**Team Name: What’s In My Fridge?**

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**App Name: MyFridge**

**Project Overview:**

MyFridge is an innovative recipe-sharing platform that helps users make the most of their available ingredients. Users can input their personal inventory through text entry or image recognition, which will be processed using AI to recommend recipes that can be prepared with the available ingredients. The app supports searching by keywords, such as specific dish or ingredient names, and advanced searches using vague phrases like "healthy snack" through large language model (LLM) integration.

Core features include the ability to post, comment on, save, and rate recipes, alongside creating a customizable feed of recipes by following users or cuisines. The app promotes healthier cooking habits by introducing users to diverse recipes and providing features like AI-generated tags and categories for enhanced discoverability.

Additional functionality includes managing a virtual fridge, curating a recipe feed, and generating shopping lists for missing ingredients. The project emphasizes accessibility, user engagement, and seamless recipe discovery.

**Use Cases**

**Required Use Cases:**

1. **User Registration and Login**
   * Users create accounts or log in to access personalized features.
2. **Virtual Fridge Management**
   * Users can add, edit, or delete items in their inventory.
   * AI analyzes inventory and suggests recipes.
3. **Recipe Discovery and Search**
   * Users search recipes by name, ingredients, or vague phrases.
   * Filter and sort recipes by cuisine, dietary restrictions, or popularity.
4. **Recipe Interaction**
   * View detailed recipes.
   * Post, rate, and comment on recipes.
   * Save recipes to a personal favorites list.
5. **AI Features**
   * Image recognition for ingredient identification.
   * LLM-powered search for vague queries.
   * AI-generated tags for recipes.

**Optional Use Cases:**

1. **User and Cuisine Following**
   * Follow other users to view their recipe activity.
   * Follow cuisines to receive updates on new recipes.
2. **Shopping List Integration**
   * Generate shopping lists for missing ingredients.
   * Export shopping lists to mobile devices.
3. **Social Features**
   * Upload and share photos of dishes.
   * View activity logs on profile pages.
4. **Accessibility Features**
   * Settings for accessibility and notifications.

**Database Design**

**Users**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| user\_id | String | Unique identifier for each user. |
| username | String | User's display name. |
| email | String | User's email address. |
| password | String (Hashed) | Securely hashed password. |
| profile\_picture | String (URL) | URL of the user's profile picture. |
| bio | String | Short bio written by the user. |
| followers | Array of IDs | List of user IDs who follow this user. |
| following | Array of IDs | List of user IDs this user is following. |
| created\_at | Timestamp | Timestamp of when the account was created. |

**Recipes**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| recipe\_id | String | Unique identifier for each recipe. |
| title | String | Title of the recipe. |
| ingredients | Array of Strings | List of ingredients needed for the recipe. |
| instructions | String | Step-by-step cooking instructions. |
| author\_id | String | User ID of the recipe's author. |
| tags | Array of Strings | AI-generated tags for the recipe. |
| image\_url | String (URL) | URL of the recipe's image. |
| rating | Float | Average rating of the recipe. |
| created\_at | Timestamp | Timestamp of when the recipe was created. |
| comments | Array of IDs | List of comment IDs related to this recipe. |

**Comments**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| comment\_id | String | Unique identifier for each comment. |
| recipe\_id | String | ID of the associated recipe. |
| author\_id | String | User ID of the comment's author. |
| content | String | Text content of the comment. |
| created\_at | Timestamp | Timestamp of when the comment was created. |

**Fridge**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| fridge\_id | String | Unique identifier for the fridge. |
| user\_id | String | User ID associated with the fridge. |
| ingredients | Array of Strings | List of ingredients in the user's fridge. |
| updated\_at | Timestamp | Timestamp of the last update to the fridge. |

**Shopping Lists**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| list\_id | String | Unique identifier for the shopping list. |
| user\_id | String | User ID who created the shopping list. |
| items | Array of Strings | List of items in the shopping list. |
| created\_at | Timestamp | Timestamp of when the list was created. |

**Ratings**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| rating\_id | String | Unique identifier for each rating. |
| recipe\_id | String | ID of the associated recipe. |
| user\_id | String | ID of the user who rated the recipe. |
| rating | Integer (1-5) | Rating value. |
| created\_at | Timestamp | Timestamp of when the rating was created. |

**Follow**

|  |  |  |
| --- | --- | --- |
| Field Name | Data Type | Description |
| follow\_id | String | Unique identifier for each follow relationship. |
| follower\_id | String | User ID of the follower. |
| followed\_id | String | User ID of the followed user or cuisine. |
| created\_at | Timestamp | Timestamp of when the follow relationship was created. |

**A whiteboard with a diagram of a website

Description automatically generatedScreens:**