



Dharmsinh Desai University, Nadiad

Faculty of Technology

Department of Computer Engineering

B.Tech CE Semester -VI

Subject: Service Oriented Computing

Project Title: **Online Cooking Recipe Management System**

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1. Abstract

Online cooking recipe management portal enables end user to upload their recipes and learn new cooking recipes online. Using this system, users can see various types of recipes and learn their procedure. Users can also provide their feedback by means of comments and likes or dislikes.

1.1 Purpose

The purpose of the document is to collect and analyze all assorted ideas that have come up to define the system, its requirement with respect to end users. Also, we shall predict how this system will be used in order to gain a better understanding of the project.

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, its user interface and software requirements. It defines how our clients, team and end user see the system and its functionality.

1.2 Scope

The main objective of the system is that users can share their recipe ideas and learn new recipes from any place. Here, users can upload their recipes & see various kind of recipes of other users. User can get feedback about their recipes by comments and likes/dislikes provided by other users. Thus, users can manage their recipes online.

1.3 Overview

The remaining sections of this document provide a general description, including characteristics of the users of this system, the functional and data requirements of the system.

2. Introduction

2.1 Brief Introduction (about the system)

Online cooking recipe management system is a web application. It allows view different kind of recipes. Anyone can start posting new recipes on the website, after doing registration successfully. Using this system, anyone on the internet can learn new recipes online. Users can see the different kind of recipes uploaded by other users by just one click & they can write some comment on that recipe. Users can also like or dislike any recipe if they wish. This system can be beneficial for a restaurant and cooking instructor to get new recipe ideas. This system makes sharing of the new recipes very easy by providing common interface for users.

2.2 Technology/ Platform/ Tools Used

For WCF Service Project

Technologies:-

- HTML5
- CSS3
- Bootstrap4
- Windows Communication Foundation Services
- ASP.NET framework
- ADO.Net
- SQL server database

Tools:-

- Visual Studio

For Rest API Project

Technologies:-

- HTML5
- CSS3

- Bootstrap4
- Rest API
- ASP.NET framework 4.6.1 (Web client)
- ASP.NET core 2.1 (REST API)
- SQL server database

Tools:-

- Visual Studio
- Restman/ Postman/ Fiddler

3. Software Requirements Specification for Online Cooking Recipe Management Portal

3.1 System User

- End User

3.2 System features

3.2.1 Functional Requirements

R.1 Manage account

User can register himself by providing necessary details and can login to the system by providing correct credentials. User can view his/her profile and update profile details anytime.

R.1.1 Register new user

Input: Enter name, email & password of user

Output: Confirmation message for successful registration, otherwise error message

R.1.2 Login to user account

Input: Email & password of user

Output: Navigate to home page if login succeeds, otherwise display error message

Processing: User credentials are validated

R.1.3 View user profile

Input: User selection to view account information

Output: Display user account details

R.1.4 Update user profile

Description: User can update his/her personal details by clicking on update profile.

R.1.4.1 Display current details of user

Input: User selection to view account information

Output: Current details of user account

R.1.4.2 Update user details

Input: Details to be updated

Output: Confirmation message for updated user details

R.1.5 Logout

Input: User selection

Output: User is redirected to login page

R.2 Manage Recipes

User can upload new recipe & view recipes uploaded by other users. User need to login before uploading any recipe. User can also view, update & delete his/her uploaded recipes. User can also like or dislike particular recipe uploaded by other users

R.2.1 Add new recipe

Input: Enter necessary details like title, ingredients, method, category, other details & photo of recipe to be added

Output: Confirmation message, if recipe is added successfully, otherwise display error message

R.2.2 Update recipe

R.2.2.1 View recipe details

Input: User selection to view particular recipe

Output: Current details of the recipe

R.2.2.2 Update recipe details

Input: Recipe details to be updated

Output: Confirmation message regarding recipe update

R.2.3 Delete recipe

Input: User selection of particular recipe

Output: Confirmation message if delete is successful, otherwise error message

R.2.4 View recipes

Description: User can view kind of recipes. User can view all recipes including his/her own recipes & other users recipes. Additionally, user can also view particular recipe details.

Input: User selection

Output: Recipes are displayed as per user selection

R.2.5 Like or dislike recipe

Input: User selection for particular recipe

Output: Like & dislike count of selected recipe is updated

R.3 Manage Comments

User can add comment to particular recipe. User can also see comments added to all the recipes.

R.3.1 Add new comment

Input: Comment text about particular recipe

Output: Comment is displayed, if added successfully, otherwise error message is displayed

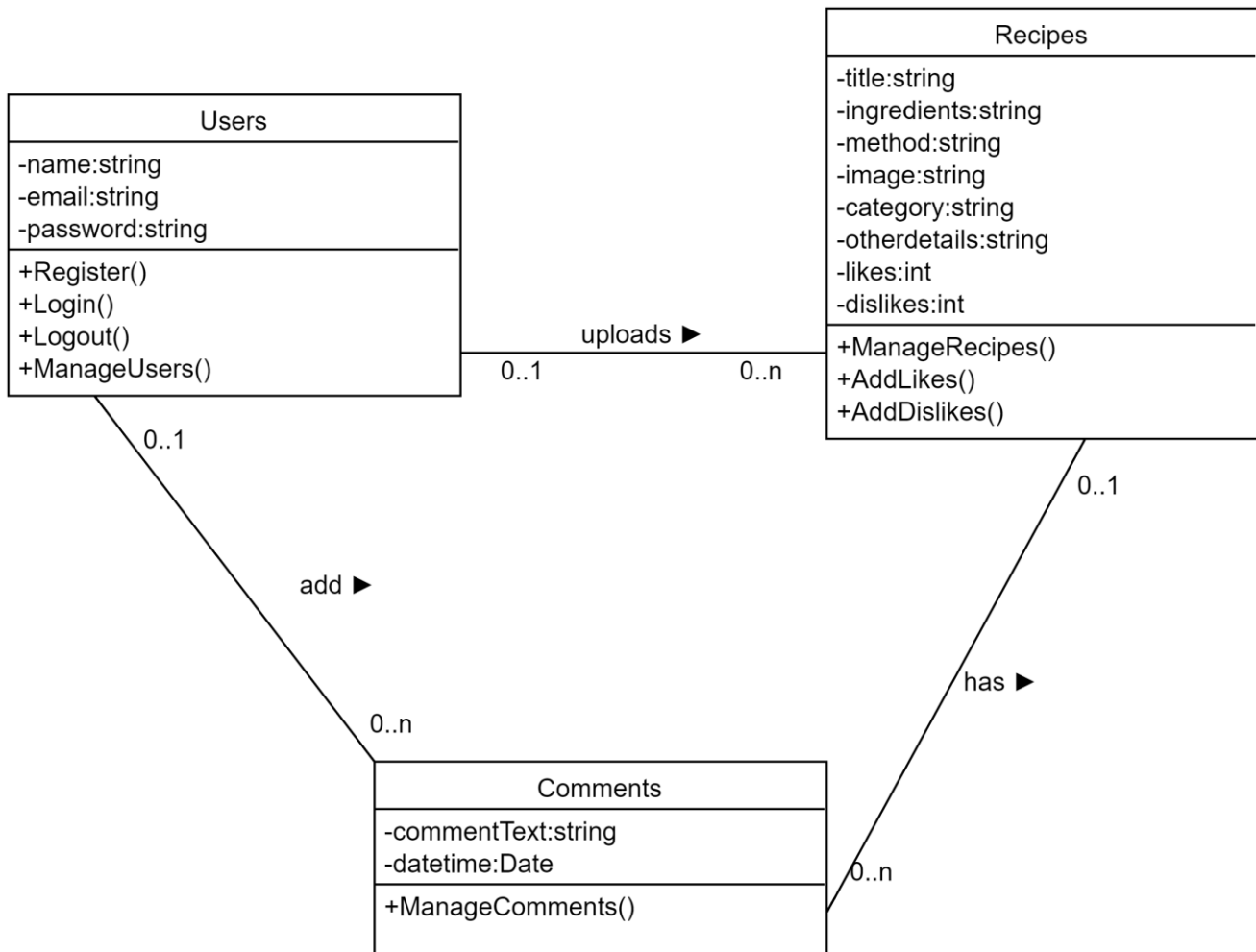
R.3.2 View comments

Input: User selection for particular recipe

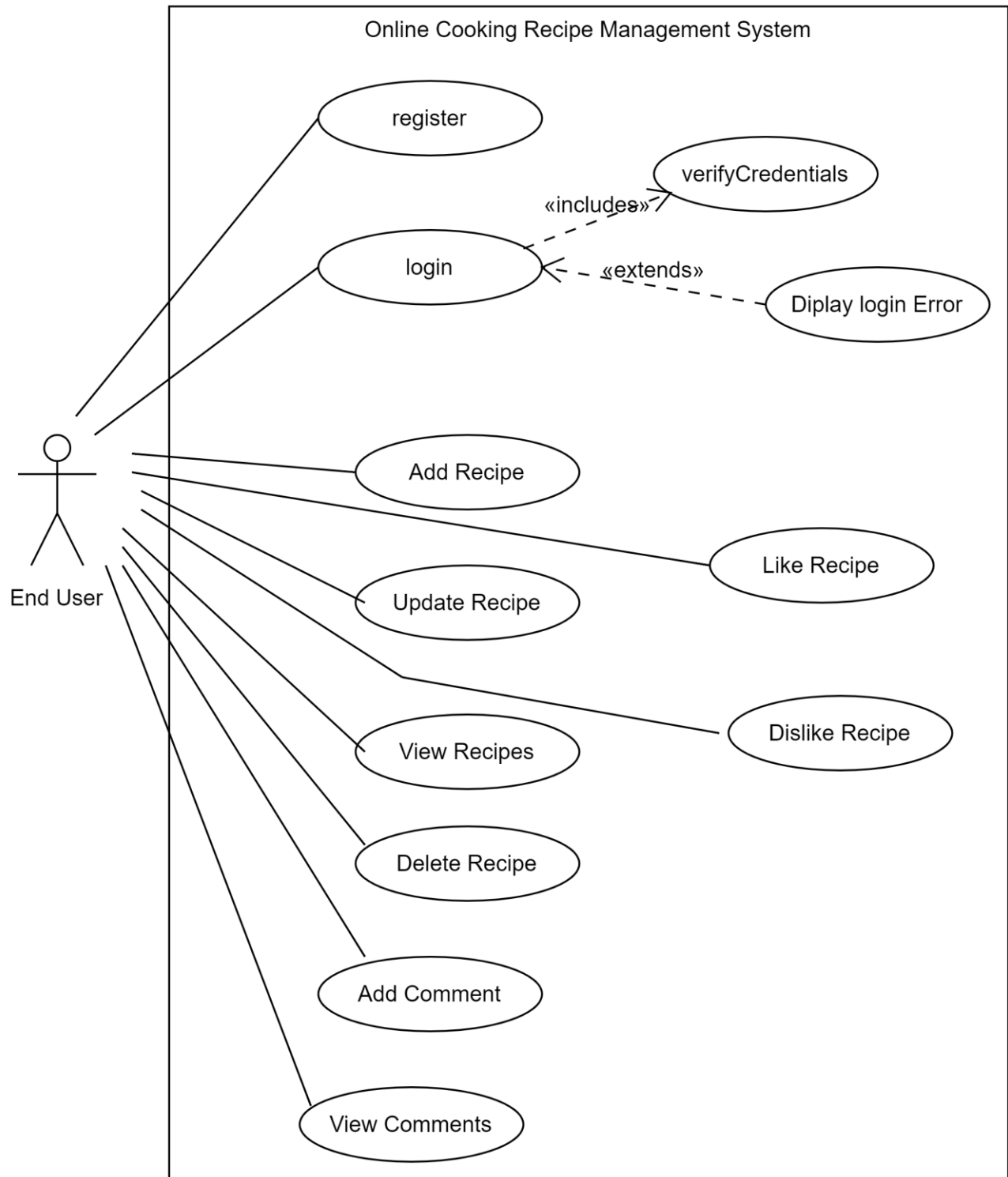
Output: Comments of that recipe are displayed

4. Design

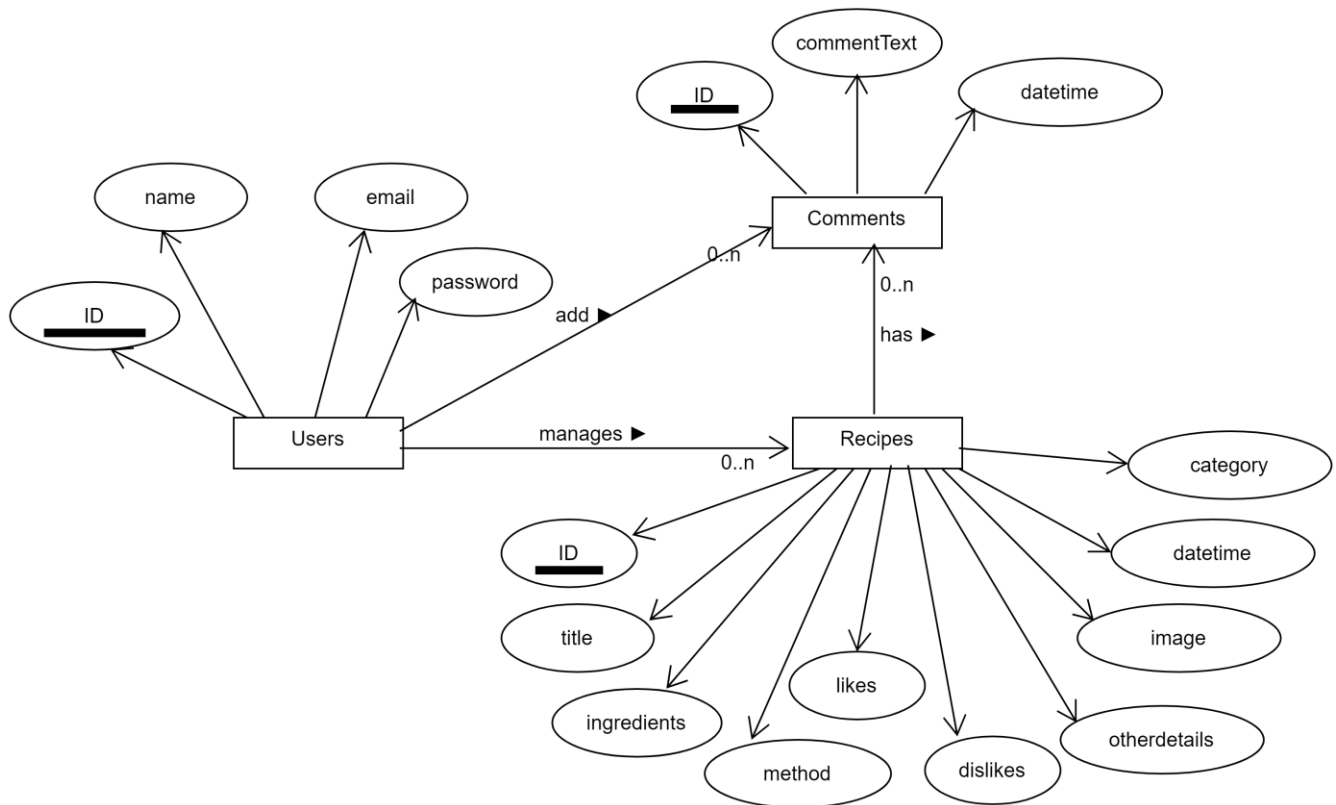
4.1 Class Diagram



4.2 Use Case Diagram



4.3 E-R Diagram



4.4 Data Dictionary

Users

No	Field name	Data type	Required	Unique	PK/FK	Ref. Table
1	Id	int	true	true	PK	-
2	name	string	true	false	-	-
3	email	string	true	true	-	-
4	password	String	true	false	-	-

Recipes

No	Field Name	Data type	Required	Unique	PK/FK	Ref. Table
1	Id	int	true	true	PK	-
2	title	string	true	false	-	-
3	ingredients	string	true	false	-	-
4	method	string	true	false	-	-
5	otherdetails	string	true	false	-	-
6	image	string	false	false	-	-
7	Date	DateTime	true	false	-	-
8	Likes	int	false	false	-	-
9	Dislikes	int	false	false	-	-
10	userId	int	true	false	FK	Users

Comments

No	Field Name	Data type	Required	Unique	PK/FK	Ref. Table
1	Id	int	true	true	PK	-
2	commentText	string	true	false	-	-
3	date	datetime	true	false	-	-
4	userId	int	true	false	FK	Users
5	recipeId	int	true	false	FK	Recipes

5. Implementation Details

5.1 Modules Created (Brief Description)

◆ For WCF Project

Project Structure:

WCFServices: WCF Service library project

WebClient: Web application (ASP.Net framework 4.6.1)

ConsoleHost: Console Application (for hosting)

Workflow: Our WCF Service library project is hosted by console application. WebClient can interact with the database using services. First Of all, client can consume services using service reference & service endpoints are configured using console host, which invokes particular service operation. Finally, service handles the provided data and performs necessary operation.

Services created:

- **AccountService:** It manages interaction with User. It is used to register & login user. It also contain operations to view & update profile details.
- **RecipeService:** It is used to manage recipes. It contains operations to add, update, delete & view recipes. Using this, we can also add like or dislike to particular recipe.
- **CommentService:** It is used to add comment to particular recipe & view comments of recipe(s).

◆ For Rest-API project

Project Structure:

RecipePortalWebAPI: Web API project (ASP.Net core 2.1)

WebClient: Web application (ASP.Net framework 4.6.1)

Workflow: WebClient is used to take data from the client or provide data to the client. Using HttpClient, it calls method of Web API to handle particular request. Then Web API maps particular request & uses repository pattern to perform interaction with the SQL server database. Data from the repository is returned to the API, which in-turn forwards it to the webclient.

API Controllers Created:

- **AccountController:** It controls all operation related with user. It provides methods for login, registration, view user details & update user details.
- **RecipeController:** It is used to manage the recipe. It contains method to add, update, delete & view recipes. It has method to update like & dislike count as well. It also handles add comments & view comments functionality of particular recipe.

5.2 Function Prototype

For WCF Project:

RecipeService Operations:-

- `string` AddRecipe(Recipe Recipe);
- Recipe EditRecipe(`int` Id);
- `string` UpdateRecipe(Recipe Recipe);
- `bool` DeleteRecipe(`int` id);
- `List<Recipe>` GetAllRecipes(`int` userId);
- Recipe GetRecipe(`int` id);
- `bool` AddLike(`int` id);
- `bool` AddDislike(`int` id);
- `List<Recipe>` GetUserSpecificRecipes(`int` id);

AccountService Operations:-

- `string` Register(Users u);
- Users Login(`string` email, `string` password);
- `void` UpdateUserDetails(Users u);
- Users GetUserDetail(`int` ID);
- `DataSet` GetUsers();
- `void` DeleteUser(`int` ID);
- `void` Logout();

CommentService Operations:-

- `string` AddComment(Comments comment);

- IEnumerable<Comments> ViewComments(int recipeId);

For Rest API Project:

AccountController Methods:-

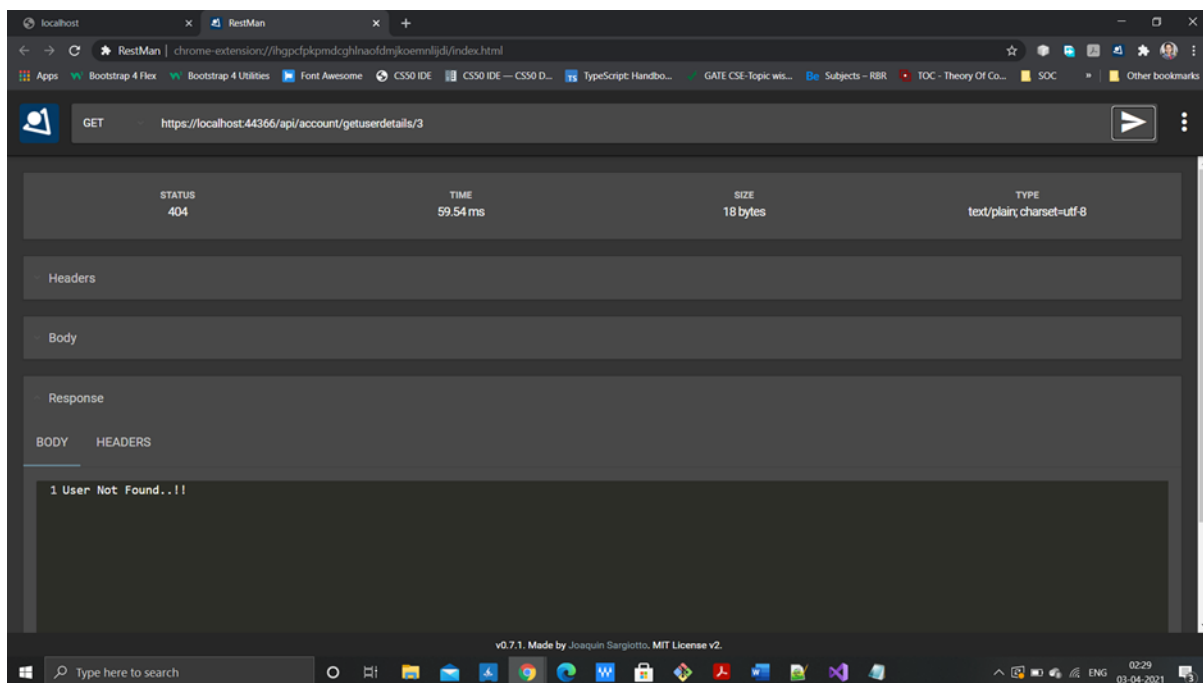
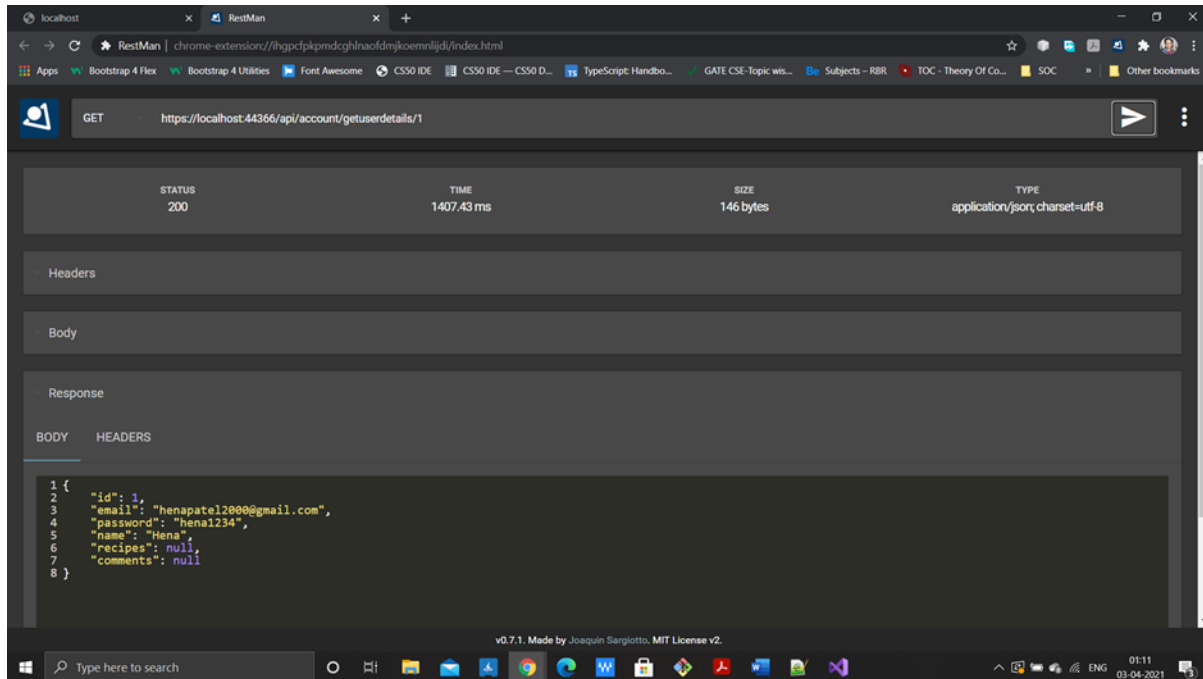
- public IActionResult Register(User user); [HttpPost]
- public IActionResult Login([FromBody] User user); [HttpPost]
- public IActionResult GetUserDetails(int id); [HttpGet]
- public IActionResult UpdateUserDetails([FromBody] User user); [HttpPut]

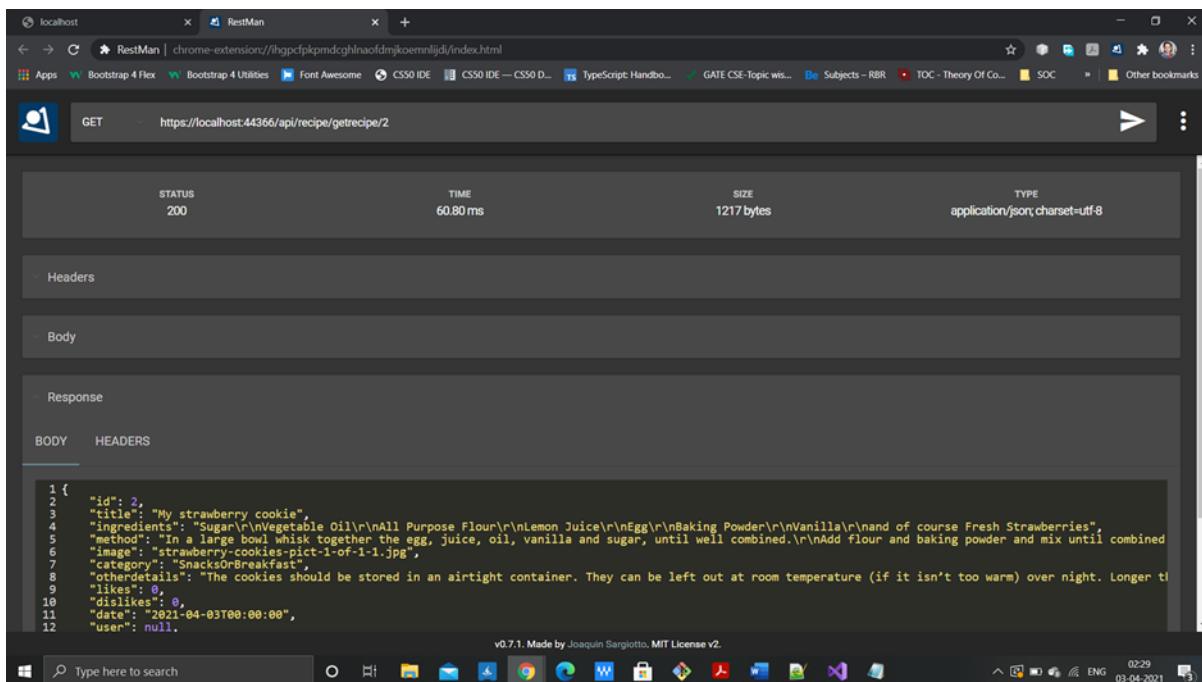
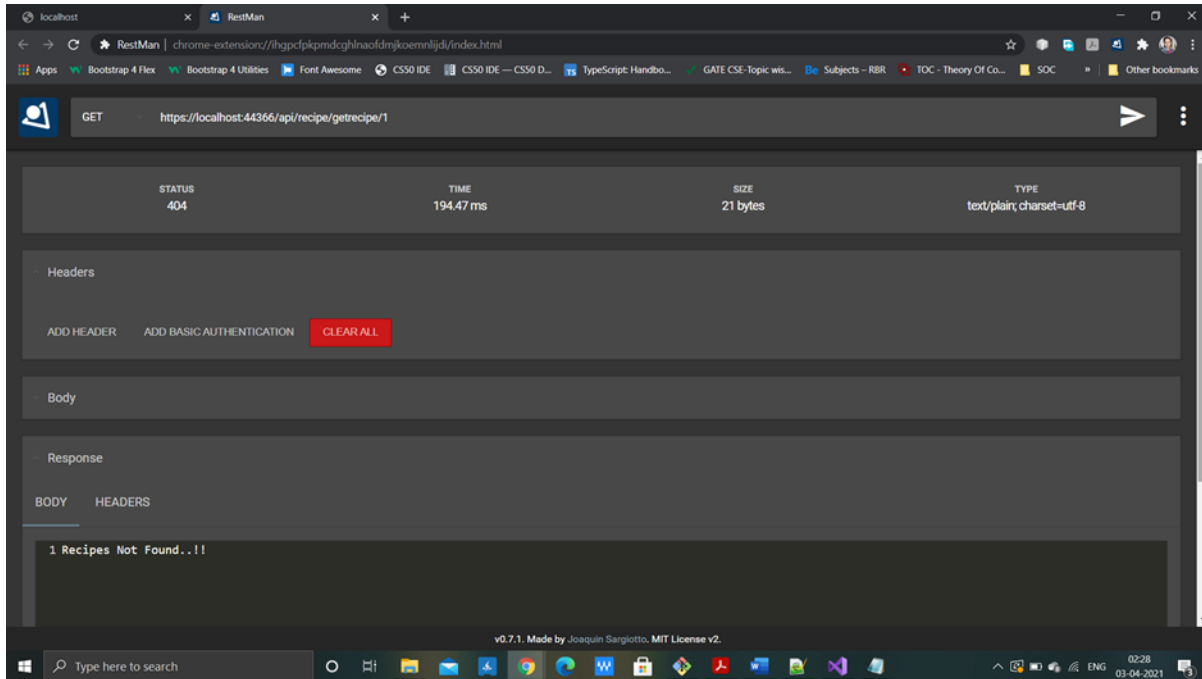
RecipeController Methods:-

- public IActionResult GetAllRecipes(); [HttpGet]
- public IActionResult GetAllRecipes(string type, int id); [HttpGet]
- public IActionResult GetRecipeById(int id); [HttpGet]
- public IActionResult AddRecipe(Recipe newrecipe); [HttpPost]
- public IActionResult AddLike([FromBody] int id); [HttpPost]
- public IActionResult AddDislike([FromBody] int id); [HttpPost]
- public IActionResult DeleteRecipe(int id); [HttpDelete]
- public IActionResult UpdateRecipeDetails(Recipe changerecipe); [HttpPut]
- public IActionResult AddComment(Comment comment); [HttpPost]
- public IActionResult ViewComment(int id); [HttpGet]

6. Testing

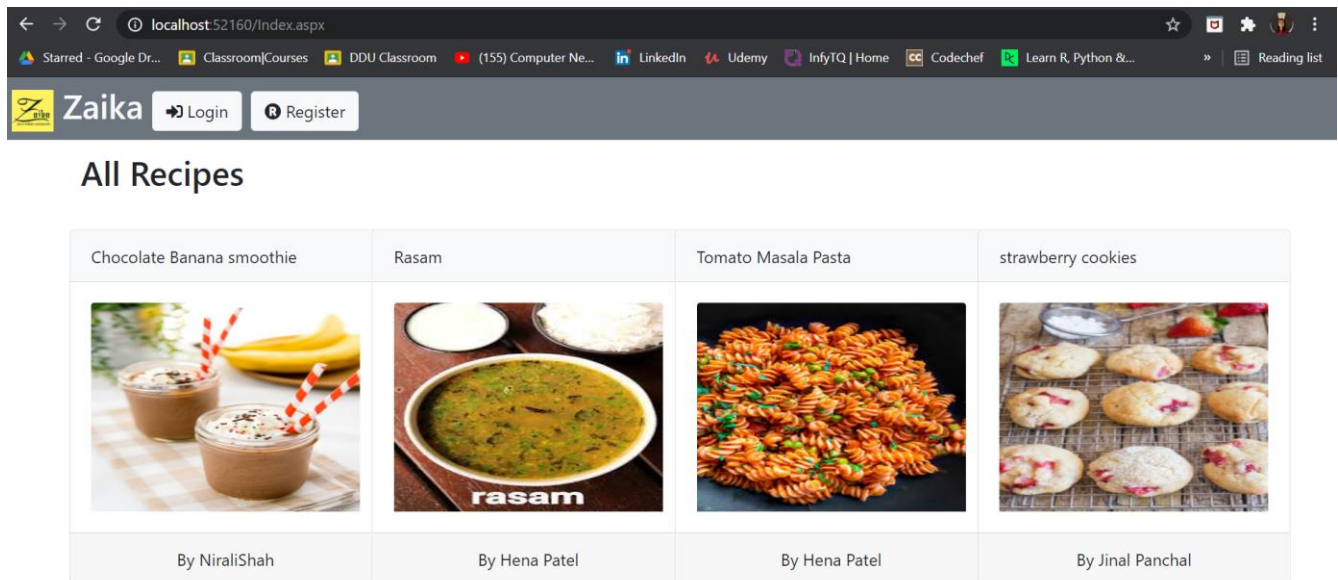
We have used Restman tool to perform testing of Web-API. Client testing is performed manually.



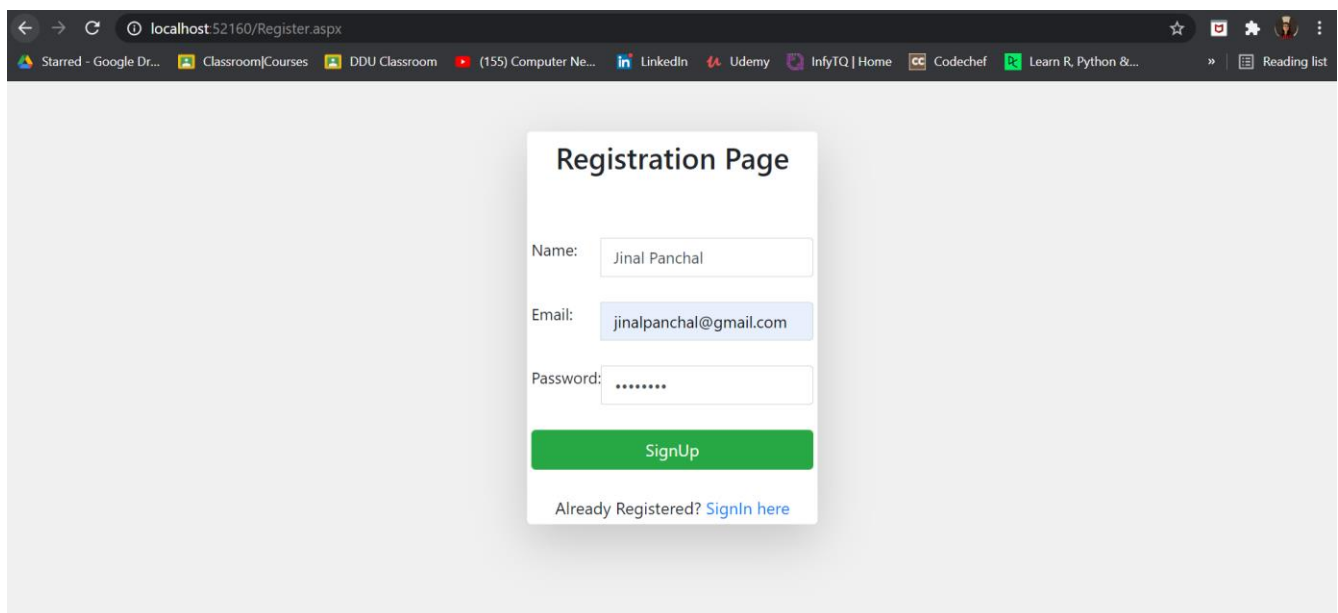


7. Screen-shots

7.1 Index Page



7.2 Sign Up



7.3 Login

localhost:52160/Login.aspx

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Login Page

Email:

Password:

Login

[Click to Register](#)



7.4 User Homepage(Other users recipes are displayed)

localhost:52160/home.aspx?userid=1

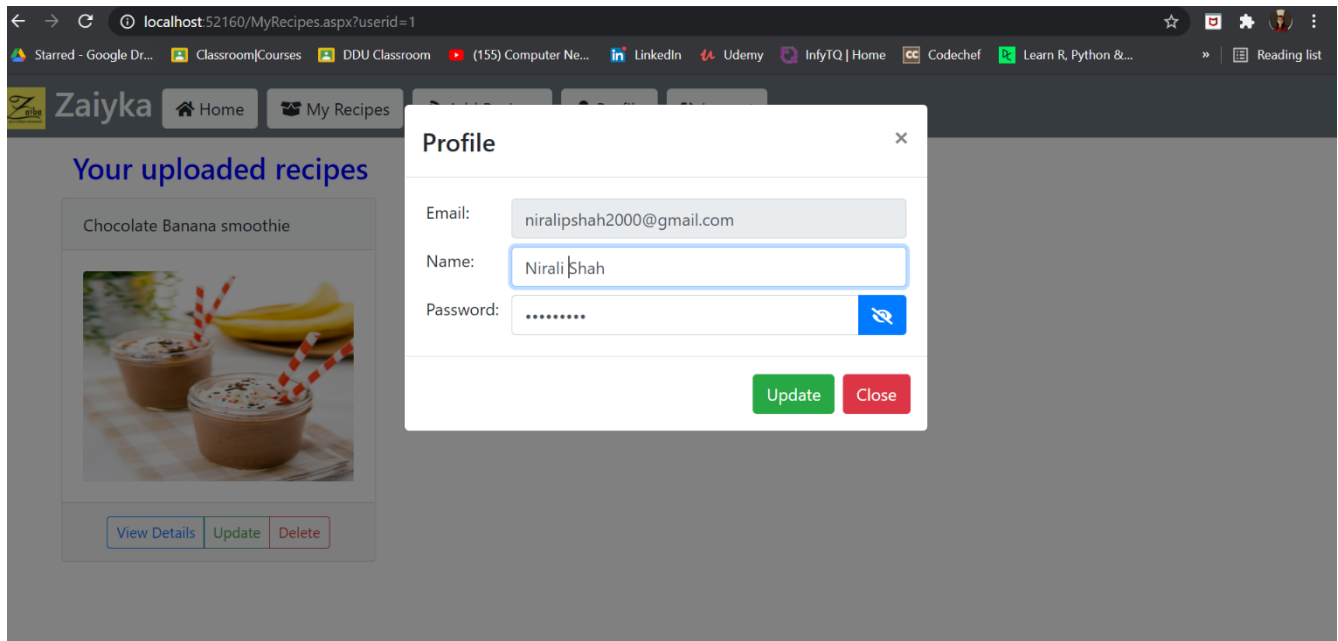
Starred - Google Dr... Classroom|Courses DDU Classroom (155) Computer Ne... LinkedIn UdeMy InfyTQ | Home Codechef Learn R, Python &... Reading list

Zaika Home My Recipes Add Recipes Profile Logout

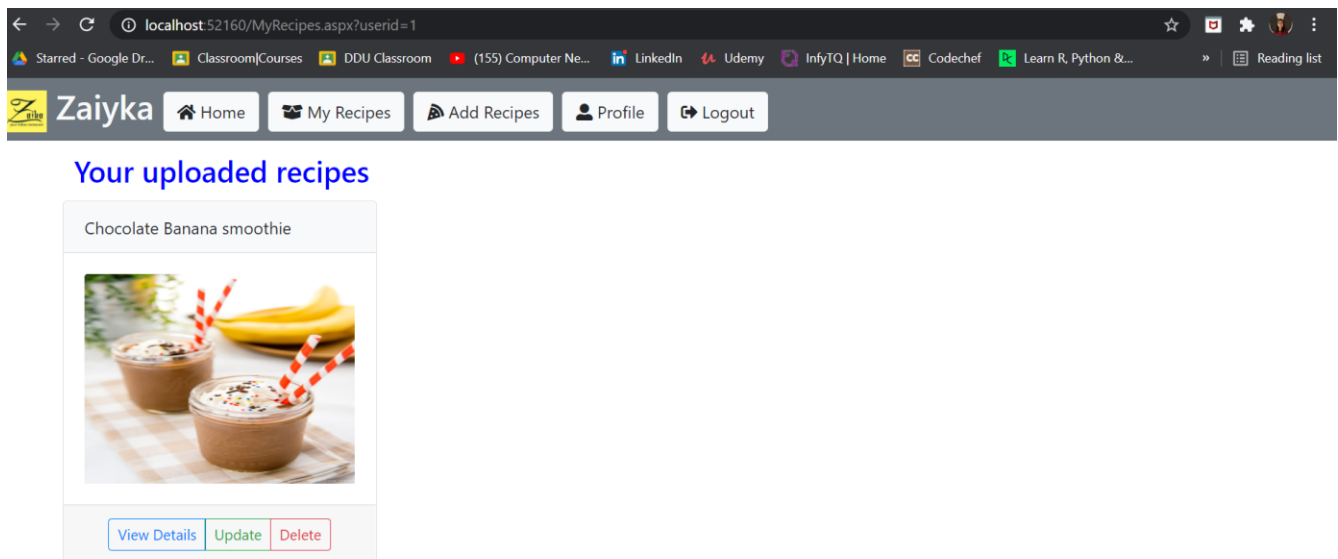
Welcome NiraliShah

<p>Rasam</p>  <p>rasam</p> <p>Likes: 1 Dislikes: 0</p> <p>View Details Like Dislike</p>	<p>Tomato Masala Pasta</p>  <p>Likes: 0 Dislikes: 0</p> <p>View Details Like Dislike</p>
--	---

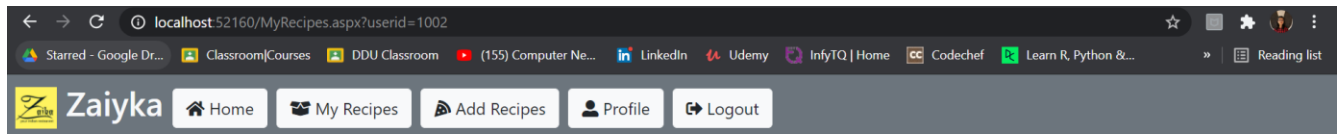
7.5 Update Profile



7.6 My Recipes(users own recipes)



→when you have not uploaded any recipe



Your uploaded recipes

7.7 Add Recipe

Add Recipe Details

Title: strawberry cookies

Ingredients: Sugar, Vegetable Oil, All Purpose Flour

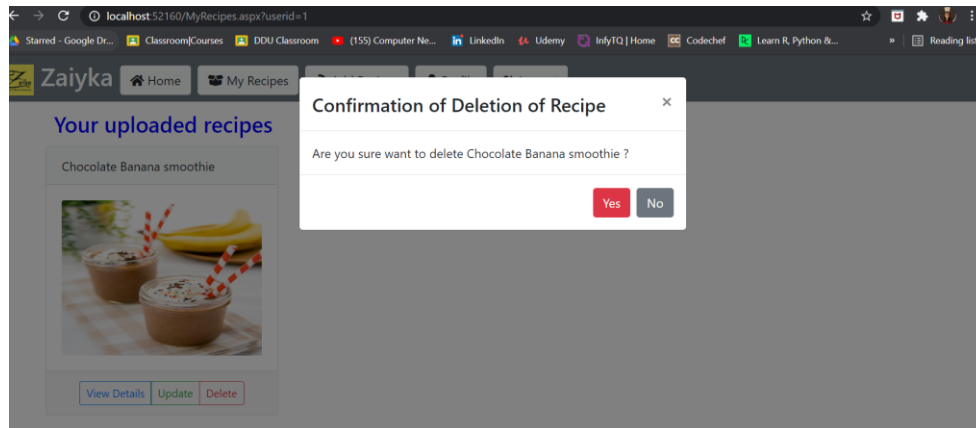
Method: In a large bowl whisk together the egg, juice, oil, vanilla and sugar, until well combined. Add flour and baking powder and mix until combined. Gently fold in the chopped strawberries just until combined. Either form into balls or drop by spoonfuls (approximately the size of a golf ball). Place on cookie sheets, sprinkle with a little sugar and bake for approximately 15 minutes. Let cool completely.

Category: SnacksOrBreakfast

Other Details: The cookies should be stored in an airtight container. They can be left out at room temperature (if it isn't too warm) over night. Longer than that they should be stored in the refrigerator. They will keep

Photo: strawberrycookies.jpg

7.8 Delete Recipe



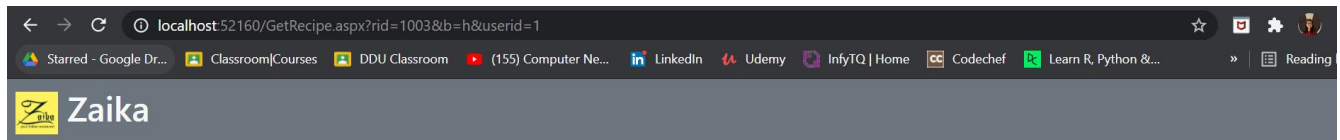
7.9 Update Recipe

A screenshot of the 'Update Recipe Details' form in the web application. The browser's address bar shows 'localhost:52160/UpdateRecipe.aspx?rid=1002&userid=1'. The page has a navigation bar with 'Zaika'. The form is titled 'Update Recipe Details' and contains the following fields:

- Recipe Id: 1002
- Title: Chocolate Banana smoothie
- Ingredients: 1 banana, ☐ 1 Tbsp unsweetened cocoa powder, ☐ 4 ice cubes (if you don't use frozen banana)
- Method: Gather all the ingredients. Put the banana, cocoa powder, ice cubes and chocolate soy milk in an electric blender/mixer. Blend until all the ingredients are combined and smooth. Pour into a glass (or 2 small glasses). Add whipped cream and your choice of sprinkles, if desired.
- Category: Dessert
- Other Details: prep time: 3mins
- Photo:

At the bottom of the form are two buttons: 'Update' and 'Back To List'.

7.10 View RecipeDetails



Rasam



Made by Hena Patel

Ingredients or masala paste: ☐ 1 tbsp cumin / jeera ☐ 1 tsp pepper ☐ 3 clove garlic ☐ 2 tbsp coriander stem for rasam: ☐ 2 tbsp oil ☐ 1 tsp mustard ☐ 2 dried red chilli ☐ few curry leaves ☐ pinch hing / asafoetida ☐ 1 tomato (chopped) ☐ ¼ tsp turmeric ☐ 1 tsp salt ☐ 1 chilli (slit) ☐ 1 cup tamarind extract ☐ 3 cup water ☐ 2 tbsp coriander (finely chopped)

Method firstly, in a small blender take 1 tbsp cumin, 1 tsp pepper, 3 clove garlic and 2 tbsp coriander stem. blend to a coarse paste without adding any water. keep aside. in a large kadai, heat 2 tbsp oil and splutter 1 tsp mustard, 2 dried red chilli, few curry leaves and pinch hing. add in the prepared masala paste and saute for a minute. now add 1 tomato, ¼ tsp turmeric, 1 tsp salt and 1 chilli. saute for a minute or until tomatoes turn soft and mushy. further, add 1 cup tamarind extract and 3 cup water. mix well. cover and boil for 8 minutes or until raw flavour disappears. finally, add 2 tbsp coriander and enjoy south indian rasam with hot steamed rice.

Category SouthIndian

Other details prep time: 5mins, cooking time: 10mins, serving:4

[Back](#) [Show Comments](#) [Add Comment](#)

7.11 ShowComments

[Back](#) [Hide Comments](#) [Add Comment](#)

Recipe Comments

NiraliShah 03-04-2021 03:16:32

Very nice recipe. I will make it for sure...

→when no comments are available.


[Back](#) [Hide Comments](#) [Add Comment](#)

Recipe Comments

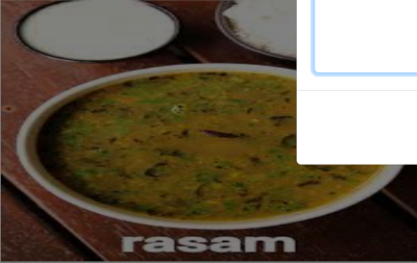
7.12 Hide Comments

[Back](#) [Show Comments](#) [Add Comment](#)

7.13 Add Comments

 **Zaika**

Rasam


rasam

Made by Hena Patel

Ingredients or masala paste: ☐ 1 tbsp cumin / jeera ☐ 1 tsp pepper ☐ 3 clove garlic ☐ 2 tbsp coriander stem for rasam: ☐ 2 tbsp oil ☐ 1 tsp mustard ☐ 2 dried red chilli ☐ few curry leaves ☐ pinch hing / asafoetida ☐ 1 tomato (chopped) ☐ ¼ tsp turmeric ☐ 1 tsp salt ☐ 1 chilli (slit) ☐ 1 cup tamarind extract ☐ 3 cup water ☐ 2 tbsp coriander (finely chopped)

Method firstly in a small blender take 1 then cumin, 1 tsp pepper, 3 clove garlic and 2 tbsp coriander stem, blend to a coarse paste without

Add Comment

7.14 After Logout

← → ↻ localhost:52160/Login.aspx ☆ 📄 ⚙️ 👤 ⋮

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Login Page

Email:

Password:

[Click to Register](#)

8. Conclusions

The functionality implemented in the system was done after understanding all the system modules according to the requirements.

Functionalities successfully implemented in the system:-

- User registration
- Login
- Logout
- Add,update,delete recipe
- View recipes
- Add comment
- View comments
- Add like or dislike to recipeId

After implementation of the system, comprehensive testing was performed to check for possible errors or bugs in the system.

9. Limitations and Future Extensions

9.1 Functionalities Not Implemented

- Forgot password & reset password
- Sharing of recipes

9.2 Future Extensions

- Rating of recipes
- Add reply to comments
- Like or dislike any comment

10. Bibliography

For solving errors & exceptions:-

- <https://stackoverflow.com/questions/18465334/getting-thread-abort-exception-while-using-response-redirect>
- <https://docs.microsoft.com/en-us/dotnet/api/system.threading.threadabortexception?view=net-5.0>
- <https://forums.asp.net/t/2163298.aspx?How+can+I+resolve+System+Net+Sockets+SocketException+An+existing+connection+was+forcibly+closed+by+the+remote+host>

For cooking recipe data:-

- <https://www.mycakeschool.com/recipes/cherry-cake-a-scratch-recipe/>
- <https://hebbarskitchen.com/>

For model validation purpose:-

- [https://docs.microsoft.com/en-us/aspnet/core/mvc/models/validation?view=aspnetcore-3.1#:~:text=expects%20an%20integer\).-Model%20validation%20occurs%20after%20model%20binding%20and%20reports%20errors%20where,rating%20between%201%20and%205\).&text=%2FIndex%22\)%3B%20%7D-Web%20API%20controllers%20don%27t%20have%20to%20check%20ModelState.have%20the%20%5BApiController%5D%20attribute](https://docs.microsoft.com/en-us/aspnet/core/mvc/models/validation?view=aspnetcore-3.1#:~:text=expects%20an%20integer).-Model%20validation%20occurs%20after%20model%20binding%20and%20reports%20errors%20where,rating%20between%201%20and%205).&text=%2FIndex%22)%3B%20%7D-Web%20API%20controllers%20don%27t%20have%20to%20check%20ModelState.have%20the%20%5BApiController%5D%20attribute)