Project 1- Interface to a smart object

Gathering design requirements:

Needs finding:

Interview 3 people outside the class (family, friends) about your smart object. Revise the questions you developed in your teams, aiming to learn about your user's needs and how your UI can address them. Report what you learned from these interviews.

What does an average week look like in terms of cooking (Number of meals, number of new recipes, complexity of meals, time taken)?

Mom: 6 meals cooked each week. 3 are new. 5/10 for complexity.

Joshua: 5 meals, .5% new, 5/10 for complexity, cooking for 2, 30-minute average.

Grace: 14 meals, 2 or 3 new, 6.5/10 for complexity, 45-minute average.

How proactive would you consider yourself to be when planning to cook? Do you have recipes in mind before shopping?

Mom: Plans shopping trips to cook later. Day before shopping.

Joshua: Weekly shopping, plans recipes before shopping.

Grace: Plan shopping trips according to planned meals, week and a half in advance.

What are some important factors that get considered when searching for a new recipe?

Mom: Healthy, easy to follow directions, reviews.

Joshua: Needs meat, better cut of meat.

Grace: Seasonal, time to prepare, cost.

Where do you go to look for new recipes and/or find interesting ones by happenstance?

Mom: Allrecipies, pintrest

Joshua: Google

Grace: Pintrest, TikToks

What are some appliances that you use while cooking?

Mom: Crockpot

Joshua: Blackstone, Instapot, Stove, Oven

Grace: Crockpot, blender, Instapot

Think of the last time you used a recipe, how was that experience and were there any notable pros or cons?

Mom: None

Joshua: Entire story is not needed.

Grace: Angry at the story and ads before the recipe.

Write down the assumptions you are making about your smart object (e.g., for a smart water bottle, perhaps it measures the water level and temperature, it tracks how much water someone drinks through a sensor in the opening....)

For my smart cookbook, I am assuming that it is a tablet like device that can connect to the internet, has a speaker and a microphone. I am also assuming that it will come with a stand that holds the device in an adjustable manner in terms of the angle and height and will also be able to turn on command of the device. I assume that it will charge from the device and can be picked up without any cord manipulation. I will also assume that the device can connect to other smart kitchen devices if available.

Create a written list of design requirements for the user interface. You can begin with the design goals you generated in class. You can address some of these in your implementation or leave some as 'future work', outside the scope of the class.

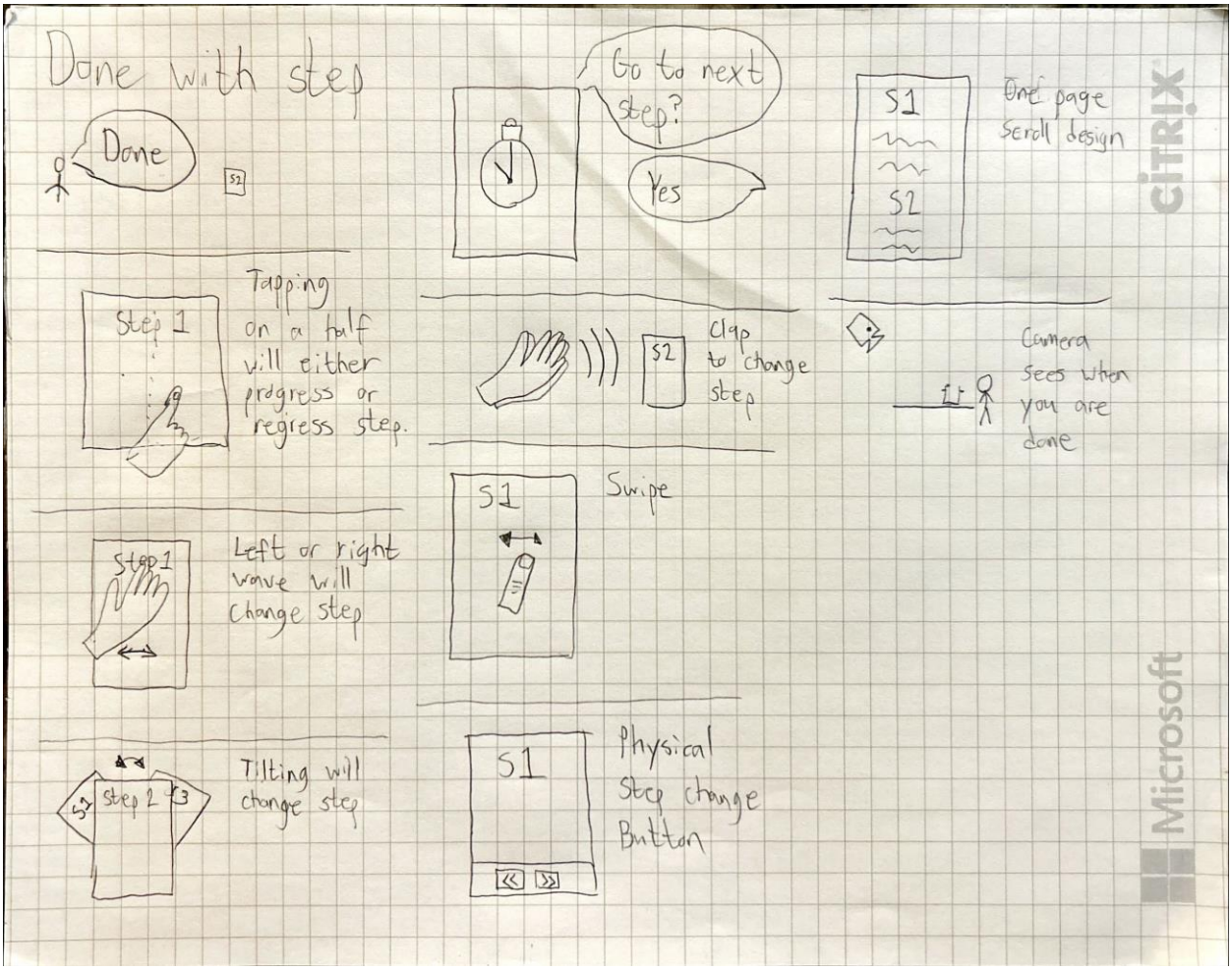
- The user should be able to search for recipes based on their criteria.
    - Name of dish
    - Nationality
    - Ingredients
    - Time to cook

    - Difficulty
    - Cookware requirements
- The user should be able to get recipes from outside sources.
- The user should be able to enter their own recipes.
- The user should be able to interact with the device in a variety of ways.
- The device should be able to communicate with the user in a variety of ways.
- The device should be able to interact with other smart kitchen devices.
- The device should be able to provide further assistance past the recipe.
    - Substitutions
    - Conversions
    - Timers
- The user should be able to meal plan.

Sketching design alternatives:

Choose 3 interesting design challenges to explore. For instance, if I were developing a microwave+toaster oven combo device, my design challenges might be- user wants to figure out how long to cook something for and in what mode, user wants to be able to quickly heat up foods they repeatedly heat up, user wants to avoid over or under cooking their food.

How to capture when the user is done with a step


Done with step
Done
S2
Go to next step?
Yes
S1
S2
One page scroll design
Step 1
Tapping on a half will either progress or regress step.
S2
Clap to change step
Camera sees when you are done
S1
Swipe
Step 1
Left or right wave will change step
S1
Step 2
S3
Tilting will change step
S1
Physical Step change Button
CITRIX
Microsoft

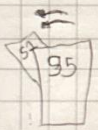
Tilting

Right Tilt

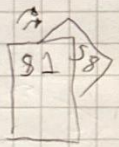
Increases Step by one

Left Tilt

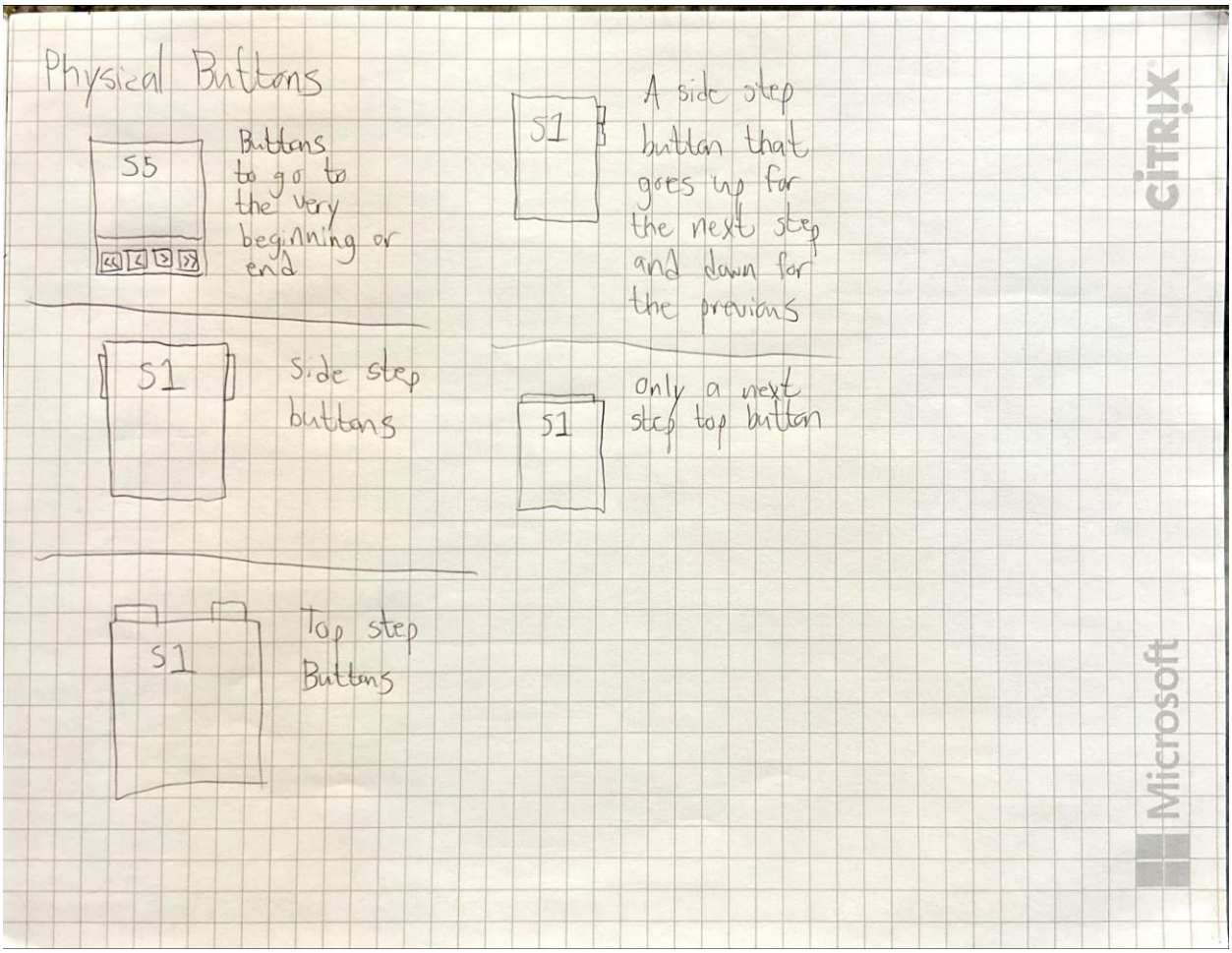
Decreases Step By One



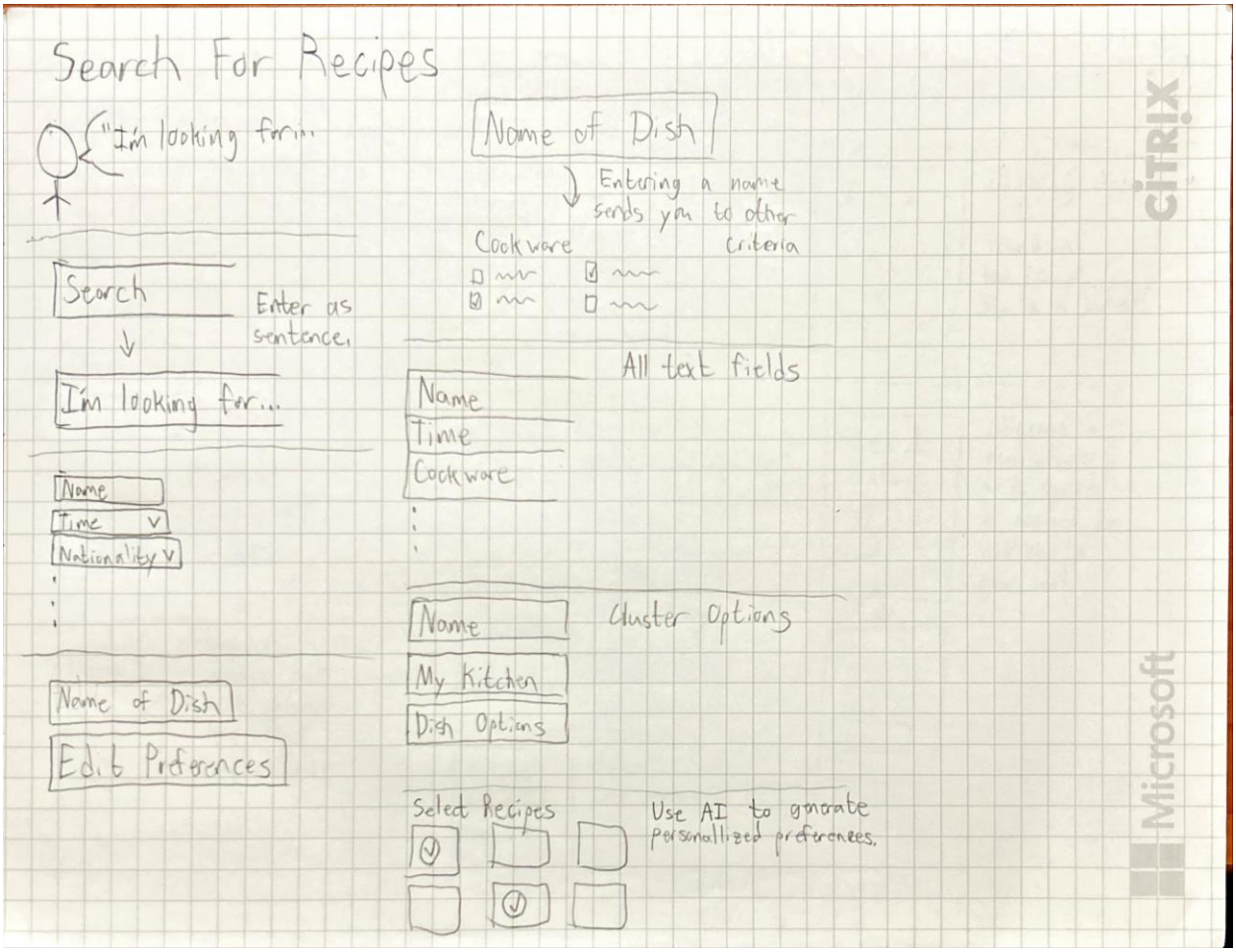
Two tilts quickly will go back to Step 1

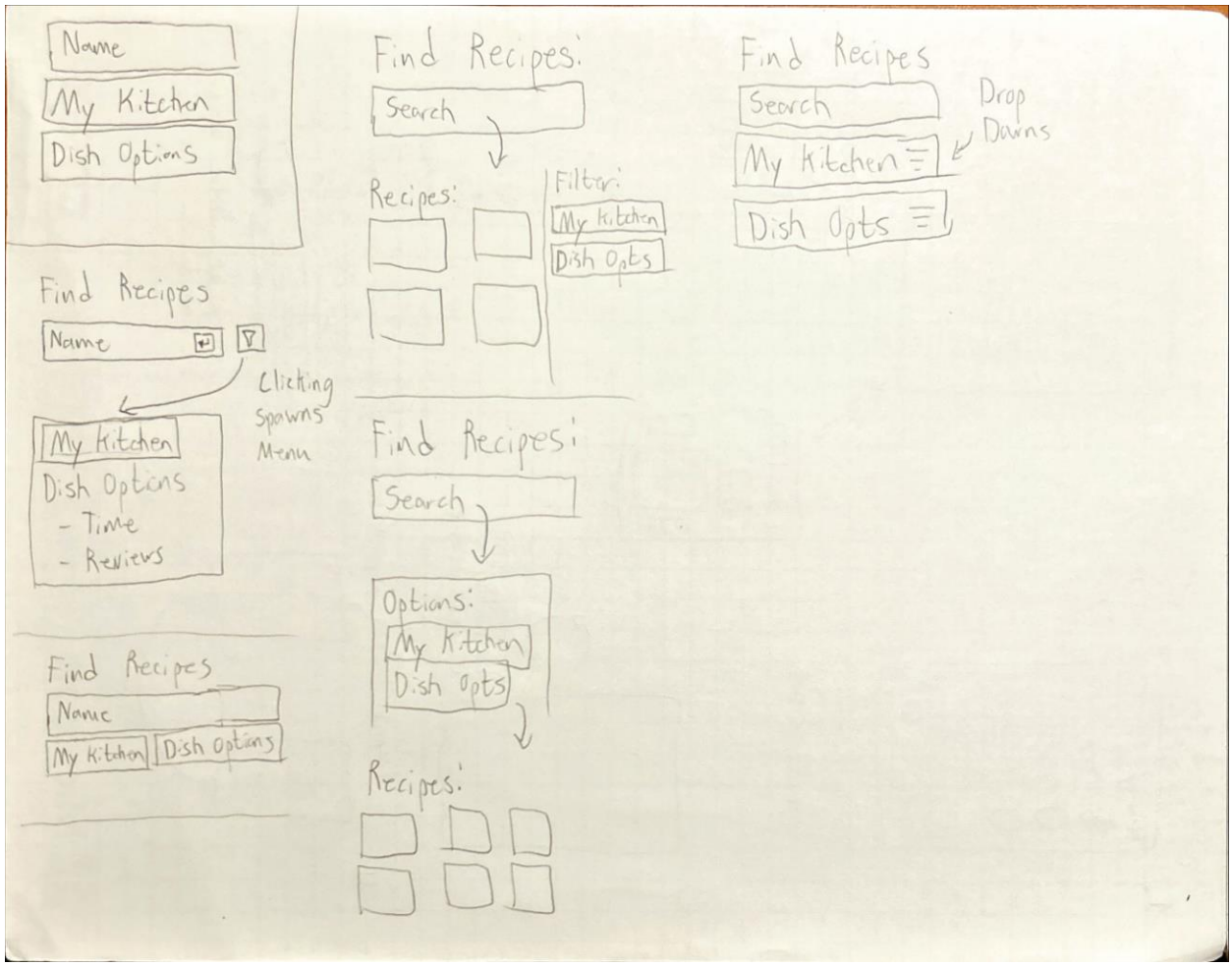


Two tilts quickly will go to the end.

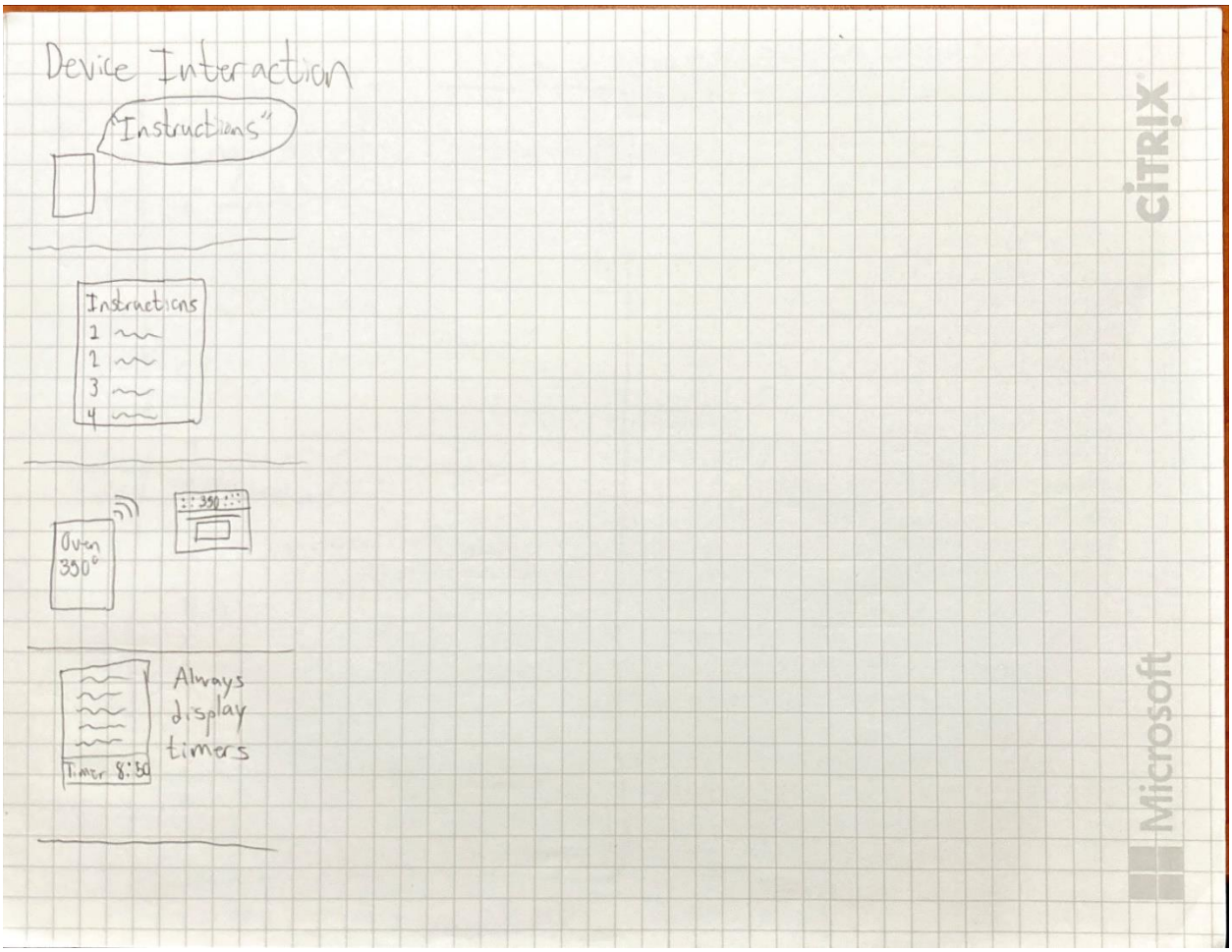


The user should be able to search for recipes based on their criteria.

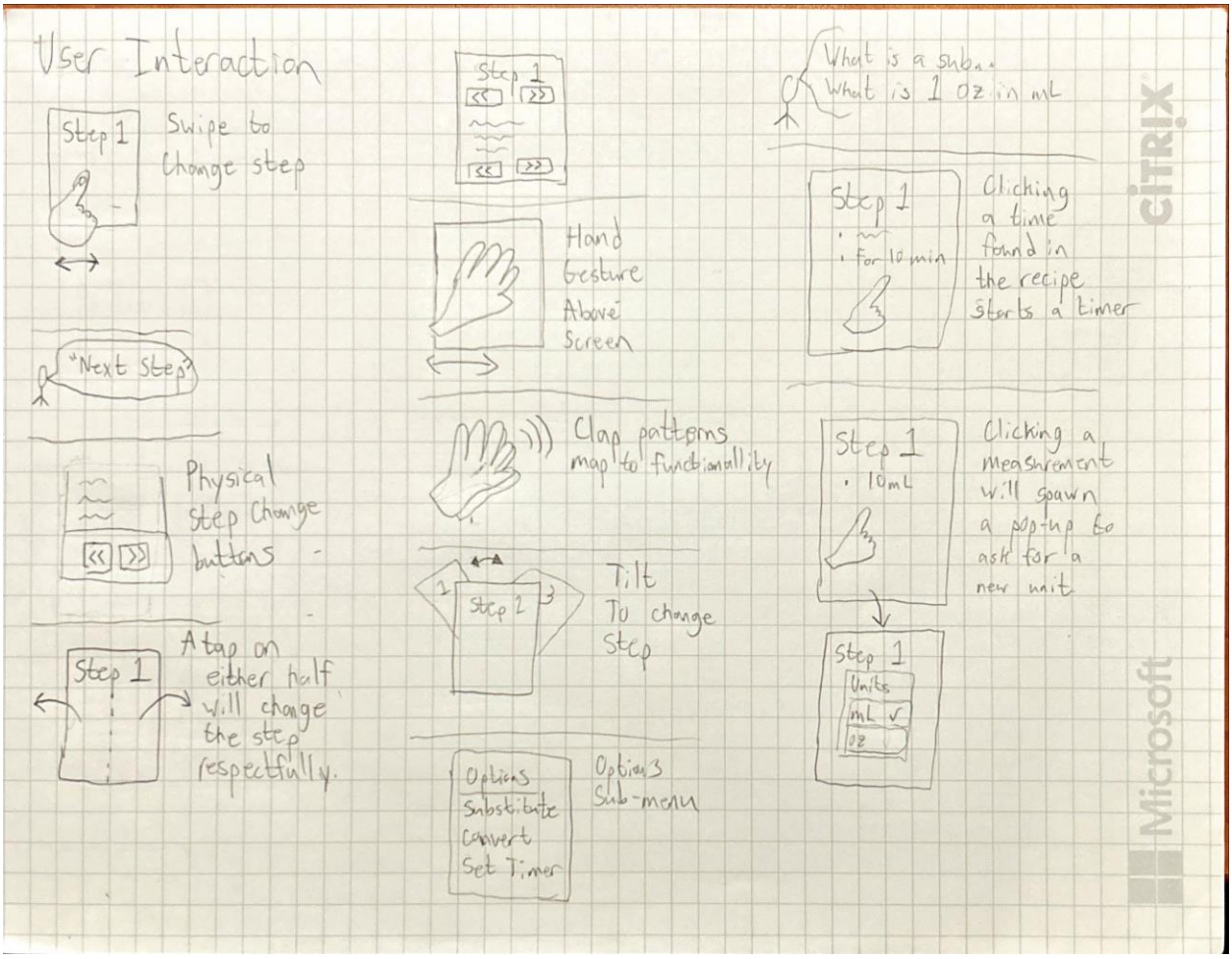

Search For Recipes
"I'm looking for...
Name of Dish
Entering a name sends you to other criteria
Cookware
Search
Enter as sentence.
I'm looking for...
All text fields
Name
Time
Cookware
Name
Time
Nationality
Cluster Options
Name
My Kitchen
Dish Options
Name of Dish
Edit Preferences
Select Recipes
Use AI to generate personalized preferences.



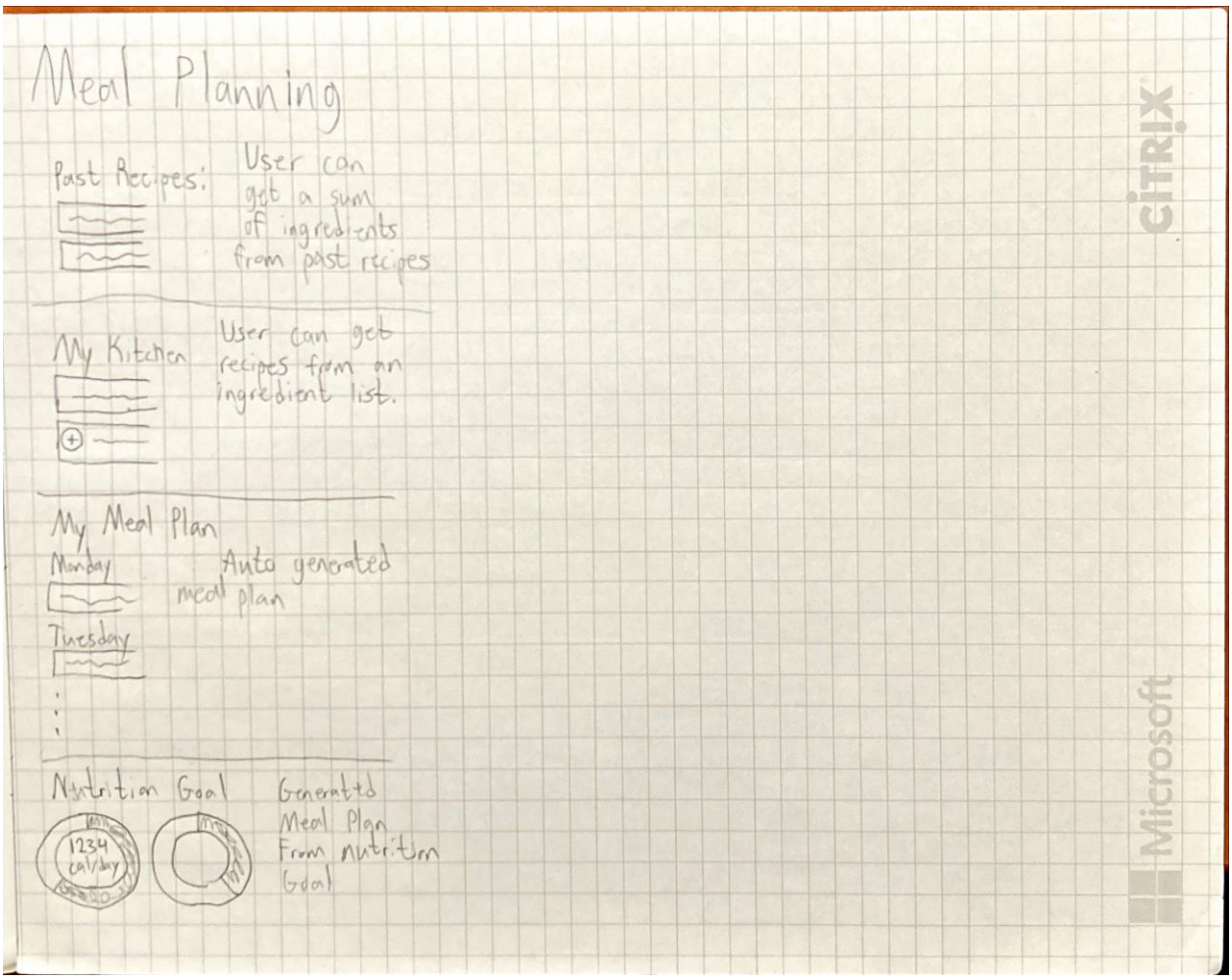
The device should be able to communicate with the user in a variety of ways.



The user should be able to interact with the device in a variety of ways.



The user should be able to meal plan.



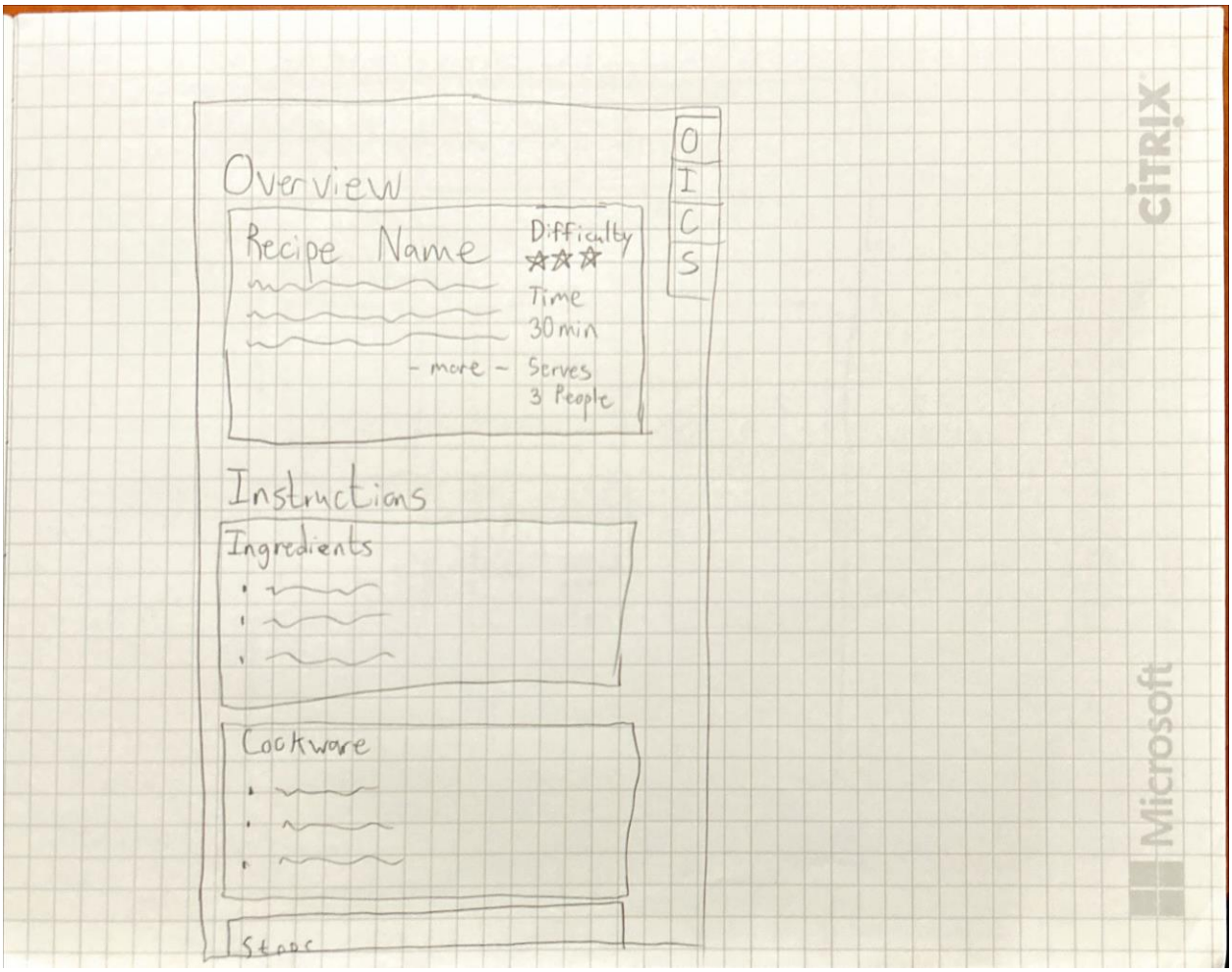
We will follow a protocol for exploring design alternatives called '10-plus-10'. See in-class notes. If you are having trouble generating 10-plus-10 sketches, try sketching 10-plus-10 MINUTES. Sketch design alternatives for 10 minutes, select from these alternatives and sketch variations on these for 10 minutes.

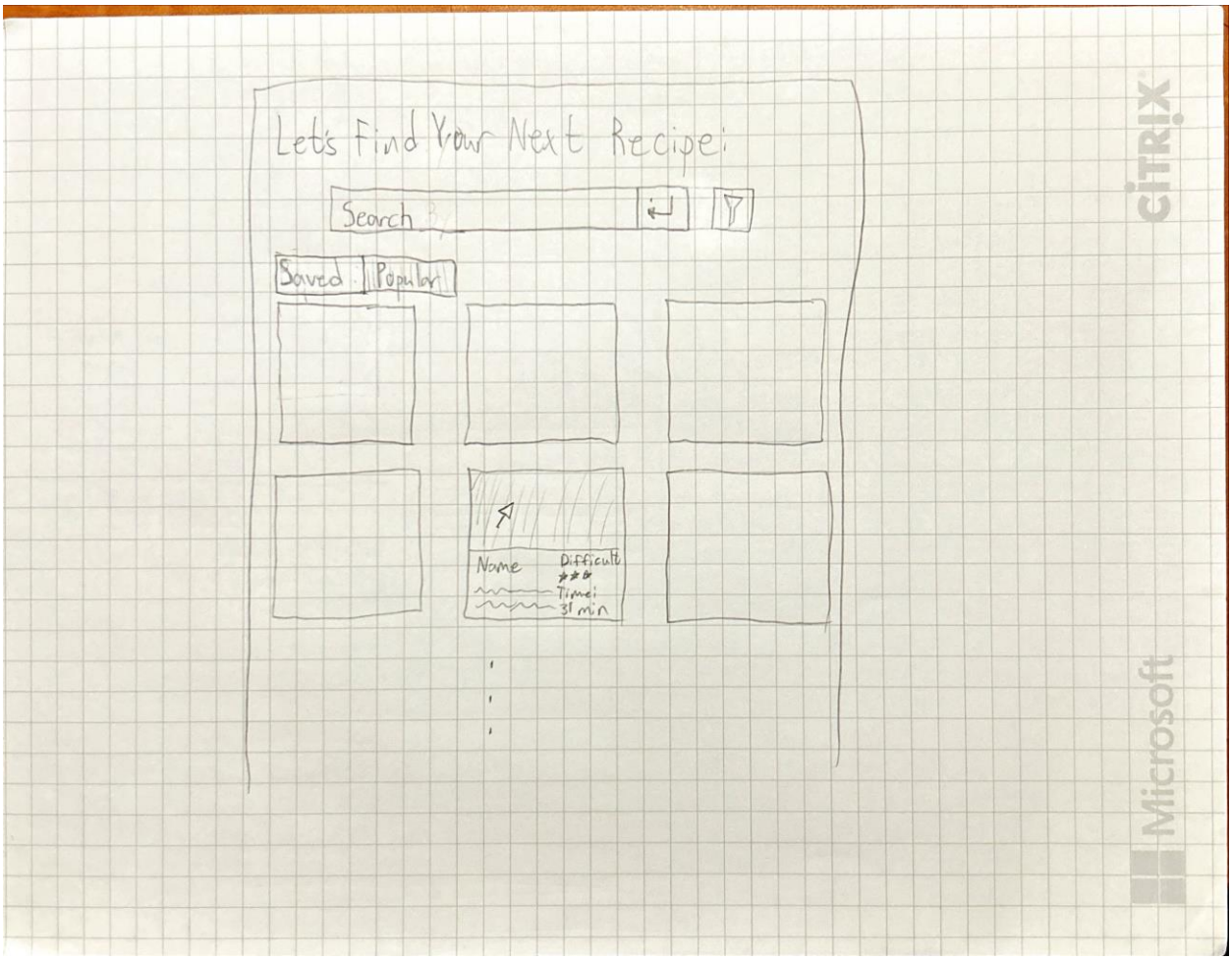
Basic UI:

- For a C, begin with the requirements you captured above, and focus on basic controls and usage first. Create a list of the controls you are including in this UI, the indicators you want display, and how these connect to the design goals you captured.
    - Controls: Ability to search for recipes, ability to set a timer, ability to convert units, ability to get instructions, ability to create recipes, ability to save recipes, ability to create a meal plan and grocery list

- Display: Display the available recipes, display the selected recipe's instructions and ingredients, display the meal plan made and what ingredients are required.
- Design Choices: Users need to be able to search for recipes. These filter options will be sorted into categories but can also be referenced in the main search bar. Users need to be able to set a timer. This can be done by either clicking a time mentioned in an instruction, by asking the device, or using a widget tab. The user needs to be able to convert units which can be done by clicking on a measurement.

- **Create prototype sketches of this interface BEFORE you implement it.**
  - **Include these sketches in your documentation**





- **Show your prototype sketches to 3 people (friends, family members, classmates). Record the feedback.**
    - Mom: Like list of ingredients. Implement amounts into steps. Minimize distance from steps to ingredients.
    - Joshua: Likes side bookmarks. Wants simplicity.
    - Grace: Simple, Doesn't include story, add reviews.