

SW Engineering CSC648/848

UMAMe

Section 04 | Team 03

Member	Role
Khalid Mehtab Khan	Team Lead
Dat Vo	Backend Lead
Anish Khadka	Frontend Lead
Renee Sewak	Scrum Master
Jacob Perez	GitHub Master

Milestone 1

26th September 2023

1. Executive Summary

UMAMe

U might add *Me!*

In the era of customization and personalization, sometimes there are small changes that we tend to like better than others. Small things like a new layout of buttons on your favorite social media you are very comfortable with, a new setup of your room, a new color that suits you perfectly. This spirit of fine-tuning led me to experiment with a dash of barbecue sauce and salt in my noodles, yielding a flavor that felt distinctly mine. Everyone has their own preferences. They have different dishes they like, but they each have their own taste and they like the same dish but maybe made with a small change that makes it different and personalized for them.

Derived from the term "umami" (うま味), which translates to "pleasant savory taste", UMAMe is a manifestation of this very culinary spirit. With the power of global connectivity in the modern world, we aim to combine robust data algorithms with agile and engaging front-end components to add a new flavor to your everyday food. We, along with you, want to analyze the ingredients, add ons and experiments you make or experience in the food you like to eat around you. UMAMe encourages users to dive in, adapt, and reinvent. It provides an easy interface with all the required data information to follow steps to how to cook a new dish. The intuitive interface, detailed with step-by-step instructions and features like in-recipe timers, ensures that every culinary exploration feels effortless. But UMAMe is not just about a recipe book. Users can post personalized recipes in a structured manner for others to try out the recipes. It's a dynamic ecosystem where users can comment, suggesting alternate ingredients or techniques that, in their opinion, might enhance a dish. The app allows users to express their appreciation for various culinary creations, follow fellow food enthusiasts, and even curate recipe collections for diverse occasions. For those in the food business, UMAMe offers invaluable insights into popular taste preferences, enabling informed menu adjustments to cater to a broader clientele. Even if you love to cook, we are trying to provide easy solutions to add, save, track and share your way of eating. UMAMe supports even the most amateur chefs in their kitchen adventures. You never know some pieces of garlic might change your noodles forever.

Our team consists of some engineers, some programmers and all foodies who, using different flavors of the technology, sprinkle a dash of novelty into your everyday meals. Over slices of pizza and brainstorming sessions we realized that our project idea was, quite literally, on our plates. Reflecting on our diverse food habits, we envisioned an app that could benefit not just us, but a global community of food lovers: UMAMe.

2. Personas and User stories

Our Personas and User stories are a collection of groups that can benefit from using UMAMe.

<p>1. <u>Young Professionals & Students</u></p> <p>Students and working professionals typically have tight schedules and seek easy, quick, and delicious meals. A significant portion of this group is new to cooking and operates on a limited budget. They prefer easy-to-cook meals that fit within their time constraints and are always eager to experiment.</p> <p>Pain Points:</p> <ul style="list-style-type: none">• Running on schedules• Lack of Experience• Limited knowledge of proper ingredient use• Budget constraints• Inconsistent interfaces across websites	<p>2. <u>Restaurant/Cafe Owners</u></p> <p>Restaurant and cafe owners strive to align their menus with current culinary trends. These users can use feedback and insights, as they're constantly innovating and adjusting their menus based on local preferences and age-group-specific tastes. They value insights about cooking styles and ingredients that can be used to enhance their offerings and appeal to a wider customer base.</p> <p>Pain Points:</p> <ul style="list-style-type: none">• Keeping up with food trends• Picking menu items for the area and what people like• Dealing with customer feedback• Being different from competitors
<p>3. <u>Event Organizers</u></p> <p>Today, many people are involved in event management. Event organizers are tasked with catering to a diverse crowd, often with different food preferences. They need to ensure the food served is something that most attendees would enjoy.</p> <p>Pain Points:</p> <ul style="list-style-type: none">• Meeting different food needs and likes• Unsure of what guests prefer.• Working with many chefs and food services• Following food fashions for global events• Changing menus often	<p>4. <u>Social Media Influencers</u></p> <p>Social media influencers in the culinary domain are always on the lookout for new and exciting recipes or food trends to share with their followers. Their content needs to be engaging, authentic, and experimental for their viewers.</p> <p>Pain Points:</p> <ul style="list-style-type: none">• Staying updated with new food styles• Being real while promoting stuff• Keeping followers interested• Dealing with bad comments• Being different from similar influencers

5. Parents (Especially mothers cooking for children)

Parents, especially mothers, are keen on providing nutritious, balanced, and tasty meals for their children. They strive to strike a balance between what's healthy and what their kids would love to eat.

Pain Points:

- Making food healthy and fun for kids
- Handling kids who are fussy about food
- Finding good and safe ingredients
- Being quick, especially in the mornings
- Getting kids to try new tastes

User Stories

Samantha Smith
25
California
Tech Specialist
Working full time


Uses Technology: ★★★★★
Cooking Expertise: ★★★★★
Willing to try new Recipes: ★★★★★

Wants/Needs

- Wants to be able to make meals without having to constantly visit the grocery store
- Needs the dishes to be quick, yet tasty.

Biography

Living at home with a full time job & limited financial freedom, Samantha is looking for a way to break her fast-food habit with a healthy, cost-effective approach. She doesn't have much experience in the kitchen besides whipping up a meal here and there. She would like to grow her knowledge when it comes to the cooking.



Frustrations

- Has spent over \$100 weekly from eating out/ordering food instead of making her own meals
- Gets upset/frustrated when recipe is too long or complicated

Kate Parker
21
California
Full time Student

Uses Technology: ★★★★★
Cooking Expertise: ★★★★★
Willing to try new Recipes: ★★★★★

Wants/Needs

- Wants to be able to share her recipes and not worry about harsh criticism
- Enjoys the ability to give positive/reinforcing feedback/comments to other creators

Biography

Growing up, Kate has always had a passion for baking. At the young age of 14, she began her journey as a small business baker where she baked cakes, cupcakes, and other treats for friends and family. As she got older, her availability became limited and she resorted to giving up her small business. Now, she's looking into getting back into the industry as a more established small business baker.



Frustrations

- When recipes call for niche/not readily available ingredients
- A recipe can get over complicated too quickly. Would like the ability to gauge how time-consuming and complex a recipe is before starting the recipe
- Some recipe languages could be vague & that could lead to an unsatisfactory dish

Suman Gurung
32
California
Restaurant Owner

Uses Technology: ★★★★★
Cooking Expertise: ★★★★★
Willing to try new Recipes: ★★★★★

Wants/Needs

- Wants to explore fusions of cuisines from different geographical backgrounds
- Wants to explore new dishes by offering and getting recipes

Biography

Suman has been in the restaurant industry for more than 6 years. He always prioritizes cooking his own food and has even perfected some of his own cuisines. However, as someone who is always willing to try recipes, he's open to the idea of bettering his dishes. Suman believes that one of the best ways to learning and appreciating other cultures is through their cuisines - so, he hopes to sample cuisines and further implement them in his own dishes.



Frustrations

- Bored from cooking repetitive dishes and wants to incorporate foreign cuisines
- Has previously added dishes to his restaurant menu only for them to be unsuccessful and 'miss the mark'

Anshul
25
India
Social Media Influencer

Uses Technology: ★★★★★
Cooking Expertise: ★★★★★
Willing to try new Recipes: ★★★★★

Wants/Needs

- Wants his social media posts to be more engaging
- Would like to try new cuisines

Biography

Anshul is a social media influencer based out of India. With a high following on Instagram, he wants to make sure his followers are engaged. He is fond of trying new cuisines and loves sharing food flicks on social media. Anshul wants to make sure he's giving his followers great recipes and restaurants to try out!



Frustrations

- Isn't always able to keep up with the latest food trends
- Feels as if his food posts aren't as engaging - usually because he isn't sure what's trending in the food industry. Isn't fond of when his comments aren't constructive

ID	Name	Persona	Comments
US01	Samantha	Novice Cook, Student	I want to find quick and easy recipes so I can make meals without much hassle.
US02	Kate	Young Professional, Student	As someone with a history of baking, I want to be able to seek constructive criticism while sharing my own recipes.
US03	Suman	Restaurant Owner	As a restaurant owner, I am looking to implement popular dishes into my menu as well as learn about foreign cuisines I am not accustomed to.
US04	Anshul	Social Media Influencer	As an influencer, I want to share and promote unique dishes to engage my followers.

3. Data Definitions

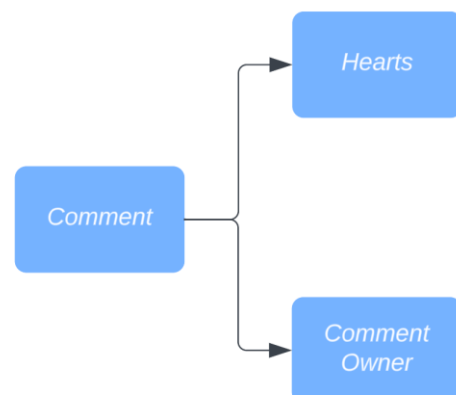
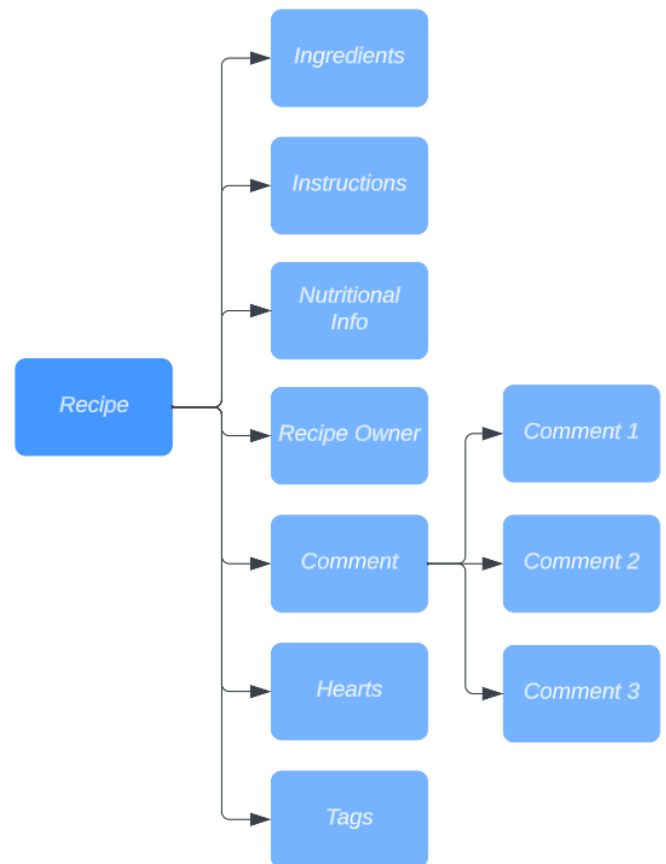
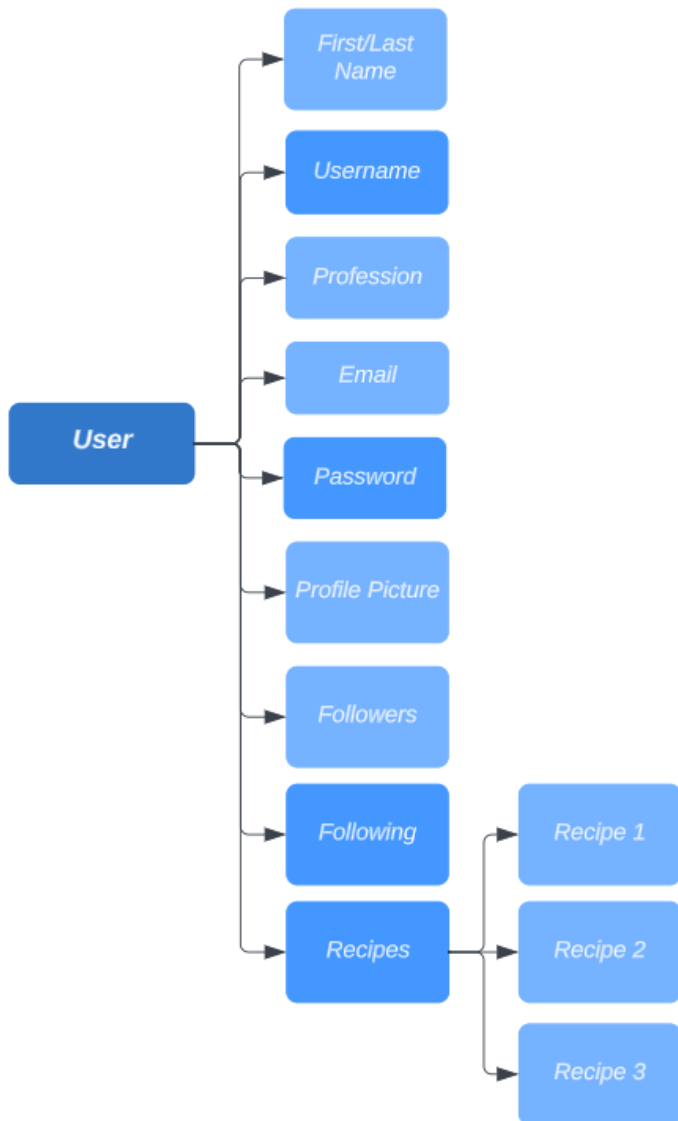
Clients who use the application are the **users**. Users can post **recipes** for others to view. Tags are included with each recipe so that users can search and filter recipes. Users can also follow other users, allowing them to easily view each other's recipes. **Comments** can be left on any recipe by any user. Both recipes and comments can be hearted. The number of hearts a post receives indicates to other users how popular that post is.

User: The main data structure. Each user can post recipes, add comments on other users' recipes, leave hearts on recipes and comments, and follow the users they especially like. User profiles can be customized to have a personal picture, name, and a profession to add extra credibility to their recipes.

Recipe: Each individual post is a recipe. Users can create and post recipes where others can view, heart, and comment on the recipe page. A recipe will have step by step instructions to create the meal, the ingredients required to cook the meal, and categories, or tags, to enable users to easily find the recipe.

Comment: Comments are the main way users can interact with each other. When viewing a recipe, users can leave suggestions on ingredients to add, different cooking techniques to use, or ask questions about specific steps and ingredients.

Structure and Hierarchy of Data



4. Functional Requirements (*P: priority)

ID	Title	Description	Story
01 (P)	Registration /Login	This requirement applies to <i>all</i> stories. Anyone visiting the website may browse and view recipes. But a user must be logged in to post recipes and comments. More importantly, having an account helps users keep track of their favorite recipes and recipe writers.	Kate Samantha Anshul Suman
02 (P)	Recipe Creation and Sharing	Allows users to create and share a recipe page on the website. The recipe writer may add ingredients, provide instructions, and specify tags to their recipe for others to view. All personas will use this feature, but social media influencers like Anshul will naturally create and share more recipes than others.	Anshul
03	Comments on Recipes	When viewing a recipe, registered users can leave comments. Beginners and experimenters like Kate and Samantha will most often leave comments asking for clarification on cooking steps or possible substitutions for uncommon ingredients. Anshul, who is already experienced, might leave comments on how they can improve the dish before trying to cook it themselves.	Kate Samantha Anshul
04	Hearts	Users can leave hearts on recipes/comments that they like. Popular recipes will naturally gather more hearts. Therefore, this feature will be most useful for Anshul and Suman. Both are interested in popular trends in the food world.	Anshul Suman
05	Statistics	Similar to hearts, the app will keep track of recipe statistics, like most viewed, most commented, and even most hearts. This will be useful for Anshul and Suman who want to know about popular food trends.	Anshul Suman
06 (P)	Recipe Search /Filtering	A feature that is useful for everyone. Tags allow users to search for specific recipes and/or filter them to pinpoint the exact recipe to satisfy the user's exact craving.	Kate Samantha Anshul Suman
07	Ingredient Mixer	The ingredient mixer allows the user to input a list of ingredients they have on hand, and the app will point to recipes they can cook with just those. Especially useful for Kate, who is a student with little time to stock up on proper ingredients.	Kate

08	Complexity Bar	A difficulty scale that ranks the complexity of each recipe on a scale of one to five, one being beginner friendly and five indicating a professional level recipe. Very useful for novice cooks like Kate and Samantha who do not want to waste ingredients on a recipe they might fail to make.	Kate Samantha
09 (P)	Cooking Mode	Beginner cooks often need to follow a recipe step by step, rereading each step carefully. This mode will display the recipe page in an easy-to-follow format: large fonts, embedded timers, and visible step-by-step instructions. Kate and Samantha will be able to follow the recipe on their device while they cook.	Kate Samantha
10	Bookmarks	Allows users to bookmark and group recipes into a named collection like "My Summer BBQ Favorites" or "Quick, Cheap Dinners". The former collection would probably be shared by Anshul to his followers, and the latter is created by Kate, so she can have a list of easy recipes always available.	Anshul Kate

5. Non-functional Requirements

We want our app to not be a hassle to use for our users. Based on our research on many users on the internet of how they feel using the recipe app like ours, we got many responses like:

- a) It's too vague and I quit before completing the cooking
- b) It takes time, the displays are confusing.
- c) Videos on recipes are not always good, you have to go back and forth to keep track while cooking
- d) I don't feel like sharing my recipes, I might get negative comments
- e) I would rather have a recipe book for better efficiency.

We have come up with several non-functional requirements to address the issues of similar kinds to maximum.

- Responsive design for various devices: We will make our app work on various devices such as laptops, mobile phones. Since our app targets users who mostly use smartphones, we will work our designs primarily on smartphones and then on bigger devices. Our app will also work on different browsers to maximize the user usability.

- Quick loading times for recipes: We have targeted to make the navigation through the app quick so that the users don't feel any hesitancy while surfing the app. Most of the content in our app will be text based, which will reduce the latency for smooth surfing.
- Data security and privacy for user profiles: We have several data structures for users, recipes and comments. Also, the users should have to be signed in with their email or phone to post and comment, to ensure the validity of recipes and comments.
- Intuitive and user-friendly interface: We have a “like” option to encourage people to post and comment. Also, we discuss leaving out the “dislike” option to encourage users to post their recipes without the fear of having any backlashes. We will attach the most popular dishes in the app and use a better UI for user attraction. The most popular tags will be shown in the homepage for better navigation for new users.
- Reliable and consistent uptime: We have targeted to make our app available all the time to our users since everything will be updated in real time.

6. Competitive Analysis

Features	Competitor 1 allrecipes.com	Competitor 2 skinnytaste.com	UMAMe
Complexity Bar	✗	✗	<p>One recurring issue we've observed in competitors' apps relates to the perceived difficulty or experience level required for cooking. From our interviews, it became evident that a major deterrent for many individuals is a feeling of inadequacy. Beginners often underestimate the time and skill needed for certain recipes. Facing obstacles mid-recipe or ending up with an unsatisfactory result can instill a sense of defeat, causing them to revert to their non-cooking habits.</p> <p>We suggest introducing a 'complexity bar' on each recipe page. With just a quick glance, users would gauge the complexity of a given recipe. There are various ways to implement this. One idea is to integrate this feature within our comment sections. As users prepare to submit a comment on a recipe, they would be prompted with a complexity bar to indicate the recipe's difficulty level.</p>

Youtube Link	×	×	<p>From our research, we've identified a common oversight among competitors: recognizing the variety in learning preferences. Many competing apps focus solely on one style, either being primarily textual or visual.</p> <p>We plan to integrate both. When users add a new recipe to our application, they'll have the option to include a YouTube video link. This enables creators to pair their recipes with visual guides for those inclined toward visual learning. This feature is optional; there's no obligation to attach a video. Nonetheless, it's available for those who wish to leverage it.</p>
Ingredient Mixer	×	×	<p>We look for recipes for multiple reasons. Either we want to try something new or maybe we are limited in terms of the ingredients we have readily available at home. Based on one of the interviews I conducted, users attempt to look for quick recipes based on what they have at home. We live in a fast-paced society where individuals don't have the time nor the means to make frequent trips to the store or order from a restaurant. However, not a lot of competitor apps cater to this category of individuals.</p> <p>This feature will allow users to make recipes based on what they currently have. We will implement this by allowing the user to select certain ingredient tags. Based on the ingredients the user selects, the application will suggest a recipe for the user to make. This feature prevents users from having to go through every recipe to see if they have sufficient ingredients to cook the meal. The app will instead present the best recipe given what the user has.</p>
In-App Timer	×	×	<p>Cooking requires a lot of precise time management. Most recipes demand our attention to be divided. We have to keep an eye out for the boiling potatoes on the stove and remember to preheat the oven while cutting the vegetables. A discrepancy of just five minutes can have significant consequences in cooking. An extra five minutes in the oven can burn your pizza. Similarly, an additional 5 minutes can overcook noodles on the stovetop.</p> <p>A way to implement this feature is by ensuring a timer is available for every recipe. There will be an option on each recipe that lets the user select a time length, adding a layer of personalization to the cooking process. For instance, a recipe might suggest a 25-minute baking time for a garlic pizza. But if someone likes their pizza crispier, they might prefer 30 minutes. This flexible timer allows users to adjust timings based on their preferences or follow the original recommendation.</p>

Based on what you selected, here's a recipe for you:

Creamy Garlic Pizza 🍴🍴🍴🍴

■

Recipe Name
Cuisine

ingredient 1 # ingredient 2

ingredient 3 # ingredient 4 # ingredient 5

Steps Link:

Step 1. Prep the Pizza

Step 2. Preheat the oven ⌚ 25 minutes

What ingredients do you have available?

ingredient 1 # ingredient 2 # ingredient 3

ingredient 4 # ingredient 5

Other: _____

Based on what you selected, here's a recipe for you:

■

7. High Level System Requirements

- HTML, CSS
- JavaScript
- React
- Material UI
- Nodejs
- Express
- MongoDB
- Amazon AWS
- GitHub
- Figma

8. Team & Milestone Planning

Khalid	Team Lead	<ul style="list-style-type: none">• With Renee & Anish, the front-end team is working on a React course that focuses on best implementations.• By October 1st, Khalid will create a basic login page where he will collaborate with Anish and Renee regarding UI & design.
Dat	Back-End Lead	<ul style="list-style-type: none">• Studying the basics of the MERN stack. Dat is focusing on the backend and the database. During his full-stack online course, Dat is focusing on how to connect the backend to the database as well as connecting the backend to the frontend.• Finished courses: Node, Express, MongoDB• As of 9/27: finish on connecting backend to database• 10/4 (planned): connecting backend to frontend
Jacob	Git Hub Master	<ul style="list-style-type: none">• Studying basics of MERN stack.• Focused on managing Git-Repo and submissions to GitHub.• Also working on backend• By Milestone 2, Jacob will teach the team regarding pull requests on GitHub.• Responsible for pushing to the mast branch while everyone else individually works on dev branch.
Anish	Front-End Lead	<ul style="list-style-type: none">• Studying designs regarding front-end. Working on creating a UI that captures our features aesthetically.• With Khalid & Renee, the front-end team is working on a React course that focuses on best implementations
Renee	Scrum Master	<ul style="list-style-type: none">• With Anish, Renee is working on the wireframe of the site. By composing multiple wireframes, we can collaborate on the best UI looks like.• With Khalid & Anish, the front-end team is working on a React course that focuses on best implementations

9. Checklist

SNo.	Task	Status
1	Team found a time slot to meet outside of the class	DONE
2	Scrum Master shares meeting minutes with everyone after each meeting.	DONE
3	GitHub master chosen	DONE
4	Everyone sets up their local development environment from the team's git-repo	DONE
d	Team decided and agreed together on using the listed SW tools and	DONE

	deployment server	
6	<p>Team ready and able to use the chosen back/front-end frameworks. For each technology (front/back-end/DB/cloud), team decides who will lead the study of each technology and what will be the specific goal of the study within one month from the M1 announcement.</p> <p>Ex: implement DB scheme for main data items</p>	ON TRACK
7	<p>Study Plan (for milestones refer to number 8)</p> <ul style="list-style-type: none"> • Host Front-end classes via Zoom on Sundays led by Khalid, Anish, and Renee • Host Back-end classes on campus Wednesdays from 2:00-3:00 led by Dat and Jacob • Mondays from 11:00-12:30, the team meets and discusses what we have worked on since our last meeting, what we plan to work on, and what hiccups we are having along the road. When we discuss any hiccups, the team collaborates to get a solution. 	ON TRACK
8	Team lead ensured that all team members read the final M1 and agree/understand it before submission	Done