

**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY**

**VADODARA**

**IT-301 SOFTWARE ENGINEERING**

Team IT - 05

Mentor : Dr. Asim Banerjee

**Web Development**

Software Requirements Specification

Version 1.0

**Version History:**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Reviewer |
| v1.0 | **25-09-2017** | **Akriti Bhadoriya** |  |
| v1.1 |  |  |  |

**Team Members:**

|  |  |
| --- | --- |
| Name | E-mail |
| Akriti Bhadoriya | [201552074@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |
| Anshit Kumar | [201552056@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |
| Niranjan Choudhary | [201552060@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |
| Chetanya Shrimali | [201552064@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |
| J Manikanta Swamy | [201552068@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |
| Vamshi Krishna | [201552079@iiitvadodara.ac.in](mailto:201552074@iiitvadodara.ac.in) |

Table of Contents

[1. Introduction](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.guww0vcotnuf)

[1.1 Purpose](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.g01e5qz1lyjf)

[1.2 Intended Audience and Reading Suggestions](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.ll0u69tnkcjk)

[1.3 Product Scope and Product Features](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.u64qwnz0hyrf)

[1.4 Definitions, Acronyms and Abbreviations](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.w1llhiptsbli)

[1.4.1 Definitions](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.mfnfpa96oxwp)

[1.4.2 Acronyms and Abbreviations](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.y112blr00olv)

[1.5 References](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.lmlipz79rxh2)

[2. Overall Description](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.khpkqg5iw8fj)

[2.1 Product Perspective](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.k08gmfopk18k)

[2.2 User Classes and Characteristics](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.hcwngie5m7a)

[2.3 Operating Environment](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.x6px648w0m7h)

[2.4 Design and Implementation Constraints](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.a7w6s9wl3kl9)

[2.5 User Documentation](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.gw2q8knkyfcu)

[2.6 Assumptions and Dependencies](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.o4o6m7pw5gm8)

[3. External Interface Requirements](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.nghz2tnz4jt0)

[3.1 User Interfaces](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.n3r1y9z14qri)

[3.2 Hardware Interfaces](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.cdk3og8h2p1j)

[3.3 Software Interfaces](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.v9ju7of4imfi)

[3.4 Communication Interfaces](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.c7lkdvt3acik)

[4. System Features](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.j46sildp7rtv)

[4.1 View Menu](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.e0q7ik55euki)

[4.2 Book a table](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.nielj59ez45o)

[4.3 Add to Cart](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.ajj1l8h2jwwl)

[4.4 Place Order](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.gd4v6mavgk6t)

[4.5 Modify menu](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.grx5wria079i)

[4.6 Modify content](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.7eqvvtquuxoc)

[5. Other Nonfunctional Requirements](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.hh1v92z8xa31)

[5.1 Performance Requirements](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.a9270gwf7x49)

[5.2 Safety Requirements](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.zcmhm5tp06fm)

[5.3 Security Requirements](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.3yodfrgiimir)

[5.4 Software Quality Attributes](https://docs.google.com/document/d/1D4bJ193ijKGe2bOjg6wa7-OVXqY4SCLA4e1b-M-u3BA/edit#heading=h.h01kzhc9fm0p)

1. Introduction

Developing the website for a restaurant, Green Apple Restaurant(Gandhinagar), is the aim of our team. It is a client-requested project. The project will help the client to extend his business and gain more popularity among the people. This is going to help people in knowing the place in a better way and reduce communication gap.

1.1 Purpose

The purpose of this document is to present a detailed description of the web development project for Green Apple Restaurant. It explains the purpose and features of the system, the interfaces of the system, what the system is expected to do, the constraints under which it must operate and how the system will react to external stimuli.

1.2 Intended Audience and Reading Suggestions

This document is intended to be used by the members of the project team to implement functioning of the system and revise if needed. It is also intended for the project manager in order to review and provide necessary solutions. Also intended for the project manager and user to get a clear understanding of the expected functionality of the system. Before moving forward the reader must go through Definition, Acronyms and abbreviations section below.

1.3 Product Scope and Product Features

This application will help the client develop his business and enter the digital world where most of the audience live. This will provide the client an online platform to compete with his/her competitors in the market. Moreover, this software will reduce the communication gap between the customers and ease things for them.

1.4 Definitions, Acronyms and Abbreviations

1.4.1 Definitions

Browser: ​A browser is a software application for retrieving, presenting, and traversing information resource on the World Wide Web.

Database: A database is an organized and structured collection of data. It is the collection of schemas, tables, queries, reports, views, and other objects.

Deployment:​ A process mapping tool used to articulate the steps and stakeholders of a given process.

● Third Party:​ The Third party means a supplier or service provider who is not directly controlled by either the seller or the customer/buyer in a business transaction.

● Editor:​ An editor is a person who edits or makes changes to documents.

● GitHub:​ GitHub is a web-based Git or version control repository and Internet hosting service. It offers all the distributed version control and source code management (SCM) functionality of Git.

● Python:​ Python is a widely used high-level, general-purpose, interpreted, dynamic programming language.

● Protocol:​ A protocol is a set of rules which describe how an activity should be performed, especially in the field of diplomacy.

Server:​ In computing, a server is a computer program or a device that provides functionality for other programs or devices, called "clients".

Authentication:​ Authentication is the act of confirming the truth of an attribute of a single piece of data (a datum) claimed true by an entity.

Authorization: It is to confirm that either a person has enough rights to access/perform a particular operation.

Algorithm:​ In mathematics and computer science, an algorithm is a self-contained step-by-step set of operations to be performed.

1.4.2 Acronyms and Abbreviations

Acronyms

Abbreviations

HTML

Hyper Text Markup Language

CSS

Cascading Style Sheets

JS

JavaScript

HTTP

Hypertext Transfer Protocol

UI

User Interface

API

Application Programming Interface

SQL

Structured Query Language

AJAX

Asynchronous javascript and xml

W3C

World Wide Web Consortium

1.5 References

www.cse.msu.edu/~chengb/RE-491/Papers/SRSExample-webapp.doc

www.csse.monash.edu.au/~sitar/CSE4002/Lectures/srs\_template-1.doc

https://imokymas.files.wordpress.com/2014/02/cos\_srs.doc

2. Overall Description

2.1 Product Perspective

It is a web application for Green Apple Restaurant which runs across a platform and accessible via the internet. It is a client-requested application which will ease the communication between the client and users. It will have features like book a table, order prior for pickups and feedback.

2.2 User Classes and Characteristics

UC-1 User who want to know about the restaurant, Like its menu and services.

UC-2 User who want to book a table or want packed food for pickup.

2.3 Operating Environment

OE-1: Any Computer/Tablet /Mobile with an internet connection and the latest version of Chrome/Firefox/IE/UC or any default web browser is used to access the application.

OE-2: A server with a capability of running Python and hosting Django Server is used to serve the application.

2.4 Design and Implementation Constraints

CO-1: Internet connection is required all the time to access the application.

CO-2: All code shall confirm to latest W3C standard.

CO-3: Application is developed using latest HTML5, CSS3, JS, Python and Django. So we need to use the modern Browser.

CO-4: Server needs to run python and host Django server.

CO-5: Time is limited to the end of this semester.

2.5 User Documentation

UD-1: There will be a User Manual with all the information regarding Web Application.

2.6 Assumptions and Dependencies

AS-1: The feedback given through survey are assumed, to be honest & reliable.

DP-1: Client is going to be benefited by book a table feature.

DP-2: Users are interested in pickups.

DP-3: Client is able to use this platform with ease.

3. External Interface Requirements

3.1 User Interfaces

UI-1: Clean UI and great user experience will be assured.

UI-2: User can navigate throughout the application using mouse or touch

navigation.

UI-3: User will be provided with visual feedback if an event has occurred.

3.2 Hardware Interfaces

HI-1: The system should be capable of making the internet connection.

HI-2: The system should be able to run a web browser.

3.3 Software Interfaces

SE-1: The application should be connected to the internet to the server which is at some remote place.

SE-2: The backend of the software will interact with SQL to receive the Data.

3.4 Communication Interfaces

CI-1: The pages will be loaded using HTTP protocol.

CI-2: Client-server communication will be through the internet.

CI-3: Dynamic contents will be loaded through AJAX.

CI-4: Password will be secured through encryption.

CI-5: Application will have proper synchronization so that user remains up to date.

4. System Features

4.1 View Menu

4.1.1 Description and Priority

A user can go through the menu based on cuisines, courses and specialty.

4.1.2 Stimulus/Response Sequences

Stimulus: User clicks on Menu button on navigation bar.

Response: System displays the menu based on courses and cuisines.

4.1.3 Functional Requirements

A system should load contents dynamically.

A server should respond by fetching menu items from the database.

4.2 Book a table

4.2.1 Description and Priority

A user can book a table using this feature. Here he needs to enter his basic details such as name email and phone number and specify his visit with hours, number of people and date.

4.2.2 Stimulus/Response Sequences

Stimulus: User enters all the details and presses the book now button.

Response: If all the required fields are filled and valid then the table is booked and a confirmation email is sent and the success message is displayed else an error message is displayed.

4.2.3 Functional Requirements

The system should have mechanism to add details of a booked table to the

database.

Authentication: System should check if tables are available.

The system should notify a user about the successful reservation.

4.3 Add to Cart

4.3.1 Description and Priority

A user can add the food items he/she want to order to the cart.

4.3.2 Stimulus/Response Sequences

Stimulus: User enters the items from the menu to the cart using Add to Cart

button.

Response: The cart count is increased and the cart amount is displayed.

4.3.3 Functional Requirements

The system should have a mechanism to update the cart. By default one item should be added.

4.4 Place Order

4.4.1 Description and Priority

A user can place an order from here. He needs to fill the required details and then place an order.

4.4.2 Stimulus/Response Sequences

Stimulus: User clicks on the Checkout button.

Response: System displays the order details dialogue box to be filled.

Stimulus: User fills the basic details and clicks on Place Order button.

Response: System responds with a success message if an order is placed else error message is displayed.

4.4.3 Functional Requirements

The system should have a mechanism to store order details in the database and should notify the user on successful placement of order.

4.5 Modify menu

4.5.1 Description and Priority

Admin can add delete and update the menu items.

4.5.2 Stimulus/Response Sequences

Stimulus: Admin clicks on any modification icon.

Response: System allows him to modify and make changes in the database.

4.5.3 Functional Requirements

The system should have a mechanism to update the database as per the modifications by the admin.

4.6 Modify content

4.6.1 Description and Priority

Admin can add delete and update the content of the website.

4.6.2 Stimulus/Response Sequences

Stimulus: Admin clicks on any modification icon.

Response: System allows him to modify and it make changes in the database.

4.6.3 Functional Requirements

The system should have a mechanism to update the database as per the modifications by the admin.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

PS-1: All the data will be processed on the server. Hence loading of dynamic content

should be done within 2-4 seconds.

PS-1: All the assets will be minified so that overall size of website decrease and

website loads very fast.

PS-1: The server will be able to easily handle 100 users at peak time (considering

The limitation of the server where the application is deployed).

PS-1: User will get notified instantly within 2s after submitting any request

(Assuming that internet connection is steady).

5.2 Safety Requirements

SR-1: Server System needs to be protected from physical damage.

5.3 Security Requirements

SE-1: Passwords will be stored in encrypted form in the database.

SE-2: User will be asked to choose strong password combination for login.

SE-3: Server will be regularly maintained against malicious attacks.

SE-4: User need to login into the web application for all operation other than

viewing the listing of the projects.

SE-5: Only authorized person will have access to the database data.

5.4 Software Quality Attributes

Availability: The Application will remain accessible 24x7 (Assuming that server is in working condition and there no maintenance work).

Reliability: Since all the data are stored securely on the remote server. The crash of user computer/browser will not affect the loss of any data.

Timely backup at the server will ensure that no data is lost on server crash.

Probability: Since it is web-based application it can run on any device, any OS, any system that has a stable internet connection and browser.