Prep for Interview

CATEGORIES

1. System Operations (Questions about how the system will manage and optimize the movement of containers between ships, trucks, and buffer zones.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	How many trucks can be called to the loading area at once?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	I read the comments on the previous doc, would it be better to remove it? Another question along that topic might be: Would calling multiple trucks to the loading/unloading area take the same time as calling a singular truck? Calling multiple trucks means the answer to the question here is >1, so we're not really getting a better question. For what it worth, we can call 6 trucks in the time it takes to move a container 1 cell… so if the operator hasn't called the truck before our crane moves a container to the truck area they are trolling Ok, u want to keep this question as it is? I think its fine as is (altho tbh i dont think its helpful but it increases count) ^^bro is formatting even his comments Locked in fr I will put it on slides for now ok
2	(Slide 22) Does the special truck take the same amount of time to arrive as a normal truck, which is effectively 0? If not, how long is this delay?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	Slide 33 mentions containers cannot weigh more than 99,999 kilos. A maximum stack of 8 could put a max load of nearly 700,000 kilos on the bottom container. Is there a maximum load that may be placed on containers when stacking?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	1.5 million pounds
4	Is there a maximum weight per ship? If so, would you like our program to alert the operator when exceeded	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

5	In your initial idea on slide 27, you'd like the operator to pick which container to unload.
	If the operator picks a container, but there is another container that may be quicker to unload with the same name, should we:
	   a. Default to the quicker container
	   b. Advise the operator of the quicker container & ask them to confirm switching
	   c. Just process steps for the picked container
		Approve: Win, Kareem, Padma, Ruben, Jaydah
		Deny:
		Modify:	

6	In your initial idea on slide 27, it is unclear if you'd like the operator to select multiple containers at a time to process steps for. Would you like the operator to be able to select multiple containers to unload (which will improve efficiency of steps) or would you prefer one container at a time?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
7	How likely is it for a container to be damaged to the point it cannot be shipped? Should we provide an option for the operator to skip a container, & recompute steps from there?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
8	Is the buffer used by multiple cranes or jobs? Is it possible for parts of the buffer to be filled (NAN) by containers or objects we did not put in? If the previous questions are both False, to clarify, it is guaranteed we are able to use & even fill the entire buffer if necessary?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
9	The objective when balancing is legally balanced in the least time possible. However, if SIFT is run the ship may end up not balanced (but still legal). Should we log when SIFT is run for legal purposes?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
10	On slide 24 states the program should save the updated manifest to the desktop. Should we update the Desktop manifest after every individual load or balance? Or should the updated manifest be saved at the beginning or end of a job?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	I rewrite this
11	It is mentioned on slide 39 that it is possible for some or all containers to be put on the buffer when balancing. Should containers placed in the buffer be displayed in the log similarly to containers that are being offloaded? Ex: June 1st 2023: 04:23 "Walmart Bikes Moreno Valley South" is placed in buffer.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	I rewrite this and add example, good question
12	In your presentation slide 45 it is stated that the log file should never be edited directly by humans. However, when the operator wishes to write in the log (which shows up as red ASCII text in the presentation) it is displayed in the example log files. In occasional scenarios, what is the operator's process for documenting that type of log? Can you clarify the process so we can represent that through our system if the log files should not be directly edited by humans?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	This question is rather broad, the obvious answer is we should provide a text box. There is a similar question in section 3, #2 Sounds good Maybe we could rephrase this to ask if he'd like input sanitization (remove new lines, non ASCII characters). I am not sure.
13	On slide 49, it is stated that an employee signing into their shift is automatically signaled as the previous employee signing out. Will shift changes occur while a ship is receiving service or will an employee finish the current job first?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

In the situation of a shift change, If the manifest is not edited after every load or balance, can we assume the operator recognizes the changes through the manifest and ship without reflecting it in real time in the manifest?		

2. Data Handling and Files (Questions about how the system will manage, edit, and save key files like manifests, transfer lists, and logs.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	We would like to verify some features of the manifest file. row weight (kilos) [01,02], {00432}, US Army MREs (winter) column name	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
2	Slide 47 says the log file should be plain ASCII, but as the transfer list may contain Spanish, it is possible accented letters may be needed (such as á, é, í, ó, ú, ü, ñ), which are part of Unicode but not ASCII. Would it be ok to use Unicode encoding instead of ASCII within the log file? Would you prefer we replace accented letters with their simplified ASCII equivalent? (ex: á replaced with a) If not, what solution would you prefer?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	Where should the log file be saved when exporting? - Desktop - Downloads - a folder in Documents - Other preferred location?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
4	Should we automatically export the log file to the predetermined location when a new year starts or should we rely on the operator?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
5	Should previous versions of the manifest be stored for auditing purposes, and if so, how many versions? - Slide 24 says you'd like the program to export to the desktop for the operator to email. - We can also export to a folder in Documents so the operator does not need to worry about this process.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
6	If manifest file is corrupted or unreadable, we believe this is a good plan:	Approve: Win, Kareem, Padma, Ruben,	

	1. Notify operator & ask for different manifest
	2. Log the occurrence
	Additionally, in the sake of time, the program may offer to attempt to repair the manifest if it is a simple syntax error:
	    1. Notify operator allow operator to either provide a different manifest or allow program to attempt repair
	    2. Log the occurrence and choice
	
	Is this process ok with you? Particularly the repair part as it may carry legal implications.
		Jaydah
		Deny:
		Modify:	

7	Slide 25 of CS179 slide, it is mentioned that for a given ship, we do one problem or the other, but never both. To clarify, this means if a ship is unbalanced after unloading/loading it should leave without adjustments because balancing is a separate task?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
8	In slide 22 of Problem overview, a situation is mentioned where the absence of a truck affects the presence of an item for a load. Should the absence of the truck & container be logged? We can provide a template like so: - Container "[container_name]" did not arrive to be loaded. Is there a specific way the manifest should be sent out or edited in order to properly reflect that?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	If a truck doesn't arrive with a container, it should not be in the manifest I think the operator would need to log it, but it would not be reflected in the manifest. Need to rephrase this or something. Yea idk either, we can do something like: Can you confirm in this case, the details for that specific container will not be included in the manifest? Would this be a case where the operator logs this manually? Yeah we can change this question to should it be logged & show a template. ok
9	After the order of operations list is produced, our software edits the manifest, and it gets sent to the operator. Can you clarify if the only change that will be made to the manifest is the name (with "outbound" added) of the document before it is sent out to the captain? Or will the operator be able to edit any section, besides the legally uneditable English portion of the manifest as mentioned in slide 33 of the presentation on Oct. 7th? Slide 33 of Problem Overview states the manifest has a section that cannot be edited for legal reasons [m]. We can reorder the file when moving the container to another slot on the ship, but what about when a container is unloaded or loaded? For example, this entry: [01, 02], {00120}, Walmart Goods Should become this once unloaded: [01, 02], {00000}, UNUSED Would this "edit" be legal? If not, can you specify what the program should do to that row in the manifest?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	I don't understand this question. We write the file with OUTBOUND appended to the filename. Ideally, the operator should not make any changes, otherwise we are not doing a good job at all. I know our software should be able to edit the manifest, Im wondering if after using our software, is the operator going to edit the manifest at all? Yeah I agree We can ask this, but we need purpose for knowing, when we ask questions we should be able to justify them, idk how strict he is but i get 180w vibes and would rather just be safe U can change this question to something related to how the operator would enter new loads from trucks. Maybe this be comes a UI thing. I think so too, we are not editing the original file as well, right? Since we are creating an <ship>OUTBOUND.txt and updating that? (i was referring to when we move the cargo). There has to be something that asks operator to confirm which cargo they moved to which slot maybe? No. We are to assume the manifest is 100% correct, we should not change entries. HOWEVER, this does make me think.. The operator may need to MAKE entries for new loads from trucks, which should be done through our program
10			

3. User Interface and Experience (Questions focusing on how the system will look, feel, and function for operators, ensuring usability in the work environment.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	Slide 49 mentions shifts are only 8 hours. Would you like the program to automatically sign out after 8 hours or just rely on the next person signing in & implicitly sign out? To prevent automatically signing out during operation we can prompt the user with a countdown they can extend.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
2	We will provide a text box for the operator to enter notes to log. In addition, would you like the program to provide templates to streamline logging? Such as the following, each field is a fillable box, action_taken can be none: - Container "[*container_name*]" was [percent_overweight] **overweight** due to "[*suspected_reason*]", so the following action was taken: [*action_taken*]. - Container "[*container_name*]" has **damage**: "[*damage description*]", so the following action was taken: [*action_taken*]. - Container "[*container_name*]" was taken by **special truck**: "[*damage description*]", because the original truck was late..	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	The example log on slide 46 show the following date time string: June 1st 2023: 08:12 Do you prefer this format? Or any of the following: 1. 06/01/23: 08:12 2. 06/01/2023: 08:12 3. 6/1/23: 08:12 4. 6/1/2023: 08:12 5. 6-1-2023: 08:12 6. 06-01-2023: 08:12 Would you like the program to append the timezone?: "June 1st 2023: 08:12 PST"	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
4	We intend on using the system time throughout the application (ex: logs), however it is common to use UTC & GMT (they are the same) to prevent ambiguity across time zones. Would you prefer we use pacific time or UTC?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
5	If using pacific time, would you like the program to account for Daylight savings? This would mean switching between PST and PDT. Doing this will cause a one hour gap (2AM-3AM) when daylight savings start & two 1AM-2AM periods when Daylight savings ends. This can be remediated by adding the timezone to the date/time string.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
6	Should our program highlight containers with hazardous or fragile materials in their name that may require special handling?	Approve: Win, Kareem, Padma, Ruben, Jaydah	

		Deny: Modify:	
7	Are any employees disabled? Would you like the program to provide any accessibility tools? - Voice control - Sounds (headphones) - Color blind mode	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
8	Slide 29 states you'd prefer large fonts and high contrast colors: Is there a color scheme you prefer? We've selected some we believe give the most contrast 	Background	Colors
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White	Black Grey Red Orange Green Blue Violet
Black	White Grey Red Orange Yellow Green Blue Violet		Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
9	Is there a font you prefer? We've selected some we believe would work well: 	1	Roboto: Quick brown fox
2	Arial: Quick brown fox
3	Calibri: Quick brown fox
4	Times New Roman: Quick brown fox
5	Lora: Quick brown fox
6	IBM Plex: Quick brown fox		Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
10	What will the size & resolution of the crane computer monitor be? Sizes usually range from 19-40 inches diagonally, commonly around 24in. Some common resolutions are: - 1024x768 - 1280x720 - 1920x1080 - 2560x1440	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
11	Should the operator accept our ordering before continuing? Is there a case where an operator would not approve our ordering or should we always continue? Some situations may be: - Incorrect operator judgment	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

	- Random variable not realized by our program		
12			
13	What kind of interface would you find most useful when interacting with the system (graphical, text-based, voice)?		We have to have animations it has to be graphical, voice would be accessibility but itd be hard to use anyways cus its loud apparently

4. System Constraints (Questions that explore the technical limitations, performance needs, and potential recovery from system failures or hardware issues.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	Slide 28 mentions only chrome, notepad, text editor, and calculator will be available. If we choose native, can we request runtimes to be installed (like .NET, Java) or are we expected to bundle all dependencies?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
2	Some dependencies may require licenses to be used commercially. Are you open to paying a small fee (ex. JRE requires a license if bundled) or should we stick strictly to commercially FOSS?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	When saving the manifest or logs, if the disk is full would you prefer we delete the oldest manifests & logs or prompt the operator to make space on the system?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
4	We believe we can save the state of the process to a file after each step to all recovery from a power cut. Is this solution ok with you, or do you prefer another?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
5	Does our program automatically receive measured container weights? Will the operator input them? If so we can detect discrepancies in weight and automatically log them.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
6	Slide 50 states that there is "zero chance of unauthorized access": So, to clarify, there is no need for encryption, authentication, or access control measures?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	I rewrite
7	On Slide 28 of the Problem Overview slides states the program should work on the cheapest all-in-one PC from COSTCO. The closest COSTCO Warehouse to Long Beach (at Signal Hill) shows this as the cheapest: https://www.costco.com/hp-23.8%22-touchscreen-all-in-one-desktop---amd-ryzen-5-7520u---1080p---windows-11.product.4000209100.html	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

23.8" TOUCHSCREEN
16GB MEMORY
1.0TB SSD

Is it safe to assume the PC in use will have the same or similar specs?

5. Error Handling and Recovery (Questions about how the system will respond to unexpected situations like missing data, incorrect inputs, or technical issues.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	<blank, can just delete this category if no questions>	Approve: Deny: Modify:	
2	What tools should be in place to detect software calculation errors or incorrect instructions to operators? Will the system have self-checking algorithms to validate that instructions are correct and possible?		If they're not correct we're cooked
3	How should the system prioritize different error types (minor vs. critical errors)?		

6. Legal and Compliance (Questions that ensure the system meets legal and regulatory requirements for shipping, especially around ship balance and deadlines.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	Slide 20 describes the weight of a container in tonnes and pounds. The manifest uses kilograms. Is there a scenario where the operator needs to know a container's weight in tonnes or pounds instead of kilograms? - If so, we can include a small conversion tool to automatically show the weight in different units.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

#	Question	Feedback(Approve/Deny/Modify)	Comments:
2	Do you consider us, KawrgoJumper, liable for any accidents, losses, or injuries sustained while using our program?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	Are there any privacy or security laws that apply to how data is collected, stored, or shared?		We are mostly concerned about storing, they send it to each other over email. Because of that, this is similar to bottom question
	In case of an accident or error during the container handling process (a container is damaged or misplaced), what are the legal liability implications?		Liability already asked in above question
	If third-party trucks are being used to transport containers, what are the legal requirements or contracts that need to be followed between the port, the shipper, and the trucking company?		Very general question, idk if we should ask that
	Should we implement processes for deleting or anonymizing data? - For example, manifests can be deleted when they are no longer needed, as they may be considered business confidential.	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	nice

7. Expectations for Performance of Application/Software

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	Is there a maximum amount of time we may spend processing before producing an ordering? For example, 5 seconds?	Approve: Deny: Modify:	
2	What are the expectations for the accuracy of the software's calculations? How should it handle errors in input (such as incorrect container information) or unexpected changes (mechanical failures or weather conditions)?		We should not have any inaccuracy. Okay Additionally, we cannot handle errors in input unless we know about it, how would we know? We can allow the operator to make a correction, if thats what you mean Unexpected changes same thing ^ I'm thinking more like can the operator make the correction if something is wrong or if the software makes a mistake
3			

8. Clarify Stakeholders

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	We have identified the stakeholders to be: 1) Crane Operators 2) Port Management (Mr Keogh) 3) Truck Drivers 4) Head Office/Logistics Team 5) Ship Captains/Crew 6) Customs Officials 7) Safety Inspectors/Compliance Officers 8) Shipping companies Would you agree with this list? Is there anyone missing?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
2	Are there stakeholders that you would prioritize over others?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	
3	Among the stakeholders identified, should any be involved early in the software's development phase to make sure that operational needs are met?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

9. Training (Questions that focus on how the system can be maintained and expanded for future needs, updates, or new regulations.)

#	Question	Feedback(Approve/Deny/Modify)	Comments:
1	We plan to create a short demo video to help your staff operating our system learn how it works once our software has been deployed. Other alternatives include making a detailed user manual, or on-site training sessions. Which type of training would you prefer?	Approve: Win, Kareem, Padma, Ruben, Jaydah Deny: Modify:	

Elicitation Interview Slides

KawrgoJumper

SHIPPING LOGISTICS

Elicitation Interview with Mr Keogh

Date: 10/20/2024

Most critical features on UI side
- Specifics on data and what is priotized
- A: simplicity and intuitiveness priortized, correctness
- Time and efficiency is critical

Describe any edge cases that you encountered
- 1 thing comes off and 1 come on
- It is possible that everything comes off
- Hardest computational case: full ship and only want to take off entire bottom row
- Balance: 5 or 6 containers

In case of emergency. How would you react
- Emergency are independent
- Power outage:
- Always running the program
- 2 possibilities: log file exists/doesn't exists
- Echo to screen, power went out
- Should recover the file
- Can push back gently

Duplicate container name
- Weights dont matter
- Logically identical

Should the system prioritize other operations?
- Small amount of moves in less time

Time

- Assume manifest is always correct
- No priority in trucks

Do we have to use SIFT
- Achieve that goal,
- Dont always have to use sift

UI - help and support on the UI side
- Help button
- Menu navigation

Direct Line of Contact for malfunctions
- Change the software

Manual override
- No possible

Should the algorithm use a buffer:
- Dont really need it
- Only allowed to stack two extra before sailing legally

Purpose

- To clarify system requirements

- To gather feedback on assumptions

- To identify any missing elements in the initial plan

KawrgoJumper

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Before We Begin

- Would it be okay if we record this interview?

KawrgoJumper

Stakeholders

- We have identified the stakeholders to be:

1) Crane Operators

2) Port Management (Mr Keogh)

3) Truck Drivers

4) Head Office/Logistics Team

5) Ship Captains/Crew

6) Customs Officials

7) Safety Inspectors / Compliance Officers

8) Shipping Companies / Container Owners

Would you agree with this list? Is there anyone you can think of that is missing?

KawrgoJumper

- Keep a correct log legally, want law enforcement
- Insurance policy for big companies, so has some stake bc on the hook for big mistakes
- Unions are a stake holder
- Local residents of businesses stakeholders → traffic locally
-

Stakeholders

- Are there stakeholders that you would prioritize over others?

- Among the stakeholders identified, should any be involved
  early in the software's development phase to make sure
  that operational needs are met?

KawrgoJumper

- No need to prioritize stakeholders
-

System Operations

Does the special truck[a] take the same amount of time to arrive as a normal truck, which is effectively 0 [b]? If not, how long is this delay?

- Zero bc tens of seconds and any container movement min

System Operations

Containers cannot weigh more than 99,999 kilos [c].

A maximum stack of 8 could put a max load of nearly 700,000 kilos on the bottom container.

Is there a maximum load that may be placed on containers when stacking?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Yes, the file limitation on the manifest will never be reached, but ships can hold 8 x 12 x 99999
- Not an issue though

System Operations

Is there a maximum weight per ship?

- If so, would you like our program to alert the operator when exceeded?

- Ship legally has to be certified to handle worst case cap

KawrgoJumper

System Operations

In your initial idea[d], you'd like the operator to pick which container to unload. If the operator picks a container, but there is another container that is quicker to unload with the same name, should we:

a. Default to the quicker container

b. Advise the operator of the quicker container & ask them to confirm switching

c. Just process steps for the picked container

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Analogy that vending machine does not matter which certain soda you get, iff the two containers have the same exact names with weight not mattering, it doesnt matter which container you choose
- Cheapest container is best to take off

System Operations

How likely is it for a container to be damaged to the point it cannot be shipped?

Should we provide an option for the operator to skip a container, & recompute steps from there?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Doesnt matter to us, containers are picked up by four divots in the corners
- Can happen, but can assume legally can move from a to b and will be able to achieve always

System Operations

Is the buffer used by multiple cranes or jobs?

Is it possible for parts of the buffer to be filled (NAN) by containers or objects we did not put in?

If the previous questions are both False, to clarify, it is guaranteed we are able to use & even fill the entire buffer if necessary?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- The buffer is exclusive to us, the buffer is a empty space to be filled

System Operations

The objective when balancing is to be legally balanced in the least time possible.

However, if SIFT is run the ship may end up not balanced (but still legal).

Should we log when SIFT is run for legal purposes?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- When want balanced, operator doesnt care how achieved only if it is legal for the ship to leave so can write but isnt important to mr keogh

System Operations

Our program should save the updated manifest to the Desktop[e].

Should we update the Desktop manifest after every container move? Or should the updated manifest be saved at the beginning or end of a job?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Workflow
  - Operator in cabin, gets an email that ship is coming
  - From gmail can take the manifest and put it in desktop
  - Get the transfer list and will be able to look at the truck region, check num of trucks, if not there can exclude from mind, not happening today
  - Software needs to be able to have op choose load or balance
  - Op chooses manifest, program accesses it and knows exactly what is on the ship
  - A simple grid appearance is preferred rather than the list
  - Operator can choose what they want, the program chooses what the operator writes they need
  - At that point operator know what is going on besides weight of the container, and program knows exactly what is coming on and off and knows the time
  - Program provides a solution to the op, telling what container to move on the ship and which to take to truck area,
  - Single instruction given to op, op moves the container, so it should be step by step to avoid missteps
  - After op is done, next instruction is given, which container to move and which to call
  - Last step is that the crane is put into park position always
  - Op clicks next, can assume that instructions followed to the letter, can say modified manifest is pushed to the desktop

- Cant force op to email, but best to set reminder to email manifest for op that doesnt go away til done
- To answer question, in beginning get manifest and at the end must save to desktop, middle steps are unimportant
    - Log file is saved instead

System Operations

It is possible for some or all containers to be put on the buffer when balancing[f].

Should containers placed in the buffer be displayed in the log similarly to containers that are being offloaded?

Ex: June 1st 2023: 04:23 "Walmart Bikes Moreno Valley South" is placed in buffer.

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Every atomic event gets flushed to log
    - Program opened
    - Program shut down
    - Employee sign in
    - Move completed (move 1 of 17)
    - Container moved to location at this time
    - Flush manifest to desktop
    - Put something in buffer

System Operations

Will shift changes occur while a ship is receiving service or will an employee finish the current job first?

KawrgoJumper

This is 1.5 million pounds or 771 tonnes
- Shift changes can happen at every time (move 5 of 17)
- At that point employee must leave, and new employee will log in
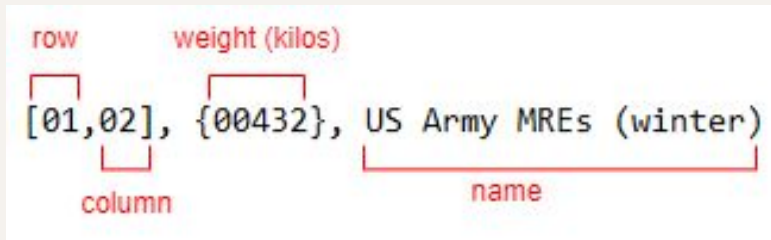- Person who leaves does not sign out

System Operations

Is there a maximum amount of time we may spend processing before producing an ordering? For example, 10 seconds?

KawrgoJumper

- 15 minutes free bc of ship
- Dont like when programs compute and lock up, want an indicator to show that program is working

Data Handling & Files

We would like to verify some features of the manifest file [g].

Does this look correct to him
- Yes, location [] always prepend a zero
- Weight is {}, five digits and cannot accept a negative or fractional num or num above the weight limit
- Possible that weight on wall will be negative bc machine designed to subtract average container weight if empty
    - That needs to be reflected as zero in the manifest, cant have negative num in the file
- String might not be mnemonic,
- Min ASCII character set
- Allowed to have tabs and spaces but first char needs to be principal char
- String comparisons are dangerous bc of misspellings, just binary equal or not
- Simple mispelling not a prob
- Max len of character name is 255 char not including weight and row

Data Handling & Files

The log file should be plain ASCII [h], but as the transfer list may contain Spanish, it is possible accented letters may be needed (such as á, é, í, ó, ú, ü, ñ). These are part of Unicode but not ASCII.

Would it be ok to use Unicode encoding instead of ASCII within the log file?

Would you prefer we replace accented letters with their simplified ASCII equivalent? (ex: á replaced with a)
If not, what solution would you prefer?

KawrgoJumper

- Does not support korean and japanese char
- Just supports simple keyboard char, but does support cut and paste so if cut and paste accents then cannot accept that so make sure that doesnt happen

Data Handling & Files

Where should the log file be saved when exporting?
- Desktop
- Downloads
- a folder in Documents
- Other preferred location?

KawrgoJumper

- Flat hierarchy, with one exception workers should not be able to change the log file, but should not be somewhere easy to find in the system
- Mr keogh should just be able to find it
- Once taken (log file) deleted from system

Data Handling & Files

Should we automatically export the log file to the predetermined location when a new year [i] starts or should the operator trigger the export?

KawrgoJumper

Location determined on previous slide

Data Handling & Files

Should previous versions of the manifest be stored for auditing purposes, and if so, how many versions?
- It was mentioned you would like the program to export to the desktop for the operator to email [j].
- We can also export to a folder in Documents so the operator does not need to worry about this process.

KawrgoJumper

- End of proc, manifest written to desktop and emailed to captain
- Policy is that op recycles those two files bc if there is lots of manifests in the desktop then can be easy to be accidentally clicked
    - So always deleted
- If manifest downloaded that doesnt match the ship → disaster so ship name is always on the manifest
- When program is running the manifest name of ship should always be displayed

Data Handling & Files

If manifest file is corrupted or unreadable, we believe this is a good plan:
1. Notify operator & ask to retry or try with a different file.
2. Log the occurrence.

Additionally, in the sake of time, the program may offer to attempt to repair the manifest if it is a simple syntax error:
1. Notify operator & allow operator to either provide a different file or allow program to attempt repair.
2. Log the occurrence and choice

Is this process ok with you? Particularly the repair part as it may carry legal implications.

- Can assume that the manifest on the desk file is perfect and readable 100 percent
-

Data Handling & Files

In CS179.pptx on Slide 25, it is mentioned that for a given ship, we do one problem or the other, but never both [k].

To clarify, this means if a ship is unbalanced after unloading/loading it should leave without adjustments because balancing is a separate task?

KawrgoJumper

XOR
- If wants to both has to leave and come back

Data Handling & Files

In slide 22 of the Problem Overview, a situation is mentioned where the absence of a truck affects the presence of an item for a **load** [I].

Should the absence of the truck & container be logged?
We can provide a template like this in the log:
- Container "[container_name]" did not arrive to be loaded.

KawrgoJumper

- If a truck wasnt there op would not care bc not going to be there that day
- When interacting w software the trucks that are there is there in software
-

Data Handling & Files

Slide 33 of Problem Overview states the manifest has a section that **cannot be edited** for legal reasons [m]. We can reorder the file when moving the container to another slot on the ship, but what about when a container is unloaded or loaded?

For example, this entry:
[01, 02], {00120}, Walmart Goods
Should become this once unloaded:
[01, 02], {00000}, UNUSED
Would this "edit" be legal? If not, can you specify what the program should do to that row in the manifest?

KawrgoJumper

- Name of manifest cannot be edited, even typos
- If weight is dif cannot be changed to be correct, only can push a note to the log file to reflect change
- Cannot be the word UNUSED all cap and not NAN, cannot be a key word (but can have key word in the larger name)

User Interface

Shifts are only 8 hours[n].

Would you like the program to automatically sign out after 8 hours or just rely on the next person signing in & implicitly sign out?

To prevent automatically signing out during operation we can prompt the user with a countdown they can extend.

KawrgoJumper

Slide 49 – add to reference
- People may change shifts or leave early but not a problem for us
- Only record when a sign in occurs

User Interface

We will provide a text box for the operator to enter notes to log. In addition, would you like the program to provide templates to streamline logging?

Such as the following, each field is a fillable box, action_taken can be none:

- Container "[container_name]" was [percent_overweight] overweight due to "[suspected_reason]", so the following action was taken: [action_taken].
- Container "[container_name]" has damage: "[damage description]", so the following action was taken: [action_taken].
- Container "[container_name]" was taken by special truck: "[damage description]", because the original truck was late..

KawrgoJumper

- All things sent to log file automatically generated so far
- Only free text pushed is when employee pushes button to make note, they write what they want and click enter
- Never deleted, only appended
- Doesnt need to be formatted
- Templates cause constraints

User Interface

The example log[o] shows the following date time string:
June 1st 2023: 08:12

Do you prefer this format? Or any of the following:
1. 06/01/23: 08:12
2. 06/01/2023: 08:12
3. 6/1/23: 08:12
4. 6/1/2023: 08:12
5. 6-1-2023: 08:12
6. 06-01-2023: 08:12

Would you like the program to append the timezone?:
"June 1st 2023: 08:12 PST"

KawrgoJumper

Slide 46 – add to reference
- Date format will be sent to everyone, time precision is to the min might be 5 on list

User Interface

We intend on using the system time throughout the application (ex: logs), however it is common to use UTC to prevent ambiguity across time zones.

Would you prefer we use pacific time or UTC? Or something else?

KawrgoJumper

- Obliged to use PST

User Interface

If using Pacific Time, would you like the program to account for Daylight savings?

- This would mean switching between PST and PDT.

- Doing this will cause a one hour gap (2AM-3AM) when daylight savings start & two 1AM-2AM periods when Daylight savings ends.

- This can be remediated by adding the timezone to the date/time string.

KawrgoJumper

- PDT not needed just append the time

User Interface

Should our program highlight containers with hazardous or fragile materials in their name that may require special handling?

- No

User Interface

Are any employees disabled? Would you like the program to provide any accessibility tools? Ex:
- Voice control
- Sounds (headphones)
- Color blind mode

KawrgoJumper

- American law cannot discriminate
- Can get exemptions
- He has exemptions bc of safety so everyone is able bodied
-

User Interface

Because of the crane tower, you stated you would prefer large fonts and high contrast colors[p]:

Is there a color scheme you prefer? We've selected some we believe give the most contrast

Background	Colors
White	Black Grey Red Orange Green Blue Violet
Black	White Grey Red Orange Yellow Green Blue Violet

KawrgoJumper

Slide 29 – add to reference
- Doesnt care too much
- Aesthetics dont matter
- Leave to us
- As long as high contrast

User Interface

Is there a font for the system that you would prefer?
We have selected some that we believe would work well:

1	Roboto:	Quick brown fox
2	Arial:	Quick brown fox
3	Calibri:	Quick brown fox
4	Times New Roman:	Quick brown fox
5	Lora:	Quick brown fox
6	IBM Plex:	Quick brown fox

KawrgoJumper

- Doesnt care, with except the MATLAB font that causes bugs bc identical

User Interface

What will the size & resolution of the crane computer monitor be?
Sizes usually range from 19-40 inches diagonally, commonly around 24in.
Some common resolutions are:
- 1024x768
- 1280x720
- 1920x1080
- 2560x1440

KawrgoJumper

- Screen is twice the size COSTCO monitor
- Solution can involve something new but preference is that it runs on curr

User Interface

Should the operator accept our ordering before continuing? Is there a case where an operator would not approve our ordering or should we always continue?
Some situations may be:
- Incorrect operator judgment
- Random variable not realized by our program

KawrgoJumper

Slide 46 – add to reference
- It should echo the moves made by operator
- Only when op hits enter
- Assume that the operator would click enter and that task is complete

System Constraints

Slide 28[q] mentions that the PC's only have a chrome web browser, the notepad text editor, and the built-in calculator.

If we choose native (software on the Operating System instead of using a web browser), can we request runtimes to be installed (like .NET, Java) or are we expected to bundle all dependencies?

KawrgoJumper

- If GPU or API needed, willing to consider if not too expensive
-

System Constraints

Some dependencies may require licenses to be used commercially. Are you open to paying a small fee (ex. Java requires a license if bundled) or should we stick strictly to commercially FOSS (Free Open Source Software)?

- If some resource that should buy yes do it

System Constraints

When saving the manifest or logs, if the disk is full would you prefer we delete the oldest manifests & logs or prompt the operator to make space on the system?

KawrgoJumper

- Doesnt think it is going to be a problem
- If think its important add to proposal

System Constraints

We believe saving the state of the process to a file after each step is the best option to ensure recovery from a power cut.
Does this approach work for you, or would you prefer a different solution?

KawrgoJumper

- Doesnt care

System Constraints

Does our program automatically receive measured container weights? Will the operator input them?

If so, we can detect discrepancies in weight and automatically log them.

KawrgoJumper

Not allowed to edit the wait
- If weight is very dif only logs it

System Constraints

Slide 50 of the Problem Overview states that there is "zero chance of unauthorized access" [r]:

So, to clarify, there is no need for encryption, authentication, or access control measures?

KawrgoJumper

No need for deep protection, just bbe able to trace(edit history)
- No need

System Constraints

On Slide 28 of the Problem Overview slides, you mentioned that the system should work on the cheapest all-in-one PC at COSTCO [s].

The closest COSTCO Warehouse to Long Beach (at Signal Hill) shows this as the <u>cheapest</u> [t]:

- 4 Cores @ 2.8Ghz (Boost 4.3 GHz)
- 16GB RAM
- 1 TB SSD

Is it safe to assume the PC in use will have the same or similar specifications?

23.8" TOUCHSCREEN
16GB MEMORY
1.0TB SSD

AMD RYZEN 7000 SERIES 5

KawrgoJumper

- Safe assumption, unless you assume need more

Legal and Compliance

Slide 20 of the Project Overview describes the weight of a container in tonnes and pounds [u]. The manifest uses kilograms.

Is there a scenario where the operator needs to know a container's weight in tonnes or pounds instead of kilograms?

- If so, we can include a small conversion tool to automatically show the weight in different units.

KawrgoJumper

- Yes, kilos used

Legal and Compliance

Do you consider us, KawrgoJumper, liable for any accidents, losses, or injuries sustained while using our program?

KawrgoJumper

- If software tells him to do something physically impossible then it is our fault, like putting a container where a container already is

Legal and Compliance

Should we implement processes for deleting or anonymizing data?
- For example, manifests can be deleted when they are no longer needed, as they may be considered business confidential.

KawrgoJumper

- Manifest is put in the recycle bin, data should not be public but not responsible otherwise

Training

We plan to create a short demo video to help your staff operating our system learn how it works once our software has been deployed.

Other alternatives include making a detailed user manual, or on-site training sessions.

Which type of training would you prefer?

KawrgoJumper

- Would prefer cheap, and video is easier for onboarding
- Video should be short, or can do a visual manual
-

- Job now is to create a project pitch
- Convince him of the problem needs to be solved and we have a solution that includes high level look at the software
- Include training, onboarding, legal issues and what was discussed
- Is he paying us for exclusive use of the software?
- Would be willing to let us sell the software if got a cut? Include this in the pitch if just for him
- Include the maintenance plan
- Once have the sig done discussing with mr keogh
- Last step is demo
-

References [system ops]

[a] - Special Truck is mentioned in Slide 22 of Problem_Overview_by_Mr_Keogh.pptx
[b] - Time for Truck is mentioned in Slide 20 of Problem_Overview_by_Mr_Keogh.pptx
[c] - Weight of Container is listed in Slide 33 of Problem_Overview_by_Mr_Keogh.pptx
[d] - Initial idea is on Slide 27 of Problem_Overview_by_Mr_Keogh.pptx
[e] - Slide 24 states where the manifest should be saved.
[f] - Slide 37, 38, 39 describes balancing.

KawrgoJumper

References [data handling]

[g]- Details of Manifest is on Slide 33 of Problem_Overview_by_Mr_Keogh.pptx
[h]- Format of log file is on Slide 47 of Problem_Overview_by_Mr_Keogh.pptx
[i] - Saving Log File on new year is on Slide 48 of Problem_Overview_by_Mr_Keogh.pptx
[j] - Saving Manifest is on Slide 24 of Problem_Overview_by_Mr_Keogh.pptx
[k] - Problem Description on Slide 25 of CS179.pptx
[l] - This scenario is in Slide 22 of Problem_Overview_by_Mr_Keogh.pptx
[m] - Description of the manifest on Slide 33 of Problem_Overview_by_Mr_Keogh.pptx

KawrgoJumper

References [user interface]

[n]- Shifts are mentioned on Slide 29 of Problem_Overview_by_Mr_Keogh.pptx
[o]- The example log is on Slide 47 of Problem_Overview_by_Mr_Keogh.pptx
[p] - High contrast colors are on Slide 29 of Problem_Overview_by_Mr_Keogh.pptx

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References [constraint]

[q] - Description of the hardware on Slide 28 of Problem_Overview_by_Mr_Keogh.pptx

[r] - Unauthorized Access is mentioned on Slide 50 of Problem_Overview_by_Mr_Keogh.pptx

[s] - Description of the hardware on Slide 28 of Problem_Overview_by_Mr_Keogh.pptx

[t] - Link to COSTCO PC: https://www.costco.com/hp-23.8%22-touchscreen-all-in-one-desktop---amd-ryzen-5-7520u---1080p---windows-11.product.4000209100.html

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References [legal]

[u] - Weight of container is mentioned in Slide 20 of Problem_Overview_by_Mr_Keogh.pptx

KawrgoJumper

System Operations (dont read)

- How many trucks can be called to the loading area at once?

KawrgoJumper