Personal Recipe Tracker App

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Project: Personal Recipe Tracker Application

The Problem

📝 Recipe Chaos
Recipes scattered across notebooks, apps, and websites

📅 Meal Planning Stress
Deciding what to cook each week is overwhelming, time-comsuming

🛒 Shopping Confusion
Creating grocery lists from multiple recipes is tedious

My own problem is that many people face

Project Objectives & Technology Stack

Objectives

🖥️ Develop Windows Forms application (C#/.NET 8.0)

🗄️ Implement SQL Server database with normalization

📋 Create user interface with 5 main forms

⚡ Use Dapper ORM for efficient data access

🔒 Implement stored procedures for security
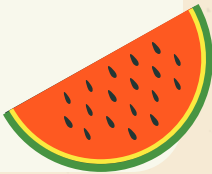
Technology Stack

🖥️ C# with .NET 8.0

🗄️ Microsoft SQL Server

📋 Windows Forms

⚡ Dapper

🔒 Stored procedures

System Architecture

PRESENTATION LAYER

(Windows Forms)

- PersonalDashboardForm
- PersonalAddRecipeForm
- PersonalViewRecipesForm
- PersonalMealPlannerForm
- PersonalGroceryListForm

BUSINESS LOGIC LAYER

(Models & Interfaces)

- Recipe, User, Ingredient
- RecipeIngredient, MealPlan
- IDataConnection interface

DATA ACCESS LAYER

(SqlConnector & Dapper)

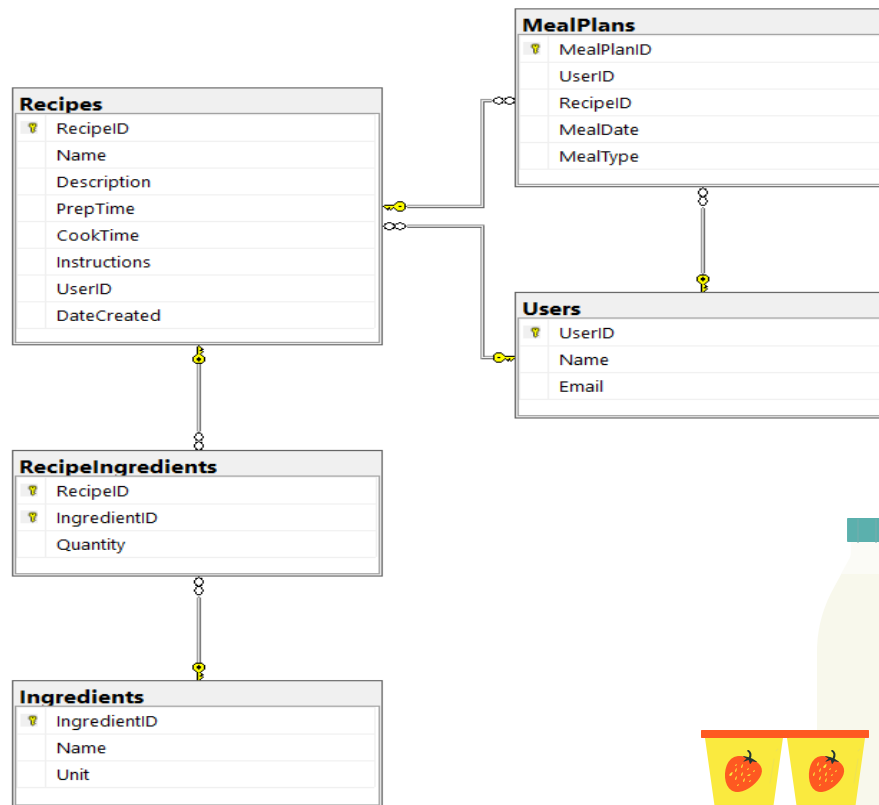- SqlConnector class
- Dapper ORM
- GlobalConfig

DATABASE LAYER

(SQL Server)

- 5 Tables
- 7 Stored procedures

Database EERD

MealPlans
- MealPlanID
- UserID
- RecipeID
- MealDate
- MealType

Recipes
- RecipeID
- Name
- Description
- PrepTime
- CookTime
- Instructions
- UserID
- DateCreated

Users
- UserID
- Name
- Email

RecipeIngredients
- RecipeID
- IngredientID
- Quantity

Ingredients
- IngredientID
- Name
- Unit

Database Table Overview

Users Table

Column Name	Data Type	Allow Nulls
UserID	int	☐
Name	nvarchar(100)	☐
Email	nvarchar(100)	☐

Ingredients Table

Column Name	Data Type	Allow Nulls
IngredientID	int	☐
Name	nvarchar(100)	☐
Unit	nvarchar(20)	☐

Recipes Table

Column Name	Data Type	Allow Nulls
RecipeID	int	☐
Name	nvarchar(100)	☐
Description	nvarchar(500)	☑
PrepTime	int	☐
CookTime	int	☐
Instructions	nvarchar(2000)	☐
UserID	int	☐
DateCreated	datetime	☐

RecipeIngredients Table

Column Name	Data Type	Allow Nulls
RecipeID	int	☐
IngredientID	int	☐
Quantity	decimal(10, 2)	☐

MealPlans Table

Column Name	Data Type	Allow Nulls
MealPlanID	int	☐
UserID	int	☐
RecipeID	int	☐
MealDate	date	☐
MealType	nvarchar(20)	☐
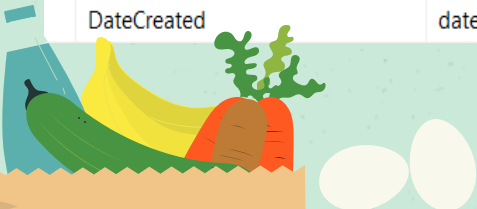
Stored Procedures

INSERT OPERATIONS

- sp_Recipes_Insert
- sp_RecipeIngredients_Insert
- sp_MealPlans_Insert

RETRIEVAL OPERATIONS

- sp_GetRecipesByUser
- sp_GetUserMealPlansForWeek
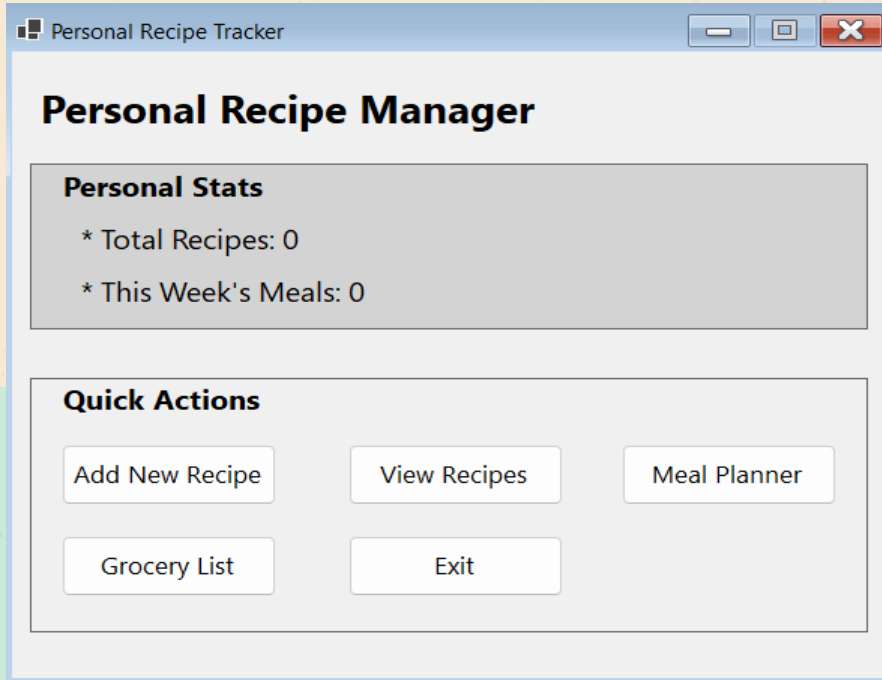- sp_GetGroceryListForWeek

UPDATE OPERATIONS

- sp_Recipes_Update

Application Forms Overview

Personal Dashboard Form

Personal Recipe Tracker

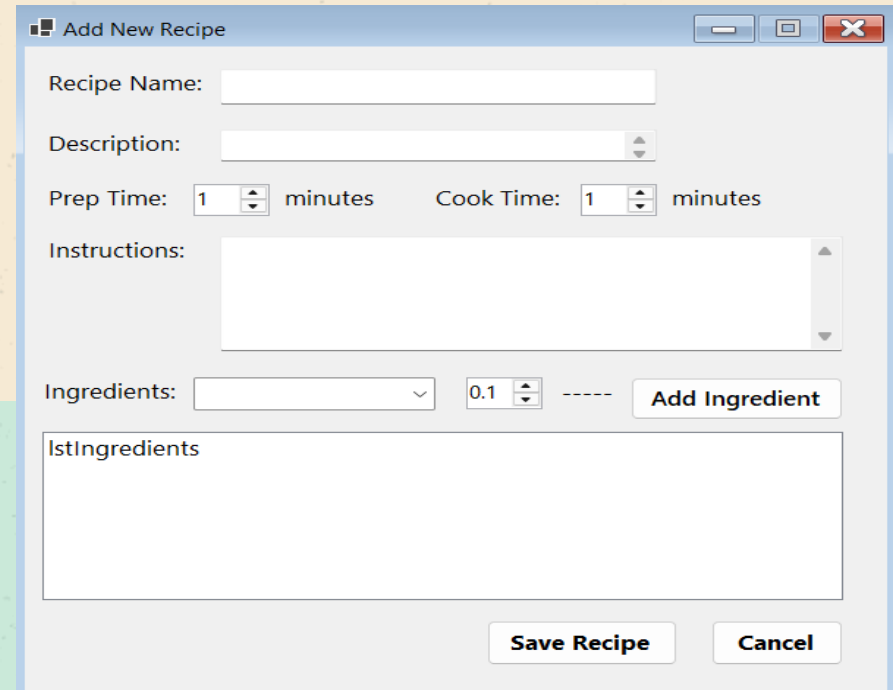# Personal Recipe Manager

Personal Stats

* Total Recipes: 0

* This Week's Meals: 0

Quick Actions

| Add New Recipe | View Recipes | Meal Planner |

| Grocery List | Exit |

Personal Add Recipe Form

Add New Recipe

Recipe Name:

Description:

Prep Time: 1 minutes   Cook Time: 1 minutes

Instructions:

Ingredients: 0.1 ----- Add Ingredient

lstIngredients

Save Recipe   Cancel

Application Forms Overview

Personal View Recipes Form

View Recipes

Search: [   ] **Search**

lstRecipes

View Selected   **Delete Recipe**   **Close**

Personal Meal Planner Form

Meal Planner

Week of: 11/11/2025

Select Recipe: [   ]
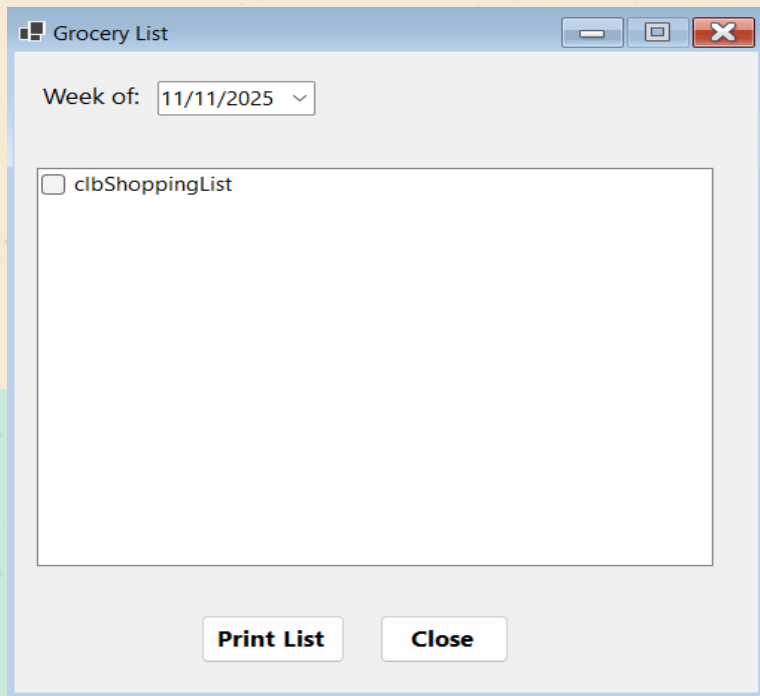
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Breakfast	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe
Lunch	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe
Dinner	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe

Previous Week   **Next Week**   Close

Application Forms Overview

Personal Grocery List Form

Application Demonstration

Thank You!