

# 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-consuming



## Shopping Confusion

Creating grocery lists from multiple recipes is tedious

*My own problem is that many people face*















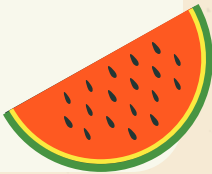
# Project Objectives & Technology Stack



## 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

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## PRESENTATION LAYER

(Windows Forms)

- PersonalDashboardForm
- PersonalAddRecipeForm
- PersonalViewRecipesForm
- PersonalMealPlannerForm
- PersonalGroceryListForm

## BUSINESS LOGIC LAYER

(Models & Interfaces)

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

## DATA ACCESS LAYER

(SqlConnection & Dapper)

- SqlConnection class
- Dapper ORM
- GlobalConfig

## DATABASE LAYER

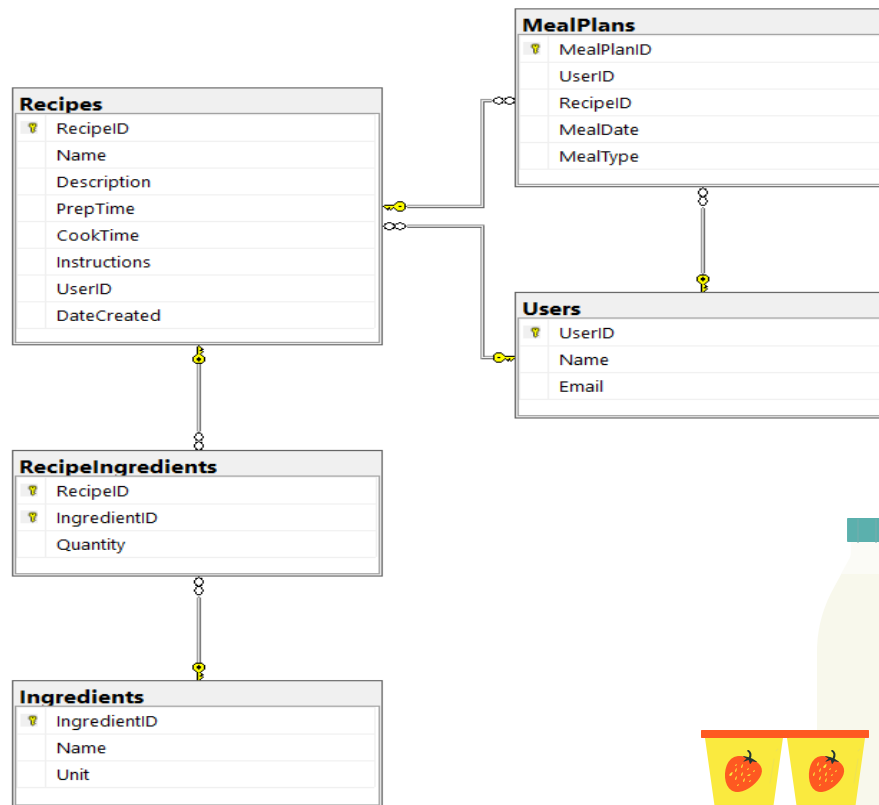
(SQL Server)

- 5 Tables
- 7 Stored procedures





# Database EERD





# Database Table Overview

## Users Table

	Column Name	Data Type	Allow Nulls
🔑	UserID	int	<input type="checkbox"/>
	Name	nvarchar(100)	<input type="checkbox"/>
	Email	nvarchar(100)	<input type="checkbox"/>

## Recipes Table

	Column Name	Data Type	Allow Nulls
🔑	RecipeID	int	<input type="checkbox"/>
	Name	nvarchar(100)	<input type="checkbox"/>
	Description	nvarchar(500)	<input checked="" type="checkbox"/>
	PrepTime	int	<input type="checkbox"/>
	CookTime	int	<input type="checkbox"/>
	Instructions	nvarchar(2000)	<input type="checkbox"/>
	UserID	int	<input type="checkbox"/>
	DateCreated	datetime	<input type="checkbox"/>

## Ingredients Table

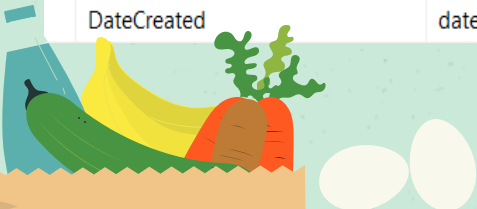
	Column Name	Data Type	Allow Nulls
🔑	IngredientID	int	<input type="checkbox"/>
	Name	nvarchar(100)	<input type="checkbox"/>
	Unit	nvarchar(20)	<input type="checkbox"/>

## RecipeIngredients Table

	Column Name	Data Type	Allow Nulls
🔑	RecipeID	int	<input type="checkbox"/>
🔑	IngredientID	int	<input type="checkbox"/>
	Quantity	decimal(10, 2)	<input type="checkbox"/>

## MealPlans Table

	Column Name	Data Type	Allow Nulls
🔑	MealPlanID	int	<input type="checkbox"/>
	UserID	int	<input type="checkbox"/>
	RecipeID	int	<input type="checkbox"/>
	MealDate	date	<input type="checkbox"/>
	MealType	nvarchar(20)	<input type="checkbox"/>





# Stored Procedures

## INSERT OPERATIONS

- sp\_Recipes\_Insert
- sp\_RecipeIngredients\_Insert
- sp\_MealPlans\_Insert



## RETRIEVAL OPERATIONS

- sp\_GetRecipesByUser
- sp\_GetUserMealPlansForWeek
- sp\_GetGroceryListForWeek



## UPDATE OPERATIONS

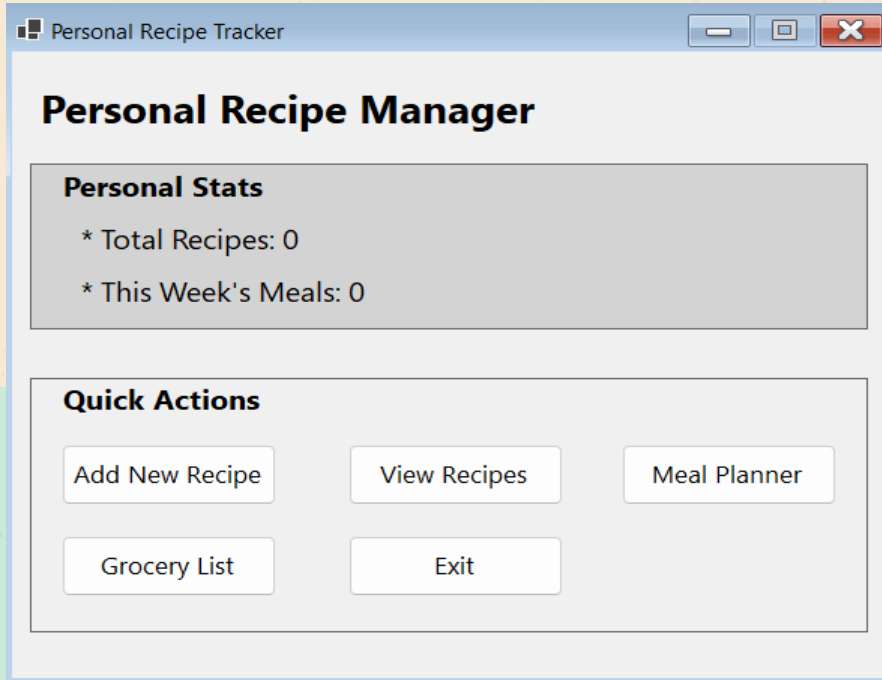
- sp\_Recipes\_Update





# Application Forms Overview

## Personal Dashboard Form



The screenshot shows a window titled "Personal Recipe Tracker" with standard Windows window controls. The main content area is titled "Personal Recipe Manager". It contains two sections: "Personal Stats" and "Quick Actions". The "Personal Stats" section has two lines of text: "\* Total Recipes: 0" and "\* This Week's Meals: 0". The "Quick Actions" section contains five buttons: "Add New Recipe", "View Recipes", "Meal Planner", "Grocery List", and "Exit".

Personal Recipe Tracker

### Personal Recipe Manager

**Personal Stats**

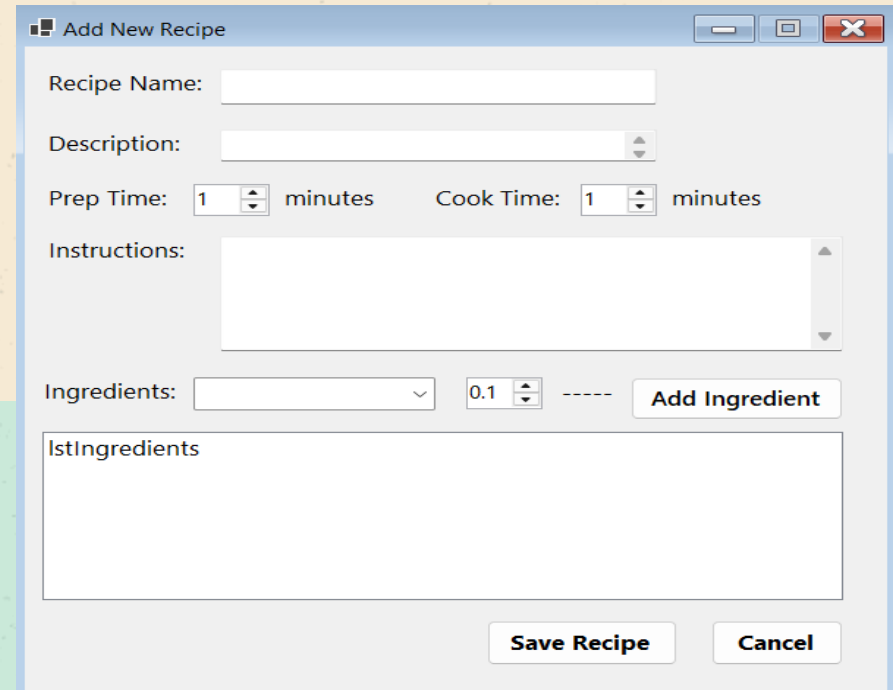
- \* Total Recipes: 0
- \* This Week's Meals: 0

**Quick Actions**

Add New Recipe View Recipes Meal Planner

Grocery List Exit

## Personal Add Recipe Form



The screenshot shows a window titled "Add New Recipe" with standard Windows window controls. The form contains several input fields: "Recipe Name" (text box), "Description" (text box with a vertical scrollbar), "Prep Time" (spin box with value 1) and "minutes", "Cook Time" (spin box with value 1) and "minutes", "Instructions" (text box with a vertical scrollbar), "Ingredients" (text box with a dropdown arrow), a spin box with value 0.1, a text box with dashes, and an "Add Ingredient" button. Below these is a large text box labeled "IstIngredients". At the bottom right are "Save Recipe" and "Cancel" buttons.

Add New Recipe

Recipe Name:

Description:

Prep Time: 1  minutes Cook Time: 1  minutes

Instructions:

Ingredients:  0.1  ----- Add Ingredient

IstIngredients

Save Recipe Cancel



# Application Forms Overview

## Personal View Recipes Form

The 'View Recipes' window has a title bar with standard OS controls. It features a search bar with a 'Search' button and a large list area labeled 'lstRecipes'. At the bottom, there are three buttons: 'View Selected', 'Delete Recipe', and 'Close'.

**View Recipes**

Search:  **Search**

lstRecipes

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

## Personal Meal Planner Form

The 'Meal Planner' window has a title bar with standard OS controls. It includes a 'Week of:' dropdown set to '11/11/2025' and a 'Select Recipe:' dropdown. The main area is a table for planning meals across the days of the week (Mon-Sun) for Breakfast, Lunch, and Dinner. Each cell contains an 'Add Recipe' button. At the bottom, there are 'Previous Week', 'Next Week', and 'Close' buttons.

**Meal Planner**

Week of: 11/11/2025

Select Recipe:

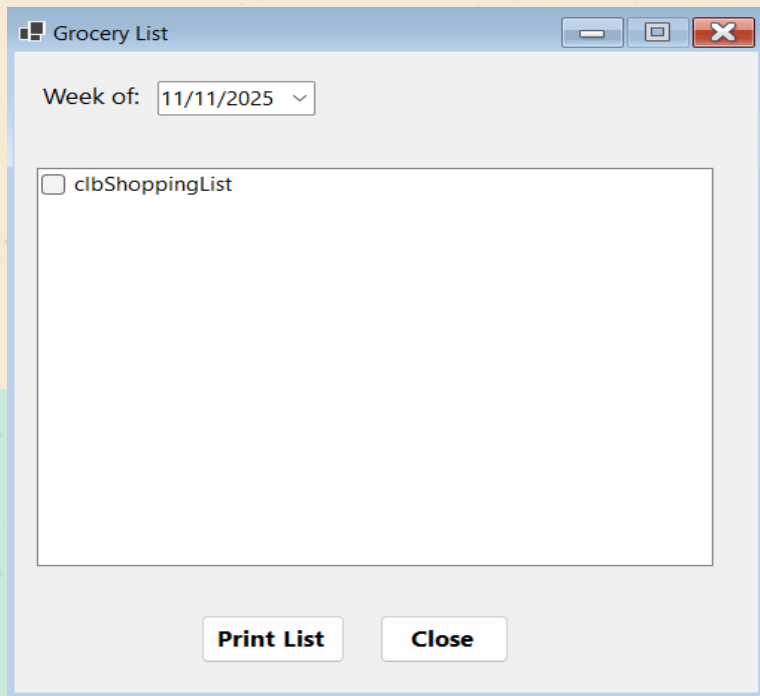
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Breakfast	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe
Lunch	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe
Dinner	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe	Add Recipe

**Previous Week** **Next Week** **Close**



# Application Forms Overview

## Personal Grocery List Form



The screenshot shows a Windows-style application window titled "Grocery List". At the top, there are standard window controls (minimize, maximize, close). Below the title bar, the text "Week of:" is followed by a dropdown menu showing "11/11/2025". The main area of the window contains a checkbox labeled "clbShoppingList". At the bottom of the window, there are two buttons: "Print List" and "Close".







# Application Demonstration





**Thank You!**