

Recipe Book WebApp

CA Advanced Programming

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Agenda



Project background



System design



Technologies



Features



Future implementations

Project background

Recipe Book WebApp that allows users to look for recipes and to create and manage their personal recipes with the goal of making cooking more organized and more social.

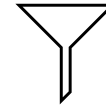
Main functionality



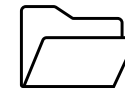
Search



Manage



Filter



Categorize

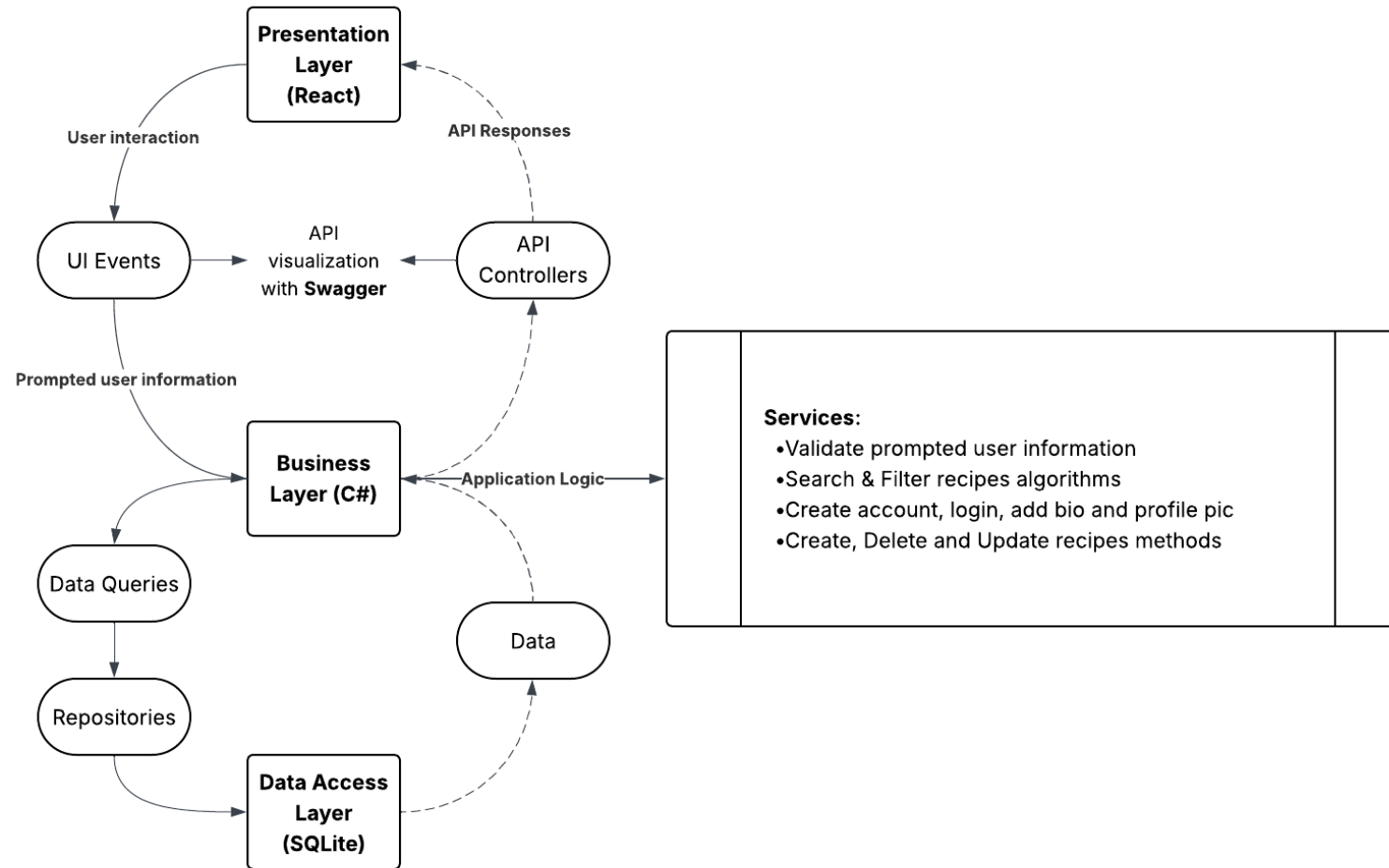


Target audience:

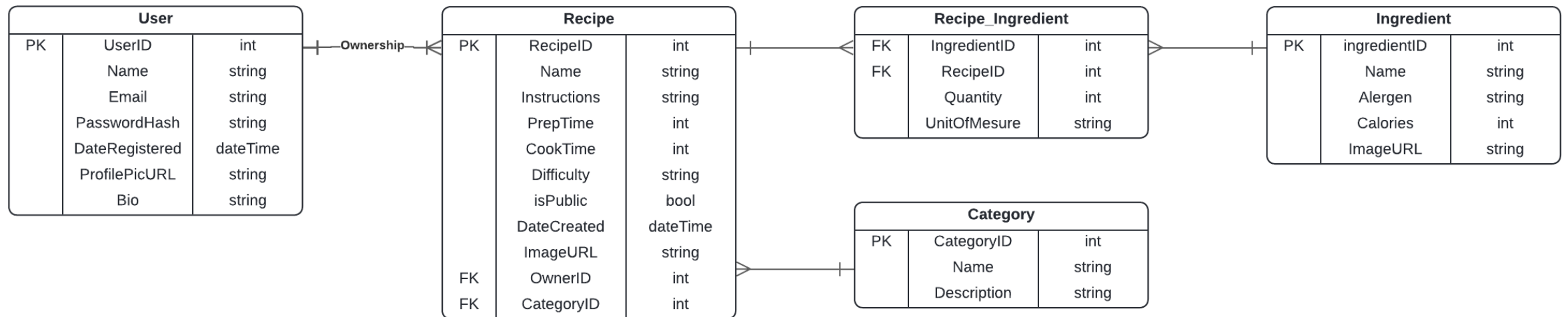
- People who cook often
- Families who share recipes
- Beginners looking for recipes
- Anyone who wants a digital recipe system

System design

Flowchart

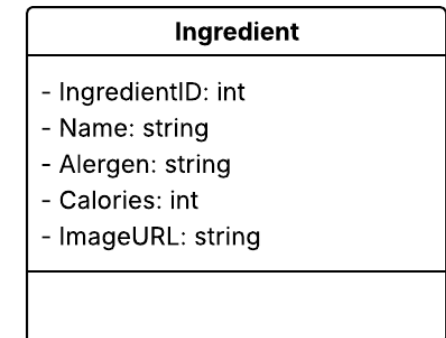
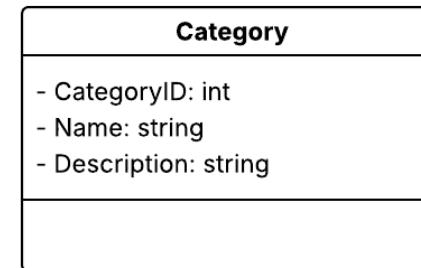
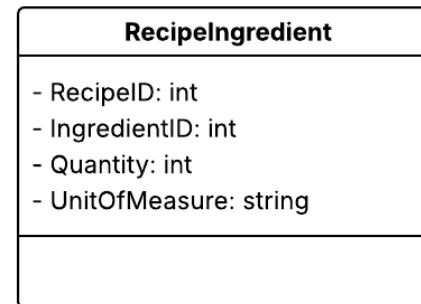
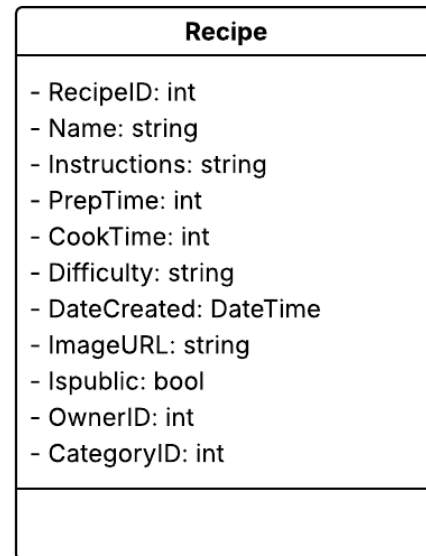
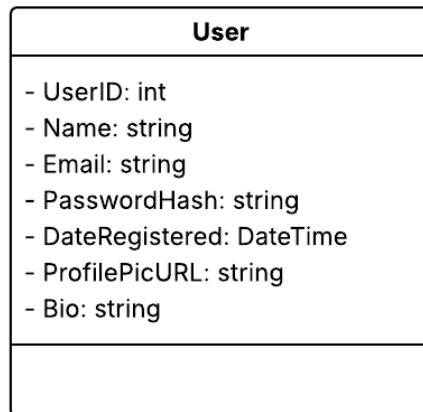


ERD



UML – Classes design

RecipeBookAPI/Models



UML – Business Logic Layer

RecipeBookAPI/Services

| UserService |
|--|
| +RegisterUser(string name, string email, string password) +Login(string email, string password) +GetUser(int id) +GetUserByEmail(string email) +UpdateUser(User updatedUser, int userID) |

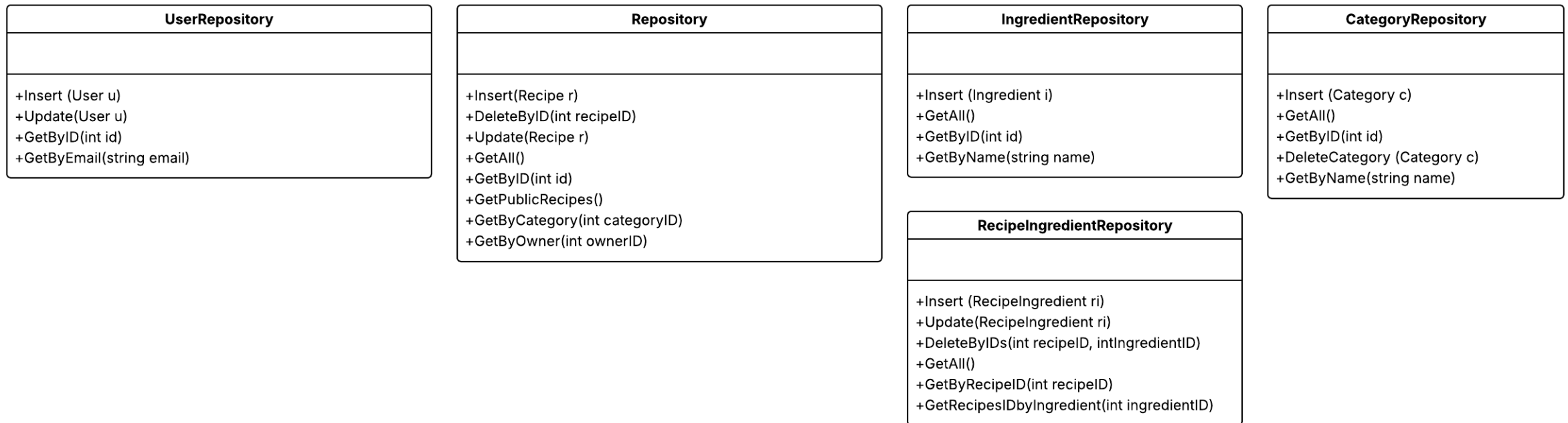
| RecipeService |
|---|
| +CreateRecipe(Recipe recipe, List<RecipeIngredient> ingredientMeasures, List <Ingredient> ingredients) +DeleteRecipe(int recipeID, int userID) +UpdateRecipe(Recipe updatedRecipe, int userID) +GetPublicRecipes() +GetByOwner(int ownerId) +TotalTimeFilter(int minTime, int maxTime) +DifficultyFilter(string difficulty) |

| CategoryService |
|---|
| +CreateCategory (Category category) +GetCategoryById(int id) +GetAllCategories() +DeleteCategory (Category c) +GetByName(string name) |

| SearchService |
|--|
| +RecipeLinearSearch(string keyword) +SearchRecipeByName(string keyword) +SearchRecipeByCategory(string keyword) +SearchRecipeByIngredient(string keyword) |

UML – Data Access Layer

RecipeBookAPI/Repository



Technologies



Swagger

Test API endpoints, visualize request/response structures, and interact with the backend during development without needing a frontend.



SQLite

Lightweight database and easy to integrate for this project size.



C#

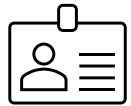
The backend uses ASP.NET Web API, which handles all the business logic and data processing.



Git & GitHub

Standard version control

Features



Authentication

- Create account
- Login
- Change password
- Update account



Search recipes by:

- Name
- Ingredient
- Category



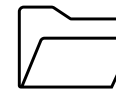
Filter recipes by:

- Total time
- Difficulty



Manage recipes

- Create
- Update
- Delete
- Get all public recipes in a list
- Get user owned recipes
- Public and private recipe visibility



Categorize

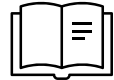
- Create
- Get a list with all categories
- Delete
- Get categories by name

Future implementations



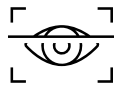
Frontend

Responsive design with React



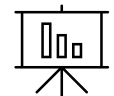
Recipe books

Gather recipes in recipe books that can be shared between users



Easier and safer authentication

Third party sign in and handling credentials following industry standards



User dashboard

Provide the user with data from their recipes: views, likes, etc.



Like a recipe

Users can save their favourite recipes by liking them