Norm's

PIZZA

Electronic Restaurant Order and Delivery System
Software Requirements Specification
For Online Restaurant System

Version 1.0

Revision History

Date	Version	Description	Author
03/Mar/22	1.0	Use–Case Model Survey, & Supporting Information	Azwad Shameem
03/Mar/22	1.0	Overview & Use-Case Reports	Dawa Sherpa
03/Mar/22	1.0	Supplementary Requirements & Assumptions and Dependencies	Jeevan Bastola
03/Mar/22	1.0	Scope & References	Ali Syed
03/Mar/22	1.0	Purpose, Definitions, Acronyms, and Abbreviations & Supporting information.	Nishanth Prajith

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Software Requirements Specification

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed description of the Online Restaurant System (Norm's Pizza), and its various functions from order processing to delivery, and complaint handling. This report will include an overall description, purpose, and explains the development concepts of the project. This report also consists of the use-case model for the project, use-case report, system requirements, specifications, and any assumptions or dependencies that were used or made throughout the project's entirety. Finally, we hope this document will serve as a guideline for how we approached the development of this application and to better understand the application along with its functionality and design elements.

1.2 Scope

The software will be an online restaurant that can be visited by guests, registered customers, VIP customers, chefs, delivery personnel, managers. The system will be structured to provide users an intuitive way to buy food. This web based application will be designed to provide an ease of use shopping experience that provides the customers access to purchase a variety of dishes. Some features that will provide ease of use to our customer is the homepage with suggested items and popular dishes recommendations, the search bar to search for specific dishes, and user profiles for all members which allows for users to keep track of their activity on the service. Members include chefs, delivery people, and customers, and managers. The system has accountability for customers, chefs, and delivery people as the customer may send a complaint or compliment about the chef or delivery person and vice versa. The system also implements a warning system where there are consequences for misbehavior. Because of the variety of users within the service, every different group of users will have their own unique user experience. Functionalities for different users can be seen in the use case model model survey.

1.3 Definitions, Acronyms, and Abbreviations

Terms	Definitions
Google Cloud Firestore	Cloud Firestore is a flexible, scalable database for mobile, web, and server development from Firebase and Google Cloud.
ReactJS	React is a free and open-source front-end JavaScript library for building user interfaces based on UI components. It is maintained by Meta.
Javascript (JS)	JavaScript is the programming language of the Web along with

	HTML and CSS. JavaScript can be used for Client-side developments as well as Server-side developments.
Visitor	Regular user, not a registered user who interacts with the online restaurant system. Only limited to searching menu items and not ordering food.
Ordinary Users	Standard system users, such as registered customers and V.I.P customers.
Privileged Users	Non-customer related users such as the manager, delivery person, and chef/cook.

1.4   References

1. IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

2. Google. (n.d.). Firebase documentation. Google. Retrieved from https://firebase.google.com/docs

3. Meta and Community. (n.d.). React.js Documentation. Retrieved from https://reactjs.org/docs/getting-started.html

1.5   Overview

The use-case and capabilities of the software as a whole are discussed in the following sections of the documentation. The use-case model survey, which includes concise descriptions of all use cases and actors, as well as relevant diagrams and relationships, is included in the Overall Description section. The use-case reports and supplemental requirements, which correspond to both functional and non-functional requirements, are explained in the Specific Requirements section.

2. Overall Description

2.1 Use-Case Model Survey

Users	Role
Visitor	Anyone who is visiting the website and is not registered.
Registered Customer	A registered customer is a user who has registered with their name and email.
VIP	A VIP is a user who has spent more than $100 or more than 5 orders as a registered customer without outstanding complaints and will now receive benefits.
Chefs	This is an employee who decides the menus and cooks the dishes.
Delivery personnel	This is an employee for the delivery that bids for the delivery of each sale and delivers the food to the customer.
Manager	This is a higher level employee who decides on which delivery personnel to deliver and confirms the registration of new registered customers.

Homepage :

> **Searchbar** : This is a feature that is accessible to anyone visiting the page. They can search for available dishes in Norm's Pizza. These searches will show up on the homepage.

> **Popular dishes** : This is a feature that will show the top 3 most popular dishes on the homepage to the customer..

> **Highest rated dishes** : This is a feature that will show the top 3 top dishes on the homepage to the customer.

> **Regular dishes** : This is a feature that will show the regular dishes on the homepage to the customer.

> **Special dishes** : This is a feature that will show VIPs special dishes they can purchase on the homepage.

Login Page:

Register : This is a function intended to give users the right to become registered customers. The normal use case for this page is to allow visitors to use their name, email and password to create an account that will be registered as a registered customer. Special cases include a user who is already a registered customer wanting to make another account

that is considered as a registered customer. Another special case is a user being on the blacklist and trying to make a new account that is registered as a registered customer as a workaround to have their original account on the blacklist.

Login : This is a function intended for registered customers, VIPs, chefs, delivery personnel and the manager to login into their respective accounts. Each account will have their own permissions depending on what type of account they login to. The normal case for this page is that the user will login into their account with no issue. The special case for this page is that the user does not put in the right email or password and will lead to them getting a wrong credentials message.

Account Management :

Registered User / VIP user : This is the function where registered customers and VIPs can view their orders and comment on their orders. VIPS and registered customers can complain about their past orders. In addition the users can add money to their wallet on this page.

Chef : This is the function where chefs can publish dishes. This is where the chef can view the orders they have to cook and they can also complain about past orders.

Delivery personnel : This is the function where delivery personnel can bid to deliver for every order. This page also shows the delivery personnel's deliveries and they have the ability to complain about past orders.

Manager : This is the function where the manager can accept the registration of new registered customers. In addition, the function allows the manager to choose which person to assign delivery to depending on the bids and if they don't choose the cheaper one they can put their reason. Lastly, the function also allows the manager to issue warnings to employees.

Complaints Page:

File Complaints : This is the function where the registered customer, VIP, chef and delivery personnel can file their complaints about the order.

View Complaints : This is the function where the registered customer, VIP, chef and delivery personnel can view their complaints.

Dispute Complaints : This is the function where the registered customer, VIP, chef and delivery personnel can dispute their complaints.

Manage Complaints : This is the function where the manager make their decision on the complaint and issue a warning to whomever needed.

Purchase Pages :

Cart : This is a function that allows users to look at the food they added to their cart and proceed to purchase the food. The normal case is that a logged in user will proceed to the checkout page. The special case is that the user is not logged in and they will be given a denial message to log in first.

Checkout Page : This is the function that allows the user to see the price and quantity of each individual dish and total price of all the dishes they are ordering. This page allows the user to then choose the method of obtaining the food which is either pickup or delivery.

Purchase Page : This is the function where the user can finalize their purchase and confirm the details of their order. The normal use case for this is where the user has enough money in their wallet and they can simply purchase the food. The special case for this page is where the user does not have enough money in their wallet, which will send them a denial message explaining that they do not have sufficient funds in their wallet.

2.2   Assumptions and Dependencies

The dependency of this project is that we will use fake information for the dishes. In addition we will be relying on a Google Firebase Database for storing and updating our information. To add on we also need React JS libraries to ensure our code runs but also talks seamlessly with the cloud database. One assumption we are making is that when the customer selects the 'pick up' option the order is automatically delivered. Another assumption is that the delivery personnel are honest and that when they confirm delivery of the order it is assumed to be delivered. However, there is a feature for the customer to complain if the order is not actually delivered.

3. Specific Requirements

3.1 Use-Case Reports

[Visitors Use Case]

Use-Case : Apply to be registered customers

Descriptions : Visitors can apply to be registered customers, they will have to be approved by the Manager.

Use-Case : Browse the menu

Descriptions : Visitors can browse the menu and look at the dishes

[Registered Customers and VIP Customers Use Cases]

Use-Case : Browse the menu

Descriptions : Registered customers can browse the menu and add to their cart. If they are VIP customers they can also see special dishes (chef specials)

Use Case : Order food

Description : Registered Customers can order any of the food options available either for pickup or delivery. If they are VIP customers they will receive 5% discount of their ordinary orders and 1 free delivery for every 3 orders. VIP customers also have access to specifically developed dishes (a.k.a chef specials).

Use Case : Rating orders and Posting complaints/compliments

Description : Registered Customers can rate and post complaints/compliments on the food they ordered to the chef of that food and if the order was delivered they are also allowed to rate and post complaints/compliments on the delivery personnel about their delivery. Rating will be from 1 star to 5 stars. VIP customers' complaints/compliments are counted twice as important as ordinary ones.

Use Case : Discuss about chefs/dishes/delivery personnel.

Description : Registered Customers can start/participate on a discussion topic on chefs/dishes/delivery personnel.

Use Case : Dispute Complaints

Description : If a complaint is made about a registered customer or VIP customer, they have the right to dispute the complaint.

Use Case : Deposit money

Description : Registered customers are allowed to deposit money to the system. They do this by going to their profile and adding to their wallet. Then they will have to provide the card number and the amount of money they would like to deposit to their amount (max amount is $100).

Use Case : VIew Past Purchase History

Description : A registered custom or VIP customer can view their past purchase history. Including the total cost of the order, as well as see the review they left for that order.

Use Case : Make a purchase

Description : A registered or VIP customer can make a purchase by adding some items to their cart. During the checkout process they will need to ensure that they have enough money in their wallet if they do not they will be given a warning. In addition, they will also be given the choice of the type of delivery, "Pick-up" or "Delivery" which they can select as per their convenience.

[Employees Use Cases (Manager, Chefs, and Delivery personnel)]

Use Case : Create dish

Description : Chefs are allowed to independently create dishes and decide on the menus.

Use Case : Post complaints/compliments about Customers

Description : Delivery personnel and chefs are allowed to post complaints/compliments about customers to whom they have delivered food.

Use Case : Bid to deliver

Description : Delivery personnel will compete to deliver orders by bidding.

Use Case : See all orders

Description : Managers will be able to see all the orders placed in the past and the present and their current status (is it delivered or not?)

Use Case : See all the delivered orders and the orders for delivery

Description : Delivery personnel will be able to see all the orders they have been assigned for delivery and their current status. In addition, they will also be able to see all the orders they have delivered in the past.

Use Case : Assign orders to delivery personnel

Description : Managers will assign orders to delivery personnel depending on the bidding results. In general, the one with the lowest delivery price is picked; if the one with the higher asking price is chosen, the manager should justify his decision with a memo in the system.

Use Case : Dispute Complaints

Description : If a complaint is made about a chef/delivery personnel, they have the right to dispute the complaint.

Use Case : Process Customer Registrations

Description : Managers approve/reject customer registrations.

Use Case : Remove Customers

Description : Managers are allowed to kick customers out of the system. Customers can also quit the system. In both cases managers will clear the deposit and close the account. Kicked-out customers will be on the blacklist of the restaurant and won't be able to register anymore.

Use Case : Handle Customer Comments and Delivery Personnel Comments

Description : Managers look at customer comments and delivery personnel comments then decide if any action should be taken. Managers make the final call to dismiss the complaints or give warnings and inform the impacted parties.

Use Case : Manage Chefs and Delivery Personnel

Description : Managers are allowed to hire/fire/raise/cut pay for chefs and delivery personnel.

3.2   Supplementary Requirements

Register: To become a registered customer, a visitor must first create an account with a unique valid email address. If the email address is associated with another account, a refusal message will appear, stating that the email address is already in use.

Submit Purchase: A customer who is registered can make an order using money deposited to the account from customers debit/credit card. The purchase is moved to the delivery subsystem. If the client has enough money in the account for the order, the order is successful otherwise an error message is displayed telling the customer to deposit more money to the account and a warning is given to the customer for their negligence.

Accept Delivery: A manager can accept the delivery personnel based on their individual bids. If the winning person's bidding price is not the lowest, the manager should provide justifications about their choice. If the delivery personnel did not deliver for the past 5 orders they get an immediate warning.

File Complaint: A registered user can file a complaint about purchased items, chef and delivery personnel in the complaints page. Users have a chance to dispute the complaints and the manager will decide in the end if the complaint is valid and decides if the warning should stay or not.
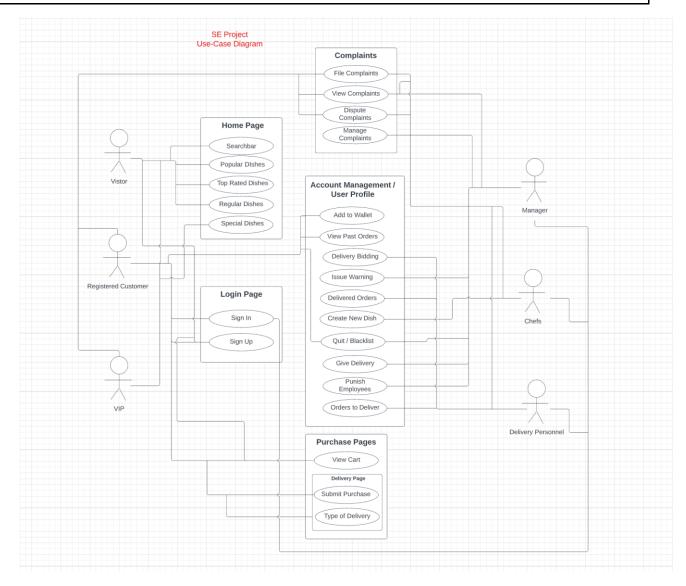
Blacklisted customers: A suspended customer will be informed by email that their account has been suspended and the money has been refunded to their bank account.

3.3   Supporting Information
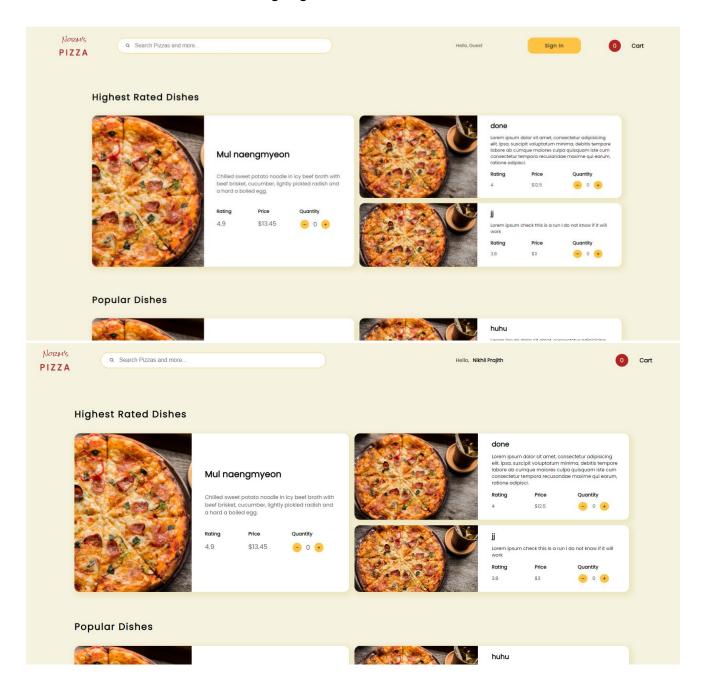
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Use Case Diagram

https://lucid.app/lucidchart/7a958fd8-750a-4804-8577-
18d7f9690bab/edit?invitationId=inv_cfd7c00d-b30f-4d1d-94f2-19a057488916

</div>

SE Project
Use-Case Diagram

Complaints
- File Complaints
- View Complaints
- Dispute Complaints
- Manage Complaints

Home Page
- Searchbar
- Popular Dishes
- Top Rated Dishes
- Regular Dishes
- Special Dishes

Account Management / User Profile
- Add to Wallet
- View Past Orders
- Delivery Bidding
- Issue Warning
- Delivered Orders
- Create New Dish
- Quit / Blacklist
- Give Delivery
- Punish Employees
- Orders to Deliver

Login Page
- Sign In
- Sign Up

Purchase Pages
- View Cart
- Delivery Page
  - Submit Purchase
  - Type of Delivery

Vistor

Registered Customer

VIP

Manager

Chefs

Delivery Personnel

The Landing Page of the Norm's Pizza Website

The User Profile Page

The Login and Sign Up Page

The Manager Profile Page

The Checkout Page