

**BIS 698 Information Systems Capstone Project  
Group 1**

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# COOK MATE



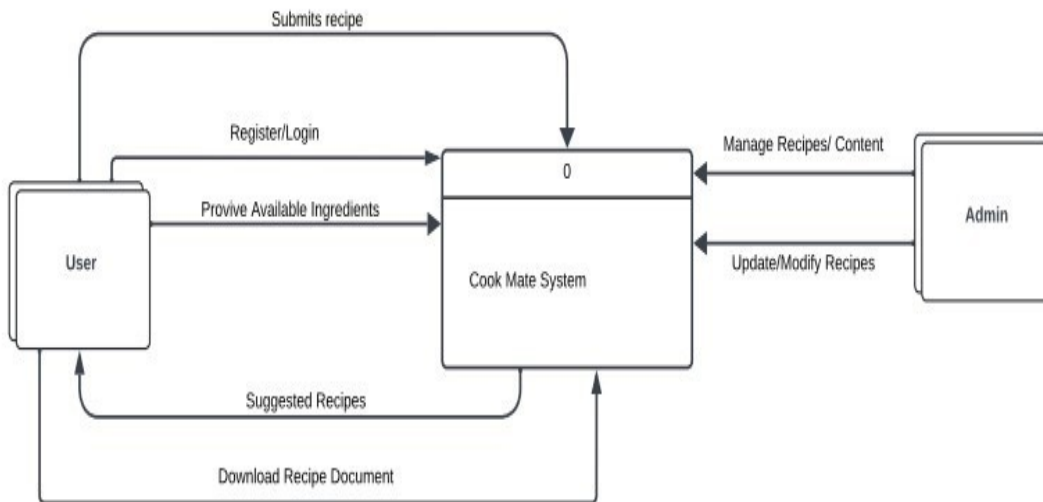
## Final Project Report

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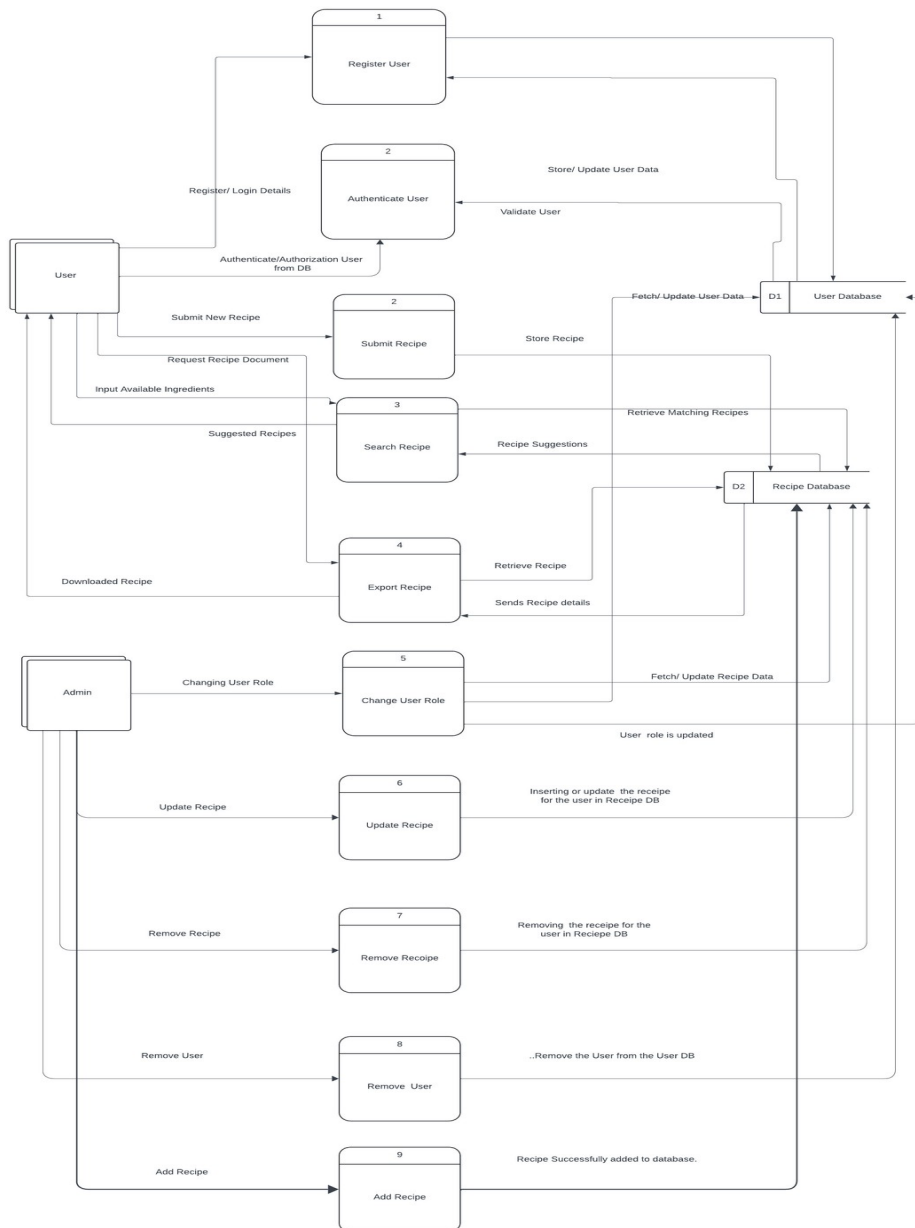
# 1 Data Flow Diagrams (DFD)

## 1.1 Context Level Diagram



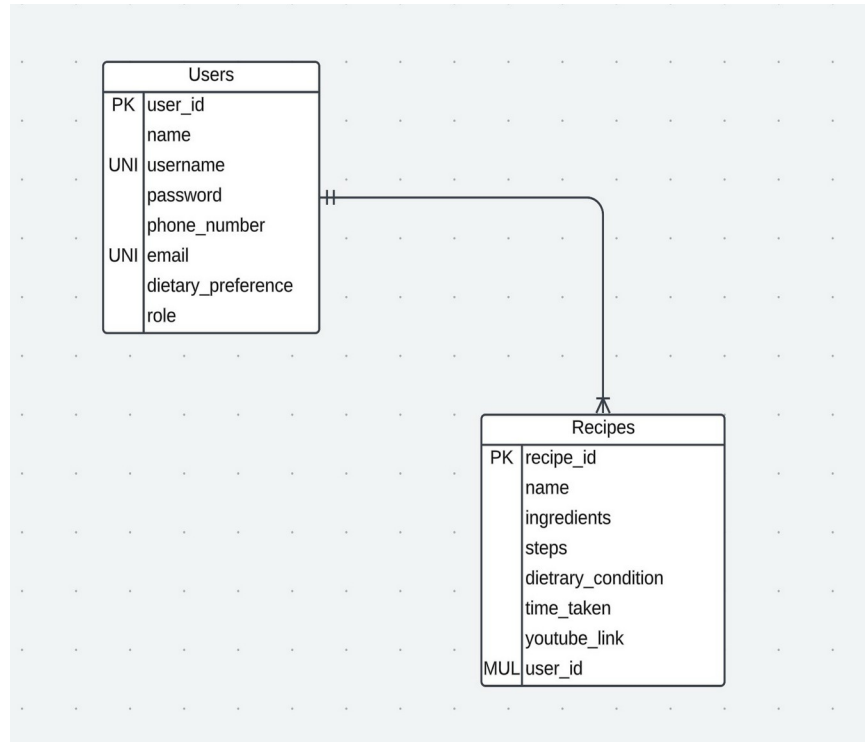
The above Context level diagram shows "Cook Mate" system's workflow where users can register, submit recipes, provide ingredients, and receive suggested recipes, while admins manage and update recipe content.

## 1.2 Level 0 Diagram



1. The above DFD system explains where users can register, log in, submit, search, and export recipes is depicted in the diagram.
2. While user information is managed in a User Database, recipes are kept in a Recipe Database. Administrators have the ability to modify user roles, manage user accounts, and add or remove recipes.
3. The system makes sure that database administration, admin duties, and user actions all work together seamlessly.

## 2.ERD Diagram



Users and Recipes are the two tables defined by the schema. User information, such as user\_id, username, and role, is kept in the Users table. Recipe\_id, name, and ingredients are stored in the Recipes table, which is connected to the Users table by user\_id. There is a one-to-many relationship between the number of recipes that each user can generate.

### 3. Use Cases

#### Use Case Name: User Registration

<b>ID:</b> UC-1
<b>Priority:</b> High
<b>Actor:</b> User
<b>Description:</b> The user creates new account by registers as new user.
<b>Trigger:</b> User wants to access the application's features.
<b>Type:</b> External
<b>Preconditions:</b> <ol style="list-style-type: none"><li>1. The user is not logged in.</li><li>2. The system is online and accessible.</li></ol>
<b>Normal Course:</b> User Registration and Login <ol style="list-style-type: none"><li>1. User navigates to the login/registration page.</li><li>2. User selects either <b>Signup</b> or <b>Login</b>.</li><li>3. If <b>Signup</b> is selected:<ol style="list-style-type: none"><li>a. In a new window User inputs necessary registration details (username, email, password, phone number, email etc.).</li><li>b. The system validates the registration information.</li><li>c. If validation is successful, the system creates a new user entry in the <b>User Database</b>.</li><li>d. The user is notified of successful registration and redirected to the login page.</li></ol></li></ol>
<b>Postconditions:</b> <ol style="list-style-type: none"><li>1. User is registered in successfully.</li><li>2. User gains access to relevant features based on their role (user/admin).</li></ol>

**Use Case Name : Authenticate User - Login**

<b>ID:</b> UC-2
<b>Priority:</b> High
<b>Actor:</b> User
<b>Description:</b> The user or logs in with existing credentials to access the system features.
<b>Trigger:</b> User wants to access the application's features.
<b>Type:</b> External
<b>Preconditions:</b> <ol style="list-style-type: none"> <li>3. The user is not logged in.</li> <li>4. The system is online and accessible.</li> </ol>
<b>Normal Course:</b> Authenticate User -Login <ol style="list-style-type: none"> <li>4. User navigates to the login/registration page.</li> <li>5. User selects <b>Login</b>.</li> <li>6. If <b>Login</b> is selected: <ol style="list-style-type: none"> <li>a. In Login Window User enters username and password which are already registered before.</li> <li>b. The system checks the credentials against stored data in the <b>User Database</b>.</li> <li>c. If credentials are valid, the user is authenticated and logged in.</li> <li>d. Upon successful login user is notified a message window as "Welcome, user name!"</li> <li>e. The system displays the user dashboard.</li> </ol> </li> </ol>
<b>Postconditions:</b> <ol style="list-style-type: none"> <li>3. User is logged in successfully.</li> <li>4. User gains access to relevant features based on their role (user/admin).</li> </ol>

**Use Case Name: Ingredient/Recipe name -Based Recipe Search**

<b>ID:</b> UC-3
<b>Priority:</b> High
<b>Actor:</b> User
<b>Description:</b> The user searches for recipes using a list of available ingredients or any already existing recipe.
<b>Trigger:</b> User wants to find recipes based on available ingredients/ recipe name.
<b>Type:</b> External



**Preconditions:**

1. The user is authenticated and logged in.
2. The user has a list of available ingredients/ recipe name to be searched.

**Normal Course:** 1.0 Ingredient-Based Recipe Search

1. Click Search Recipe in the dashboard.
2. User inputs a recipe name or list of ingredients they currently have.
3. User also selects **Dietary concerns** such as vegan, vegetarian etc and **Time Taken** such less than 15 mins, 30mins etc.
4. On clicking **Search Button** the system verifies the input for valid ingredient/recipe name entries.
5. The system searches the **Recipe Database** for recipes that match the input ingredients.
6. Matching recipes are displayed to the user, sorted by relevance.
7. User can view the recipe.

**Postconditions:**

1. A list of matching recipes is displayed to the user.
2. User can choose to save or download the recipe.

**Use Case Name:** Add recipe**ID:** UC-4**Priority:** Medium**Actor:** User**Description:** The user submits a new recipe to the system, including details such as ingredients, instructions, and dietary preferences.**Trigger:** User wants to contribute a new recipe to the community.**Type:** External**Preconditions:**

1. The user is logged in.
2. The user has the necessary recipe details ready to input.

**Normal Course:** Recipe Submission

1. On Clicking **Add Recipe** user navigates to the recipe submission page.
2. User enters the recipe name, ingredients, cooking instructions, and any relevant dietary information , time taken for the recipe and clicks on Add Recipe.
3. The system validates the recipe details (e.g., required fields are filled).
4. If the validation is successful, the recipe is stored in the **Recipe Database**.
5. A confirmation message is displayed, and the recipe is made available for future searches.

**Postconditions:**

1. Recipe is saved in the **Recipe Database**.
2. Recipe becomes searchable and visible to other users.

**Use Case Name: View My Recipe**

<b>ID:</b> UC-5
<b>Priority:</b> Medium
<b>Actor:</b> User
<b>Description:</b> The user views the recipes they have submitted.
<b>Trigger:</b> User wants to see a list of their added recipes.
<b>Type:</b> External
<b>Preconditions:</b> User is logged in
<b>Normal Course:</b> View My Recipes <ol style="list-style-type: none"><li>1. On clicking <b>View Recipes</b> user navigates to the "My Recipes" section.</li><li>2. The system retrieves the user's recipes from the database.</li><li>3. The system displays the list of recipes to the user.</li></ol>
<b>Postconditions:</b> <ol style="list-style-type: none"><li>1. User can view their submitted recipes.</li></ol>

**Use Case Name: Download/Export Recipe**

<b>ID:</b> UC-6
<b>Priority:</b> Medium
<b>Actor:</b> User
<b>Description:</b> The user downloads or exports selected recipes in a pdf format.
<b>Trigger:</b> User wants to save/download a recipe locally.
<b>Type:</b> External
<b>Preconditions:</b>

1. User is logged in.
2. Recipes are available in the system.

**Normal Course:** Export Recipes

1. In **View Recipes** user navigates to the recipe they want to download/export.
2. User selects the download/export option.
3. The system generates the file and makes it available for download.
4. User downloads the file.

**Postconditions:**

1. Recipe is successfully downloaded/exported in the selected format.

**Use Case Name: Admin Authentication- Login****ID:** UC-7**Priority:** High**Actor:** Admin**Description:** The admin logs in with their credentials to manage system features.**Trigger:** Admin wants to access the system's administrative features**Type:** External**Preconditions:**

1. Admin account exists in the system.
2. The system is logged in and accessible..

**Normal Course:**

1. Admin navigates to the login page.
2. Admin inputs username and password.
3. The system validates the credentials against stored data in the Admin Database.

4.If credentials are valid, the admin is authenticated and logged in.

5.The system displays the admin dashboard.

**Postconditions:**

1. Admin is logged in successfully.
2. Admin gains access to administrative features.

**Use Case Name: Admin Add Recipe****ID:** UC-8**Priority:** High**Actor:** User**Description:** Admin adds a new recipe to the system for all users to access.**Trigger:** Admin wants to publish a new recipe.**Type:** External**Preconditions:**

1. Admin is logged in.

**Normal Course:** Add Recipe

1. Admin navigates to the "Add Recipe" section.
2. Admin fills in the recipe details (e.g., name, ingredients, procedure, dietary conditions, time taken).
3. Admin submits the recipe.
4. The system validates the data and saves the recipe in the database.
5. Admin receives a confirmation that the recipe has been added successfully.

**Postconditions:**

1. Recipe is stored in the system and is visible to users.

**Use Case Name: Admin Edit Recipe****ID:** UC-9

<b>Priority:</b> High
<b>Actor:</b> User
<b>Description:</b> Admin edits an existing recipe's details
<b>Trigger:</b> Admin wants to update a recipe's information.
<b>Type:</b> External
<b>Preconditions:</b> 1.Admin is logged in. 2. Recipe exists in the system.
<b>Normal Course:</b>  1. Admin navigates to the recipe to be edited. 2. Admin clicks the "Edit" button. 3. Admin modifies the desired details (e.g., name, procedure, ingredients, dietary conditions, time taken). 4. Admin clicks the "Save Changes" button. 5. The system updates the recipe details in the database
<b>Postconditions:</b>  1. Recipe details are updated successfully.

#### Use Case Name: Admin Delete Recipe

<b>ID:</b> UC-10
<b>Priority:</b> Medium
<b>Actor:</b> User
<b>Description:</b> Admin deletes a recipe from the system.
<b>Trigger:</b> Admin wants to remove an existing recipe.
<b>Type:</b> External
<b>Preconditions:</b> 1.Admin is logged in. 2. Recipe exists in the system.
<b>Normal Course:</b> Delete Recipe  1. Admin navigates to the recipe to be deleted.  2. Admin clicks the "Delete" button.  3. A confirmation box appears asking, "Are you sure?" with "Yes" and "No" options.

4. Admin clicks "Yes."
5. The system removes the recipe from the database.

**Postconditions:**

1. Recipe is deleted from the system.

**Use Case Name: Admin Edit User Role****ID:** UC-11**Priority:** Medium**Actor:** User**Description:** Admin updates a user's role.**Trigger:** Admin wants to modify user access**Type:** External**Preconditions:**

1. Admin is logged in.
2. User exists in the system.

**Normal Course:** Edit User Role

1. Admin navigates to the "User Management" section.
2. Admin selects a user to modify.
3. Admin changes the user role to "Admin" or "User."
4. Admin clicks the "Save Role" button.
5. The system updates the user's role in the database.

**Postconditions:**

1. User role is updated successfully.

**Use Case Name: Admin Delete User Role****ID:** UC-12**Priority:** Medium

<b>Actor:</b> User
<b>Description:</b> Admin removes a user from the system.
<b>Trigger:</b> Admin wants to delete a user account.
<b>Type:</b> External
<b>Preconditions:</b> 1. Admin is logged in. 2. User exists in the system.
<b>Normal Course:</b> Delete User Role  1. Admin navigates to the "User Management" section.  2. Admin selects a user to delete.  3. Admin clicks the "Delete" button.  4. A confirmation box appears asking, "Are you sure?" with "Yes" and "No" options.  5. Admin clicks "Yes."  6. The system removes the user account from the database.
<b>Postconditions:</b>  1. User account is deleted from the system.

**Use Case Name: Admin View Insights**

<b>ID:</b> UC-13
<b>Priority:</b> Medium
<b>Actor:</b> User
<b>Description:</b> Admin views insights and analytics related to recipes and system usage
<b>Trigger</b> Admin wants to analyze system data.
<b>Type:</b> External
<b>Preconditions:</b> 1. Admin is logged in.

**Normal Course:** View Insights

1. Admin navigates to the "Insights" section.
2. The system displays data such as:
  - a. Recipes by dietary conditions.
  - b. Recipes by time taken.
3. Admin clicks the "Download Insights" button to save insights as images.

**Postconditions:**

1. Insights are displayed and optionally downloaded as images.

**Use Case Name: Generating Reports****ID:** UC-14**Priority:** Medium**Actor:** User**Description:** Admin generates a detailed analytics report for the system.**Trigger :** Admin wants a comprehensive report on system usage.**Type:** External**Preconditions:**

1. Admin is logged in.

**Normal Course:** Generate Reports

1. Admin navigates to the "Reports" section.
2. Admin clicks the "Generate Report" button.
3. A message box appears stating, "CookMate Analytic Report generated successfully."
4. The system generates a Word document with:
  - a. Executive summary.
  - b. Recipe analytics.
  - c. User demographics analysis.
  - d. Top contributors.
5. Admin downloads the report.

**Postconditions:**



1. Report is generated and downloaded successfully.