

## List of Tests

## Loading/Unloading Steps

- 1) Ship manifest is empty (all unused/NAN), and load/unload is chosen, but nothing is loaded/unloaded.
- 2) Ship manifest is empty (all unused/NAN), and load/unload is chosen, two containers are chosen to be loaded.
- 3) Ship with 8 containers that are all in the bottom row needs to unload all containers.
- 4) Container at the bottom row needs to be unloaded, and there are multiple containers above this container.
- 5) A full container manifest needs to load a container, without unloading any containers.
- 6) Unloading the four middle column containers from the last row of a half full ship.
- 7) Loading 8 containers to a half full ship.
- 8) Unloading four containers on the 7th row of a ship with only one unused slot.
- 9) Unloading one container on the top row and Loading one container for a full ship.

1. Empty Ship is uploaded, load/unload is chosen, but nothing is loaded/unloaded.

Handling: We directly just print the outbound manifest file.

Kawgo Jumper

localhost:8080/summary

ENTER LOG NOTE   RESTART   LOG OUT

**Done!**

**Return the crane to park!**

**Manifest saved to Desktop as:**

C:\Users\winth\Desktop\ShipCaseEmptyOUTBOUND.txt

**Remember to email the captain!**

**Back to Upload Screen**

2. Empty Ship needs to be loaded with two containers.

**Handling:** Go directly to steps for Loading.







UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	UNUSED										
UNUSED	PalcidDr...	MtRush...									

**Current Task:** Move container at [0,11] (MtRushmore) to TRUCK

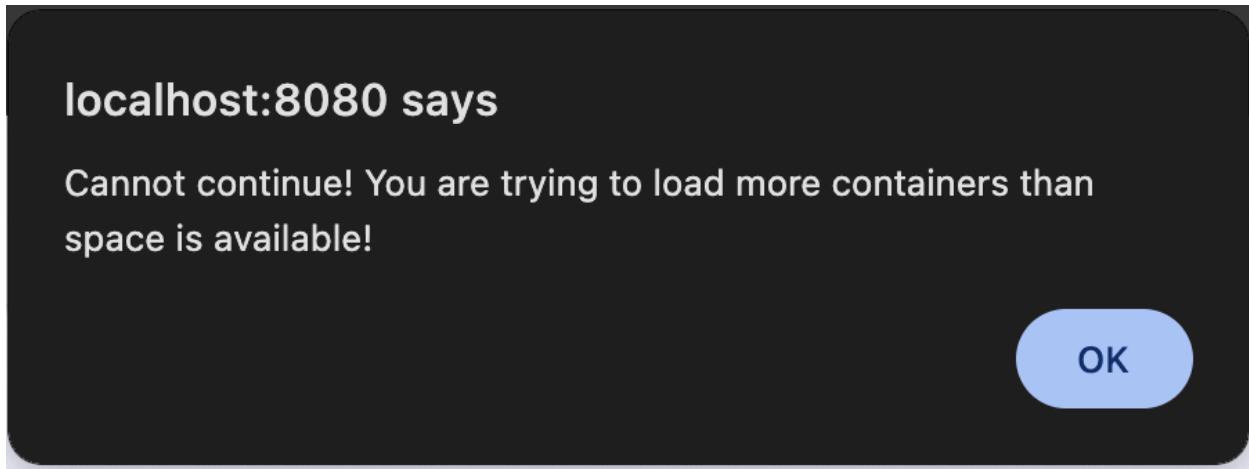
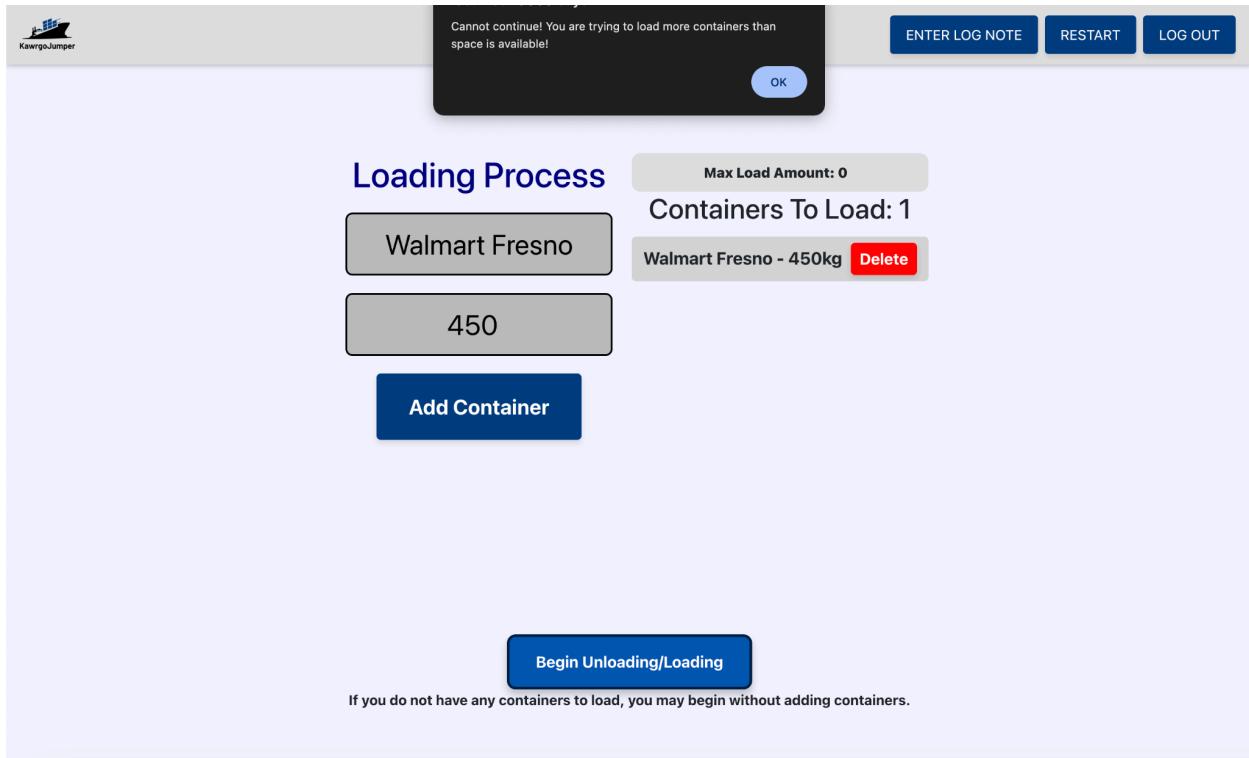
4. Container at the bottom row needs to be unloaded, and there are multiple containers above this container.

## Steps:





5. A full container manifest needs to load a container, without unloading any containers.



6. Unloading the four middle column containers from the last row of a half full ship.

## Steps:





Kawgo Jumper

localhost:8080/move-containers-unload

ENTER LOG NOTE RESTART LOG OUT

**Current File:** ShipCaseHalfFull.txt **Job:** Unload **ETA:** 68 minutes **Next**

**Current Task:** Move container at [1,6] (FiveGuys) to TRUCK

UNUSED												
UNUSED												
UNUSED												
UNUSED												
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED								
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	FiveGuys						
FiveGuys												
CHOSEN1	FiveGuys											

Kawgo Jumper

localhost:8080/move-containers-unload

ENTER LOG NOTE RESTART LOG OUT

**Current File:** ShipCaseHalfFull.txt **Job:** Unload **ETA:** 49 minutes **Next**

**Current Task:** Move container at [3,7] (FiveGuys) to [3,5]

UNUSED												
UNUSED												
UNUSED												
UNUSED												
UNUSED												
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED								
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	Unused	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys
FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	Unused	FiveGuys						
CHOSEN1	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	Unused	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys



Kawgo Jumper

localhost:8080/move-containers-unload

Incognito

ENTER LOG NOTE RESTART LOG OUT

**Current File:** ShipCaseHalfFull.txt **Job:** Unload **ETA:** 25 minutes **Next**

**Current Task:** Move container at [3,8] (FiveGuys) to [4,9]

UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED
FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys
FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys
CHOSEN1	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys

Kawgo Jumper

localhost:8080/move-containers-unload

Incognito

ENTER LOG NOTE RESTART LOG OUT

**Current File:** ShipCaseHalfFull.txt **Job:** Unload **ETA:** 23 minutes **Next**

**Current Task:** Move container at [2,8] (FiveGuys) to [1,7]

UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED						
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED	UNUSED
UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	UNUSED	UNUSED	FiveGuys	UNUSED	UNUSED	UNUSED
FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys
FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys
CHOSEN1	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	FiveGuys	UNUSED	FiveGuys	FiveGuys	FiveGuys	FiveGuys



#### 7. Loading 8 containers to half full ship.







8. Unloading four containers on the 7th row of a ship with only one unused slot.

## Steps:











## 9. Unloading one container on the top row and Loading one container for a full ship.

Steps:

## 10. Testing Container Placement for Loading a container to fastest available spot.

Step:

Instead of using column2, we place the container on the last row of column 3.

The screenshot shows a web-based application for managing shipping containers. At the top, there's a header bar with a logo, the title "Kawrgo Jumper", and a URL "localhost:8080/move-containers-load". Below the header is a control panel with buttons for "ENTER LOG NOTE", "RESTART", and "LOG OUT". The main area displays a 12x12 grid of shipping containers. The grid has 12 columns and 12 rows. Column 3, Row 1 contains the text "ShipCaseTerrorAlt.txt". Column 3, Row 2 contains "Unused". Column 3, Row 3 contains "Unused". Column 3, Row 4 contains "Unused". Column 3, Row 5 contains "Unused". Column 3, Row 6 contains "Unused". Column 3, Row 7 contains "Unused". Column 3, Row 8 contains "Unused". Column 3, Row 9 contains "Unused". Column 3, Row 10 contains "Unused". Column 3, Row 11 contains "Unused". Column 3, Row 12 contains "Unused". Column 4, Row 1 contains "Unused". Column 4, Row 2 contains "Unused". Column 4, Row 3 contains "Unused". Column 4, Row 4 contains "Unused". Column 4, Row 5 contains "Unused". Column 4, Row 6 contains "Unused". Column 4, Row 7 contains "Unused". Column 4, Row 8 contains "Unused". Column 4, Row 9 contains "Unused". Column 4, Row 10 contains "Unused". Column 4, Row 11 contains "Unused". Column 4, Row 12 contains "Unused". Column 5, Row 1 contains "Unused". Column 5, Row 2 contains "Unused". Column 5, Row 3 contains "Unused". Column 5, Row 4 contains "Unused". Column 5, Row 5 contains "Unused". Column 5, Row 6 contains "Unused". Column 5, Row 7 contains "Unused". Column 5, Row 8 contains "Unused". Column 5, Row 9 contains "Unused". Column 5, Row 10 contains "Unused". Column 5, Row 11 contains "Unused". Column 5, Row 12 contains "Unused". Column 6, Row 1 contains "Unused". Column 6, Row 2 contains "Unused". Column 6, Row 3 contains "Unused". Column 6, Row 4 contains "Unused". Column 6, Row 5 contains "Unused". Column 6, Row 6 contains "Unused". Column 6, Row 7 contains "Unused". Column 6, Row 8 contains "Unused". Column 6, Row 9 contains "Unused". Column 6, Row 10 contains "Unused". Column 6, Row 11 contains "Unused". Column 6, Row 12 contains "Unused". Column 7, Row 1 contains "Unused". Column 7, Row 2 contains "Unused". Column 7, Row 3 contains "Unused". Column 7, Row 4 contains "Unused". Column 7, Row 5 contains "Unused". Column 7, Row 6 contains "Unused". Column 7, Row 7 contains "Unused". Column 7, Row 8 contains "Unused". Column 7, Row 9 contains "Unused". Column 7, Row 10 contains "Unused". Column 7, Row 11 contains "Unused". Column 7, Row 12 contains "Unused". Column 8, Row 1 contains "Unused". Column 8, Row 2 contains "Unused". Column 8, Row 3 contains "Unused". Column 8, Row 4 contains "Unused". Column 8, Row 5 contains "Unused". Column 8, Row 6 contains "Unused". Column 8, Row 7 contains "Unused". Column 8, Row 8 contains "Unused". Column 8, Row 9 contains "Unused". Column 8, Row 10 contains "Unused". Column 8, Row 11 contains "Unused". Column 8, Row 12 contains "Unused". Column 9, Row 1 contains "Unused". Column 9, Row 2 contains "Unused". Column 9, Row 3 contains "Unused". Column 9, Row 4 contains "Unused". Column 9, Row 5 contains "Unused". Column 9, Row 6 contains "Unused". Column 9, Row 7 contains "Unused". Column 9, Row 8 contains "Unused". Column 9, Row 9 contains "Unused". Column 9, Row 10 contains "Unused". Column 9, Row 11 contains "Unused". Column 9, Row 12 contains "Unused". Column 10, Row 1 contains "Unused". Column 10, Row 2 contains "Unused". Column 10, Row 3 contains "Unused". Column 10, Row 4 contains "Unused". Column 10, Row 5 contains "Unused". Column 10, Row 6 contains "Unused". Column 10, Row 7 contains "Unused". Column 10, Row 8 contains "Unused". Column 10, Row 9 contains "Unused". Column 10, Row 10 contains "Unused". Column 10, Row 11 contains "Unused". Column 10, Row 12 contains "Unused". Column 11, Row 1 contains "Unused". Column 11, Row 2 contains "Unused". Column 11, Row 3 contains "Unused". Column 11, Row 4 contains "Unused". Column 11, Row 5 contains "Unused". Column 11, Row 6 contains "Unused". Column 11, Row 7 contains "Unused". Column 11, Row 8 contains "Unused". Column 11, Row 9 contains "Unused". Column 11, Row 10 contains "Unused". Column 11, Row 11 contains "Unused". Column 11, Row 12 contains "Unused". Column 12, Row 1 contains "Unused". Column 12, Row 2 contains "Unused". Column 12, Row 3 contains "Unused". Column 12, Row 4 contains "Unused". Column 12, Row 5 contains "Unused". Column 12, Row 6 contains "Unused". Column 12, Row 7 contains "Unused". Column 12, Row 8 contains "Unused". Column 12, Row 9 contains "Unused". Column 12, Row 10 contains "Unused". Column 12, Row 11 contains "Unused". Column 12, Row 12 contains "Unused".

## Balancing

- 1) Empty manifest is uploaded, balance is chosen.
- 2) A ship with a single container needs to be balanced.
- 3) A ship that happens to be already balanced.
- 4) The simplest case with a move, say cat and dog both weight 100, and are at [1,2] and [1,3].

## Balancing Results

1. Empty manifest is uploaded, balance is chosen.

Handling: We directly just print the outbound manifest file.

The screenshot shows a software interface with a header bar containing the KawgoJumper logo, three buttons labeled "ENTER LOG NOTE", "RESTART", and "LOG OUT", and a "Done!" message. Below this, there are two blue buttons: "Return the crane to park!" and "Manifest saved to Desktop as:". A gray box contains the path "/Users/rubenruiz/Desktop/SilverQueenOUTBOUND\_0.txt". At the bottom, a large blue button has the text "Remember to email the captain!".

ENTER LOG NOTE   RESTART   LOG OUT

Done!

Return the crane to park!

Manifest saved to Desktop as:

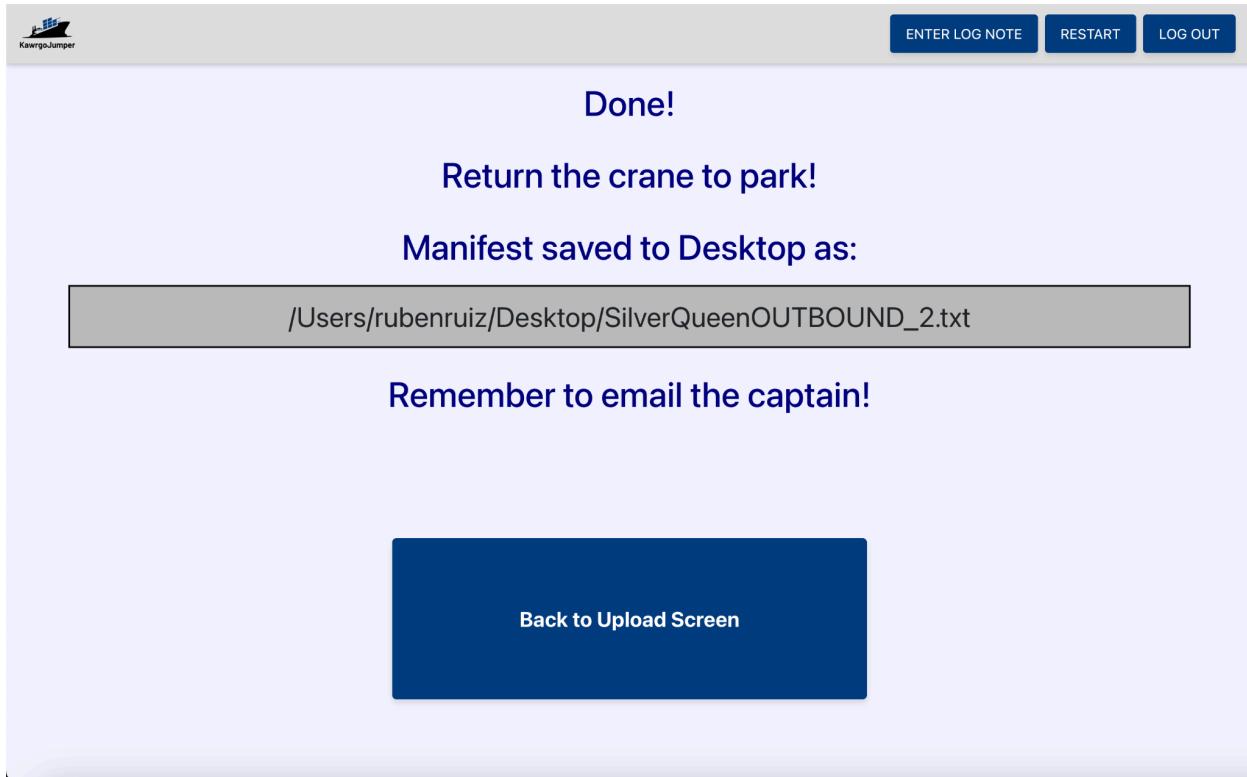
/Users/rubenruiz/Desktop/SilverQueenOUTBOUND\_0.txt

Remember to email the captain!

Back to Upload Screen

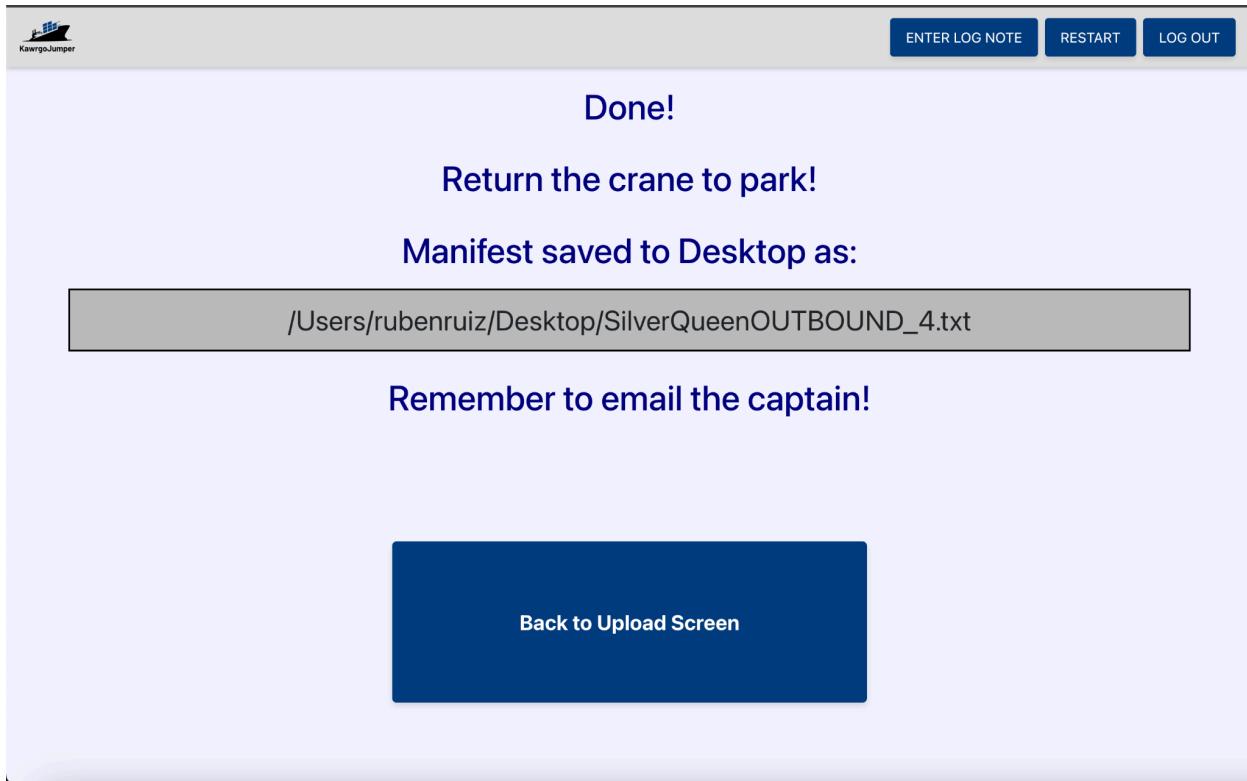
2. A ship with a single container needs to be balanced.

Handling: We directly just print the outbound manifest file.



3. A ship that happens to be already balanced.

Handling: We directly just print the outbound manifest file.



4. The simplest case with a move, say cat and dog both weight 100, and are at [1,2] and [1,3].

5. A full ship needs to be balanced (not necessarily full 8 by 12).

## Steps:



ENTER LOG NOTE

RESTART

LOG OUT

Done!

Return the crane to park!

Manifest saved to Desktop as:

/Users/rubenruiz/Desktop/TheTerrorOUTBOUND\_2.txt

Remember to email the captain!

[Back to Upload Screen](#)