ON-LINE FURNITURE CENTER

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EP1153

Declaration

I hereby declare that except where specific reference is made to the work of others, the contents of this report are original and have not been submitted in whole or in part for consideration for any other's one. This report is the result of my own work and includes nothing which is the outcome of work done in collaboration, except where specifically indicated in the text. This report contains less than 65,000 words including appendices, bibliography, footnotes, tables and equations.

S.K.Sachini Amanda
2014

Acknowledgements

I take this opportunity to express my profound gratitude and deep regards to our guide senior lecturer S.V.Priyan for his exemplary guidance, monitoring and constant encouragement throughout the course of this thesis. The blessing, help and guidance given by him time to time shall carry me a long way in the journey of life on which I am about to embark.

Abstract

In today's competitive Sri Lankan furniture supplies' market, it is vital for retailers to have a website where products can be sold online. For this master's project, an e-commerce website has been created called Liyawel.com. The main requirement of this project is to create the website in the least expensive yet in a professional way – thus, an open-source solution known as OSCommerce is utilized to develop the e-commerce system. The final version of the website has a front-end site for public viewers and a back-end site for the store owner so that owner could maintain the website.

In addition, this website is accompanied by documents which cover topics such as intended website audience, design decision, competitive analysis, website contents, website structure, database elements, security aspects, payment methods, marketing approaches, website maintenance guide, management and user requirements, costs and benefits analysis, alternative development strategies, and project schedule.

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Chapter 1

Introduction

1.1 Overview of the organization

Liyawel.com is the official web site that create a site platform independent, and with some of the furniture centers, building mutual assistance and cooperation relations, online sales.This furniture site supplies facilities to buy online basic , durable home and office furniture.

This website for is created to help increase its sales as well as to acquire more customers in the furniture market. As well as;to treat every supplier, employee, and customer with honesty, dignity and respect,improve all aspects of service delivery to our customers, our employees and our community and to provide a safe and convenient environment to shop.

1.2 Business Process (Manual/ Partial Auto- mated)

The customer can select any of it and enter the quantity of items he wishes to buy and update their orders. And suppliers who manufacture this furniture can view sales details of their products. In the payment procedure the total amount of buying items is displayed and also provides discount if any and finally the net amount is displayed. The buyers can pay using online payment methods like palpal or through their credit card. If credit card's details are correct, then the sales procedure is authorized. Finally they order furniture from a distributor and the items are dispatched to the customer's address to where the goods have to be delivered. A bill will be sent to the customer by the credit card company and vendors account will be credited.But there is a special constraint that is only registered members can do payment.The admin of the web site provides a unique username and password for each employee through which he can login. Admin also has the authority to add details of the

items to be sold. And he also has the right to edit or delete that information to/from the list.

1.3 Definition of the Problem

The existing system is manual system. Needs to be converted into automated system.As it has a risk of mismanagement of data, less Security, no proper coordination between dierent Applications and Users, fewer users - friendly, accuracy not guaranteed and not in reach of distant users

1.4 Need Analysis

By creating the online funiture center we hope to deliver furniture providing facilities for online shopping system to the customers by ordering it from furniture distributors/suppliers. This system will help to achieve maximum efficiency in shopping online and to reduce the time taken to purchase items.But our main focus is youth. While artist promote their popularity, we are able to achieve better economic level by this system.

1.5 Aims and Objectives

Liyawel.com is to provide high quality service to all its customers with a professional, kind, and supportive manner.This furniture center is committed to being the best in all areas of its business.And its' objectives are to:

- Treat every supplier, employee, and customer with honesty, dignity and respect.
- Impress our customers, current and prospective, to encourage future business.
- Improve all aspects of service delivery to our customers, our employees and our community.
- Provide a safe and convenient environment to shop.

1.6 Scope of the system

This site has great future scope.Online shopping system is developed on and for the Windows and later versions environments and Linux OS. This project also provides security with the use of Login-id and Password, so that any unauthorized users can not use your account. The only Authorized that will have proper access authority can access the software.

Chapter 2

System Analysis

2.1 High Level Diagrams (Eg. UML diagrams) for existing system/ process

Fig. 2.1 data flow

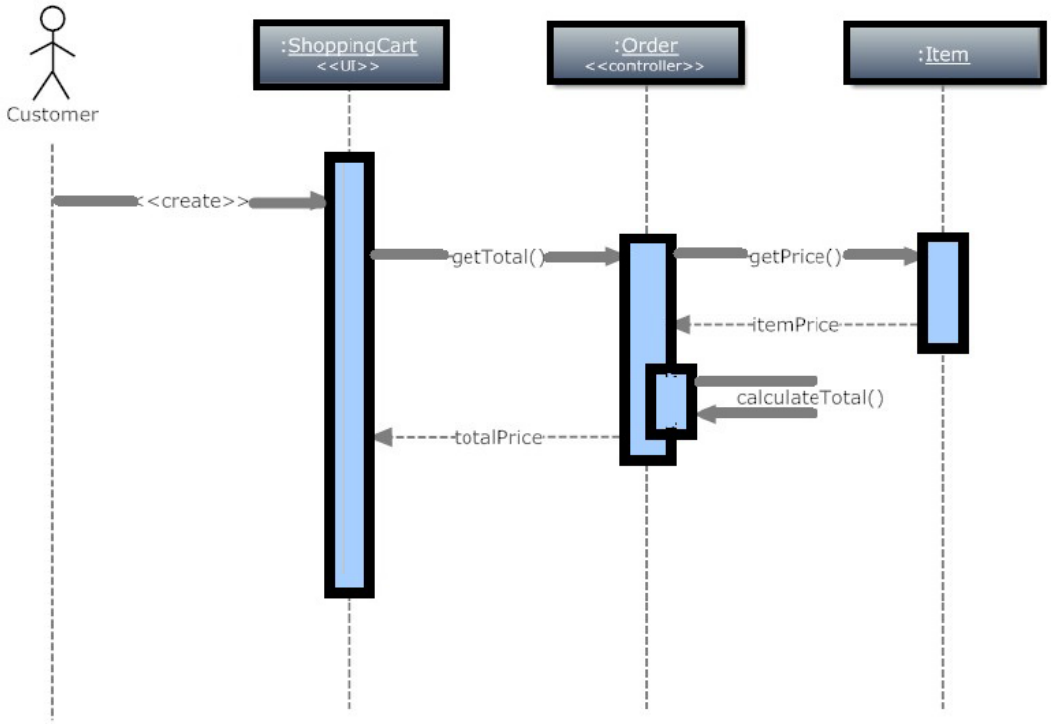

Fig. 2.2 Sequence diagram

2.2 Software Requirement Specification

Its' software requirenments are;

1. The main goal of the website is to provide an up-to-date, complete list of the products carried by Chinguun-Tulga Office Supply Store in a professional manner.

2. When a user visits the site, they should be able to locate the information they seek in a timely fashion.

3. It is also important for the website's default language to be set in Mongolian. The English version of the website is created for the thesis committee members.

4. The website must be easily updatable and user-friendly to admin and the supplier of Liyawel.com.

Its' quality requirenments are;

Accessibility- Customers should have the ability to access the system whenever they want. Accessibility is strongly related to universal design when the approach involves "direct access." This is about making things accessible to all people.

Accessibility- Availability of a system is typically measured as a factor of its reliability. Availability of a system may also be increased by the strategy on focusing on increasing

testability maintainability and not on reliability. . An availability plan should clearly provide a strategy for availability control.We an- ticipate to grant maximum availability to our users by using our newly created web site.

Privacy-Most people have a strong sense of privacy in relation to the exposure of their body to others.It means that its absolutely banned to disclose ones credit card information and other details to others.

Maintanability-Maintainability is the ease with which a product can be maintained in order to isolate defects or their cause,correct defects or their cause,repair or replace faulty or worn-out compo- nents without having to replace still-working parts,When artists want to add songs to the web site,they have to send the requests to the web site.If system maintains properly above things will happen in a good level.

Tmeliness-When one user updates some his/her personel data, the system shall ensure that admin can automatically see the update within 2 seconds.When admin adds new videos and MP3 songs to the site,it should provide the ability to customers to access those songs simultaneously.

Speed-Submission of the details should be speed. There should be a high speed data retrieval from a specific storage media if not user have to wait a long time.When updating overall system it should be speed unless it provide old data to the users. And when one user receive one data which is updated another user can get old data which is not updated so the speed is very important.

Constraints are;

There are several kinds of constraints in one system.Among them physical constraints,business constraints, Data and Content Con- straints,Hardware Constraints,Software Constraints,Personnel Constraints.

System Component Specic Constraints:

data and content constraint-

To the extent that it is practical, all textual content of the application shall be in the form of the eXtensible Markup Language (XML).

To the extent that it is practical, all graphical content of the application shall be in the form of the .gif or .jpeg les. To the extent that it is practical, all persistent data shall be stored in relational databases.

All persistent data shall be stored in Oracle databases

hardware constraint-

The application shall only use commercial-o-the-shelf (COTS) hardware components.

software constraint-

Architecture Constraint:

The application shall use a layered architecture, whereby each layer may only access the layer directly below it.

Design Constraint:

All application software shall be modularized into classes using object-oriented design principles.

Implementation Constraints:

To the extent that it is practical, all software components of the application shall be programmed in the Java programming language. All Java software components shall conform to the ocial organizational Java programming standards.

Testing Constraint:

The component shall include built-in self-test software that automatically and continuously tests the component while it is in operation

personnel constraint

Required support for circumventing foreseeable human errors under both normal and extreme conditions

High level language:

Application server software shall be written in Java. Employee client software shall be written in Java. User client software shall be written in DHTML, CSS, and JavaScript webpages

legal and regulatory constraint:

The application shall comply with all relevant tax laws in the countries for which it is being internationalized

industry standards:

National industry standards-IEEE International industry standards MPEG-1 Audio ISO/IEC 11172-3 textbfArchitecture Design

2.3 Business Systems Options for Software

- WINDOWS 7 OS/ WINDOWS XP /WINDOWS VISTA
- Glasssh server/Tomcat server
- My SQL workbench/ Phpmyadmin
- Netbeans

2.4 Business Systems Option for Hardware

- Intel Core 2 Duo 2 GHz processor
- 4 GB Ram
- 50 GB HDD Space
- Internet connection

2.5 Cost Benefit Analysis

if installed must still be a good investment for the SAN music studio private limited company. In the economical feasibility, the development cost of creating the system is evaluated against the ultimate benet derived from the new systems. Financial benets must equal or exceed the costs

The system is economically feasible .Because it does not require any addition hardware or software resources. Since the interface for this system is developed using the existing resources and technologies that are available , There is nominal expenditure and economical feasibility for certain. -

2.6 Selected BSO(Business System Options) and Justification for it

- Computer Hardware- A PC with a 2.4-gigahertz (GHz) processor or faster, at least 1GB of memory, and a DirectX 9.0 compliant Video (128 MB Memory) and a Multi Channel 5.1 Capable Sound Card. For HD videos,the faster your computer the better.And internet connection capable of 1.5+ mbps of sustained transfer speeds
- Software requirements
  - Adobe Flash Player
  - WINDOWS OS (XP / 2000 / 200 Server / 2003 Server)
  - SQL Server Enterprise Edition
  - Glasssh Server
  - PHP myadmin

- Netbeans

Chapter 3

System Design

3.1 High Level Diagrams (Eg. UML diagrams) for proposed system/ process

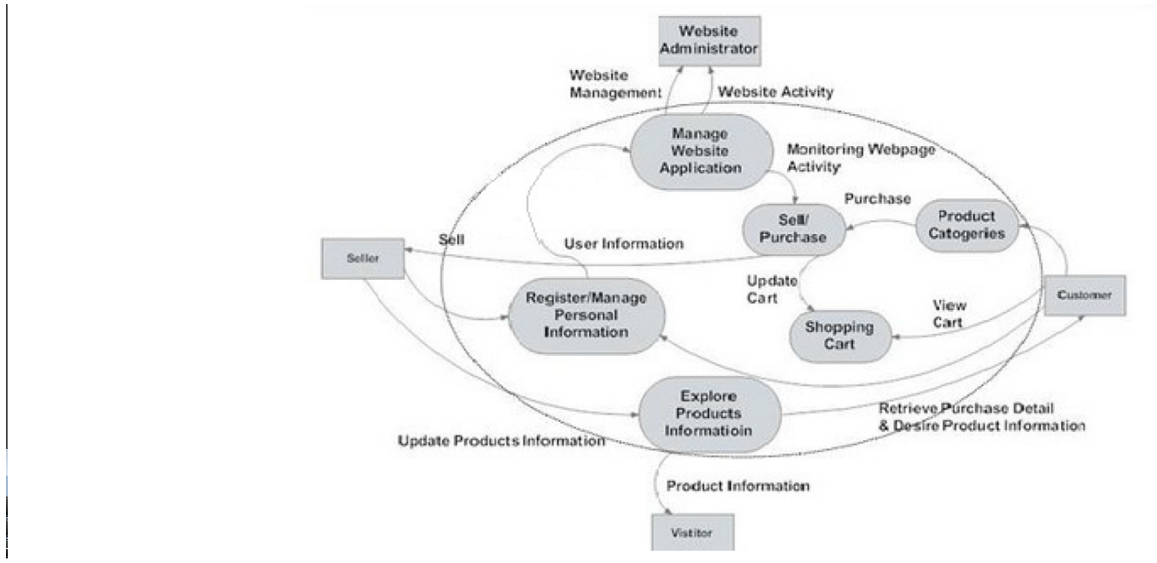

Fig. 3.1 DFD

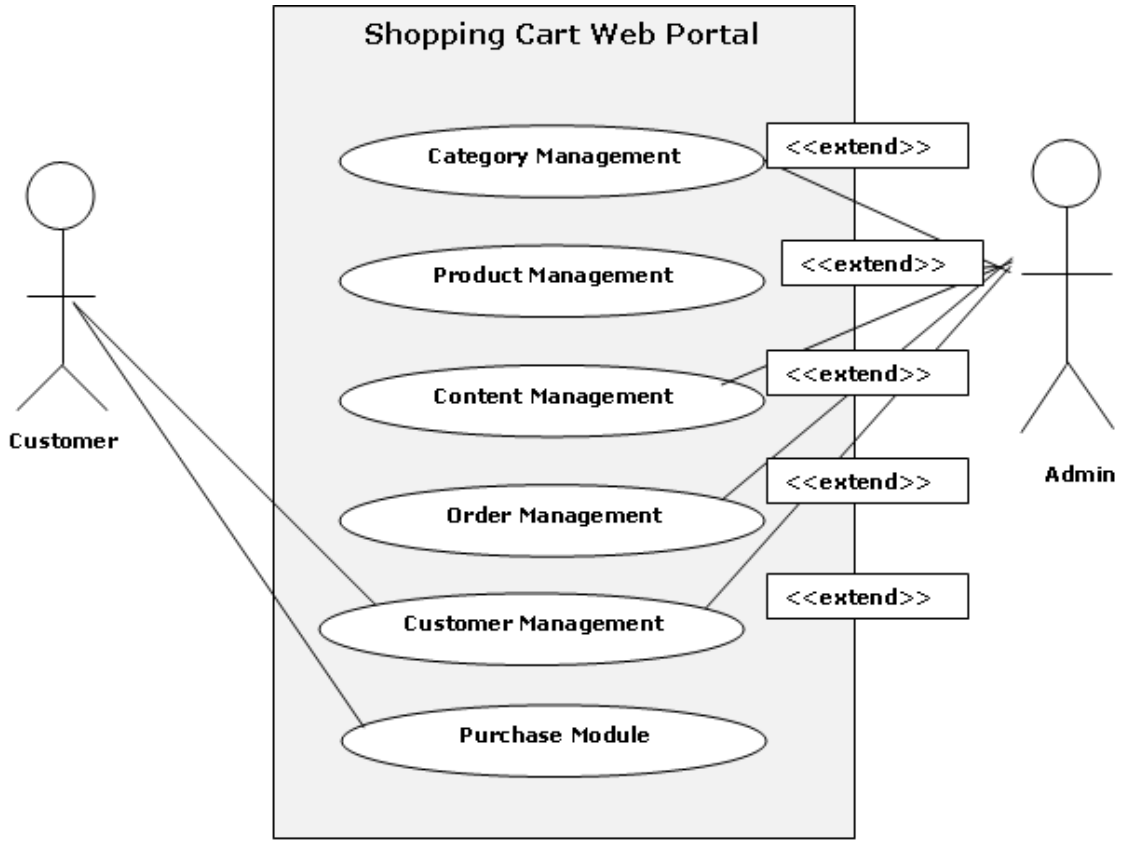

Fig. 3.2 use Case

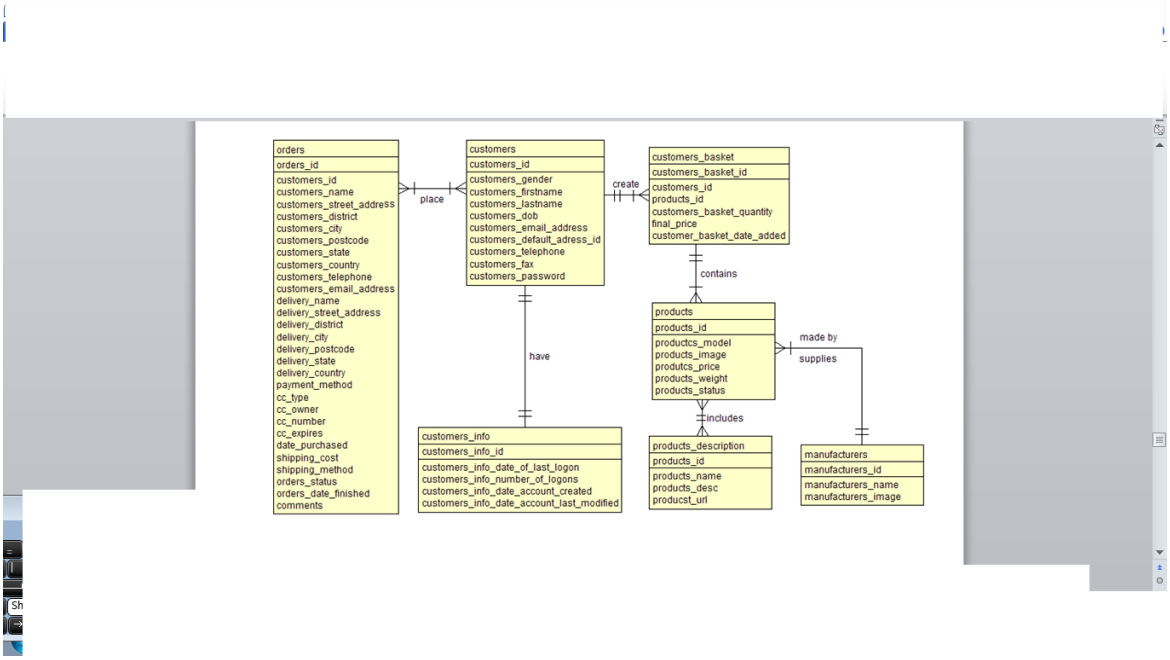

Fig. 3.3 Class daigram

3.2 Methodologies used for the system (Eg. Agile, water fall , Unified Process etc)

We have selected V-model to implement the system.Because: Our project is a medium siize project and requirements are already clear and also the V-shaped model should be used for small to medium sized projects where requirements are clearly dened and xed. Testing activities like planning, test designing happens well before coding. This saves a lot of time. Hence higher chance of success over the waterfall model.

If we use v model we can nd defects at early stages (even may be in the development phase before application is tested.) because of the proactive defect tracking of v model and also it avoids the downward ow of the defects.

This is our rst web information system development project and V model is simple and easy to use.So we decided to use V model instead of using a complex model in our rst project. Able to make any changes to any phases after the process started

If a mistake happened no need to start the process from the beginning. Since this is our rst web information system we hope there is a higher possibility of arising mistakes

3.3 Database Design

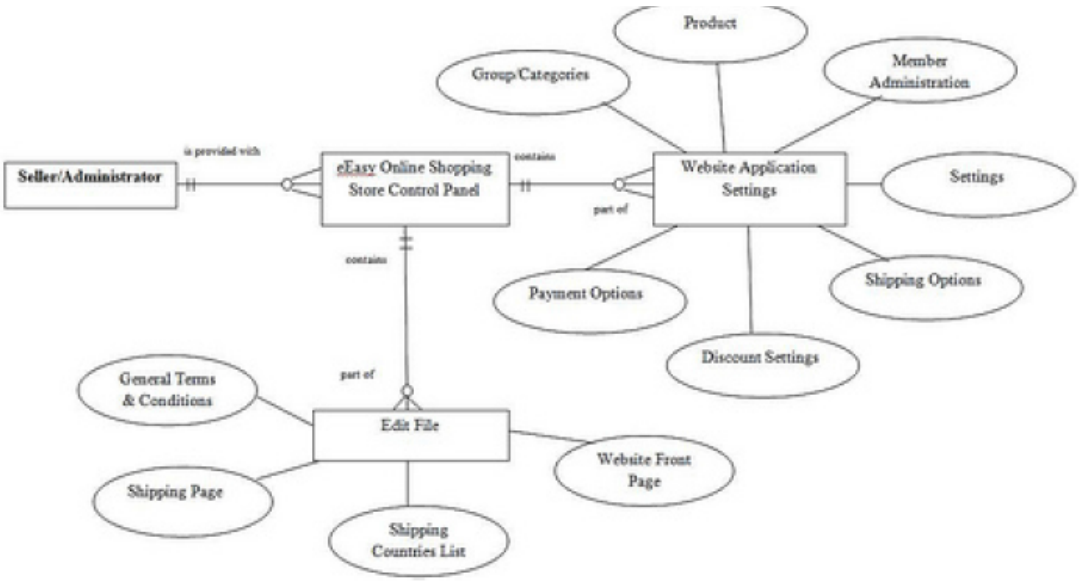

Fig. 3.4 ER diagram

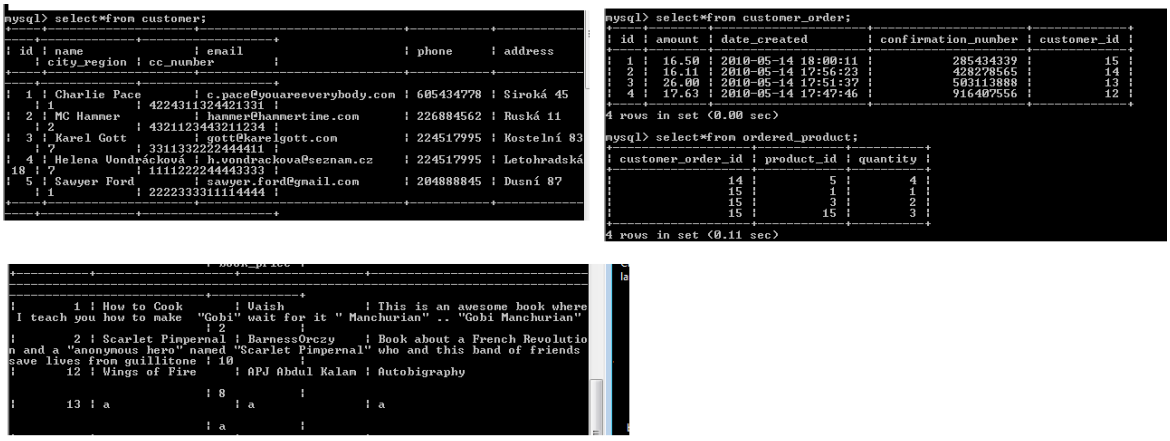

Fig. 3.5 databse

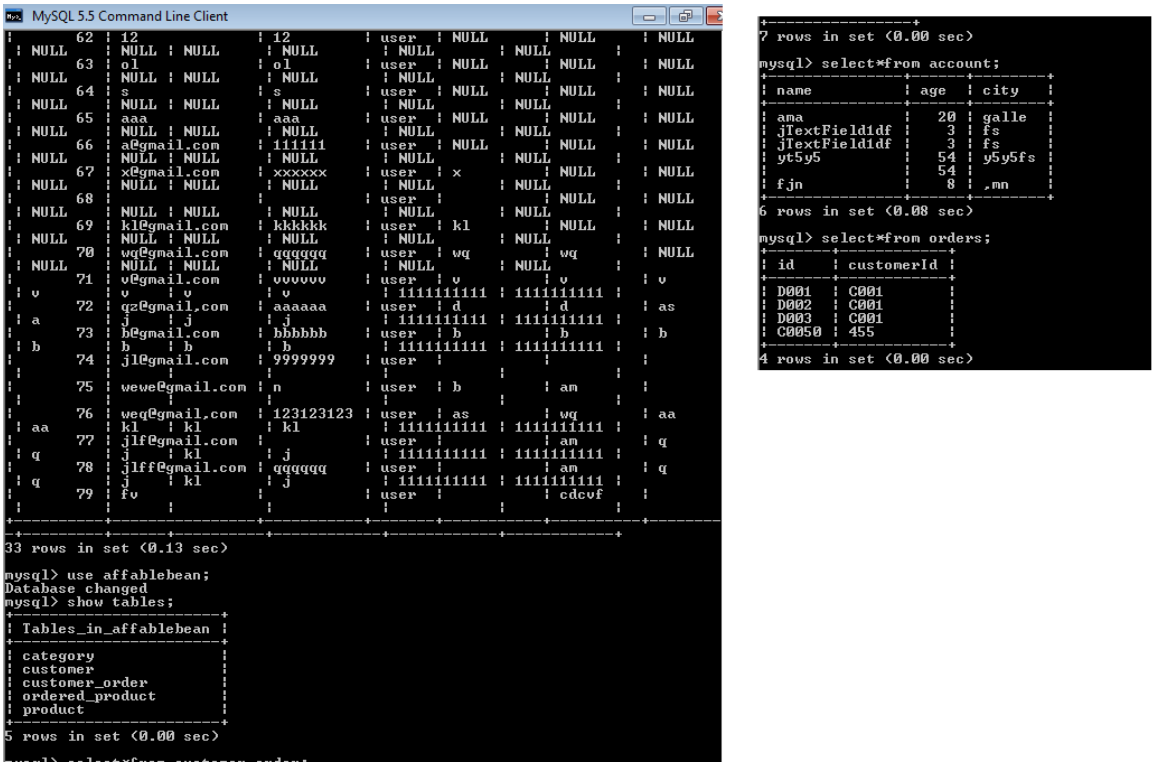

Fig. 3.6 database

3.4 GUI Design

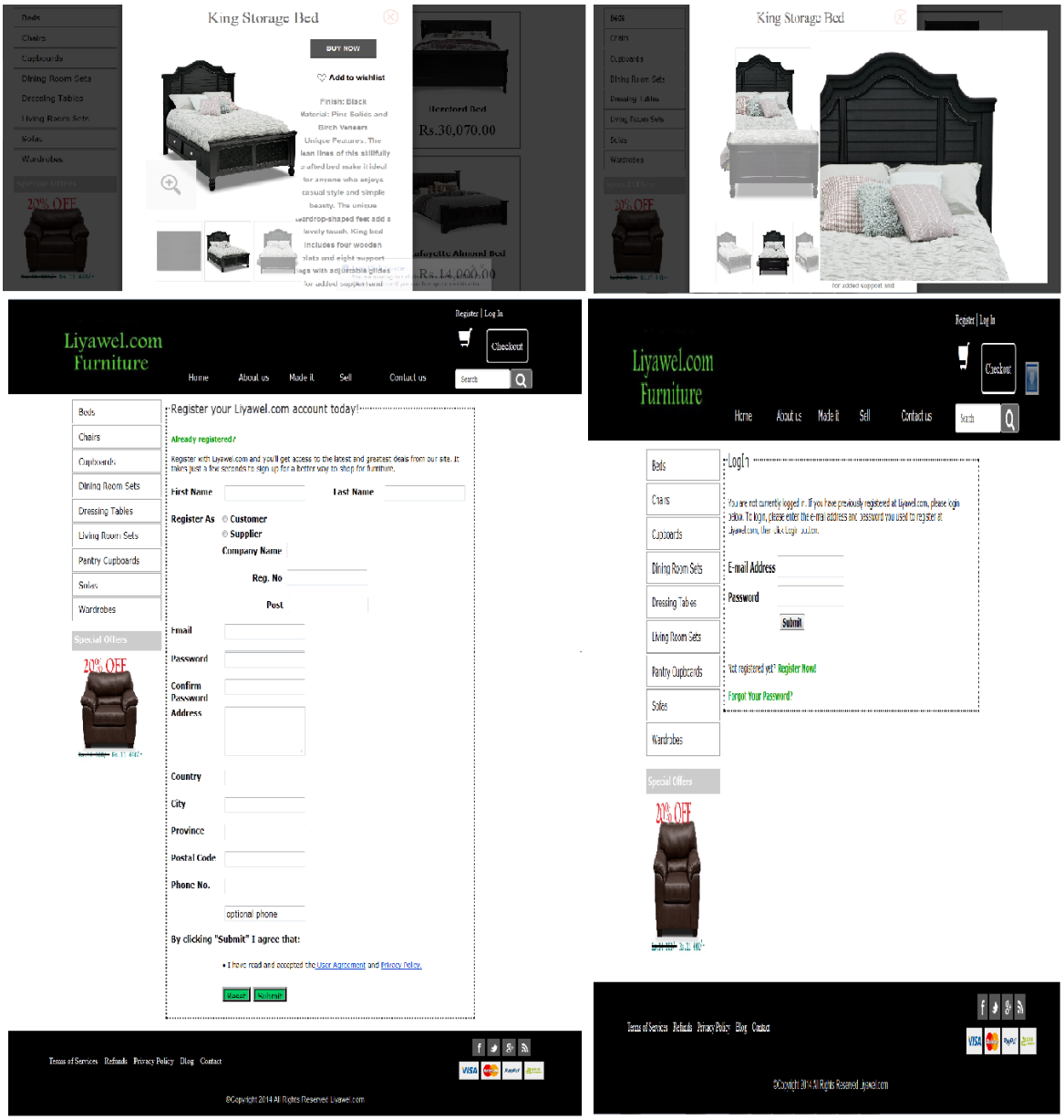

Fig. 3.7 GUI

3.5 Program Design

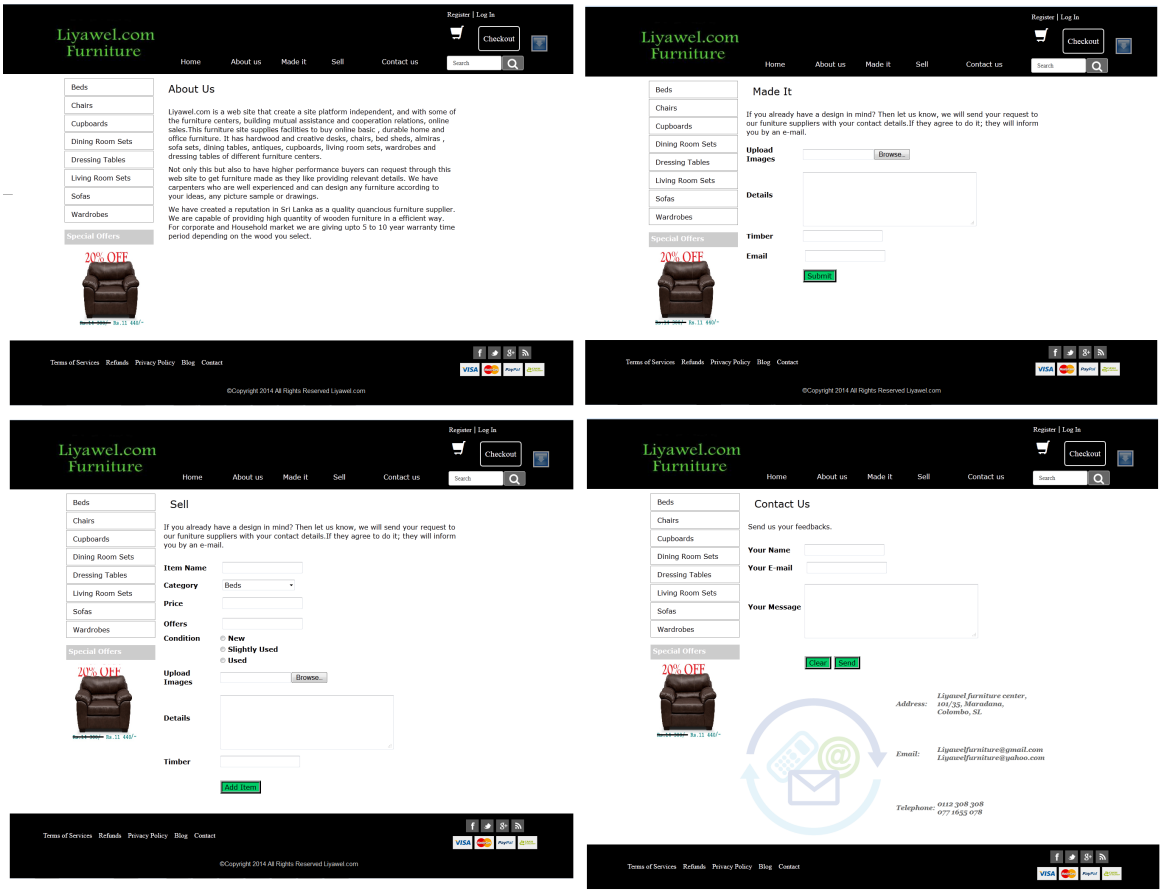
Liyawel.com Furniture
Register | Log In
Checkout
Home
About us
Made it
Sell
Contact us
Search
Beds
Chairs
Cupboards
Dining Room Sets
Dressing Tables
Living Room Sets
Sofas
Wardrobes
Special Offers
20% OFF
About Us
Liyawel.com is a web site that create a site platform independent, and with some of the furniture centers, building mutual assistance and cooperation relations, online sales.This furniture site supplies facilities to buy online basic , durable home and office furniture. It has hardwood and creative desks, chairs, bed sheds, almiras , sofa sets, dining tables, antiques, cupboards, living room sets, wardrobes and dressing tables of different furniture centers.
Not only this but also to have higher performance buyers can request through this web site to get furniture made as they like providing relevant details. We have carpenters who are well experienced and can design any furniture according to your ideas, any picture sample or drawings.
We have created a reputation in Sri Lanka as a quality quancious furniture supplier. We are capable of providing high quantity of wooden furniture in a efficient way. For corporate and Household market we are giving upto 5 to 10 year warranty time period depending on the wood you select.
Terms of Services
Refunds
Privacy Policy
Blog
Contact
©Copyright 2014 All Rights Reserved Liyawel.com
Made It
If you already have a design in mind? Then let us know, we will send your request to our furniture suppliers with your contact details.If they agree to do it; they will inform you by an e-mail.
Upload Images
Browse...
Details
Timber
Email
Submit
Sell
If you already have a design in mind? Then let us know, we will send your request to our furniture suppliers with your contact details.If they agree to do it; they will inform you by an e-mail.
Item Name
Category
Beds
Price
Offers
Condition
New
Slightly Used
Used
Upload Images
Browse...
Details
Timber
Add Item
Contact Us
Send us your feedbacks.
Your Name
Your E-mail
Your Message
Clear
Send
Address:
Liyawel furniture center, 101/33, Moratuwa, Colombo, SL
Email:
Liyawelfurniture@gmail.com
Liyawelfurniture@yahoo.com
Telephone
0112 308 308
077 1655 078

Fig. 3.8 GUI

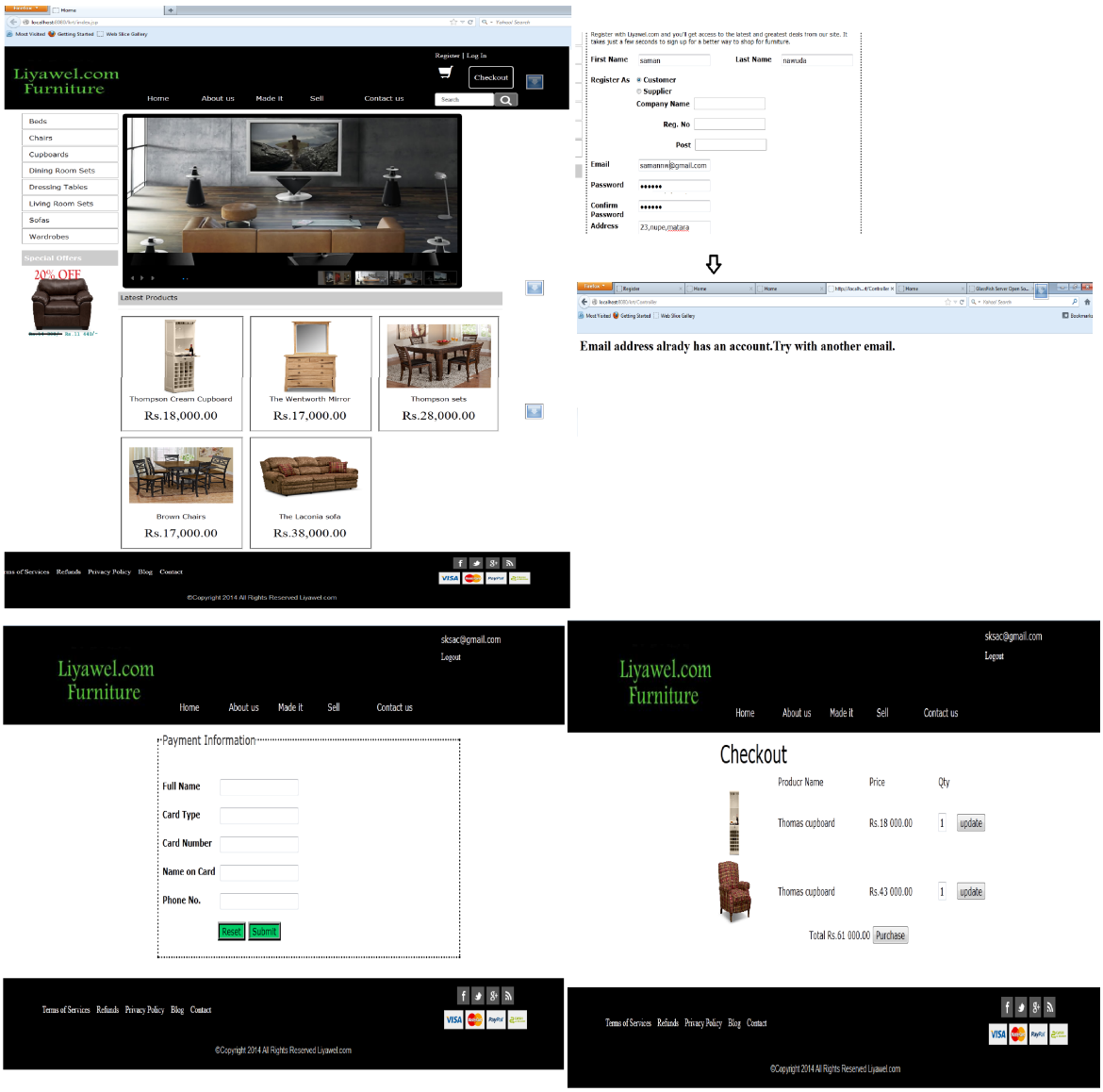

Fig. 3.9 GUI

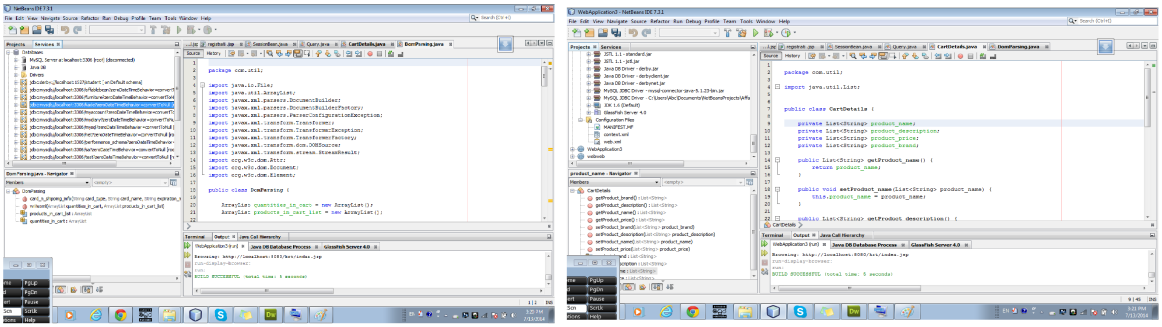

Fig. 3.10 Program Design

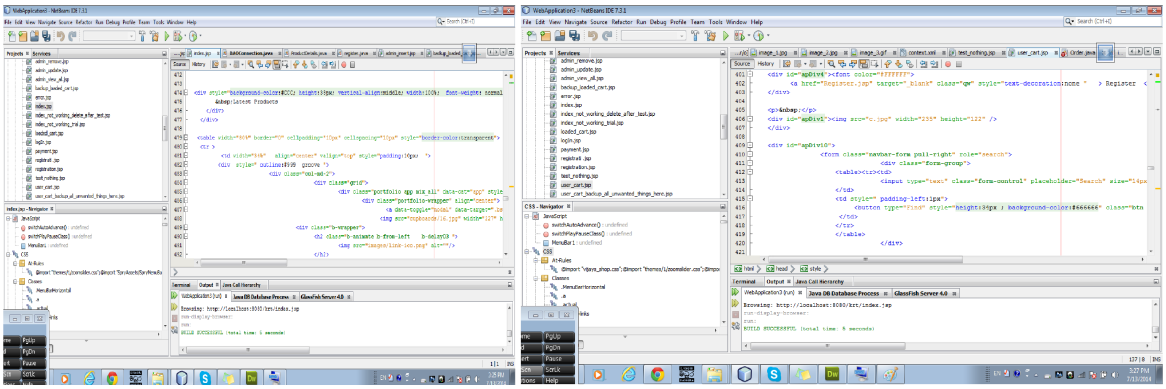

Fig. 3.11 Program Design

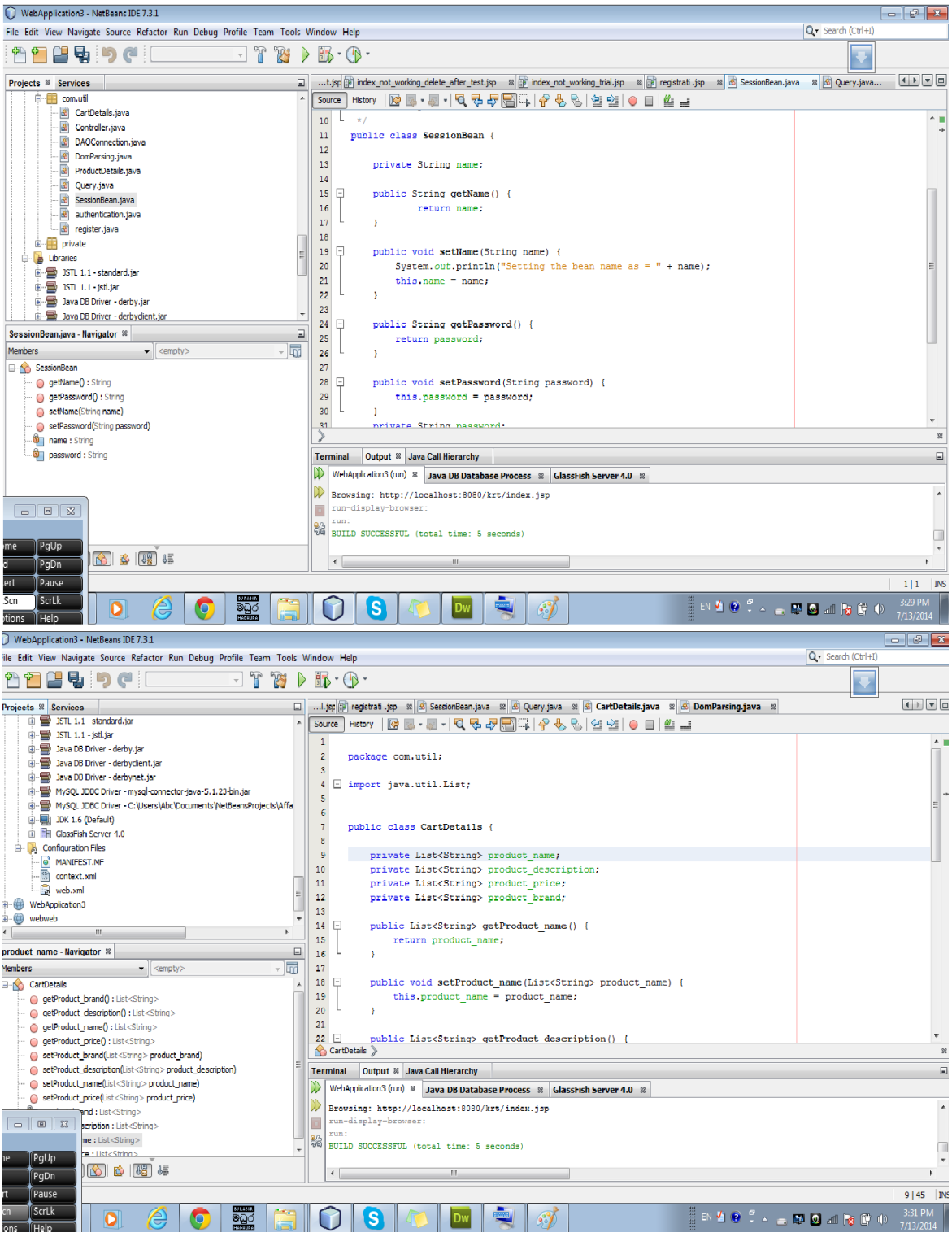

Fig. 3.12 Program Design

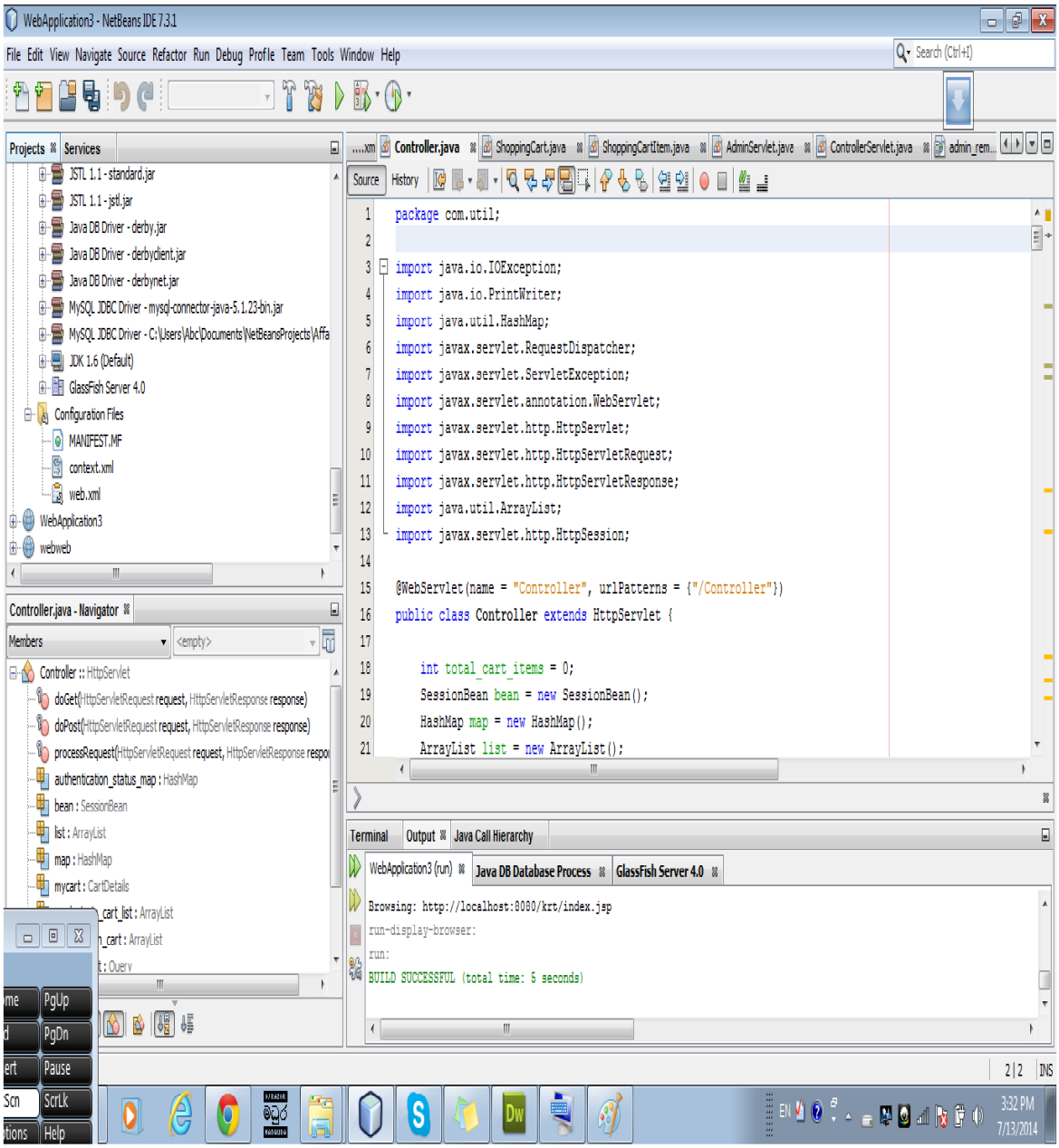

Fig. 3.13 Program Design

Chapter 4

System Development

4.1 Brief description about the Developing environment tools and programming language

We used JEE technology for our implementations.Java EE is Ora- cle's enterprise Java computing platform. The platform provides an API and runtime environment for developing and running enterprise software, including network and web services, and other large-scale, multi-tiered, scalable, reliable, and secure net- work applications. Java EE extends the Java Platform, Standard Edition (Java SE),providing an API for object-relational map- ping, distributed and multi-tier architectures, and web services. The platform incorporates a design based largely on modular components running on an application server. Software for Java EE is primarily developed in the Java programming language. Optionally XML can be used to override annotations or to deviate from the platform defaults.And we used MsSql, Windows Server, Firefox and Opera and Safari and Windows XP / Vista / 7 for develop this.

4.2 Security Infrastructure

Liyawel.com has tight security system.We would not want to lose our precious players by letting their email address get stolen. Another issue for a poker application is that Liyawel.com should guarantee that bot will not receive unfair information.And here when we store some data(ex. password) are used after encrypted to preserve security.

4.3 The Validation Techniques used in the system

As we can see, the error pages can serve as a valuable source for critical information. These errors can be induced in web applications that do not follow strict input validation principles. For instance, the application may expect numeric values and would fail when alphabets or punctuation characters are supplied to it. User can loginnto the system by entering email address as user name and the pass word.Email address should be in the required format and email should be unique.If not system notify about that.Password should be contain at least 5 characters.If not users are not allowed to access their accounts.And issue credit card for validation to chect its current status to allow for purchasing.We used java methods,java script codes for that.

4.4 Data Structures and Algorithms used in the system

4.5 Implementation of Algorithm

To prevent the waste OS space and reduce the cost of speed we have choose some strongest algorithm. We have used so many alogithems and data structures.Basically we used algorithm used to generate the session ID is weak, to prevent the waste OS space and reduce the cost of speed arrays as a data structure in designining the interfaces.And also algorithems for form validation , jquery , image sliders and other methods in boath java and java scripts.

Chapter 5

System Testing

5.1 Testing Methodology used

ACCEPTANCE TESTING- Testing to verify a product meets customer specified requirements. A customer usually does this type of testing on a product that is developedexternally.

BLACK BOX TESTING- Testing without knowledge of the internal workings of theitem being tested. Tests are usually functional FUNCTIONAL TESTING- Validating an application or Web site conforms to and correctly performs all its required functions. This entails a series of tests which perform a feature by feature validation of behavior, using a wide range of normal and erroneous input data. This can involve testing of the prod- uct's user interface,APIs, database management, security, installation, networking, etcF testing can be performed on an automated or manual basis using black box or white box methodologies

REGRESSION TESTING- Similar in scope to a functional test, a regression test allowsa consistent, repeatable validation of each new release of a product or Web site. Suchtesting ensures reported product defects have been corrected for each new release andthat no new quality problems were introduced in the maintenance process. Thoughregression testing can be performed manually an automated test suite is often used toreduce the time and resources needed to perform the required testing

SYSTEM TESTING- Testing conducted on a complete, integrated system to eval- uatethe system's compliance with its specified requirements. System testing falls within thescope of black box testing, and as such, should require no knowledge of the inner designof the code or logic.

UNIT TESTING- Functional and reliability testing in an Engineering envi- ronment.Producing tests for the behavior of components of a product to ensure their correct behavior prior to system integration

WHITE BOX TESTING- Testing based on an analysis of internal workings andstructure of a piece of software. Includes techniques such as Branch Testing and PathTesting. Also known as Structural Testing and Glass Box Testing

5.2 Test cases and Test Results

Table 5.1 Table

Test case	Test result
Open Internet Explorer	Internet Explorer Window is di
Go to home page	home page is displayed in br
Enter valid user name and valid password to login	User has access to admin main menu or use
Relevance of search results	Display a list of search results in
Query response time	10 seconds
Test the creation, modification, and deletion of data by admin	Allow to update relavent produc
Links' perfomence and test toolbar and menu item	Go to the specify page
Fileds in registration form	Show alert box if not fill the fields and not st
Graphics	Visually appear
shipping calculations	Accurate and do within 9 sec
Purchase items	If not login show alert to lo
Use used email for new register	Show message that already email ha
Use invalid email	Show message that email is i

5.3 Sample Test of Field Level Validation

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5.4 Test Report

5.5 User Evaluation and Reviews (using questionnaires or other methods)

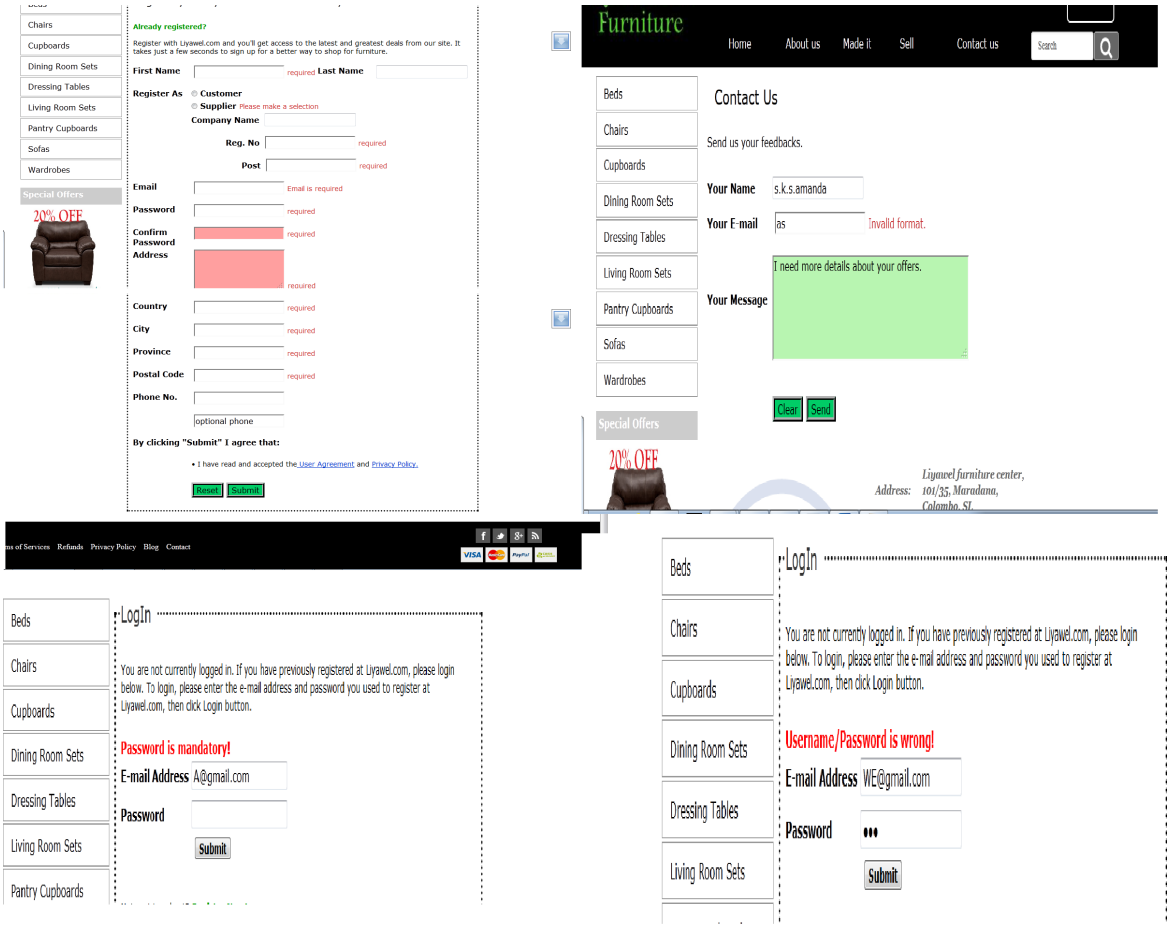

Fig. 5.1 validation

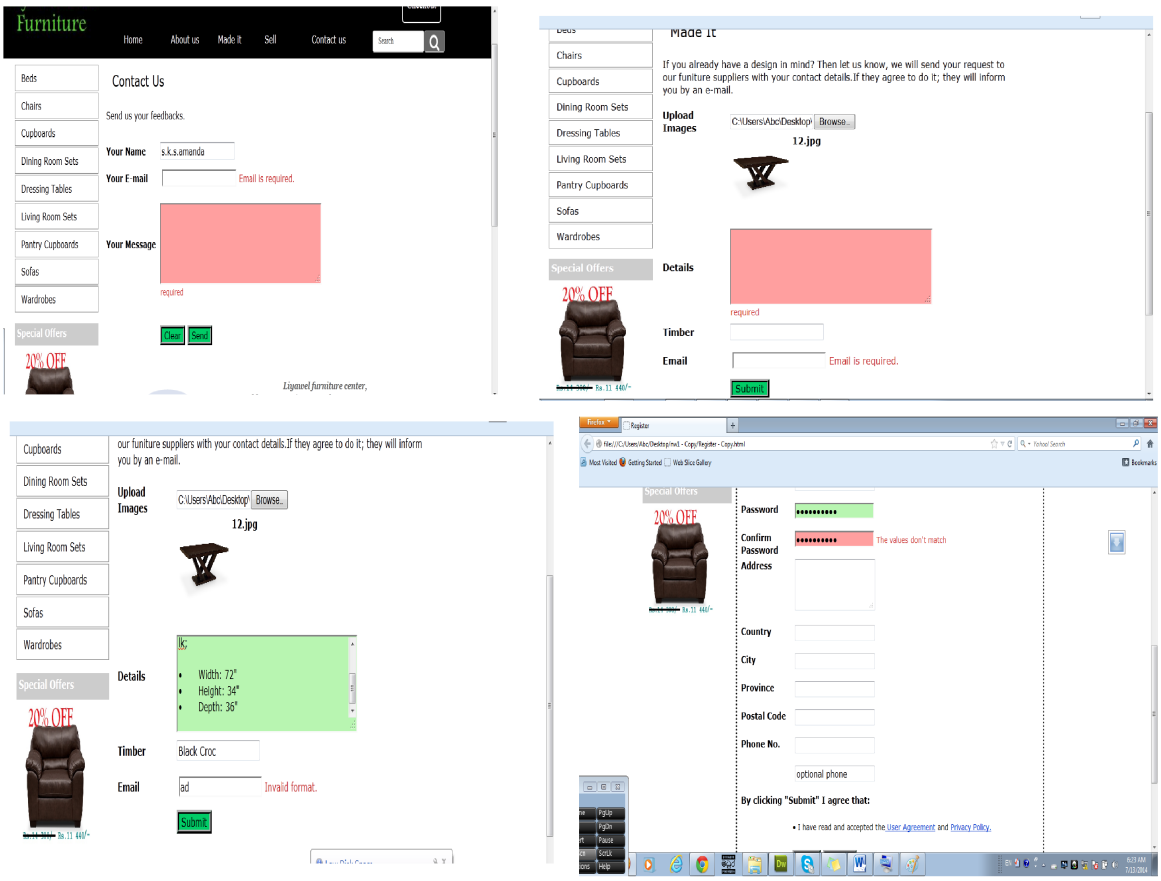

Fig. 5.2 validation

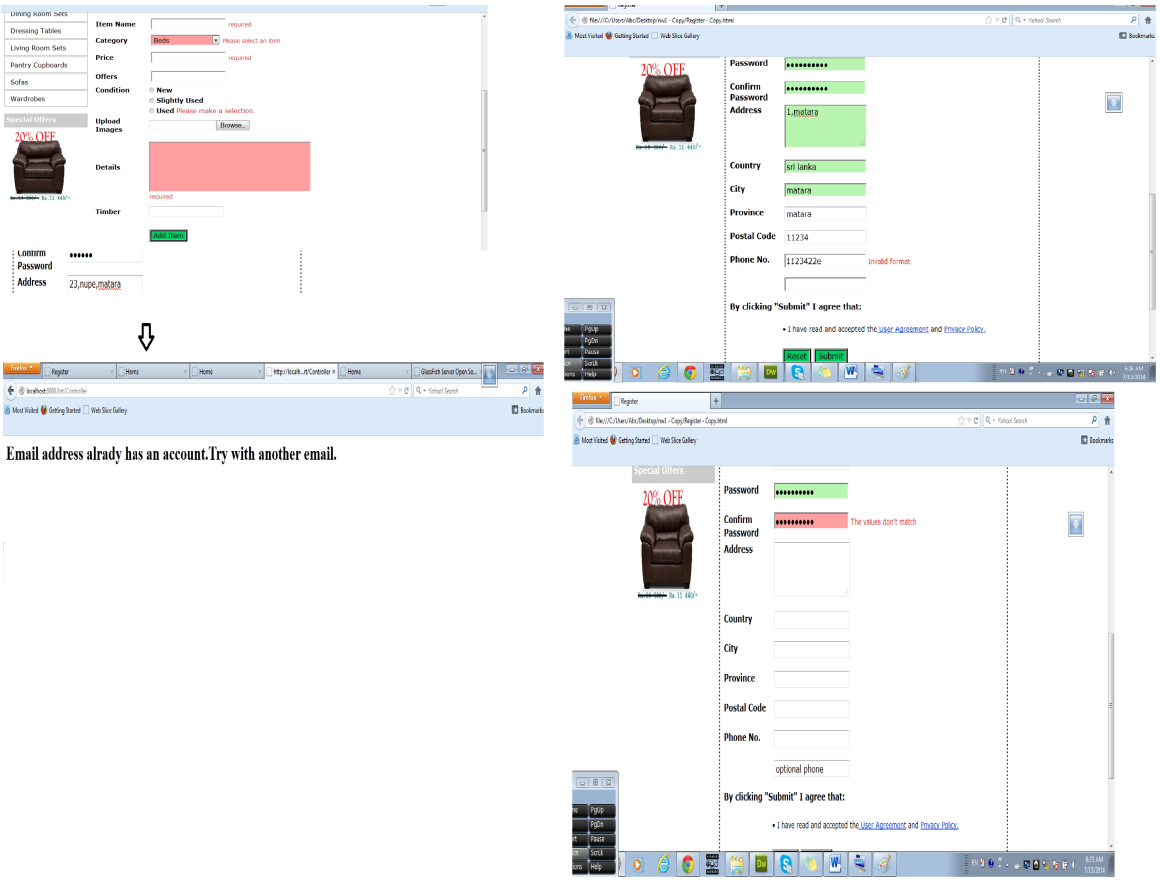

Fig. 5.3 validation

Fig. 5.4 validation

Chapter 6

System Implementation

6.1 Implementation Requirements

6.2 Installation Guide

6.3 User Manual

6.4 User Training

Chapter 7

Discussion and Conclusion

7.1 The degree of objectives met

Liyawel funiture Supply Store will provide product information and service for customers through their online store, at Liyawel.com. Customers will be able to access information through the website for services such as product listings, product pricing, product descriptions, upcoming products, best selling products, and special product discounts. After browsing, customers can conveniently purchase the products using the online shopping cart. If customers have any questions or concerns, they may fill out a form on “contact us” page on the website. The secondary goal of the website is to increase sales by attracting more customers. On their website,Liyawel.com will provide up-to-date information both to the customers and the employees. New visitors will be able to see the new products, while the employees can keep track of inventory by logging on to the back-end of the website.We supposed decrease check out time for customer by at least 50

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

Usability – Liywel.com will be an easy to use online.This is an important requirement for us because our main claim is making easier for people who try to buying furniture in a limited time. In each step we will clearly show all choices of user .Registration, payment methods will not be a complicated process.

Accessibility- Customers should have the ability to access the system whenever they want. Accessibility is strongly related to universal design when the approach involves "di-

rect access." This is about making things accessible to all people.

Reliability- We will keep profiles of registered users We have tuned this application side to as much browser as possible.And all pages and functions will occur in specified minimum time limit. Our database is big but our serve time is fast.

User frendliness- This system will help to achieve maximum efficiency in shopping online and to reduce the time taken to purchase items. It is designed for people to shop online rather than searching for things by visiting the shop. It is a 365/24 service.And it content in simple English and it has clearly and accurately described.As well as it has a site map to find where is client by himself.

7.3 Limitations and Drawbacks

The system is not configured for multiusers at this time. The concept of transactioncan be used to achieve this.

-The Website is not accessible to everyone. It can be deployed on a web server so that everybody who is connected to the Internet can use it.

-Credit Card validation is not done. Third party proprietary software can be used forvalidation check.

-Only admin allow to delete,add or update an product item.

-Provider only can see their prograss.

7.4 Further Modification and Enhancement

The Administrator of the web site can be given more function- ality, like looking at a specific customers profile, the books that have to be reordered, etc.

- Multiple Shopping carts can be allowed. -This System being web-based and an undertaking of Cyber Security Division ,needs to be thoroughly tested to out any security gaps.

-A console for the data centre may be made available to allow the personnel to monitor on the sites which were cleared for hosting during a particular period.

-Moreover, it is just a beginning; further the system may be utilized in various other types of auditing operation viz. Network auditing or similar process/workow based application

References

Appendix A

How to install LaTeX

Windows OS

TeXLive package - full version

1. Download the TeXLive ISO (2.2GB) from
   https://www.tug.org/texlive/

2. Download WinCDEmu (if you don't have a virtual drive) from
   http://wincdemu.sysprogs.org/download/

3. To install Windows CD Emulator follow the instructions at
   http://wincdemu.sysprogs.org/tutorials/install/

4. Right click the iso and mount it using the WinCDEmu as shown in
   http://wincdemu.sysprogs.org/tutorials/mount/

5. Open your virtual drive and run setup.pl

or

Basic MikTeX - TeX distribution

1. Download Basic-MiKTeX(32bit or 64bit) from
   http://miktex.org/download

2. Run the installer

3. To add a new package go to Start » All Programs » MikTex » Maintenance (Admin) and choose Package Manager

4. Select or search for packages to install

TexStudio - Tex Editor

1. Download TexStudio from
   http://texstudio.sourceforge.net/#downloads

2. Run the installer

Mac OS X

MacTeX - TeX distribution

1. Download the file from
   https://www.tug.org/mactex/

2. Extract and double click to run the installer. It does the entire configuration, sit back and relax.

TexStudio - Tex Editor

1. Download TexStudio from
   http://texstudio.sourceforge.net/#downloads

2. Extract and Start

Unix/Linux

TeXLive - TeX distribution

Getting the distribution:

1. TexLive can be downloaded from
   http://www.tug.org/texlive/acquire-netinstall.html.

2. TexLive is provided by most operating system you can use (rpm,apt-get or yum) to get TexLive distributions

Installation

1. Mount the ISO file in the mnt directory

```
mount -t iso9660 -o ro,loop,noauto /your/texlive####.iso /mnt
```

2. Install wget on your OS (use rpm, apt-get or yum install)

3. Run the installer script install-tl.

```
cd /your/download/directory
./install-tl
```

4. Enter command 'i' for installation

5. Post-Installation configuration:
   http://www.tug.org/texlive/doc/texlive-en/texlive-en.html#x1-320003.4.1

6. Set the path for the directory of TexLive binaries in your .bashrc file

For 32Bit OS

For Bourne-compatible shells such as bash, and using Intel x86 GNU/Linux and a default directory setup as an example, the file to edit might be

```
edit $~/.bashrc file and add following lines
PATH=/usr/local/texlive/2011/bin/i386-linux:$PATH;
export PATH
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;
export MANPATH
INFOPATH=/usr/local/texlive/2011/texmf/doc/info:$INFOPATH;
export INFOPATH
```

For 64Bit

```
edit $~/.bashrc file and add following lines
PATH=/usr/local/texlive/2011/bin/x86_64-linux:$PATH;
export PATH
MANPATH=/usr/local/texlive/2011/texmf/doc/man:$MANPATH;
export MANPATH
INFOPATH=/usr/local/texlive/2011/texmf/doc/info:$INFOPATH;
export INFOPATH
```

Fedora/RedHat/CENTOS:

```
sudo yum install texlive
sudo yum install psutils
```

SUSE:

```
sudo zypper install texlive
```

Debian/Ubuntu:

```
sudo apt-get install texlive texlive-latex-extra
sudo apt-get install psutils
```

Appendix B

Installing the CUED Class file

LaTeX.cls files can be accessed system-wide when they are placed in the <texmf>/tex/latex directory, where <texmf> is the root directory of the user's TeXinstallation. On systems that have a local texmf tree (<texmflocal>), which may be named "texmf-local" or "localtexmf", it may be advisable to install packages in <texmflocal>, rather than <texmf> as the contents of the former, unlike that of the latter, are preserved after the LaTeXsystem is reinstalled and/or upgraded.

It is recommended that the user create a subdirectory <texmf>/tex/latex/CUED for all CUED related LaTeXclass and package files. On some LaTeXsystems, the directory look-up tables will need to be refreshed after making additions or deletions to the system files. For TeXLive systems this is accomplished via executing "texhash" as root. MIKTeXusers can run "initexmf -u" to accomplish the same thing.

Users not willing or able to install the files system-wide can install them in their personal directories, but will then have to provide the path (full or relative) in addition to the filename when referring to them in LaTeX.