**SOFTWARE**

**REQUIREMENTS SPECIFICATION**

**For**

# Recipe Management System

**Prepared by:-**

Team 8

## 1. Introduction

### 1.1 Purpose

The main objective of this document is to illustrate the requirements of the project Recipe Management system. The document gives the detailed description of the both functional and non-functional requirements proposed by the client.The purpose of this project is to build a system for managing and sharing recipes, including ingredients and cooking instructions. This project describes the hardware and software interface requirements using ER diagrams and UML diagrams.

### 1.2 Document Conventions

* Entire document should be justified.
* Convention for Main title

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* Convention for Sub title

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* Convention for body

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### 1.3 Scope of Development Project

Recipe Management System is basically creating an efficient platform for users to manage and share recipes, encompassing detailed ingredient lists and cooking instructions. Users will have the ability to create, edit, and delete recipes, promoting a collaborative cooking environment.

The project can be easily implemented under various situations. We can add new features as and when we require, making reusability possible as there is flexibility in all the modules. The language used for developing the project is Java as it is quite advantageous than other languages in terms of performance, tools available, cross platform compatibility, libraries, cost (freely available), and development process.

### 1.4 Definitions, Acronyms and Abbreviations

JAVA -> platform independence

SQL-> Structured query Language

ER-> Entity Relationship

UML -> Unified Modeling Language

IDE-> Integrated Development Environment

SRS-> Software Requirement Specification

### 1.5 References

* Books

Software Requirements and Specifications: A Lexicon of Practice, Principles and



Prejudices (ACM Press) by Michael Jackson

Software Requirements (Microsoft) Second EditionBy Karl E. Wiegers



Software Engineering: A Practitioner’s Approach Fifth Edition By Roger S. Pressman

* Websites [**http://www.slideshare.net/**](http://www.slideshare.net/)

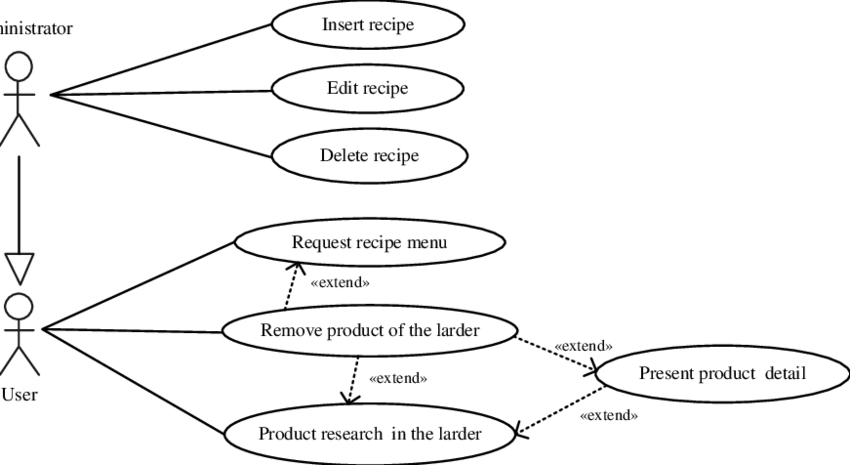


[**http://ebookily.net/doc/srs-library-management-system**](http://ebookily.net/doc/srs-library-management-system)

## 2. Overall Descriptions

### 2.1 Product Perspective

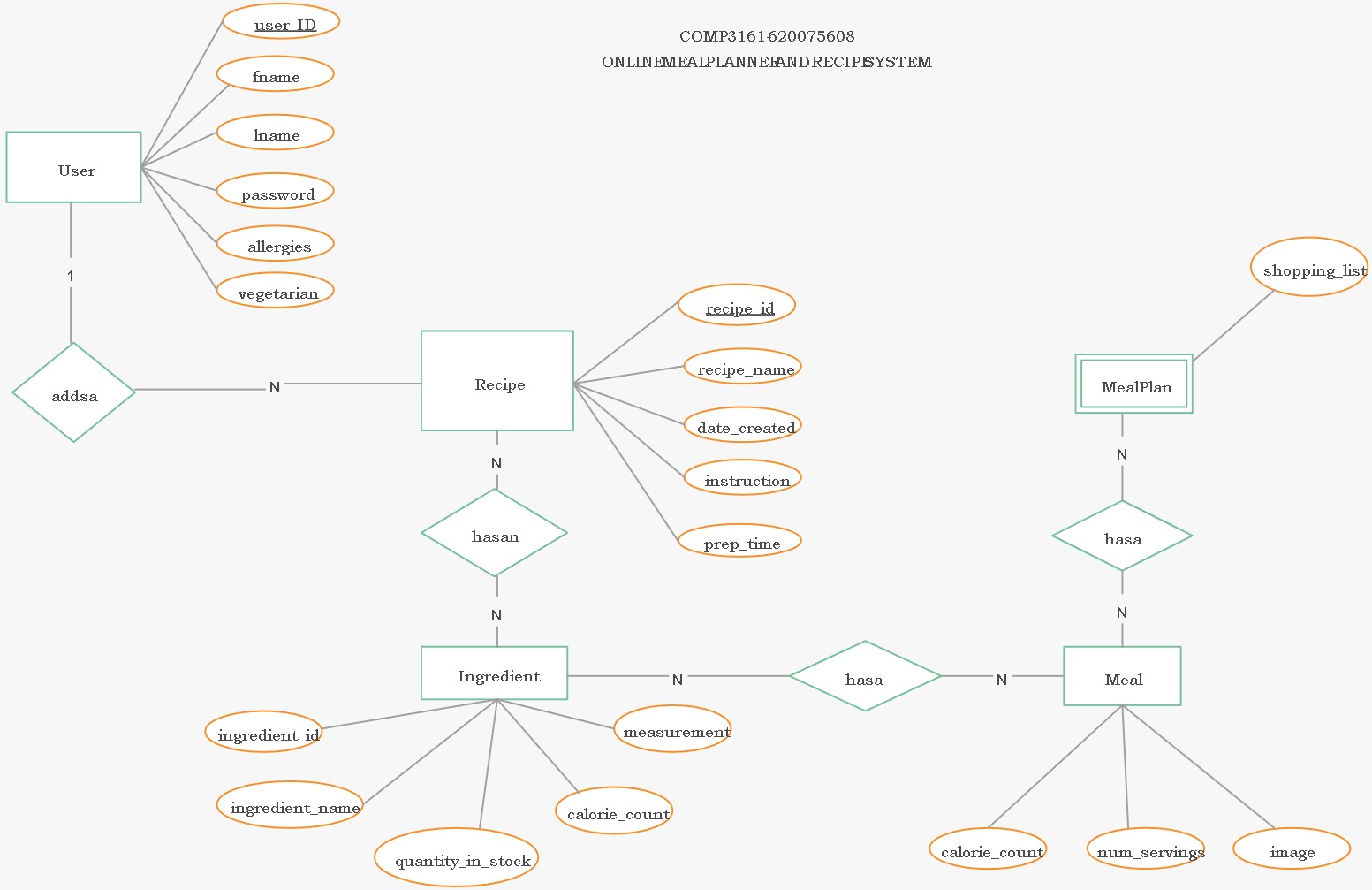
Use Case Diagram of Recipe Management System



This is a broad level diagram of the project showing a basic overview. The users can be either staff or student.. This System will provide a search functionality to facilitate the search of resources. This search will be based on various categories viz. book name or the ISBN. Further the library staff personnel can add/update the resources and the resource users from the system.The users of the system can request issue/renew/return of books for which they would have to follow certain criteria.

### 2.2 Product Function

Entity Relationship Diagram of Recipe Management System



### The Recipe Management System offers real-time online access to a comprehensive collection of recipes, ingredient details, and user information. The primary objective of this system is to streamline manual efforts in recipe organization. It's designed to handle recipe creation, modification, sharing, and user interaction seamlessly. The system facilitates recipe sharing, modification, and deletion while also managing ingredient lists and user ratings. Administratively, the system empowers administrators to oversee user activities and manage the recipe database. Users can access their account information, and authorized members can view and modify their recipes as needed.

### 2.3 User Classes and Characteristics

The system provides different types of services based on the type of users [Member/Librarian]. The Librarian will be acting as the controller and he will have all the privileges of an administrator. The member can be either a student or staff of the university who will be accessing the Library online.

The features that are available to the Admin are:-

 Recipe creation, modification, and deletion.

* Ingredient list and preparation instructions
* Recipe sharing and rating.

The features that are available to the Members are:-

* Can view the different categories of recipe available in the list.

 Can view the List of recipe available in each category

 Can own an account in the system.

* Can view the books issued to him
* Can put a request for a new order
* Can view the history of orders issued to him previously
* Can search for a particular recipe

### 2.4 Operating Environment

The product will be operating in windows environment. The Recipe Management System is a website and shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer,Google Chrome,and Mozilla Firefox.Also it will be compatible with the IE 6.0. Most of the features will be compatible with the Mozilla Firefox & Opera 7.0 or higher version. The only requirement to use this online product would be the internet connection.

The hardware configuration include Hard Disk: 40 GB, Monitor: 15” Color monitor, Keyboard: 122 keys. The basic input devices required are keyboard, mouse and output devices are monitor, printer etc.

### 2.5 Assumptions and Dependencies

The assumptions are:-

* The coding should be error free
* The system should be user-friendly so that it is easy to use for the users
* The information of all users, recipes and ingredients must be stored in database that is accessible by the user
* The system should have more storage capacity and provide fast access to the database
* The recipe management is running 24 hours a day
* Users may access from any computer that has Internet browsing capabilities and an Internet connection
* Users must have their correct usernames and passwords to enter into their online accounts and do actions

The dependencies are:-

* The specific hardware and software due to which the product will be run
* On the basis of listing requirements and specification the recipe will be produced and be success
* The end users (admin) should have proper understanding of the product
* The system should have the general report stored
* The feedback and the ratings of the user wants to stored in the database so that we will make the dishes quality and improvements.

### 2.6 Requirement

Software Configuration:-

This software package is developed using java as front end which is supported by sun micro system. Microsoft SQL Server as the back end to store the database.

Operating System: Windows 10 or later, MacOS-10.12 or later.

Language: Java Runtime Environment, Net beans 7.0.1 (front end)

Database: MS SQL Server (back end)

Hardware Configuration:-

Processor : A Modern multi-core processor(minimum Intel core i- 3)

Hard Disk: 256GB or more

RAM: 4 GB or more

### 2.7 Data Requirement

The inputs consist of the query to the database and the output consists of the solutions for the query. The output also includes the user receiving the details of their recipe based on their ingredients. In this project the inputs will be the queries as fired by the users like create an account, selecting recipe and putting into account. Now the output will be visible when the user requests the server to get details of their account in the form of time, date and which recipe can make with the ingredients and their needs.

## 3. External Interface Requirement

### 3.1 GUI

The software provides good graphical interface for the user and the administrator can operate on the system, performing the required task such as create, update, viewing the recipes.

* It allows user to view the recipe based on the ingredients given and vice versa.
* The user interface must be customizable by the administrator
* All the modules provided with the software must fit into this graphical user interface and accomplish to the standard defined
* The design should be simple and all the different interfaces should follow a standard template
* The user interface should be able to interact with the user management module and a part of the interface must be dedicated to the login/logout module

Login Interface:-

In case the user is not yet registered, he can enter the details and register to create his account. Once his account is created he can ‘Login’, which asks the user to type his username and password. If the user entered either his username or password incorrectly then an error message appears.

Search:-

The member or user can enter the ingredients he is looking for the or recipe he is interested in, then he can search for the recipe by entering the recipe name.

Administrator control Panel:-

This control panel will allow administrator to add/remove users; add, edit, or remove a resource, and manage lending options.

## 4. System Features

The users of the system should be provided the surety that their account is secure. This is possible by providing:-

* User authentication and validation of members using their unique member ID
* Proper accountability which includes not allowing a member to see other member’s account. Only administrator will see and manage all member accounts

## 5. Other Non-functional Requirements

### 5.1 Performance Requirement

* The performance of the system should be fast and accurate
* Management System shall handle expected and non-expected errors in ways that prevent loss in information and long downtime period. Thus it should have inbuilt error testing to identify invalid username/password
* The system should be able to handle large amount of data. Thus it should accommodate high number of ingredients and recipes without any fault

### 5.2 Safety Requirement

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup so that the database is not lost. Proper UPS/inverter facility should be there in case of power supply failure.

### 5.3 Security Requirement

* System will use secured database
* Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
* System will have different types of users and every user has access constraints
* Proper user authentication should be provided

 No one should be able to hack users’ password

* There should be separate accounts for admin and members such that no member can access the database and only admin has the rights to update the database.

### 5.4 Requirement attributes

* There may be multiple admins creating the project, all of them will have the right to create changes to the system. But the members or other users cannot do changes
* The project should be open source
* The Quality of the database is maintained in such a way so that it can be very user friendly to all the users of the database
* The user be able to easily download and install the system

### 5.5 Business Rules

A business rule is anything that captures and implements business policies and practices. A rule can enforce business policy, make a decision, or infer new data from existing data.This includes the rules and regulations that the System users should abide by. This includes the cost of the project and the discount offers provided. The users should avoid illegal rules and protocols. Neither admin nor member should cross the rules and regulations.

### 5.6 User Requirement

The users of the system are members and has administrator to maintain the system. The members are assumed to have basic knowledge of the computers and internet browsing. The administrators of the system should have more knowledge of the internals of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface, user manual, online help and the guide to install and maintain the system must be sufficient to educate the users on how to use the system without any problems.

The admin provides certain facilities to the users in the form of:-

 Backup and Recovery

* Data replication i.e. if the data is lost in one branch, it is still stored with the server
* Auto Recovery i.e. frequently auto saving the information
* Maintaining files i.e. File Organization
* The server must be maintained regularly and it has to be updated from time to time

## 6. Other Requirements

### 6.1 Data and Category Requirement

There are different categories of users namely chef and normal users etc. Depending upon the category of user’s the access rights are decided. It means if the user is an administrator then he can be able to modify the data, delete, append and the chef can add the recipe and ingredients and the normal users can only read the data .

### 6.2 Appendix

**6.3 Glossary**

The following are the list of conventions and acronyms used in this document and the project as well:

* Administrator: A login id representing a user with user administration privileges to the software
* User: A general login id assigned to most users
* Client: Intended users for the software
* SQL: Structured Query Language; used to retrieve information from a database
* SQL Server: A server used to store data in an organized format
* Layer: Represents a section of the project
* User Interface Layer: The section of the assignment referring to what the user interacts with directly
* Application Logic Layer: The section of the assignment referring to the Web Server. This is where all computations are completed
* Data Storage Layer: The section of the assignment referring to where all data is recorded

 Use Case: A broad level diagram of the project showing a basic overview

* Class diagram: It is a type of static structure diagram that describes the structure of a system by showing the system’s cases, their attributes, and the relationships between the classes
* Interface: Something used to communicate across different mediums

 Unique Key: Used to differentiate entries in a database

### 6.4 Class Diagram

A class is an abstract, user-defined description of a type of data. It identifies the attributes of the data and the operations that can be performed on instances (i.e. objects) of the data. A class of data has a name, a set of attributes that describes its characteristics, and a set of operations that can be performed on the objects of that class. The classes’ structure and their relationships to each other frozen in time represent the static model. In this project there are certain main classes which are related to other classes required for their working. There are different kinds of relationships between the classes as shown in the diagram like normal association, aggregation, and generalization. The relationships are depicted using a role name and multiplicities. Here ‘user’, ‘ingredients’ and ‘recipe’ are the most important classes which are related to other classes.