https://www.dropbox.com/scl/fi/a2546eubjk6c6y5zedg5e/CS179.pptx?rlkey=hhtcq10w88bu5taqdsdvv3an2&e=1&dl=0

https://www.dropbox.com/scl/fi/jmmuz02s9fzh2w4sgub4v/Problem_overview_by_Mr_Keogh.pptx?rlkey=ol9yff8pxh79gjlykepego2zb&e=1&dl=0

1. Software Development Model: Kanban board https://flexagon.com/7-software-development-models-you-should-know/
2. Requirements elicitation: The process by which you find out what the customer really wants. (Stakeholder analysis , Interviewing , Study similar companies , Observation, Task demonstration, Document studies, Questionnaires, Brainstorming, Focus groups, Domain workshops, Design workshops, Pilot experiments, Ask suppliers, Negotiation, Risk analysis, Cost/benefit analysis, Goal - domain analysis, Domain - requirements analysis).
    a. Come up with a plan to do the Requirements elicitation, and then document every step of the plan.
    b. When did your team meet, how did you come up with the questions? You will be graded on this.
        i. (Oct, 6, 2024 - 7pm) The group met to discuss/come up with questions to ask Mr.Keogh. We also decided to use the Kanban board development model.
        ii. (Oct, 9, 2024 - 10:30am)
    c. Come up with a preliminary set of questions to ask Mr. Keogh. Document the creation of these questions.

Stakeholders

1. Who will be using the software and what are their computer skills? (How user-friendly does the UI need to be?)
2. From what we understand, the stakeholders include truck drivers, truck companies,local government, customs protocol services, local government, crane operators, captain of the ship, and the shipping company. Are there any others we haven't thought of?

Operations

1. Do the users only have access to 1 crane for shifting the containers?
2. Is the buffer area used to move containers onto the ship, or is it just a holding area to reach lower containers on the ship?
3. How do you take care of situations in which trucks were not able to reach the dock? (Due to accidents, flat tires, etc.) Do you leave the containers in the buffer zone or ship?
4. Are all of the containers the same dimensions?
5. Can you describe the lighting in the operator areas? (where our software is going to be used)

Safety

1. Should we integrate a shutdown protocol in case of emergency situations?

Physical Environment

1. Are we taking weather and maritime conditions into account?
2. How should our software be able to handle power outages? (continue where last left off?)

Manifest

1. Can we assume that the NAN spots on the manifest are the same for each ship, since you stated that all the ships are X2 ships which are the same kind.
2. How often is the manifest updated? After each operation has been made by the operator or once all operations have been made?
3. What formats are the manifests in?

Business

1. Should our software be able to keep track of how much money you make per ship and update?

Security

1. Do the operators need to clock in and out using a password/account?
2. Does the manifest have to be deleted after we send it to the captain?

UI/UX

1. The animation can be simple as a grid representation of the field with a colored square representing the target and source of the container?
2. Do you or your team have a preference for color to use in the software?
3. How big does the text need to be? Is anyone on the team who will be using the software visually impaired?

Accessibility

1. Should the software have multiple language options?
2. Do there need to be different user portals to account for the different operators using the software?
3. Should we include a user guide?

Logging Feature

1. Should the log files be organized in specific folders/locations?
2. How descriptive does the description need to be on the log?
3. What time zone do we need to use for the times recorded in the log?
4. What format do time need to be in?

Meeting Notes

1. (notes)
2. True, 1 crane
3. If truck is not present, the long beach organization has a service, of providing a temporary truck and garb that container and take it away, doesn't matter for the software, do not need to account for the time
4. 44 and 24, only standard 44 identical size
5. Crane must be used to put it in and out of the buffer, 1 min/cell
6. FBI and insurance companies for correct logs, legal purposes.

7. The guys using the software are all older guys, they can open a web browser or an excel sheet, we can assume that they can follow instructions well.
8. It would be optimal if the interface was so easy to use and intuitive that they don't need training but it is totally acceptable and great to have an onboarding for an hour or a document or manual to use it.
9. Weather never affects us. We work in the hot sun or in the rain. Since we're in California weather is never a problem.
10. We get power from the grid, and it takes 2 minutes to get the power back. Have a set of movies to immediately come back to when we left.
11. Cannot assume the NAN spots are all in the same place, they can be in an arbitrary place as long as they're symmetrical.
12. Internally, he doesn't care. But the manifest is updated through email, a file is sent which the person downloads onto their computer. Dismissible window that says "don't forget to email the captain"
13. YES, it needs to be the exact same since these are the standards.
14. Animation can be as simple as a grid, yes
15. No strong preference for colors as long as it's high contrast and bright
16. No visually impaired individuals
17. Wheelchairs cuz they can't physically climb all of these stairs, but you can assume employees are for the most part able-bodied
18. employees dont sign out. People only log in, no log out
19. To desktop, remind to email, thats it. Operator decides to delete or not
20. Nothing else, maybe bathroom break/lunch - walk away momentarily
21. No
22. No, log will cover this
23. No
24. We have two levels. Basically all employees are same. Should NOT be able to edit log file. They can append text by adding note. But they cant directly change log file. Everything is the same for all employees.

25. In project pitch, explain how to onboard employees. We want a simple onboarding process. Maybe a 10-min video/pdf/once-a-year meeting. Cheap and simple.
26. The locations of the containers is up to Mr. Keogh. Where the container is in the ship we don't care. No constraints for the restrictions. The operator should have no freedom you give them the best solution and they follow it.

27. He only retrieves it once a year. Only one log file at a time.
28. 255 characters.
29. Yes.
    1 log for the crane/operation during the year. Not ships.
    - Opened manifest, __ log in, moved container _ to truck, etc… "Close for the year"

    Dr. Keogh notes: think about inputs/outputs, more gaps - short email, area of doubt - zoom/in-person.

New Questions:

1. Animation-buffer and trucks?

An Example transfer list :
—----------
When Queen Maria arrives at 11am Tuesday
Unload, all Ferrari Car Parts and Taiwanese Semiconductors
Load, Qualcomm container, Target container, Walmart container

(**this transfer list is for demonstration purposes only**)

Notes from Meeting October 30rd at 11am in Mr. Keogh's office - Project Pitch Notes

- instead of saying "suggested moves" we want to say moves that the operator MUST perform
- instead of should say must
- time stamp for log: fetch it from an external source / API because the system may not have the correct time (this should be down to the second.)
- add a slide about intellectual property and if we want him to have control over it for 10 years? or 5 years? or if we want to sell it to other ports while giving him a percentage of the profit
- flat tire? - don't need to consider it
- expand on how it will be safe by having someone 24/7 in the cabin securit
- acceptance testing changes: we have 15 minutes of time to compute the moves for the operator: anything more than that will start costing us money
- based off how many containers
- make a copy of slides, and make everything red that you change / revert changes to prev version
- less time for maintenance, we should have somebody 24/7 on-call ready to answer questions during the first month of having the software.

one ship only balances OR unloads and LOADS

- you will have a manifest input taken
- then we create a graphic of all the grid and then we see what to unload, and they click boxes on the grid to unload the stuff

and then:
Loading:

- then we will ask to type in what to load and (one more thing?)

and Make sure to have a loading symbol going on while it is doing that.

then we generate steps; and then display each move one step at a time, and have a next button to go to the next step. and update the log file after each move without any action.

SIFT the computer will accommodate for sift. and SIFT can be optimized as well. GOAL state will be told by sift, but the ordering doesn't matter.

should we remove scenarios with the flat tire case ?: let's ask him

TODO;s

- what design GUI's we can use with Python
- ^ working with grids and intuitive- have to be able to have buttons/ click on the grid - display a grid.
- decide what software tools we want to use (Python)
- classes OOP
- what functions are needed
- what inputs we need to take in
- ask for or make a sample manifest in order to take in inputs and parse the file
- divide up what functions/ classes each person is doing

—--
in class he said initial state is given by the manifest
goal state - is implicit (can't show you, but can give a test that if it satisfies the conditions (like legal weight balance, then))

- heuristic (admissible) - prediction should be less than or equal to the actual cost
- we are minimizing the minutes which is manhattan distance - count the number of spots it takes to get to the spot it should be at.

cite on the slides: As per our conversation with Mr.Keogh on November 4th we do not need to consider flat tires.