SOFTWARE REQUIREMENTS SPECIFICATION

for

FOOD AGGREGATOR AND DELIVERY WEBSITE

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1 Introduction

1.1 Purpose

It is known globally that, in today's market, it is extremely difficult to start a new small-scale business and live-through the competition from the well-established and settled owners. In fast paced time of today, when everyone is squeezed for time, the majority of people are finicky when it comes to placing a food order. The customers of today are not only attracted because placing an order online is very convenient but also because they have visibility into the items offered, price and extremely simplified navigation for the order.
Online ordering system that we are proposing here, greatly simplifies the ordering process for both the customer and the restaurant.

1.2 Intended Audience and Reading Suggestions

This SRS is for developers, project managers, users, testers and various stakeholders.This documents will provide all the internal,external ,functional and non-functional information about "FoodKart" system.

1.3 Project Scope

This project provides e-commerce business product for the restaurants and hotels to manage and boost their business online. Through this website application restaurants connect with the customer within few clicks at the peak lunch time. In today's pandemic-hit world, this project also executes the processes of restaurant services with minimal contact between beneficiaries. This also helps to learn about the Web application designing for e-commerce using new programming technique and it creates techno friendly environment. Anticipated Benefits from this project:

1. This will minimize the number of employees at the back of the counter, hence, cutting labor cost.

2. Less probability of making mistakes in order management making the process smooth and hassle-free.

3. This will avoid long queues at the counter due to the speed of execution and number of optimum screens to accommodate the maximum throughput.

2 Overall Description

2.1 Product Perspective

"FoodKart" is a web-based aggregating system connecting different food service houses with customers online. The application enables order placing, order processing and order distribution. It also comes with a review system enabling different types of users to review the specific service of the application used.

2.2 Product Functions

The application specifies the following functions:

- Search for restaurant or any meal
- Order Placement
- Order Confirmation and Order Processing
- Provision of real-time status update
- Delivery Dispatch
- Real-time tracking of dispatched orders
- Feedback mechanism between service providers and consumers

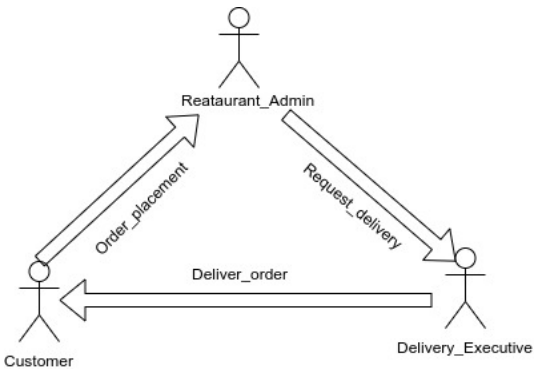

Figure 2.1: System Model

2.3 User Classes and Characteristics

"FoodKart" supports three types of user privileges:

- Customer
- Restaurant Management Admin
- Delivery Executive

The users of the system will have different levels of access to data in database. Customers will have access to customer functions, restaurant admin will have access to both customer and restaurant management functions and delivery executive will have access to delivery execution related functions.
All users have to register and create an account in the application. A Customer should be able to do the following functions:

- Create and manage account
- Login to the system
- Search for a particular dish or restaurant
- Browse through restaurant menu
- Add item to current order
- Review order
- Confirm and place order
- Get confirmation from restaurant (order code)
- Get live status of order procession
- Get notified once dispatched(delivery code)
- Track dispatched delivery
- Review Restaurant and Delivery services

A Restaurant Management Admin should be able to do the following functions:

- View all orders
- Accept or Reject orders in real-time
- Update the status of the orders
- Monitor delivery service

Other Administrative functions include:

- Add or Delete a Dish from Restaurant Menu
- Update details of a dish
- Update details of restaurant

A Delivery Executive should be able to do the following function

- get live updates on nearby delivery requests
- accept or decline the request

2.4 Operating Environment

The website will be operate in any Operating Environment - Mac, Windows, Linux etc.

2.5 Design and Implementation Constraints

- Languages Used: HTML, CSS, Python, SQL
- Hardware Constraints: Pentinum Processor or above, 60 MB disk space, 128 MB RAM
- Permissions Required: Get device location of users

3 System Features

System features of the application are listed below.

3.1 Order Management System Feature

3.1.1 Description and priority

This system maintains menu information of various restaurants and facilitates smooth flow of order procession. This is the highest priority feature as this enables remote access to catering services in real-time and brings meals to a customer's doorstep.

3.1.2 Stimulus/response sequences

- Customer looks for a specific restaurant from where to order food.
- System displays the menu of the selected restaurant and customer can place order for food items.
- Restaurant accepts or decline the order.
- Restaurant on acceptance start preparing food items.
- As the food item is ready for delivery they wait for delivery executive to take order.

3.1.3 Functional Requirements

- REQ-11: User should have a properly functional browser support such as google chrome, mozilla firefox, safari.

3.2 Real-Time Location tracking of dispatched orders

3.2.1 Description and priority

The application handles delivery executive real-time location coordinates, to create a smooth delivery service to fast pick-up from restaurant location and deliver to customer.

3.2.2 Stimulus/response sequences

- Delivery Request by Restaurant
- Define a search radius
- Get a list of executives in the defined radius by collecting real-time data of delivery executives.
- Send live update to the list of executives.
- increase defined radius and repeat process until request is accepted.

3.2.3 Functional Requirements

- REQ-21:User should have a properly functional browser.
- REQ-22:User should allow the application to share his/her current geo-location

3.3 Client/Server System

The term client/server refers primarily to an architecture or logical division of responsibilities, the client is the application (also known as the front-end), and the server is the DBMS (also known as the back-end). Client side usually makes request for data that is fulfilled by server side provided the request is valid under all defined conditions.

A client/server system is a distributed system in which, all applications get executed at client side.

4 External Interface Requirements

4.1 User Interfaces

The system will implement an user-friendly GUI. The implementation is made to be compatible with both PC and mobile. All users are directed to separate login pages. The interfaces include:

- **Interface for Customers**: searching, search-results, order and check out pages, order status page with map view.
- **Interface for Restaurants**: Admin pages for adding/updating information, order processing status pages.
- **Interface for Delivery Executive**: Delivery Request notifications, Navigation maps.

Technologies Used: HTML, CSS, BOOTSTRAP, PYTHON

4.2 Hardware Interfaces

- Pentium Processor
- 60 MB of free hard-drive space
- 128 MB of RAM

4.3 Software Interface

- Operating System: Any(Windows, Linux, Mac)
- Browser: Any browser supporting HTML, CSS such as Google chrome, Mozilla Firefox etc.

The project is implemented using the following software:

- HTML,CSS,BOOTSTRAP,PYTHON(Frontend)
- Django(Framework)
- Mapbox API
- SQLite(Database)

5 Non Functional Requirements

5.1 Performance Requirements

The steps involved to perform the implementation of airline database are as listed below.

- **E-R DIAGRAM**
  The E-R Diagram is a pictorial representation of the logical structure of the database. This analysis is then used to organize data as a relation, normalizing relation and finally obtaining a relational database.
  - ENTITIES: The distinct real-world objects in the application.
  - PROPERTIES/ATTRIBUTES: Characteristics associated with an entity
  - RELATIONSHIPS: Connection among entities with meaningful dependencies between them.

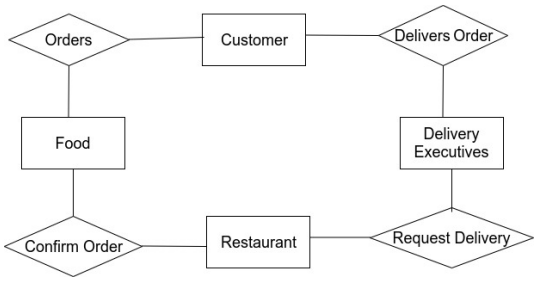

Figure 5.1: ERD for Order Management

- **Normalization**
  Reduce redundancy of database. Helps in preventing anomalies and inconsistencies arising from data update. The process includes breaking down bigger tables into smaller tables and defining meaningful relationships between them.

5.2 Safety Requirements

In order to assure maximum data security and prevent data loss, all transaction logs will be maintained. The recovery method restores a past copy of the database that was backed up to archival storage and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

5.3 Security Requirements

All users must follow registration process and create an account. Restaurants will be put through a screening system to verify themselves with us. This involves sharing any sort of legal document which will be stored with us in a secure manner which will be verified manually by site administration. All activities relating to data sharing will ask for prior permission from the user.

5.4 Software Quality Attributes

- **Reliability**
  Efficient with minimal hardware and software requirements. Assures smooth processing and work-flow between client and server.
- **Maintainability**
  All menus and dish details should be correctly maintained by Restaurant Admin. The site provides a flexible interface for these updating processes.
  The site implementation is modular and easy to understand which helps in fast tracking of bugs and their fixing.
- **Compatibility**
  Compatible with both PC and Mobile with a properly functional browser.
- **Correctness**
  User reviews are used to ensure correctness of information in the site.