

Sketch 3: *Minigame, Documentation*

Complete all sections of this documentation. The following questions ask you to describe your project and respond to feedback you'll receive in lab during the final week of lab class periods. **Make sure to answer all questions where highlighted in yellow.**

Your Name(s)

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Describe your game. Include an explanation of the theme of your game, what the objective is, and any instructions on how to play the game.

I created a bakery-themed minigame where the objective is to bake a cake by:

1. Finding and collecting all the ingredients (egg, milk, sugar, flour)
2. Mixing the collected ingredients by using the mixer
3. Baking the mixture in the oven

To move, the player must use the arrow keys. If the player is facing and in the range of an object they can interact with, a box will pop up in the bottom right corner with the corresponding instruction: Press 'c' to collect an ingredient, or press 'e' to open/close the fridge, mix ingredients, or bake. The player can only use the mixer if they have ingredients in their inventory. The player can only use the oven if they have a mixture in their inventory, which can be obtained after using the mixer.

To win, the player must bake a mixture that contains all of the ingredients. This can be achieved by collecting all ingredients, mixing, then baking. It is also possible for the player to win by mixing partial ingredients, and then mixing in the rest of the ingredients before baking. (For example, they can use the mixer after collecting eggs and milk, which will add a partial mixture to the inventory. They can then collect flour and sugar, and then use the mixer again to receive the full mixture). The player will lose if they bake a partial mixture or if they run out of time.

Critique and Feedback Questions

To be completed in the final lab class period

When you shared your visual and technical prototypes for your minigame, what feedback did you receive on ways to improve the visual design, functionality, and game play/objective of the game? Record that feedback here:

- make the canvas bigger
- Add a mixing station to mix ingredients before the player can bake. If player bakes a mix that doesn't contain all the ingredients, they lose. (In the initial prototype, the player was required to bake immediately after collecting ingredients.)
- Add background music, sound effects when you pick up an ingredient
- Multiple end screens for winning, losing, and running out of time
- Gray out already collected components or draw empty fridge/remove items once collected
- Add directions for the next step

Choose at least 1 specific point of feedback to respond to related to the visual design of your minigame. State the feedback you received, and offer a response: Do you think the

feedback is valid, and if so, why? How might you implement it? Do you reject the feedback, and if so, why?

I received the suggestion to add visual indication that an item has been collected. In my initial prototype, when a player collects an item, there were no indications that it was collected, other than its image being drawn in the inventory. I think this feedback is valid because it would help the player understand that an item only needs to be collected once. It also makes the game more interactive by adding changes to the kitchen instead of just the inventory. I can implement this by using a boolean to keep track of whether an ingredient has been collected or not. First, I would have to initialize the boolean as false, and then set it to true when the player presses 'c' while in the range of that ingredient. The ingredient image would only be rendered if the ingredient is not collected. For the fridges, I would also have to illustrate an "empty" fridge that should be drawn after an ingredient is collected from a fridge.

Choose at least 1 specific point of feedback to respond to related to the functionality, game play, or objective of your minigame. State the feedback you received, and offer a response: Do you think the feedback is valid, and if so, why? How might you implement it? Do you reject the feedback, and if so, why?

I received the suggestion to add a mixing step in the game play. This feedback is valid because it's more reflective of the actual process of baking, making the game more intuitive for the player. In my initial prototype, I only had an array list that kept track of images of the ingredients the player collected, which was used to draw the images on the inventory slots. When the player mixes ingredients, this list would be cleared, which is why I would need to have another arrayList to keep track of collected ingredients. This arrayList would determine which mixture is added to the inventory when they use the mixture: If the list contains all necessary ingredients, the player would receive the full mixture, otherwise, they would receive the partial mixture.

(Also, in the future I would change the ArrayList to contain Ingredient objects instead of images)

Choose at least 1 specific point of additional feedback to respond to related to anything else from your prototypes. State the feedback you received, and offer a response: Do you think the feedback is valid, and if so, why? How might you implement it? Do you reject the feedback, and if so, why?

I also received the suggestion to make the canvas size bigger because the font was blurry and hard to read. Although creating a "mini" game was intentional, I thought this feedback was still valid because the text should be readable. However, I had some limitations due to the way I illustrated the game components. Because I used a small drawing canvas that was the same size as the processing canvas, scaling the objects to be larger would make them blurry. I would have to redraw the components on a larger canvas. Instead of increasing canvas size, I addressed the issue of readability by using a tiny pixel font that would be clear when rendered on the canvas.

