

Software Requirements Specification

for

Food Delivery System

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Submitted to: Md. Musfique Anwar
course: CSE327
Section :7

27-07-2020

Contents

Revision History	1
1 Introduction	2
1.1 Purpose	2
1.2 Intended Audience	2
1.3 Intended Use	2
1.4 Product Scope	3
1.5 Risk Definition	3
2 Overall Description	4
2.1 Product Perspective	4
2.2 Features	4
2.3 User Classes and Characteristics	5
2.4 User Needs	6
2.5 Operating Environment	6
2.6 Diagram Representation	7
2.7 Constraints	7
2.8 Assumptions	7
3 Requirements	8
3.1 Functional Requirements	8
3.2 Non Functional Requirements	11

Revision History

Revision	Date	Author(s)	Description
1.0	22.07.2020	Taufiq,Shawon	Chapter 1 - Introduction
2.0	24.07.2020	Shawon,Tasin	Explaining different sortings
3.0	25.07.2020	Taufiq,Shawon,Tasin	Kleine Änderungen
4.0	27.07.2020	Taufiq	Finale Version

Chapter 1

Introduction

1.1 Purpose

The objective of this project is to allow the admin of any delivery company to find out and edit all the information of their client and delivery man. It allows the client to order their foods from nearby restaurants. And the delivery man will also be informed about their nearby orders as well as the restaurants will be notified as they need to prepare the food.

1.2 Intended Audience

Any delivery company those who want to manage their clients' record can use this project. But as we are making this project specifically for food delivery. There will be 3 intended user for this system:

- Consumers: The intended audience are those who don't want to go out or don't feel like cooking at home. Mostly the bachelors.
- Delivery man: As the delivery man will also be benefited by our system so they are also our audience. So the target audience are those who have a bicycle or bike and want to make some money doing food delivery. This will also help some of the unemployed people.
- Restaurants: Our intended restaurants will be all. But the new restaurants which are not getting enough customers or those who don't have enough room for the customers to serve will be benefitted the most. Moreover, food sells will be more because of using our software.

1.3 Intended Use

Without any management system, it is a tedious job for any organization to keep track of all the users information.

- In this project, Users can order food faster.
- The admin will be able to monitor the user information and can provide offers or discount to specific customers

1.4 Product Scope

The Food Delivery App is a medium through which customers can choose the restaurant of their choice and order specific food. Potentially good quality restaurants will be connected through this and customers will order food as per their choice.

Our goal is to making a web application for a company to spread good quality food among the buyers and the customer will get the food of their choice without any hassle at home. In this case, using the app will benefit the company will increase employment by hiring a delivery man and increase the sales of restaurants.

1.5 Risk Definition

As we all know, no system is 100 percent safe. So, we need to be aware of any risky situation. The Potential risks this type of application may have are given bellow:

1. Overloading
2. Server Crash
3. Affected by Hackers
4. Minor Bugs in system that may cause severe problem in the long run.
5. Database using mistake

But our App has ensured the minimal risk possible as we have:

1. Avoided recursive functions and nested loops.
2. Avoided string concatenation in loops.
3. Released resources.
4. Avoided instantiations inside loops.
5. Avoided throwing exceptions as much as possible as this causes slow down.
6. Used caching to improve performance.
7. Disabled tracing to get the max performance.
8. Encrypted all the data in transit using https.
9. Ensured that up-to-date and strong standard algorithms or ciphers are used
10. Disable caching for responses that contain sensitive data.

Chapter 2

Overall Description

2.1 Product Perspective

The product is designed for a specific purpose for a specific group of people and it needs to fulfill that requirement and also the system itself is a theoretical approach, with more data it can be determined whether it will be effective. It's a web base application system. This food delivery system will provide simple mechanism. User, delivery boy, and also the admin who will use. The major components are:

- User account: This system allows the user to create their accounts in the system. Viewing food from home and check the ratings of restaurant
- Search: search is simply local search so that users can find their desire food on time and also the restaurant.
- Discounts: this application can generate some random coupon of discount so that users will attract in it.
- Location: this system track user address automatic so that users won't face any problem for delivery address.
- Support and Help: this application have support option for user and delivery boy. When they face some problem they can ask for help in it.
- Notification:
 1. The Customer will be notified about any discounts
 2. The restaurants will be notified about the orders
 3. The Delivery man will be notified about the location of Restaurant and customers.

2.2 Features

Features for Customer:

Sign up:

New customers will create an account through it. Which will allow you to login later with a password. There will be an option to sign up using Google, Facebook, etc.

Personal Profile:

Once signed up, a profile will be created. You can login to the profile using only password and all history will be saved there. Card information system can be kept for paying the bill.

Restaurant Search:

Only those restaurants that are close to the consumer will be displayed in the app. The customer will be able to see the menu of food by selecting the menu of the restaurant of his choice and order the food as per his choice. There will be ideas about food prices, offers, etc .

Order:

This is the most important feature in this app. Where consumers will be able to add and delete items of their choice.

Payment:

Once the item is selected, the payment option will appear and will be displayed on an investment screen. If the consumer wants, he can make payment online or there will be cash on delivery system.

Real-time tracking:

Customers can see where their order is currently through real-time tracking. When the order is being prepared, the location of the delivery man can be known through everything.

Features for Restaurant:

Content Management:

Special offers and important information including food menu, ingredients, images and prices will be in the application. Restaurant authorities can update them if they want. Communication:

You can pay if the restaurant authorities want or you can contact the customer directly. This is very important to check if the delivery man is ready to pick up.

Features for Delivery man:

Sign up /Login:

Delivery Man needs to sign up. Be able to login to the past. You must submit the required documents when signing up.

Order Receive:

The delivery man can receive the order as per his requirement. Basically, the delivery man can work independently whenever he wants.

Payment:

As soon as each order is delivered, a certain amount of payment will be credited to the Delivery Man's account.

2.3 User Classes and Characteristics

User Classes and Characteristics:

User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. We got some physical characteristics and some system characteristics. In physical characters we have User, Delivery boy, Restaurant and system characters Server and Database administrator and Employee administrator.

Physical Characteristics:

User:

User are those who use this application for get some food without any harassment. This application will save time of cooking for the user. They can order food any time from nearby restaurants.

Delivery boy:

Delivery boy are those who deliver the food on time to the customers or users. They can earn some money with this application. They can earn some bonus by crossing the daily basis limit.

Restaurant:

Restaurant are like food factory. They hire a lot of cook so that they can make food on time. For this application restaurant grow their business a lot.

System characteristics:

Server and Database administrator:

For food delivery application we need a server for our database. Server main focus is Data management or resources management. Today's most used server is Clint server model. A database server is a server which uses a database application that provides database services to other computer programs or to computers, as defined by the client server model. Database main objective is manage this applications data.

Employee administrator:

For this administration employees need ID and pass so they can access to the database. If any employee do access in database system will recorded their activists and if they want to change their will be a confirmation or verification needed. So that the data base will not harmed at all. And all the information will encrypted so no one change it easily.

2.4 User Needs

The first thing to keep in mind in the food delivery app is the news of the user. Customer satisfaction and the app must be thought to be very easy to run. In addition, some more important things to look at -

1. When ordering food, the nearest restaurants around the customer will be seen in the news feed.
2. Good quality restaurants will be connected to the app.
3. Quality of food and testing will be confirmed.
4. In case of any problem, the customer can contact the admin panel. If there is any problem in the delivery of food, there will be a refund system.
5. Good use of delivery man will be ensured.
6. Provide good quality food packaging.
7. Discount offer.
8. App will be user friendly and supported for any device.
9. App size will be small.

2.5 Operating Environment

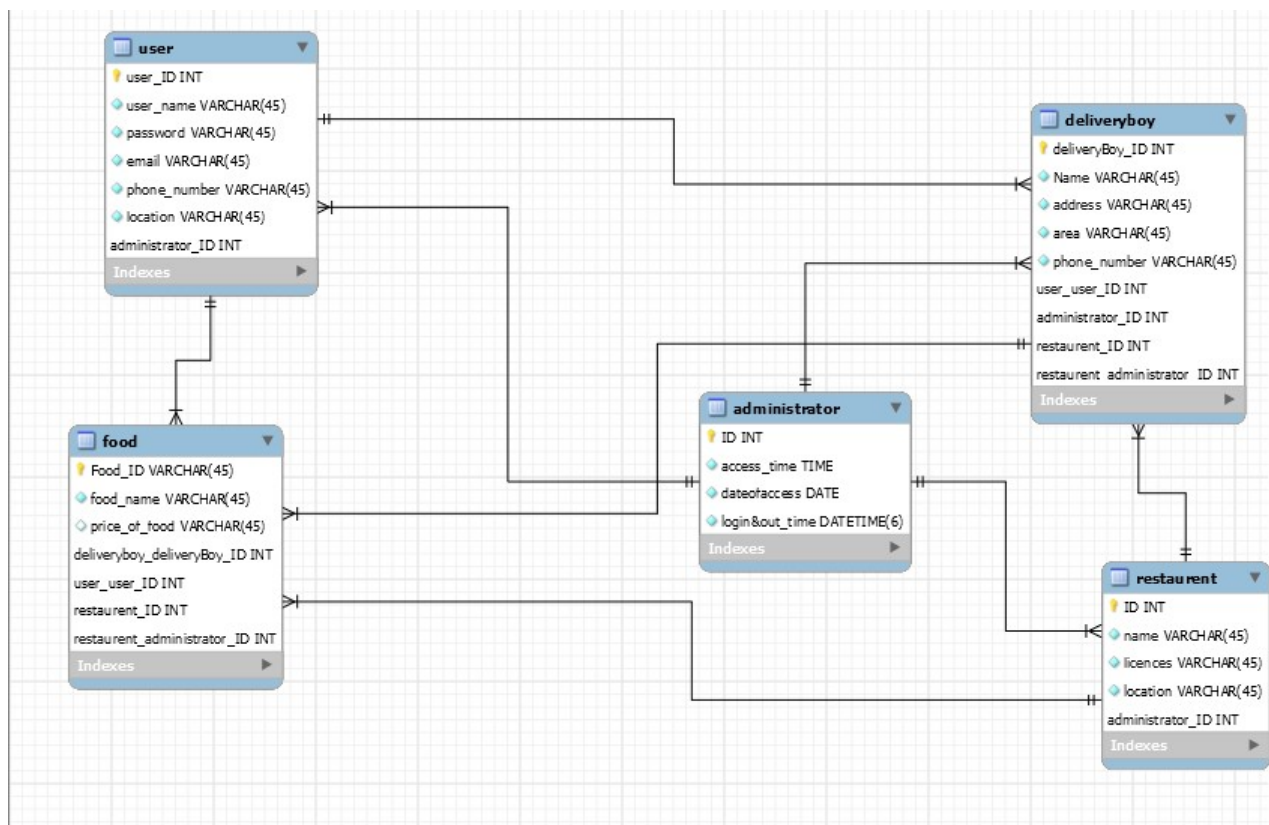
1. Operating System:

It can run on any modern OS with an internet connection because it's a web application like Ubuntu, Linux Mint, Solus, Debian; Windows 7,8,10

2. Hardware Platform:

we are also planning to create mobile application on the road. Then it will work in Android using devices which has minimum memory requirement of 512 MB RAM

2.6 Diagram Representation



2.7 Constraints

1. On the road if we end up making the mobile app, it may get tricky to integrate the mobiles database with the apps database so we have decided it would be wise to use rest API from the beginning.
2. Giving the notifications to the Customer, Restaurant and Delivery man because it's a web application we don't expect them to be logged in at all times, we have decided to send email as notifications but that's not an effective way so the best way down the road would be to notify with the help of an app, either create a mobile app from scratch or convert web application into an app using android studio.
3. We have to complete our project within 3 months. It is very challenging. Because we have to learn many things than we will apply.
4. We must use Version Control System for this project.

2.8 Assumptions

1. We assume our users are from Bangladesh.
2. We assume users knows English well.
3. We assume user will use common browser, which can view our website properly.
4. We assume they have internet connection enabled.

Chapter 3

Requirements

Requirements falls mainly under two category. The functional requirement is describing the behavior of the system as it relates to the system's functionality. The non-functional requirement elaborates a performance characteristic of the system. Typically non-functional requirements fall into areas such as: Accessibility. Capacity etc.

3.1 Functional Requirements

Use case 1 add Restaurant:

Actor: admin

Scenario:

Admin can add restaurant to the system. User will see the restaurant and their rating.

Exception:

Page not found

No database connection

Precondition:

Admin must be accessed the URL of add restaurant from the browser.

Use case 2 remove Restaurant:

Actor: admin

Scenario:

Admin can remove restaurant to the system. If they are inactive for long time or bad service.

Exception:

Page not found

No database connection

Precondition:

Admin must be accessed the URL of remove restaurant from the browser.

Post Condition:

Admin successfully removing the restaurant.

Unsuccessful removing the restaurant.

Use case 3 add Delivery man:

Actor: admin

Scenario:

Admin can add delivery man so that the food will be delivered one place to another.

Exception:

Page not found

No database connection

Precondition:

Admin must be accessed the URL of add delivery man from the browser.

Post Condition:

Admin successfully added the delivery man.

Unsuccessful adding the delivery man.

Use case 4 remove Delivery man:

Actor: admin

Scenario:

Admin can remove delivery man. When they served our customer badly or too many negative reviews.

Exception:

Page not found

No database connection

Precondition:

Admin must be accessed the URL of remove delivery man from the browser.

Post Condition:

Admin successfully removed the delivery man.

Unsuccessful removed the delivery man

Use case 5 add Food:

Actor: restaurant

Scenario:

Restaurant can add food. If food was finished it will automatically show to the customer or user that food 'SOLD OUT'

Exception:

Page not found

No database connection

Precondition:

Restaurant must be accessed the URL of add food from the browser.

Post Condition:

Restaurant successfully add food.

Unsuccessful add food.

Actor: User

Scenario:

User can see food. And order it through this application If food was finished it will automatically show to the customer or user that food 'SOLD OUT'

Exception:

Page not found

No database connection

Precondition:

User must be accessed the URL of add food from the browser so that they can order it from the browser.

Post Condition:

User successfully order the food. Unsuccessful order.

Use case 6 remove/cancel Food:

Actor: restaurant

Scenario:

Restaurant can remove food. Not available.

Exception:

Page not found

No database connection

Precondition:

Restaurant must be accessed the URL of remove food from the browser.

Post Condition:

Restaurant successfully remove food.

Unsuccessful to remove food.

Actor: User

Scenario:

User cannot see food through this application

Exception:

Page not found

No database connection

Use case 7 payment:

Actor: User

Scenario:

User can pay in many ways. There will be cash on delivery, by card like master card, visa card, credit card etc.

Also local payment system can be added for the User. So that user will not think about the payment any more.

Exception:

Page not found

No database connection

Precondition:

User must be add their payment system in browser

Post Condition:

User successfully added the payment system.

Unsuccessful to add payment system in browser.

3.2 Non Functional Requirements

This part requires to be extra careful on the small details of the project such as:

- Sign-Up User name:

1. The user name must have more than 5 characters.
2. The users will log in with their individual IDs.
3. The field cannot be empty when login

- Sign-Up password:

1. The passwords of the users should be alphanumeric
2. There cannot be any empty field
3. The password must be between 4 to 10 characters
4. The password cannot be the username or user ID

- Sessions:

1. When inactive for a long time, the user will be logged out automatically
2. The page will reload itself every 5 minutes

- Cookies:

1. Cookies implemented for better User Experience
2. Customers, Restaurants and Delivery man will have different home page versions
3. Cookies will be implemented in login

Other than all of those, we have to take care of the following aspects:

All of the application data will be store in a Sql database and therefore a Sql Database must also be installed on the host computer. This software is freely available and can be installed and run under most operating systems. The server hardware can be any computer capable of running both web and database servers and handling the expected traffic. For a small scale restaurant that is not expecting to see much web traffic,an average personal computer may be appropriate. Once the site starts generating more hits, though, it will likely be necessary to upgrade to a dedicated host to ensure proper performance. The exact cutoffs will need to be determined through a more thorough stress testing of the system.