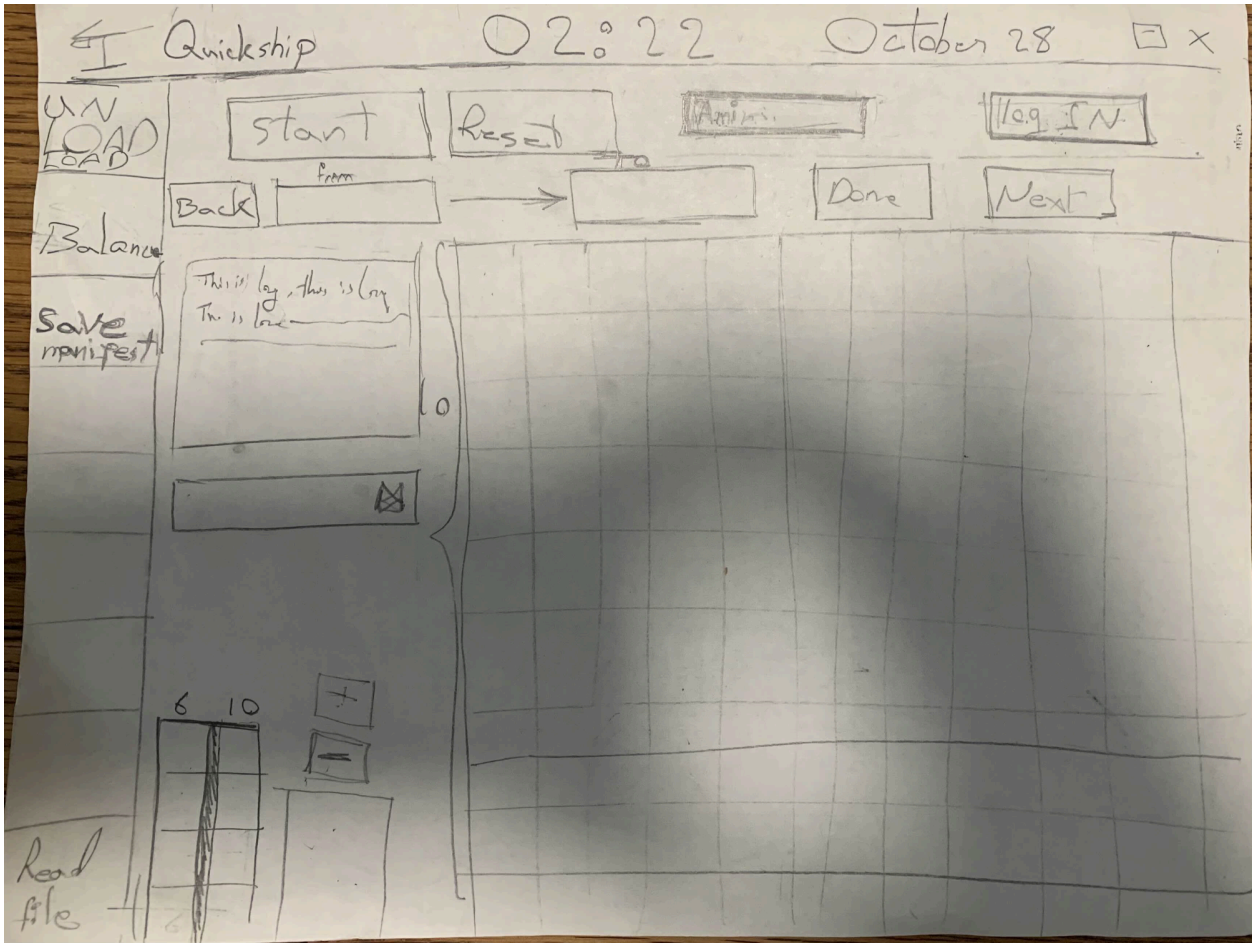
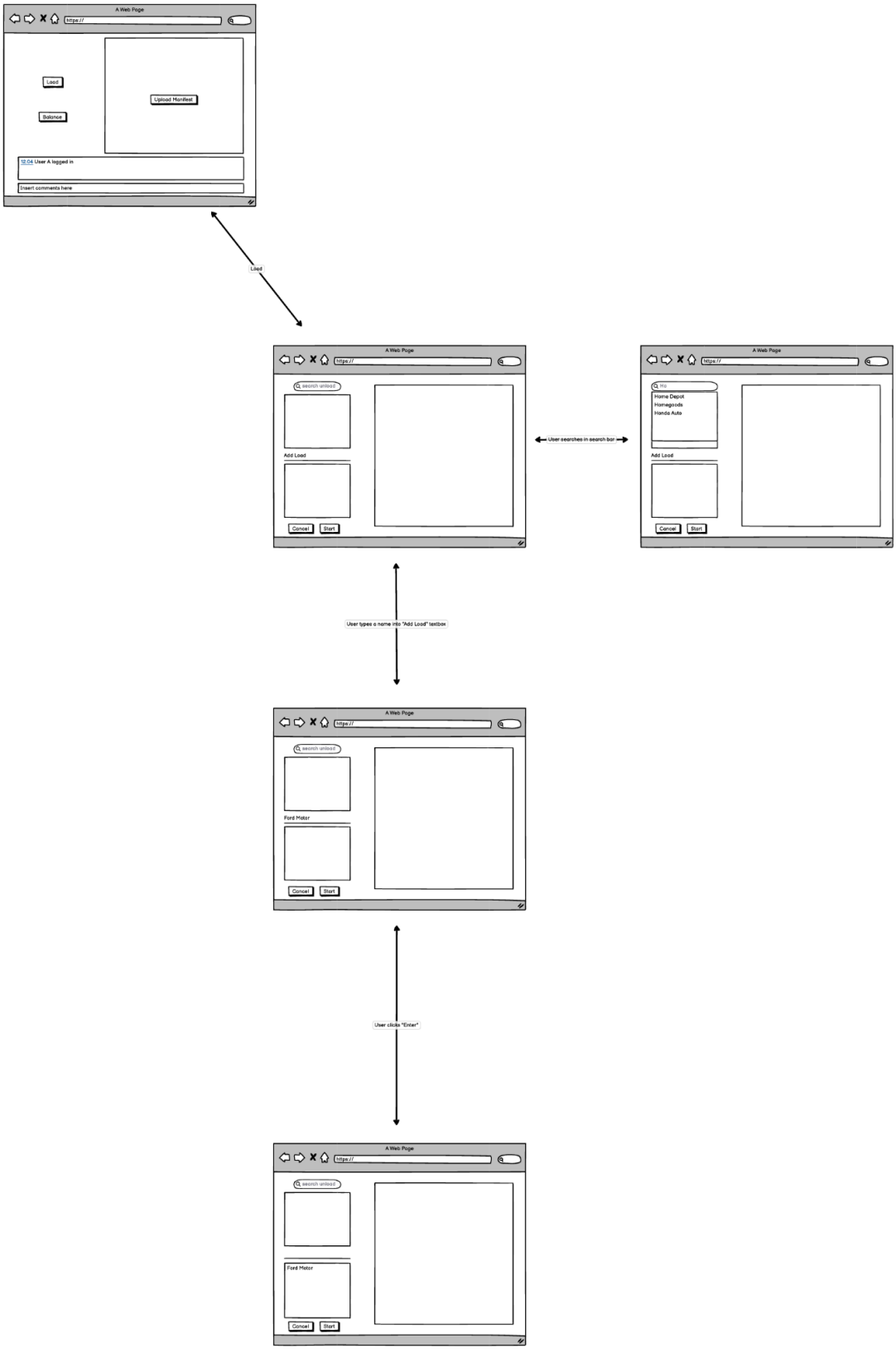
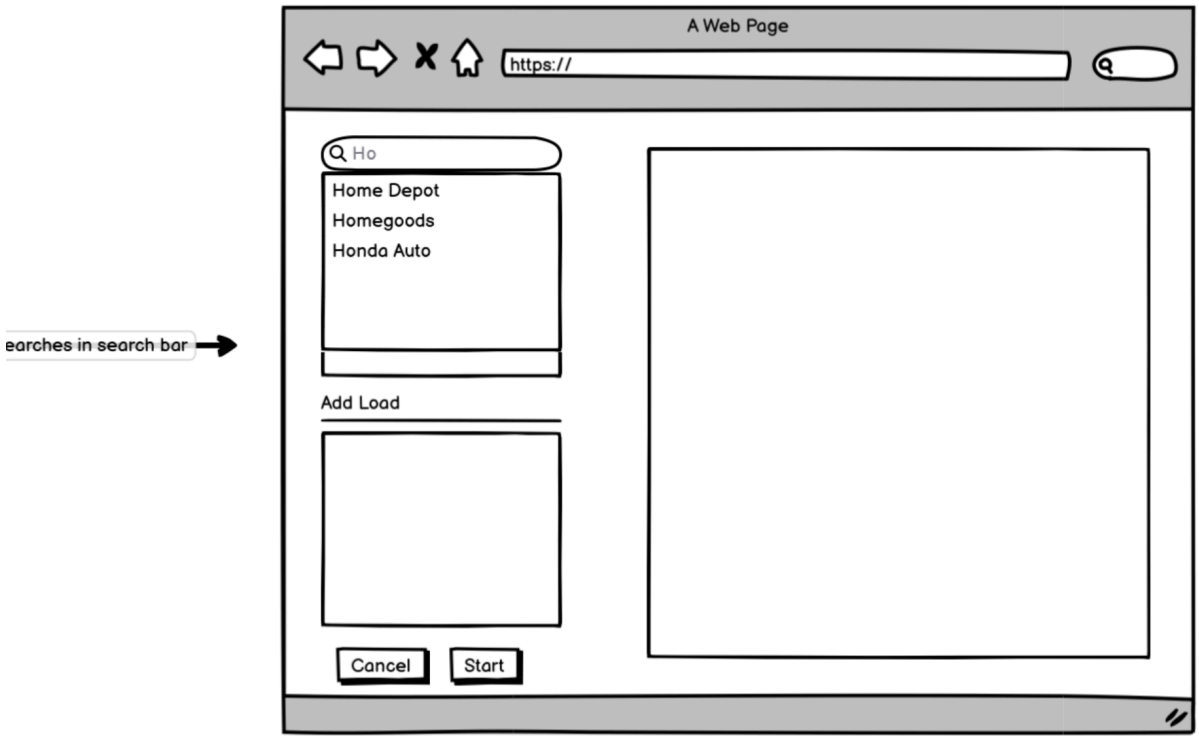
This was the first concept for the QuickShip interface.



This diagram shows how the quickShip interface transitions based on the button presed.




A Web Page
https://
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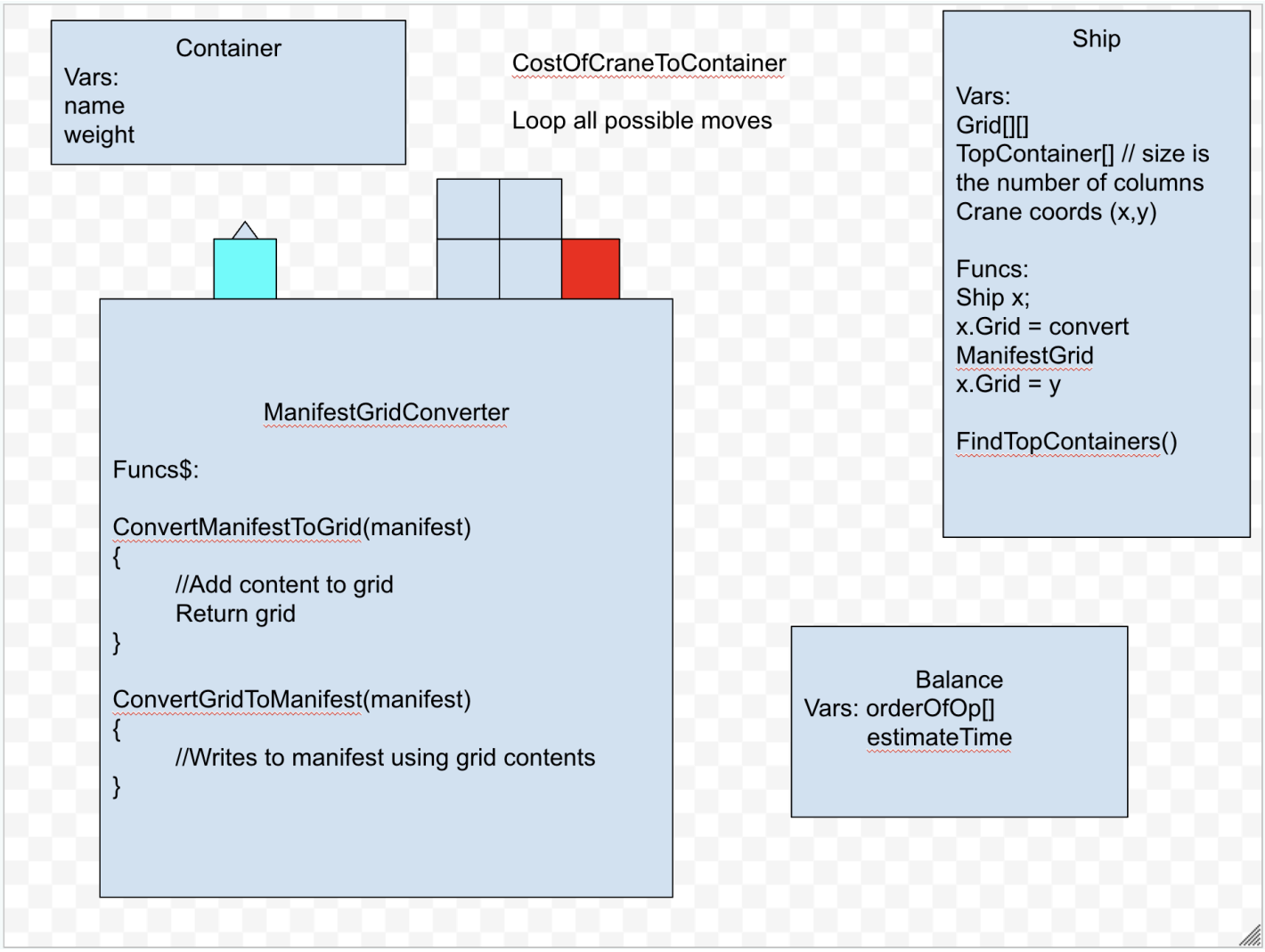
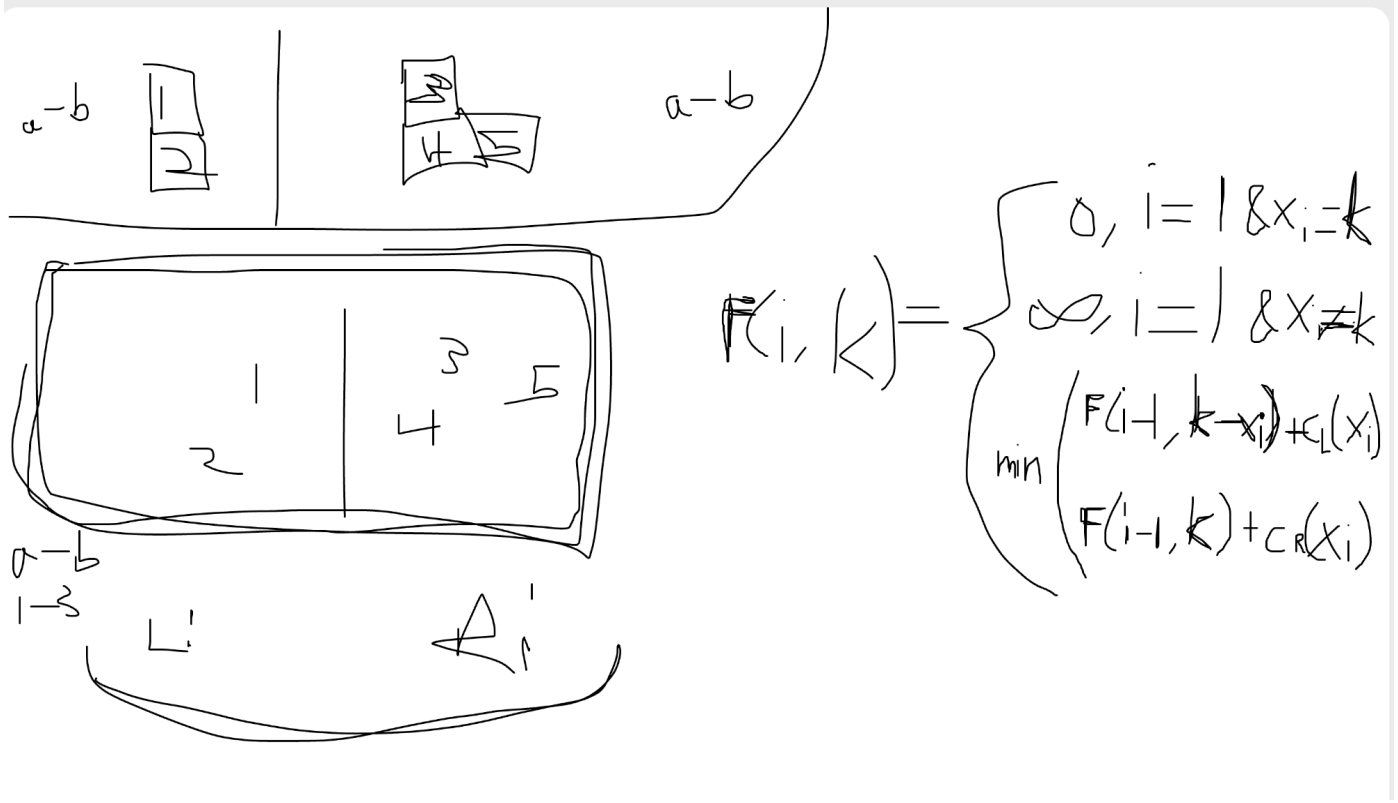
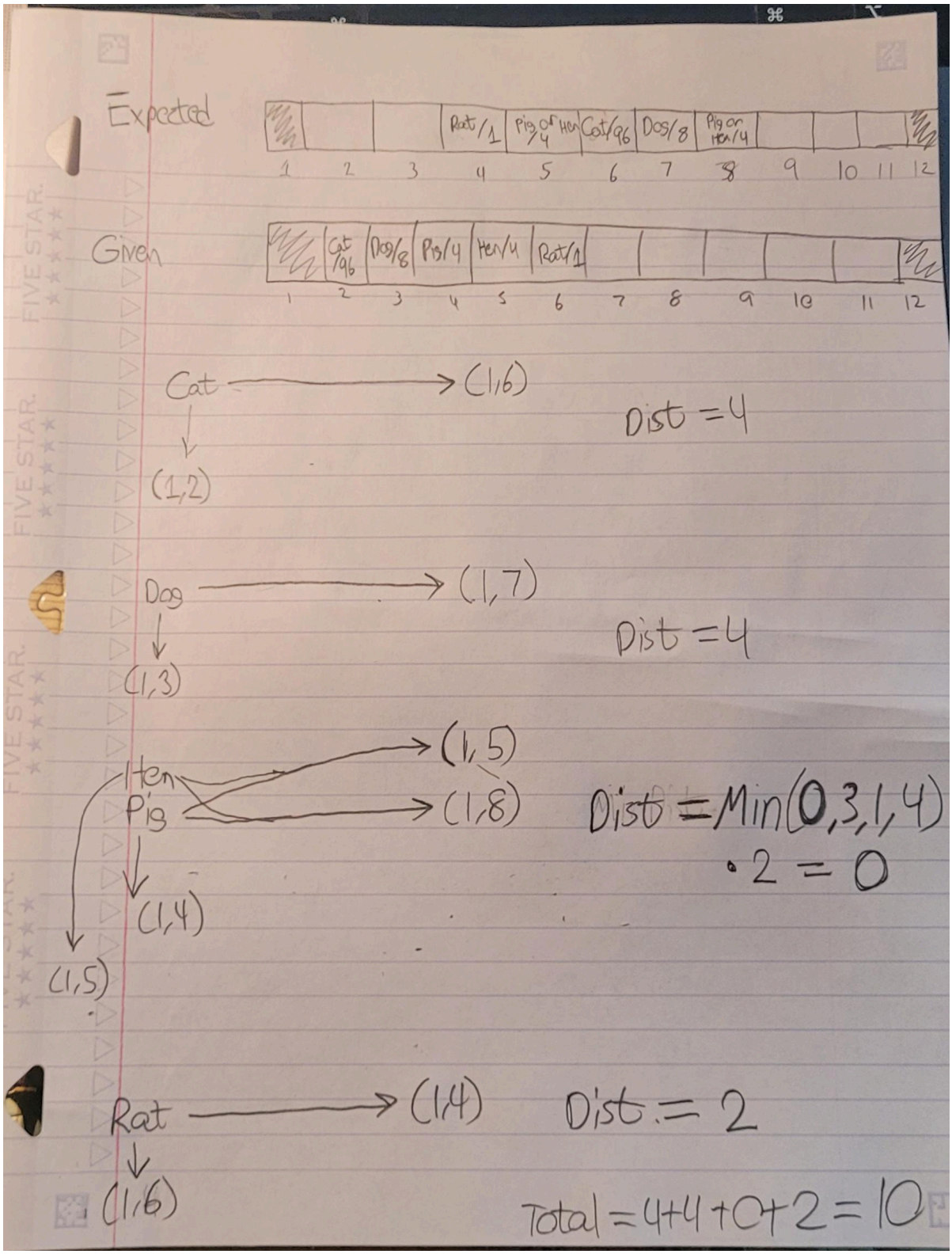
These were some of our first diagrams for the balance operation. It includes a container, ship, balance, and manifest grid converter class. We created this November 9th.



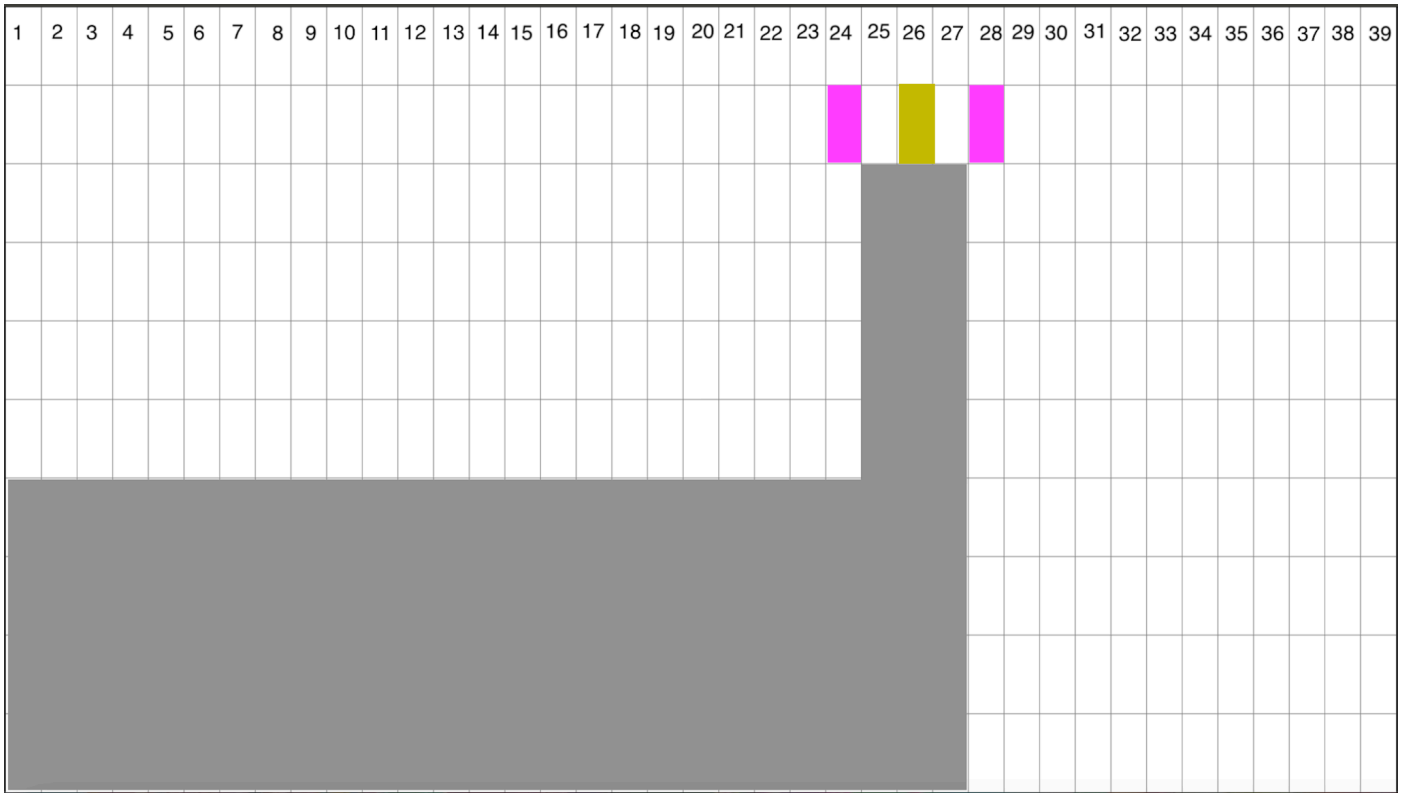
This was a recurrence equation idea for a heuristic for the balance operation that uses dynamic programming.



This is a practice problem for a SIFT operation heuristic idea. The algorithm is being run on paper.



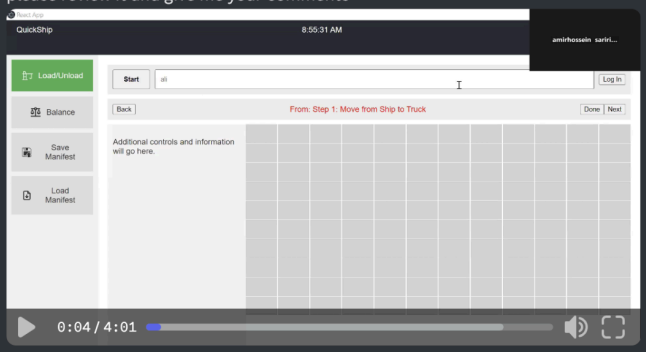
This is a concept we came up with for representing the whole problem with the buffer. We combine the ship and buffer, and specify the virtual cells, loading zones, and places that can't be accessed.



These are some examples of discord conversations we had regarding the system design.

November 15, 2024

9:10 AM **amir_sa.** Good morning everyone, I started working on the project last night, made a video from the code until now, please review it and give me your comments



9:46 AM **HienBoyo** Looks nice so far

9:48 AM **amir_sa.** Thanks, if you guys have any comment or need any change tell me

@amir_sa. Good morning everyone, I started working on the project last night, made a video from the code until now, please r...

10:14 AM **dingleberrylord** Wow this looks amazing

dingleberrylord I have 2 questions
1) What would happen if you load manifest but you dont save it?
2) Where are you going to show the buffer. I assume we have to show the buffer for load/unload

dingleberrylord By the way my progress right now is I am close to finishing the manifest to grid translation in javascript

dingleberrylord I should be done by today

10:31 AM **amir_sa.** Good question, I think manifest should be updated every time there is a change, for example user clicks on done if it is related to a change in ship

amir_sa. The buffet, i want to show just two columns of it the reason is that we don't have enough space to show all of

5:59 PM **HienBoyo** finished testing / fixing bugs (mostly, im not 100% sure its completely bug free) with my heuristic for load unload. just pushed it. however it is for a version that has the buffer connected to the ship in one large array. if you need me to change it to work jsut for ship just lmk. (edited)

6:00 PM **danyeughl** so that method is what we are going with?

6:03 PM **HienBoyo** Im not sure, i can easily alter it if we choose a different way. What do you guys think of this method to have the buffer?

6:04 PM **danyeughl** As long as it works there's nothing to really debate

6:05 PM **dingleberrylord** Now that Im thinking about it i wouldnt mind implementing the buffer that way either

dingleberrylord We could make it so that every state in our search algorithms have the ship and buffer in a big 2d array

6:08 PM **HienBoyo** We would just need to make some changes in the manifest to grid and searches to make sure they put/look in the correct area of the array.

1

6:09 PM **danyeughl** So long as you can "clean them up" and have the final output with separated buffer and manifest that's ready to display then its all good

Reply

6:11 PM **dingleberrylord** Thats doable

6:13 PM **dingleberrylord** @HienBoyo So does your heuristic expect the grid[][] argument already combine both the ship and buffer?

dingleberrylord Are we putting the responsibility on the state classes to initialize a combined ship buffer 2d array?

6:15 PM **danyeughl** if the state class is being used for balance heuristic then you can't without a big refactor

6:16 PM **dingleberrylord** Oh yeah thats a good point

dingleberrylord We don't actually have to show any tests in our demo that would end up using the buffer though do we?

dingleberrylord If thats the case we have some room for the buffer not being perfect

dingleberrylord It might slow the search down though there wont ever be an operations list path that uses it

6:27 PM **dingleberrylord** Heres an idea: Since there arent really any tests for the demo that even need to buffer, we can have the balance/sift heuristics return a really high value whenever the input is a grid that has containers in the buffer. That way these states are less likely to be expanded before the solution is found and the implementation is simple and the performance doesnt take a big hit