



# Senior Design in CS

Purpose - To create an application using knowledge and experience gained throughout my Academic career as well as professional career.

- Goals - Learn to utilize new tools, languages and frameworks
- Go through full stack web dev process to create an application
- Help users get into a healthier and cheaper dietary lifestyle

# The Team

Members:

- Tamer Alorfahli
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  - (513)-903-2743
  - Role: Research, development, documentation

Project Advisor

- Brett Spilka

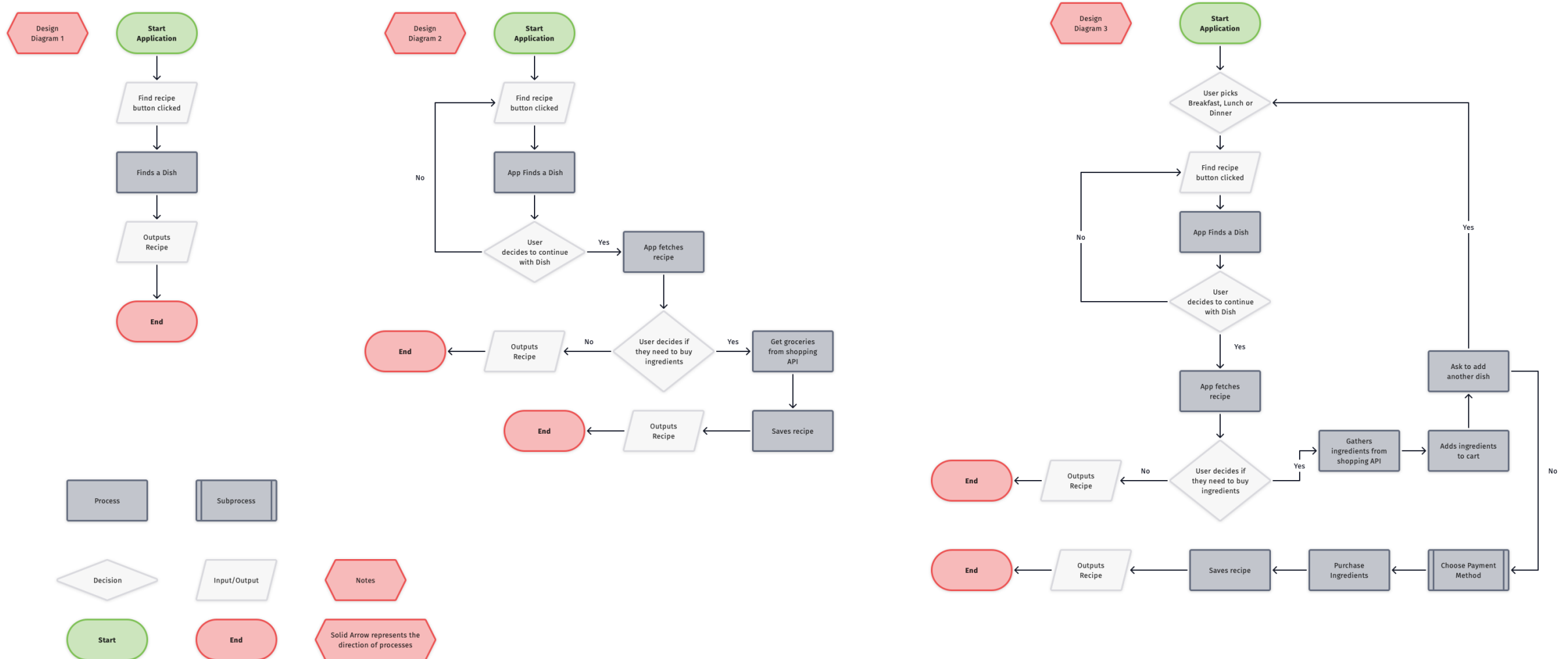
# Abstract

- I plan to create an application that is able to streamline the process of determining what to eat and cooking. The application helps the user determine what to cook and provide recipes to them with a more robust database of selections. As well as adding additional features such as helping the user source the ingredients from the recipe generated by purchasing them through the app and picking them up from their local grocery store. With the added functionality to meal prep for the week, with meals catered to the users preferences.

# User Stories and Design Diagrams

- As a hungry user, I want to be able to effortlessly produce dish ideas so that I can eat.
- As a hungry user, I want to be able to be given the recipes for the dishes generated, so that I can cook.
- As a hungry user, I want to be able to find different dishes so that I can have a unique variety in my diet.
- As a hungry user, I want to be able to shop for the ingredients or missing ingredients of the generated dish so that I can cook them.
- As a hungry user, I want to be able to purchase the groceries via the app so I can have a seamless user experience.
- As a hungry user, I want to be able to have a clean and simple user experience so that I may navigate the app with ease.
- As a hungry user, I want to save recipes so that I may use them in the future or after receiving the groceries.

# User Stories and Design Diagrams



# Major Project Constraints


- Economic
  - The cost of designing the application in terms of UI/UX could be an issue as many quality design software are pricey and are usually monthly subscriptions which can rack up prices with the various design tools used over the course of the project's development.
  - Some other factors to consider or potentially scaling the project, buying cloud server to allow constant uptime, paying for API keys and other small transactions add up.
  - Being on a student budget that will be personally financed avoiding as many costs as possible without sacrificing time, effort, and quality is the goal.
- Security
  - Security and encryption for the application, attempting to add a feature to purchase the ingredients used in the recipes and paying from the app, it may contain sensitive information.
  - If not developed correctly using API's or not encrypted properly when creating the payment processor sensitive data could be leaked or vulnerable to theft.
  - This would be the biggest issue as user data policies have gotten much stricter and could end up having serious legal repercussions.
- Legal
  - Recipes could be considered intellectual property and without crediting or getting permission to use them could be more effort than what it is worth.

# Progress

- Research
  - Research wise the project is mostly finished and more going into to possibly make components of the project easier to implement. As well as researching smaller issues that need to be tackled with issues in the code and for budget and constraint purposes. Some is also going into having more features added to the application.
- Front end design
  - Design wise what the front end should look like is drafted but subject to change. More changes are likely to be done to the front end as my experience in this is not as good as the back end. Tools to create drafts are being such as Figma to give an outline of what the project should look like.
- Back-end design
  - The design is mainly done of how the back end should be implemented, but some additional changes are being made to make a better and faster user experience and development process.
- Documentation
  - Documentation is on going and is mostly up to date with the current state of the project.
- Development
  - Development has had some progress and a rough testing project is being made.



# Expected Accomplishments

- Finishing or having a final draft for the research for the current state of the project is the aim for this semester.
  - The front-end design and having a rough draft of what it should look like to be complete.
  - The Backend for the development should also be roughly drafted out.
  - Finding additional features to add to the project and different tools to implement.
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# Division of Work

- Since this is a single person team the work is going to be done by me.
  - Research, Design, Documentation, Development, and testing.

# Expected Demo

- The expectations for the Demo is to have a functioning application that can achieve the basic goals the user stories aim to be able to do,
- Being able to use the app to find a dish to eat, the given recipe, and the ability to purchase the ingredients using the app.
- As well as having a great user interface and user experience being another high priority for the project to showcase what I have learned in front end development.

# Additional Features

- Some features that are being researched and possibly being implemented as the project is developed.
  - Artificial Intelligence to be able to have recipes that can be generated for more/highly specific dietary needs.
  - Linking the application to a possible fitness application to go hand in hand with not only dietary planning but weight loss, muscle growth, and health improvement.
  - Meal planning not only for the single dish use but for a week or however many days the user wants to be able to bulk buy food and cook.
  - Adding nutritional information to the recipes for users who want to count their macros.
  - The ability to share recipe favorites or user data with other users, or API's.
  - The ability to have a user analytics page to see what was eaten, nutrition, and other information for any date/period of time or app history.