



HOST HUNTER'S CRYPT: MASTERING ORDER AMID CHAOS

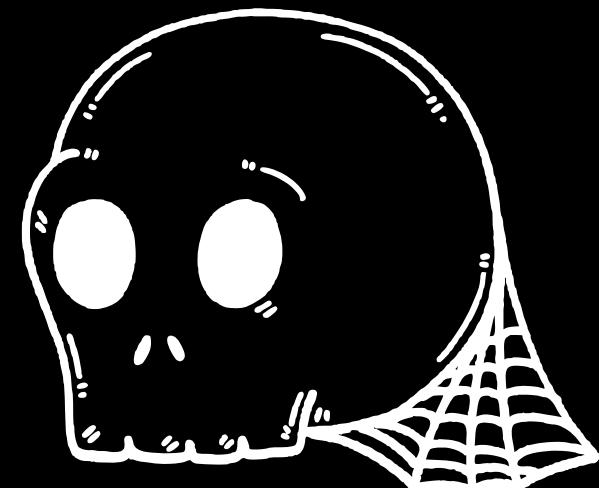
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BSCS 2A

INTRODUCTION

In the heart of the haunted valley lies a crypt shrouded in mystery and legends of untold power. The Ghost Hunter, a fearless adventurer, has been summoned to tame the restless spirits and harness their energy to maintain balance in the spectral world. Each ghost harbors a unique power level, representing their strength and influence over the crypt's domain.

To succeed, the Ghost Hunter must learn to organize these spirits effectively, deciding which to summon, which to banish, and when to shift strategies to outwit the most cunning apparitions. However, the crypt operates under an ancient system of rules: a heap structure, where the strongest (or weakest) spirits must always rise to the top.



GHOST HUNTER'S OBJECTIVES

Master the Art of Heaps

- Understand the fundamentals of max-heaps and min-heaps, and how they govern the order of spirits in the crypt.

Perform Key Heap Operations

- Learn to summon spirits (insert) and banish them (delete) while maintaining the crypt's order using heapify up and heapify down.

Adapt Strategies to Conquer the Crypt

- Switch between max-heap and min-heap strategies to control the strongest or weakest spirits, depending on the challenge.

Solve Cryptic Challenges

- Use problem-solving skills to find and defeat specific ghosts based on their power, even when faced with unexpected situations.

GHOST HUNTER'S OBJECTIVES

Visualize the Crypt's Structure

- See how the crypt's hierarchy changes in real-time, understanding the impact of each action on the balance of power.

Handle Ghostly Inputs

- Manage different forms of input, ensuring the program can handle both valid and invalid ghost power levels with ease.

Build Logical Programming Skills

- Strengthen your logical thinking and decision-making by manipulating and organizing dynamic data in a haunted crypt.

MISSIONS

Summoning Spirits: Call forth (insert) the ghosts into the crypt and align them according to their power.

Banishing Spirits: Vanquish (delete) specific ghosts to weaken their hold on the crypt.

Adapting Strategies: Toggle between focusing on the strongest (Max Heap) and weakest (Min Heap) spirits, as some challenges require different approaches.

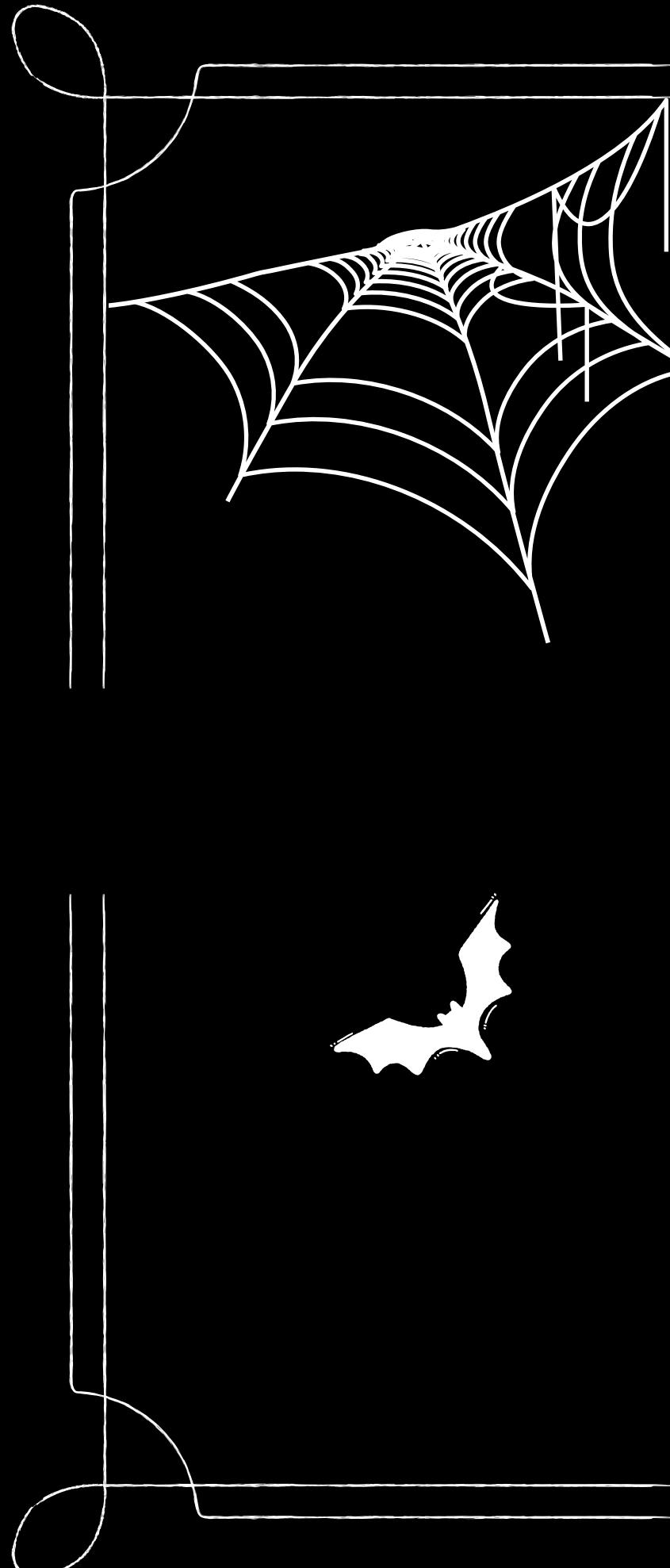
Reorganizing the Crypt: Every action causes the crypt to shift, and only a hunter who can maintain order will succeed.



HOST HUNTER'S GUIDE

CHOOSE YOUR
HOSTLY QUEST

Begin by selecting a task from the Ghost Hunter's menu. Each option leads you on a different path in your hunt.



HOST HUNTER'S GUIDE

Ghost Hunter Task Board:

0. View Task Board
1. Insert Ghost Power
2. Defeat Specific Ghost
3. Switch Strategy (Max/Min-Heap)
4. Exit

COMPLETE THE TASKS ON THE BOARD

Add new ghosts to the crypt by specifying their power levels. Input multiple levels at once, separated by spaces.

SUMMON SPIRITS



SUMMON SPIRITS

SUMMON

Unveil your ghostly quest! (0-4): 1

Enter ghost levels (space-separated): 11 22 33 44 55 66 77 88

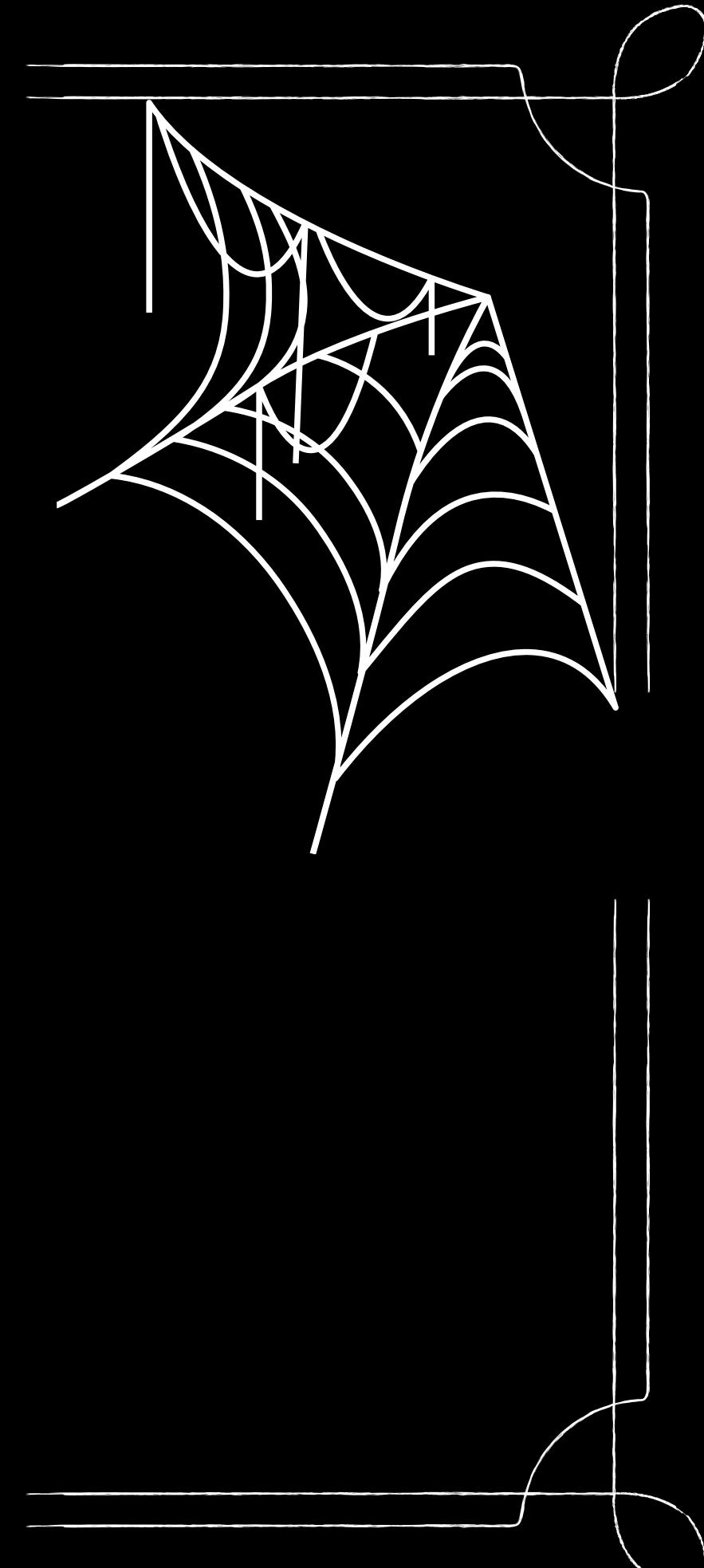
MANIFESTATION

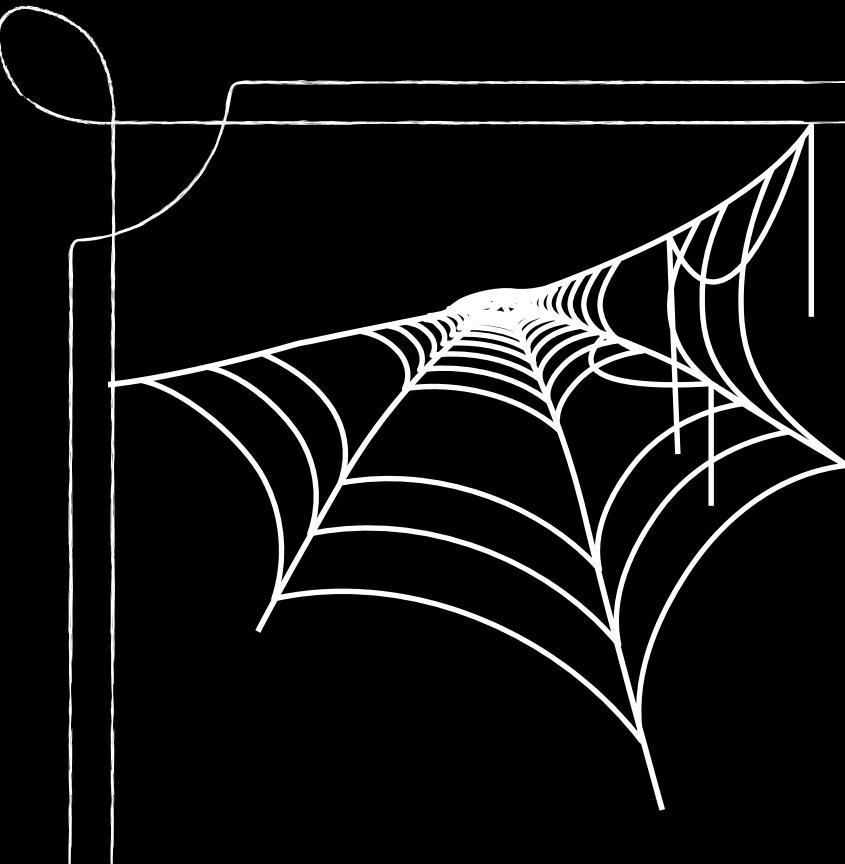


The hunter has called upon new spirits. Ghost levels added to the crypt!

88

77 66
44 33 22 55
11



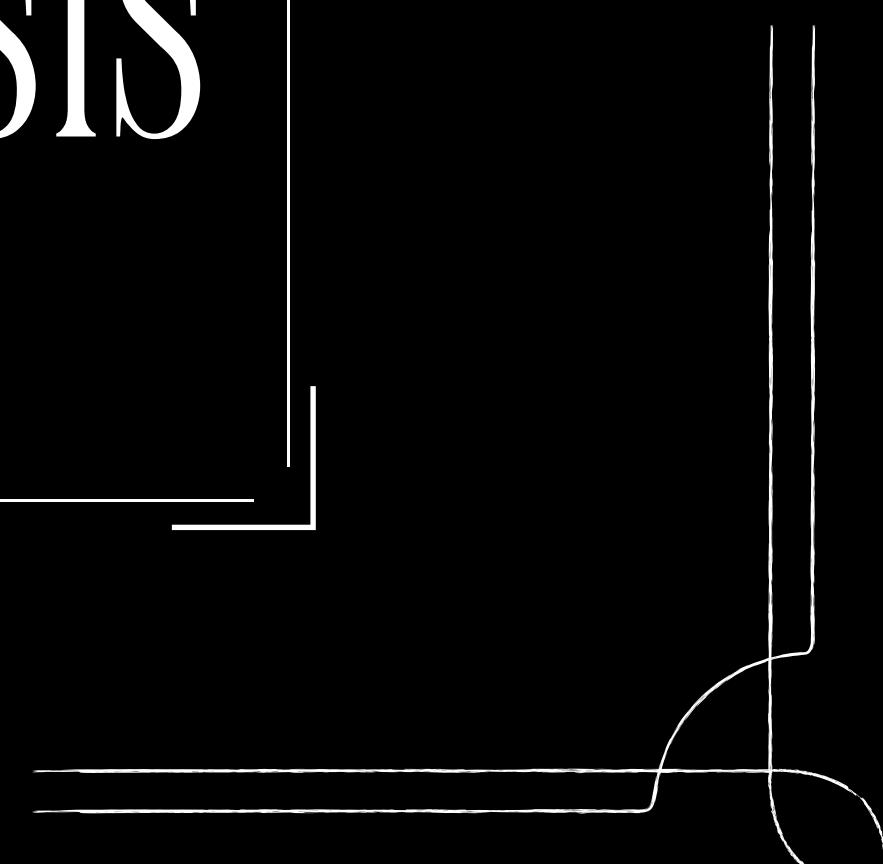


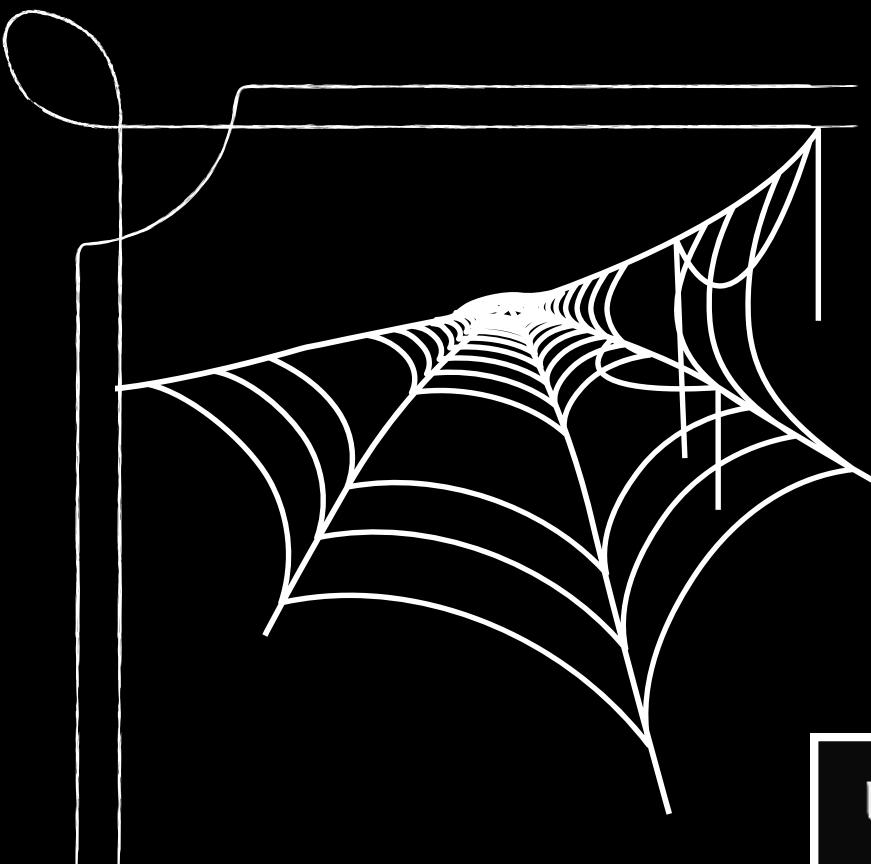
COMPLETE THE TASKS ON THE BOARD

Identify ghosts to banish by their power levels. The crypt will reorganize after each banishment.



DEFEAT GHOSTS





DEFEAT GHOSTS

LOCK YOUR TARGET



Unveil your ghostly quest! (0-4): 2

Enter the power levels of ghosts you want to defeat (space-separated): 22

Ghosts defeated! The crypt shifts...

88

77 66

44 33 11 55



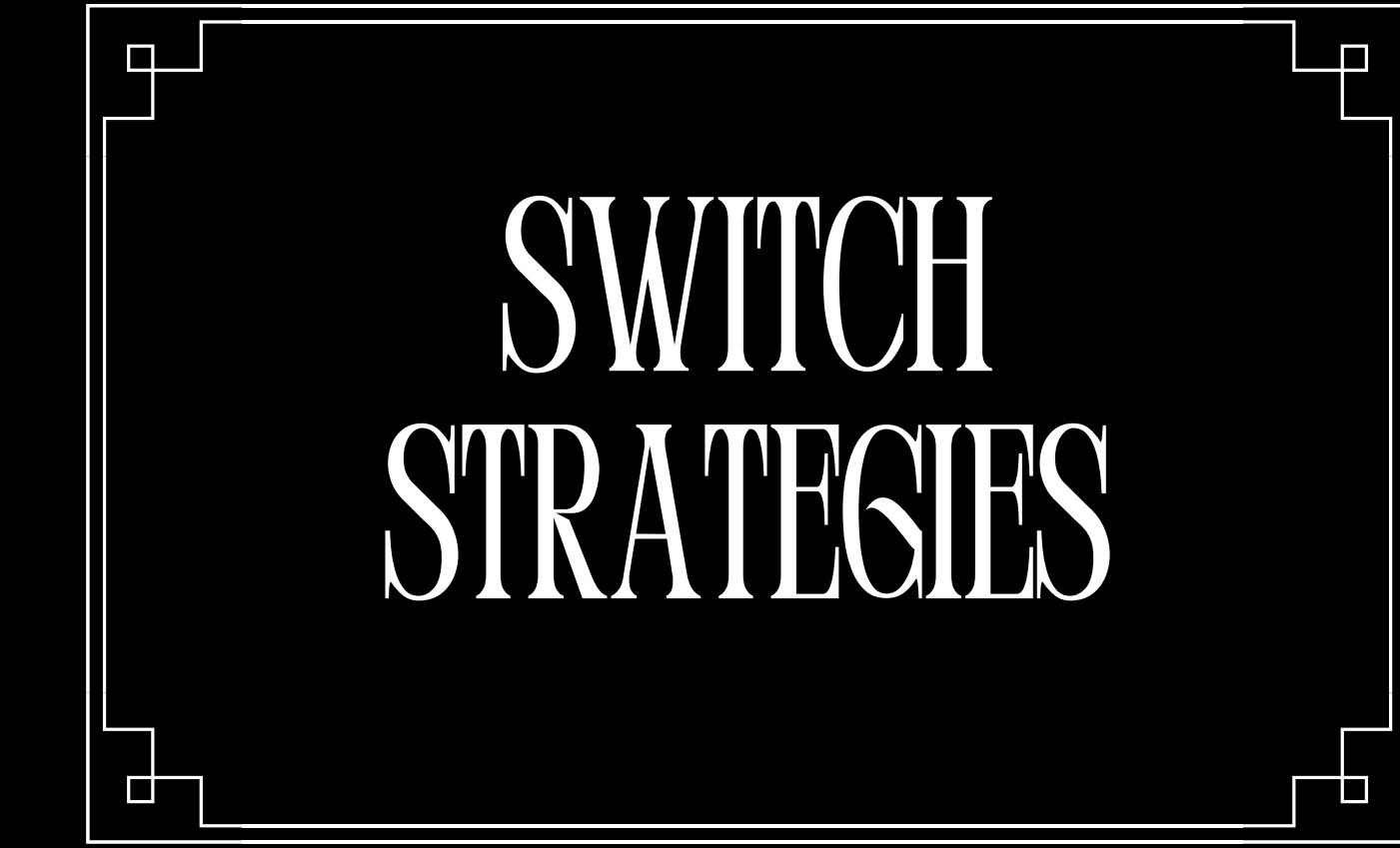
VANQUISH



Ghosts defeated! The crypt shifts...

No ghosts to fight!

COMPLETE THE TASKS ON THE BOARD



SWITCH STRATEGIES

Change between max-heap and min-heap strategies to control the strongest or weakest ghosts. Observe how this affects the crypt's structure.

SWITCH STRATEGIES

Unveil your ghostly quest! (0-4): 3

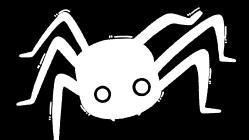
Strategy switched. Updated Ghost Power Diagram:

11
33 55
44 77 66 88

MIN

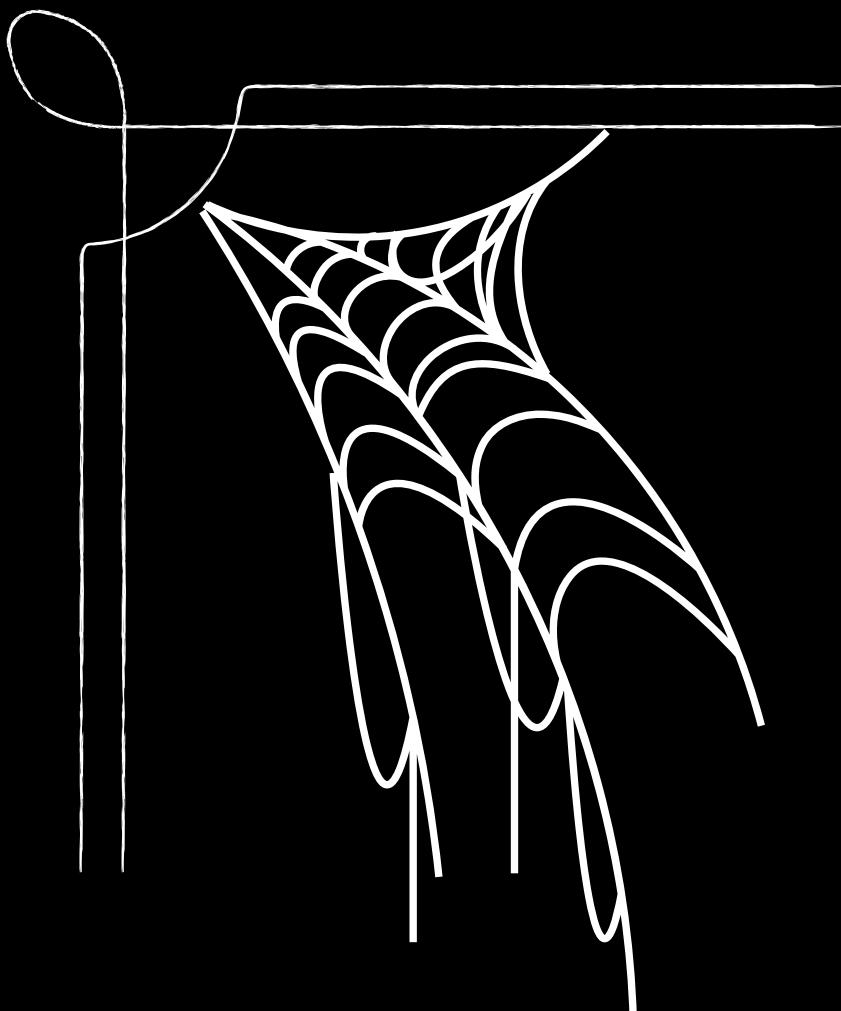


MAX

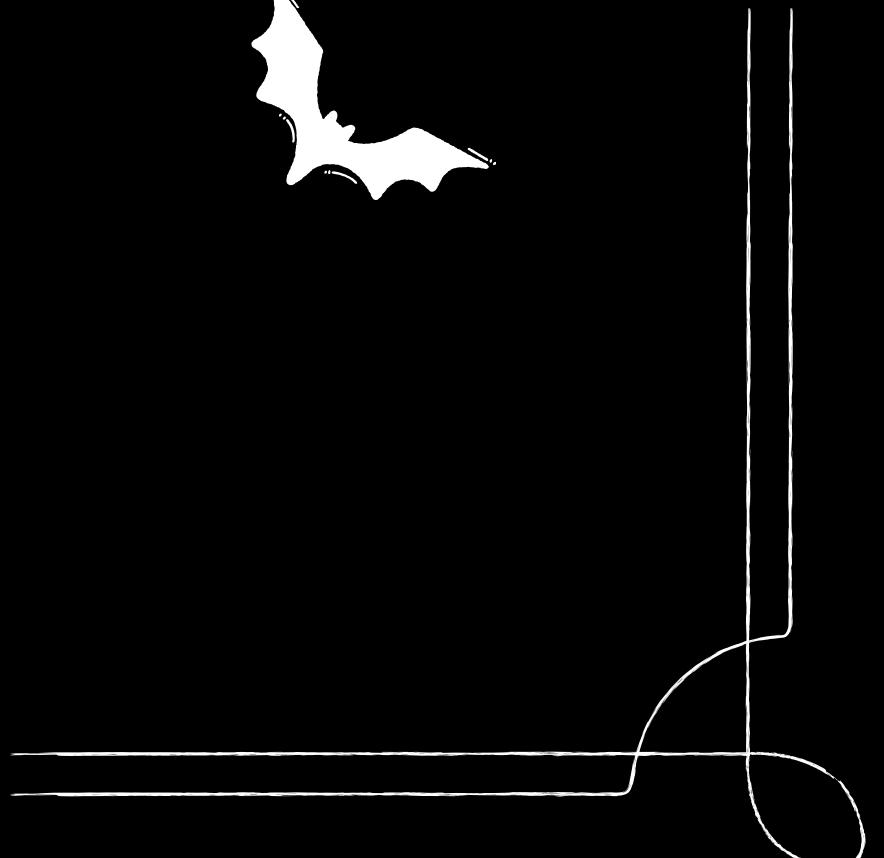


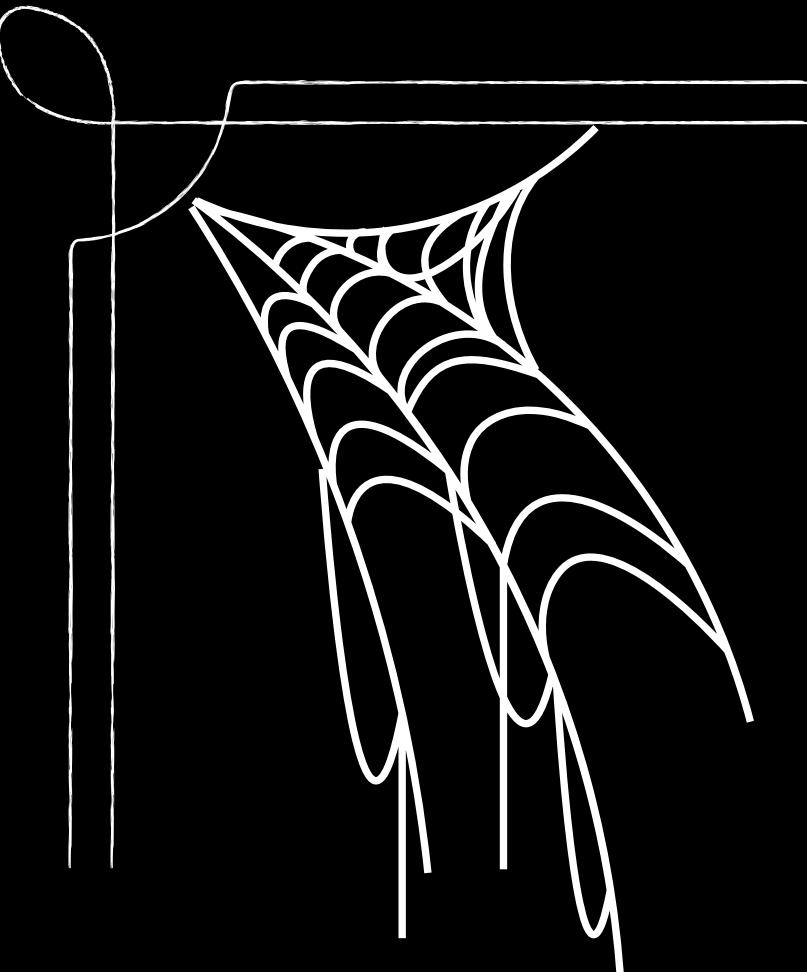
Strategy switched. Updated Ghost Power Diagram:

88
77 66
44 33 11 55



Ensure that only valid ghost power levels are entered. If you try to summon ghosts with negative power or defeat ghosts not present, handle the error gracefully.





HANDLE GHOSTLY INPUTS

NO INPUT (TASK 1)

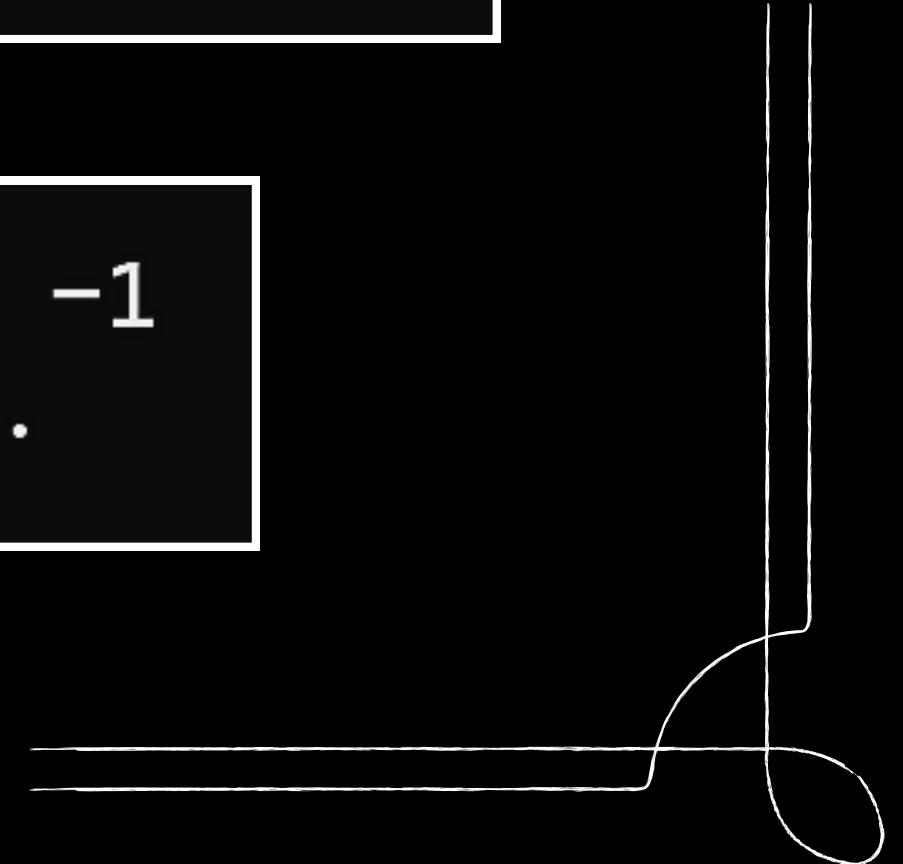


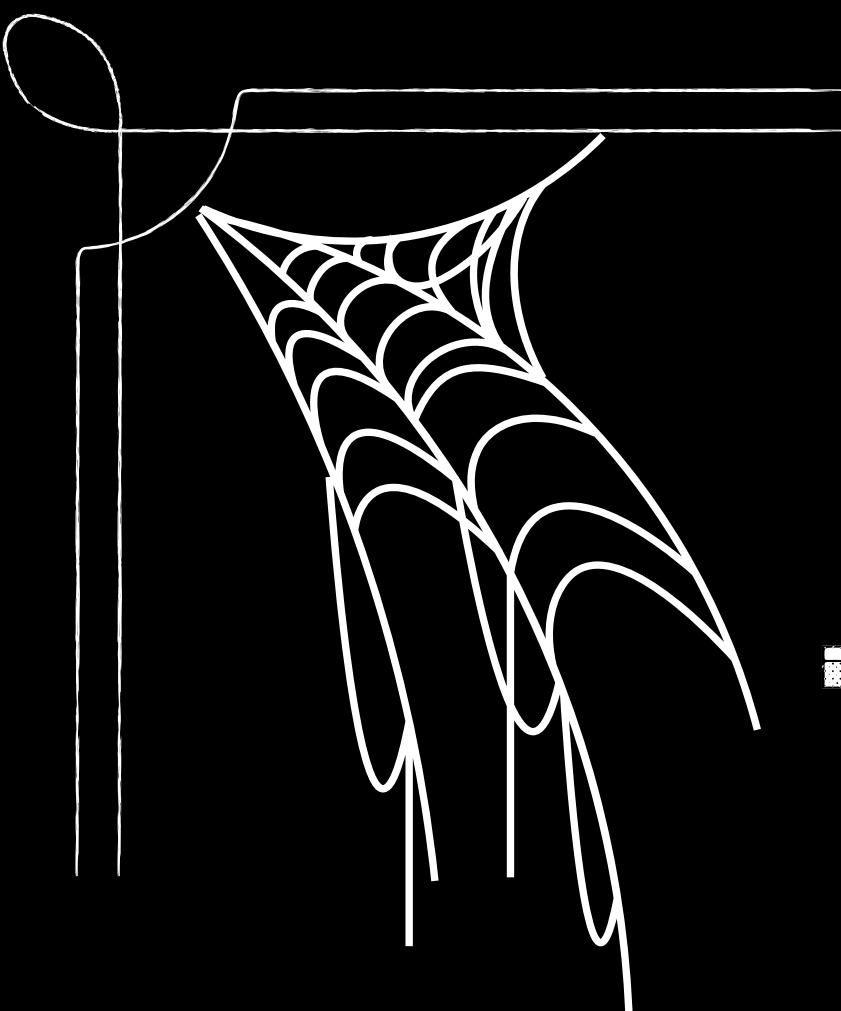
Enter ghost levels (space-separated):
The spirits refuse to show themselves.



Enter ghost levels (space-separated): -1
The spirits refuse to show themselves.

NEGATIVE INPUT (TASK 1)





HANDLE GHOSTLY INPUTS

DOES NOT EXIST (TASK 2)



Enter the power levels of ghosts you want to defeat (space-separated): 12
Ghost not found!
The ghost you seek is not here, hunter!

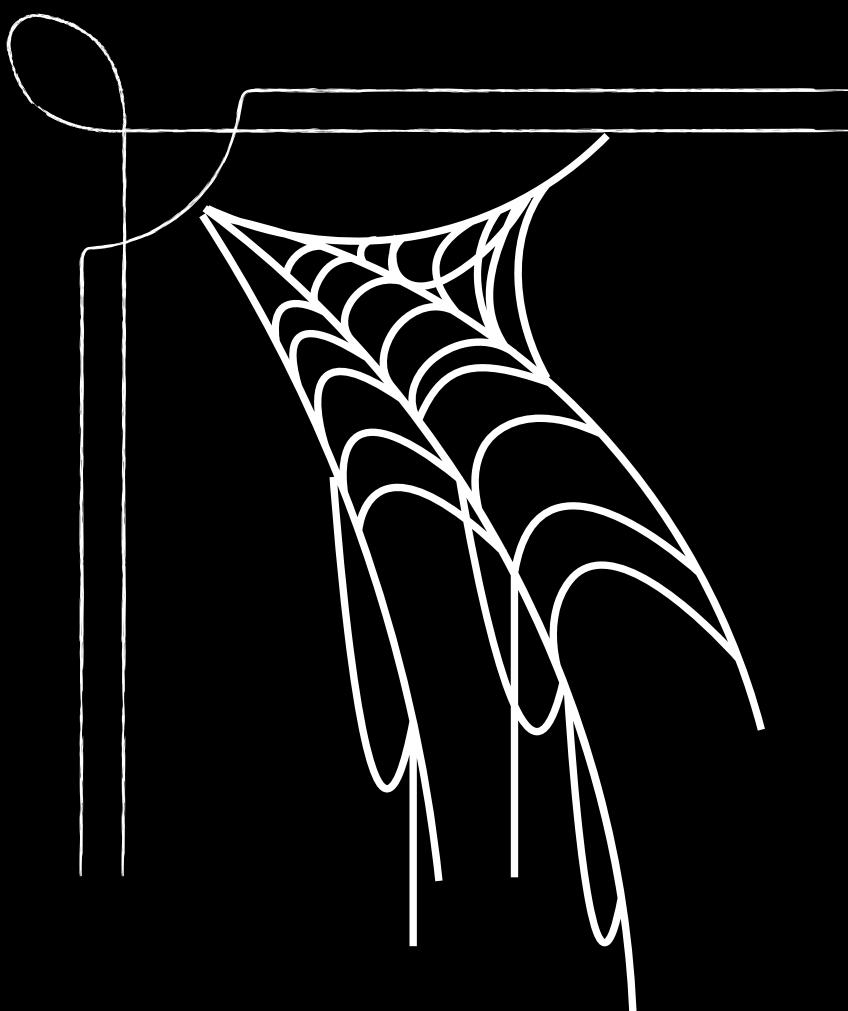


NO INPUT (TASK 2)



Enter the power levels of ghosts you want to defeat (space-separated):
The ghost you seek is not here, hunter!





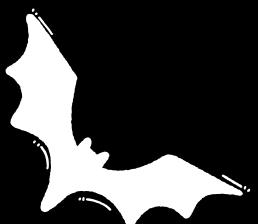
HANDLE GHOSTLY INPUTS

INVALID CHOICE



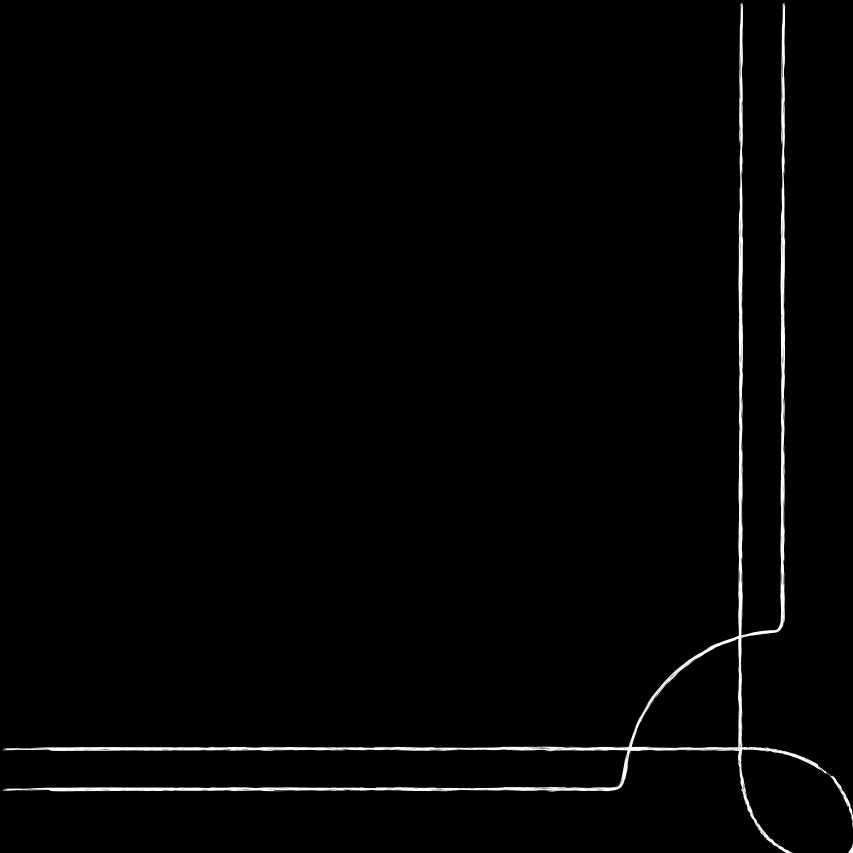
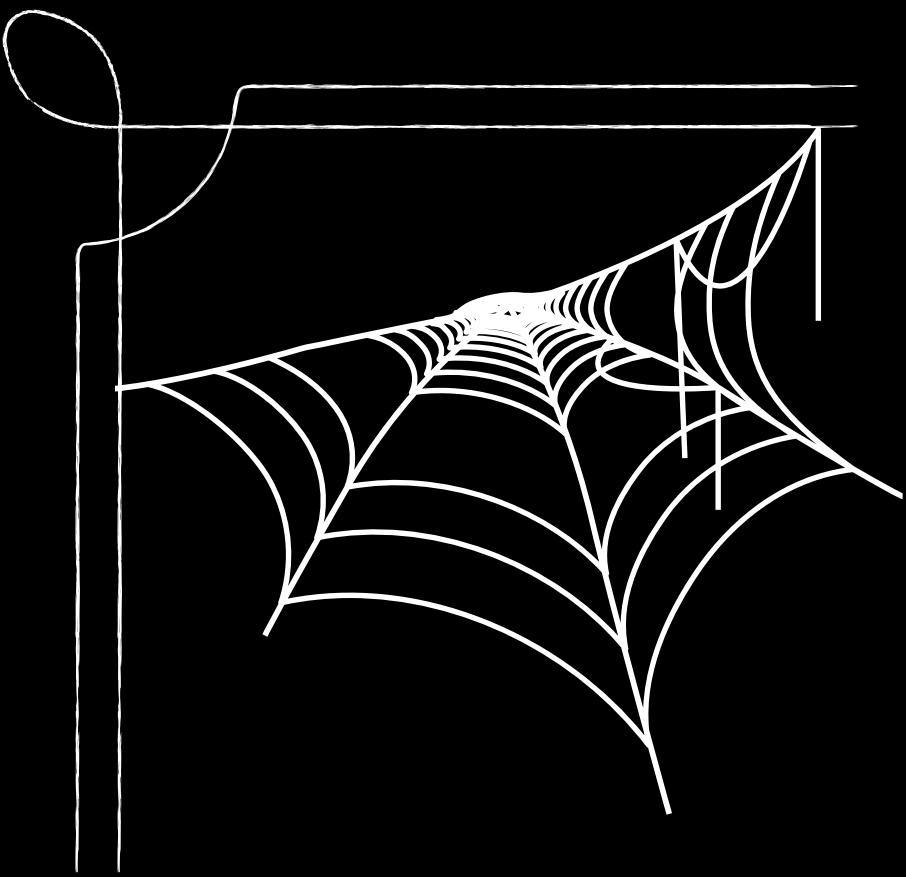
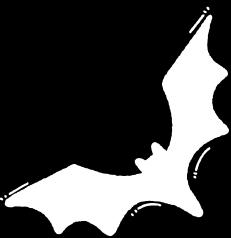
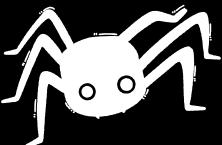
Unveil your ghostly quest! (0-4): 5

A ghostly chill fills the air... That choice won't work.

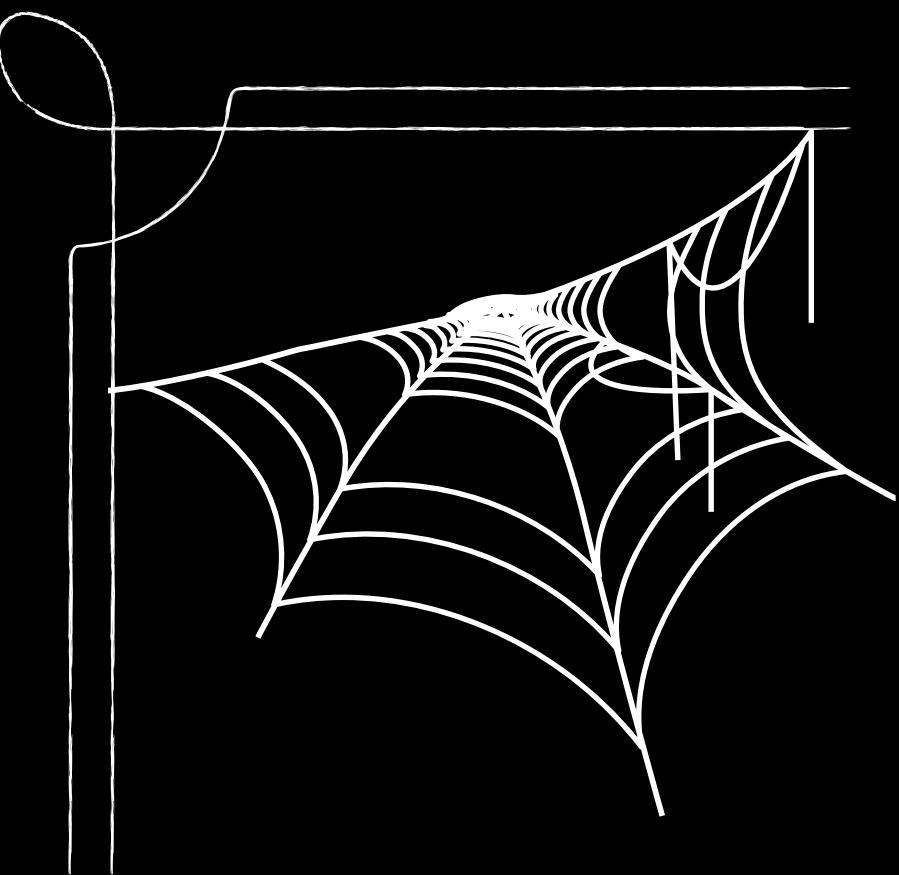


EXIT THE CRYPT

Once all tasks are completed,
exit the program with a final
farewell message from the
spirits.

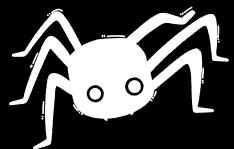


EXIT THE CRYPT



Unveil your ghostly quest! (0-4): 4

• - •
(o o) Boo!
| 0 |
` - - '



Ghosts terminated!
Until next time ghost hunter!

BOO!

