University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1

Date: October 1st, 2025

Group Number: 39

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

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Project Description

Application Domain

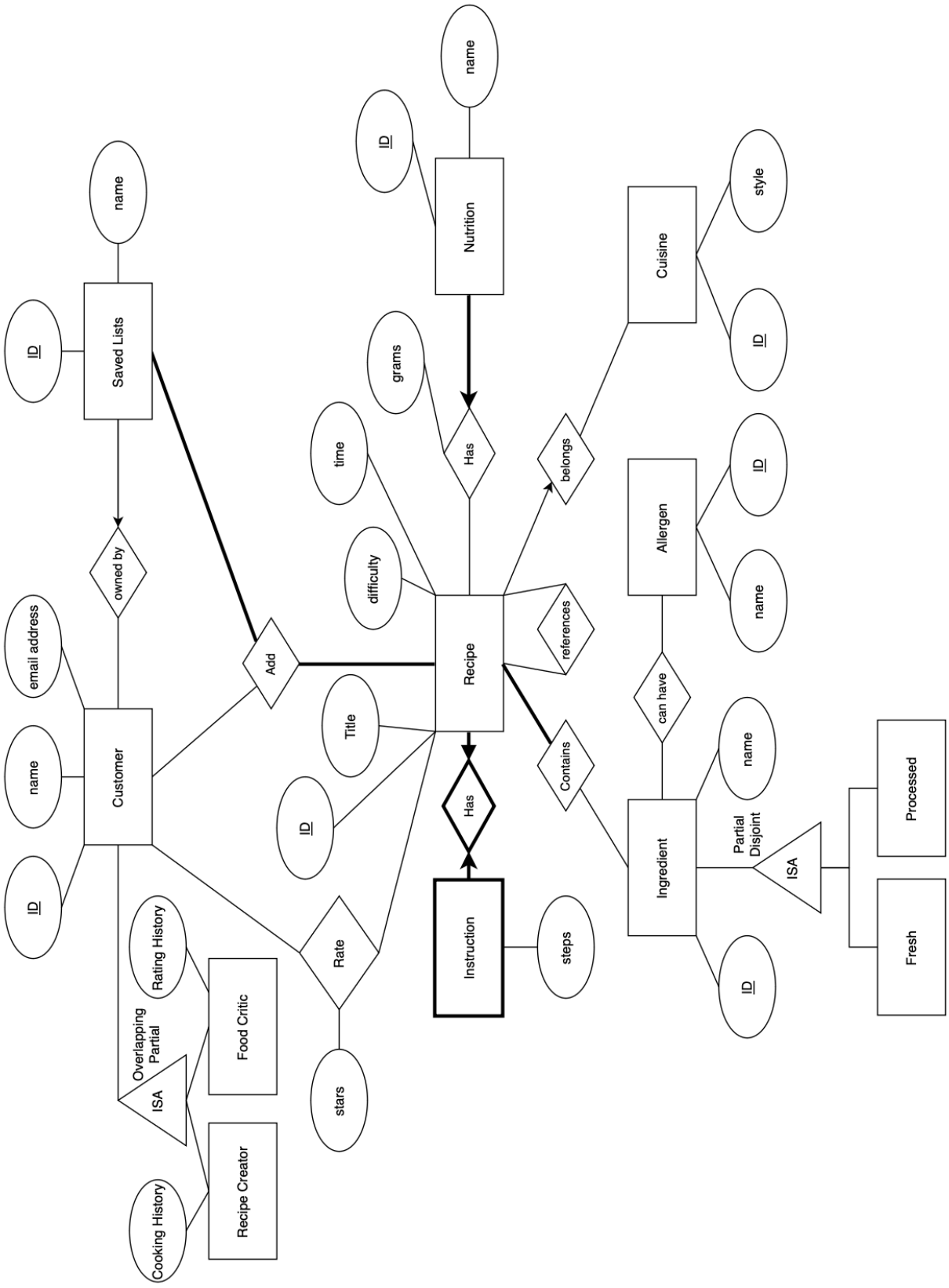
The domain of this application is culinary and nutrition management, and more specifically, is focused around recipe organization. It encompasses areas such as storing recipes, giving instructions for cooking, and tracking nutritional or dietary information. Moreover, the system also includes community engagement features such as rating or saving recipes, which extend the domain into social and collaborative cooking.

Aspects of the Domain modeled by the Database

The database models recipes, ingredients, instructions, nutritional information, allergens, cuisines, and customer interactions. In particular, it supports real-life use cases such as customers creating personalized saved recipes lists or rating other recipes, as well as seeing details on nutrition or allergens that a recipe has. Furthermore, this database essentially allows for users to not only follow recipes and cook individually, but also to share their opinion on other recipes or make their own for other users to see, which creates a collaborative environment.

Database Specification

The database will provide functionality for storing, managing, and retrieving recipes, along with their ingredients, instructions, nutritional information, and cuisine that they belong to. Users will be able to create, rate, and save recipes, which would be added to individual saved lists. In addition, the system will also track allergens, and categorize ingredients as either fresh or processed. Lastly, users can either be recipe creators or food critics, which allows them to make or rate recipes respectively.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AI Tool Use Acknowledgement

We hereby state that we did not use any AI tools for any parts of this assignment.

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Conditions for ER Diagram

1. at least 7 entities, 7 relations (except ISA, weak entity)
2. at least 1 ISA relation
3. at least 1 weak relation (or one more ISA)
4. Key, constraints (1:1, 1:N, N:M) are required

Milestone 1 Deliverables

1. A completed cover page (template on Canvas)

2. A brief project description answering these questions:
    a. What is the domain of the application? Describe it.
    The domain of an application refers to the area of knowledge your application resides in. For example, if I am making an application for a hospital, the domain would be something like healthcare/patient management/logistics (it would depend on what the application is trying to do).
    The domain of this application is culinary and nutrition management, and more specifically, is focused around recipe organization. It encompasses areas such as storing recipes, giving instructions for cooking, and tracking nutritional or dietary information. Moreover, the system also includes community engagement features such as rating or saving recipes, which extend the domain into social and collaborative cooking.

    b. What aspects of the domain are modeled by the database? In answering this question, you will want to talk about what your project is trying to address and how it fits within the domain. It is likely that in the process of answering these questions you will bring up examples of a real-life situation that the application
    could be applied to.
    The database models recipes, ingredients, instructions, nutritional information, allergens, cuisines, and customer interactions. In particular, it supports real-life use cases such as customers creating personalized saved recipes lists or rating other recipes, as well as seeing details on nutrition or allergens that a recipe has. Furthermore, this database essentially allows for users to not only follow recipes and cook individually, but also to share their opinion on other recipes or make their own for other users to see, which creates a collaborative environment.

3. Database specifications: (3-5 sentences)
    a. What functionality will the database provide? I.e., what kinds of things will people using the database be able to do.
    The database will provide functionality for storing, managing, and retrieving recipes, along with their ingredients, instructions, nutritional information, and cuisine that they belong to. Users will be able to create, rate, and save recipes, which would be added to individual saved lists. In addition, the system will also track allergens, and categorize ingredients as either fresh or processed. Lastly, users can either be recipe creators or food critics, which allows them to make or rate recipes respectively.

4. An ER diagram for the database that your application will use. It is OK to hand-draw it but if it is illegible or messy or confusing, marks will be taken off. You can use software to draw your diagram (e.g., draw.io, GoogleDraw, Microsoft Visio, Powerpoint, Gliffy, etc.) The result should be a legible PDF or PNG document. Note that your ER diagram must use the conventions from the textbook and the lectures. For example, do not use crow's feet notation or notation from other textbooks).

    a. Please limit your diagram to a letter size page (8.5 x 11 inches). If you require additional space, talk to your project mentor beforehand as this might mean that your project is a bit more complicated than what we expect.

5. Your E/R diagram should adhere to the expectations listed above.

6. Other comments, as appropriate, to explain your project.

7. An explicit acknowledgment about your use of AI tools in this assignment. Specifically, we are looking for a clear yes/no about whether you have used one or more AI tools. If yes, we want to know which tool(s) you have used and we want a PDF of the full
conversation.

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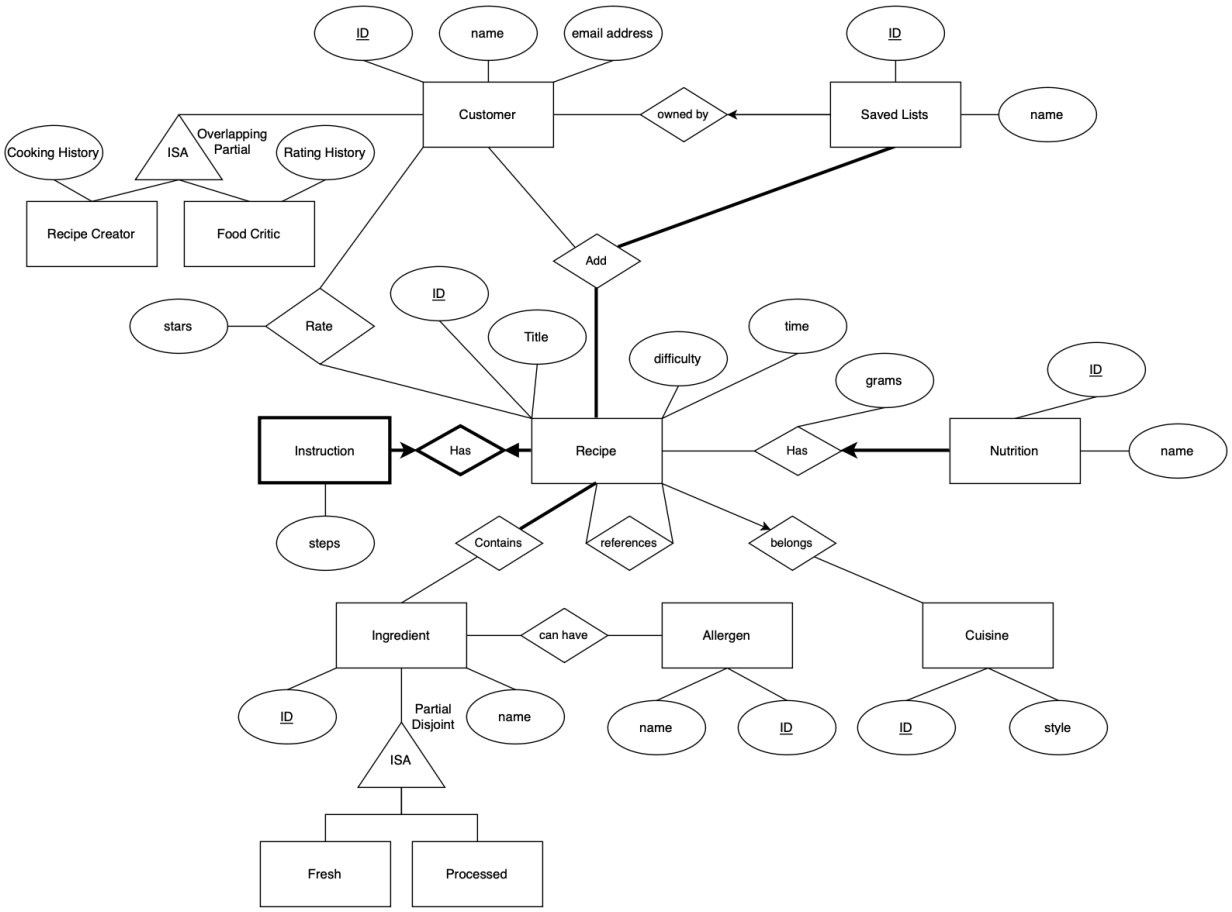
Idea 2: Ingredients and Recipe

Main entities:

1. User
    a. User has a unique ID, name, and contact info
    b. user can add recipe to favorites
    c. User can have multiple favorites (1:N)
2. Recipe
    a. has a unit ID, title, difficulty, and time
    b. must belongs to one cuisine type
    c. can contain multiple ingredients and instructions
3. Ingredient
    a. has a unique ID, name, and optional allergy info
    b. Multiple recipes can share the same ingredients
    c. can be categorized as fresh or processed (ISA)
4. Nutrition
    a. a recipe must have one set of nutrition info
    b. each record corresponds to exactly one recipe
5. Favorite
    a. be defined only in the context of User-Recipe pair
    b. user can have many favorites but each (User, Recipe) pair must be unique
    c. can be deleted without affecting the recipe or user
6. Cuisine
    a. has a unique ID, and describes the style or origin of a recipe (e.g., Korean, Japanese, Chinese)
    b. each recipes belongs to one cuisine, but a cuisine can have many recipes
7. Instruction (Weak entity to recipe)
    a. be tied to a single recipe
    b. can have multiple instructions in order.
    c. Instructions cannot exist without the recipe
8. Allergen
    a. unique allergen name
    b. can be in multiple ingredients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