SOFTWARE REQUIREMENTS SPECIFICATION

Food Stall

Version 1.0

Course: Software Engineering (CSE325)

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Date: March 13, 2015

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1 Introduction

1.1 Purpose

The purpose of the Software Requirements Specification is to describe the specific requirements of the Food Stall project. Included with the description of the requirements is a description of any constraints or assumptions that the project is working within.

This document also provides a description of any project dependencies that need to be explicitly expressed. Along with the requirements descriptions, it is also the purpose of this document to describe any performance requirements that need to be met. If there are any standards that need to be considered when developing the software are also listed.

In short, the purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in software delivery lifecycle processes.

1.2 Scope

The Food Stall System will permit users to order meals from Food Stall on-line to be delivered to specified campus locations on specific time.

It is within the scope of the Software Requirements Specification to describe the specific system requirements of the Food Stall Project. This would include performance requirements, system constraints, and project assumptions. Any specific detail that is needed about the standards or technology used to define these requirements, constraints, and assumptions are within the scope of this document.

1.3 References

`http://en.wikipedia.org/wiki/Online_shopping`
`https://docs.python.org/2/`
`http://en.wikipedia.org/wiki/Online_food_ordering`

1.4 Technologies to be used

1.4.1 Apache Web Server

- The Apache HTTP Server, colloquially called Apache, is the world's most widely used web server software. HTML HTML is a markup language for describing web documents (web pages).

1.4.2 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language.

1.4.3 Javascript

Javascript is an object-oriented computer programming language commonly used to create interactive effects within web browsers.

1.4.4 jQuery

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

1.4.5 Python with django

Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source. Ridiculously fast.

1.4.6 SQL

SQL Structured Query Languag is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS).

2 Overall Description

2.1 Product Perspective

The Online Food Ordering System 'Food Stall' is a new system that replaces the current manual and telephone processes for ordering and picking up lunches in the shops. It would be of great help for people especially during the time of journey when user can pre-order their meal according to their train schedule at a particular location.

The system is expected to evolve over several releases, ultimately connecting to the Internet ordering services for several local restaurants and to credit, debit card authorization services and also with cash on delivery option provided.

2.2 Product Functions

The following are the requirements that the system shall meet:

- The system shall let a User who is logged into the Food Stall to place an order for one or more meals.
- Provide an interface for the communication between customers and vendors for placing orders online
- Provide the user a registration form if not registered.
- Provide an online payment system.
- Provide a device for the vendors to handle orders.
- Provide a method for the vendors to manage the flow of orders.
- Provide a map of vendor locations such as the Google Maps API.
- Provide a forum for the review of vendors.
- Provide the ability to search for vendors based on various criteria, such as food categories, location, ratings, and price.
- Facilitate the creation and maintenance of database.

2.3 Constraints

The following are the constraints that the system shall meet:

- All HTML code shall conform to the HTML 5 standard.
- The language used to develop the website depends on screen resolution and user experience should change according to it.
- The interface for the vendors' application must take into account the existing demand of in-person orders .
- The interface for the vendors' application must take into account the possibility that the vendors may have a limited knowledge of English.
- The system shall protect against any forgery requests the attacker might try to make.
- The system shall encrypt the data before storing for better safety of user's information.
- The system shall give every logged user a session and logout after 15 minutes of inactivity.
- Lack of startup capital may limit implementation choices.

2.4 User Characteristics

2.4.1 Users

User should have a basic knowledge of surfing on the Internet. User should know how to use a browser for better experience on our website. The user should know English language at a basic level as the website will be provided in English language only. These users are expected to have a level of Internet competency that is requisite of that needed to use an online ordering system.

2.4.2 Vendors

The expected vendors are current lunch truck operators interested in improving business by allowing customers a more convenient ordering and payment system. Vendors may have varying education levels and may have limited comprehension of written English.

Within the scope of this project, vendors are assumed to be able to operate an Internet-capable device which, in turn, requires a level of comfort in managing orders electronically and without face-to-face interaction. Furthermore, use of the product assumes a level of English literacy necessary to understand written orders

2.4.3 Administrator

Administrators are those responsible for the maintenance of the system as a whole. These users are expected to have full comprehension of the system, including but not limited to its web-based interface, mobile interface, payment interface, business layer, and database.

2.5 Assumptions and Dependencies

- The System Depends on the server that the website is going to be uploaded on i.e Heroku.
- The availability of food items for the users are dependent on the vendors stock of food and the no of request.
- The system assumes to have a secure channel between the user and the vendor to avoid any malpractices.

3 Functional Requirements

3.1 Web Interface

3.1.1 User Login

- Registration shall be required to log in
- Logged in users shall be able to edit account information
- The user shall be able to log in
- The user shall have an option to save login information
- The user shall not be able to log in with invalid credentials
- The user shall be able to recover forgotten credentials

3.1.2 Account Creation

- The user shall be able to create an account if they don't already have one.
- The user shall have the ability to register for an account
- An account shall contain sufficient information to uniquely identify the user

3.1.3 Vendor Location Map

- The vendor shall be able to see the location of customers on google maps which will be integrated in our website.
- The user shall be able to see the menu provided by vendor.
- The user shall be able to give reviews after buying.

3.1.4 Reviews

- The user shall be able to see reviews.
- The user shall have the ability to sort the products according to their ratings.

3.2 Vendors

These are the requirements that are unique to the vendors.

3.2.1 Vendor account Pages

Vendor account pages shall allow each vendor to view and edit stored information, including his or her profile, food truck information, payment options, and business statistics

- The vendor shall be able to update his or her profile information
- The vendor shall be able to update menu information such as: Categories,Menu Items.
- The vendor shall be able to choose the method by which he or she shall be paid

3.2.2 Statistics and Reports

Vendors shall be able to view business statistics, including:

- Daily, Monthly, Yearly report of how many orders were placed
- Most commonly ordered food items
- Average cost per order
- Average number of items per order

3.3 Customers

These are the requirements that are specific to the customers and are only available if the customer is logged in.

3.3.1 Order Food

- Browse vendor menus
- Add items to order
- Remove items from order
- Specify quantity of each item
- View itemized bill
- Select form of payment
- Complete order
- Receive order confirmation

3.3.2 Customer Account

- Customer account details should uniquely identify each customer.
- Customer shall have a list of their previous orders.
- **Recommendation System** - Customer shall be recommended food items according to their previous searches.

3.3.3 Ratings

- Customer can give rating to a particular food.
- Ratings shall be provided from a scale of 1 to 5 only after the transaction.

3.4 Administrators

Administrators are users who shall be able to manage all information on the website. Administrators shall have all the abilities of both customers and vendors as well as additional administrative abilities.

- Administrators shall be able to manage vendor accounts
- Administrators shall be able to manage customer accounts
- Administrators shall be able to moderate reviews

4 Non Functional Requirements

4.1 Web Browser and Mobile Interface

- The device shall have Internet access capability
- The website shall have a method of alerting the vendor of an incoming order
- The website will be available on all the days 24*7.
- The website will have cross browser support functionality to support Chrome,Safari,Internet Explorer and Mozilla Firefox.

4.2 Performance and Security

- The system shall perform with minimal latency as to not disrupt normal business operations of the vendors or exceed the time a customer reasonably expects to wait for his or her order
- The database shall execute queries in an amount of time such that the above condition is satisfied
- Throughput - System shall be able to handle 400 requests per hour.
- Users data is stored safely such that no other party can access it.
- User can complain and online help will be provided.
- Inactivity Timeout System will timeout if there is no activity for 10min.
- Response Time will be less than 10 sec for more than 95
- Downtime of maximum 1 hr.

4.3 Hardware and Software Requirements

These are the hardware and software requirements that the system shall fulfill.

4.3.1 Hardware Requirements

- Minimum RAM: 512 MB
- Minimum disk space: 500 MB
- Processor Intel Core 2 DUO 2.4 GHz minimum

4.3.2 Software Requirements

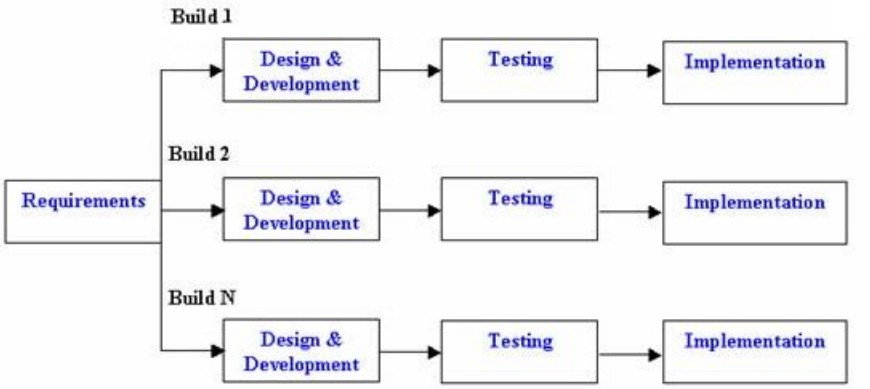
- Operating system - Windows,Linux, Mac OSX with a web browser installed.
- Sublime Editor
- Browser and Database
- Rational Rose Enterprise Edition
- Microsoft Visio 2010

5 Process Model

Our Food Stall will use **Incremental Model** as the process model.

5.1 What is Incremental Model?

In Incremental model the whole requirement is divided into various builds. Multiple development cycles take place here, making the life cycle a multi-waterfall cycle. Cycles are divided up into smaller, more easily managed modules. Each module passes through the requirements, design, implementation and testing phases. A working version of software is produced during the first module, so you have working software early on during the software life cycle. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is achieved.



Incremental Life Cycle Model

5.2 Why is it suitable for our projects?

- In our project not all the requirements are known so as we progresses there might be some other requirements we need to add in the system.
- It's easier to test and debug the code during the small iteration.
- We can implement the major requirements for now and can extends it later on increment by increment.
- We chose it so that customer can respond to our project on each build.

5.3 Project Schedule and Milestones

Milestones	**Estimated Start Date**	**Estimated Completion Date**	**No of days**
Topic Selection	17/2/2015	19/2/2015	2
Division of Functional Requirements	19/2/2015	25/2/2015	6
Process Model Construction	25/2/2015	03/3/2015	6
Gantt Chart & Pert Chart Construction	03/3/2015	04/3/2015	1
UML	04/3/2015	11/3/2015	7
Software Design	11/3/2015	15/3/2015	4
Detailed Design - 1	15/3/2015	25/3/2015	10
Detailed Design - 2	25/3/2015	01/4/2015	7
Coding & Implementation	01/4/2015	15/4/2015	15
Unit Testing	15/4/2015	22/4/2015	7
Integration & Software Testing	22/4/2015	29/4/2015	7
Project Demo	29/4/2015	01/5/2015	3

6 USE CASE Diagram