

**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY**

**VADODARA**

**IT-301 SOFTWARE ENGINEERING**

Team IT - 05

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**Web Development**

Software Requirements Specification

Version 1.0

**Version History:**

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Reviewer |
| v1.0 | **25-09-2017** | **Akriti Bhadoriya** | **Anshit, Chetanya, Niranjan, Vamshi, Manikanta** |
| v1.1 | **04-10-2017** | **Akriti Bhadoriya** | **Anshit, Chetanya, Niranjan, Vamshi, Manikanta** |

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# **1. Introduction**

Developing web application for a restaurant, Green Apple Restaurant, Gandhinagar is the aim of the team. It is a client-requested project. The project will help the client to extend his business and gain more popularity among the online people. This is going to help people in knowing the place in a better way, reduce the communication gap and ease things for both the users and the restaurant.

## 1.1 Purpose

The purpose of this document is to present a detailed description of the web application 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 project manager and user to get 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 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:​** 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 repository 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 rule which describes 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.
* **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](http://www.cse.msu.edu/~chengb/RE-491/Papers/SRSExample-webapp.doc)
* [www.csse.monash.edu.au/~sitar/CSE4002/Lectures/srs\_template-1.doc](http://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 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, online order for pickups and home delivery and feedbacks.

## 2.2 User Classes and Characteristics

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

UC-2 User who want to book a table or want to order food online for pickups.

UC-3 User who want to book a table or want to order online for home delivery.

## 2.3 Operating Environment

OE-1: Any Computer/Tablet /Mobile with an internet connection and latest version

of Chrome/Firefox browser is used to access the application.

OE-2: A server with a capability of running python 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 conform to latest W3C standard.

CO-3: Application is developed using latest HTML5, CSS3 and JS. So we need to

use the modern Browser.

CO-4: Server need to run python.

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 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 through 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 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**

User can go through the menu based on cuisines, courses and speciality.

**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**

System should load contents dynamically.

Server should respond by fetching menu items from the database.

## 4.2 Book a table

**4.2.1 Description and Priority**

User can book a table using this feature. Here he need to enter his basic details

such as name email and phone no. and specify his visit with hours, no. 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 success message is displayed else error

message is displayed.

**4.2.3 Functional Requirements**

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

database.

Authorisation: System should check if tables are available.

System should notify user about successful reservation.

## 4.3 Add to My Orders

**4.3.1 Description and Priority**

User can add the food items he want to order to my orders.

**4.3.2 Stimulus/Response Sequences**

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

Response: The count is increased and the subtotal is displayed.

**4.3.3 Functional Requirements**

The system should have mechanism to update the total. By default one item

should be added.

## 4.4 Checkout

**4.4.1 Description and Priority**

User can choose type of order, pickup or home delivery order from here. He

needs to fill the required details.

**4.4.2 Stimulus/Response Sequences**

Stimulus: User clicks on Pickup button.

Response: System displays the details to be filled.

Stimulus: User clicks on Home Delivery button.

Response: System displays the details to be filled.

**4.4.3 Functional Requirements**

The system should have mechanism to store order details in the database.

## 4.5 Place Order

**4.5.1 Description and Priority**

User can place pickup and home delivery order from here.

**4.5.2 Stimulus/Response Sequences**

Stimulus: User clicks on Place Order button.

Response: On successful placement system displays success message else

Shows error message.

**4.5.3 Functional Requirements**

The system should have mechanism to notify user about order placement.

The system should forward the order details to the admin via email.

## 4.6 Modify menu

**4.6.1 Description and Priority**

Admin can add delete and update the menu items.

**4.6.2 Stimulus/Response Sequences**

Stimulus: Admin clicks on any modification icon.

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

**4.6.3 Functional Requirements**

The system should have mechanism to update the database as per the

modifications by the admin.

## 4.7 Modify events

**4.7.1 Description and Priority**

Admin can add delete and update the events.

**4.7.2 Stimulus/Response Sequences**

Stimulus: Admin clicks on modification icons.

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

**4.7.3 Functional Requirements**

The system should have mechanism to update the database as per the

modifications by the admin.

## 4.7 Manage status of book a table

**4.7.1 Description and Priority**

Admin can either open or close bookings on a particular day.

**4.7.2 Stimulus/Response Sequences**

Stimulus: Admin clicks on either of the check box.

Response: System sets the bookings to be open or close as per the checkbox

selected.

**4.7.3 Functional Requirements**

The system should have mechanism to change the status and accordingly enable

and disable the booking features.

## 4.8 View Events

**4.8.1 Description and Priority**

User can go through the events and get the details of occasions when there is

some special arrangement or offers.

**4.8.2 Stimulus/Response Sequences**

Stimulus: User clicks on Our Events tab on navigation bar.

Response: System displays the events along with their description and images.

**4.8.3 Functional Requirements**

System should load contents dynamically.

Server should respond by fetching events from the database.

# **5. Other Nonfunctional Requirements**

## 5.1 Performance Requirements

PS-1: All the data will be processed on 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 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 database.

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

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

SE-4: 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 is no maintenance work).
* Reliability: Since all the data are stored securely on remote server. The crash of user computer/browser will not affect loss of any data.
* Timely backup at 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.