

SABARAGAMUWA UNIVERSITY OF SRI LANKA

Department of Computing and Information Systems

ELECTRONIC BUSINESS STRATEGY
ARCHITECTURE AND DESIGN

CIS 31221

YEAR III SEMESTER I

BookShoppe Web System

By
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10/AS/CI/048
EP1150

BookShoppe Web System



www.bookshoppe.lk

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You are always looking for.
Good place for anyone who is looking for
Latest popular books.....

Declaration

This web project has been done as final project for the subject Electronic business strategy architecture and design of year 3 - semester 1, Department of Computing and Information Systems, Faculty of Applied Sciences, Sabaragamuwa University of Sri Lanka. Project was assigned and guided by Mr. S.V. Priyan, Subject lecturer and Head of the department of Computing and Information Systems. All the work relating to this application including designing, programming and development has been done by O.D. Wedamulla(10/AS/CI/048), as an individual project and I was able to collect a vast knowledge about web development. I did my best to get this program up to the expectations and the goals we elaborated in the project proposal. This document is the final report of this project which includes system requirements, analysis, design and development.

.....

Name of the Student

.....

Signature of the Student

Date:...../...../.....

Certificate of Approval

I hereby declare that this report is from the students own work and effort, and all other sources of information used have been acknowledged. This report has been submitted with my approval.

.....

Supervisor

.....

Signature of Supervisor

Date:...../...../.....

.....

Head of Department

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Signature of Head of Department

Date:...../...../.....

Abstract

This project is followed the concept of the E-commerce thoroughly. This project is developed to sell the products on line of various book collection category mentioned in the project. This project definitely helps the user to purchase books from the internet because in the ONLINE BOOK SHOP you can purchase anything with clicking of the some buttons and entering your credit card no or any other online payments methods like PayPal or master, visa cards.

This web project is dedicated to deliver a specific need for people who are interested in books. We have noticed that though there are online book-stores for popular publishers like GODAGE and M.D. GUNASENA and it is difficult to find a good place to sell books for independent book publishers and authors who are not popular, but publish quality books. So they are limited to selling their books in a small area unless a bigger publisher notice their product and we are planning to address this issue in this project.

The other fact we try to address by our project is the fact that there are almost no website which allows independent book collectors and small scale library owners to exhibit their collections. In our site we not only allow this function but we also allow them to get in contact with each other to request trades or even lending them for private use, though we do not plan on taking responsibility for those type of exchanges and transport of that type.

Our implementation will encourage future book collectors and related parties like independent authors and publishers to come together and create a place for any new member in this industry to get a proper foothold on the market without making unnecessary commitment or investments. This will definitely increase the industries successes and provide a better platform to increase the nations literacy.

Acknowledgment

I take this valuable opportunity to express our sincere gratitude and appreciation to all those who supported me in making the web application study and this final web project a success.

My heartfelt gratitude first goes to my parents and family members, and close relations and my friends who helped not only in resources but also in guidance and encouragement.

I offer special thanks to Mr. S.V. Priyan, head of the department of computing and information systems and all staff members of Sabaragamuwa University who delivered us an invaluable support in both academic and non-academic aspects.

I appreciate friends at Sabaragamuwa University and outside who provided a great help in many ways

We absorbed plenty of extra web developing knowledge from the printed and electronic learning materials since authors of those materials are also given our gratitude.

We acquired plenty of extra web developing knowledge from the printed and electronic learning materials since authors of those materials are also given our gratitude.

Finally we thank all those whose names were not mentioned for their help and encouragement in completing our project.

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Chapter 1

Introduction

1.1 Overview of the organization

This organization is a true marketplace for publishers, which means that you can find all the publishers selling their items under one platform. There can also be independent sellers and distributors selling their items. This gamut of choices allows customers to choose to buy a book they want at the price they want to pay.

The company is completely handled on the internet with only a few services actually being physical. Company mainly provides a space for the members to advertise their products in a commercial way and carry out their transactions. The company does not make deliveries and will charge a percentage of the sales as fees for advertising.

The staff mainly consists of a few system administrators and several engineers to maintain the hardware and software of the company. As the company has no need for storage and delivery there are no other facilities.

1.2 Business Process

Manual - Publishers and Authors have to transport their books to various bookstores and find a store willing to sell their books then sell them for a negotiated price. While buyers have to visit multiple book stores and try to find the book they are interested in before buying them. Both publishers and buyers waste their time going store to store to find a suitable place for distribution. If they could not find a book suitable for them then try to come again another day hoping there will be new releases.

Partial Automated We can consider this level as the web application only contain the abilities to browse and pay for books but not for arranging sharing and delivery. This application only provides facility to find books and buy them or to sell what they have. Without any trouble you can search books and buy them instantly. The delivery and other functions such as negotiating trades and lending have to be done by the users or members manually.

1.3 Definetion of Problem

When selecting book due to lack of information about the book buyer waste significant amount of time. And also it takes too much time to purchase a book if there is difficulties like price changes, human errors in selling books, in case of requested book is out of stock. Also consumer has to pay more money if he/she goes directly to a shop because there are middleman. These are the problems that happens when we deal directly with shop.

If we consider the Authors and Publishers there is a certain amount of work needed for publishing and selling their products because it is difficult to transport and sell goods a throughout the country when you are a small scale business. So the amount of sales will be reduced to the aria they can deliver their products. This will decrease the sales and will limit the number of potential buyers.

If we consider the buyers then there are the issues of finding books that they have interest in. Usually buyers have to visit multiple stores to find what they want. This requires a lot of unnecessary work and does not guarantee that you will find what you look for. Also only the books from a few independent publishers in the aria will be available.

When it comes to sharing books, you can only borrow books only from libraries in the aria and from people you know. This limits the number and verity of books anyone could borrow.

1.4 Need Analysis

We gather facts and determine drawbacks in the manual system from both buyer and seller sides as well as sharing. From this analysis we identified the requirements and constraints of the system. Then features provided by our new system were determined. To make our web project success problem domain of all the definition should be met its targeted destination.

Our main point of research was about the current methods of advertising and distribution. It also included research regarding the spared of products by independent publishers.

We also investigated problems faced by buyers and the current level of Facilities provided by the existing online book stores. And we hope to enhance that existing method providing more facilities and reliable services.

1.5 Aims and Objectives

The targeted Aims of the web application is to provide automated support for the customers who willing to buy books through internet.

Objectives

- Make it easy for buyers to find new and unique products from a verity of Publishers and Authors.
- Sell their products through the internet.
- Find new markets and get attention from other publishers.
- Providing a Platform for Authors and Publishers to advertise their products.
- Enhance security method to ensuring user confidentiality and integrity.
- Selling the product without middle man and it will reduce the cost of a product.
- Aid user to save valuable time.
- Allow them to buy books through the internet.
- Allow book collectors and independent library holders to find others with the same interests and lend, exchange or share books.

- Provide custom build functionality with scalability.
- Provide a place for book lovers to get-together and have a chat, share ideas and get to know each other.

1.6 Scope of the System

This system has developed only for use within Sri Lanka. Though it provides facilities to advertise, sell and buy books as well as sharing and lending. Money transactions are handled by the system and all other delivery and transport functions should be handles by the members themselves manually

Payment method we are going to use majorly is Credit cards and customers should pay full payments online. Customer should have customers own account on web site. Staff will be trained under the development team. Free technical maintenance will be provided. Secure registration and profile management facilities for Customers will be given.

System works as a web application that uses http request response mechanism. All the feature of the web site is controlled by http request and response. Because of the large interfaces its recommended to access this website using desktop computers only, access through mobile phones may occur display conflicts

1.7 Requirements

1.7.1 Hardware requirements

- Processor : Intel processor with 2.2GHz or higher
- Ram : Minimum 2GB
- Hard disk : 20GB free space
- Monitor : 15.6 inch

1.7.2 Software requirements

- Operating System : Intel processor with 2.2GHz or higher
- Languages : Minimum 2GB

- Front End : 20GB free space
- Back End : 15.6 inch
- Web Servers : 20GB free space
- Browser Program : 15.6 inch

1.7.3 Other requirements

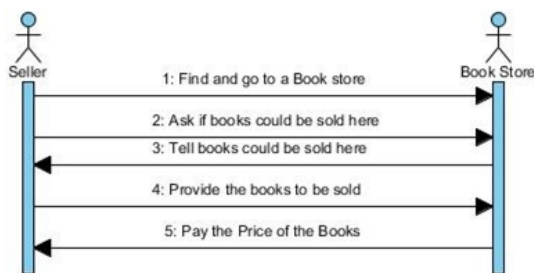
- cost
 - Web Developing Rs.150 000.00
 - Web Hosting Rs.2000.00 per month
 - Domain Name Rs.2000 per year
- End Users : -
Public, Sellers

Chapter 2

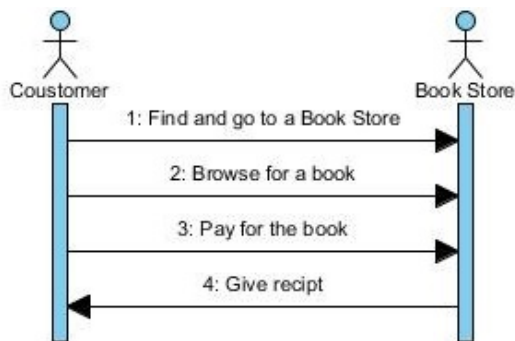
System Analysis

2.1 High Level Diagrams for existing system

2.1.1 Sell books to store(Publisher/Author)



2.1.2 Buy books(Customer)



2.2 Software Requirement Specifications

- A user account system needs to be implemented to help identify the owners of books which helping when sharing books.
- Provide a forum for members to discuss sharing and lending issues as well as discussions about new releases.
- Customers should able to browse through the items either by their names or their categories.
- Sellers should be able to upload details about Books including their unit price and amount of copies available.
- Buyers should able to browse through the Boos either by their names or their categories.
- There should be more details about books, so the buyers can get an understanding about the contents of the book.
- A payment system should be implemented so books could be sold on-line.
- Keep track of sales for each individual member.
- Manage a database to keep the data of each individual title.
- Allow insertion, updating and Deletion of entries by Members.

2.3 Business System Options for Software

for buyers

- Keep track of the transaction and complain if product not delivered.
- View stock levels and decide amount to buy.
- Browse and pay for a book of choosing.
- Keep track of most selling books and Favorite books.

for sellers

- View current remaining book stocks..

- Upload Product details with price and quantity. .
- Negotiate deals with others sellers if necessary.
- Check every day for bought items and deliver them accordingly. .

2.4 Business System Options for Hardware

- A server for the company is a must unless they are planning to have another party for hosting facility.
- Customers and members need a pc with access to Internet. .

2.5 Cost Benefit Analysis

- The company can charge a membership free or can charge a percentage of sales as fees.
- The major costs will be implementing and maintaining the system. There are no additional costs during the operation of the software.
- SO this can be categorized as a project with High initial cost and with steady income, depending on the growth of the community.

2.6 Selected BSO(Business system option) and Justification for it

In manual system customers have to go to shop from shop find needed books. In our system we provide facility to select books and view book information and buy them online through internet without visiting a single bookshop.

- Charging Membership Fees.
This way we can guarantee income from people who are just exhibiting books and making separate income from things like private libraries. It is not a must to have a membership to just brows our site, it is open for non-members to come and browse through any amount of books and they can get a membership if they find this site useful.
- We are delivering the product within one week from the day your transaction happened if not money will be return to you within 2 days.

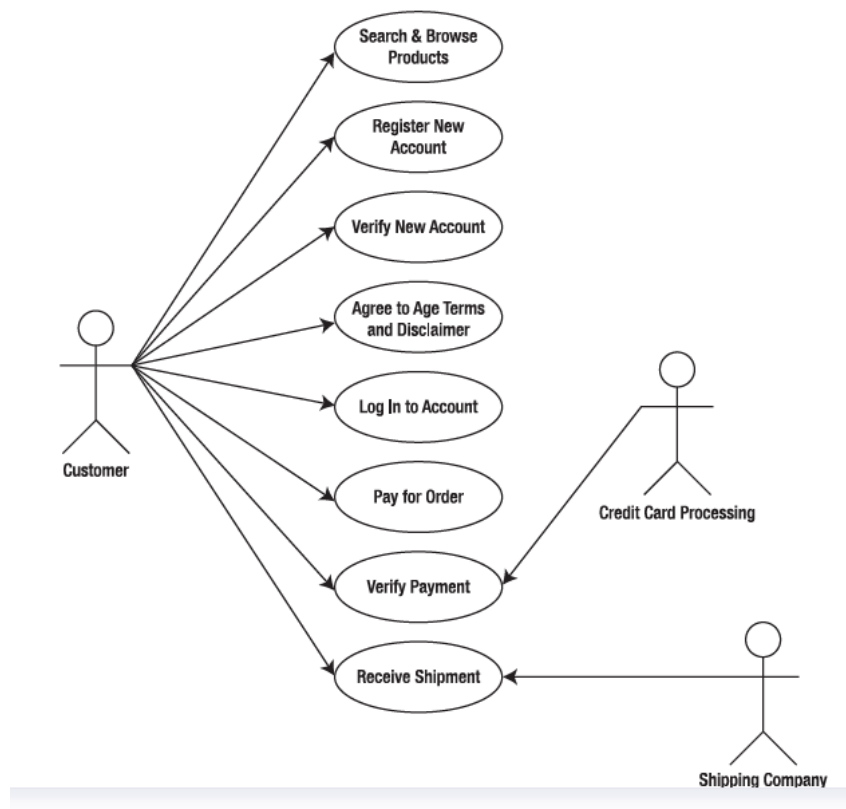
- We have a strict procedure to take all books we buy from publishers or independent author. In addition to that we initiate background check on publishers or seller and find out whether they are trusted or not.
- Selling tax.
Because we allow selling of books through the site, we must make sure no one exploits our site to carry out their business. So we implement charging a percentage of sales as fees on how much sales one individual member have during a month.
- Only the costs of maintaining the databases and servers plus the salaries of the employees are considered as expenses other than the initial cost.
- We are delivering the product within one week from the day your transaction happened if not money will be return to you within 2 days.
- We have a strict procedure to take all books we buy from publishers or independent author. In addition to that we initiate background check on publishers or seller and find out whether they are trusted or not.
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Chapter 3

System Design

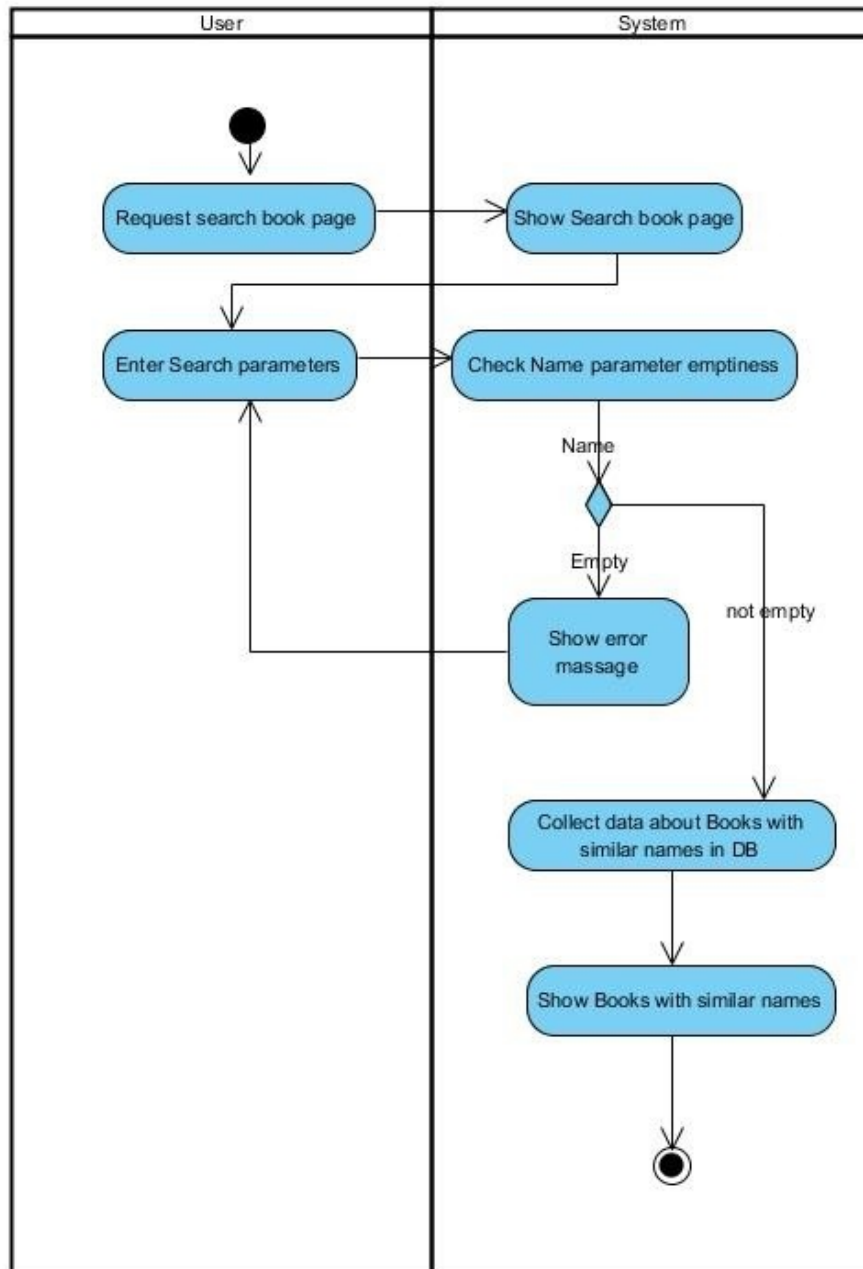
3.1 High Level Diagrams for proposed system

3.1.1 Use Case Diagram

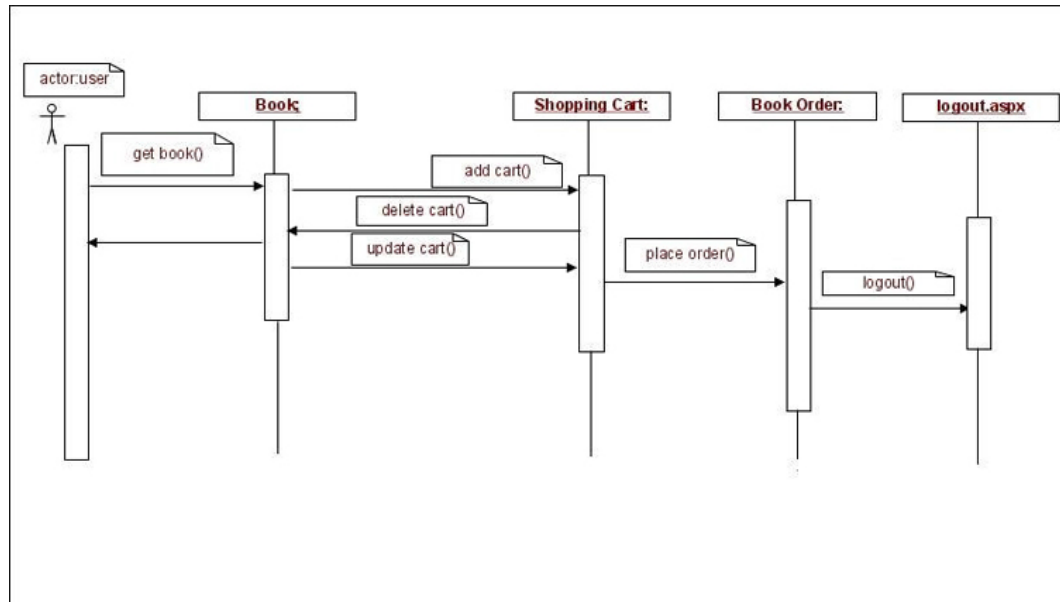


3.1.2 Activity diagram

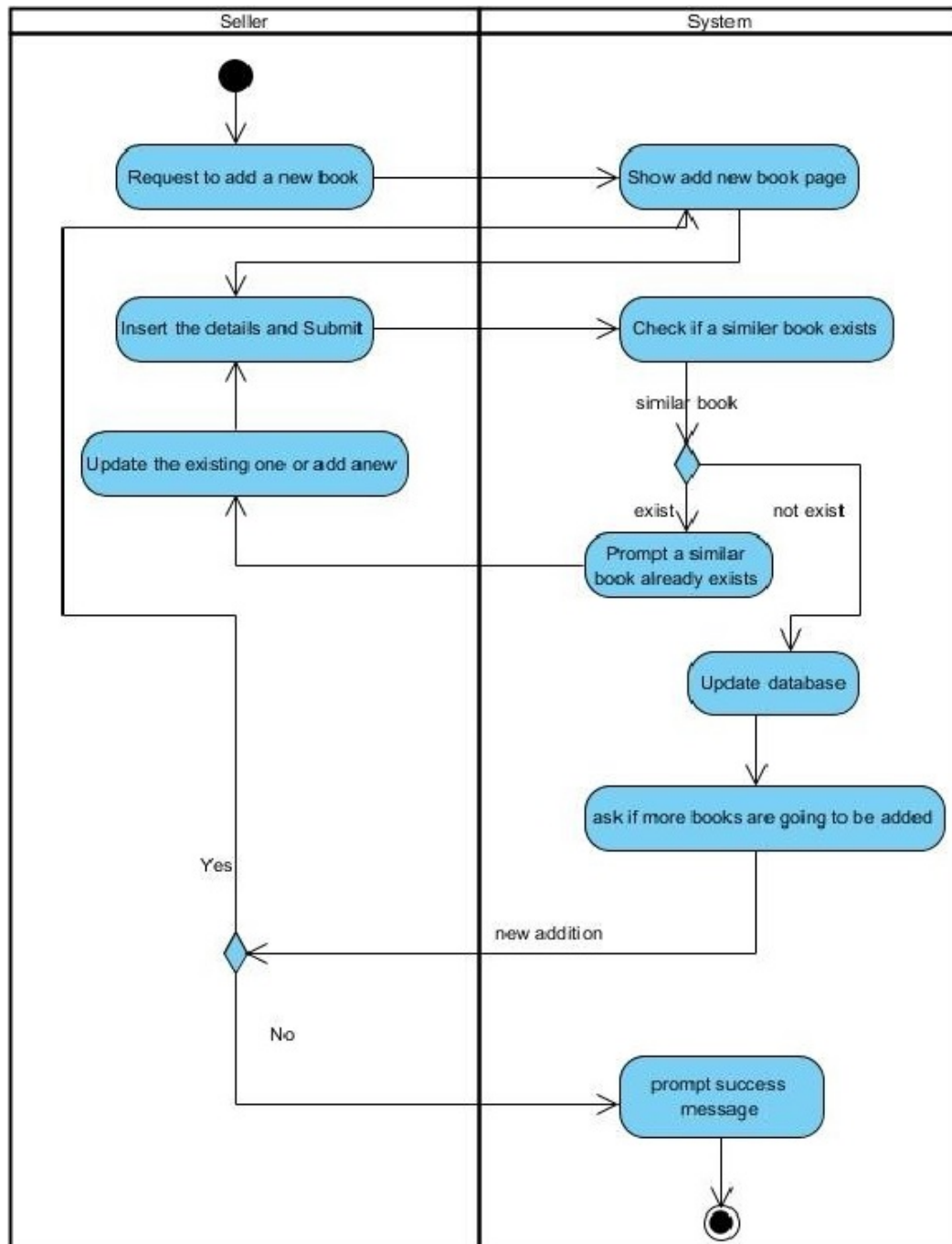
- Consumer Activities(Search Books)



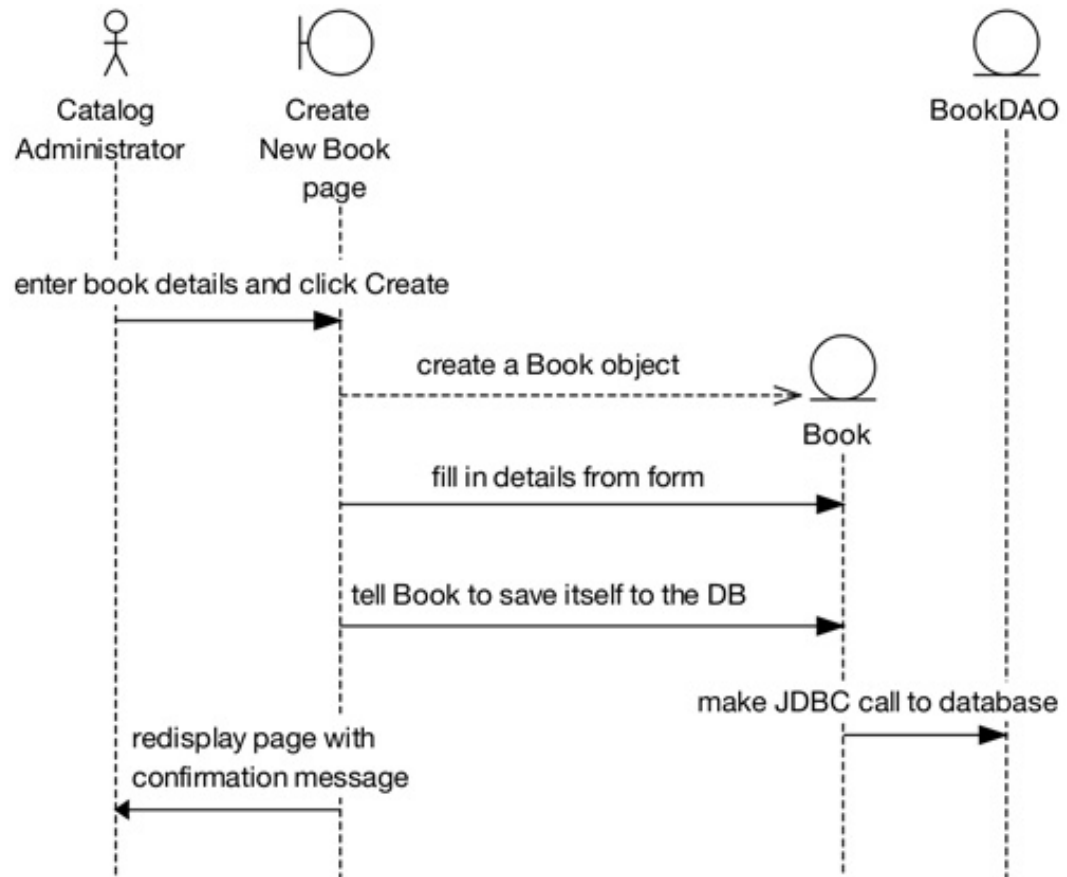
- Consumer Activities(Add books to cart)



- Seller Activities(Add books to sale)

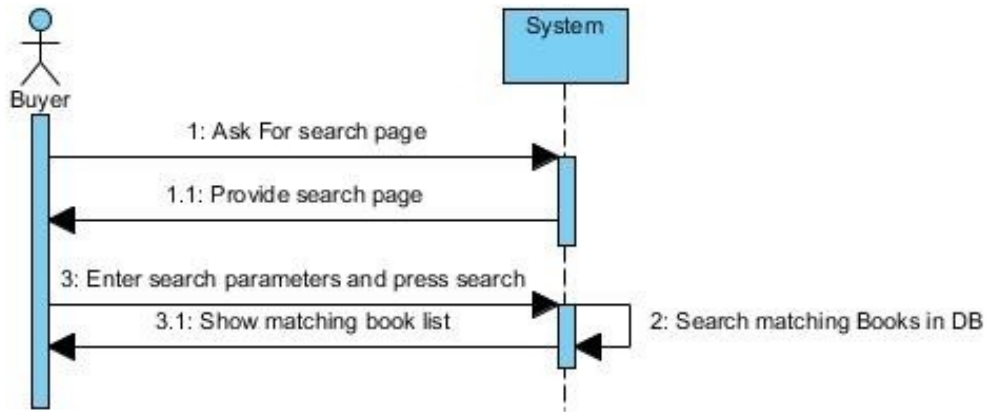


- Administrator Activities

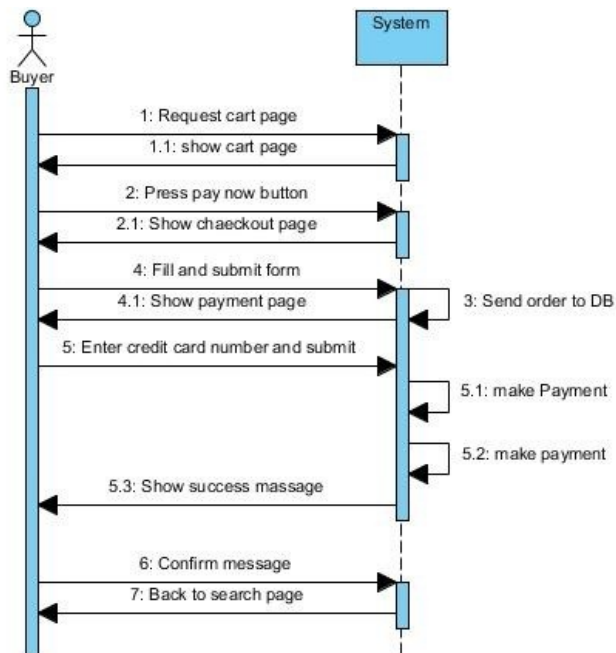


3.1.3 Sequence diagram

- Consumer Activities(Search books)



- Consumer Activities(Pay for order)



3.2 Methodologies used for the system

Unified Process / V Model.

Unified process

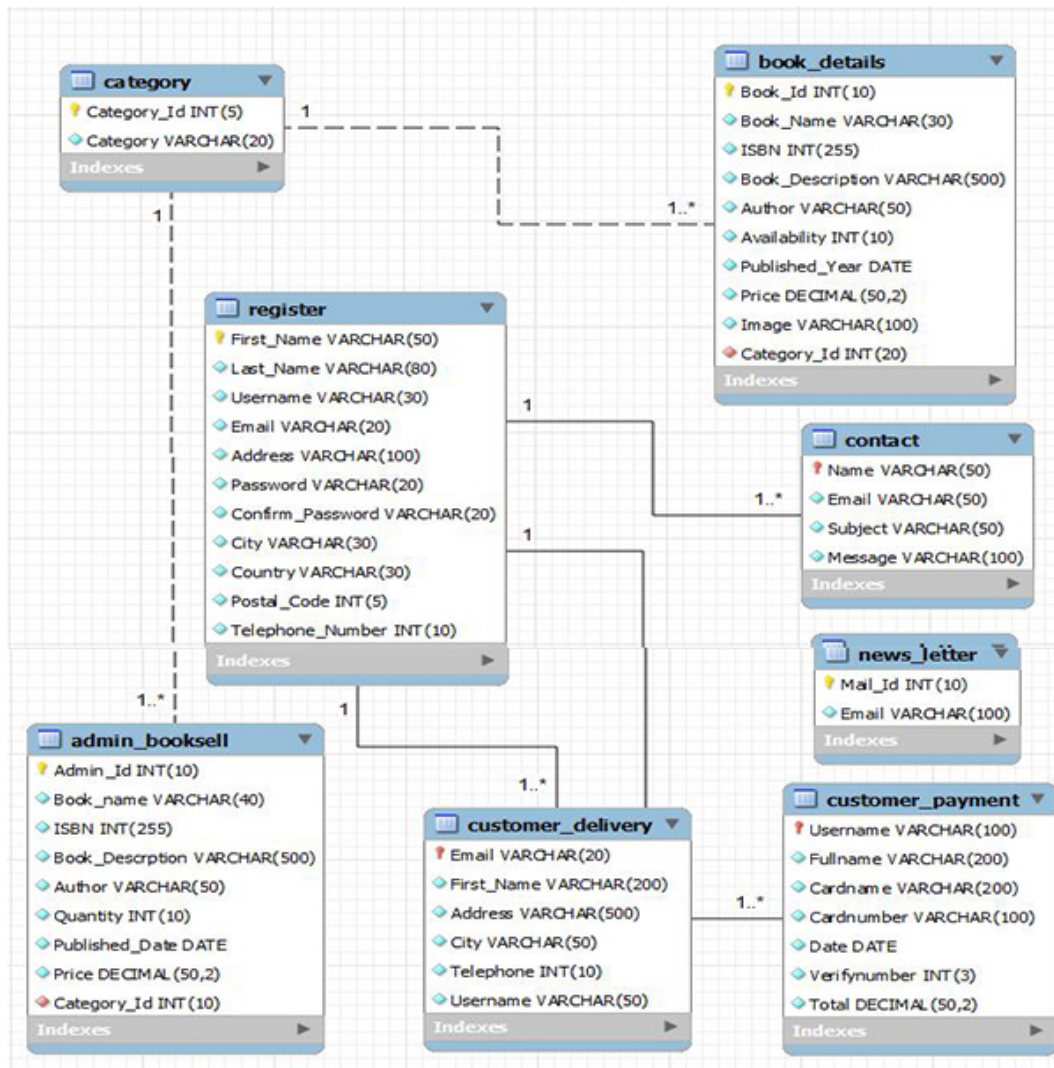
- Inception - Establish the business case for the system.
- Elaboration - Develop an understanding of the problem domain and the system architecture. .
- Construction - System design, programming and testing.
- Transition - Deploy the system in its operating environment.

V-Model

- We have a small size project compare to other industrial projects
- Because requirements are stable. .
- Easy to implement and understand.
- Risk is low and low expensive.
- No need to have big amount of money or resources to start the project..
- Less work when changing requirements according to customer specifications.
- Testing can be done very easily without any trouble.

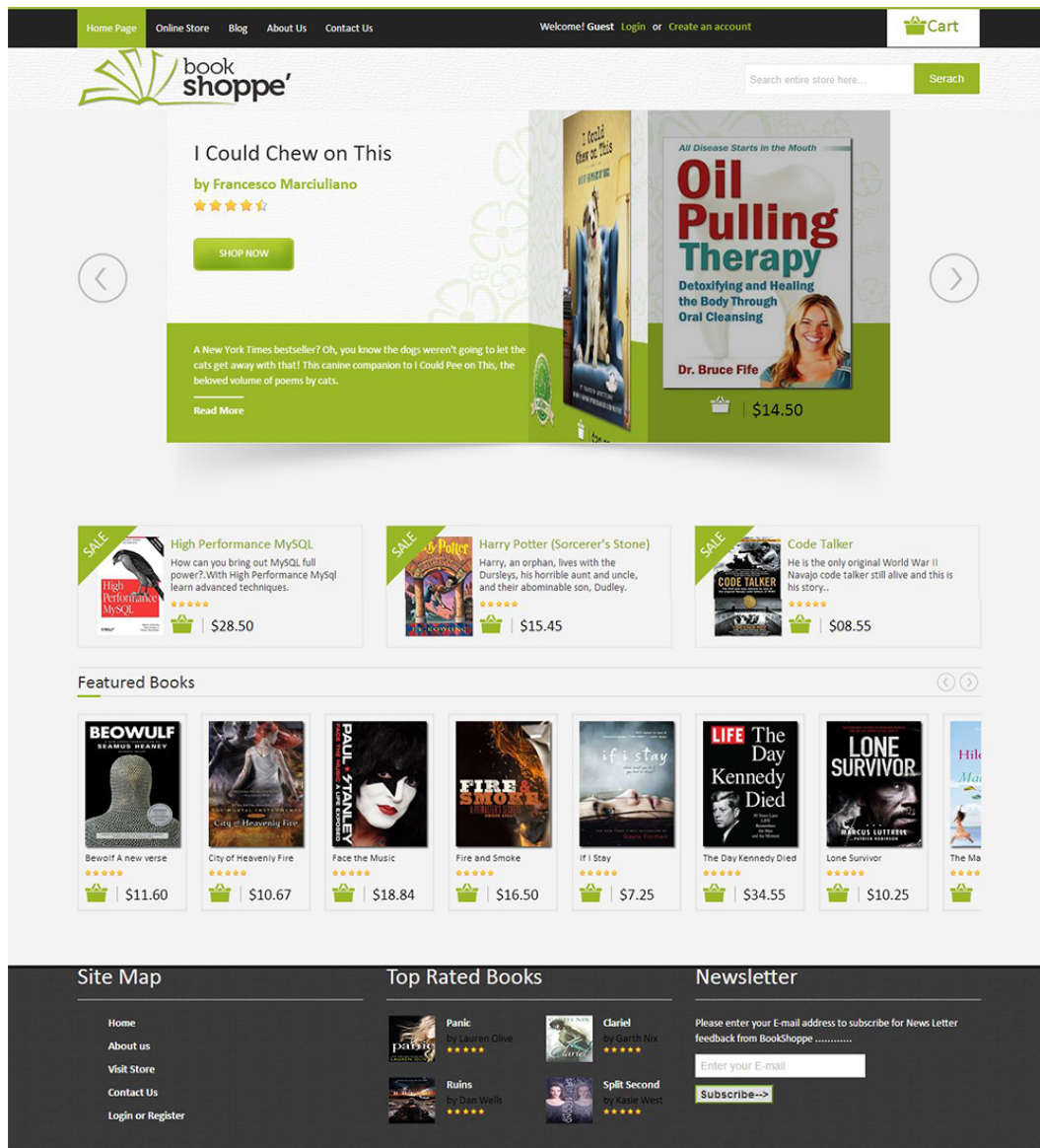
Using the steps of these two we can easily finish our project without taking any risks. And working with these two models can always be tricky but it is so efficient when we use these two models like this.

3.3 Database Design



3.4 GUI Design

3.4.1 Home page



3.4.2 Book select

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[Online Store](#)
[Blog](#)
[About Us](#)
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Grid View

BEOWULF
SEAMUS HEANEY

★★★★★

\$11.60

City of Heavenly Fire
Cassandra Clare

★★★★★

\$10.67

PAUL STANLEY
A LIFE IN MUSIC

★★★★★

\$18.84

FIRE & SMOKE
A PHILIP MARSHALL NOVEL

★★★★★

\$16.50

if i stay
Rachael Lippman

★★★★★

\$7.25

The Day Kennedy Died
LIFE

★★★★★

\$34.55

LONE SURVIVOR
MARCUS LUTTRELL

★★★★★

\$16.50

Elin Hilderbrand
The Matchmaker

★★★★★

\$16.50

I Could Pee on This
AND OTHER POEMS BY CATS

★★★★★

\$16.50

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Panic
by Lauren Olive

★★★★★

Ruins
by Dan Wells

★★★★★

Clarel
by Garth Nix

★★★★★

Split Second
by Kase West


★★★★★

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[Checkout as a Guest or Register](#)

Register with us for future convenience:

☒ Checkout as Guest

☐ Register

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by Lauren Olive
★★★★★

 **Ruins**
by Dan Wells
★★★★★

 **Clariel**
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 **Split Second**
by Kase West
★★★★★

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3.4.4 Sell books

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Cart



Search entire store here

Serach

Checkout

Checkout Method

Registering Information

Sell Books

Book Name *

ISBN id *

Book Description *

Quantity *

Upload image file *

Published Date *

Author *

Category *

Price *

Choose File

No file chosen

History

CONTINUE

Payment Information

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by Lauren Oliver
★★★★★

Clarel
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Ruins
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★★★★★

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3.4.5 Cart

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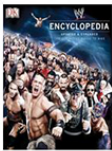

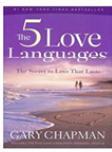

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 Cart



Search entire store here... [Search](#)

SHOPPING CART

Book Image	Book Name	Unit Price	Quantity	Subtotal	
	Skin Game	\$15.05	5	\$ 75.25	
	WWE Encyclopedia	\$28.34	1	\$ 28.34	
	The 5 Love Languages	\$9.28	1	\$ 9.28	

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Enter your destination to get a shipping estimate.

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City*

Postal Code*

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Add more books to the cart -----> [UPDATE CART](#)

Clear the whole cart -----> [CLEAR - CART](#)


GRAND TOTAL \$ 959.14


[PROCEED TO CHECKOUT](#)

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We are looking for newest trends

All books are available with free shipping worldwide. And in case you're concerned about your eco-footprint, every order shipped from Mishawaka is carbon balanced with Green-e Climate certified offsets from 3Degrees, a leading green power and carbon balancing services firm..


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Clariel
by Charm Nix
★★★★★



Ruins
by Chris Wells
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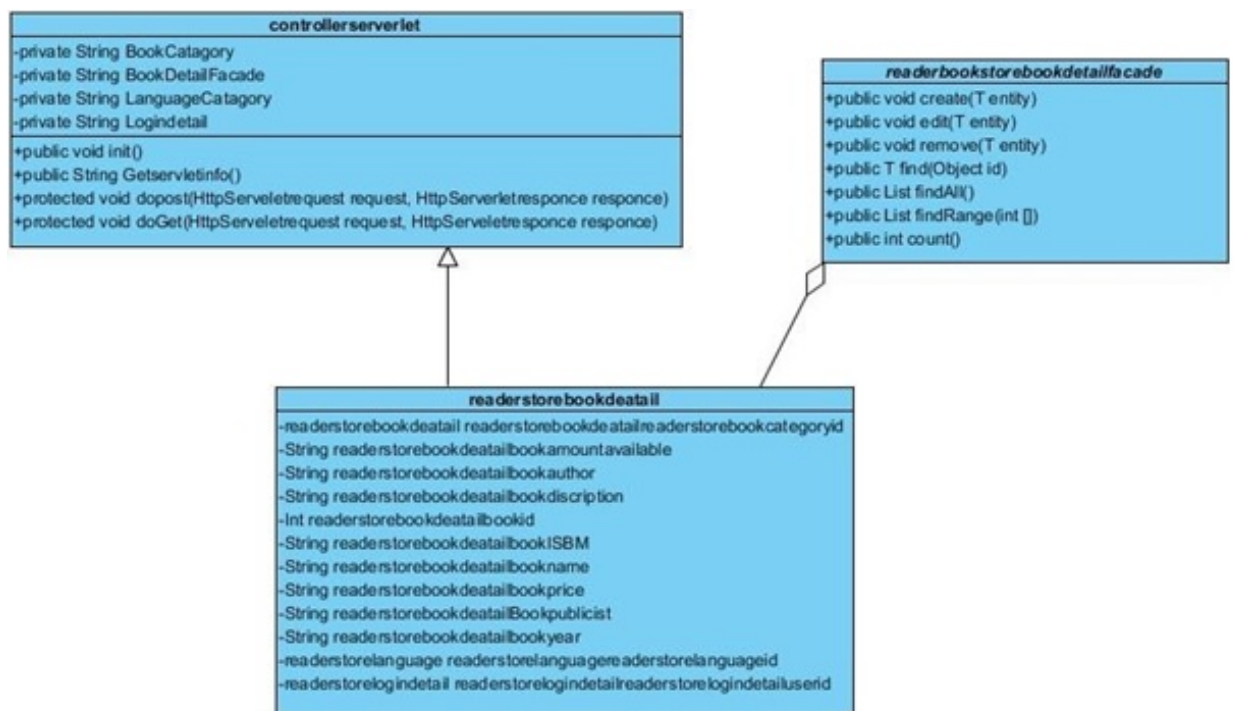
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3.5 Program Design

3.5.1 Classdiagram

This application contains a number of classes. Because its difficult to represent all the classes here in the report, below we have taken apportion of the system to explain with this report



Chapter 4

System Development

4.1 Developing environment tools and programming language

4.1.1 Programming languages, frameworks and techniques

Java EE

Java Enterprise Edition (Java EE), the most stable and standard web programming language, which consists of Java Standard Edition (Java SE) and web specific library, is used in this application to do backend (server) processes such as executing business logics connected with database and generating dynamic view contents etc.

This web application use not only Java EEs generic components but also it is reinforced with latest Java EE web frameworks namely struts, spring, hibernate and site mesh collaboratively. Using these components application is developed in a high level modular way based on Web MVC (Model-View-Controller) and Front Controller design architectures.

- Struts Controller (Accepting http requests and sending http responses)

- Spring Model/Service (Providing service objects)
- Java Server Pages (JSP) View (With generating dynamic contents))
- Site mesh Provides page templating facilities for JSPs

HTML

Hyper Text Markup Language (HTML) is the predominant markup language for web pages. It provides plenty of XML based tags to produce structured static and interactive web pages. In this project HTML is used inside JSP pages to create UI elements of the view pages.

CSS

Cascading Style Sheets (CSS) is used as page structuring and styling partner of the HTML. It makes the application fast rather than using images.

JavaScript

JavaScript is a scripting language used here as the client side programming language. It helps to use modern web techniques, and present interactive and dynamic contents to the user.

MySQL

MySQL is used as Structured Query Language (SQL) which enables communication with database server.

4.1.2 IDEs and tools

NetBeans IDE - Version 7.4

Net Beans IDE has been used as the main Ide to develop and write all the code needed for the application and also in debugging and other related functions. As the go to application for java coding we have most experience and knowledge about this IDE.

MySQL Server 5.6

MySQL Server is used as database server application which is a relational database management system (RDBMS) that runs as a server providing multi-user access to a number of databases.

Visual Paradigm for UML 11.0

Visual Paradigm is used for system designing works like drawing diagrams such as Use Case diagrams, Activity diagrams, Sequence diagrams, Class diagrams, Entity Relationship (ER) diagrams etc. and generating physical database to database servers.

Adobe Photoshop CS6

Adobe Photoshop was used to do the designing of graphics included in the application and other editing of images.

Wamp Server 2.4

This is used to create the whole database and enter the needed amount of data to the database.

4.2 Security Infrastructure

- Some resources are restricted using WEB-INF folder in the application folder.
- User specific contents are displayed after checking the logging state of the user.
- User log states and login histories are maintained.
- User registration log details are maintained.
- Data is transferred in encrypted way using HTTPS protocol

4.3 Validation Techniques used in the system

- Both client-side and server-side validations are used.
- Client-side validations are more than server-side validations.
- Client-side validations are done with JavaScript.
- Client-side validations are done with JavaScript.
- Validations include checking value emptiness, formats, data types etc.

4.4 Data Structures and Algorithms used in the system

- LinkedList, Stack, and Queue are used as core data structures.
- Array list, ArrayList is an implementation of List, backed by an array. All optional operations including adding, removing, and replacing elements are supported.

- Collection are used to implement commonly reusable collection data structures
- Many sorting algorithms are used.

Chapter 5

System Testing

5.1 Testing Methodology used

- Java assertions were used for single line testing.
- Units (methods) in the program were first tested using those logics during developing time.
- After developing test cases were used to do unit testing. For this JUnit was utilized.

5.2 Test cases and Test Results

5.2.1 Java Code

```
package Servlets;
import Database.Dbconnection;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.ResultSet;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```

import javax.servlet.http.HttpSession;

/** * * @author Osanda Wedamulla */
public class Login extends HttpServlet

    protected void processRequest(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException
    response.setContentType("text/html;charset=UTF-8");

    PrintWriter out = response.getWriter();
    String userid = request.getParameter("inputusername");
    String password = request.getParameter("inputpassword");
    String conpath = request.getContextPath();

    if(userid.equals(admin)—— password.equals(admin) )
    //response.sendRedirect(conpath+ "/orderrecieved");
    request.getRequestDispatcher("/orderrecieved").forward(request,response);

    try
    String sql = "SELECT * FROM register WHERE Username='"+userid+"'";
    ResultSet rs = Dbconnection.query(sql);

    while (rs.next())

    if (userid.equals(rs.getString(3)) —— password.equals(rs.getString(6)))

    HttpSession session = request.getSession();
    session.setAttribute("username", userid);
    session.setAttribute("password", password);
    session.setAttribute("firstname", rs.getString(1));
    session.setAttribute("lastname", rs.getString(2));

```

```

session.setAttribute("email", rs.getString(4));
session.setAttribute("address", rs.getString(5));
session.setAttribute("city", rs.getString(8));
session.setAttribute("phone", rs.getString(11));

    //response.sendRedirect(conpath+ "/index.jsp");
request.getRequestDispatcher("/index.jsp").forward(request,response);

    break;

    request.setAttribute(error, Wrong User name or password);
response.sendRedirect(conpath+"/404page");

    catch (Exception e)

    @Override
protected void doGet(HttpServletRequest request, HttpServlet-
tResponse response)
throws ServletException, IOException
processRequest(request, response);

    @Override
protected void doPost(HttpServletRequest request, HttpServlet-
tResponse response)
throws ServletException, IOException
processRequest(request, response);

    @Override
public String getServletInfo()
return "Short description";
//

```


5.3 Java Script code for validation

```
<script type="text/javascript">
function validate_addressInfo(){
var fault = 0;
validate_basicInfo();
var street = document.getElementById("street_txt");
var city = document.getElementById("city_txt");
var postal = document.getElementById("postal_txt");
if(street.value.replace(/\s+$/g,"") == ""){ fault+ +;
document.getElementById("error_td_street").innerHTML = "Please
enter your street";
}else{document.getElementById("error_td_street").innerHTML
= null;}
if(city.value.replace(/\s+$/g,"") == ""){
fault ++;
document.getElementById("error_td_city").innerHTML = "Please
enter your city";
}else{document.getElementById("error_td_city").innerHTML =
null;}
if(postal.value.replace(/\s+$/g,"") == ""){
fault++;
document.getElementById("error_td_postal").innerHTML = "Please
enter your postal code";
}else{document.getElementById("error_td_postal").innerHTML
= null;}
if(fault > 0 —— validate_basicInfo() == false){
return false
}
else{
return true;
}
}
```

5.4 Test Report

Bug Name: Application crash on clicking the Clear Cart button while removing books from cart.

Bug ID: The BUG Tracking tool will automatically create it once you save this.

Area Path:User > Cart > Selected Book > Book

Build Number:/Version Number 002

Severity: Medium (High/Medium/Low)

Priority: Medium (High/Medium/Low)

Assigned to:Osanda

Created By: Osanda

Created On: 09.07.2014

Reason : Defect

Status:Manual repair with tool support

Environment:Windows 8/Glassfish 4.0/MySQL Server 5.6 /Netbeans 7.4 JavaEE

Description: Application crash on clicking the Checkout button while checking out products and it is making it unable to purchase products.

5.5 User Evaluation and Reviews

Questions and Answers

- Does the idea given by each page clear? Yes
- Are the labels on a form clear? Yes
- Are the form field sizes enough? All the fields are ok

- How does the field validation support for filling forms? Excellent
- How does the data viewing methods? Good
- How does the page navigation? Good
- How does the UI design? Good
- How is the response time? Very good

Reviews

User reviews about the application are written on the reviews page of the application.

Chapter 6

System Implementation

6.1 Implementation Requirements

Requirements were implemented through a long requirements elicitation and analysis, system and software design and development. For this client-side and server-side programming languages, frameworks and tools were used.

6.2 Installation Guide

- Start wemp server.
- Load database file (.sql) to the wemp server ,in order to that we have to create a database same as the .sql extention file. Then we can import the sql file to the interface. After that we can see all the tables in the database.
- Start Glassfish 4.0 or greater version.
- Upload application file (.war) to the GlassFish server.
- Open a web browser and send requests to JSP pages for generating Servlets for those JSPs by the server/container.

6.3 User Manual

- Open a web browser.
- Request this URL: www.bookshoppe.lk/ and it will display the home page of the application.
- To create a new user account click Create account link in upside of the page, it will display the user registering information tap, then fill it and hit continue button.
- To login to the system we can enter user id and password to the system in the home page and hit LogIn button
- To search products use search form in the home page. Fill form and hit Search button and it will show search results of the electronic items you searched.
- To view full details of all books, first go to the online store page, there you can see all the details of each and every products. For example you can see books price, image, description, author, published date just by clicking on it.
- To buy books you can go to the online store page and see if there is any books you wish to buy. Then you can add books to the cart and after that go to the cart and you can check out the items from the cart.
- If you want to contact us you can just visit to the contact us page and post message giving asked information on contact page..
- To get news feeds from us you can subscribes to newsletter by just entering the mail address.

6.4 User Training

Since this is a web application users are not trained by developers. System provide user friendly environment for customers. So users will not face trouble while using this application.

Chapter 7

Discussion and Conclusion

7.1 The degree of objectives met

- Objectives were set to enhance the manual food ordering process and convert it to a hybrid one.
- Generally all objectives were feasible to implement.
- As the specification all suggested objectives were implemented successfully.
- Now the system is running properly.

7.2 Usability, Accessibility, Reliability and User friendliness of the system

- Application is very easy to use.
- System keeps data very securely.
- No need a big help to understand the way of using features.
- Workflow is controlled by validations and user messages.
- Furthermore user can get more help from help menu.
- System errors and crashes are very few.

- Any user connected to the internet and has a http web browser can access to the system.
- Many of the features dont require the user login.
- But to access user specific data, user is asked to login.
- Data is available on demand.
- Many operations are provided to manipulate data in a more flexible way.
- User is guided very clearly when doing some operation.
- User interfaces are very clear.
- System avoids possibilities of occurring faults by the user.

7.3 Limitations and Drawbacks

- A user can create a user account for fake purposes and will compromise security.
- Application user interfaces are larger since its easy on accessing via a computer.
- A user can create a user account for fake purposes.
- Can add unnecessary reviews.

7.4 Further Modification and Enhancement

- An admin console will be created.
- Modified payment gateway will be added later at larger cost.

- A sales report tool will be created for seller outside our company.
- A mobile phone application for the site will be developed.