22
Table 3.3.11: Use case description of delete Book	23
Table 3.3.12: Use case description of List All Book	24
Table 3.3.13: Use case description of Reviews	25
Table 3.3.14: Use case description of delete Reviews	25
Table 3.3.15: Use case description of update Reviews	26
Table 3.3.16: Use case description of update list all orders	27
Table 3.3.17: Use case description of update order	27
Table 3.3.18: Use case description of delete order	28
Table 3.3.19: Use case description of list all customer	29
Table 3.3.20: Use case description of delete customer	29
Table 3.3.21: Use case description of register customer	30
Table 3.3.22: Use case description of login customer	31
Table 3.3.23: Use case description of manage profiles customer	31

Table 3.3.24: Use case description of place order	32
Table 3.3.25: Use case description of view order details	33
Table 3.3.26: Use case description of add book to shopping chart	33
Table 3.3.27: Use case description of remove book from shopping cart	34
Table 3.3.28: Use case description of remove book from shopping cart.	35
Table 3.3.29: Use case description of remove clear shopping cart	35
Table 3.3.30: Use case description of remove search book	36
Table 5.1.1: Client	49
Table 5.1.2: Category	49
Table 5.1.3: Book	49
Table 5.1.4: Review	49
Table 5.1.5: Book order (master)	50
Table 5.1.6: Order detail	50
Table 5.1.7: Employee	50
Table 5.5.1: Registration	61
Table 5.5.1: Registration	62
Table 5.5.2: Login	62
Table 5.5.3: Update profile	62
Table 5.5.4: Search book	62
Table 5.5.5: Add Book to shopping cart	62
Table 5.5.6: Remove Book and clear the shopping cart	62
Table 5.5.7: Update shopping cart	63
Table 5.5.8: Order and shipping information	63
Table 5.5.9: Add review and comment	63
Table 5.5.10: Add Book	63
Table 5.5.11: Delete Book	64
Table 5.5.12 Update Book	64
Table 5.5.13: Add and Delete Category	64

Table 5.5.14: Update Category	64
Table 5.5.15: Add and Delete employee	65
Table 5.5.16: Update Employee	65
Table 5.5.17: Manage Orders	65
Table 5.5.18: Manage Client	65

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Current development now a day, is called heavenly time. The charm called innovation. Present day innovation has achieved all of the goals that were once dream to human. In this report we will clear up a stimulating voyage not far-removed of Web administrations application. From necessities to use cases, to database structure, to fragment frameworks, to UIs, we will cover each and every piece of system setup required to develop an application with network situated Web administrations. The inspiration driving why we picked online Bookstore web organization is everybody walking around the street has some idea with respect to book shops. The objective of this endeavor is to develop an advanced book shop where books can be acquired from the comfort of home through the web. An online book shop is a virtual store on the Internet where client can scrutinize the stock and select books of interest. The picked books may be accumulated in a shopping basket. On the Check Out page, the client can audit the books she needs to arrange once more, and affirm the delivery data. As a matter of course, the delivery data is loaded up with client's enrolled data (name, phone, email, address, city, zip code and country). The client can refresh this data if necessary. What's more, this starting stage, the site acknowledges just installment by COD (Cash on Delivery). The client clicks "Spot Order" catch to present the request to the organization's staff, and after that she can check the request status by means of "My Orders" menu. The default status of a request is 'Handling' and just the organization's staff can refresh the request status. On the My Orders page, the client can see all requests she made through the site. The latest requests are appeared and she can snap to see the subtleties of each request. Right now, the client can't alter their requests once they are submitted. The site additionally enables the client to see their enlisted data (profile subtleties) and alter it. Note that the client can't change their enrolled email address, and their secret word won't be changed whenever left clear in the alter structure. Likewise note that when the client logs out, the data in their shopping basket is cleared. Whenever, the client can look through the books they need by composing a catchphrase in the inquiry box at the highest point of the site. The query item indicates books that have either title or depiction contain the predefined catchphrase. The client can add the book to truck straightforwardly in the query output.

## **1.2 Motivation**

The essential goal of this venture is to make a “BdBookBazaar” that licenses customer to request and purchase a book online reliant on characterization, essayist and subject and furthermore by review top of the line books, most. The picked books are appeared and the customer can mastermind their books online through COD. The Administrator will have additional functionalities when appeared differently in relation to the typical customer [6].

The motivation to make this task has various sources –

- Interest to develop a better than average simple to utilize webpage with various online trades using a database.
- To extend my Knowledge horizon in developments like Java, SQL, CSS, HTML, JavaScript, JQuery, JPA, Hibernate, Servlet, JSP.
- To lessen time use, work necessities

## **1.3 Objective**

- To empower administrator to get to the system from anyplace.
- To diminish information repetition and pruning equivocal information.
- To process information in potentially least measure of time.
- To secure the data and impede the entrance of unauthorized people.
- To profit the data quickly sought after.
- To examine the information for giving expository choices.

## **1.4 Expected Outcome**

We expect the result from our task is completely right and explicit. From our application customer will be profited most. With our venture we need to help the books sweetheart to think about each book and they don't have to go outside to buy book. With our undertaking our customer can look through the book by name or writer name. Customer can pick the book dependent on top rated book and customer can likewise pick the book from most loved book list.

## **1.5 Report Layout**

### **Chapter 1: Introduction**

In this section we have clear up beginning presentation, inspiration, destinations, expected result and report design of our venture.

### **Chapter 2: Background**

In this section we have examined about working foundation of our task. We have additionally examined about the related works, comparatives think about like our undertaking, challenges, established issues and arrangements.

### **Chapter 3: Requirement Specification**

This part is about the necessity investigation and gathering. We have talked about a lot of things like prerequisite accumulation and investigation, business process demonstrates, use case display, point by point use case and structure necessities.

### **Chapter 4: Design Specification**

We have talked about pretty much every one of the plans of our task like front end configuration, back end structure, association and UX, usage of prerequisites.

### **Chapter 5: Implementation and Testing**

This section contains database usage, front-end plans execution, collaborations of various pieces of the undertaking and the test consequences of the venture.

### **Chapter 6: Conclusion and Future Scope**

This part is about the end and future extent of this undertaking. We have talked about what should be possible later on with this task.

## **CHAPTER 2**

### **BACKGROUND**

#### **2.1 Introduction**

Our framework will be an intelligent Web application which can be opened by any program. In our application customer can enlist by his/her email. Enlisted client will get notice by means of their mail about our new books. Customer can likewise observe their buy history and furthermore can discover the smash hit books on our framework. What's more, customer likewise can alter their profile in the event that he/she need.

#### **2.2 Related work**

There are various online book shops like Powell's, Amazon which were organized using HTML. We have to develop a relative site using java, servlet, JSP, JavaScript, JQuery, JPQL, Hibernate, MySQL, CSS. Online Book store is an online web application where the customer can purchase books on the web. Through a web program the customers can scan for a book by its title and class, later can add to the shopping basket finally purchase using Cash on Delivery. The customer can sign in using his record nuances or new customers can set up a record all around quickly. They should give the nuances of their Recipient Name, Recipient Phone, Order Date and Shipping Address. The books are isolated into various orders reliant on subjects like a social book, programming book, business book, etc [7, 6].

#### **2.3 Comparative Studies**

Our implemented application is different from the existing sites. This total system is observed by an admin.

**My system will give following term:**

- System Administration
- Clients:
  - Visitor client
  - Registered client.

### **Facilities to be given to the system administrator:**

- The system administrator will have easy to use offbeat GUI (Graphical User Interface) system.
- To have the subtleties information of the request, normal selling rate, top-selling books information, week by week selling books information and so forth.[6, 8].

### **Facilities to be given to the registered client:**

- The client can pick and purchase any sorts of books effectively from this site just by registering.
- The client can search for any sort of books from this website.
- The client can without much of stretch access to this website
- The client can add, update or drop his/her shopping cart inside a restricted time.
- Client can give review and comment to each book.
- Clients can contact the administrator.
- Clients can complain about the website [6, 8].

### **Facilities to be given to the Guest client:**

- Clients can demonstrate all information about books.
- Client can search for any sort of books from this website.
- Clients can peruse a review of the books.
- Clients can complain about the website.
- Clients can contact the administrator.

## **2.4 Scope of the problem**

The fundamental point of our venture is to give an online web based business on bookselling. It will be a simple method to discover the needed book by means of our framework. Through this framework our customer will get customary help in the event that they face any sort of issue while looking or requesting books from our site.

We give fantastic security of information at each dimension of our customer framework collaboration. Our webpage will be useful for books darling to choose their books type and they will get the new book rundown and smash hit book list and most-favored book list when they touched base to BdBookBazaar site page.



## **2.5 Challenges**

- Client must have to register first.
- Client must have to use valid email for login.
- Must need internet connection to get the service.
- Client must need to give a valid contact number for delivery service.
- Client must need to give a valid shipping address.
- Client must have to use unique email address.

## CHAPTER 3

### REQUIREMENT SPECIFICATION

#### 3.1 Business Process Modeling

Business process displaying is a method for speaking to the business exercises, the data stream and choice rationale in business forms.

With the intensity of representation, it is utilized to impart data in regards to a procedure and the association it incorporates inside/between associations either among the people perusing a model or the people who make it.

It externalizes the business learning so as to concur and tie all partner in a portrayal that is shared inside an association and is reflected in its data frameworks.

It shows various granularity levels: from straightforward delineation of the work process to reproduction and execution.

It tends to unpredictability by underscoring on explicit perspectives and by reusing models.

It accomplishes a typical comprehension of business learning between an association and IT specialists and along these lines drives the structure and usage of programming frameworks.

Business Process Modeling are two sorts [9].

**Dynamic Model Type:** At whatever point a model sort should indicate process significant data that can be placed in an ordered, time subordinate way, this model kind is alluded to as a "dynamic model sort". Every model kind that speak to a procedure stream are dynamic model sort.

**Static Model Types:** Static model sorts speak to structures that don't give time reliance. This incorporates the demonstrating of hierarchical structures, of data transporters like structures or the displaying of connections between business objects [6].

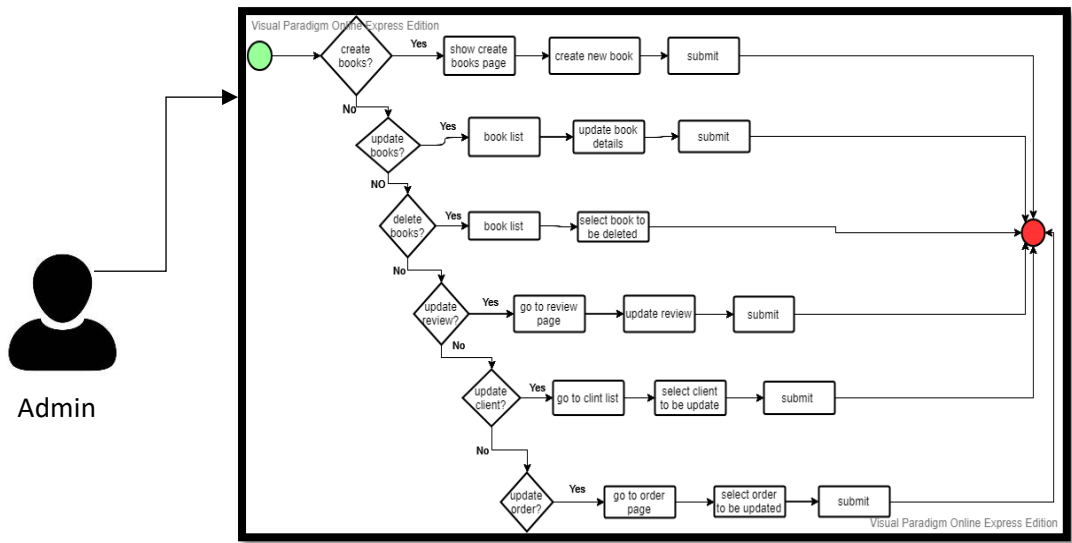


Figure 3.1.1: Business process model for Admin.

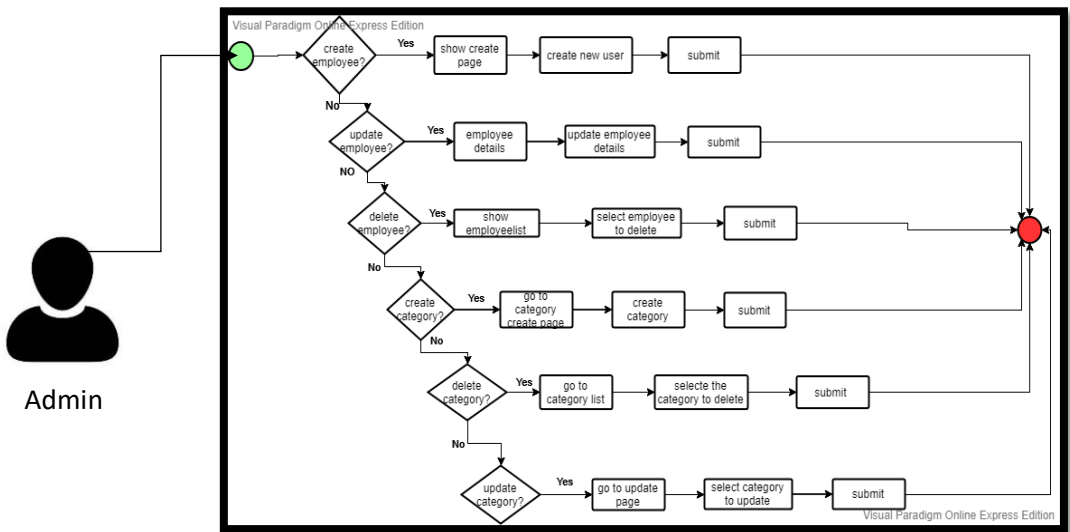


Figure 3.1.2: Business process modeling for Admin

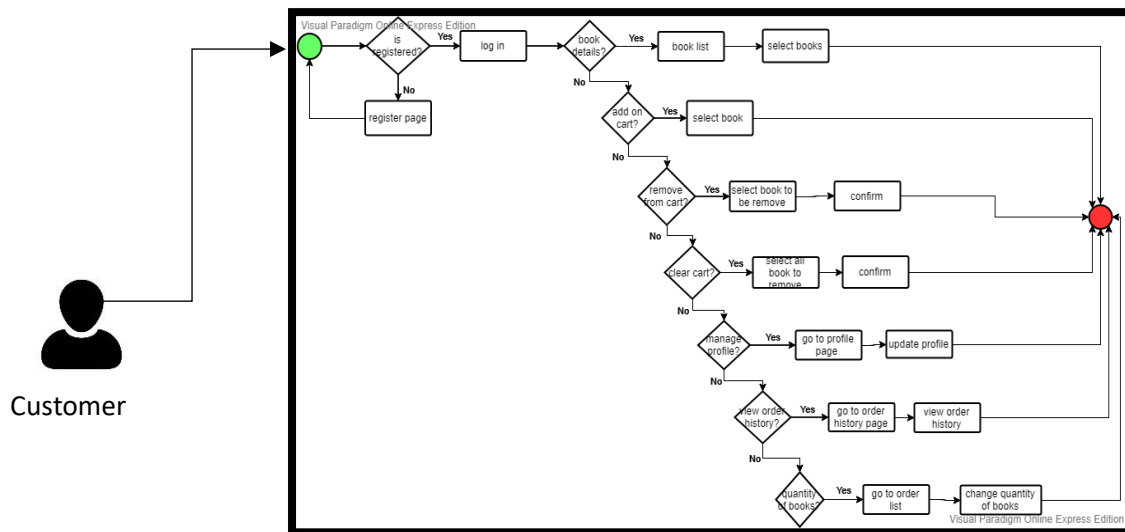


Figure 3.1.3: business process modeling for client/customer

### 3.2 Requirement Collection and Analysis [1]

Here we were using of waterfall model for requirement collection and analysis.

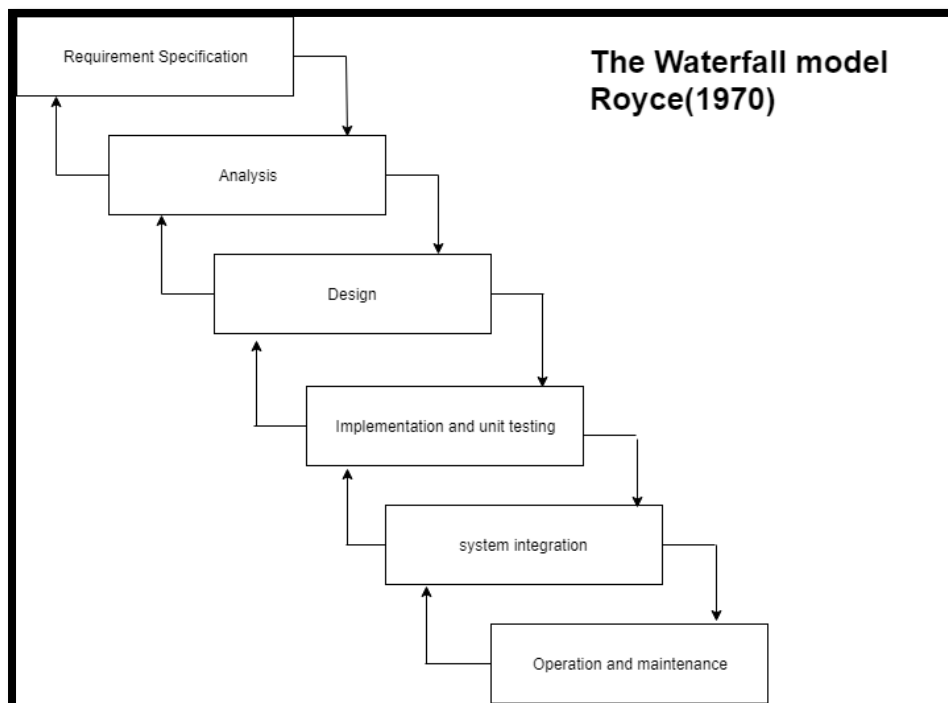


Figure 3.2.1: Requirement collection and analysis

The methodology we will use to develop the OTBMS is cascade display. Cascade display is

one of the framework improvement life cycle (SDLC) models. Customers proceed to the accompanying stage in case and just if the present stage is done. Customers are not allowed to come back to past stages if there is any mistake so the model is named after the cascade display.

In Royce's exceptional cascade demonstrate, the cascade show at first involves seven phases which are Requirement specification

- Analysis
- Design
- Implementation
- Testing and Debugging
- Installation and Deployment
- Acceptance and Maintenance

### **Requirement specification:**

Each and every believable essential of the system to be created are communicated in this stage. Prerequisites are a ton of limits and constraints that the end customer envisions from the structure. The prerequisites are collected from the end customer and are dissected for their authenticity and the probability of going along with them. Finally, a need particular report is made which fills the need of a standard for the accompanying time of the model.

### **Software Design:**

Prior to starting the genuine coding stage, it is exceedingly basic to appreciate the prerequisites of the end customer and moreover have an idea of how the last outcome ought to take after. The essential details from the fundamental stage are analyzed here, and a framework design is prepared. The structure helps in deciding equipment and framework necessities and besides helps in describing the general framework engineering. The framework plan determinations fill in as a commitment for the accompanying time of the model.

### **Implementation and unit testing:**

Execution and Unit testing on tolerating framework setup records, the work is disengaged in modules/units and genuine coding starts. The framework is first clarified into little ventures called units, which are composed in the accompanying stage. Each unit is created and strove for its convenience; this is insinuated as unit testing. Unit testing generally checks if the modules/units meet their determinations.

### **Integration and system Testing:**

The units are as of now consolidated to outline a complete framework in the midst of the blend stage and attempted to check if all modules/units organize with each other and the framework all things considered continues as indicated by the particulars. After successfully testing the item, it is passed on to the customer.

### **Installation and Deployment:**

The product is by and by associated by the customer to his/her own one of a kind system(s). What the customer's needs to manage is his framework consenting to the base framework prerequisites of the product. He in like manner needs to manage any framework structures and reconfigurations on his side of the course of action. At the point when the product is honestly presented, he will begin correspondence with the dealers on a need-to-know reason and help report any bugs that occur.

### **Operation and Maintenance:**

This time of the model is in every practical sense unending. Generally, issues with the framework (which are not found in the midst of the headway cycle) come up after its rational use starts, so the issues related to the framework are settled after its association. Few out of every odd one of the issues come into the picture explicitly, yet they develop occasionally and ought to be lit up; from now on this system is insinuated.

### **Data Flow Diagram:**

Otherwise called DFD, Data stream outlines are utilized to graphically speak to the stream of information in a business data framework. DFD depicts the procedures that are engaged with a framework to exchange information from the contribution to the document stockpiling and reports age.

Information stream graphs can be partitioned into sensible and physical. The sensible information stream chart portrays stream of information through a framework to play out certain usefulness of a business. The physical information stream graph portrays the execution of the coherent information stream.

DFD graphically speaking to the capacities, or procedures, which catch, control, store, and circulate information between a framework and its condition and between segments of a framework. The visual portrayal makes it a decent specialized instrument among User and System fashioner. Structure of DFD permits beginning from a wide outline and extend it to

a progressive system of graphs. DFD has frequently been utilized because of the accompanying reasons:

- Logical information flow of the system
- Determination of physical system construction requirements
- Simplicity of notation
- Establishment of manual and automated systems requirements

There are four basic symbol which are used to represent the data flow diagram [8].

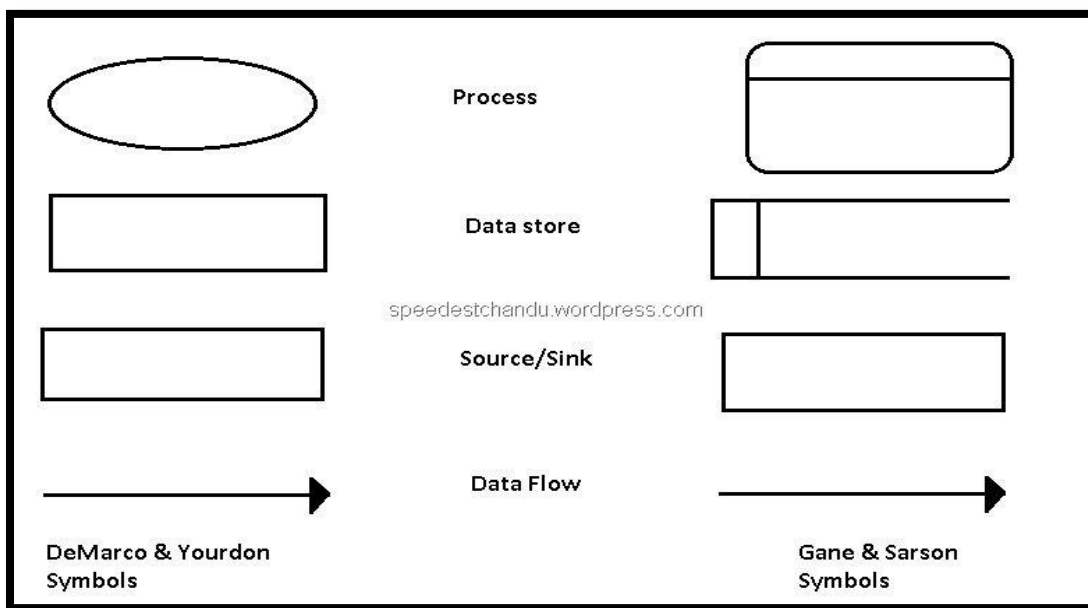


Figure3.2.2: Data flow diagram symbol

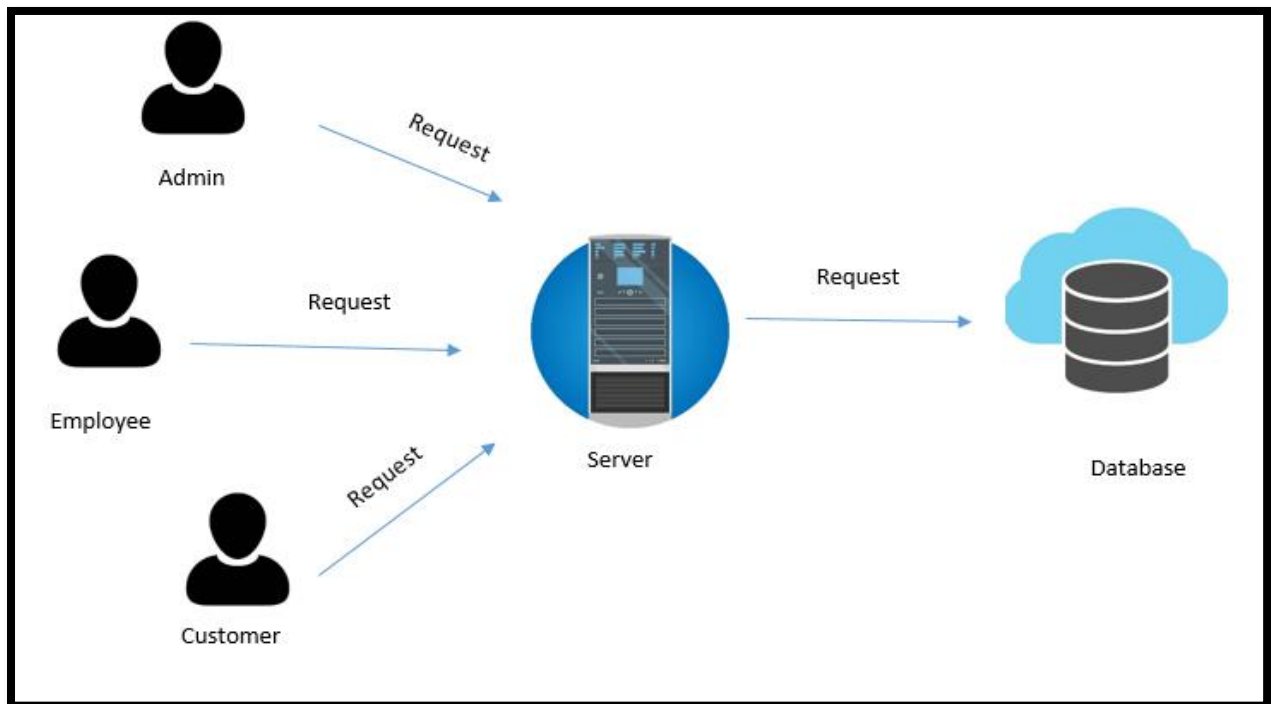


Figure 3.2.3: Data Flow Diagram

### 3.3 Use case modeling and description

The going with figure exhibits the utilization case demonstrate for “BdbookBazzar”. Here two sorts of the customers are open. A head customer can play out all of the systems yet that needs a login for that. On the other hand, a run of the mill customer can simply draw a graph, Import and admission data. He furthermore ought to be marked in the system for organizations that I am giving.



Use Case Model for Admin:

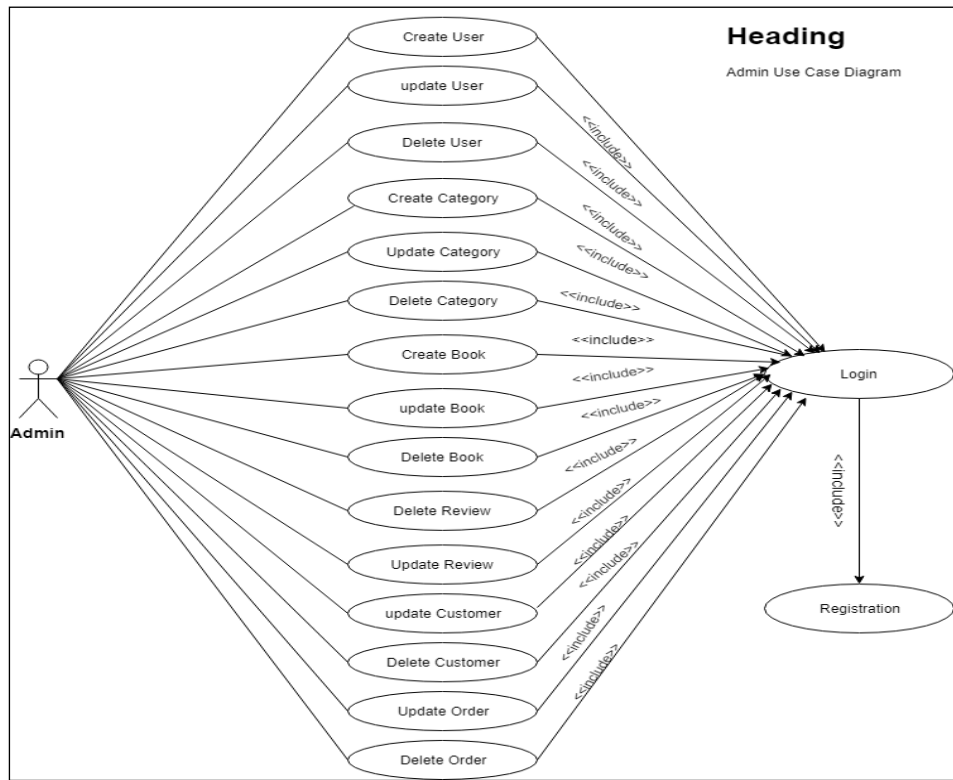


Figure 3.3.1: Use Case Model for Administration

Use case model for Client/customer:

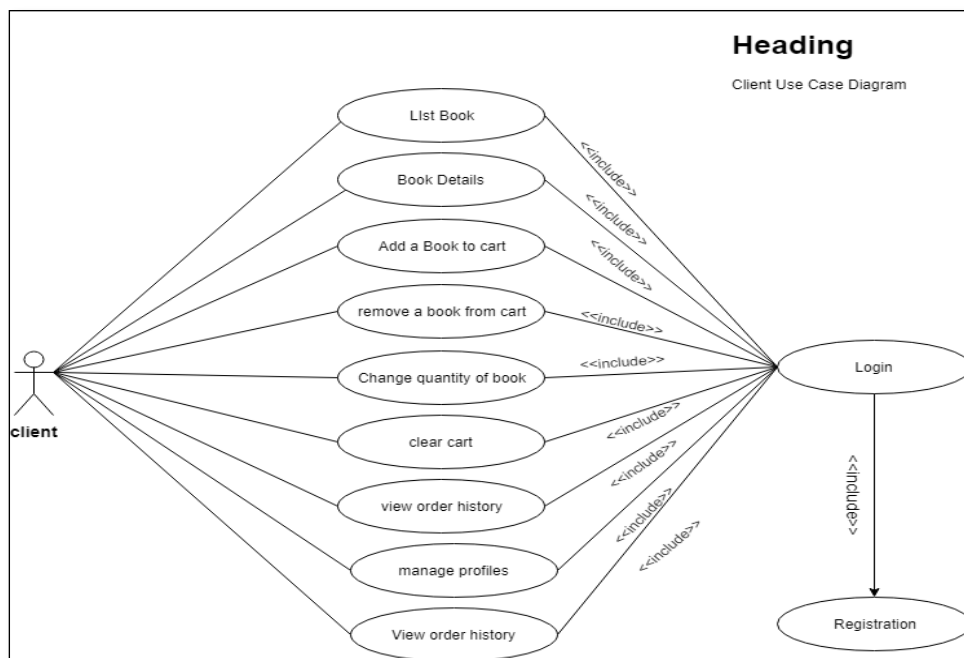


Fig 3.3.2: Use case model for Client/customer

Table 3.3.1 portrays about “create employee” procedure of our venture and it gives us a seeing how the procedure functions in task. Create employee process has four essential ways they are enter email, full name, position, pass word and create employee. In this four essential way have three invalid ways that are client with email is as of now exist, invalid administrator secret key, invalid administrator email.

Table 3.3.1: Use case description of create employee

Use Case	Create employee
Pre-Condition	Login
Actor	Admin, Employee
Primary Path	<ul style="list-style-type: none"> <li>• Enter Email</li> <li>• Enter Full Name</li> <li>• Enter Position</li> <li>• Enter Password</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This user with email is already exist.</li> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.2 portrays about “Delete employee” procedure of our task and it gives us a seeing how the procedure functions in venture Delete employee process has three essential ways they are go to client page, select client and snap erase catch. In this there are two invalid way they are invalid administrator email, invalid administrator secret word.

Table 3.3.2: Use case description of Delete employee

Use Case	Delete employee
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Users page.</li> <li>• Select a User to delete.</li> <li>• Click on the Delete Button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.3 portrays about “Update employee” procedure of our undertaking and it gives us a seeing how the procedure functions in venture. Update employee process has five essential ways they are go to client page, select client to refresh, click update catch, return email, secret phrase, and full name and snap spare catch to refresh. In this there are three invalid way.

Table 3.3.3: Use case description of Update employee

Use Case	Update employee
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Users page.</li> <li>• Select a User to Update.</li> <li>• Click on the Update Button</li> <li>• Re-Enter email, password, full name</li> <li>• Click the save button to update</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This user cannot update. Because this user with this email is already exist.</li> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.4 portrays about “List of all employee” procedure of our task and it gives us a seeing how the procedure functions in undertaking. List of all employee process has three essential ways they are go to. In this there are three invalid way they are invalid administrator email, invalid administrator secret key.

Table 3.3.4: Use case description of List of all employee

Use Case	List All User
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Administration page.</li> <li>• Click on the Users</li> <li>• See the List of User.</li> </ul>

Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>
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Table 3.3.5 depicts about “Create category” procedure of our task and it gives us a seeing how the procedure functions in undertaking. Create category process has two essential ways they are enter class name and snap on make catch. In this there are three invalid way.

Table 3.3.5: Use case description of Create category

Use Case	Create Category
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Enter Category Name</li> <li>• Click on the create button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This Category Name is already Exist.</li> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.6 depicts about “Delete category” procedure of our venture and it gives us a seeing how the procedure functions in task. Delete category process has three essential ways. In this there are two invalid ways they are invalid administrator email, invalid administrator secret word.

Table 3.3.6: Use case description of Delete category

Use Case	Delete Category
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Categories page.</li> <li>• Select a Category to delete.</li> <li>• Click on the Delete Button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.7 depicts about “List of all category” procedure of our venture and it gives us a seeing how the procedure functions in task. List of all category procedure has three essential ways. In this there are two invalid ways they are invalid administrator email, invalid administrator secret word.

Table 3.3.7: Use case description of List of all category

Use Case	List All Category
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar Administration page.</li> <li>• Click on the Categories</li> <li>• See the List of categories.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.8 describes about “update category” process of our project and it gives us an understanding how the process works in project. Update category process has four primary paths. In this there are three invalid path.

Table 3.3.8: Use case description of Update category

Use Case	Update Category
Pre-Condition	Login
Actor	Admin, employee
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar Administration page.</li> <li>• Click on the Update Button</li> <li>• Re-Enter Category Name</li> <li>• Click on the Update button to update</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This Category cannot update. Because this Category with this name is already exist.</li> </ul>

	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>
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Table 3.3.9 Describes about “create book” process of our project and it gives us an understanding how the process works in project. Create book process has nine primary paths. In this nine primary path have three invalid paths that are user with email is already exist, invalid admin password, invalid admin email.

Table 3.3.9: Use case description of Create Book

Use Case	Create Book
Pre-Condition	Login
Actor	Admin, employee
Primary Path	<ul style="list-style-type: none"> <li>• Enter Title</li> <li>• Enter Author</li> <li>• Enter Description</li> <li>• Enter ISBN</li> <li>• Enter Image</li> <li>• Enter Price</li> <li>• Enter Publish Date</li> <li>• Enter Publish Date</li> <li>• Enter Last Update Time</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This Book with the title is already exist.</li> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.10 Describes about “update book” procedure of our venture and it gives us a seeing how the procedure functions in task. Update book process has two performers one is administrator and another is client. Also, this procedure has five essential ways they are go to book page, select book for update catch, reemerge all the portrayal and snap spare catch. In this there are three invalid ways.

Table 3.4.10: Use case description of update Book

Use Case	Update Book
Pre-Condition	Login
Actor	Admin, employee
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Books page.</li> <li>• Select a Book to Update.</li> <li>• Click on the Update Button</li> <li>• Re-Enter Title, author, ISBN, image, price, description, Publish date.</li> <li>• Click the save button to update</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This book cannot update. because this book with this title is already exist.</li> <li>• Invalid Admin or User Email</li> <li>• Invalid Admin or User Password</li> </ul>

Table 3.3.11 Describes about “Delete book” process of our project and it gives us an understanding how the process works in project. Delete book process has three primary paths. In this there are three invalid path.

Table 3.3.11: Use case description of delete Book

Use Case	Delete Book
Pre-Condition	Login
Actor	Admin, employee
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Books page.</li> <li>• Select a Book to delete.</li> <li>• Click on the Delete Button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This book is already deleted by another admin or user.</li> <li>• Invalid Admin or User email</li> <li>• Invalid Admin or User Password</li> </ul>

Table 3.3.12 Describes about “list all books” process of our project and it gives us an understanding how the process works in project. List all book process has three primary paths they are go to BdBookBazaar administration page, click on the book page and see the list of

book. In this there are two invalid path and they are invalid admin email, invalid admin password.

Table 3.3.12: Use case description of List All Book

Use Case	List All Books
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Administration page.</li> <li>• Click on the Books page.</li> <li>• See the List of Book.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.13 Describes about “list all reviews” process of our project and it gives us an understanding how the process works in project. List all reviews process has three primary paths. In this there are two invalid path.

Table 3.3.13: Use case description of Reviews

Use Case	List All Reviews
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Administration page.</li> <li>• Click on the Reviews page.</li> <li>• See the List of Reviews.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.14 Describes about “delete review” process of our project and it gives us an understanding how the process works in project. Update category process has three primary paths and they are go to review page, select review to delete, and click delete button. In this there are three invalid path.



Table 3.3.14: Use case description of delete Reviews

Use Case	Delete Review
Pre-Condition	Login
Actor	Admin
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Reviews page.</li> <li>• Select a Review to delete.</li> <li>• Click on the Delete Button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This review is already deleted by another admin or user.</li> <li>• Invalid Admin or User email</li> <li>• Invalid Admin or User Password</li> </ul>

Table 3.3.15 Describes about “update review” process of our project and it gives us an understanding how the process works in project. Update review process has five primary paths and they are go to review page, select review to update, click on update button, re-enter headline, comments and click save button to update. In this there are three invalid path.

Table 3.3.15: Use case description of update Reviews

Use Case	Update Review
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Reviews page.</li> <li>• Select a Review to update.</li> <li>• Click on the Update Button.</li> <li>• Re-Enter – Headline, Comment</li> <li>• Click the save button to update</li> </ul>

Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin or User email</li> <li>• Invalid Admin or User Password</li> </ul>
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Table 3.3.16 Describes about “list all orders” process of our project and it gives us an understanding how the process works in project. List all orders process has three primary paths and they are go to administration page, click on order page and all the order list. In this there are two invalid path and they are invalid admin email and password.

Table 3.3.16: Use case description of update list all orders

Use Case	List All Orders
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar Administration page.</li> <li>• Click on the Orders page.</li> <li>• See the List of Orders.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin Email</li> <li>• Invalid Admin Password</li> </ul>

Table 3.3.17 Describes about “update order” process of our project and it gives us an understanding how the process works in project. Update order process has six primary paths. In this there are two invalid path.

Table 3.3.17: Use case description of update order

Use Case	Update Orders
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar Administration page.</li> </ul>

	<ul style="list-style-type: none"> <li>• Go to the Orders page.</li> <li>• Select an Orders to update.</li> <li>• Click on the Orders Button.</li> <li>• Re-Enter – Shipping Address, Recipient Name, Payment Method, Order Total, and Order Status.</li> <li>• Click the save button to update</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin or User email</li> <li>• Invalid Admin or User Password</li> </ul>

Table 3.3.18 Describes about “delete order” process of our project and it gives us an understanding how the process works in project. Delete order process has three primary paths and they are go to order page, select order to delete and click delete button. In this there are three invalid path.

Table 3.3.18: Use case description of delete order

Use Case	Delete Orders
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to the Orders page.</li> <li>• Select an Order to delete.</li> <li>• Click on the Delete Button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This Order is already deleted by another admin or user.</li> <li>• Invalid Admin or User email</li> <li>• Invalid Admin or User Password</li> </ul>

Table 3.3.19 Describes about “list all customer” process of our project and it gives us an understanding how the process works in project. List all customer process has three primary paths. In this there are two invalid path.

Table 3.3.19: Use case description of list all customer

Use Case	List all customer
Pre-Condition	Login
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Administration page.</li> <li>• Click on the customer’s page.</li> <li>• View List all the customers.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin or user Email</li> <li>• Invalid Admin or user Password</li> </ul>

Table 3.3.20 Describes about “delete customer” process of our project and it gives us an understanding how the process works in project. Delete customer process has three primary paths and they are go to order page, select order to delete and click delete button. In this there are three invalid path.

Table 3.3.20: Use case description of delete customer

Use Case	Delete customer
Actor	Admin, User
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Administration customer’s page.</li> <li>• Click on the delete button.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Invalid Admin or user Email</li> <li>• Invalid Admin or user Password</li> <li>• Go to customer page</li> </ul>

### Use case Description for client

Table 3.3.21 Describes about “register” process of our project and it gives us an understanding how the process works in project.in this process there only one actor that so Customer. Register

process has four primary paths and they are entering mail, enter full name, enter password, re-type password. In this there are one invalid path.

Table 3.3.21: Use case description of register customer

Use Case	Register
Pre-Condition	none
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Enter Email</li> <li>• Enter Full Name</li> <li>• Enter password</li> <li>• Enter Retype-Password</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This customer with this email is already exist.</li> </ul>

Table 3.3.22 Describes about “login” process of our project and it gives us an understanding how the process works in project. Login process has three primary paths and they are enter mail, enter password, click on login button. In this there are two invalid path and they are enter wrong email, enter wrong password.

Table 3.3.22: Use case description of login customer

Use Case	Login
Pre-Condition	Registration
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Enter Email</li> <li>• Enter password</li> <li>• Click on the login button.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.23 Describes about “manage profile” process of our project and it gives us an understanding how the process works in project. Manage profile process has three primary paths and they are go to profile, re-enter email, full name, password and click on the update button. In this there are two invalid path.

Table 3.3.23: Use case description of manage profiles customer

Use Case	Manage Profiles
Pre-Condition	login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to profile page</li> <li>• Re-Enter email, Full Name, password</li> <li>• Click on the update button</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• This customer with this email is already exist.</li> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.24 Describes about “place order” process of our project and it gives us an understanding how the process works in project. Place order process has eight primary paths. In this there are two invalid path.

Table 3.3.24: Use case description of place order

Use Case	Place Orders
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar page.</li> <li>• Go to the Orders page.</li> <li>• Enter Shipping Address</li> <li>• Enter Recipient Name</li> <li>• Enter Payment Method</li> <li>• Enter Order Total</li> <li>• Enter Order Status.</li> <li>• Click the on the order button to order</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.25 Describes about “view order details” process of our project and it gives us an understanding how the process works in project. View order details process has two primary paths and they are go to order details page and view order details. In this there are two invalid path they are wrong password and wrong email.

Table 3.3.25: Use case description of view order details

Use Case	View Orders details
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar Orders details page.</li> <li>• See the Orders details.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.26 Describes about “add book to shopping chart” process of our project and it gives us an understanding how the process works in project. Add book to shopping chart process has two primary paths. In this there are two invalid path.

Table 3.3.26: Use case description of add book to shopping chart

Use Case	Add book to Shopping Cart
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar shopping cart.</li> <li>• Click on a book to added in shopping cart.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.27 Describes about “remove book from shopping chart” process of our project and it gives us an understanding how the process works in project. Remove book from shopping chart process has two primary paths. In this there are two invalid path.

Table 3.3.27: Use case description of remove book from shopping cart

Use Case	remove book from Shopping Cart
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar shopping cart.</li> <li>• Click on a book to remove from shopping cart.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.28 Describes about “change quantity” process of our project and it gives us an understanding how the process works in project. Change quantity process has four primary paths they are go to shopping chart, click on quantity update button, re-enter quantity and click save button. In this there are two invalid path.

Table 3.3.28: Use case description of remove book from shopping cart

Use Case	Change quantity
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazzar shopping cart.</li> <li>• Click on the quantity update button</li> <li>• Re-enter quantity.</li> <li>• Click save button.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.29 Describes about “clear shopping chart” process of our project and it gives us an understanding how the process works in project. Clear shopping chart process has two primary paths. In this there are two invalid path.

Table 3.3.29: Use case description of remove clear shopping cart

Use Case	Clear Shopping Cart
Pre-Condition	Login



Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar page.</li> <li>• Click on the clear button for remove all books from cart.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

Table 3.3.30 Describes about “search book” process of our project and it gives us an understanding how the process works in project. Clear shopping chart process has four primary paths they are go to home page, click on search bar, enter book name, click on search button. In this there are two invalid path.

Table 3.3.30: Use case description of remove search book

Use Case	Search books
Pre-Condition	Login
Actor	Customer
Primary Path	<ul style="list-style-type: none"> <li>• Go to BdBookBazaar home page.</li> <li>• Click on the search bar.</li> <li>• Enter book name.</li> <li>• Click on the search button.</li> </ul>
Invalid Path	<ul style="list-style-type: none"> <li>• Enter wrong email.</li> <li>• Enter wrong password.</li> </ul>

### 3.4 Logical Data Model

Here represented the logical Data model of the whole project system.

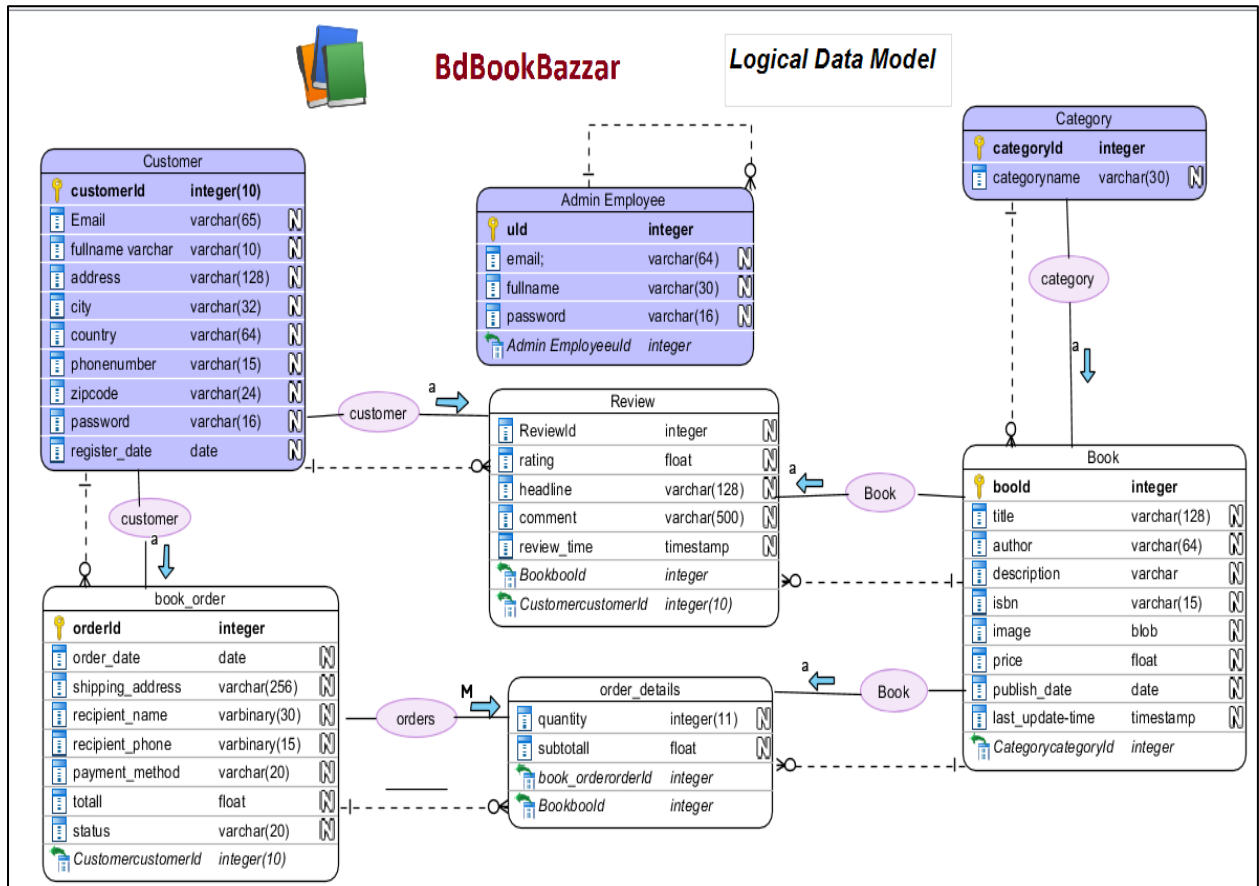


Figure 3.4.1: Logical Data Model

### 3.5 Design Requirements

Frameworks configuration is the way toward describing the design, sections, modules, interfaces, and data for a system to satisfy showed necessities. In this part by and large system plan of our application has been showed up, where structural structure, use case graph, stream outline and data stream chart included. Whole structure of this task is customer neighborly. Present day and refreshed plan instruments have been used for this task. In like manner, new thoughts have been considered to make it straightforward. In future any kind of modify is allowed as time stipends.

- Both employee and client will create their respective account.
- Both employee and client can be able to update their profile.
- Client can place order.
- Client can also cancel the order.

- Client can add books on cart.
- Client can also remove or clear cart.
- Client can give review on product.
- Client can also write comment on the books.
- Client will get all the notification via his/her mail.
- Client can see the book list.
- Client can find out bestselling books.
- Client can find out most favored books.
- Client can see their order history.
- Client can search books by book name, author name.
- When client will be log out then he/she session will be destroyed.
- Admin can see all the information.
- Admin will monitor all activity if employee and client.

### **Architecture Design**

The architecture design of a system emphasizes the design of the system architecture that describes the structure, behavior, and more views of that system and analysis.

Our application's architectural design shows that-

- User writes the web address of our application through the web browser.
- This link request goes to the web server.
- JVM Files fetch the data from database and the web page is showed to the user.

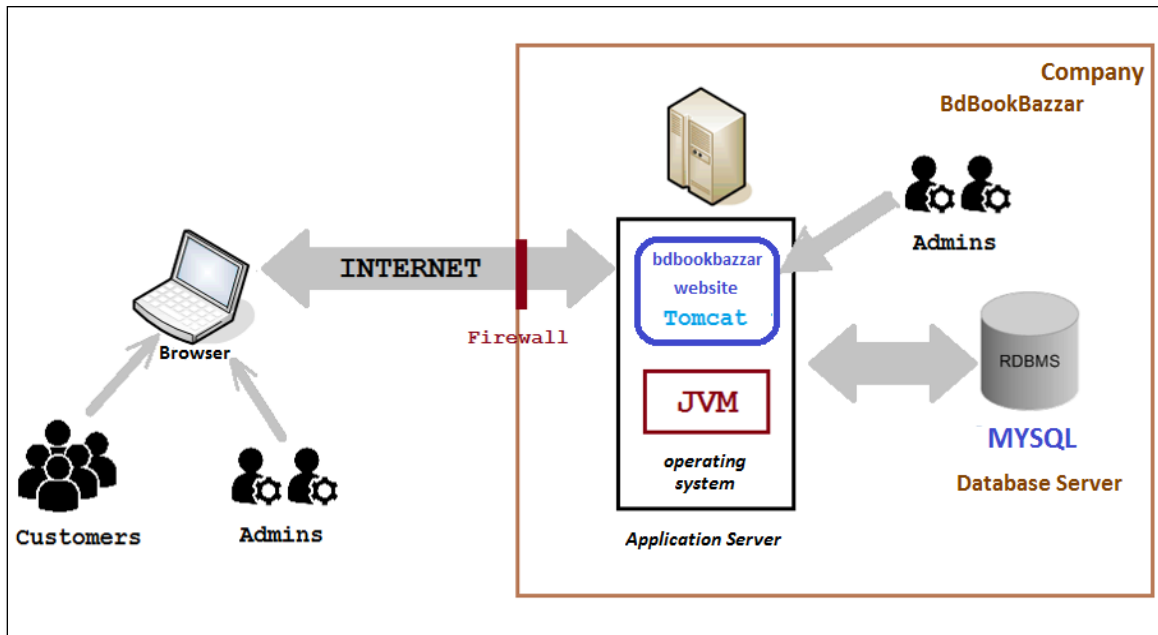


Figure 3.5.1: Architecture Design

Database configuration is the relationship of data according to a database demonstrate. The planner makes sense of what data must be secured and how the data segments interrelate. With this data, they can begin to fit the data to the database display. Database configuration incorporates gathering data and recognizing interrelationships.

Two essential settings for a database are:

- Primary-key: - The field that is novel for all the record occasions.
- Foreign-key: - The field used to set association between tables. Institutionalization is a framework to keep up a vital separation from excess in the tables [6, 7].

## CHAPTER 4

### DESIGN SPECIFICATION

Improvement of an online business site used the advances of both front and back end and the Front-End improvement allude to the web customers to connect with explicitly.

#### 4.1 Front-end Design

##### **JSP:**

JSP is being used as Front End as a result of its benefit and reasonableness. Java Server Pages (JSP) is a development for controlling the substance or presence of Website pages utilizing servlets, little program they are resolved in the Pages and continue running Online server to change the Page before it is sent to the customer who requested it. Sun Smaller scale systems, the architect of java, in like manner suggest the Jsp advancement as the Servlet application program interface (API).

There is abundance inclinations of using JSP. At the point when all is said in done, JSP empowers originators to easily scatter application convenience to a wide extent of page makers. These scholars don't have to understand the Java programming language or know anything about making servlet code, so they can concentrate on making their HTML code while you center on making your articles and application method of reasoning.

JSP pages are incorporated progressively into servlets when requested, so page creators can without quite a bit of a stretch make updates to presentation code. JSP pages can similarly be precompiled at whatever point needed [5, 4].

##### **JSTL:**

JSTL has support for typical, assistant errands, for instance, cycle and conditionals, marks for controlling XML chronicles, internationalization names, and SQL names. It is like manner gives a structure to consolidating the present custom marks with the JSTL names.

To engage JSTL features, we'd have to add the library to our endeavor. For a Maven store, we incorporate the dependence in pom.xml record:

```
<dependency>
    <groupId>jstl</groupId>
    <artifactId>jstl</artifactId>
    <version>1.2</version>
```

```
<scope>compile</scope>
</dependency>
```

With the library added to our project, the last setup will be to include the core JSTL tag and some other labels' namespace document to our JSP utilizing the taglib order this way:

```
<% @ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"% >
```

JSTL-version: 1.2

### **HTML:**

Hypertext Markup Language (HTML) is the standard markup language for making site pages and web applications. HTML parts are the structure squares of HTML pages. With HTML assembles, pictures and distinctive things, for instance, natural structures, may be embedded into the rendered page. It gives an approach to make composed files by demonstrating assistant semantics for substance, for instance, headings, entries, records, associations, refers to and distinctive things. HTML segments are delineated by names, created using point segments. Marks, for instance, `<img/>` and `<input/>` present substance into the page explicitly. Others, for instance, `<p>...</p>` envelop and give information about record message and may consolidate diverse marks as sub-segments. Projects don't demonstrate the HTML names, be that as it may, use them to decipher the substance of the page [2, 6].

### **CSS:**

CSS speaks to Cascading Style Sheet. Site masters that don't use CSS for their structure what's more, advancement of locales are rapidly transforming into a relic of times passed by. Moreover, it is clearly as basic to grasp CSS for what its value to know HTML.

CSS is organized basically to enable the unit of presentation and substance, checking edges, for instance, the structure, hues, and content styles. This segment can improve content receptiveness, give more prominent versatility and control in the specific of presentation characteristics, engage different HTML pages to share arranging by demonstrating the appropriate CSS in a different.css record and lessening multifaceted nature and excess in the essential substance. [2, 6]

### **JQuery:**

JQuery isn't a language, yet it is a very much made JavaScript code. As referred to on power jQuery site, it is a snappy and brief JavaScript Library that streamlines HTML document exploring, event dealing with, stimulating, and Ajax associations for quick web advancement.

jQuery is a lightweight, “create less, achieve more”, and JavaScript library. The explanation behind jQuery is to make it significantly less requesting to use JavaScript on your site. jQuery takes a lot of ordinary endeavors that require various lines of JavaScript code to accomplish, and wraps them into techniques that you can call with a singular line of code.

The 3 rule inclinations of jQuery are:

- Its light weight when stood out from other JavaScript frameworks.
- It has a wide extent of modules available for various express prerequisites.
- It is less requesting for a modeler to learn jQuery as it uses characteristic CSS language structure. JQuery is JavaScript for Designers [3].

## **4.2 Back-end Design**

### **Java:**

Java is an all-around valuable, concurrent, object-arranged, class-based, and the runtime condition (JRE) which involves JVM which is the establishment of the Java organize

Java-rendition: 1.8

### **Servlet:**

A servlet is a Java programming language class that is used to extend the limits of servers that have applications gotten to by strategies for an interest response programming model. Notwithstanding the way that servlets can respond to request, they are commonly used to grow the applications encouraged by web servers. For such applications, Java Servlet development describes HTTP-express servlet classes.

Servlet-variant: 3.0

### **Hibernate:**

Hibernate is an open source Java perseverance system venture. It performs astonishing article social mapping and question databases using HQL and SQL. Sleep is a phenomenal instrument for ORM mappings in Java. It can cleave down a lot of multifaceted nature and thusly surrenders too from your application, which may by one way or another make sense of how to exist. This is astoundingly help for architects with confined learning of SQL.

Then again, we can say, hibernate is a first class Object/Relational industriousness and question administration. Sleep is an open source object-social mapping (ORM) device that gives a structure to diagram arranged space models to social databases for web applications.

To enable Hibernate features, we'd have to add the library to our endeavor. For a Maven storehouse, we incorporate the dependence in pom.xml record [4]:

```

<dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>5.2.12.Final</version>
    <scope>compile</scope>
</dependency>

```

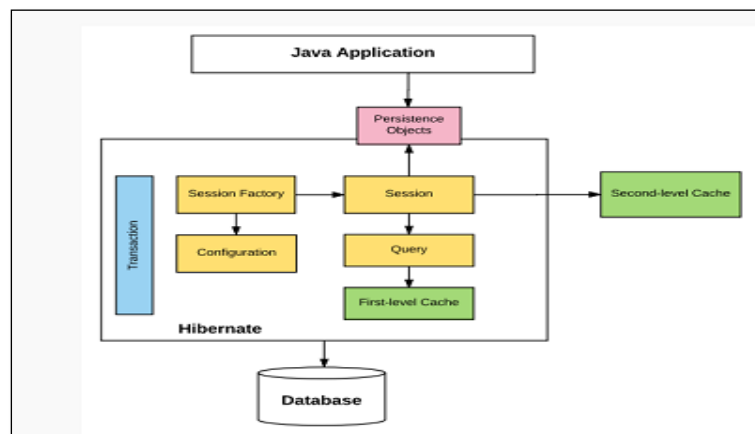


Figure 4.2.1: Hibernate Structure

**JPA:**

The Java Persistence API (JPA) is the Java standard for mapping Java things to a social database. Notwithstanding the way that prohibitive mapping things like Hibernate Top Link still exist, they are directly revolved around giving their convenience through the JPA API, empowering all applications to be minimal across over JPA executions. This record will give customers enough to fathom the fundamentals of JPA and start making JPA applications. It covers substances, identifiers, O-R mappings, using a component administrator, making and executing request, and setup of the persistence.xml report.

The explanations are portrayed in javax.persistence, so you'll need to import that group.



**Entity:** implies that a particular class is a component class. If the component name isn't equivalent to the table name, by then the @Table explanation is used; else, it isn't required.

**Column:** gives the name of the segment in a table if it is remarkable in connection to the characteristic name.

**Id:** means the essential key.

**GeneratedValue:** infers a method to dole out a stand-out motivation to your personality fields thusly. The sorts of frameworks available are IDENTITY, SEQUENCE, TABLE, and AUTO [4].

### JPQL:

The sentence structure of the Java Persistence Query Language (JPQL) is essentially equivalent to the grammar of SQL. Having a SQL like a sentence structure in JPA questions is a basic good position in light of the fact that SQL is a very mind blowing request language and various engineers are currently familiar with it.

The principal differentiate among SQL and JPQL is that SQL works with social database tables, records and fields, while JPQL works with Java classes and things. For example, a JPQL question can recoup and return substance challenges instead of just handle regards from database tables, as with SQL. That makes JPQL all the more thing organized neighborly and less difficult to use in Java.

So as to characterize SQL to execute for a Servlet Data archive technique, we can explain the strategy with the @Namesqueries explanation — its esteem property contains the JPQL or SQL to execute.

```
@NamedQueries({
    @NamedQuery(name = "findAll.Book" , query = "SELECT b FROM Book b"),
    @NamedQuery(name = "Book.findByTitle" , query = "SELECT b FROM Book b WHERE b.title = :title"),
    @NamedQuery(name = "Book.countAll" , query = "SELECT COUNT(*) FROM Book b"),
    @NamedQuery(name="Book.findByCategory" , query="SELECT b FROM Book b JOIN "+
    "Category c ON b.category.categoryId = c.categoryId AND c.categoryId = :catId"),
    @NamedQuery(name="Book.newBookList" , query="SELECT b FROM Book b ORDER BY b.publishDate DESC"),
    @NamedQuery(name="Book.search",query="SELECT b FROM Book b WHERE b.title LIKE '%' || :keyword || '%"
    + " OR b.author LIKE '%' || :keyword || '%"
})
```

Figure 4.2.2: JPQL Code Format

## MY-SQL:

MySQL is an Oracle-upheld open source social database the official's system (RDBMS) in perspective on Structured Query Language (SQL). MySQL continues running on for all intents and purposes all stages, including Linux, UNIX and Windows. Regardless of the way that it will in general be used in a wide extent of usages, MySQL is consistently associated with web applications and web appropriating. MySQL engages data to be secured and got to over various capacity motors, including InnoDB, CSV, and NDB. MySQL is similarly fit for reproducing data and isolating tables for better execution and strength. MySQL customers aren't required to adjust new headings; they can get to their data using standard SQL bearings.

- It is easy to keep up.
- It is exceptionally verified.
- It can be coordinated with JSP very effectively.
- It can bolster and deal with an extensive sum if information.
- It is entirely versatile item and can bolster the same number of number of client as upheld by the foundation.

MYSQL- version: 5.7

### 4.3 Interaction Design and UX

Whole structure of this undertaking is anything but difficult to utilize. Present day and refreshed structure devices have been used for this task. Also, new thoughts have been considered to make it straightforward. In future any kind of change is allowed as time gifts. All the layers of the project which has been implemented by following MVC pattern.

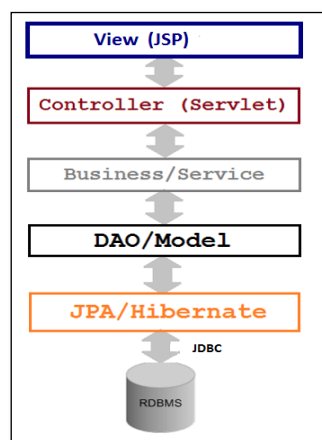


Figure 4.3.1: Interaction design and UX

## **PROJECT DELIVERABLE'S**

Task expectations are the yields from an undertaking that regularly give invaluable change. Deliverable's can be process improvements, new or improved organizations, organization quality redesigns, picture and reputation ancient pieces, chance diminishing advantages, augmentations to the versatility or feasibility of staff or approach compliances.

### **4.4 Implementation Requirements**

Prerequisites examination in frameworks building and programming structuring wraps those endeavors that go into choosing the necessities or conditions to meet for another or changed thing or task, surveying the maybe conflicting prerequisites of the distinctive accomplices researching, archiving, approving and regulating programming or system prerequisites.

- Software: Software required for 'Online study framework' to make the working of the item is:
  - Operating System: Windows8.1, Linux, Ubuntu.
  - Development platform: Eclipse, Apache Tomcat, MySQL
  
- Hardware: For 'Online review framework' equipment necessities for protection on the web will be same for both the gatherings which are pursuing:
  - Processor: Dual Core or above.
  - RAM: 1GB or above.
  - HD: 20 GB or above.
  - NIC: For each gathering

### **Design and Implementation Constraints**

General limitations for the system are given underneath:

- The interface will be in English as it were.
- The system is working for a single server.
- Receiver
- There is no practicality or reinforcement so accessibility will get influenced.
- The system is a multi-client system

## **CHAPTER 5**

### **IMPLEMENTATION AND TESTING**

#### **5.1 Implementation of Database**

Pattern, the structure of a database framework, portrayed in a formal language bolstered by the database the board framework (DBMS). In a social database, the diagram describes the tables, the fields in each table, and the associations between fields what's more, tables. Constructions are generally secured in a data word reference. Despite the way that an example is portrayed in the substance database language, the term is as often as possible used to suggest a graphical outline of the database structure.

A database arrangement is a collection of secured data dealt with so the data essentials are satisfied by the database. The general target is to influence information to get to straightforward, remarkable, sensible and versatile for the customer. There are moreover some specific objectives like controlled reiteration from disillusionment, insurance, security and execution. Two basic setting for database:

#### **Primary Key:**

A primary key furthermore called a fundamental catchphrase, is a field that is one of a kind for all record event in a social database.

#### **Foreign Key:**

A foreign key is a fragment or a social event of areas in a social database table that gives an association between data in two tables. Standardization is a system to stay away from excess in the tables.

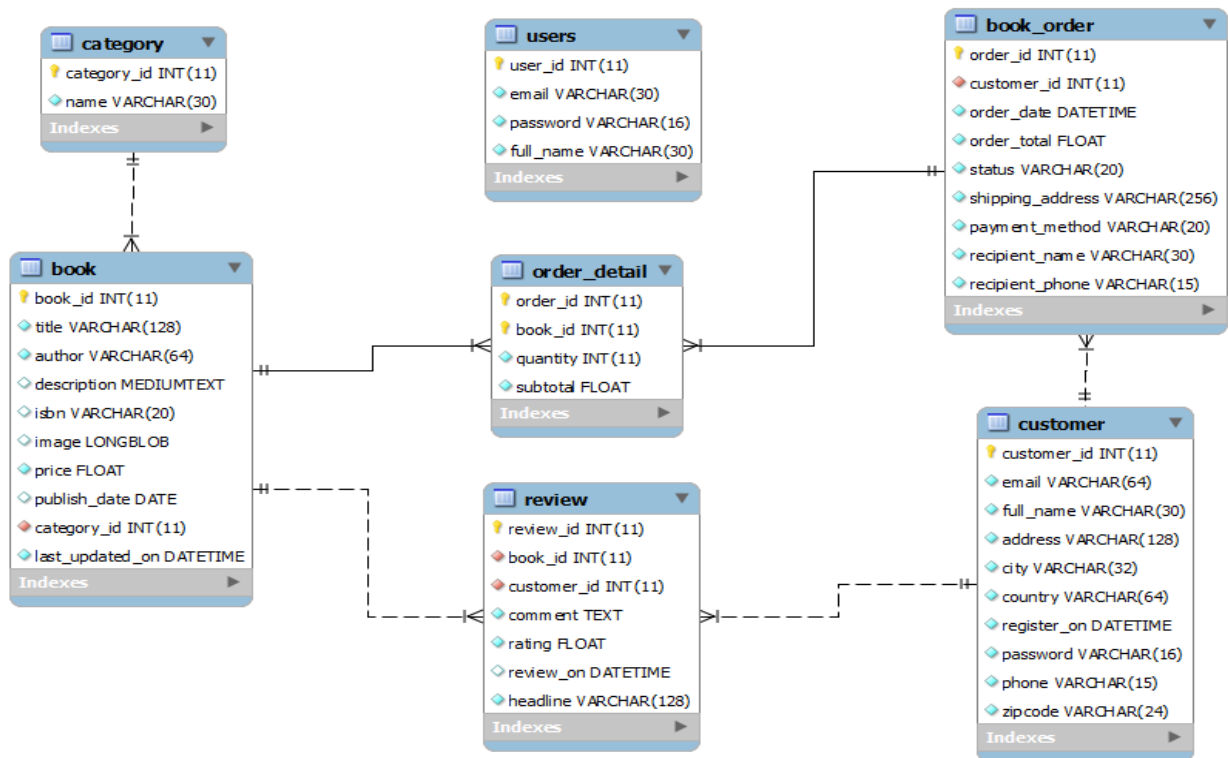


Figure 5.1.1: Database Table Design

**Database tables:**

Note: The field in bold font indicate as a primary key, and italic font as a foreign key.

Table 5.1.1: Client

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	<b>Customer ID</b>	Number			Yes	Yes
2	E-mail	Text	10	64	Yes	Yes
3	Full name	Text	8	30	Yes	
4	Address	Text	10	128	Yes	
5	City	Text	3	32	Yes	
6	Country	Text	3	64	Yes	
7	Phone Number	Text	10	15	Yes	
8	Zip Code	Text	3	24	Yes	
9	Password	Text	8	16	Yes	
10	Register date	Date and time			Yes	

Table 5.1.2: Category

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	<b>Category ID</b>	Number			Yes	Yes
2	Category Name	Text	5	30	Yes	Yes

Table 5.1.3: Book

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	<b>Book ID</b>	Number			Yes	Yes
2	Title	Text	10	128	Yes	Yes
3	Author	Text	3	64	Yes	
4	Description	Text	200	2000	Yes	
5	ISBN	Text	10	15	Yes	
6	Image	Image			Yes	
7	Price	Float number			Yes	
8	Publish Date	Date			Yes	
9	Last Update Time	Date time			Yes	
10	<i>Category ID</i>	Number	<i>Foreign key to Category table</i>			

Table 5.1.4: Review

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	<b>Review ID</b>	Number			Yes	Yes
2	<i>Book ID</i>	Number	<i>Foreign key to Book table</i>			
3	<i>Customer ID</i>	Number	<i>Foreign key to Customer table</i>			
4	Rating	Number				
5	Headline	Text	20	128	Yes	
6	Comment	Text	100	500	Yes	
7	Review Time	Date time				

Order Tables:

This requires two tables: master and detail.

Table 5.1.5: Book Order (master)

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	<b>Order ID</b>	Number			Yes	Yes
2	<i>Customer ID</i>	Number	<i>Foreign key to Customer table</i>			
3	Order Date	Date time			Yes	
4	Shipping Address	Text	20	256	Yes	
5	Recipient Name	Text	8	30	Yes	
6	Recipient Phone	Text	10	15	Yes	
7	Payment Method	Text	5	20	Yes	
8	Order Total	Float number				
9	Order Status	Text	5	20		

Table 5.1.6: Order Detail

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	Order ID	Number	Foreign key to Book Order table			
2	Book ID	Number	Foreign key to Book table			
3	Quantity	Number			Yes	
4	Sub Total	Float number			Yes	

Table 5.1.7: Employee

No	Field Name	Data Type	Minimum length	Maximum length	Required	Unique
1	User ID	Number			Yes	Yes
2	E-mail	Text	10	64	Yes	Yes
3	Full Name	Text	8	30	Yes	
4	Password	Text	8	16	Yes	

## 5.2 Implementation of Front-end Design

### Frontend-design for client:

In this section, we were showing all the frontend design for a client site. Where Client can give a review, shopping cart, place order, search book and homepage. In the homepage, Client can view most favored books, best-selling books and Recent added Books.



Figure 5.2.1: Homepage



Figure 5.2.2: Client Login page

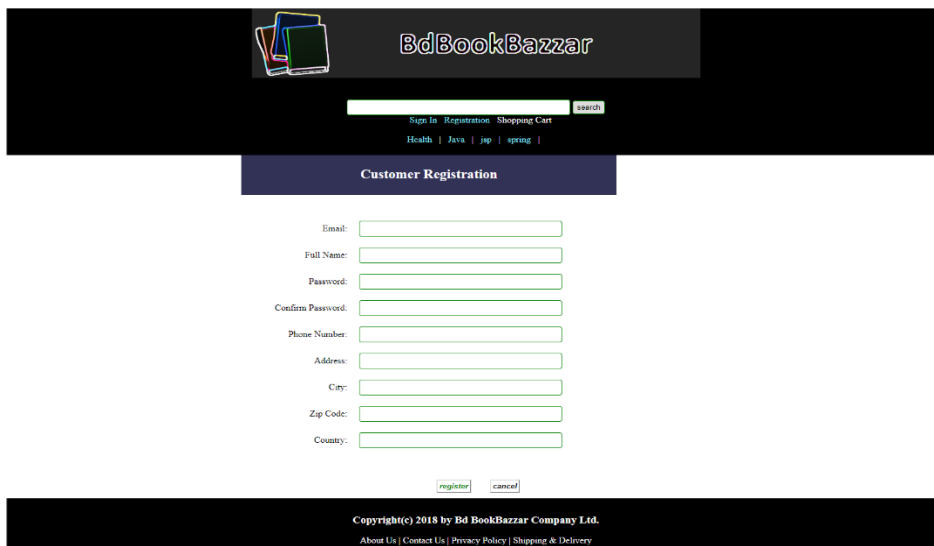


Figure 5.2.3: Client Registration page



Figure 5.2.4: Search page



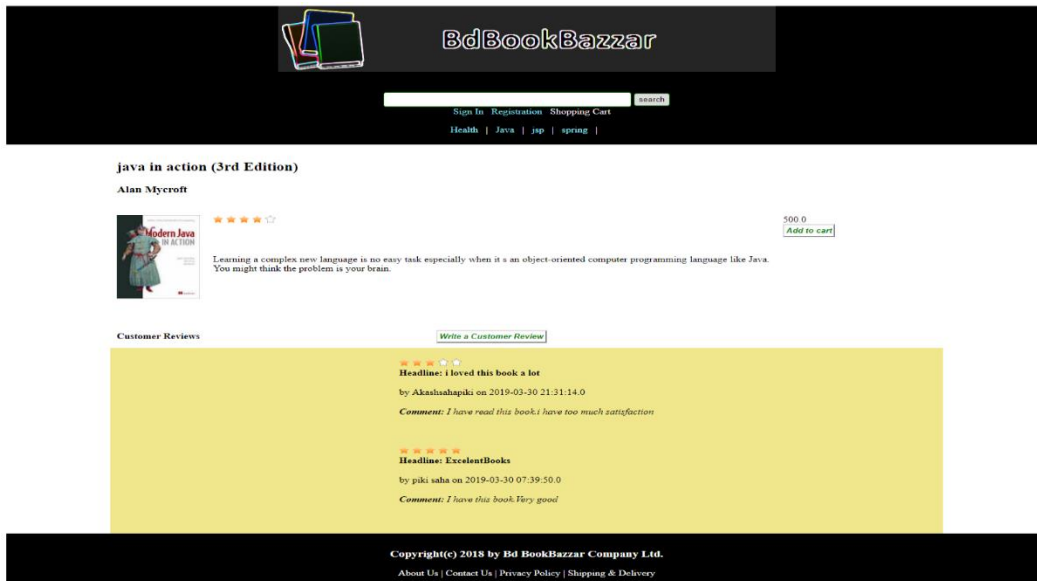


Figure 5.2.5: Book details and Client review page

### Frontend-design for Admin User:

In this section, we were showing all the frontend design for Administration site. Where Administration can handle review details, order details, book details, user details, category details, Client details and homepage. In the homepage, the administration can perform some quick action and also view the statistical information.



Figure 5.2.6: Admin login page

**BDBookBazar Administration**

welcome, ma@gmail.com Logout

Home Users Categories Books Customers Reviews Orders

**Books Management**

Create New Book

Index	ID	Image	Title	Author	Category	Price	Last Update	Action
0	3		Java in action (3rd Edition)	Alan Mycroft	Java	Tk. 500.0	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
1	5		Java: The Complete Reference	Herbert Schildt	Java	Tk. 600.0	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
2	7		J2EE: The complete Reference	Jim Keogh	Java	Tk. 689.0	03/13/2019	<a href="#">Update</a> <a href="#">Delete</a>
3	8		Head First Design Patterns	Kathy Sierra, Elisabeth Freeman	Java	Tk. 550.0	03/17/2019	<a href="#">Update</a> <a href="#">Delete</a>
4	9		Think Java: How to think like a computer scientist	Allen B. Downey	Java	Tk. 550.0	04/01/2019	<a href="#">Update</a> <a href="#">Delete</a>
5	10		Core Java(TM), Volume I--Fundamentals	Cay S. Horstmann	Java	Tk. 550.0	03/17/2019	<a href="#">Update</a> <a href="#">Delete</a>

BDBookBazar Administration  
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Figure 5.2.7: Book management page

**BDBookBazar Administration**

welcome, ma@gmail.com Logout

Home Users Categories Books Customers Reviews Orders

**Category Management**

Create New Category

Index	ID	CategoryName	Action
0	25	Health	<a href="#">Update</a> <a href="#">Delete</a>
1	11	Java	<a href="#">Update</a> <a href="#">Delete</a>
2	21	jsp	<a href="#">Update</a> <a href="#">Delete</a>
3	23	spring	<a href="#">Update</a> <a href="#">Delete</a>

BDBookBazar Administration  
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Figure 5.2.8: Category management page

**BDBookBazar Administration**

welcome, ma@gmail.com Logout

Home Users Categories Books Customers Reviews Orders

**Customers Management**

Create New Customer

Index	ID	Email	FullName	Phone Number	Address	City	Country	Zip Code	Registered Date	Action
0	17	tonmoyasaha@gmail.com	tonmoy saha	0188595855	Lincion Ave	Dallas	U.S.A	1005	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
1	16	SafayetUllaha@gmail.com	SafayetUllaha	01854448521	Mirpur-2	Dhaka	Bangladesh	1236	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
2	15	Akashshapiki@gmail.com	Akashshapiki	0174595855	Rajshahi, Badhortola	Rajshahi	Bangladesh	3586	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
3	14	java@gmail.com	java developer	0175448521	Bashundara City	Dhaka	Bangladesh	1229	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
4	10	ranbir@gmail.com	ranbir	0174569872	Banani-2	Dhaka	Bangladesh	1300	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
5	9	Akashsaha@gmail.com	Akash saha	0175448521	Dhanmondi 32	Dhaka	Bangladesh	1209	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
6	8	javalearnersite@gmail.com	java learner	+0442569854	Lincoln AVE	Newyork	U.S.A	10009	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
7	6	tonmoyasahaopi@gmail.com	tonmoy saha opi	01754049177	Digambaritola	Comilla	Bangladesh	3700	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>
8	3	piki@gmail.com	piki saha	01744907616	Digambaritola	Comilla	Bangladesh	3700	03/28/2019	<a href="#">Update</a> <a href="#">Delete</a>

BDBookBazar Administration  
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Figure 5.2.9: Customer management page



Figure 5.2.10: Review management page



Figure 5.2.11: Admin user management page

### 5.3 Implementation of Interactions

#### For frontend:

Client can peruse the online book shop by class (for example Wellbeing, Success, Business, Programming, and so forth.) or they can seek books by giving a particular watchword for example “achievement propensities”. The client can see fundamental data about a book like title, writer, depiction, ISBN number, distribute date and cost (in Taka). Also, the individual can peruse audits of different clients just as normal rating of a book, which can be extended from 0 to 5 stars.

The site must give a little picture to each book, which is commonly the intro page of the book. The client can compose an audit for a book yet the person in question needs to login first. At that point the person needs to indicate rating (from 0 to 5 stars) alongside a short feature and more subtleties in the remark. A client can make just a single audit for a specific book. On the off chance that the client officially made a survey, the site will demonstrate that audit on the off chance that the person in question attempts to make an audit once more. Note that the client can't alter the audit they officially made.

Before signing in, the client must enroll a record by giving their own data like full name, email address, secret word, telephone number, and the data required for delivery, for example, address, city, postal division and nation. At that point the individual can login by giving email and secret key.

The site records all classifications in the top menu, which enables the client to peruse books in a particular space. On the landing page, the client can see the most as of late distributed books (in light of the distribute date, not by the date on which the book is put onto the site). At that point he can see the top of the line books (in view of the quantity of requests have been made through the site), and the most supported books (in light of their rating and number of surveys).

When perusing the subtleties of a book, the client can add the book to his shopping basket by hitting the catch "Add to Cart". At that point she can see her shopping basket posting every one of the books that have been included. Note that adding a book on different occasions to the shopping basket will expand the amount (number of duplicates). The shopping basket page enables the client to alter the amount, evacuate books and even void the truck.

The data in shopping basket is kept up amid the client's session, which implies that she can keep exploring the site before putting in a request. The site additionally gives a menu that enables the client to see her shopping basket rapidly and for comfort, she doesn't need to login first to utilize the shopping basket.

To submit a request subsequent to including books into shopping baskets, the client needs to audit all books in the truck (she can alter amount or evacuate a few books) before hitting "Look at". The checkout procedure requires the client to login. If not, she is diverted to the login page, and the site continues to the checkout page upon effective login.

On the Check Out page, the client can survey the books she needs to arrange once more, and affirm the transportation data. As a matter of course, the transportation data is loaded up with

client's enrolled data (name, telephone, address, city, postal division and nation). The client can refresh this data if necessary. Furthermore, this starting stage, the site acknowledges just installment by COD (Cash on Delivery).

The client clicks “Spot Order” catch to present the request to the organization's staff, and afterward she can check the request status through “My Orders” menu. The default status of a request is 'Handling' and just the organization's staff can refresh the request status.

On the My Orders page, the client can see all requests she made through the site. The latest requests are appeared and she can snap to see the subtleties of each request. Right now, the client can't alter their requests once they are submitted.

The site likewise enables the client to see their enrolled data (profile subtleties) and alter it. Note that the client can't change their enlisted email address, and their secret word won't be changed whenever left clear in the alter structure.

Additionally, note that when the client logs out, the data in their shopping basket is cleared.

Whenever, the client can look through the books they need by composing a catchphrase in the inquiry box at the highest point of the site. The query output demonstrates books that have either title or depiction contain the predetermined catchphrase. The client can add the book to truck legitimately in the item.

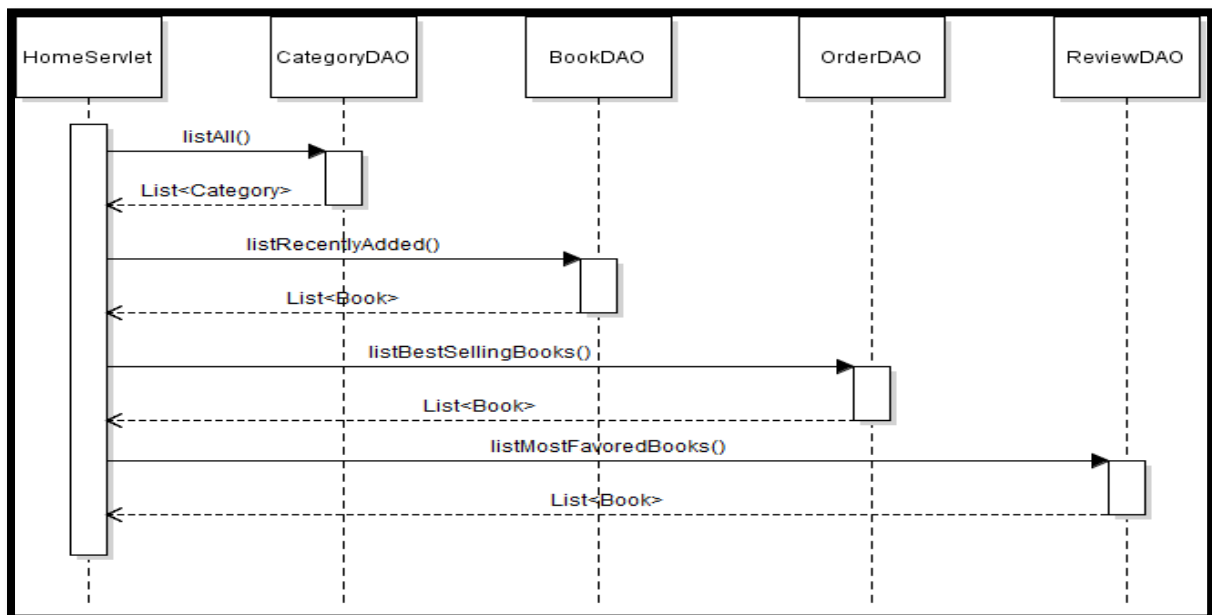


Figure 5.3.1: Frontend

**For Backend:**

In the back end, the organization procures a gathering of representatives that are capable to oversee data for the site (they are called administrator).

For the most part, the backend permits an administrator to oversee data about classifications, books, clients, surveys and arranges with basic activities like view things (posting and detail); make, update, and erase a thing. Be that as it may, the person in question can't make new audit or new request. Likewise, an administrator can make represent another administrator client and obviously, deal with those clients.

The administrator can deal with all classifications that are utilized to arrange the books on the site. The main data required for a class is the classification name. He can't erase a class in the event that it contains books. He can erase just void one.

For putting a book onto the site, the administrator can transfer a picture record that is utilized as the book's thumbnail. When altering a book, he can refresh the thumbnail or not. What's more, if not, the old picture is kept. Note that the administrator can't evacuate a book if there are surveys and arranges on it.

For overseeing clients, client's email is novel. He can change a client's email, however not to another client's email. What's more, a client can't be erased on the off chance that the person effectively made surveys or bought books from the site.

For overseeing surveys, the administrator can't make another one. No one but client can compose an audit. The administrator can alter the feature and remark, yet not rating, book or client. Obviously he can erase any audit on the off chance that it is unseemly or abuses organization's arrangement.

For overseeing orders, the administrator can refresh shipping data and status of a request (there will be more alternatives for installment technique in future, however there's solitary one "Money down" choice at this stage). Furthermore, the administrator can deal with the books picked by the client. He can refresh amount, evacuate or even add different books to the request.

What's more, in conclusion, an administrator can make another administrator client with data like email, full name and secret key. At that point the new client can utilize his email and secret word to login to the backend for overseeing data.

An administrator can likewise alter data and erase other administrator clients if necessary.

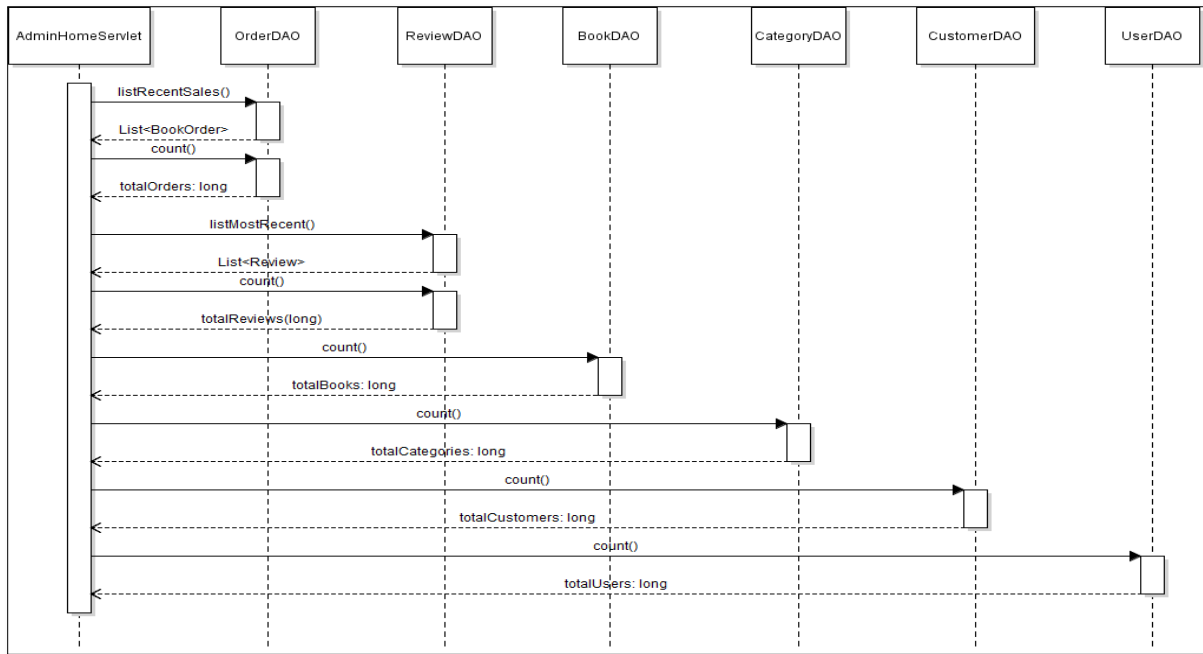


Figure 5.3.2: Backend

## 5.4 Testing Implementation

This fragment contains the advancement of a test plan for the BdBookBazaar plan framework. This record portrays all of the techniques and activities required to prepare for testing of the functionalities of the framework which are resolved in the Vision record. The objectives of the test plan are to describe the activities to perform testing, portray the test desires records and to perceive the distinctive perils and conceivable outcomes connected with testing.

### JUnit Testing:

JUnit testing is a technique for testing that checks the individual units of source code are working properly. The target of unit testing is to limit each bit of the program and show cap the individual parts are correct.

### Feature to be tested:

#### Client:

- Login
- Registration
- Update profiles
- Add books to cart
- Remove book from cart and Clear cart
- Order and shipping information

- Update Order and shipping information
- Search book
- Add review and comment
- Delete review and comment

**Admin:**

- Add book
- Delete Book
- Update book
- Add category
- Delete Category
- Update Category
- Add Employee
- Delete Employee
- Update Employee
- Manage order
- Mange client

**.5 Test Results and Reports**

**Client:**

Table 5.5.1: Registration

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Client registration	Input Email is already exist	PASSED	Please select an another email address
Client_2	Client registration	Client forgot enter a field in the form	PASSED	Please enter the required field
Client_3	Client registration	Client enter all the details successfully	PASSED	Client account created

Table 5.5.2: Login

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Client Login	Client enter wrong email address	PASSED	Please enter a valid email Address



Client_2	Client Login	Client enter wrong password	PASSED	Please enter a valid password
Client_3	Client Login	Client enter correct email and password	PASSED	Log in successfully

Table 5.5.3: Update profile

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Update profiles	Client enter an email is already exist	PASSED	Please select an another email address
Client_2	Update profiles	Client enter correct email and also enter password, full name	PASSED	Profile updated successfully

Table 5.5.4: Search book

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Search book	Client enter a wrong book name	PASSED	Please enter an valid book name
Client_3	Search book	Client enter a correct book name	PASSED	Showing the book details

Table 5.5.5: Add Book to shopping cart

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Add to Shopping cart	Client select a book and click add to cart	PASSED	Book is add to the shopping cart
Client_2	Add to Shopping cart	Guest select a book and click add to cart	PASSED	Client should create an account

Table 5.5.6: Remove Book and clear the shopping cart

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Remove book	Client delete a book from shopping cart	PASSED	Books and total cost of cart updated
Client_2	Clear cart	Client click on the clear button	PASSED	Books and total cost clear from the cart

Table 5.5.7: Update shopping cart

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Update cart	Client change the quantity	PASSED	Quantity and total cost is changed
Client_2	Update cart	Client select a new book to shopping cart	PASSED	Books and total cost is changed

Table 5.5.8: Order and shipping information

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Order and shipping	Client forget enter phone number	PASSED	Please enter an required phone number
Client_2	Order and shipping	Client forget to enter shipping address	PASSED	Please enter an required shipping address
Client_2	Order and shipping	Client forget to enter shipping address	PASSED	Please enter an required shipping address

Table 5.5.9: Add review and comment

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Client_1	Add review and comment	Client give a review to a book	PASSED	Review shown in the book details
Client_2	Add review and comment	Client give a comment without headline to a book	PASSED	Please enter a required headline

**Admin:**

Table 5.5.10: Add Book

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Admin_1	Add Book	Admin enter a name	PASSED	Book created successfully
Admin_2	Add Book	Admin enter a book name is already exist	PASSED	Please select an another name
Admin_3	Add Book	Admin forget to enter a field	PASSED	Please enter the required field

Table 5.5.11: Delete Book

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Admin_1	Delete Book	Admin select a book to delete	PASSED	Book has been deleted successfully
Admin_2	Delete Book	Admin select a book to delete	PASSED	Book already deleted

Table 5.5.12 Update Book

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Admin_1	Update Book	Admin enter a name to update a book	PASSED	Book created successfully
Admin_2	Update Book	Admin enter a book name to update is already exist	PASSED	Please select an another name

Table 5.5.13: Add and Delete Category

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Admin_1	Add and Delete Category	Admin enter a category name	PASSED	Category created successfully
Admin_2	Add and Delete Category	Admin enter a category is already exist	PASSED	Please select an another category name
Admin_3	Add and Delete Category	Admin forget to enter a field	PASSED	Please enter the required field

Table 5.5.14: Update Category

Testcase_number	Test Case	Client Input	Result	Pass Criteria
Admin_1	Update Category	Admin enter a category name to update	PASSED	Category update successfully
Admin_2	Update Category	Admin enter a category name to update is already exist	PASSED	Please select an another category name

Table 5.5.15: Add and Delete employee

<b>Testcase_number</b>	<b>Test Case</b>	<b>Client Input</b>	<b>Result</b>	<b>Pass Criteria</b>
Admin_1	Add and Delete employee	Admin enter a employee email to create	PASSED	employee created successfully
Admin_2	Add and Delete employee	Admin enter a employee email to create is already exist	PASSED	Please select an another email
Admin_3	Add and Delete employee	Admin select an employee to delete	PASSED	Employee delete successfully
Admin_4	Add and Delete employee	Admin forget enter an field	PASSED	Please enter the required field

Table 5.5.16: Update Employee

<b>Testcase_number</b>	<b>Test Case</b>	<b>Client Input</b>	<b>Result</b>	<b>Pass Criteria</b>
Admin_1	Update Employee	Admin enter an employee email to Update	PASSED	employee update successfully
Admin_2	Update Employee	Admin enter an employee email to update is already exist	PASSED	Please select an another email
Admin_3	Update Employee	Admin forget enter an field	PASSED	Please enter the required field

Table 5.5.17: Manage Orders

<b>Testcase_number</b>	<b>Test Case</b>	<b>Client Input</b>	<b>Result</b>	<b>Pass Criteria</b>
Admin_1	Manage Orders	Admin accepts an order	PASSED	Order is in process
Admin_2	Manage Orders	Admin delete an order	PASSED	Order deleted successfully

Table 5.5.18: Manage Client

<b>Testcase_number</b>	<b>Test Case</b>	<b>Client Input</b>	<b>Result</b>	<b>Pass Criteria</b>
Admin_1	Manage Client	Admin select an client to	PASSED	Client deleted successfully
Admin_2	Manage Client	Admin forget a field to enter update the client	PASSED	Please enter required field

## **Chapter 6**

### **CONCLUSION AND FUTURE SCOPE**

#### **6.1 Discussion and Conclusion:**

The purpose behind the site is to make a BdBookBazaar that empowers customers to pursue and buy a book online reliant on class, writer and subject with no issue. We believe this will satisfy the enthusiasm of the customer and the customer can find each open book and subtleties of the books to buy with no time and imperativeness waste. We have been successful in our push to manage the prerequisites of both the customer similarly as the head. We exertion to execute the recommended methodology and Framework of Servlet, Hibernate, JSP. We in like manner actualize a MVC arrangement structure with fronted layout framework like Smarty. We worked in Servlet and JSP unprecedented for this assignment. So a portion of the time we stood up to a couple of issues at the period of work [6].

Some minor utilitarian and structure irregularities exist in my system because of time requirement, the plan of model and cost limitations. The limitations of “BdBookBazaar” is:

- Clients can't pay web-based utilizing a charge card.
- Clients can include books in his/her list of things to get.

#### **6.2 Scope for Further Developments**

My framework sites made subject to current disclosures, the enthusiasm of customer's satisfaction and offices. In our framework, we have used the cutting edge web headways to make my framework snappy, beneficial and capable for most of the work constrain referenced. Due to time and cost basic, it was unreasonable to fulfill all necessities and functionalities those were masterminded. Regardless, in future, these masterminded functionalities and more noteworthy improvement will be possible to look for after. The functionalities to be realized are [8].

- On the off chance that any new element like the credit card system will be included and verification will happen.
- Two-step verification

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## **Appendices**

### **Acronyms**

JSP = Java Server Pages

JUnit = Unit Testing Framework

JPA = Java Persistence API

JPQL = Java Persistence Query Language

HQL = Hibernate Query Language

SQL=Structured Query Language

CSS = Cascading Style Sheets

HTML = Hyper Text Markup language

OTBMS= Online Text Books Monitoring System

SDLC= System Development Life Cycle

RDBMS = Relational Database Management System

ER diagram=Entity Relationship Diagram

DDF= Data Flow Diagram

GUI= Graphical User Interface

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