



# My Starbucks

## Requirements Specification and Design Document

ITIS- 5166 Network Based Application Development

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## Abstract

The purpose of this document is presenting the requirements specification for **My Starbucks- A Coffee Shop Website** designed primarily for use in the Beverages and Food delivery industry. This site will allow café shop to quickly and easily manage an online menu which customers can browse and use to place orders with just a few clicks. The website incorporates the features of pickup as well as home delivery of their favorite coffee and other food items just in few clicks. The system then relays these orders to café Manager and Waiter through an easy to navigate graphical interface for efficient processing.

Described within the document is an overall model of the system, outlines of functional and non-functional requirements, and a detailed description of the user interface. Finally, the document presents an account of the evolution of the system along with anticipated maintenance.

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## 1. Introduction

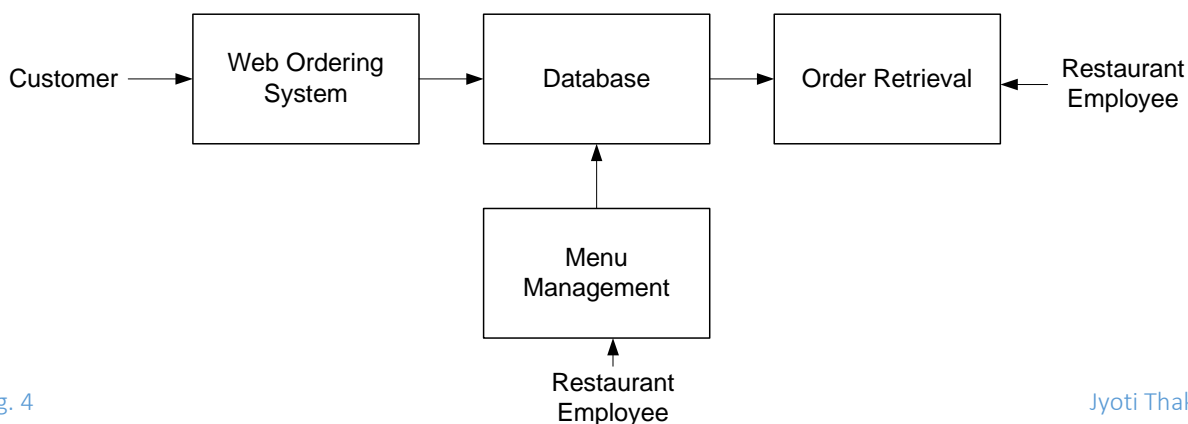
Online Food order is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace. The objective of this project is to develop a general purpose online café shop where any food item or drink can be bought from the comfort of home through the Internet and it will be delivered to door step or can be picked up from store. It is a client/server model, which deals with “MY Starbucks- an online café shop”. The system has two parts first for the customers and the other for the management side.

My Starbucks, An online café is a coffee shop website on the Internet where customers can browse the catalog and select food of interest. The selected items may be collected in a shopping cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill or select a billing address, a shipping address, pickup option or shipping option, and payment information such as credit card number. Customer can send an e- mail to the store regarding their experience with the store or any complaints they may have.

The customer side allows the customer to view menu list and place order, and at the management side the manager can edit information regarding menu list, price, adding resources to the system, maintain information regarding the orders placed, deleting orders etc.

## 2. System Model

The structure of the system can be divided into three main logical components. The first component must provide some form of menu management, allowing the restaurant to control what can be ordered by customers. The second component is the web ordering system and provides the functionality for customers to place their order and supply all necessary details. The third and final logical component is the order retrieval system. Used by the restaurant to keep track of all orders which have been placed, this component takes care of retrieving and displaying order information, as well as updating orders which have already been processed.



### 3. Functional Requirements:

As can be seen in the system model diagrammed above, each of the three system components essentially provides a layer of isolation between the end user and the database. The motivation behind this isolation is twofold. Firstly, allowing the end user to interact with the system through a rich interface provide a much more enjoyable user experience, particularly for the non-technical users which will account for most the system's users. In addition, this isolation layer also protects the integrity of the database by preventing users from taking any action outside those which the system is designed to handle. Because of this design pattern, it is essential to enumerate exactly which functions a user will be presented and these functions are outlined below, grouped by component.

- The Coffee Ordering System
- Users of the web ordering system, namely customers, must be provided the following functionality:
- Create an account where he provides his complete address and contact option.
- Log in to the system.
- Navigate the My Starbucks's menu.
- Select an item from the menu.
- Customize quantity for a selected item.
- Add an item to their current order.
- Review their current order.
- Remove an item/remove all items from their current order.
- Place an order.

As the goal of the system is to make the process of placing an order as simple as possible for the customer, the functionality provided through My Starbucks Site is restricted to that which most pertinent to accomplish the desired task. All the functions outlined above, with the exceptions of account creation and management, will be used every time a customer places an order.

## 4. Analysis Methodology

### 4.1 Feasibility study and requirements elicitation

Organize a development and implementation team composed of people knowledgeable about the current ordering processes. A series of interviews with the managers, employee and customer of cafe will be arranged. Interview and feedback from the personnel and staff working directly with the Coffee order processing system is needed to define the current environment and future system requirements. A Feasibility and Risk Assessment study will be conducted to determine which solution(s) are most appropriate based upon the results of the interviews.

### 4.2 System Analysis and Requirements Specification

#### 4.2.1 Perform an analysis of the problem using object-oriented techniques

An external view of the Coffee shop model of the customers' orders, customer details and staff information, course requirements, and class schedules will be developed using Unified Modeling Language (UML). This System Requirement Specifications documents will form part of the documentation for the project. Some desired features of the new system include access for 3 layers- Manager, Waiter and Customer.

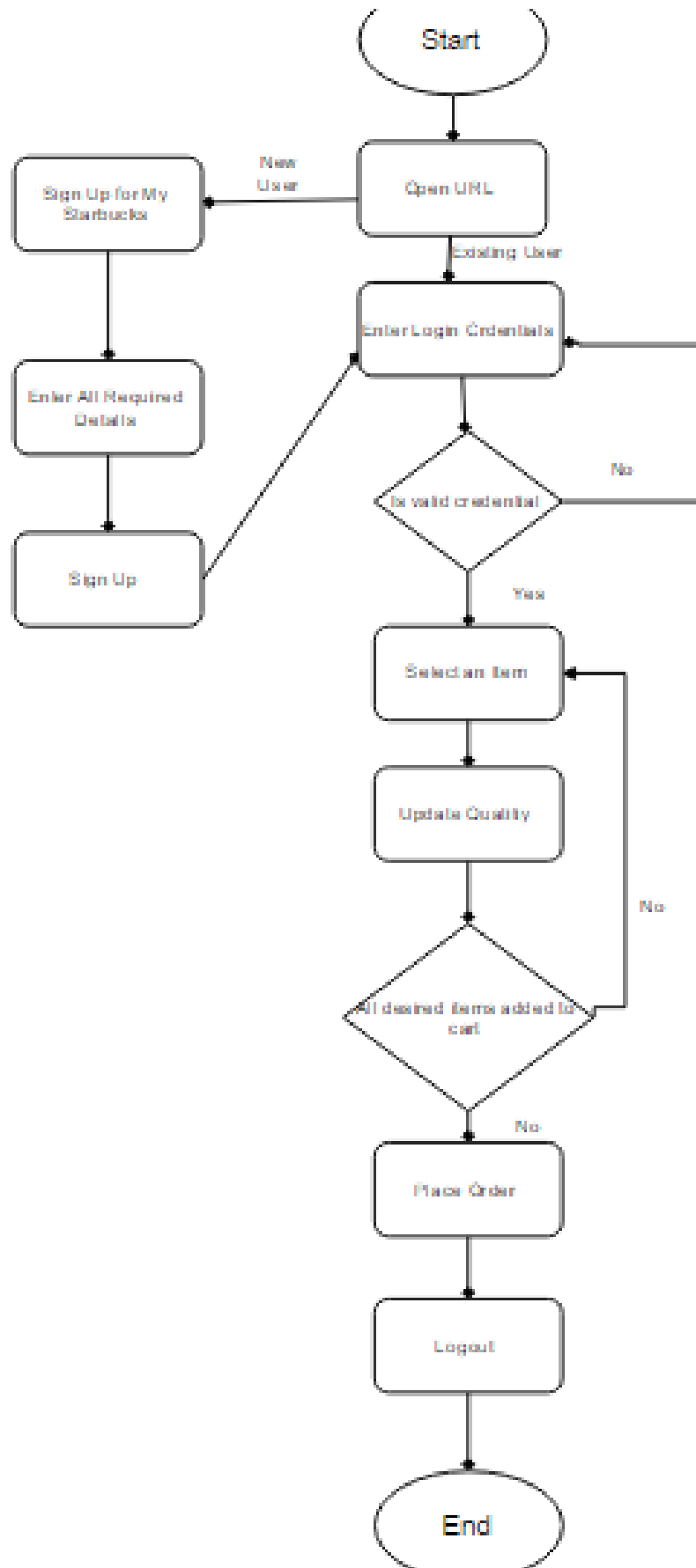
#### 4.2.2 Scope and Limitations

Analysis methodology will involve business analysis, requirement analysis, data analysis, process analysis, (web) and application architecture:

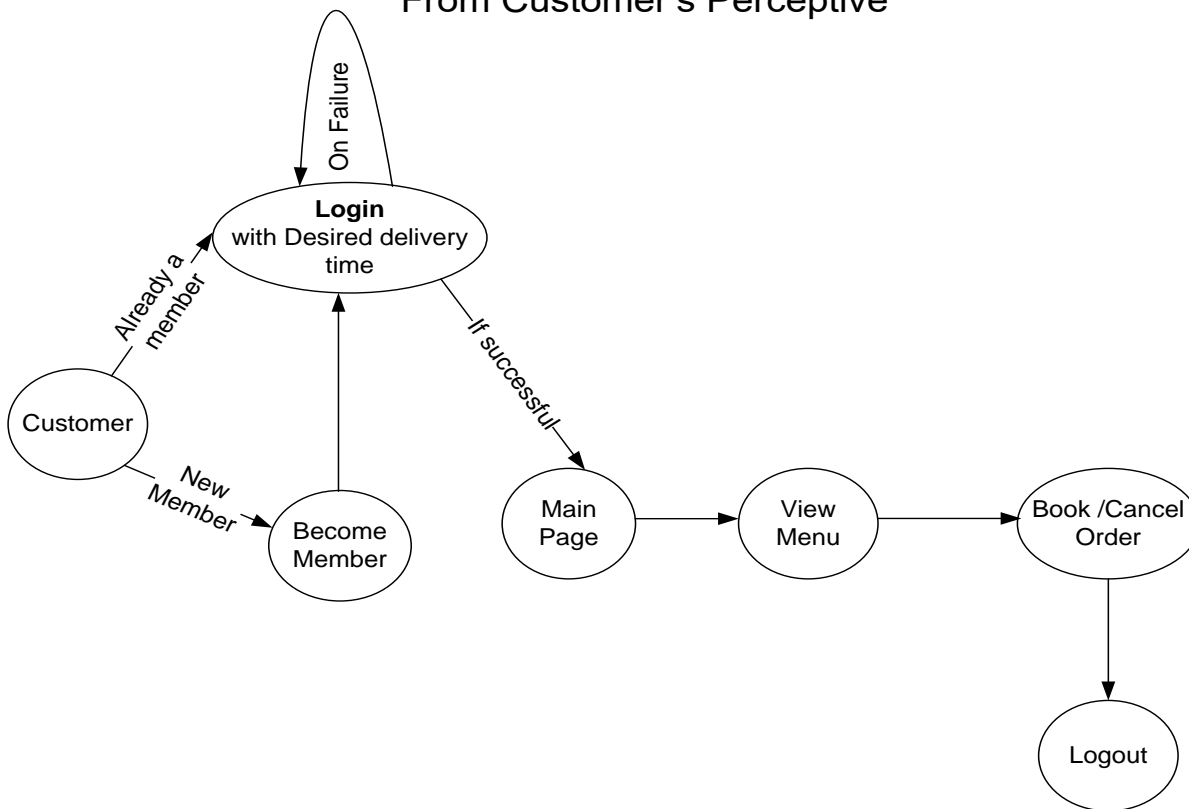
- i. Business analysis – State the business rules, business system interfaces, business function, business ownership, sponsorship and associated project budget requirement
- ii. Requirement analysis – System I/O description, user requirement definition, functional and security requirement  
Data analysis – Involve data collection process, data validation, data storage, manipulation and retrieval
- iii. Process analysis – Data/process flow analysis, process decomposition and system interfaces
- iv. Application architecture – Analyze application information structure, usability, user interface design, interaction and application implementation.

#### 4.2.3 Object-oriented design using UML

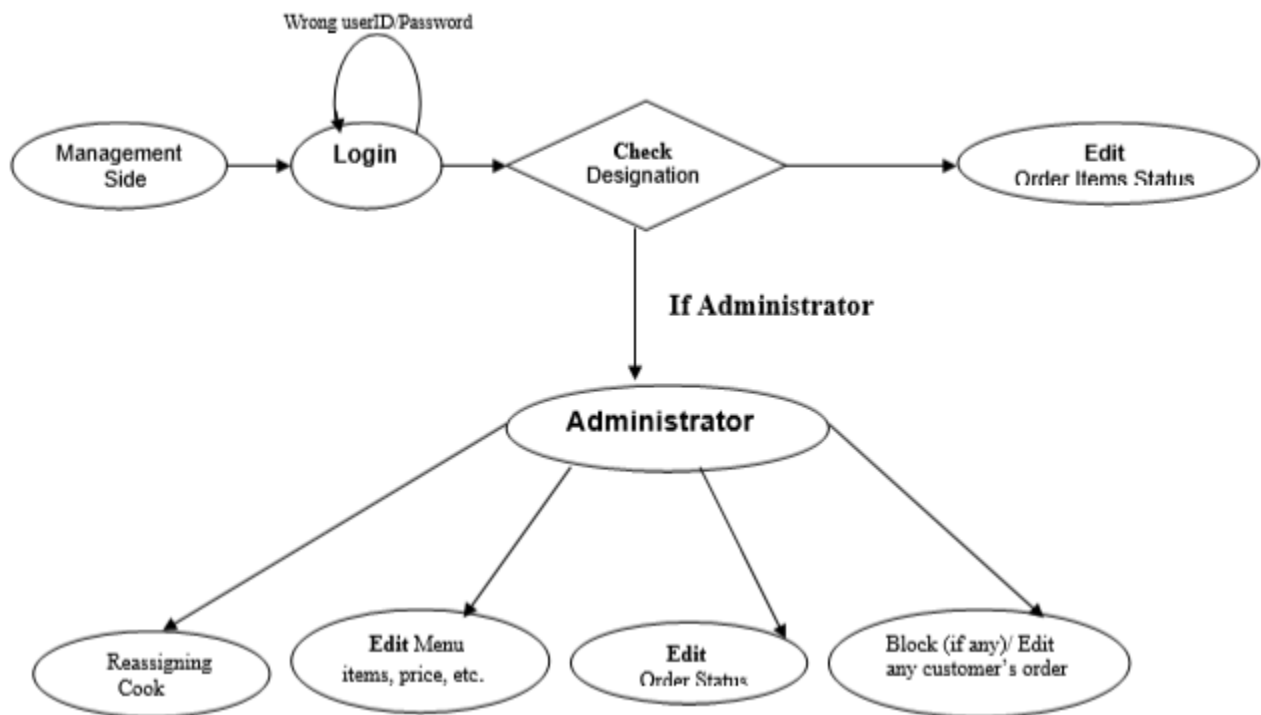
A detailed object-oriented design for the My Starbucks system will be developed. UML will be used again for the graphical representation and documentation of the design. The system will primarily concern itself with the ordering process. At its core, a customer will fill out his details an order for the items he would want. In addition, the system will allow customer to send a feedback to the store by contacting the store. Contact us functionality solves this purpose. The system will be secured against all kind of XSS attack or SQL injection with a customer' ID and password/PIN. ssword/PIN.



## From Customer's Perceptive



## From Management's Perspective





## 4.2.4 Prototyping

The Object Oriented Rapid Prototyping (OORP) method will be used to implement a limited and functional prototype for the Coffee ordering system. The prototype will be a working example of part of the system for demonstration and proof of concept purposes only. It will include web-based forms as an end-user interface with the MYSQL database.

## 5. Operational Requirements

### 5.1. Manager Specification:

A Manager shall have three Major functionalities as described below:

#### 5.1.1 Add User/ Staff Management

#### 5.1.2 View Details

##### 5.1.2.1 Order Details

##### 5.1.2.2 Customer Details

##### 5.1.2.3 Staff Details

#### 5.1.3 Delete Orders

### Manager Page



Add Users



Delete All Orders

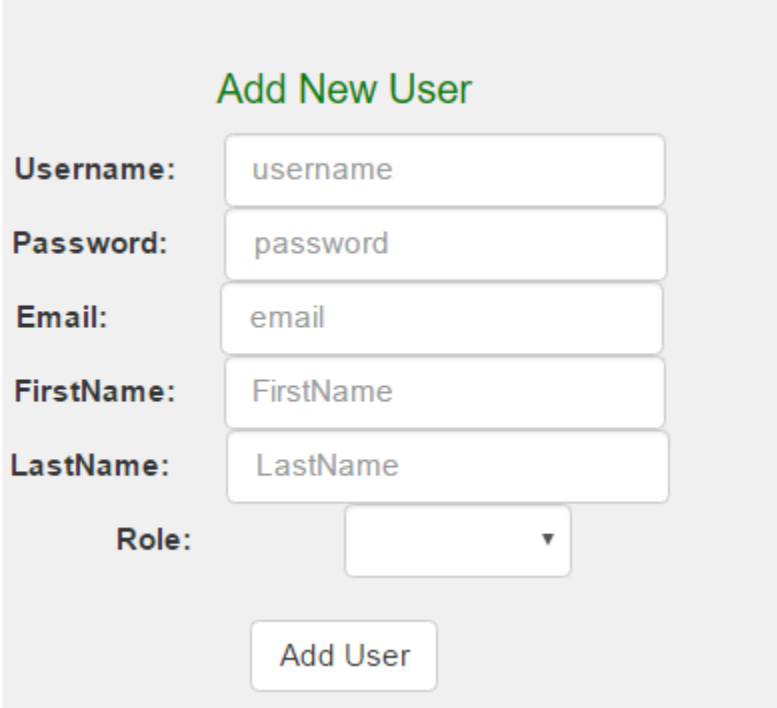


View Details

#### 5.1.1 Add User/ Staff Management

The Staff management system will be available only to manager, as the name suggests, allow manager to add waiter or another manger to his staff. The functions afforded by the staff management system provide user with the ability to, using a graphical interface:

- Add a staff member to their system, be it waiter or manager.
- Add staff member's details like Full Name, complete address.
- Assign Roles to Staff. Roles are given as Waiter or Manager. A Staff member can have both the roles as well at the same time.



The image shows a web form titled "Add New User" in green text. The form is set against a light gray background. It contains five text input fields, each preceded by a label: "Username:" with placeholder text "username", "Password:" with placeholder text "password", "Email:" with placeholder text "email", "FirstName:" with placeholder text "FirstName", and "LastName:" with placeholder text "LastName". Below these fields is a "Role:" label followed by a dropdown menu with a downward arrow. At the bottom of the form is a button labeled "Add User".

## 5.1.2 View Details

### 5.1.2.1 Order Details:

Of the three components, the order retrieval system is functionally the simplest. Like the Staff management system, it is designed to be used only by the manger, and provides the following functions:

- Manager have an option to see all the transaction happened at his store by viewing the Order details. Manager can see which customer has given the bulk orders and highly priced Items.
- He can also view that which Kind of items were bought by customer along with their quantity, the time customer placed the order, and Total amount of that order.

- The most important feature of this view is “Order Status”. This order status get updated at run time. Initial Order Status is “NEW” for each order. Once the Chef/Waiter process that order, which means once the order is ready for delivery/dine-in, This order status gets updated to “Completed”. So manager have the option to see live status of each order whether the order is in completed state or Pending state.

### Order Details

Customer Name	Menu Item	Quantity	Order Time	Amount	Order Status	
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#### 5.1.2.2 Customer Details :

This customer details view enables manger to mine its customer for future purpose. Which Customers have placed highest amount of orders in the past, can be categorized as highly valuable customers. A customer’s complete information is stored in the database and can be retrieved any time by the manger. This view shows customer’s name, Email, Contact Address, his phone number and his user id.

### Customer Details

Customer Name	Email	First name	Last Name	Phone Number	Delivery Address
Ashu	pahuja.piyush86@gmail.com	Ashish	Thakral	612	121 Vinoy Blvd , Charlotte , NC , 335001
gfhgfh	dfg	fdgfd	ff	55	gfggfg , fgf , fg , 44
Jyoti1	Jyoti@gmail.com	Jyoti	Thakral	77495335	8408 Vinoy Blvd, 1211 , Charlotte , NC , 28262
Jyoti3	jyoti.thakral.new@gmail.com	Jyoti	Thakral	1774994957	8408 Vinoy Blvd, 1211 , Charlotte , NC , 28262
Jyoti4	jyoti.thakral.new@gmail.com	Jyoti	Thakral	1774994958	8408 Vinoy Blvd, 1211 , Charlotte , NC , 28262

#### 5.1.2.3 Staff Details:

A Manager have access to view the staff members along with the role they are assigned to. This requirement ads on value not only to view exiting manpower in store, but also for new recruits. A manger can add a staff member, can assign a role and then can view staff details to verify if the new onboard employee was added successfully to the system.

### Staff Details

Staff Name	Email	First name	Last Name	Role	
Jyoti	jyoti@uncc.edu	Jyoti	Thakral	Manager	
Piyush1	pahuja.piyush86@gmail.com	Piyush	Pahuja	Manager	
Arati	arati@gmail.com	Arati	Middha	Waiter	
Ashish	Ashish@gmail.com	Ashish	Thakral	Waiter	
Pawan	pawan@uncc.edu	Pawan	A	Waiter	

#### 5.1.3 Delete Orders

Delete Orders cleans the database on a reoccurring basis. As the all the transaction are maintained in the database A backup of the same is also uploaded on Amazon AWS cloud on hourly basis. This data can provide useful insights for doing data analysis, and to advertise campaign of My Starbucks as company. Manger of the store can go back and clean up all the previous transactions at one go. This action can help in saving space and increasing response time of the website. As the data is already backed up, keeping up local instance of the data is not necessary.

1. As soon as the *Delete orders* button is pressed This screen pops up for confirmation.

### Manager Page

Delete Orders  
Confirm Delete all orders?

[Go back to Manager Page](#)

2. Manager has option to Go back and don't perform this action. But once he wants to delete the transaction, He confirms the dialog box, and All the orders in database gets deleted.

### Order Details

Customer Name	Menu Item	Quantity	Order Time	Amount	Order Status	
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## 5.2 Customer Access:

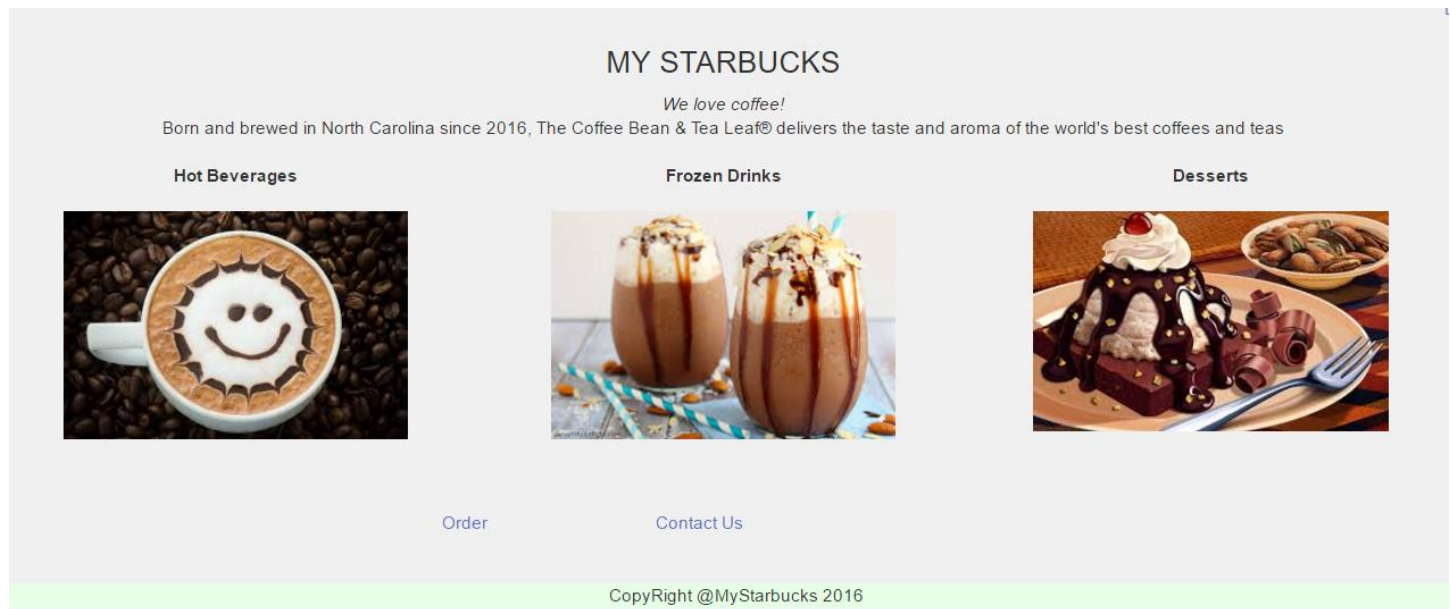
### 5.2.1 Sign up /Sign in :

Customer can use the portal, once he is logged in to the system. If he is a returning customer, he can simple login by supplying his username and password. If a user is entering first system in system, he needs to sign up, where he provides his full name, desired user name, Email and password, also the address. This address he can set as default delivery address as well if he wishes so. Given below are the screen for signup and sign-in

The image displays two user interface screens for a Starbucks application. The left screen is the 'Sign Up' form, featuring a title 'Sign Up' in green. It includes input fields for Username, Password, Email, FirstName, LastName, Phone Number, Address, City, State, and Zipcode, each with a corresponding label. A 'Sign Up' button is located at the bottom. The right screen is the 'User Login Form', with a title 'User Login Form' in large black font. It prompts the user to 'Please enter your Username and Password to continue'. It features input fields for Username (containing 'Sujit') and Password (containing 'Password'). Below these fields are two buttons: 'Login' and 'New to my Starbucks, Please Sign Up Here'.

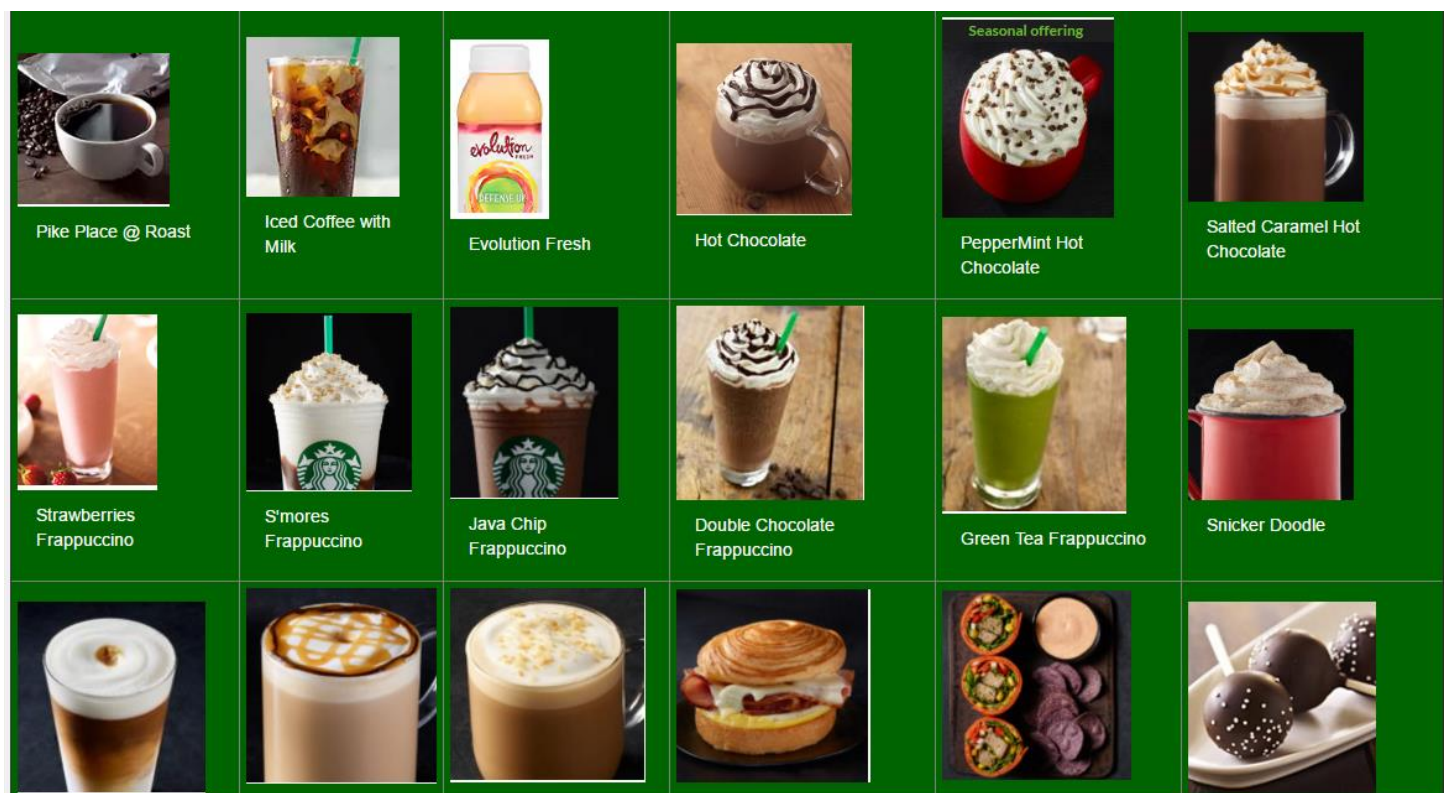
### 5.2.2 Home Page:

Once the customer has logged in, he further lands up to welcome page. Customer can select from a variety of hot beverages, frozen drinks and deserts. He can navigate to place and order or have an option to contact the store admin by clicking contact us.



### 5.2.3 Browse Menu:

After the customer, clicks order button, he lands to Menu page, where he has the option to select his choice of beverage and food item. Once the item is clicked its added to cart.



#### 5.2.4 Add / Update/ Remove Item from cart:

- Once an item is added to cart, customer have the option to add another item by pressing Continue shopping, on doing so, he is redirected to Menu Page, where he can select more menu item and add them to cart.
- A customer can update the quantity of an item, by clicking update button.
- A customer can remove an item from menu by clicking Remove Item.

### Your cart

Quantity		Description	Price	Amount	
<input type="text" value="1"/>	<button>Update</button>	Double Chocolate Frappuccino	7.0	7.0	<button>Remove Item</button>
<input type="text" value="3"/>	<button>Update</button>	S'mores Frappuccino	4.0	12.0	<button>Remove Item</button>

To change the quantity, enter the new quantity and click on the Update button.

Continue Shopping

Place Order

#### 5.2.5 Place order

Once the customer is ready to checkout, he can checkout the cart item, If he is satisfied with his cart Items , he can go ahead and confirm the order, if he is not sure, he can go back to orders page and can add, update or remove items from cart.

### Your cart

Quantity	Description	Price	Amount
1	Double Chocolate Frappuccino	7.0	7.0
3	S'mores Frappuccino	4.0	12.0

Total: \$ 19.0

Confirm

### 5.3 Chef/ Waiter Specification:

When the Chef logs on to the system, he can see all the new orders in system. So once the order is ready for pickup or delivery, he completes the order by pressing **Process Order**, Once the order is **processed**, The status of order changes to display so.

## Process Orders

### Order Details

Customer Name	Menu Item	Quantity	Order Time	Amount	Order Status	
Sujit	S'mores Frappuccino	3	2016-12-05 13:46:56.0	\$12.0	Completed	<a href="#">Process Order</a>
Sujit	Double Chocolate Frappuccino	1	2016-12-05 13:46:56.0	\$7.0	New	<a href="#">Process Order</a>

Now when the manger, opens view details, he can see which orders are processed, and which are still in pending state.

### Order Details

Customer Name	Menu Item	Quantity	Order Time	Amount	Order Status	
Sujit	S'mores Frappuccino	3	2016-12-05 13:46:56.0	\$12.0	Completed	
Sujit	Double Chocolate Frappuccino	1	2016-12-05 13:46:56.0	\$7.0	New	

### 5.6 Contact Us:

A user can contact the store management by pressing Contact us. Once the user writes his message and send it, he gets an automatic reply from Store management, Which has the format as shown in the mail snip below:



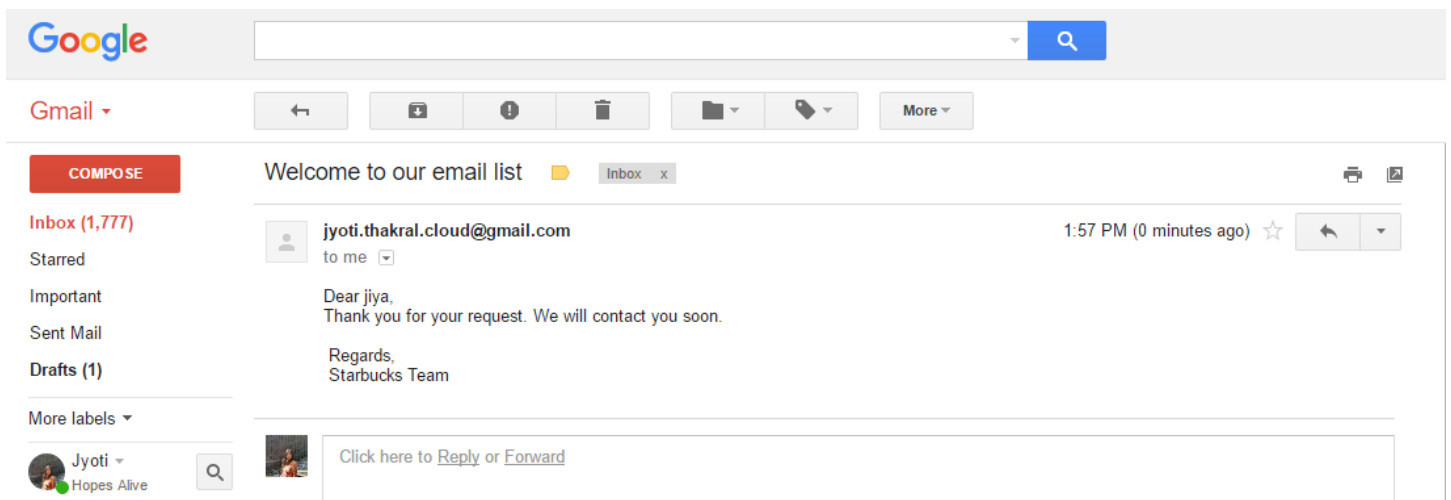
**Username:**

**Email:**

**Message:**

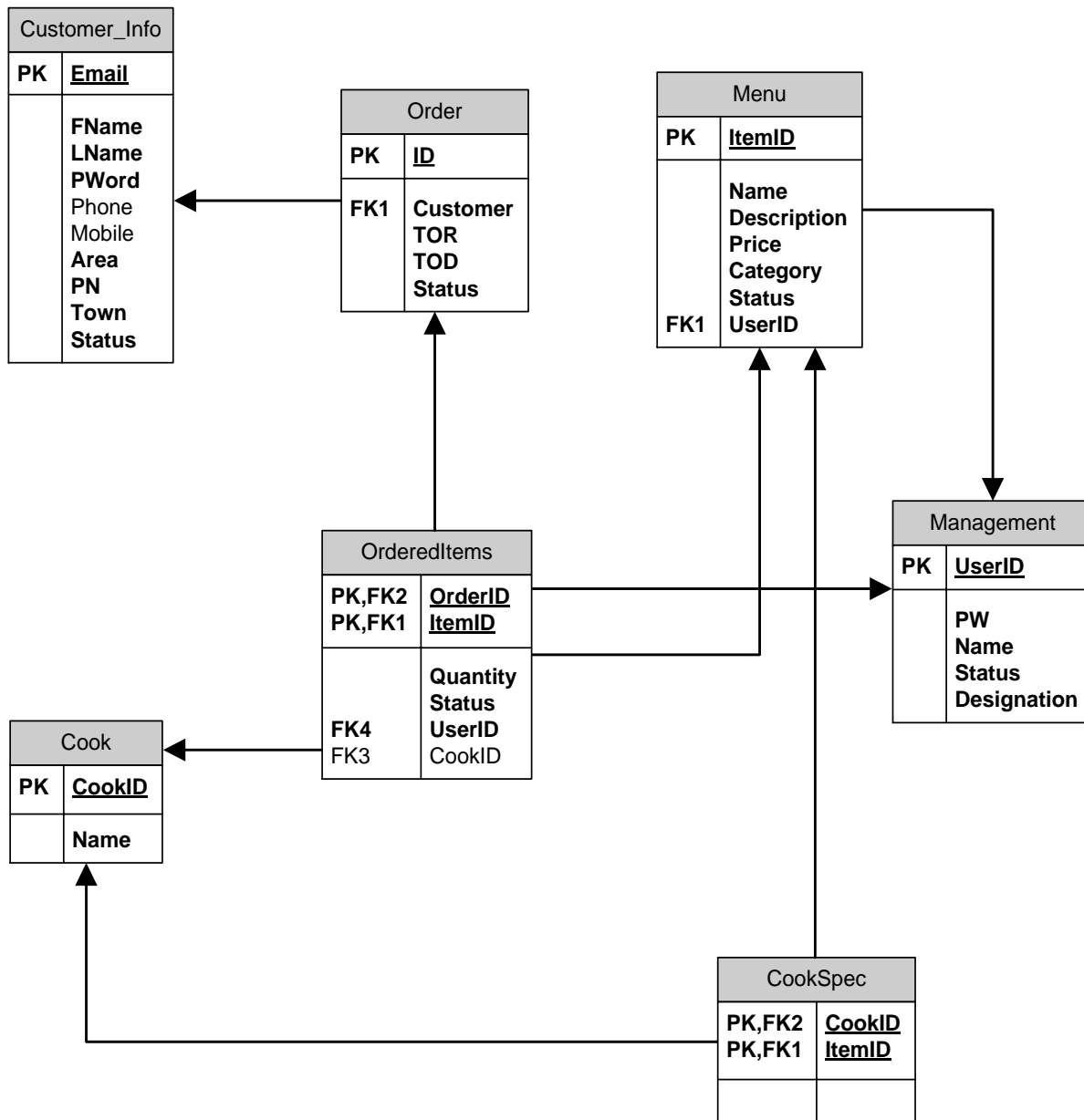
We Love My Starbucks  
Coffee. Can you please add  
Holiday Coffees to the menu

Submit



## 6. Database Design:

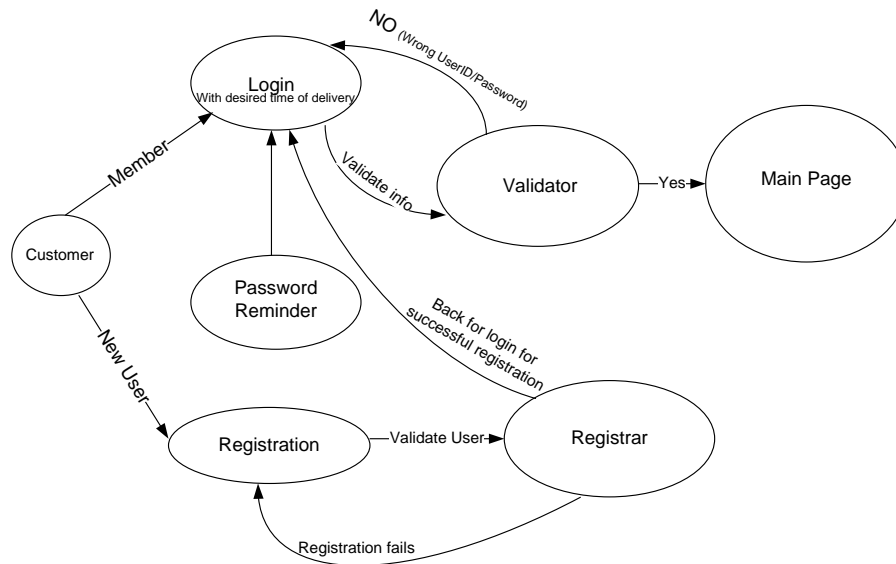
### ER Diagram for "My Starbucks"



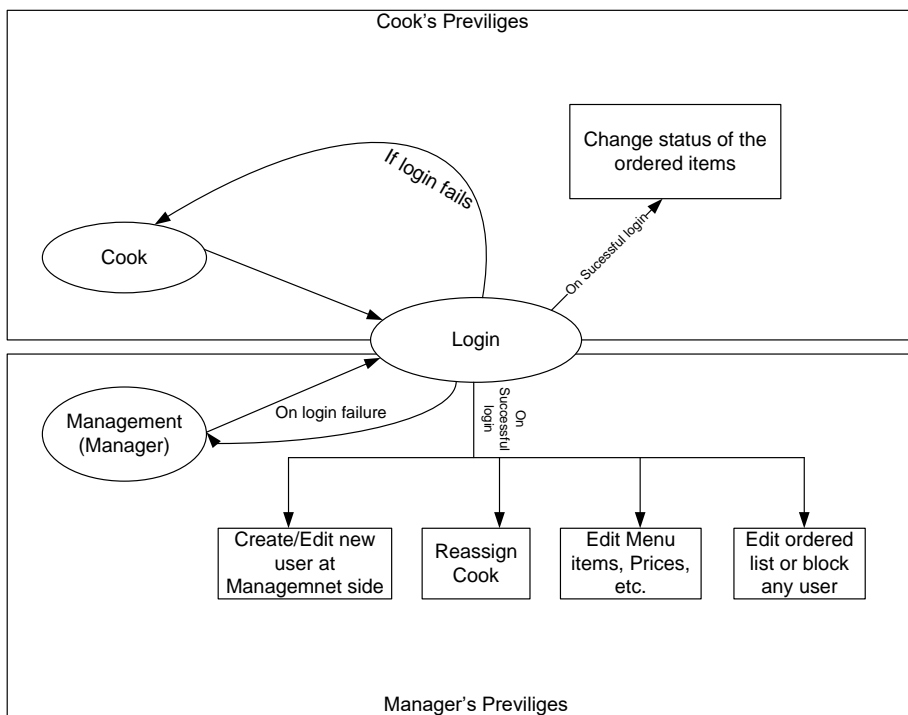
## 7. System Design

### 7.1 System Design for Customer Side

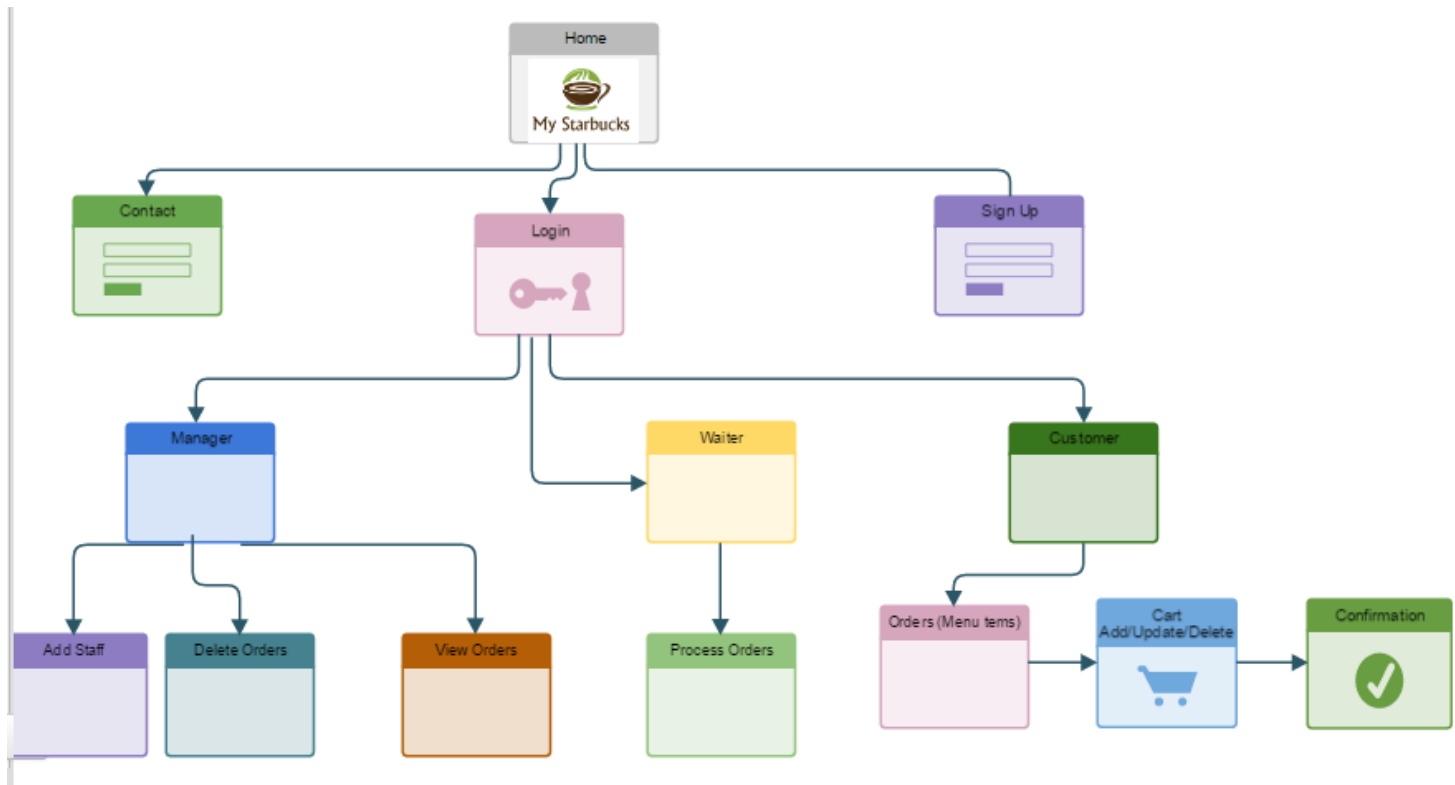
Customer Interaction



### 7.2 System Design for Management side:



## 8. Site Map of My Starbucks:



## 9. Glossary

Web application – an application, often comparable in functionality to a desktop application, which is accessed over a network, often via a web browser, rather than hosted on the user's machine

Apache2 – a very common, freely available HTTP server

XAMPP – a free and open source server package which contains, among other things, the Apache HTTP Server, MySQL, MercuryMail, and a PHP interpreter

Freeform input – input fields in which the user is not presented with a finite set of choices, but rather allowed to supply their own input (ex. textbox)

Input sanitization- pre-processing of user input to prevent malicious side-effects