COLLEGE OF APPLIED BUSINESS

Tribhuvan University

Institute of Science and Technology

Final Year Project Report

On

Online Gifting System

In partial fulfillment of the requirements for the Bachelor's Degree in Computer Science and Information Technology

Under the supervision of
Mr. Prateek Regmi

Submitted by

Kishan Thapa [R.N. 2065/069]
Priyanka Sharma Poudel [R.N. 2066/069]
Rachi Rana [R.N. 2067/069]

Submitted to

TRIBHUVAN UNIVERSITY

Department of Institute of Science and Technology

Kirtipur, Kathmandu, Nepal

March, 2016

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SUPERVISOR'S RECOMMENDATION

I hereby recommend that this project prepared under my supervision by Kishan Thapa, Priyanka Sharma Poudel and Rachi Rana entitled "Online Gifting System" in partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Information Technology be processed for the evaluation.

_____

Mr. Prateek Regmi
Supervisor
Department of Computer Science and Information Technology
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Chabahil, Kathmandu

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College of Applied Business

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LETTER OF APPROVAL

_____

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ACKNOWLEDGEMENT

In accordance with the syllabus of "Project Work" as prescribed by Tribhuvan University (T.U) for the fulfillment of semester-project, we have prepared this project entitled "Online Gifting System". Apart from our own effort, there are some other people who helped us a great deal in completion of this task.

We would also like to offer our sincere gratitude to the Department of Computer Science and Information Technology, IOST, College of Applied Business for providing us an opportunity to work and prepare a project as part of our syllabus of "Project Work".

We wish to acknowledge our deepest gratitude to our supervisor, Mr. Prateek Regmi for his insight and input to the help make our project even better. We express our gratitude to our external examiner as well as our internal examiner for their valuable suggestions.

We would also like to extend our acknowledgement toward our classmates and colleagues for their useful input and view for our project.

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ABSTRACT

Surprise is an online Internet-based website which will be accessed by a variety of users. The main emphasis lies in providing a user friendly platform. This system is website based and it basically creates a platform to the customers in order to buy various interesting gifts like movie tickets or a meal for two or park tickets for their loved ones. It gives customers an interface to send a personal gift instantly on the internet, online gifting made easy. You can think of us a personal online gift voucher that you can spend on something interesting. The concept of Surprise is not totally new in Nepal but Surprise gives you a wide range of gift options like: cinema tickets, restaurant meals, amusement park tickets etc.; which is very rare for a gift purchasing site.

This website will be very useful for anyone who wants to purchase items for their loved ones, online. Users that have an access to the internet are potential clients for Surprise.com. People with specific interest to gift other people can enjoy services provided by Surprise as we provide wide range of gift options. Here at Surprise we provide you convenient facilities which will save time and money of users.

This work includes a literature review giving background information of various cases that exist similar to Surprise.com. Specifically, the aspects of system structure design and database design are explained. The structure can be clearly seemed in the class diagram, sequence diagram and use cases. Furthermore, according to the viewpoint of the software development, the project will step into the detailed design phase, i.e. the system implementation. The fundamental goal of this stage is to determine how to achieve the required system, and give an internal process description of each module. After the system development is completed, the final step is testing. The system to be implemented will perform the functions like maintaining details of users, products, suppliers etc. Only the admin has privilege of adding details of the various gifts and users. Also the registration of new users to the site is possible so the data is well protected while purchasing gifts.

Table of Contents

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS

MAC OSX – Macintosh Operating System 10

Linux – Open Source Operating System

ASP – Active Server Page

.NET – Network Enabled Technologies

IDE – Integrated Development Environment

IIS – Internet Information Server

HTML – Hyper Text Transfer Language

CSS – Cascading Style Sheet

MS-SQL – Microsoft Sequential Query Language

MVC – Model View Controller

DBMS-Database Management System

UML-Unified Modeling Language

HBO– Home Box Office

1.INTRODUCTION

The project is about developing an E-commerce site named as “Surprise” through which people are reminded that they are not alone in this world and there is someone who cares about them. Surprise deals with providing gifts to people on their special day by someone special be it their birthday, wedding day or just because. The gifts include movie tickets, lunch or dinner date etc.

Surprise helps to save customer’s time. The Project is about developing a website named “Surprise” where people are brought together with an eye for a great experience, who loves to make others surprised. Customers just need to select required number of gifts at Surprise then enter their gift receiver’s name. The customer will then receive a gift voucher which will be in a printed form. The voucher will have gift receiver’s name, his/her phone number and a message from the gift sender. Verification is done through phone number of the gift sender. The gift voucher will only be valid for 3 months. Surprise.com provides an easy platform for the gift exchange process. Surprise has a range of gifts of all prices. It provides home delivery service to the customer, which saves their time. It will also work on all the major browsers like- Google Chrome, Internet Explorer, Mozilla Firefox, etc. Surprise will work on all types of operating system, whether it is Windows, Linux or MAC OSX.

Surprise will collect Personal Information about customers, gift receivers and Website viewers which is reasonably necessary for, or directly related to, one or more its functions or activities. Personal information collected through registration process on website and over the phone. Surprise will only refund vouchers in accordance with its Refunds Policy. Surprise is a website providing various gift selection to its customers. After making the purchase customer will get a phone call or email to verify the purchase. After verification, customer will then receive a gift voucher which will be home delivered and the payment mode is cash on delivery. Customer will enjoy.

1.1 Background

Surprise is a website which provides an interface for its customers to purchase gifts for their loved ones. Surprise, an online Internet-based system which will be accessed by a variety of users. Surprise.com guarantees a terrific range of gifts to its customers. It’s so easy to become a member Surprise, all you have to do is register to the website. By becoming a Surprise membership, customer can buy creative gifts for their loved ones, after making the order customer will receive a voucher. Each voucher will have an expiry date.

Many online portals and shopping portals are launched past few years. Leaving the measurement of success behind, they are now on the top list. Peeping into the future of e-Commerce, launch of few large online shopping portals was thought as milestone, everyone thought there will be a turnaround in the e-Commerce industry in Nepal. Now having dozens of virtual Nepali stores in

the web, they still have the same problem of payment. There are few payment methods like eSewa Nepal, Payway, Yogaal Business Technology that provides online payment services in Nepal. But since people here in Nepal are not used to these methods payment mode for Surprise will be cash on delivery which is the safest payment mode in a country like Nepal. But in the near future; online payment would still be an excellent choice and it will be highly considered if necessary.

1.2 Problem Statement

What the present context is when people are invited somewhere let's say in a birthday party or baby shower or baby's annaprasan or bratabanda people don't really know what to gift the other people. So, they end up buying a useless bouquet or just hand over cash which is not a proper gesture to show your appreciation. This results in total waste of money and the bouquet gets thrown away somewhere in the garbage. That is not how you want your gift to be treated right? People want a unique way to gift someone so that their money will be used in something meaningful, something the gift receiver will actually like.

The online gifting websites are common and gaining some popularity in other countries like United States, Singapore, Australia, etc. with the websites like Giftano.com, buygifts.com, gifts.com. But in Nepal people are not facilitated with such websites via which they can buy unique and creative gifts.

There are few websites in Nepal as well but our project includes something that they don't that is better customer service. With this idea in our mind the project was born.

1.3 Technology Used

Development of Surprise is carried through three tier architecture in MVC, front end will be developed with Bootstrap and database is created using SQL database. MVC is used for creating user interfaces on computers and is a software architectural pattern. It divides a software application into three interrelated part. This helps to separate internal representation of information from the ways that information is presented or accessed by the user. MVC is traditionally used for graphical user interface. It consists of the following components:

Model: It is the central component of MVC, and expresses the core of the solution. Model directly manages the data, logic and rules of the application.

View: View is the output representation of information like chart or diagram. There can be multiple view of the same information.

Controller: Controller accepts input and converts it to commands for the model or view [1]

"Prior to being an open-sourced framework, Bootstrap was known as Twitter Blueprint." [2]. Since it is an open-sourced framework the project will be built using Bootstrapping. Bootstrap is a free and open-source collection of tools for creating websites and web applications. It contains HTML

and CSS and optional JavaScript extensions. Bootstrap is a front end framework, that is, an interface for the user unlike the server side code which resides on the back end. [1]

SQL is a special purpose programming language designed for managing data in a relational database management system. SQL consists of data definition language, data manipulation language, and data control language. [1]

1.4 Scope of Project

1. Audience: The target audience range from teenagers to mid-30s to 40s of people who know or are familiar with modern technology and Internet usages.

2.Our Websites Offers: Surprise offers wide variety of gifts for purchase which can be appealing to people. From men and women in different age group and for special occasion as well.

3.Ordering Overview: Once ordered the user will be given a voucher which will have validation period of about 3months and if the user is not able to use then the purchase will be cancelled and because the money is non-refundable the customer will not be reinstated with the amount.

1.5 Limitations

1. Audience: The target audience range from teenagers to mid-30s to 40s of people who know or are familiar with modern technology and Internet usages.

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2. Literature Review

There are different websites that exist providing similar features as of Surprise. Some of similar cases are explained in detail below justifying why Surprise is needed to exist:

2.1 Giftano.com

Giftano.com is a Singapore based gifting website that delivers gifts worldwide. Giftano.com lets you buy gift cards online in Singapore for your loved ones. You will find great gift ideas from your favorite restaurants, spas and retail stores. You can choose to receive the gift as an e-voucher which is delivered to you instantly via email, to have the gift vouchers printed and sent to you by post in an exclusive envelope, or have them delivered by courier in a luxurious gift box. Somewhat similar to Giftano, Surprise provides gifting delivery as a gift voucher [3].

2.2 Gifts.com

Gifts.com is an online gifting website that goes by the saying "Find the perfect gift, every time". Its main concept is personalized gifts which ranges to fresh flowers to gourmet sweets. Gifts.com claim to the number one gifting destination for every special occasion. Their brands include ProFlowers, Sharis Berries, personalcreations.com, Cherry Moon Farms, ProPlants, gifts.com. The website consists distinctive sections for Birthday, Occasion, Recipient, and Category. The interesting part is it also includes a personality quiz section [4]

2.3 Buygifts.com

Buygifts.com is a division of Kincal enterprises established in Richmond, Virginia, USA. The website has been serving up gifts and gift ideas for 16 years now. The company started with music-related gifts in 1999 and later expanded to gifts for all occupations such as teachers, doctors and lawyers. Buygifts.com also has a promotional products division and has provided merchandise for many recognizable brands through the years from Allstate Insurance to HBO to Hard Rock Cafe. They came up with this concept through their own personnel lives [5].

2.4 Uncommongoods.com

Uncommongoods.com is a New York based gifting as well as ecommerce website. As the name goes 'uncommon' they provide very unique range of gifts." UncommonGoods" was founded in 1999 that offer original designs by independent makers. Products that express individuality and creativity, while also making a positive impact on people and the planet. They also have a better to give campaign to support causes and to impact the world in a positive way. With every purchase made, "Uncommongoods" donate $1 to the non-profit of customer's choice. Since the start of the Better to give program 12 years ago, "Uncommongoods" have donated over $1,000,000. (Our Story, 2016) [6], (Uncommongoods, 2016) [7].

2.5 Why Surprise?

Surprise is a very new concept in a country like Nepal. As the use of Internet has been growing, people are preferring easier being at home business transactions whether it be shopping online or ordering food online or even buying movie tickets online. So people are now jumping into buying goods at their own house without any hassle of going to the market to buy goods. Keeping up with the taste of today's generation, Surprise provides an easy interface for buying creative gifts from home, office or anywhere else. As seen in above Literature review section many countries are already having this kind of online interface in order to buy gifts but in Nepal no such website is introduced which will be the advantage of using Surprise.

3. Requirement Analysis

The requirement analysis can be into functional and non-functional requirements.

3.1 Requirement Analysis

3.1.1 Functional Requirements

- Search options are given to the user

- Users can mail if any confusion or problems.

- Different users can have different authority.

3.1.2 Non- Functional Requirements

- Security: Software must have proper security for any imposing threats for the website.

- Cost: The cost of the website should be constant so as to keep proper balance and constant feasible cost of the website.

- Flexibility: The website is flexible as it is built using bootstrapping and is compatible in any tablets, mobiles and other mobile devices.

3.1.3 User Interface Requirements

As User Interface is an important part of any software so is Surprise.

Surprise is:

- Easy to operate.
- Quick in response
- Effectively handling operational errors.

Simple yet consistent. [8]

3.2 Feasibility Study

Feasibility study helps to know about the 'strengths' and 'weakness' of project [9]. The contents and recommendations of this feasibility study helped us as a sound basis for deciding how to proceed the project. Types of feasibility included in our project.

-Technical Feasibility

-Economical Feasibility

-Operational Feasibility

-Legal Feasibility

-Social Feasibility [9]

3.2.1 Technical Feasibility

Technically, the project is built using ASP.NET technology with C# as the programming language. Visual Studio is the IDE used for the development of the project. Due to use of ASP, the website can be hosted on any IIS server in the internet. The website is built using bootstrapping technique which includes HTML5, CSS3 and also JavaScript for the front end. This can be accessed by using any modern browser (like Chrome, Mozilla, Opera, etc.). Due to the fact that this project website is built using bootstrapping the website will be responsive and can be used by any devices that can support the Internet; PCs, tablets, smartphones, etc.

3.2.2 Economical Feasibility

Economically the website is bound to do well. The cost of operation is low only the cost for server is needed. The project is expected to bring profit after 2 years of running as there are only limited websites that can provide services like Surprise can. Economically Surprise will be stable and can earn back as the costs that will be put in by the company is not too much. [10]
Moreover, Economic feasibility is carried out on the basis of

3.2.2.1 Determining Project Benefits

A tangible benefit is an item that can be measured in dollars with certainty.

Most tangible benefits fit in one or more of the following categories:

- Cost reduction and avoidance

- Error reduction

- Increased speed of activity

- Improvement of management planning and control

- Opening new markets and increasing sales opportunities

An intangible benefit that cannot be measured in dollars.

Similarly, under intangible project benefits following are the findings our company concluded.

- Competitive necessity

- Efficient buying of gifts

- More timely information

- Flexible system for product purchase

Tangible Benefits Worksheet Gift Purchasing System (per user)	
A. Cost Reduction or Avoidance	Rs. 1500
B. Error Reduction	Rs. 500
C. Increased Flexibility	Rs. 500
D. Increased Speed of Activity	Rs. 500
E. Improve in management planning and control	Rs. 1000
F. Accommodation	Rs. 1000
G. Accessories	Rs. 500
H. Other	Rs. 1000
Total	Rs. 6500

Table 3-1: Tangible Benefits Worksheet

3.2.2.2 Determining Project Costs

There can be one-time costs as well as recurring costs. These costs typically encompass the following activities:

- System development

- New hardware and software purchases

- User training

- Site preparation

- Data or system conversion

Above points can be included on one-time costs.

- Application software maintenance

- Incremental data storage expense

- Incremental communication

- New software and hardware leases

One Time Costs WorkSheet Gift Purchasing System		
A.	Development Costs	Rs. 25,000
B.	New hardware	Rs. 15,000
C.	User Training	Rs. 5000
D.	Site Preparation	Rs. 5000
E.	Other	Rs. 5000
	Total	Rs. 55,000

Table 3-2: One Time Costs Worksheet

Recurring Costs Gift Purchasing System		
A.	Application Software Maintenance	Rs. 25,000
B.	Incremental Data Storage	Rs. 20,000
C.	Incremental Communication	Rs. 10,000
D.	Supplies	Rs. 5000
E.	Other	Rs. 5000
	Total	Rs. 65,000

Table 3-3: Recurring Costs [10]

3.2.3 Operational Feasibility

Surprise is simple enough for it to run for a long time with bug fixes and updates. Surprise depends upon customer demands and availability of the product. The operation of the Surprise greatly depends upon the uniqueness of the gifts offers that can be provided. The operation of Surprise is simple; the customer chooses the gift the customer wants and the way the customer wants it to be delivered to the receiver. Then payment can be done upon delivery as it will be more feasible scenario in the context of our country.

So, it depends upon how Surprise can be reliable and fast enough to fulfill the customers' demands at any costs.

3.2.4 Legal Feasibility

Surprise is legal as it uses Microsoft products. The Microsoft products used for Surprise have license and product key that have been given by the Microsoft to use. And also one of our engineers is Microsoft partners; so there would not be any legal problems regarding the product. Our company will have registered the domain once the prototype is well and running. The logo of our company is specifically designed so there will be no cases of plagiarize.

3.2.5 Social Feasibility

Socially, Surprise does not contain any inappropriate contents. The contents in the website are acceptable. Surprise is a socio-cultural application built on the sole purpose of connecting people so it is bound to be socially feasible. By any chance, if such cases of vulnerable content may be included in our website such content will be immediately taken down. Also since all the products go through admin there is a rare chance that any staff will be able to upload any content without proper authorization. If not, then legal actions will be taken by the company.

4. System Design

4.1 System Architecture

System Architecture is basically breaking down of system into components, how the components interact and technology used. It can be divided into hardware and software architecture.

4.1.1 System Hardware Architecture

Minimum requirements of hardware are:

- ➔ 32-bit processor
- ➔ 512 MB RAM
- ➔ 4 GB disk space
- ➔ 20 GB hard disk
- ➔ Pentium 4
- ➔ 5-inch display
- ➔ Mouse/touchpad and keyboard

4.2 System Software Architecture

The most common way to describe System Software Architecture is referring it as the high level structures of a software system, the discipline of creating such structures, and the documentation of these structures. Because software structures are about making fundamental choices which are costly to change once implemented i.e. why for the project Use-case, Class Diagram, Sequence Diagram were taken into context for Surprise.

4.2.1 Use Case

The diagram consists of two actors: customer and supplier. At first customer register and then login. After logging customer view deals and purchase the deal of their interest. Finally, customer checks out. And the supplier uploads various product that are required for the deals which are viewed by the customer.

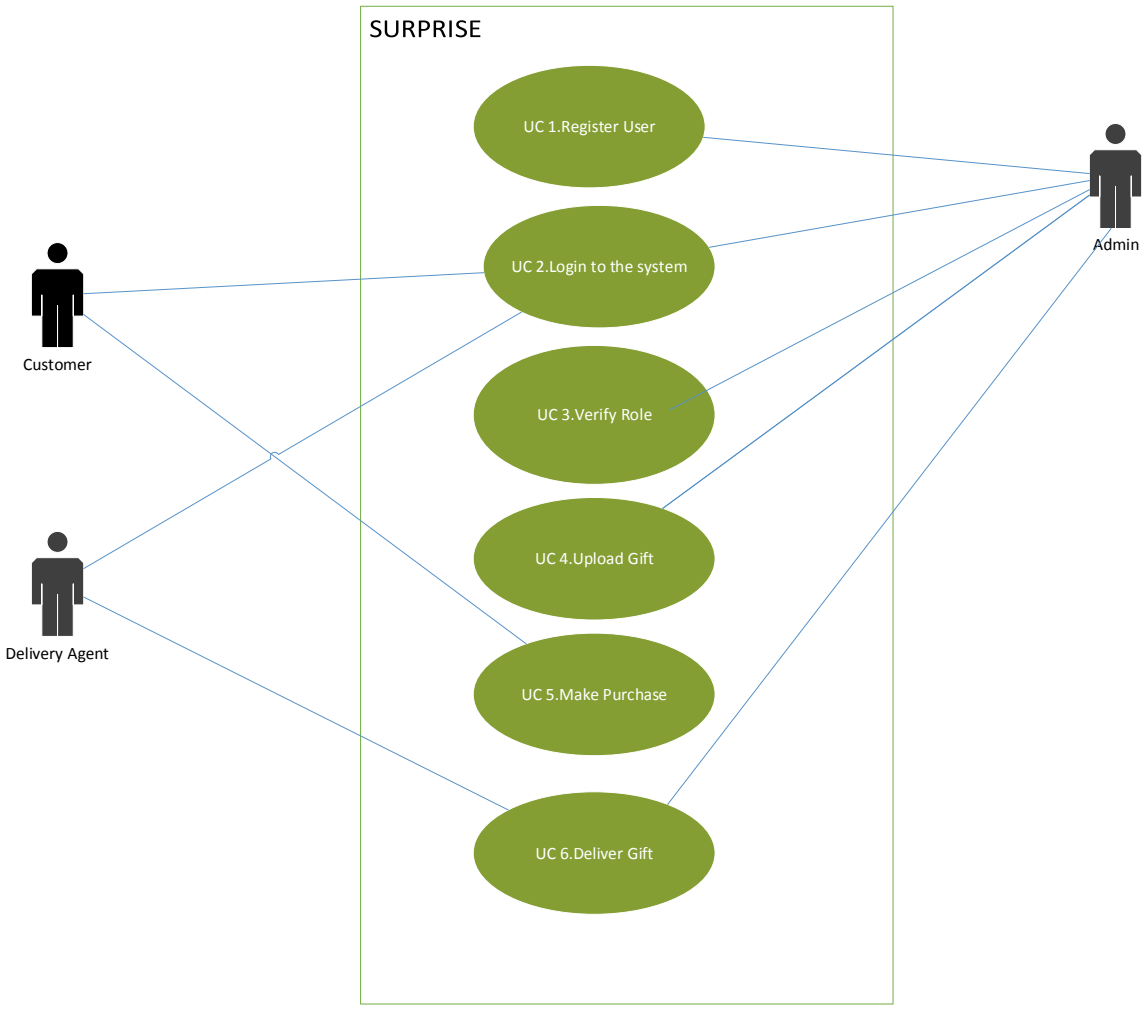


Fig 4-1: Use Case Diagram

4.2.1.1 UC1: Register User

Scope: Online surprise gift System

Level: User level

Primary actor: Customer, Administrator, Delivery Agent

Stake holders and interests:

- Customer: Login to the website and go to the website's homepage and select gifts.
- Administrator: Login to the website and has administrative roles

Preconditions: User must open the browser and enter Surprise.com and press register button.

Success Guarantee (or Post conditions): Customer registration is confirmed.

Main Success Scenario (or Basic Flow):

1. User enters name, username, email, address, phone number, password, and date of birth and pre-defined questions and answer for recovery of password.
2. System verifies if the given user name is available.
3. User accepts the terms and conditions given by the company.
4. After accepting all the terms and condition, a verifying email is sent to the email address.
5. User verifies the email.
6. User verifies password.
7. User goes back to the company's website.
8. User can is now successfully registered to the system.

Extensions or Alternative Flows

1. User enters the username already taken by another User
    a. System asks the User to enter another username.
    b. User has unique username.
2. User enters with empty fields
    a. System asks the user to fill up the form.

4.2.1.2 UC2: Login to the System

Scope: Online Surprise Gift System

Level: User level

Primary actor: Customer, Delivery Agent, Admin

Stake holders and interests:

- Customer: Login to the website and go to the website's homepage in order to view and book available gifts of their choice.
- Administrator: Admin login with additional roles.

Preconditions: Customer, admin, delivery agent is registered and identified.

Success Guarantee (or Post conditions): Customer can successfully login to the home page.

Main Success Scenario (or Basic Flow):

1. Customer can see login page with the username and password.
2. Customer enters username and password.
3. Admin login with username and password.
4. System checks customer's and admin's username and password registered or not.
5. Customer is registered and they are directed to the company's homepage.

Extensions or Alternative Flows

2(a). At any time, the Customer may enter the wrong username/and password

a. System re-displays the login page to correctly enter the username and password.

b. Customer correctly enters the username and password.

2(b). Customer may forget the password or username

a. System asks the customer to answer the pre-defined question and preset answer given by Customer during registration.

b. System checks if the answer given by the Customer is correct or not

c. If answer is correct system sends the username and password of Customer to its respective e-mail address.

d. If the answer is incorrect then the Customer are asked to re-create the profile.

2(c). Customer may not be registered

a. System asks the customer to create a new profile.

b. Customer has new profile.

4.2.1.3 UC3: Verify Role

Scope: Online surprise gift

Level: User level

Primary actor: Administrator

Stake holders and interests:

- Administrator: Differentiate between the registered user, i.e. if the login user is a passenger, itself or employees.

- Customer: Wants easy access to service with minimal effort. Wants the visibility of gift confirmation related with the date, time, departure, prices. Wants proof of purchase to support the order.
- Delivery Agent: Wants to access the type of gift information. Wants to quickly perform override operations assisted by administrator.
- Supplier: Wants to access the update records in inventory. Wants to quickly perform override

Preconditions: Customer is identified and authenticated.

Success Guarantee (or Post conditions): Customer can make reservation, Delivery Agent can access the company information, and administrator can control the contents of website.

Main Success Scenario (or Basic Flow):

1. Administrator login to system and checks for the new registration.
2. Customer registration is accepted and provided role for searching the gift information, reserving gift, making payments, cancelling gift.
3. Delivery Agent register is accepted and provided role for delivering the gift and contact customer.
4. Supplier registration is accepted and given roles of accessing the contents of website.
5. Administrator role is to control the content of website- updating the gift information, accepting the registration of customer and supplier in the system, ticket confirmation, and payment authentication.
6. Administrator can successfully manage the role in the system.

Extensions or Alternative Flows

1. At any time the website is down
    a. Administrator checks for fault and recover the site.
    b. Administrator starts new checking action.

4.2.1.4 UC4: Upload gift

Scope: Online Surprise Gift

Level: Admin level

Primary actor: Admin

Stakeholders and Interests:

• Administrator: Wants accurate, fast entry of product information in the website with all the necessary information.

• Customer: Wants easy and detailed view of product information.

Preconditions: Administrator has successfully uploaded product information.

Success Guarantee (or Post conditions): Gift information is up to date and all the gifts with order are entered in the system.

Main Success Scenario (or Basic Flow):

• Admin views and creates a list of all gifts available.

• Admin uploads all the products' information in the system. System has up to date information of the gifts.

Extensions or Alternative Flows

1. Admin may fail to upload the product details properly:

    a. Admin re-accesses the product information

    b. Admin updates the product information

2. System may be down

    a. Admin checks for fault and recover the system.

    b. Admin starts updating action.

4.2.1.5 UC5: Make Purchase

Scope: Online Surprise Gift

Level: Customer level

Primary actor: Customer

Stakeholders and Interests:

Customer: Wants easy access to service with minimal effort. Wants the visibility of product details and order lists.

Preconditions: Customer is identified and authenticated.

Success Guarantee (or Post conditions): Purchase is confirmed and included in the order list.

Main Success Scenario (or Basic Flow):

• Customer enters the website of surprise to check the gift information.

• Customer logs in to the website and browses the gifts.

• Customer selects the appropriate gift and proceeds to order the gift.

• System enters the gift in the orders list.

Extensions or Alternative Flows

1. At any time the website is down

    a. Admin checks for fault and recover the site.

    b. Admin starts new checking action.

2. At any time the validity of the order has expired

    a. System displays the information to the customer that the deal has expired.

    b. Customer is not logged in to the site

a. System asks the customer to login to the site.

b. Customer enters his credentials and logs in to the website.

4.2.1.6 UC6: Deliver Gift

Scope: Online Surprise Gift

Level: Customer level

Primary actor: Delivery Agent

Stake holders and interests:

- Gift Receiver: Receive the gift from delivery agent. Wants the visibility of product details and order lists.

- Delivery Agent: Delivery Agent: Wants to access the type of gift information. Wants to quickly perform override operations assisted by administrator.

Preconditions: Customer is registered and identified.

Success Guarantee (or Post conditions): Customer can successfully login to the home page.

Main Success Scenario (or Basic Flow):

1. Delivery agent is registered by administrator.

2. Delivery agent enters username and password.

3. System checks username and password.

4. Delivery agent deliver gift to gift receiver and keep details of gift receiver.

Extensions or Alternative Flows

1. At any time the website is down

    a. Delivery Agent checks for fault and suggest recover the site.

    b. Admin starts new checking action.

2. At any time the validity of the order has expired

    a. System displays the information to the customer that the order has expired.

    b. Customer is not logged in to the site

4.2.2 Class Diagram

From the context of software engineering a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

4.2.3 Sequence Diagram

UML sequence diagrams the flow of the logic within Surprise in a visual diagram; the following diagram shows the flow of how work gets done from the start until the end.

Customer request for registration and admin confirms it.Then the product detail it sent to the supplier which makes aware wether the required gift/product is available or not.If availalble the gift/product is sent to inventory until time.The delivery agent helps deliver the voucher afer viewing and checking for updates and all.Finally, the voucher is delivered to the registered user accordingly.

4.2.3.1 Update Customer:

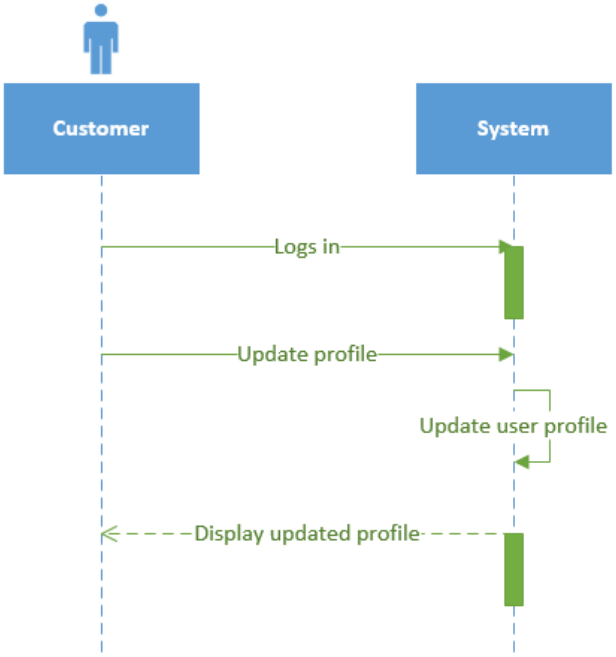


Fig 4-2: Sequence diagram for update customer

4.2.3.2 Customer Select gift:

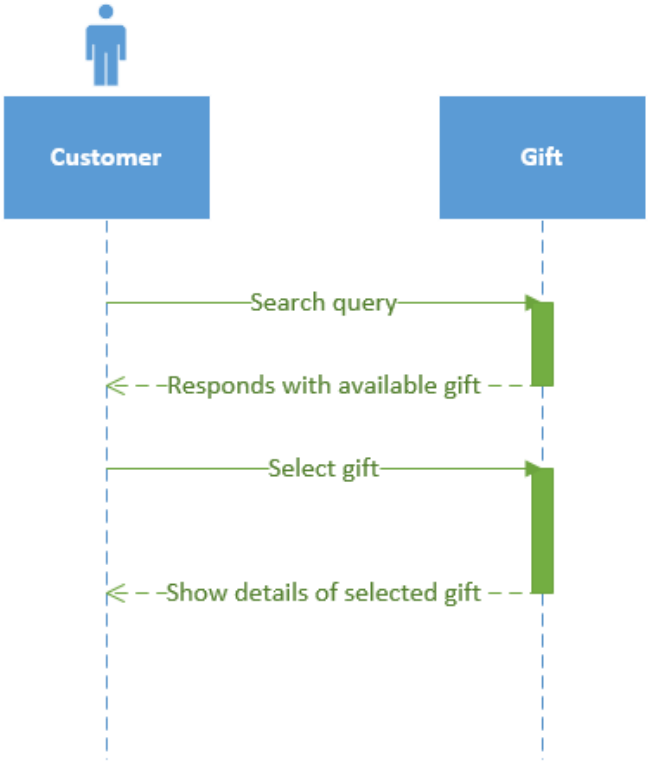


Fig 4-3: Sequence diagram for select customer

4.2.3.3 Register User:

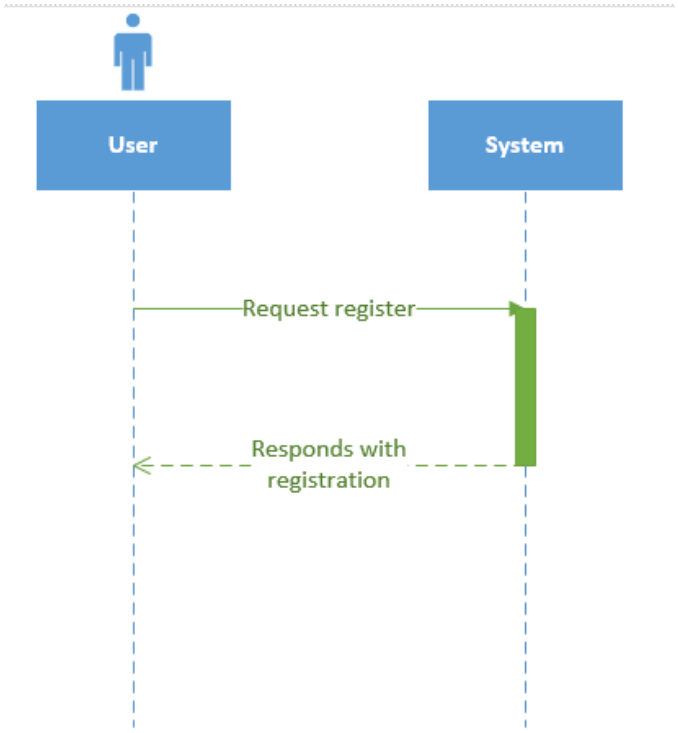


Fig 4-4: Sequence diagram for register user

4.2.3.4 Update User:

Refer to Update Customer.

4.2.3.5 Validate Voucher:

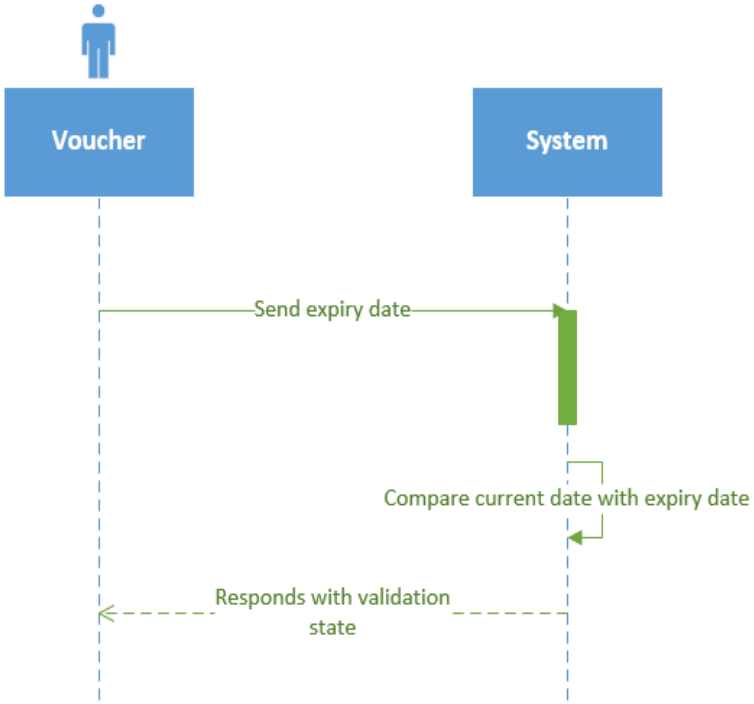


Fig 4-5: Sequence diagram for validate voucher

4.2.3.6 Deliver agent Availability:

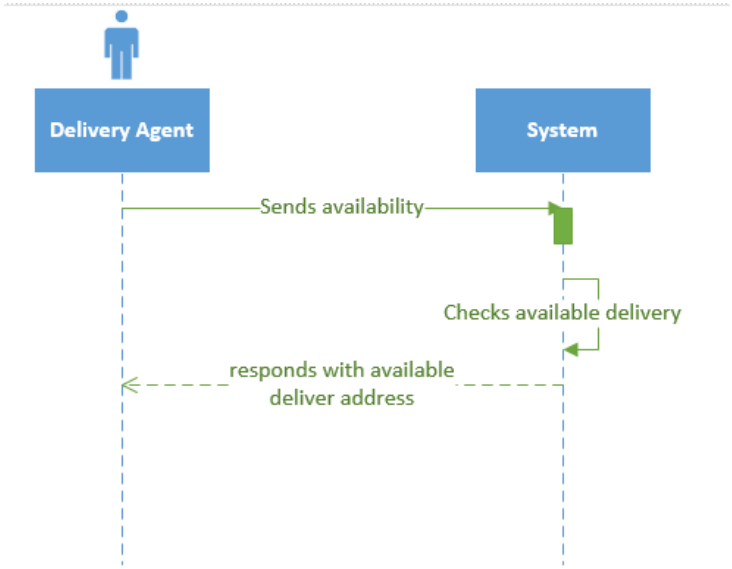


Fig 4-6: Sequence diagram for availability of delivery agent

4.2.3.7 Delivery agent Deliver:

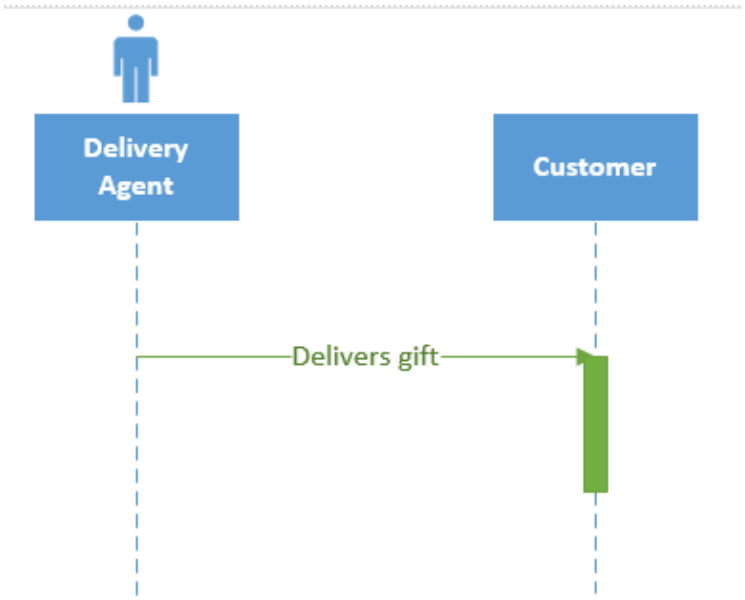


Fig 4-7: Sequence diagram for deliver in delivery agent

4.2.3.8 Select Gift:

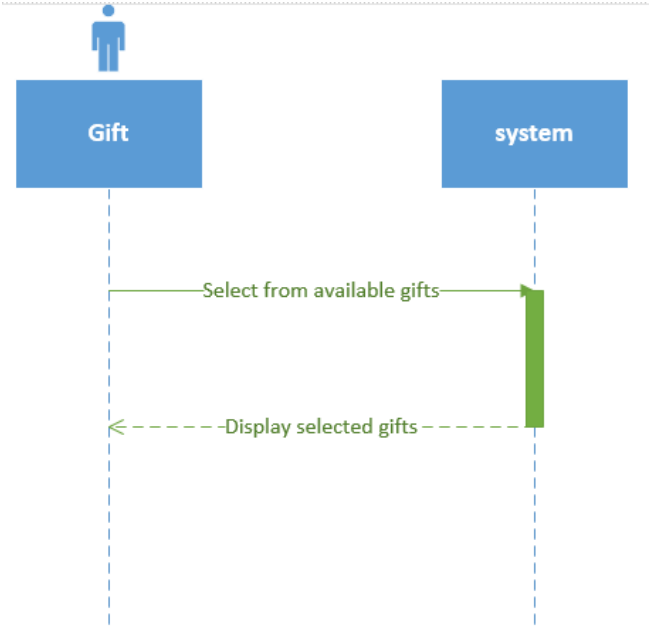


Fig 4-8: Sequence diagram for select gift in gift

4.2.3.10 Select Gift Type:

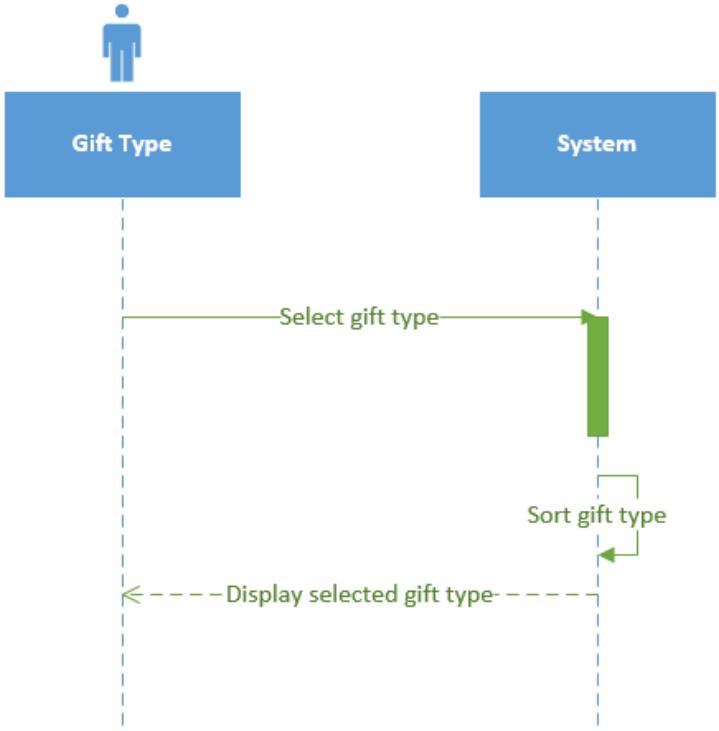


Fig 4-9: Sequence diagram for select gift type

4.2.3.11 Admin Insert:

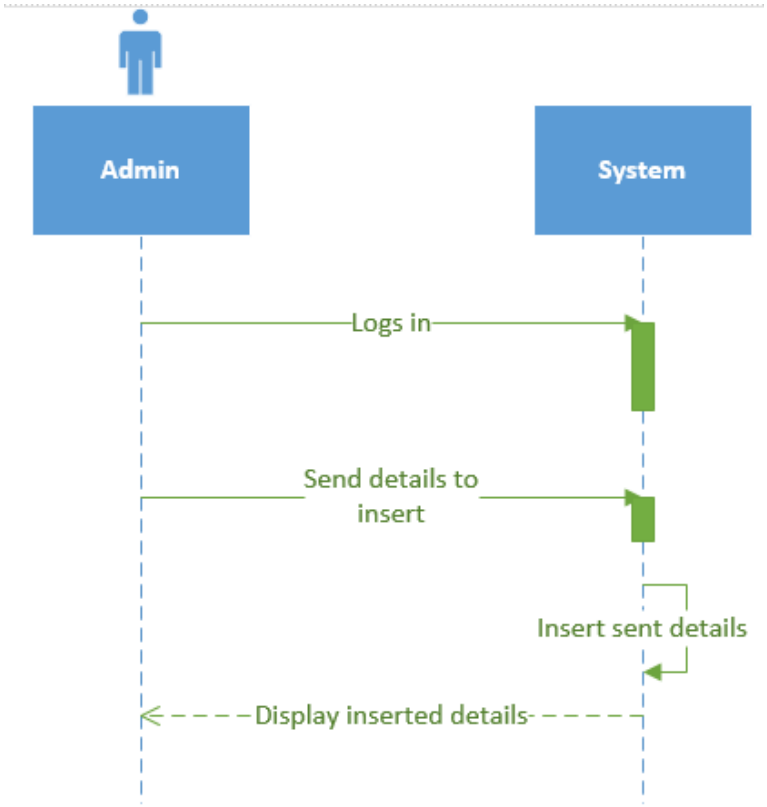


Fig 4-10: Sequence diagram for insert in admin

4.2.3.12 Admin Delete:

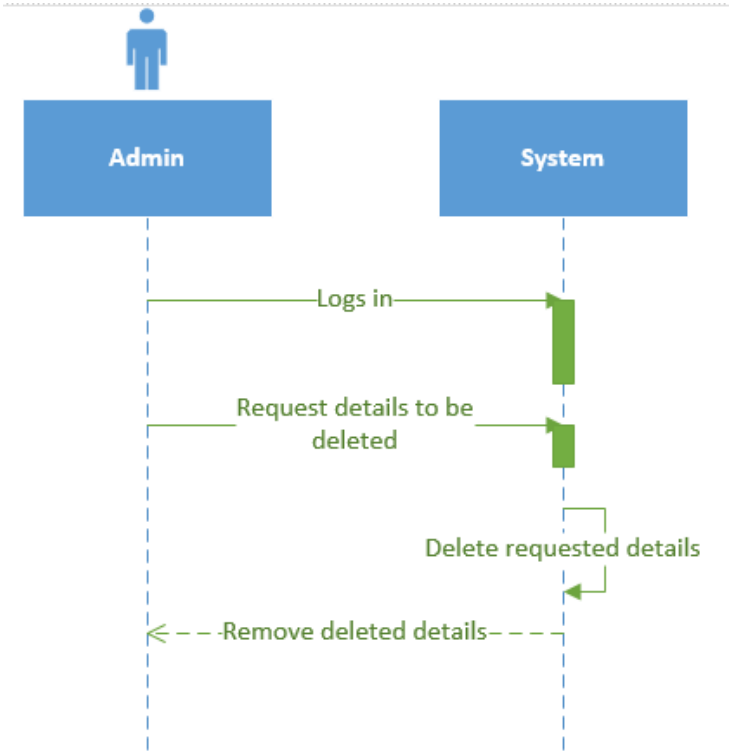


Fig 4-11: Sequence diagram for delete in admin

4.2.3.13 Update Admin:

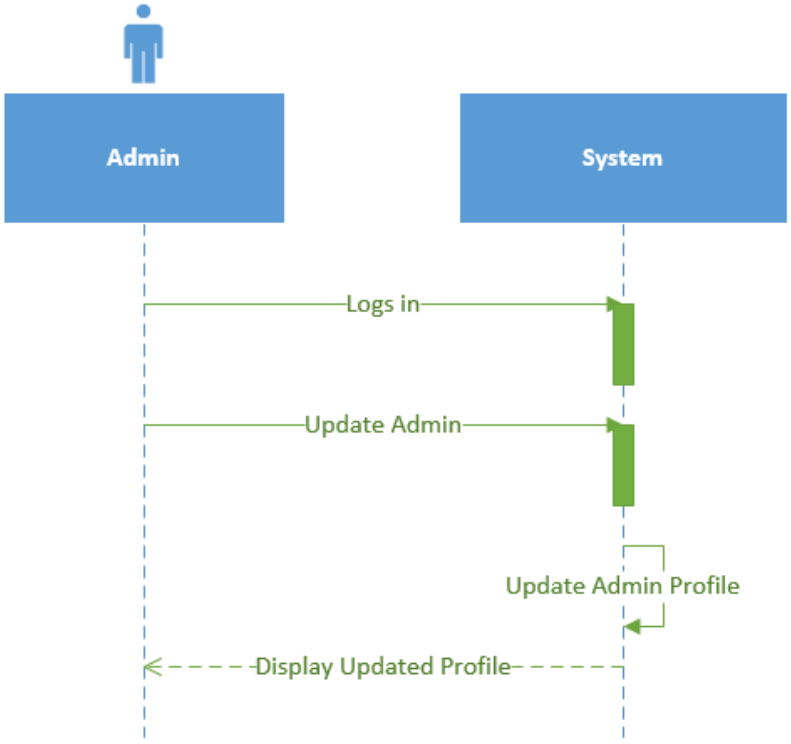


Fig 4-12: Sequence diagram for update in admin

4.2.3.15 Insert Role:

Refer to Insert in Admin

4.2.3.16 Update Role:

Refer to Update in Admin

4.2.3.17 Delete Role:

Refer to Delete in Admin

4.2.3.18 Insert Gift Receiver:

Refer to Insert in Admin

4.2.3.19 Update Inventory:

Refer to Update in Admin

4.2.3.20 Delete Inventory:

Refer to Delete in Admin

4.2.3.21 Insert Inventory:

Refer to Insert in Admin

4.2.3.22 Suppler Add gift:

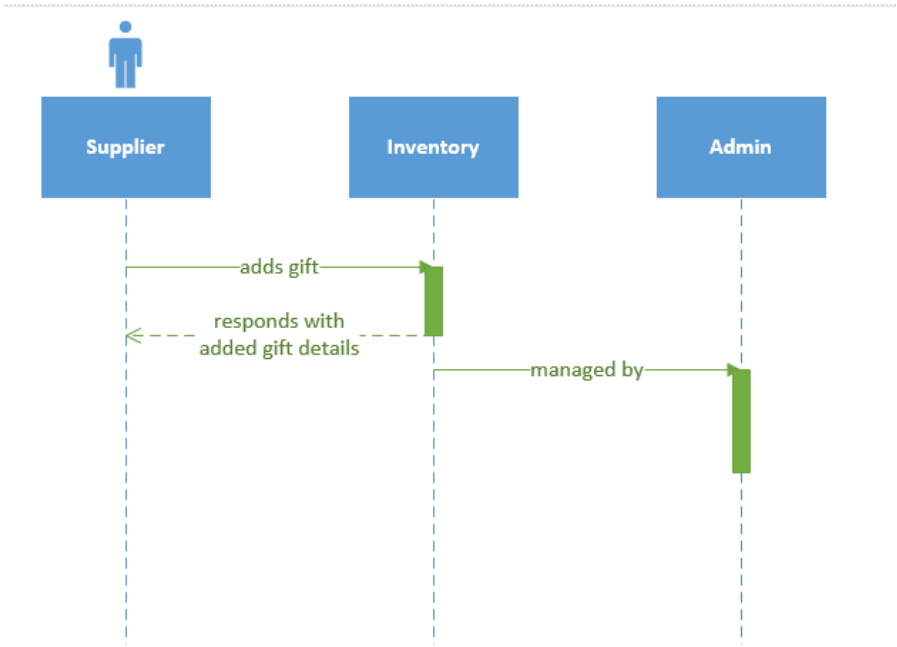


Fig 4-13: Sequence diagram for add gift in supplier

4.3 Database

4.3.1 Database Design

After the completion of the system architecture, it is time to step into the design stage. Design of database is done to show the functionality. CRUD operations are performed. Various entities like customer, gifts can be created, read, deleted or updated. Once the data are analyzed, and the relationships between the data understood, the ER model is established, and then the concept structure and logic structure of database designed. We use SQL for the database which is a database computer language designed for the retrieval and management of data in relational database. SQL Server can be completed with high efficiency to a variety of database queries, and can facilitate the use of stored procedures, and its graphical user interface allows intuitive and simple system and database, it was used for storage management and maintenance in this project.

4.3.2 Database Management System Files

This topic reveals the final design of the DBMS files that includes the Entity relationship diagram and entities involved in the system. This step is the key to database design.

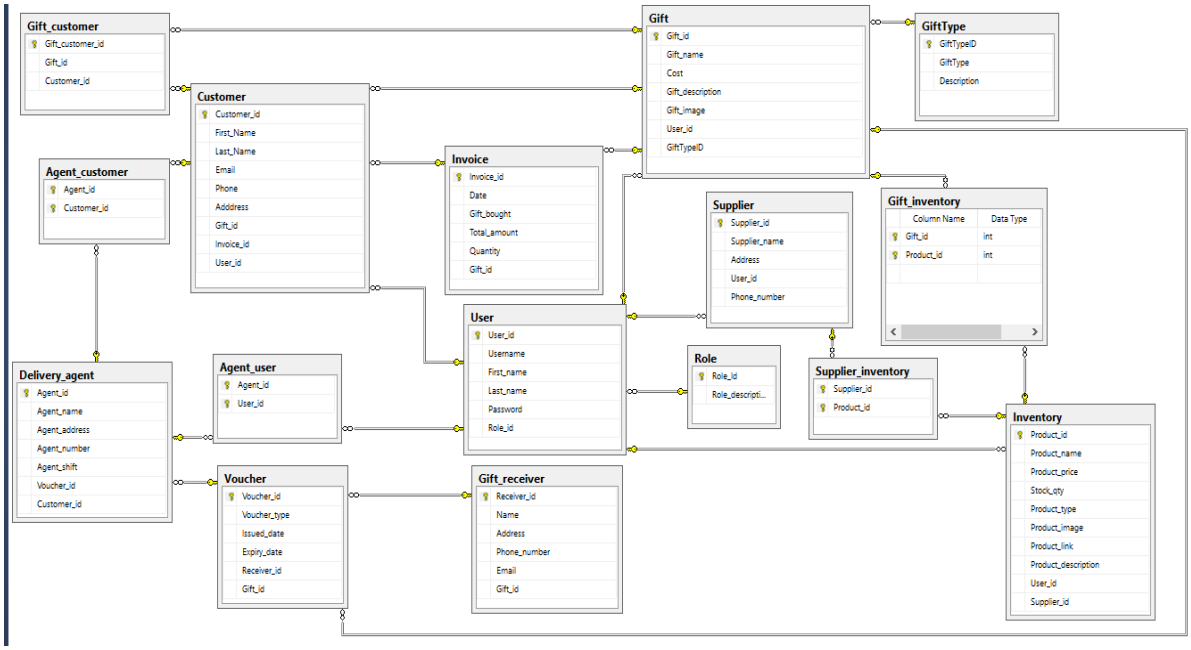
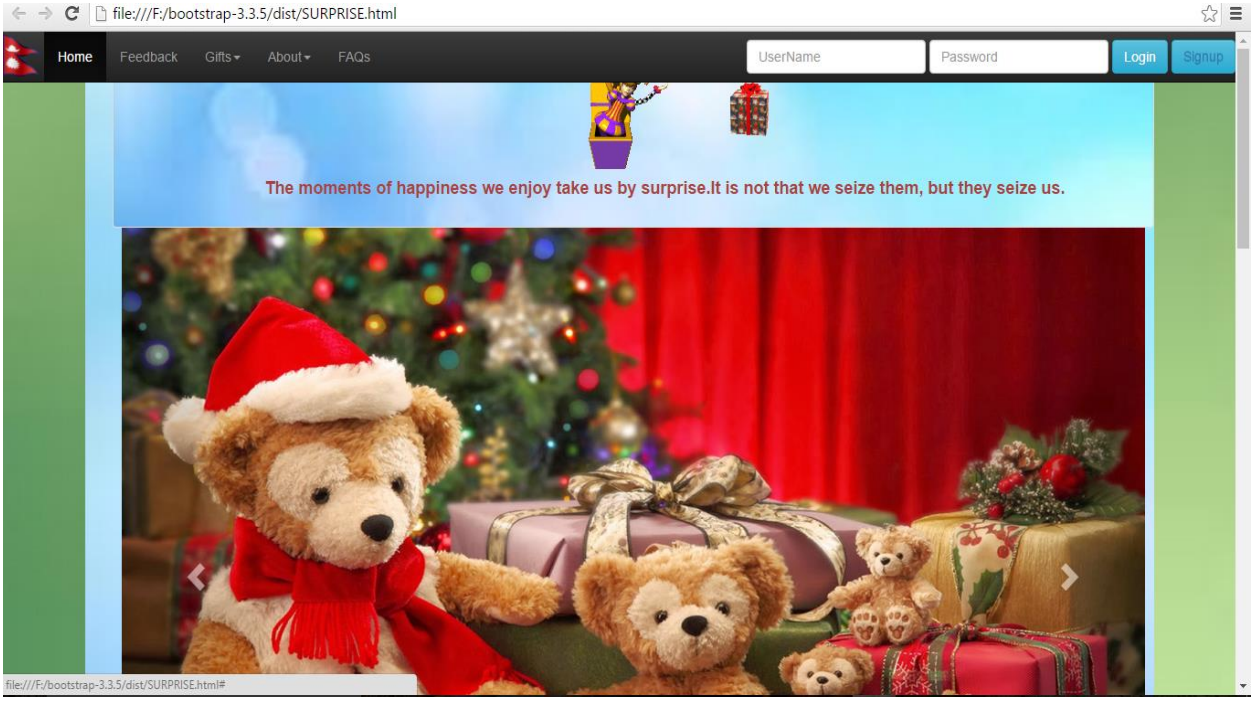
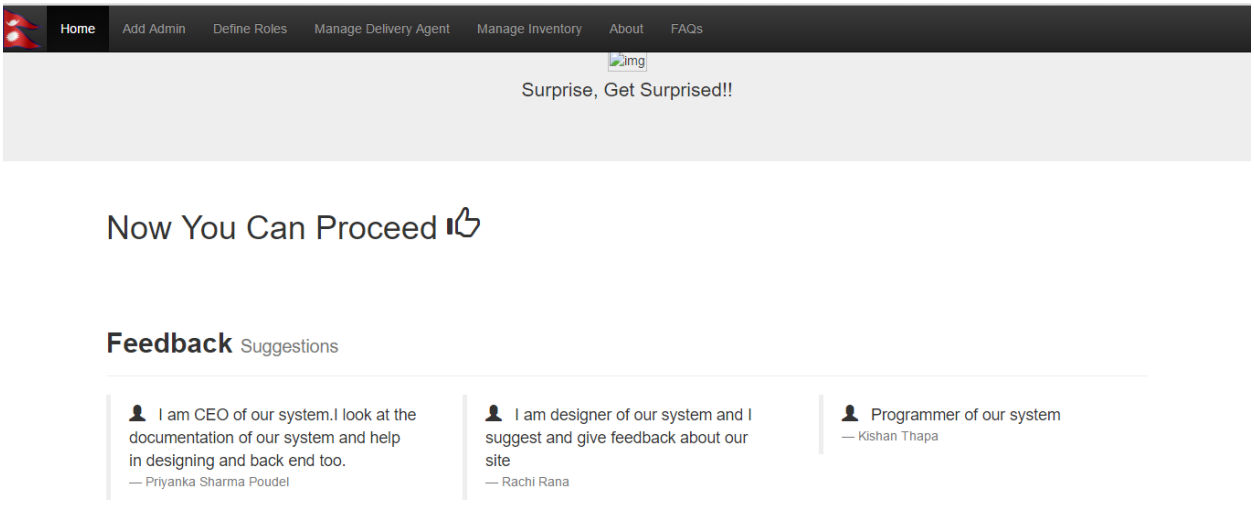


Fig 4-14: Database Diagram

4.4 User Design





For other User Interface Design refer to Appendix A.

5. Implementation and Coding

This phase shows the execution of the project. Implementation has been done according to the design process of the system i.e. the design of the system from the previous chapter is implemented. The fundamental goal of this stage is to determine how to achieve the required system, and give an internal process description of module. This chapter will give a presentation of some interfaces, sub-modules, algorithm of the system implementation.

5.1 Implementation

Surprise has been implemented using the best of breed technologies, object-oriented designs in both the problem and solution space, an object-oriented database, support for mobile devices and interfaces and implemented in C#. The Project has been developed on Visual Studio using ASP.net. Three tier architecture has been implemented in the system development.

Back end has been developed in MSSQL. Information are created and retrieved from the database. All the business logic has been managed by the use of SQL of database. So major database related operations, logical decisions, calculations have been carried out from this layer. The designing of the software is done through front end tools.

The frontend i.e. presentation layer of the project is created using HTML5 and ASP for creating the website elements. CSS, bootstrap. CSS is used to change the style of html and asp elements. Bootstrap is used for developing responsive website. It has been used to create menu, navigation bar, buttons etc.

5.1.2 Implementation Technology Used

The ASP.NET framework is used for the project because framework of asp is complemented by a rich toolbox and designer in the Visual Studio integrated development environment. Drag-and-drop server controls, WYSIWYG and automatic deployment are just a few of the powerful features provided.ASP.NET drastically reduces the amount of code required to build large applications. With built-in Windows authentication and per-application configuration, applications are safe and secured.

C#: C# has been used to inherit common classes for easier code writing. C# removes some of the complexities. C# code can be written in chunks called classes.

CSS: The properties of CSS has been used to make the website responsive to be usable in all smartphones and tablets. The CSS classes of bootstrap have been assigned to buttons and form fields to automatically manage their layout and colors.

5.1.3 Architecture

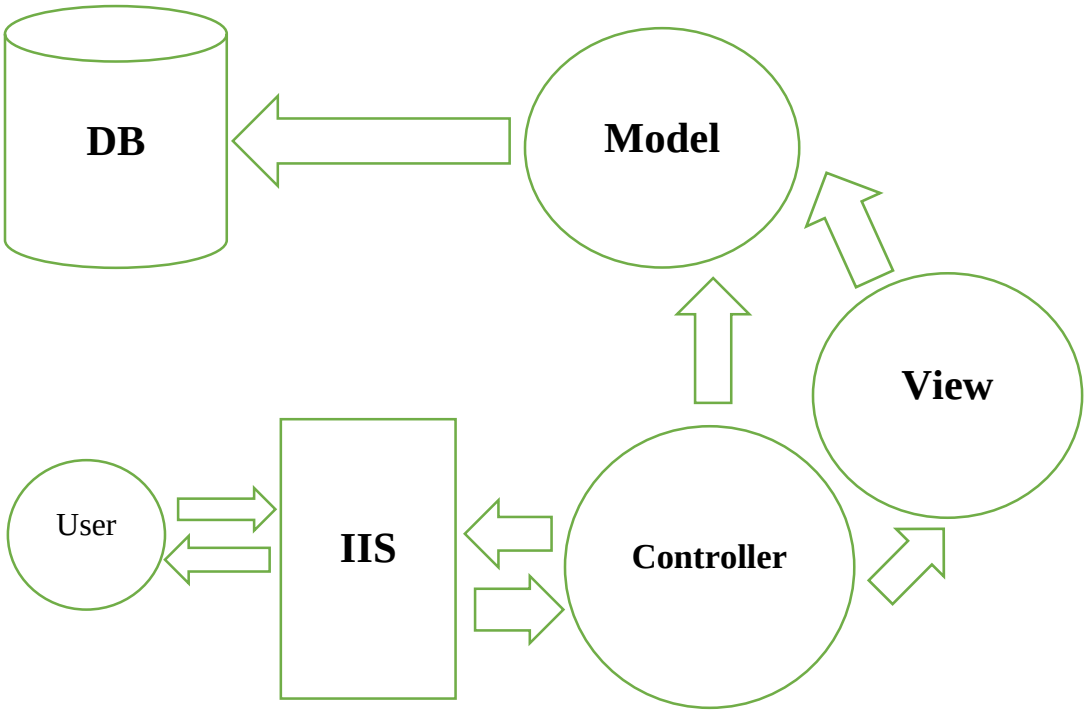


Fig 5-1(i): System Architecture

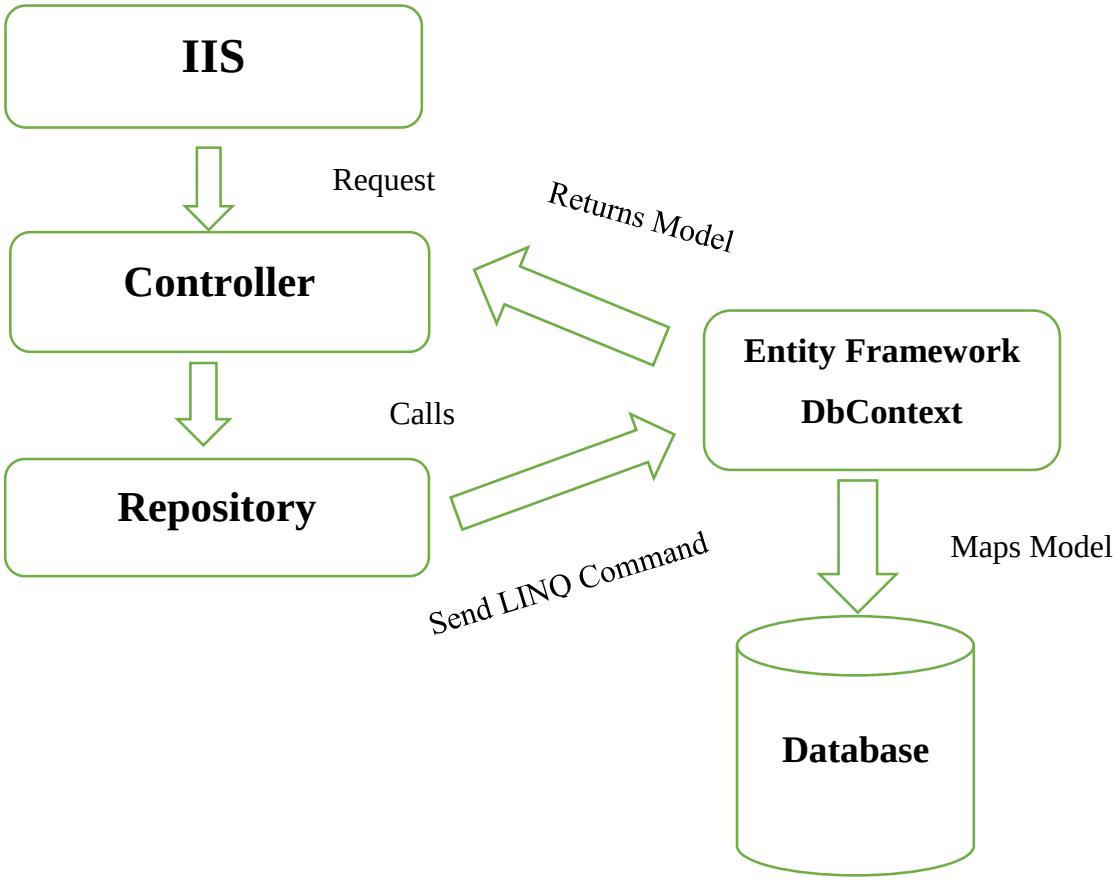


Fig 5-1(ii): System Architecture

5.1.4 Project Timeline

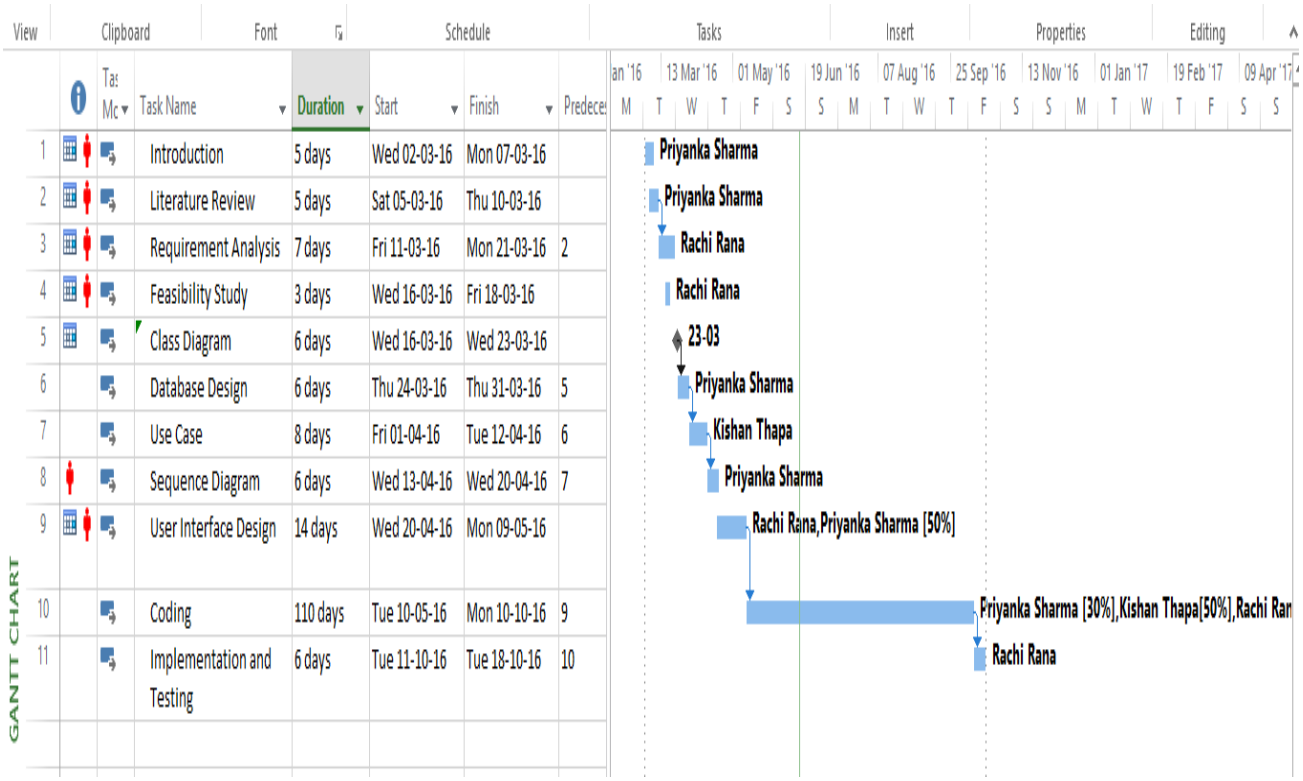


Fig 5-2: Project Timeline

For Coding refer to Appendix B.

5.Testing

At the completion time of this system, entire testing has been done and system has been made free as far as possible. For testing purposes, following testing methods has been used:

5.1 Unit Testing

Each of the modules of the system are tested separately in unit testing. The functionality of a specific section of code, usually at the function level are verified. Products, users, suppliers are some modules of Surprise. So each functionality has been tested and compared with desired output. The test explorer has been used to check and manage each tests. In the product add module, it has been tested that all the images of the products with detail information are displayed properly. Similarly, user add module has been tested to check new user are registered each time after filling the form through test explorer.

The test cases for Login test:

Test No	First Name	Last Name	Email	Password	Expected Result	Actual Result	Remarks
1	Kishan	Thapa	kisn123@gmail.com	12aaa	Login Successful	Login Failed	Password Error
2	Priyanka	Sharma	pri884@gmail.com	23ggg@	Login Successful	Login Successful	No Error
3	Kesab	Bhandari	kk99@gmail.com	66#22ee	Login Successful	Login Failed	Email Error
4	Ankit	Shrestha	Anik999@gmail.com	888#@ii	Login Successful	Login Successful	No Error

Table 12-1: Unit Test Table

5.2 Integration Testing

After unit testing the modules are integrated one by one and then tested the system for problems arising from component interaction. In integration testing, modules are combined and tested as a group to make sure that one unit does not cause problems to other unit. The visual studio debugger

has been used for integration testing of the units. The breakpoint has been used to properly test the integration between the units. During integration testing phase, product add and user add module are tested to ensure proper functionality. Similarly, all other modules are also integrated and tested using the debugger and tracer.

Test cases for integration test between display cart item details:

Test No.	Product selected in Display products unit	Expected result	Actual result	Remarks
1	Red female shoes	Display details for Red female shoes	Product not found error	Data access from error database
2	Blue Coat	Display details for Blue Coat	Product picture not displayed correctly	Picture storage error during product add
3	Men's black shoes	Display details for Men's black shoes	Product not found error	Incorrect product no. passed
4	Red female shoes	Display details for Red female shoes	Product detail displayed correctly	Data correctly accessed error database
5	Blue Coat	Display details for Blue Coat	Product detail displayed correctly	Data correctly accessed error database

Table 12-2: Integration Test Table

5.3 System Testing

When units and integration testing are successfully completed, system testing is done. Entire system test has been ensured a completely integrated system to verify that it meets its requirements. If any problems are found, they are fixed and the system is tested again. Testing conducted on a

complete, integrated system to evaluate the system's compliance with its specified requirements. System Functionality test cases:

Test No.	Test Name	Expected Result	Actual Result	Reason
1	Registration Test	User is able to register to the site	User is able to register to the site	All details entered and valid
2	Login Test	User is able to login to the site	User is able to login to the site	Correct information entered

Table 12-3: System Testing

6.Conclusion and Future Enhancement

6.1 Conclusion

The project is about developing an E-commerce site named as “Surprise.com” through which people are reminded that they are not alone in this world and there is someone who cares about them. Surprise deals with providing gifts to people on their special day by someone special be it their birthday, wedding day or just because. The gifts include movie tickets, lunch or dinner date etc.

At first different cases are studied as well as feasibility studies are undertaken. Then system was designed by using designing tools to understand a system in better and simple way. And the system was implemented on the basis of system designed. Finally, different testing like unit, integration and system was done in order to get the desire results. There were some issues during development of project. The overall the management of the project was not planned out well enough. The development of the prototype took longer than necessary, which wasted a lot of time. The other set back was that at the beginning of the project, search for useful information about cases was not plentiful, which time was wasted and lead to further delays on further project activities.

6.2 Future Enhancement

At the completion of the current system, primary aim of this project has been met. All the objectives that were set out have been completed and giving positive results in the end. But some features can be added in near future. Payment methods like credit card, debit card, smart card can be adopted with secured encryption mechanism instead of cash on delivery.

Now the gifts are only provided to the customers inside Kathmandu valley but there is plan of extension to other parts of the country in the near future. Customer will get a reminder email before any favorite deals expire, to ensure that customer never miss out on an offer again.

References

[1] https://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller >

[2] < http://getbootstrap.com/about/ >

[3] <https://giftano.com/about-us >

[4] < http://www.gifts.com/AboutUs>

[5] < http://www.buygifts.com/about-us.html >

[6] < http://www.gifts.com/ >

[7] < http://www.uncommongoods.com/our-story >

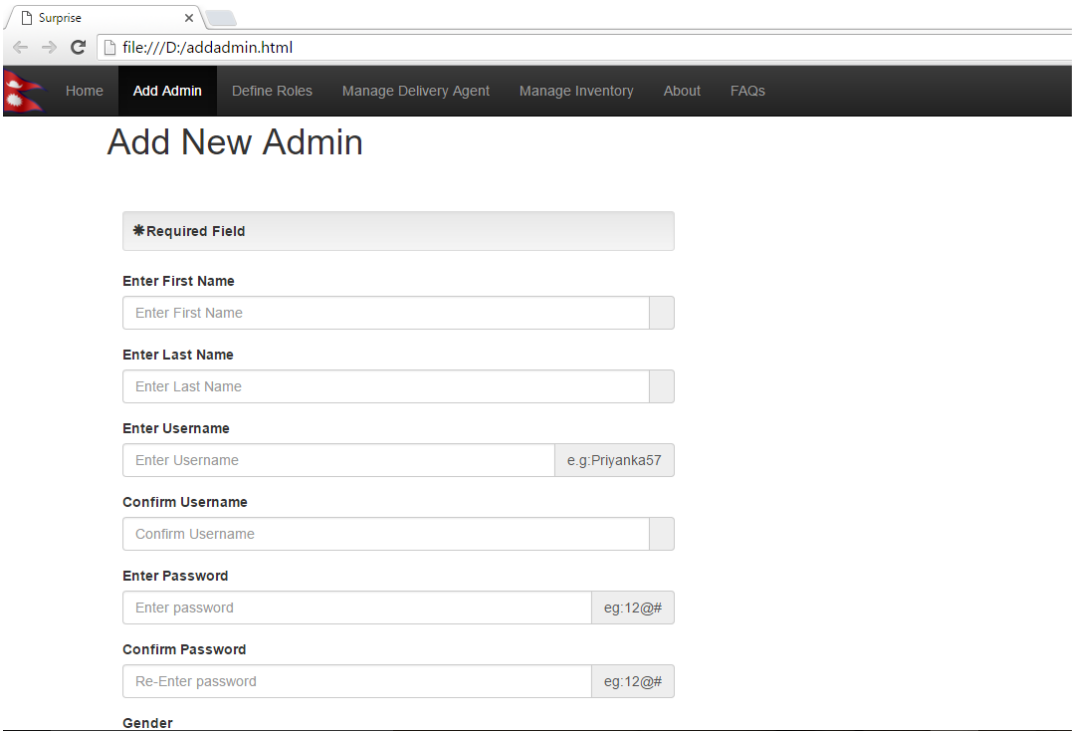
[8] <http://www.tutorialspoint.com/software_engineering/software_requirements.htm>

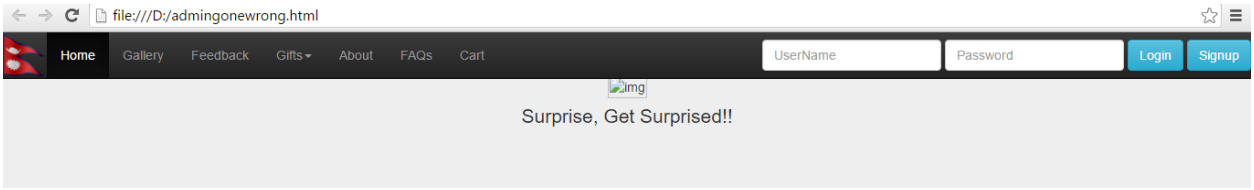
[9] <https://en.wikipedia.org/wiki/Feasibility_study>

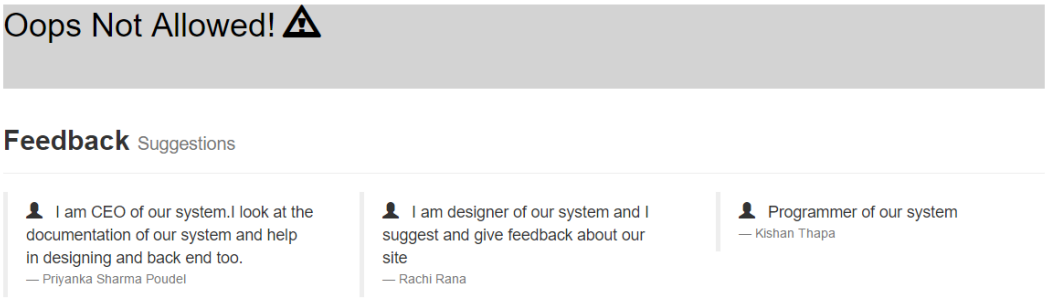
[10] Hoffer, J., George, J., Valacich, J. (2013). Modern System Analysis and Design. India: Dorling Kindersley, pp.129-136.

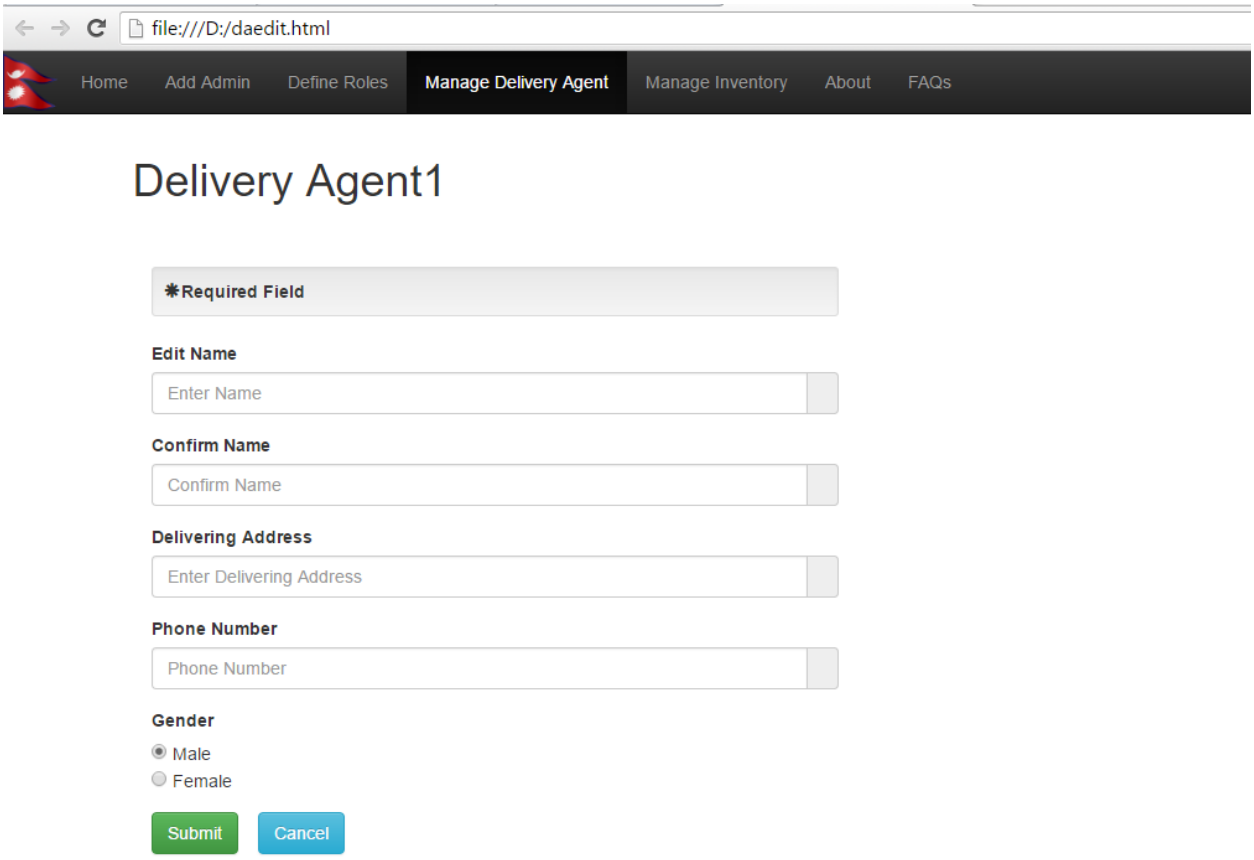
APPENDICES

Appendix A:





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Home
Add Admin
Define Roles
Manage Delivery Agent
Manage Inventory
About
FAQs
Delivery Agent1
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Edit Name
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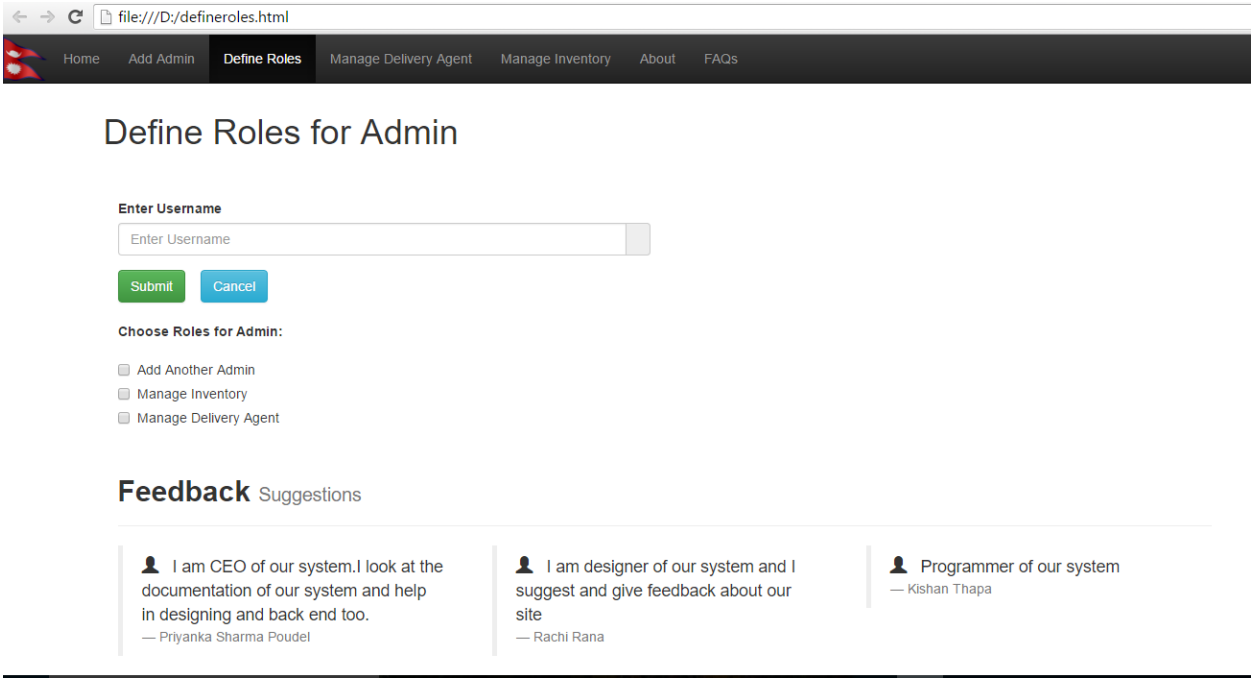
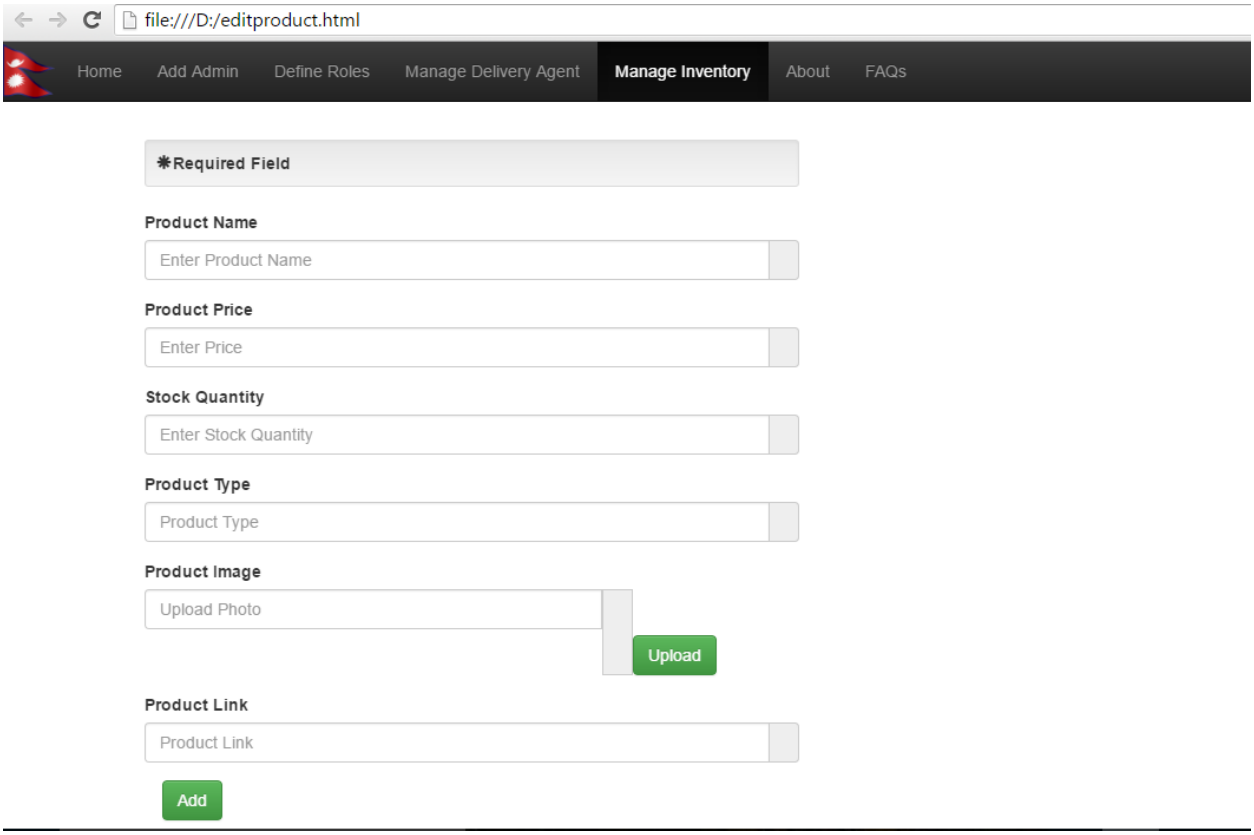
Confirm Name
Confirm Name
Delivering Address
Enter Delivering Address
Phone Number
Phone Number
Gender
Male
Female
Submit
Cancel


file:///D:/defineroles.html
Home
Add Admin
Define Roles
Manage Delivery Agent
Manage Inventory
About
FAQs
Define Roles for Admin
Enter Username
Enter Username
Submit
Cancel
Choose Roles for Admin:
Add Another Admin
Manage Inventory
Manage Delivery Agent
Feedback
Suggestions
I am CEO of our system.I look at the documentation of our system and help in designing and back end too.
— Priyanka Sharma Poudel
I am designer of our system and I suggest and give feedback about our site
— Rachi Rana
Programmer of our system
— Kishan Thapa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Home
Add Admin
Define Roles
Manage Delivery Agent
Manage Inventory
About
FAQs
*Required Field
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Product Price
Enter Price
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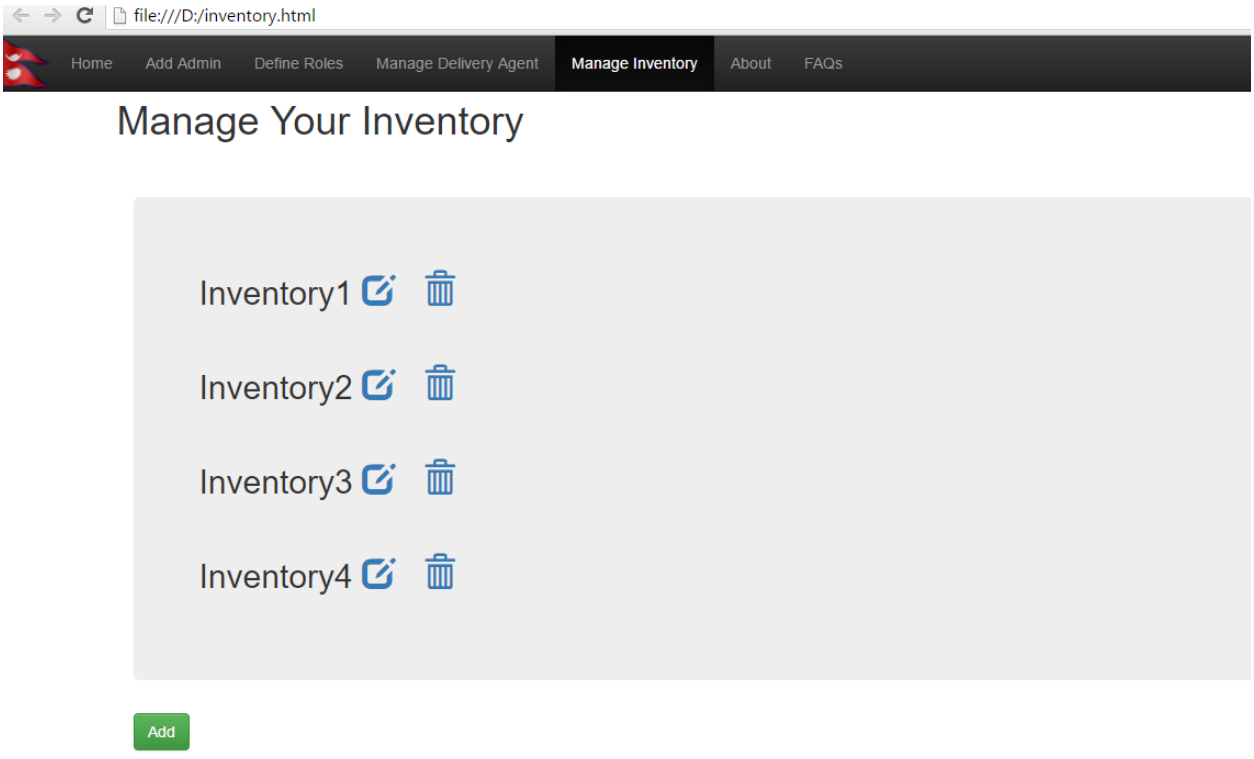
Enter Stock Quantity
Product Type
Product Type
Product Image
Upload Photo
Upload
Product Link
Product Link
Add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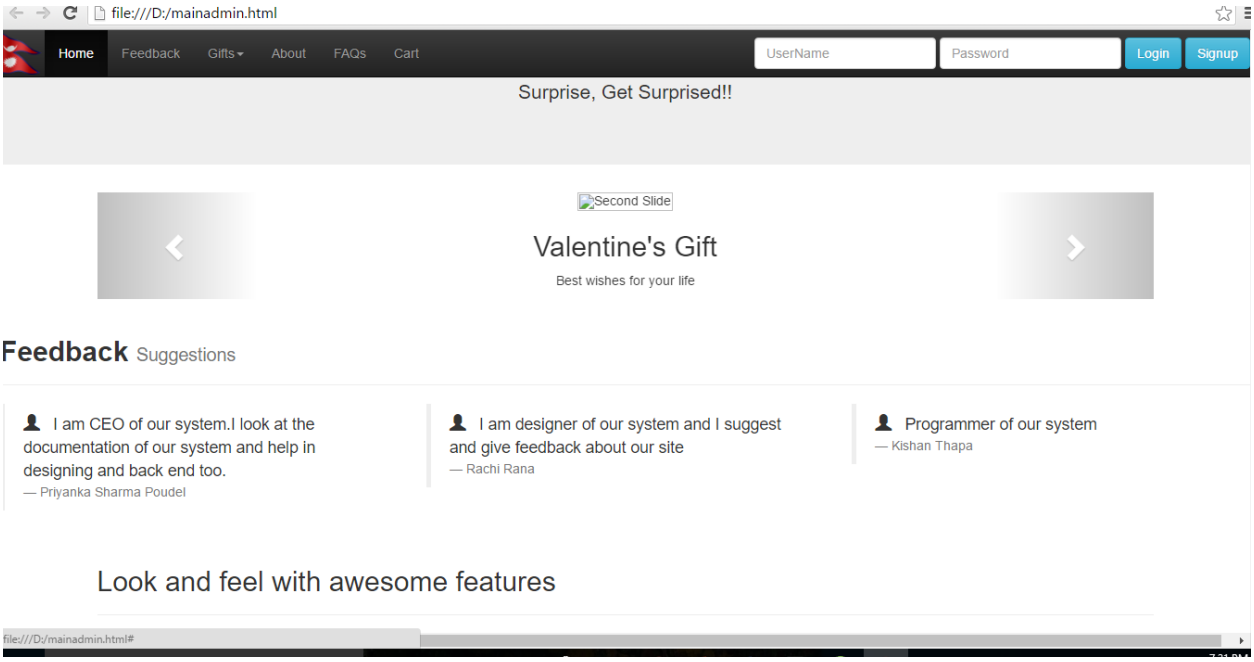
Manage Delivery Agent
Manage Inventory
About
FAQs
Manage Your Inventory
Inventory1
Inventory2
Inventory3
Inventory4
Add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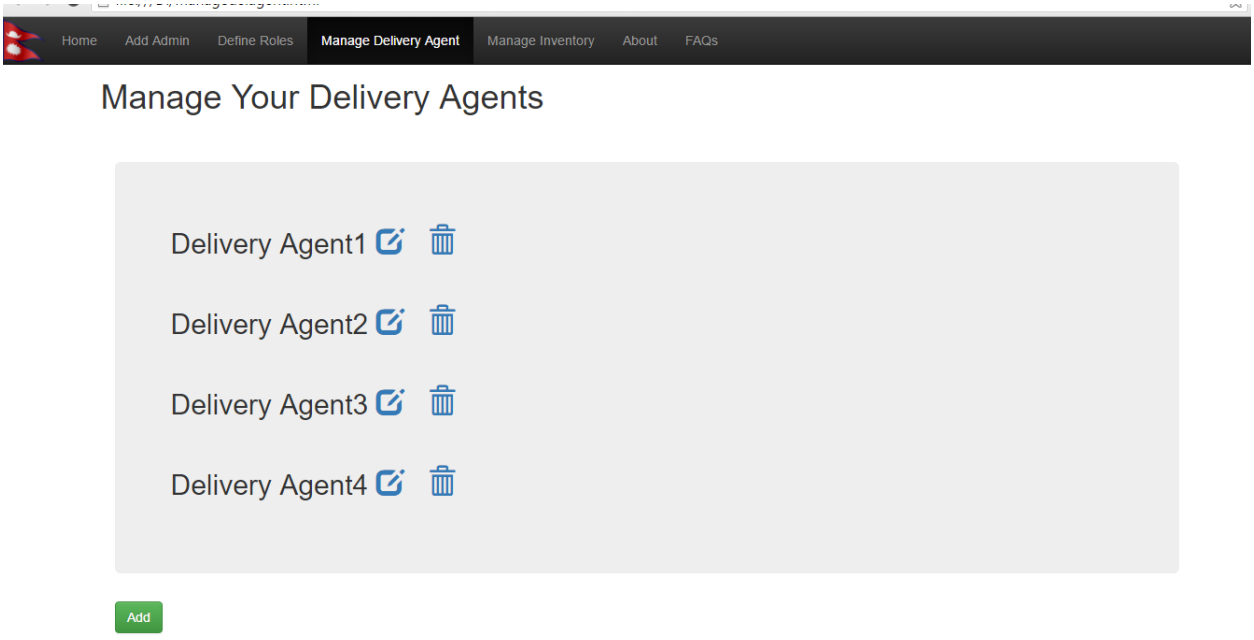
Home
Feedback
Gifts
About
FAQs
Cart
UserName
Password
Login
Signup
Surprise, Get Surprised!!
Second Slide
Valentine's Gift
Best wishes for your life
Feedback Suggestions
I am CEO of our system.I look at the documentation of our system and help in designing and back end too.
— Priyanka Sharma Poudel
I am designer of our system and I suggest and give feedback about our site
— Rachi Rana
Programmer of our system
— Kishan Thapa
Look and feel with awesome features


Home
Add Admin
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Manage Inventory
About
FAQs
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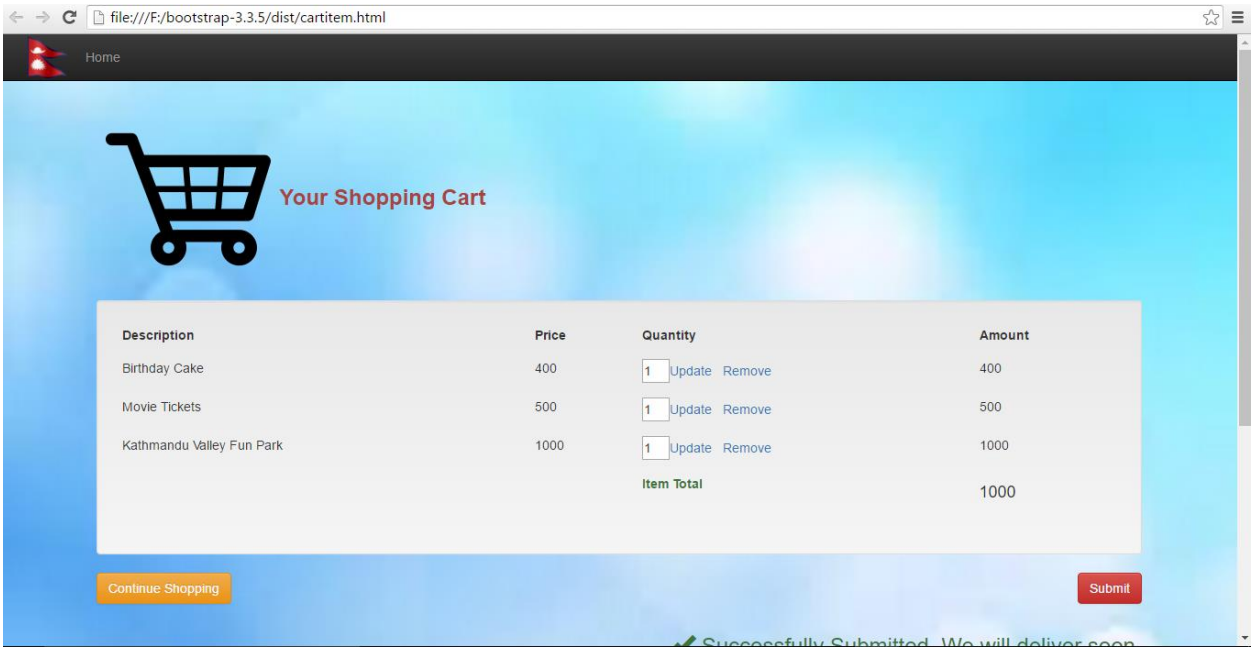
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Movie Tickets
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1 Update Remove
500
Kathmandu Valley Fun Park
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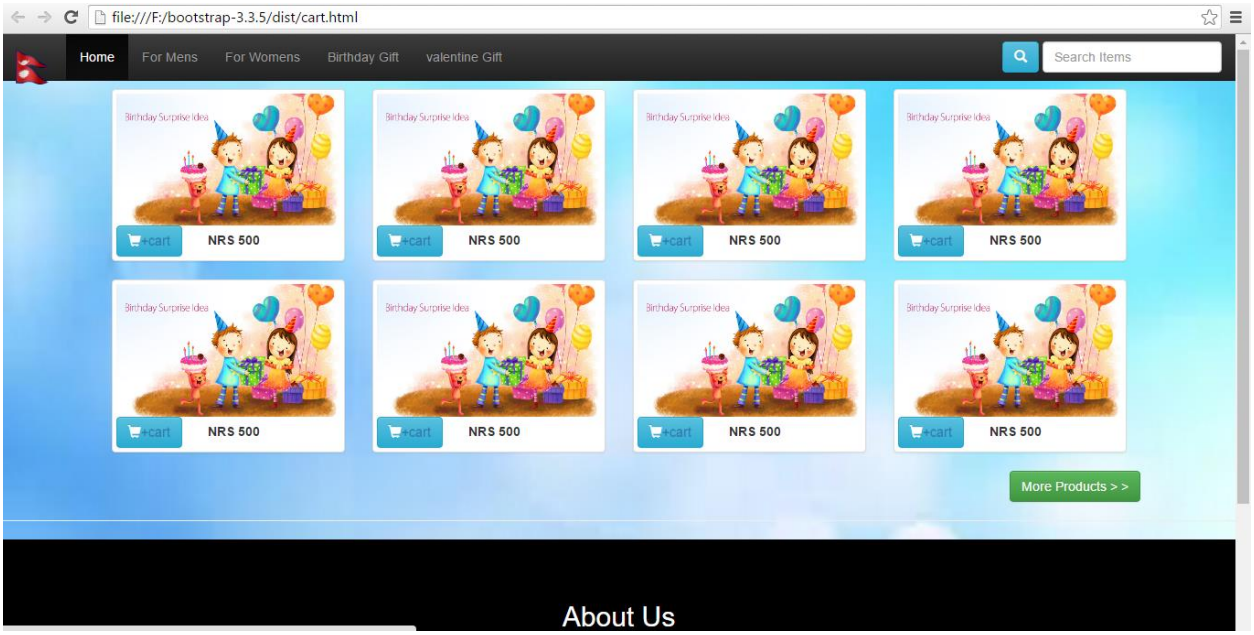
1000
Item Total
1000
Continue Shopping
Submit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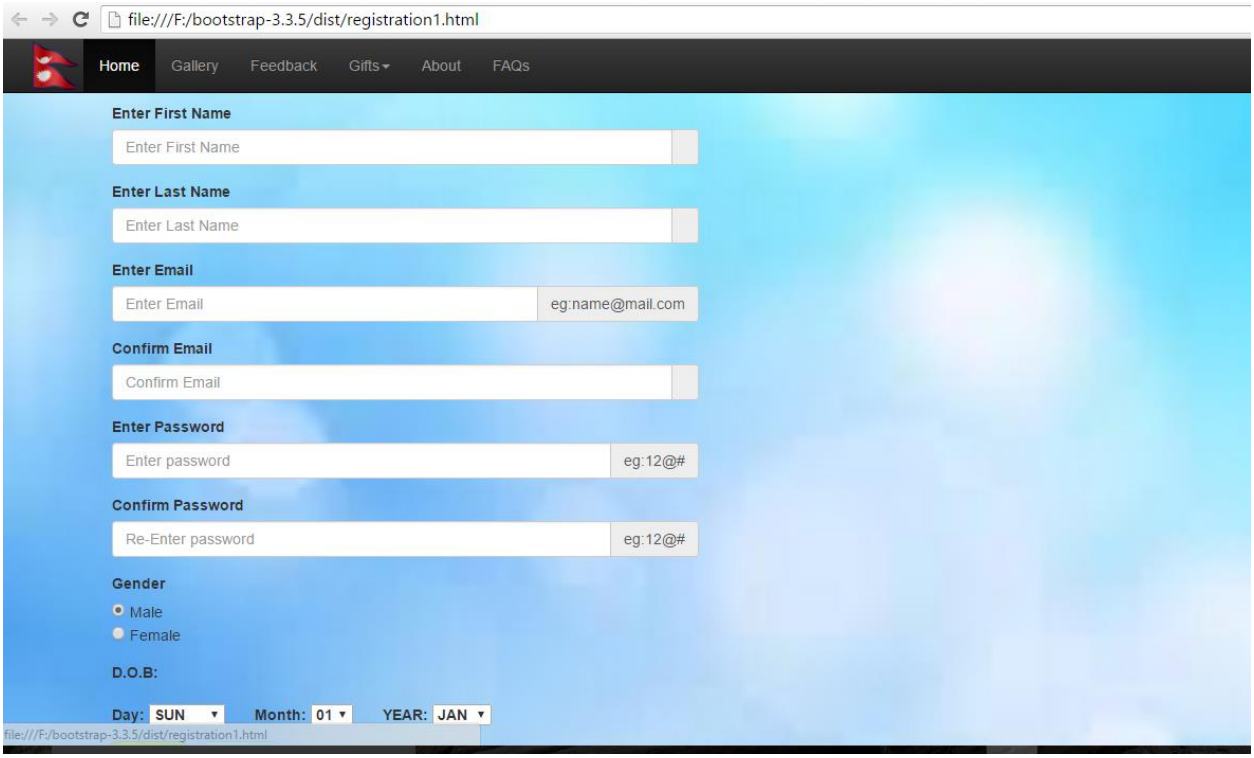
About Us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Gallery
Feedback
Gifts
About
FAQs
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Enter Password
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Male
Female
D.O.B:
Day: SUN
Month: 01
YEAR: JAN
file:///F:/bootstrap-3.3.5/dist/registration1.html

Appendix B: Account Section

```
    {
        List<SelectListItem> listrole = new List<SelectListItem>();
        listrole.Add(new SelectListItem { Text = "Admin", Value = "1" });
        listrole.Add(new SelectListItem { Text = "Supplier", Value = "2" });
        listrole.Add(new SelectListItem { Text = "User", Value = "3" });
        return View(loginModel);
    }
    public ActionResult Login(LoginViewModel model, string returnUrl)
    {
        var data = iUserService.UserLoginCheck(model);
        UserSessionModel userdata = new UserSessionModel();
        userdata.RoleId = data.RoleId;
        userdata.UserLoginId = data.UserId;
        userdata.LoginFullName = data.FullName;
        if (data.UserId > 0)
        {
            if (model.RoleId == 1)
            {
                TempData["UserDetail"] = (LoginViewModel)data;
                TempData.Keep();
                Session["SUserDetail"] = userdata;
                return RedirectToAction("Index", "Admins");
            }
            else if (model.RoleId == 2)
            {
                TempData["UserDetail"] = (LoginViewModel)data;
                TempData.Keep();
                Session["SUserDetail"] = userdata;
                return RedirectToAction("Index", "Admins");
            }
            else
            {
                TempData["UserDetail"] = (LoginViewModel)data;
                TempData.Keep();
                Session["SUserDetail"] = userdata;
                return RedirectToAction("Index", "Home");
            }
        else
        {
            List<SelectListItem> listrole = new List<SelectListItem>();
            listrole.Add(new SelectListItem { Text = "Admin", Value = "1" });
            listrole.Add(new SelectListItem { Text = "Supplier", Value = "2" });
            listrole.Add(new SelectListItem { Text = "User", Value = "3" });
            return View("Login", data);
        }
}
```

Appendix C: Gift Section

```
    List<SelectListItem> listrole = new List<SelectListItem>();
    listrole.Add(new SelectListItem { Text = "For Men", Value = "1" });
    listrole.Add(new SelectListItem { Text = "For Women", Value = "2" });
    listrole.Add(new SelectListItem { Text = "For Children", Value = "3" });

    model.GiftTypeList = listrole;
    return View(model);


    List<SelectListItem> listrole = new List<SelectListItem>();
    listrole.Add(new SelectListItem { Text = "For Men", Value = "1" });
    listrole.Add(new SelectListItem { Text = "For Women", Value = "2" });
    listrole.Add(new SelectListItem { Text = "For Children", Value = "3" });

    model.GiftTypeList = listrole;
    return View(model);
}
public ActionResult Index()
{
    var gifts = iGiftsService.AllGiftsLists();
    return View(gifts.ToList());
}
```

Appendix D: Admin Section

```
public ActionResult AddSuppliers(RegisterModel registermodel)
{
   registermodel.RoleId = 1;
   var result = iUserServices.RegisterNewUser(registermodel);
   if (result.CheckUserExist == true)
   {
      if (result.CustomerId > 0)
      {

         ViewBag.Successmessage= "Sucessfully Registered..."; ;
         return View();
      }
      else
      {

      ViewBag.MessageError ="Error in registring please try later”;
         return View();
      }
   }
```