Software Requirements Specification

for

FOOD ORDERING SYSTEM

Version 1.0 approved

Prepared by;

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Revision History:

Name	Date	Reason For Changes	Version
All Team Members.	09-09-2022	No changes, initial version of the project, developed by team members.	1.0

1 INTRODUCTION:

The following section provides an overview of the derived Software Requirements Specification (SRS) for the subject Food Ordering System (FOS). To begin with, the purpose of the document is presented and its intended audience outlined. Subsequently, the scope of the project specified by the document is given with a particular focus on what the resultant software will do and the relevant benefits associated with it. The nomenclature used throughout the SRS is also offered. To conclude, a complete document overview is provided to facilitate increased reader comprehension and navigation.

1.1 Purpose:

The purpose of this SRS is to outline both the functional and non-functional requirements of the subject FOS. In addition to said requirements, the document also provides a detailed profile of the external interfaces, performance considerations and design constraints imposed on the subsequent implementation. It is the intention that the presented set of requirements possesses the following qualities; correctness, unambiguousness, completeness, consistency, verifiability, modifiability and traceability. Consequently it should act as a foundation for efficient and well-managed, Project completion and further serve as an accurate reference in the future.

1.2 Intended Audience and Reading Suggestions:

- The primary audience of this SRS document will be the development team employed to implement the specified FOS. It will not only provide an extensive capacity for project planning and progress assessment but it will further assist with developer/stakeholder interactions.
- The secondary document audience comprises the stakeholders of the project, that is, restaurateurs and Cloud kitchen owners. To this audience group, this SRS should convey and confirm the required functionality and represent a contractual agreement between the involved parties.
- The professors who would review the document.

1.3 Scope:

Nowadays everyone is having a busy schedule whether it is urban areas or rural. But talking specifically about the urban areas and deeply about the big cities, people out there are so busy in their life that they don't get enough time to have their meals properly. These days women are no less than men, in any field. So, in big cities even wives are working women, therefore mostly the small families manage to have their food ordered from somewhere, as

they lack time. Not only this is the case, if we talk about the children in the modern era, they like only fast food or something from the outside. But they ignore eating homemade meals.

So, the food ordering system these days has one of the fastest-growing markets, though being a new idea. In this project, we have developed something like the same to learn from and serve the nation in a much better way possible. Nowadays, people are more regular to dine-in at the restaurant for their meals. The online food ordering system provides convenience for the customers that are nothing special but the general busy people of the society. It overcomes the demerits of the manual hotel or mess system and the old-fashioned queuing system. Therefore, this system enhances the speed of getting food on a person's plate and the quality and manner of taking the order from the customer. It provides a better communication platform. The user's details are stored using electronic media. The online food ordering system provides the menu online and the customers can easily place the order by just clicking the mouse or by touching a button on their smartphones.

Also, with the food ordering system online, people can easily track their orders, and the admin can maintain the customer's database and advance the food delivery system. This food ordering system allows the user to select the desired food items from a list of available menu items provided by the local hotel or restaurant. The user can place orders for the food items of their like from the list. The payment can be made online or pay-on-delivery system. The user's details are maintained confidentially because it maintains a separate account for each user. An id and password are provided for each user. And several encryption techniques have also been used on the server-side to protect the card details. Therefore, it provides a more secure and safe ordering system.

1.4 References:

Software Engineering: Principles and Practice, Hans van Vliet – 3rd edition, 2010.

Software Engineering (A practitioner's approach), Roger S Pressman - 6th edition, McGraw Hill 2005.

IEEE Recommended Practice for Software Requirements Specification, IEEE Standard 830, 1998.

2 OVERALL DESCRIPTION

2.1 PRODUCT PERSPECTIVE :

The software specified in this SRS is for a Food ordering system. The application merges various software and hardware elements and provides external interface from people/systems.
Allows the users to view and order food by adding to a cart and purchase it
It relies heavily on physical interaction from humans and external interfaces like databases, software for unhandled tasks (storing into databases, calculating total cart sum)

2.2 PRODUCT FUNCTIONS :

a) Sign up page for new users using the food ordering application
b) Login page for registered users
c) Search the menu catalogue for a particular food or category
d) Adding to cart feature
e) Editing the cart feature
f) Calculating total cost of the cart
g) Choosing payment options and making payment
h) Track order functions
i) Adding food items to website, update price , provide food description
j) Updating food availability status
k) Feedback form
l) Log out

2.3 USER CLASSES AND CHARACTERSTICS :

There are 2 main classes of Users

A) General customers
B) Admin

The general customers will use the application casually with expectancy of load during lunch,dinner,breakfast times where there can be active usage of the application by multiple users. They don't have any privileged commands like price,updating availability etc

The Admin has privileged commands like updating the prices, adding new items, updating item availability , status of orders etc. Does not load the system . Responsible for handling the database performing backup, resource monitoring and security of the data.

2.4 OPERATING ENVIRONMENT :

The food ordering delivery system can be used on a Computer, Tablet, or a Phone.
Require a web server for launching the application.
The application will run on any version of windows,linux and mac platforms with a browser support preferably chrome, firefox, safari, edge
Users interact with the system by clicking and moving objects on the screen. It's a interactive UI
All the core processing will be done at the back-end at the servers where the application is hosted
The admin will get a more richer UI compared to casual users for performing specific privileged tasks.

2.5 DESIGN AND IMPLEMENTATION CONSTRAINT :

Design constraints :
The UI must be easy to use and understand by customers which will be hard to test.
Must not cause scalability constraints while using various displays differing in sizes and using different types browsers .
The system must be able to handle large loads if required during peak periods.
Must be easy to maintain and detect errors if any

Implementation constraint :
Providing UI in multiple language will be hard to achieve and searching in other languages will be a constraint.
The hardware system must provide capacity for parallel operations and processing.
There must be low latency between each operation performed by the user for seamless performance and efficiency.
The banking transactions must occur in a secure manner and fast without any glitches.
In case on glitches, bugs must be able to facilitate fast recovery

2.6 ASSUMPTIONS AND DEPENDENCIES :

The user who uses the application will have a updated browser and is familiar with using websites and handling browsers
The database and the back end hardware will be active at all times
Assumes that tablet, PCs of sufficient processing capability and battery life will be properly utilized.
The user must have a stable and strong internet connectivity.
The user must have a online payment source

3 SPECIFIC REQUIREMENTS

3.1 User Interfaces

Customer

- A customer shall be able to engage their menu by simple clicks and mouse scrolls on their computer screens.
- A customer shall be able to add an item to a pending order by clicking on the add button on the item from the engaged menu onto the order
- A customer shall be able to remove an item from a pending order by clicking on the remove button for the item off the order.
- When in billing mode, a surface computer shall display a representation of a bankcard payment for each customer.

Admin

- The admin will be able to add a product,alter it's price using the UI buttons provided on the website
- The admin can also view the customer's orders,and notify the customer about it's delivery specifications via UI buttons
- A admin can also add additional promo codes or discount offers

3.2 software interfaces

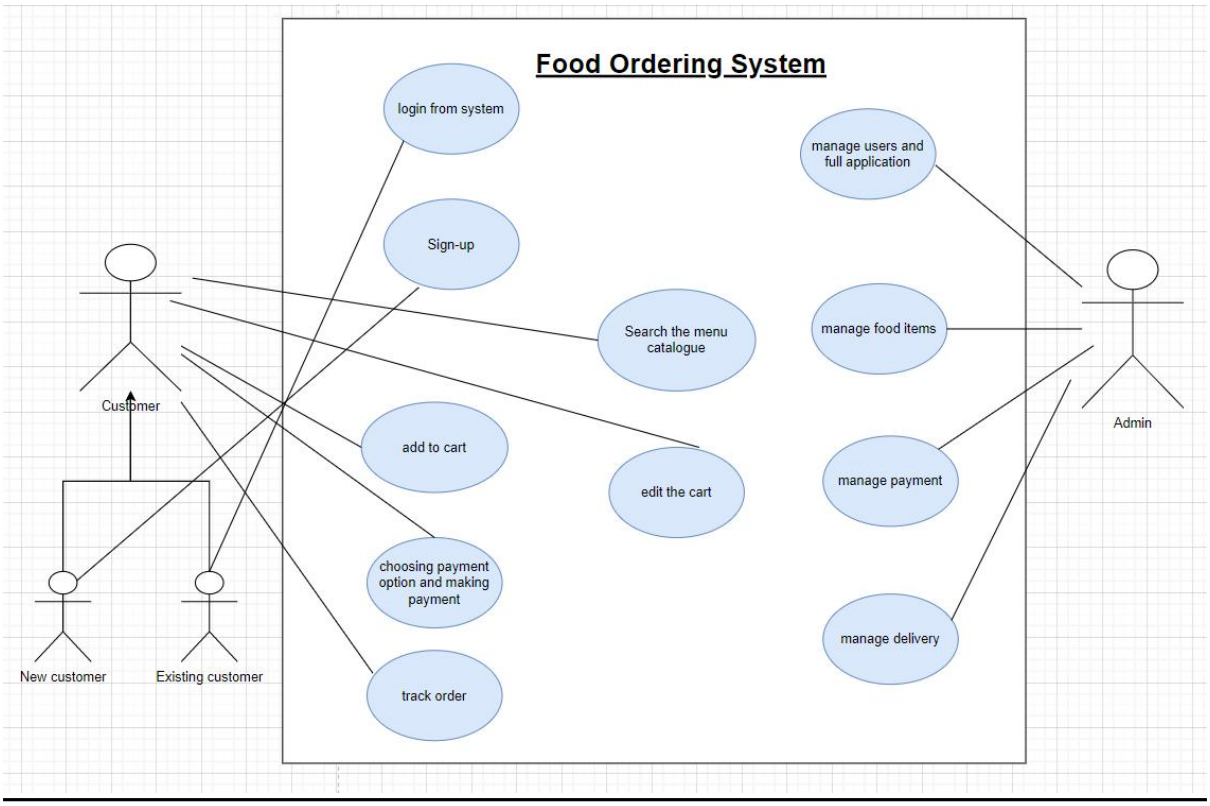
The application is independent of the type of operating system of the user.
It requires a website running on the os.
The application software will be hosted on a backed XAMP server
The server will have database connectivity for the backend storage
The middle ware will be handled using java script and php
The front end will be handles using CSS and HTML.

3.3 communication interfaces

All communication between the user and the backend will take place via web protocols like ftp,http,https
The website server and the data base server will have a physical connection for communication in the backend

4 Analysis Models :

Use case diagram



6 Other Non-functional Requirements

6.1 Performance Requirements

Since User Experience (UX) is critical to the success or failure of our system in the market and performance is UX, we should a strict requirement on our system's performance

• The app should provide greater performance with minimum delay.

• For food brands, who would be using web app on their desktop computers, the performance of their systems must be good and queries must be processed with minimum time like "join" statements must per done fast for better and fast results.

• Too many tables in database can result in slower execution of queries, hence effecting the entire system . 92% of the queries shall be completed in approximately 3.5-4 seconds.

• There should be no more than 0.5 – 0.8 second of delay in communication between customers and food brands.

•The system should support more than 1000 user to checkout at the same time.

•The response time of HTTP interfaces should be around 1 second.

•When the user request data by click on search button, searching result shall be presented on the screen within no more than 2 seconds.

• On the successful completion of the transaction from the user, the details of the transaction have to be stored in the database for six months and can be retrieved when needed in less than 3 seconds.

• Multiple registrations should be accepted by the application and database cannot close unexpectedly due to loss of internet, and even when it closes unexpectedly the information should be stored.

6.2 Safety Requirements

•RPO and RTO should be clearly defined to avoid loss of data that could affect the business.

The system can not afford loss of data of its customers because it provides analysis on basis of it

•We should highlight spicy foods high calorie foods ,Veg ,Non-Veg in the menu in case users order the foods that they don't want

The transactions will all take place via the https communication web protocol for safe transactions

A log file about the server activity must be maintained for better resource monitoring and crash recovery.

6.3 Security Requirements

• Every user must change his initial password after first successful login

•if any user uses his credit card for payment, OTP is sent via text or call for

Confirmation

•The user shall receive a text message by bank on successful transaction

•User's personal information like phone number and credit card information should be encrypted before storing in databases.

• Only the registered users shall be allowed to order items from their account

•When using debit/credit card transactions, identification of the user is important and the contact details should be specified by the user

•Manager/ Admin shall have the right to change or modify menu in the application and will interact with the various restaurant people and manage orders.

•Manager shall be the point of contact for the customer reviews and inventory management and will receive information about changes in order or reviews

•On unsuccessful entry of pin for more than two times, the system (admin) shall cancel the transaction of the user

•Every change in the order or delivery shall be updated by the manager to the delivery man

6.4 Software Quality Attributes

Availability: The application should be available to all the users on the website

Robustness: The application is robust in nature and the downtime should be very minimal and the application should be accessed by the user almost all the time .Only when logged in with the correct user name and password the user can Place orders and also make payment ,on invalid details it will give popup error.

Accessibility: The application can be accessed easily by the users and the restaurants from which the order is placed should be available in the menu

Deliverable: The order that the customer places needs to be delivered at the right time and constant monitoring of the order is done through the GPS tracker.

Adaptability: The application can adapt the new inputs such as custom meals, new meal and recipe orders from the customer and will be implemented in the application and will adapt to the various operating systems and environments.

I**nteroperability**: The system/Admin makes sure that the information received from the customer regarding the order is genuine and will be stored in the database. Information regarding the phone number, email addresses and card details will be checked

Reliability :The app is reliable and is available 24/7 and is fast enough for user satisfaction

Maintainability :The food items should be maintained by the managers of the restaurants and also the admin of the web app for faster delivery.

Usability: The orders should satisfy a maximum number of customer needs

Portability :The app can used be users with different operating systems

Correctness :Cost will be calculated accurately on the payment page for each order. Only the selected items will be added to the cart

Flexibility :Many varieties of Food items are supported and also different model of payment(UPI ,card , net banking etc)

Reusability : The functionality for Frequently asked questions on homepage will be reused on payment page as well

Testability : The app tests the users inputs for invalid data and checks for corner cases.

6.5 Business Rules

ID	*Rule Definition*	*Type of Rule*	*Static or Dynamic*	*Source*
1	*All meals in a single order must be delivered to the same location.*	*Constraint*	*Static*	*Restaurant Manager*
2	*All meals in a single order must be paid for using the same payment method.*	*Constraint*	*Static*	*Restaurant Manager*
3	*Order price is calculated as the sum of each food item price times the quantity of that food item ordered, plus applicable sales tax, plus a delivery charge*	*Computation*	*Dynamic*	*Restaurant's policy; state tax code*
4	*Only admin ,Restaurant manager's my*	*Constraint*	*Static*	*Restaurant policy*

	create, modify, or delete cafeteria menus.			
5	*Network transmissions that involve financial information or personally identifiable information require 128-bit encryption.*	*Constraint*	*Static*	*corporate security policy*
6	*Only registered Users can order The food items*	*Constraint*	*Static*	*corporate security policy*

7 Other Requirement's:

Software Requirements:

Name of Component	Specification
Operating System	Windows 10 and higher,Linux
Language	Javascript
Database	SQL server
Framework	Html ,CSS
Browser	Chrome Browser ,Microsoft edge, Mozilla Firefox

Hardware Requirements:

Name of component	Specification
Processor	Pentium III 630MHz
RAM	128 MB
Hard disk	20 GB
Monitor	15" color monitor
Keyboard	122 keys