

Lunar Hunt: Game Design Document

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1. Game Structure

- Game Play
- Basic Control
- Combat Control
- Levels
 - Level 1: Overgrown Forest
 - Level 2: Abandoned River To...
 - Level 3: Mountain Peak
 - Level 4: Dark Thicket Forest

2. Core Game Mechanics

- 2.1 Combat
 - Combat Stat
 - HP (Health Points)
 - Attack Points
 - Attack Move Sets
 - Dodging
 - Low Health Enemy
 - Stealth Attack
- 2.2 Stealth
 - Stealth Attack
 - Stay Undetected
 - 2.3 Clue

Game Play

Basic Control

Buttons/ Mouse	Action	Desc.
W	Move Up	Move toward the top of the game screen.
A	Move Left	Move toward the left side of the game screen.
S	Move Down	Move toward the bottom of the game screen.
D	Move Right	Move toward the right side of the game screen.
Spacebar	Jump	Used to move over some obstacle.
Shift	Roll	Roll over the ground. Don't have much use.
Ctrl	Crouch/Stealth	Can crouch behind covers to hide. Like tall grass or walls
E	Interact	Used to talk with NPC, collect items, and open merchant shop.
Tab / ESC	Menu	Open the character's inventory and game menu settings.

Combat Control

Buttons/	Action	Desc.
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Figure 9: The game design idea written in Google Doc

Lunar Hunt: Script Writing

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Author note

Even more summary

Summary

Prologue

Chapter 1

- Clue 0: Back to crime scene
- Clue A1: The hunter's trail
- Clue A2: The hunter's shelter
- Clue B1: The witch's schedule
- Clue B2:

— Chapter 2

Chapter 3

Chapter 4

- Boss fight: Cassandra
- The Ending

Chapter 2

Sebastian found a lead that a lot of kidnapping has happened in another forest across the river. Sebastian went to the said forest and encountered a thief who tried to kidnap him. Sebastian has to either retaliate and fight back, or hide away and lose them. Sebastian has to reach the dead end in which he found a shack belonging to the group of thieves. Sebastian investigated inside and found more connections to other hideouts.

Chapter 3

The clues that Sebastian found leads to the true lair of the illegal group. The lair is hidden in a dark dense forest and the leader of the group usually spends his time in the craftroom. Throughout the forest, Sebastian has to fight the thieves and their tamed monster. There are a lot of covers to stealth but the path is linear. Sebastian enters the lair behind the cliff wall. The lair has dim light with some narrow corridors. More thieves and monsters still guard inside the lair. Sebastian has to either fight or stealth through the lair. Once he reached the craftroom, he found the thief leader, Corbett, doing his leather work. Corbett gave a cold response that Seb is interrupting his precious time. Before Sebastian took the life of Corbett, he asked Corbett if he knew about the skin of his father, who had the feature of a white wolf skin. Corbett said that he's the one who took care of all of the leather, and he does recognize the fine quality of the white wolf skin which he made into various items. It was kept as a high quality product in his room.

Chapter 4

[The condition for each type of ending will depend on the clues that the player has completed.]

The next day, Sebastian enters the church and sits quietly on the chair. He avenged his father and other innocent people. But his nights of grief will stay. He didn't realize it until now, that the feelings he holds up are overwhelming him.

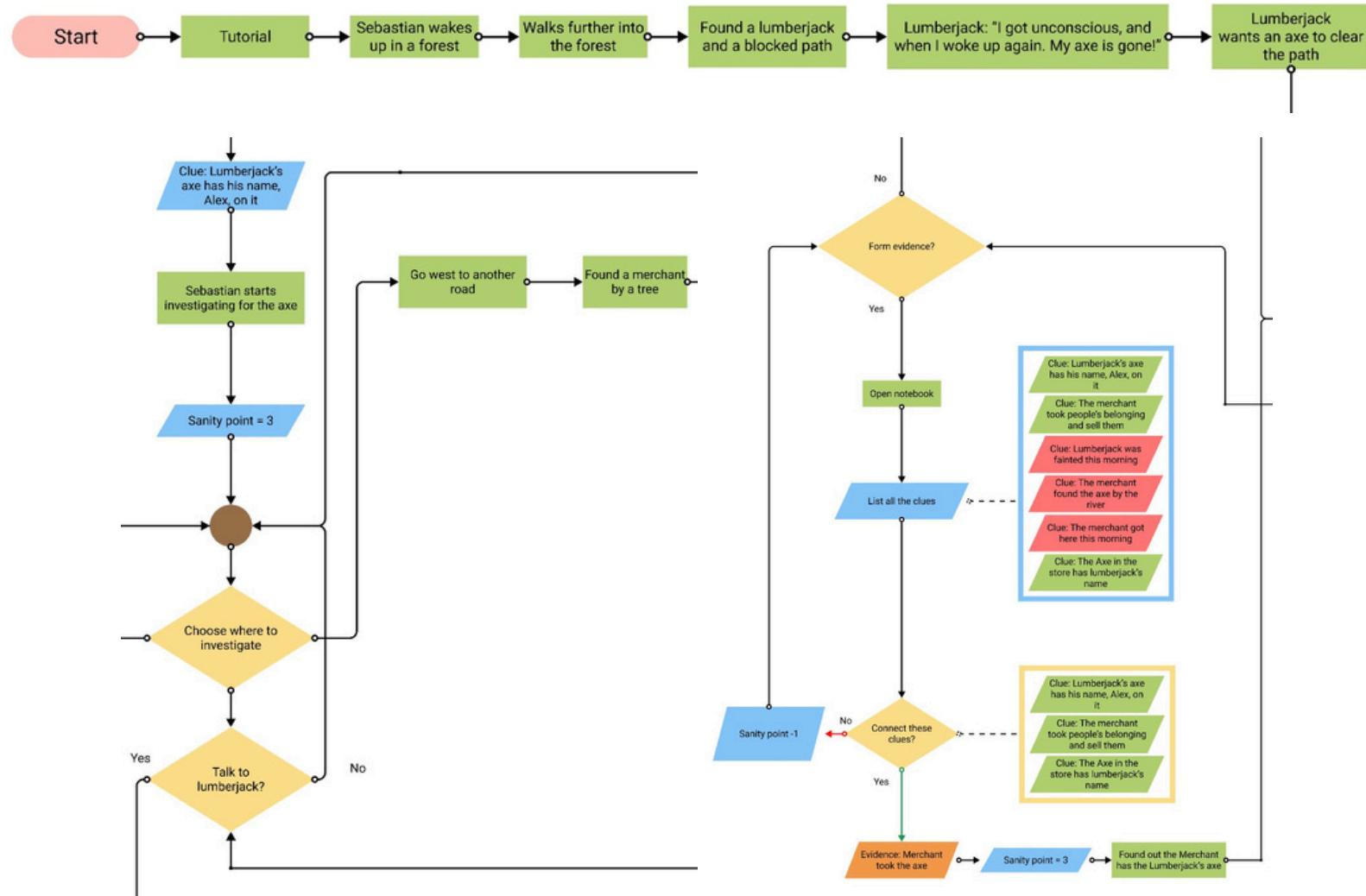
Several days have passed, Sebastian wakes up in his room. At the door he found letters delivered under the door gap. It was a letter from Athena, inviting him to visit the Sanctuary. When Sebastian shows up at the sanctuary, Athena greeted him and brought him tea in the garden. They talked about how life around sanctuary should be more safe now. But there are still more thieves lurking in the forest.

Sebastian is still suspicious of the witch Cassandra. He may have found some proof that

Figure 10: The written scripts in Google Doc

Evidence for lumberjack

Evidence that will be used for the lumberjack is going to be "Evidence to show where the lumberjack's axe went to"



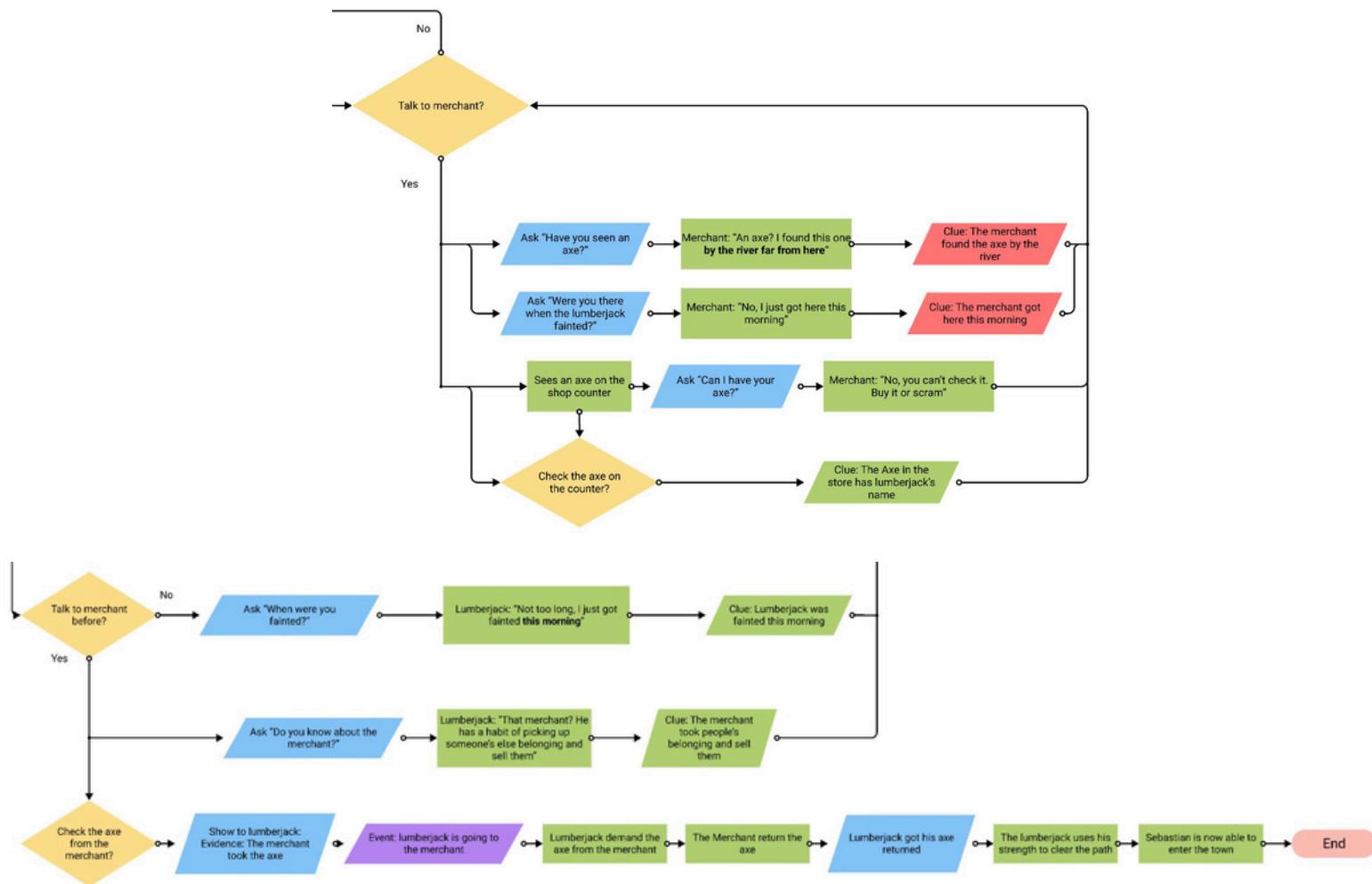


Figure 11: A game script flowchart for chapter procedure

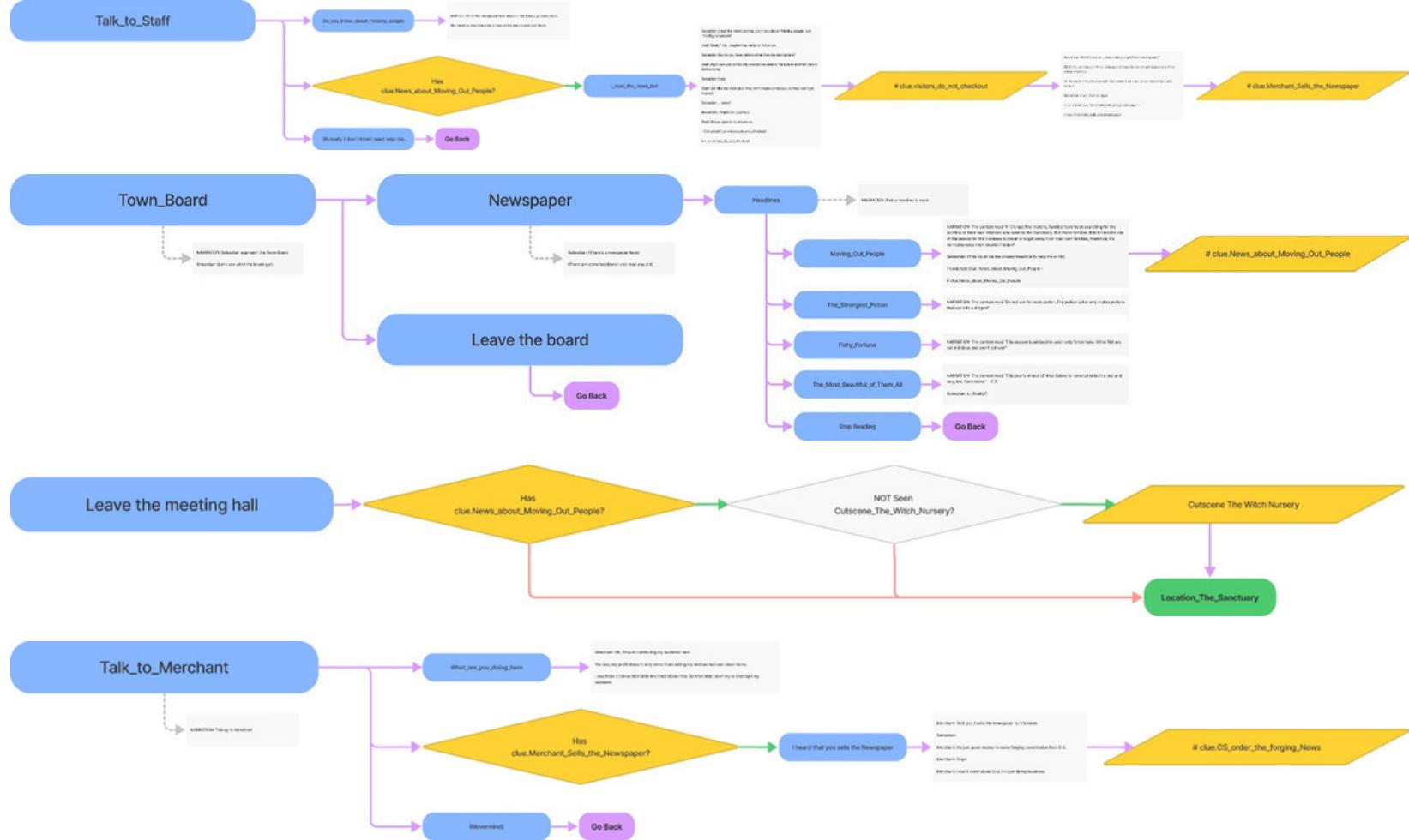


Figure 12: Scriptwriting flowchart made in Figma



Figure 13: Inkle homepage.

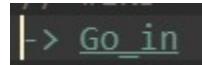


Figure 14: The divert arrow would bring the next conversation in Ink Editor.

This screenshot shows a portion of an Ink script. It begins with a section header '= Headlines'. Below it, there is a '#noSpeaker' directive. The next line, 'Pick a headline to read.', is followed by a list of five choices, each preceded by a plus sign and enclosed in brackets: '+ [Moving Out People] -> Moving_Out_People', '+ [The Strongest Potion] -> The_Strongest_Potion', '+ [The Most Beautiful of Them All] -> The_Most_Beautiful_of_Them_All', '+ [Stop Reading] -> Town_Board'. The entire list is contained within a dark grey box.

Figure 15: Writing choices in Ink Editor.

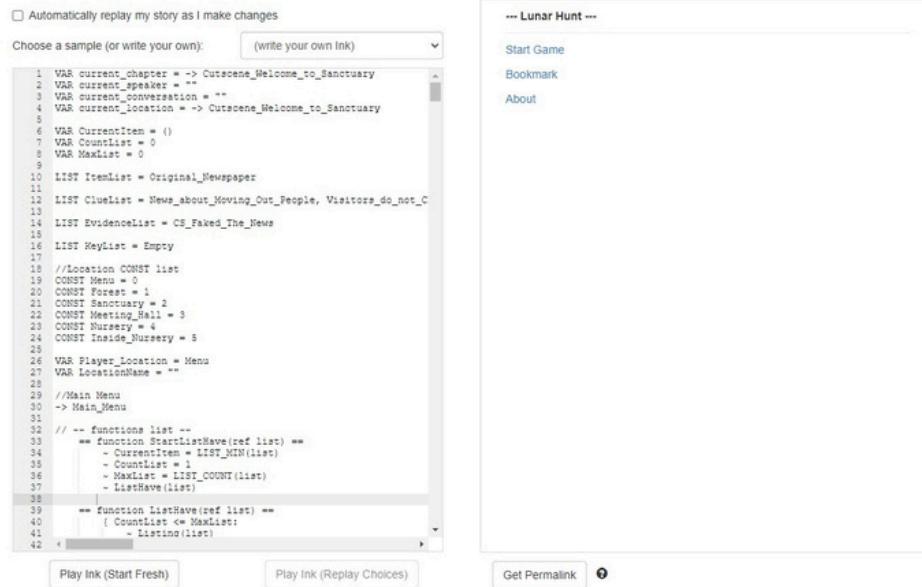
This screenshot shows a more complex section of an Ink script. It starts with a section header '= Talk_to_Merchant =='. Following this, there is a '#speaker.Merchant' directive. The next line, 'What do you want from me?', is followed by a series of conditional branches. The first branch is triggered by a comment //Tutorial and a condition {Talk_to_Lumberjack} (not Talk_to_Lumberjack.About_the_axe). It leads to a choice '[Have you seen an axe?] -> Have_you_seen_an_axe'. This is followed by a comment //chapter 1 and another choice '[What are you doing here?] -> What_are_you_doing_here'. There is also a condition { ClueList ? Merchant_Sells_the_Newspaper } {ClueList !? CS_Order_to_Forge_The_News}. The final choice in this block is '[I heard that you sells the Newspaper] -> I_heard_that_you_sells_the_Newspaper'. The script then continues with a choice '+ [(Nevermind)] {EndCon()} -> END #END' and a final choice '- -> Talk_to_Merchant'.

Figure 16: Choices with conditions.

```
= first
#speaker.Sebastian
(Now that I got here, I should ask if someone knows about missing people.)
(That way, I should be able to find a lead about my father.)
//Sebastian walk until in front of Athena
#timeline.Athena
#knot.Cutscene_Welcome_to_Sanctuary.Athena
#END
-> END|
```

Figure 17: Example of the use of a tag in Ink Editor.

This page runs Quill, a web app for playing and tinkering with Ink stories. (Ink is a mini-language for writing choose-your-own-adventure games.)
When you click Play, your Ink story will appear on the right and become playable. You can test out (and modify) the example snippets below, or play the short-but-complete Ink story The Intercept. If you're experimenting, the Ink tutorial may come in handy.
If you are playing a story and making revisions as you go along, you can use Play Ink (Replay Choices) to replay your previous path on the latest revision.



The screenshot shows the Quill web application interface. On the left, there is an Ink code editor with syntax highlighting for variables, constants, lists, and functions. The code is for a story titled "Lunar Hunt". On the right, there is a preview area titled "Lunar Hunt" with options to "Start Game", "Bookmark", and "About". Below the preview are three buttons: "Play Ink (Start Fresh)", "Play Ink (Replay Choices)", and "Get Permalink".

```

 Automatically replay my story as I make changes
Choose a sample (or write your own): (write your own Ink)
1 VAR current_chapter => Cutscene_Welcome_to_Sanctuary
2 VAR current_speaker = ""
3 VAR current_conversation = ""
4 VAR current_location => Cutscene_Welcome_to_Sanctuary
5
6 VAR CurrentItem = {}
7 VAR CountList = 0
8 VAR MaxList = 0
9
10 LIST ItemList = Original_Newspaper
11
12 LIST CleveList = News_about_Moving_Out_People, Visitors_do_not_C
13
14 LIST EvidenceList = CS_Faked_The_News
15
16 LIST KeyList = Empty
17
18 //Location CONST list
19 CONST Menu = 0
20 CONST Forest = 1
21 CONST Sanctuary = 2
22 CONST Meeting_Hall = 3
23 CONST Nursery = 4
24 CONST Inside_Nursery = 5
25
26 VAR Player_Location = Menu
27 VAR LocationName = ""
28
29 //Main Menu
30 -> Main_Menu
31
32 // -- functions list --
33 == function StartListHave(ref list) ==
34   ~ CurrentItem = LIST_MIN(list)
35   ~ CountList = 1
36   ~ MaxList = LIST_COUNT(list)
37   ~ ListHave(list)
38
39 == function ListHave(ref list) ==
40   { CountList <= MaxList:
41     - Listing(list)
42   }
```

Figure 18: The Quill web app.

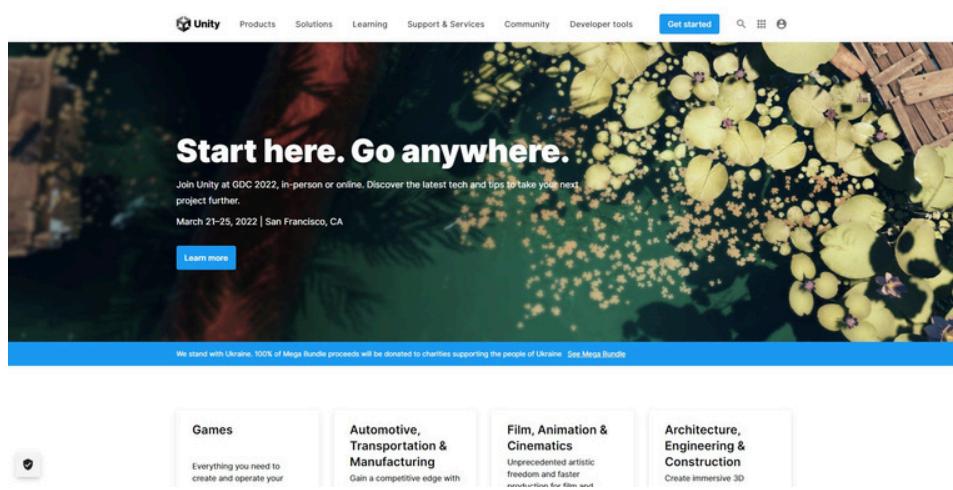


Figure 19: Unity's website.



Figure 20: Main menu UI.



Figure 21: Pages from the UI tutorial.



Figure 22: UI for the game dialogues.



Figure 23: Pages of the in-game menu.



Figure 24: The notification box on the screen.

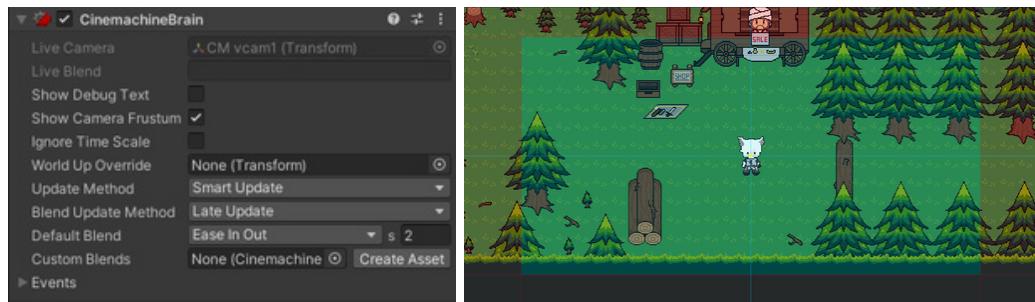


Figure 25: The Cinemachine camera in the Unity.



Figure 26: The player is within the interactable range.

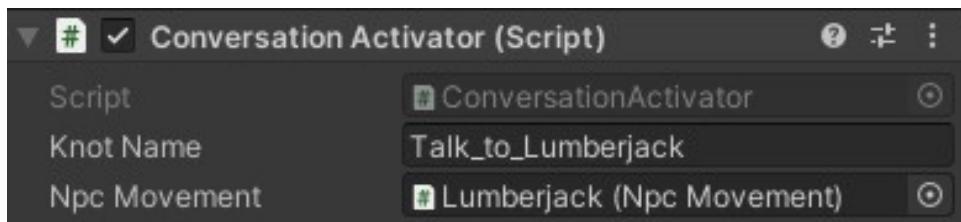


Figure 27: The value in the inspector.

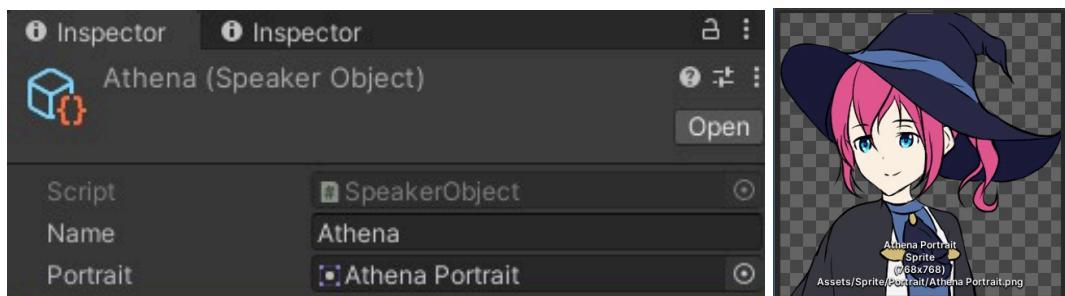


Figure 28: Data that the speakerObject holds.

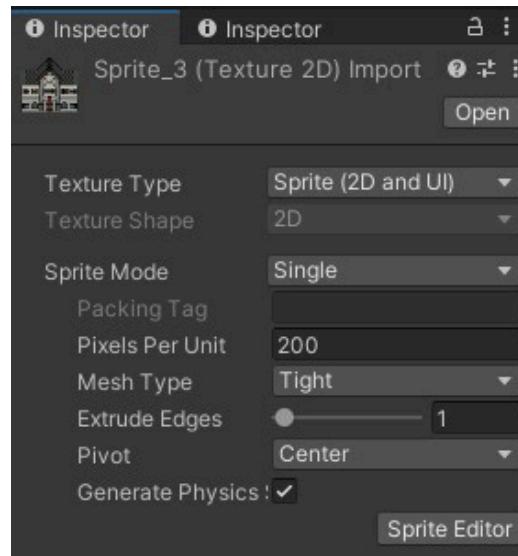


Figure 29: Image asset inspector.

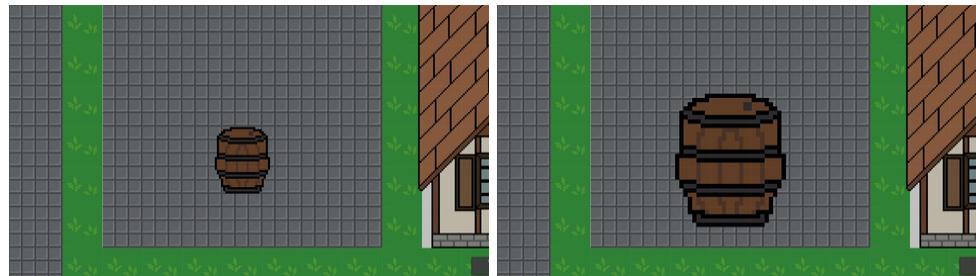


Figure 30: The picture on the left shows the correct pixel per unit of 100, while the right side is wrongly set to 100.

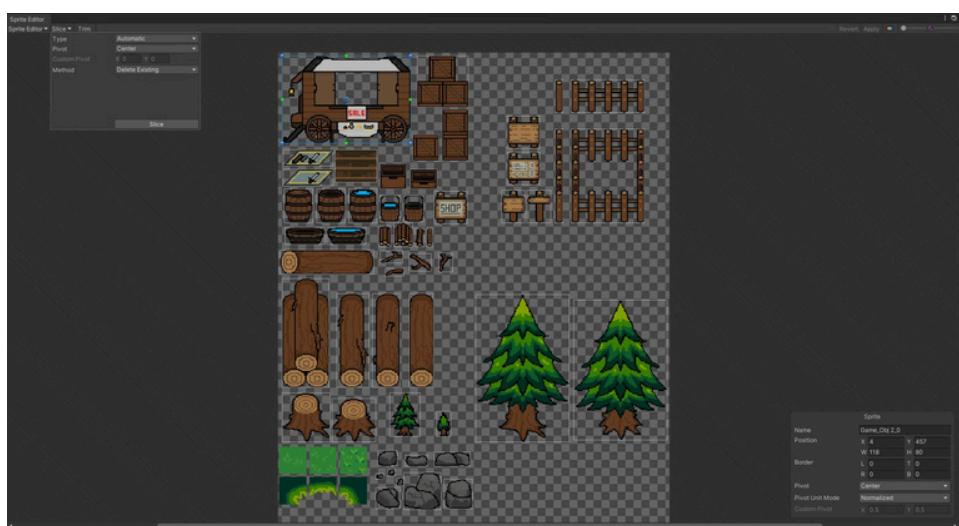


Figure 31: Auto slice multiple sprite.

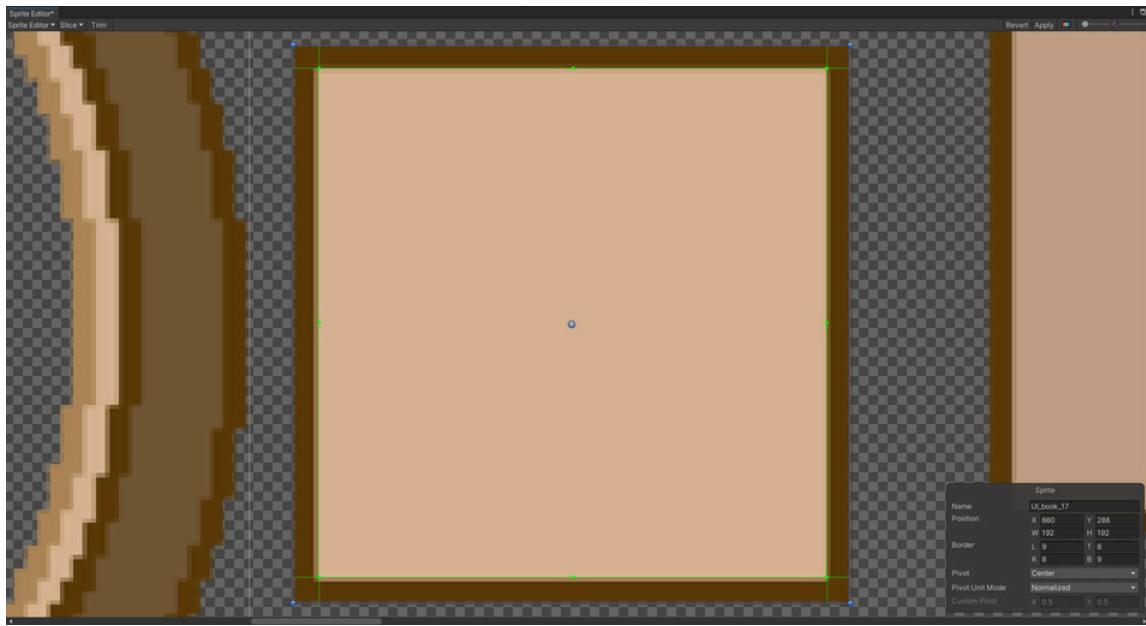


Figure 32: UI border of the in-game menu.

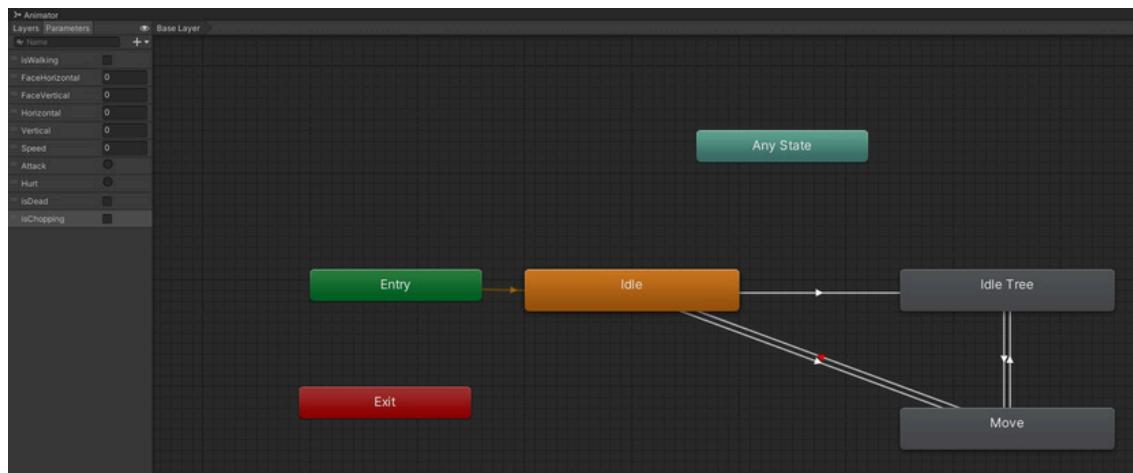


Figure 33: Sebastian's animation relationship.

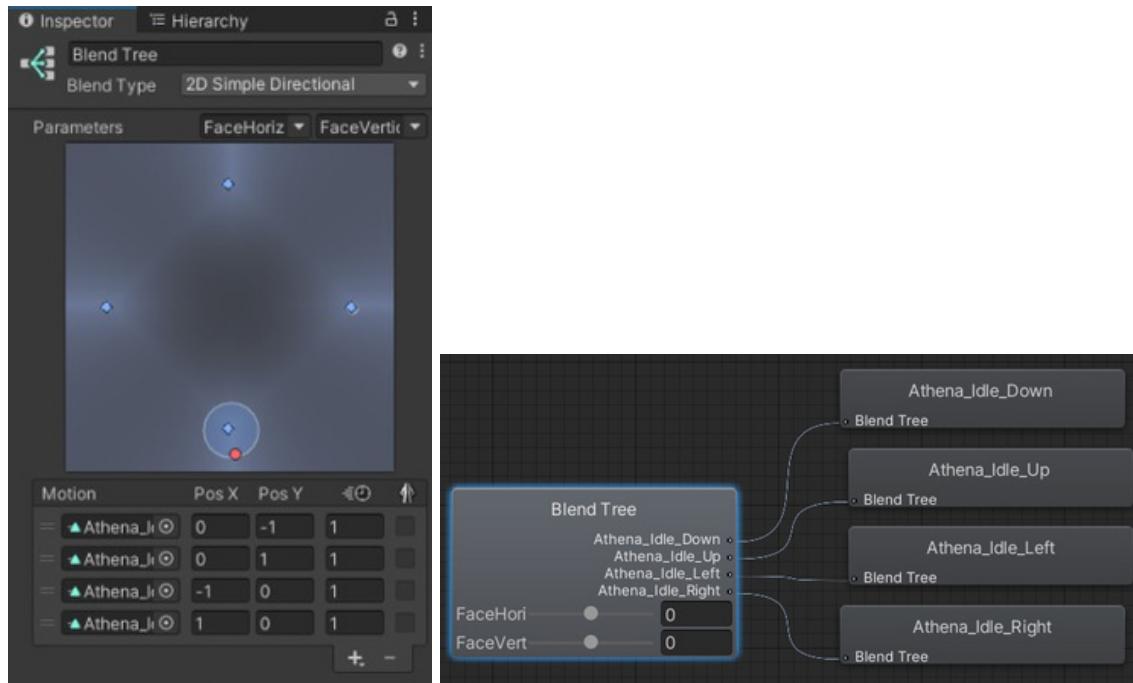


Figure 34: The two variables that detect the faced direction.

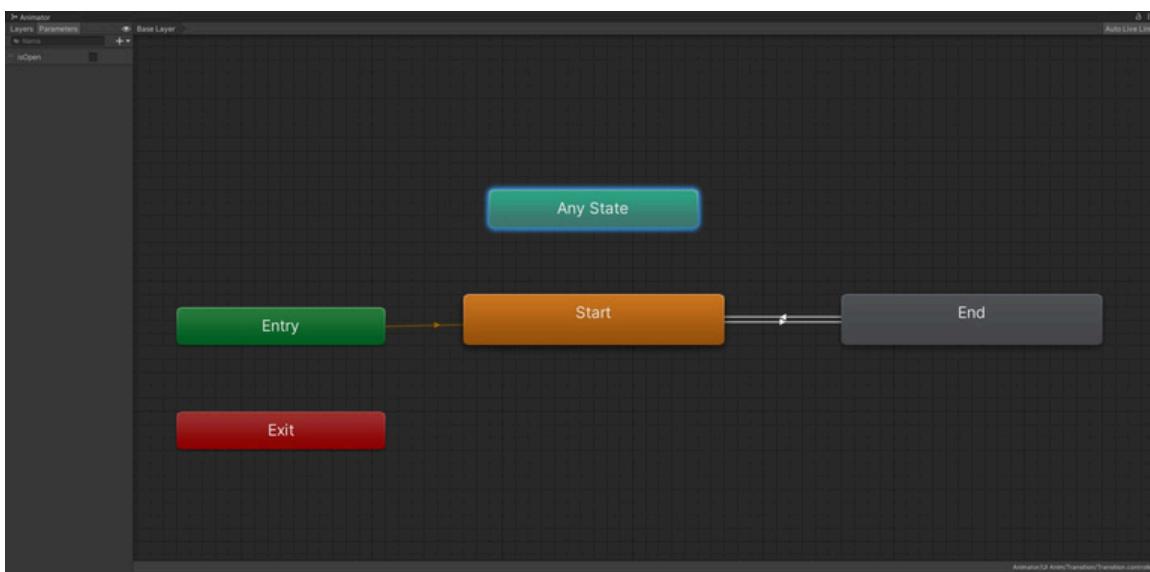


Figure 35: The start and end state the relationship.

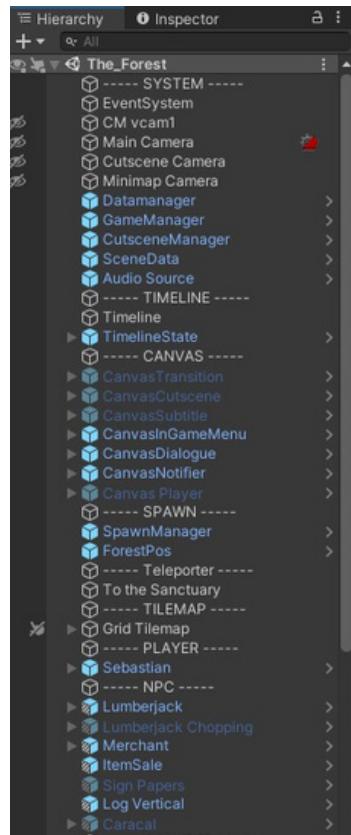


Figure 36: Game objects in the hierarchy.



Figure 37: Player standing behind the tree and another in front of the tree.

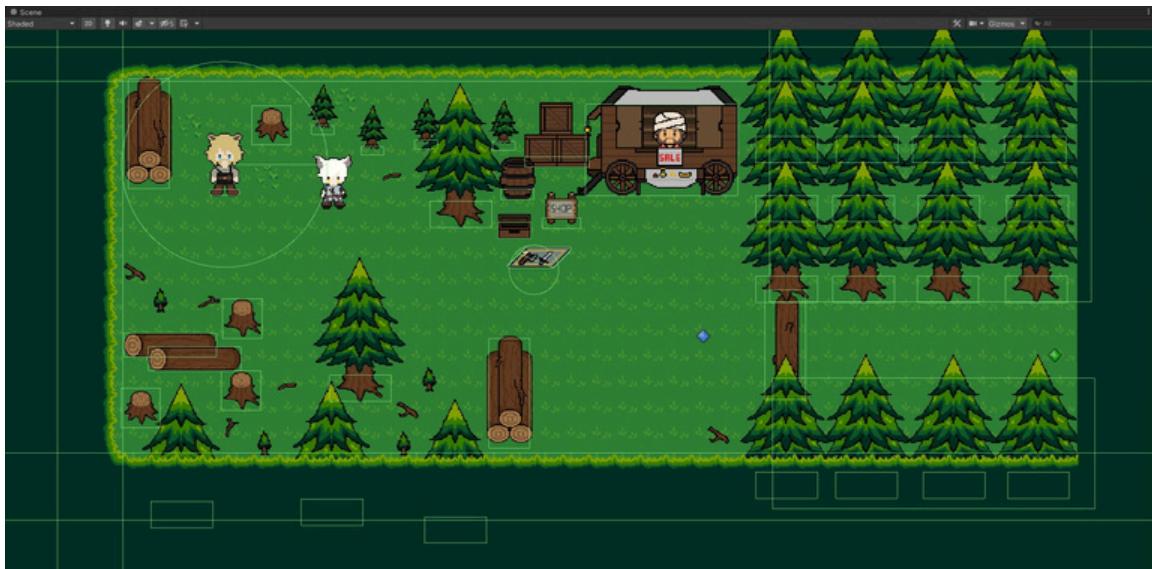


Figure 38: Different objects and their physical collider.



Figure 39: NPCs with their interactable collider.



Figure 40: The picture on the left uses the wall collider, while the one on the right does not use a wall collider.

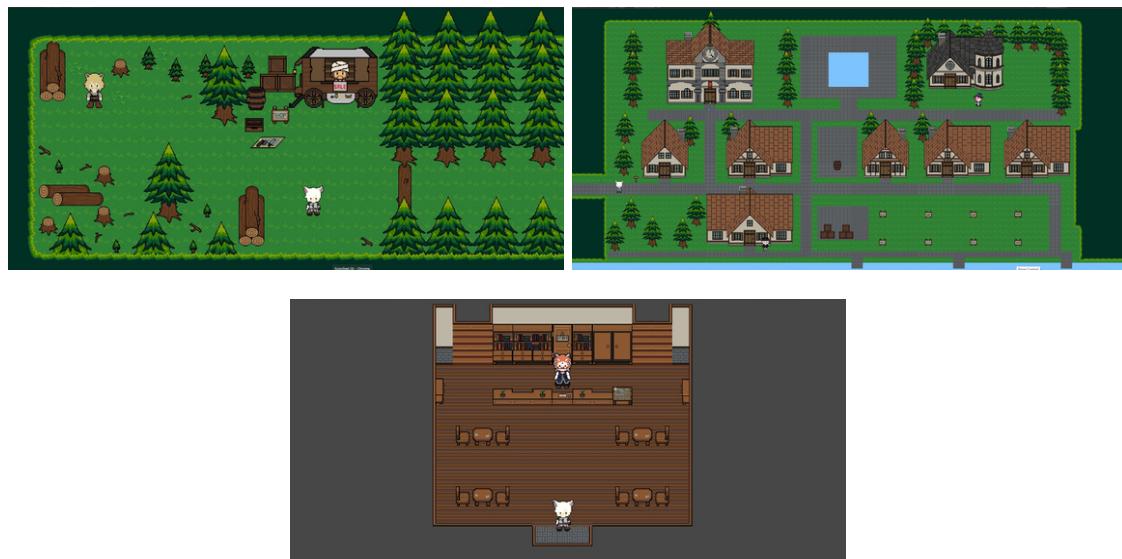


Figure 41: The game maps developed in the Unity.

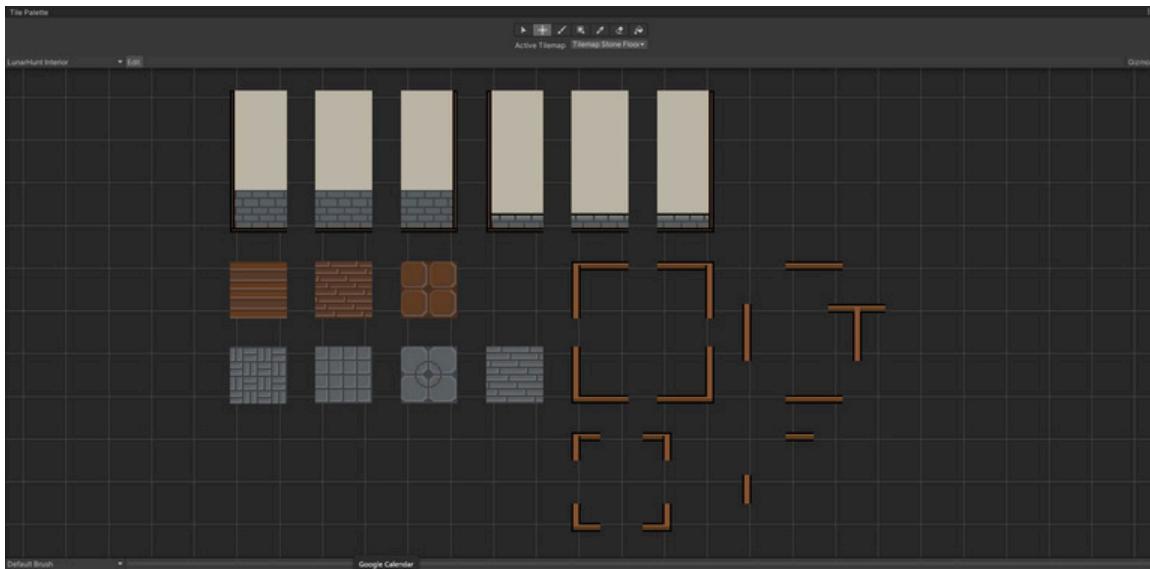


Figure 42: The tilemap assets window.

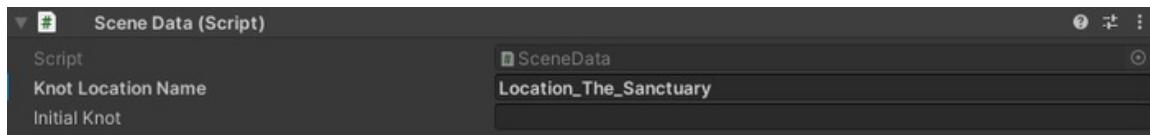


Figure 43: SceneData component window.



Figure 44: The invisible teleporter that would lead back to the forest.



Figure 45: The minimap at the top left of the screen.

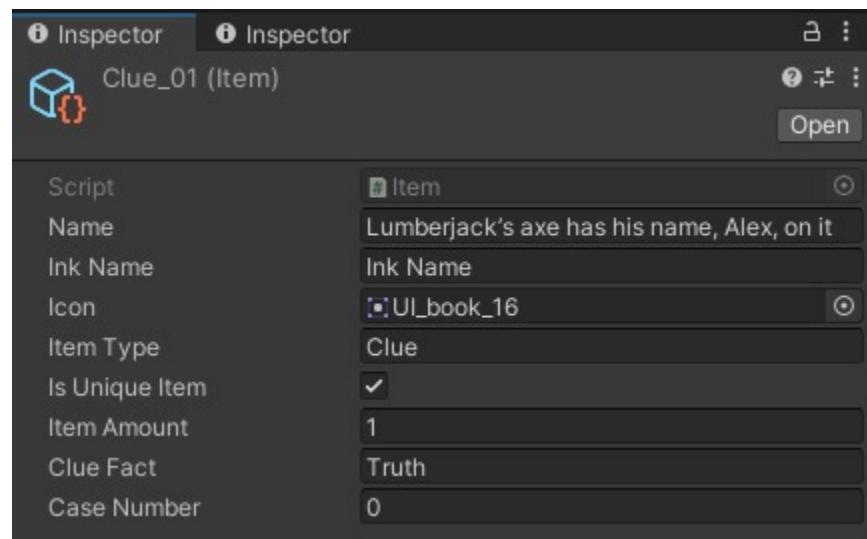


Figure 46: Item data.

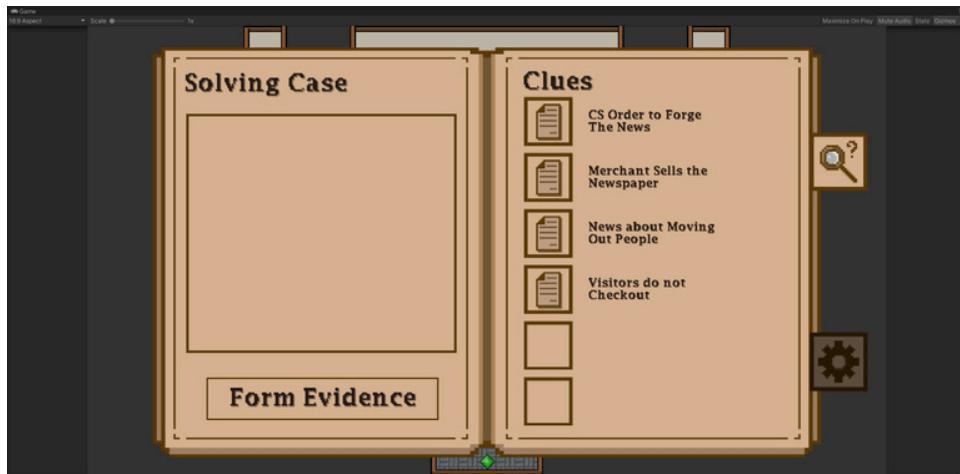


Figure 47: The form evidence UI menu.

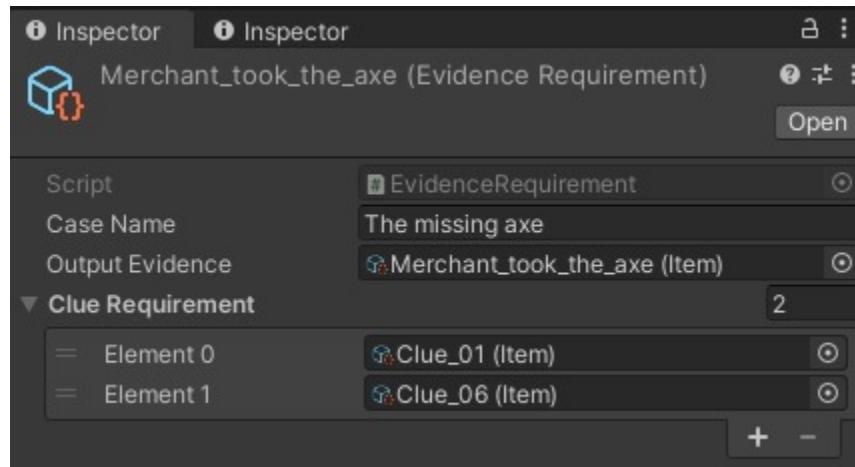


Figure 48: Evidence requirement data.

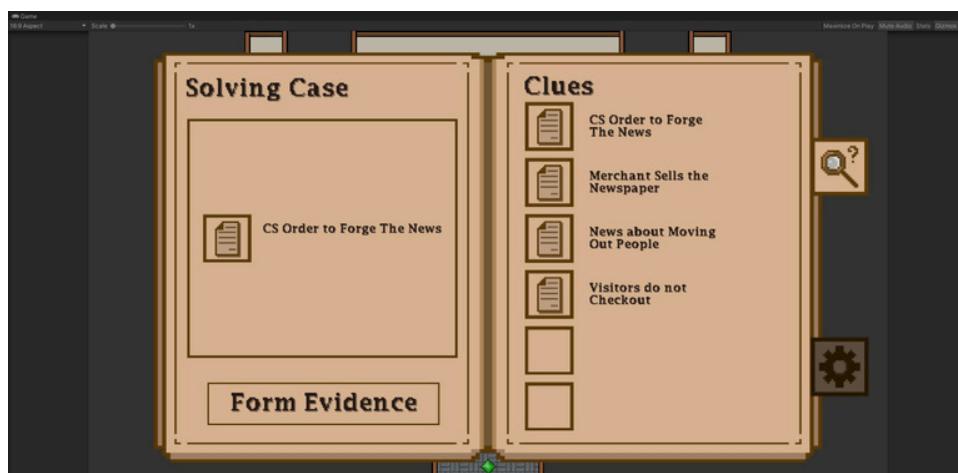


Figure 49: One clue is currently selected to form evidence.

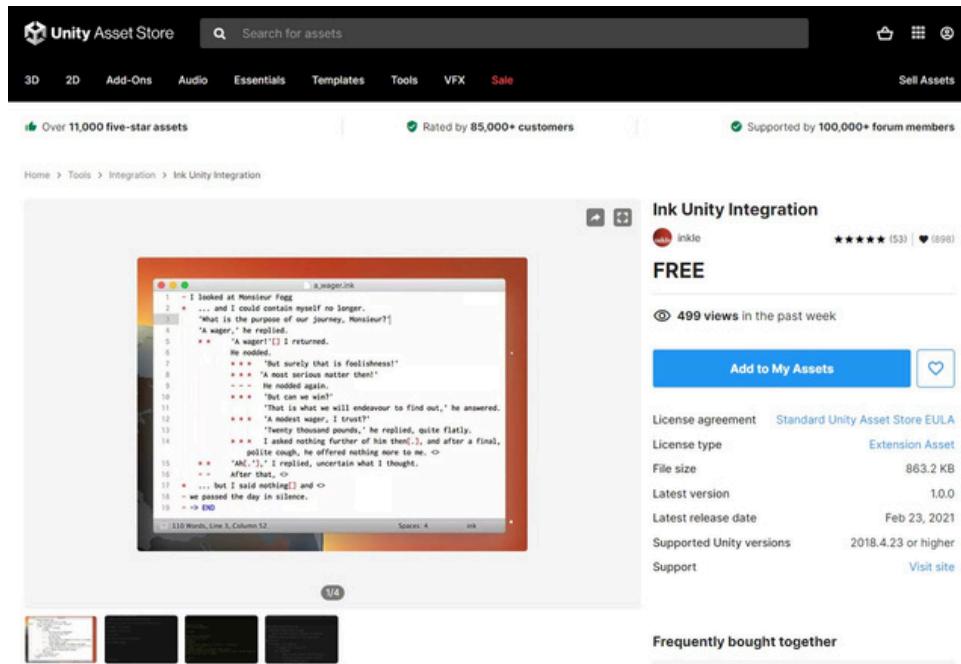
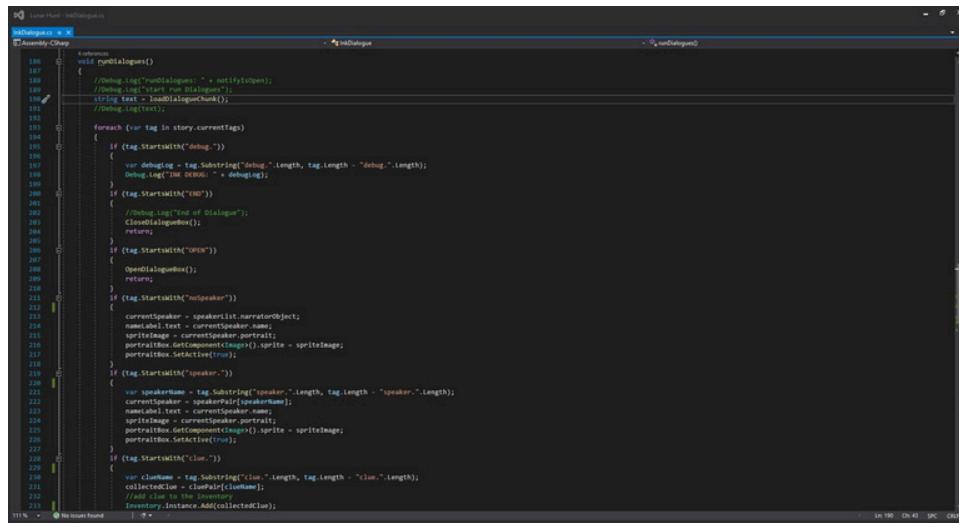


Figure 50: The Ink Editor to Unity asset page

```
public void OpenDialogueBox()
{
    IsOpen = true;
    player.controlUI = true;
    anim.SetBool("IsOpen", true);
    //setting knot
    story.ChoosePathString(knotName);
    //run dialogues
    endDialogue = false;
    eraseUI();
    runDialogues();
}
```

Figure 51: The ChoosePathString code inside one of the script procedures.



```

Assembly-CSharp
InkDialogue.cs
180     void runDialogues()
181     {
182         //Debug.Log("runDialogues: " + multiPlayerOpen);
183         //Debug.Log("start run Dialogues");
184         string text = loadDialogueChunk();
185         //Debug.Log(text);
186
187         foreach (var tag in story.currentTags)
188         {
189             if (tag.StartsWith("debug"))
190             {
191                 var debug = tag.Substring("debug.".Length, tag.Length - "debug.".Length);
192                 Debug.Log("INK DEBUG: " + debug);
193             }
194             if (tag.StartsWith("END"))
195             {
196                 //Debug.Log("End of Dialogue");
197                 endDialogueBox();
198                 return;
199             }
200             if (tag.StartsWith("OPEN"))
201             {
202                 OpenDialogueBox();
203                 return;
204             }
205             if (tag.StartsWith("notSpeaker"))
206             {
207                 currentSpeaker = speakerList.narratorObject;
208                 nameLabel.text = currentSpeaker.name;
209                 spriteImage.sprite = speakerPortrait;
210                 portraitImage.GetComponent().sprite = spriteImage;
211                 portraitImage.SetActive(true);
212             }
213             if (tag.StartsWith("speaker"))
214             {
215                 var speakerName = tag.Substring("speaker.".Length, tag.Length - "speaker.".Length);
216                 currentSpeaker = speakerPair[speakerName];
217                 nameLabel.text = currentSpeaker.name;
218                 spriteImage.sprite = speakerPortrait;
219                 portraitImage.GetComponent().sprite = spriteImage;
220                 portraitImage.SetActive(true);
221             }
222             if (tag.StartsWith("clue"))
223             {
224                 var clueName = tag.Substring("clue.".Length, tag.Length - "clue.".Length);
225                 collectedClue = cluePair[clueName];
226                 //add clue to the inventory
227                 Inventory.Instance.Add(collectedClue);
228             }
229         }
230     }

```

Figure 52: Lines of code for the Unity to use the Ink Editor.

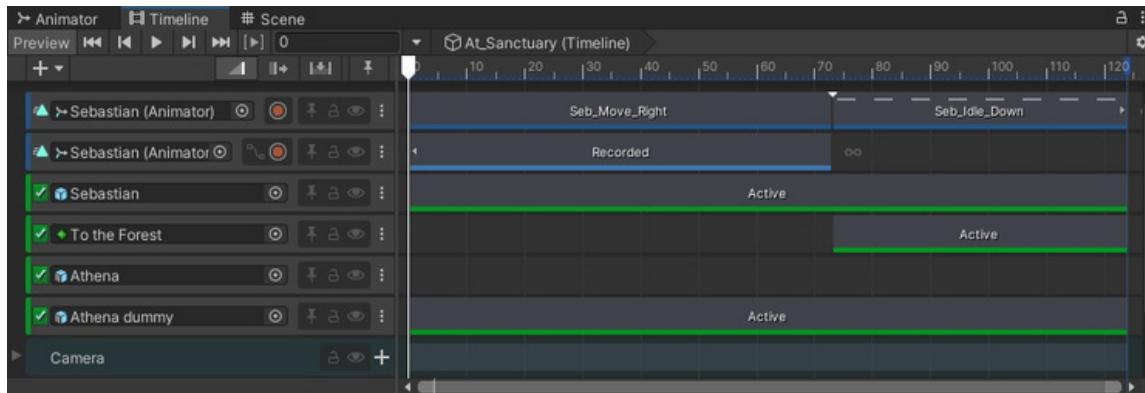


Figure 53: The timeline editor.

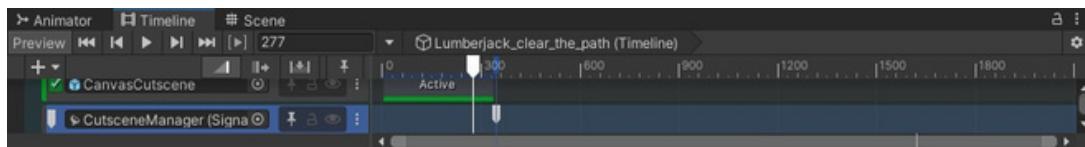


Figure 54: The signal on the timeline editor.

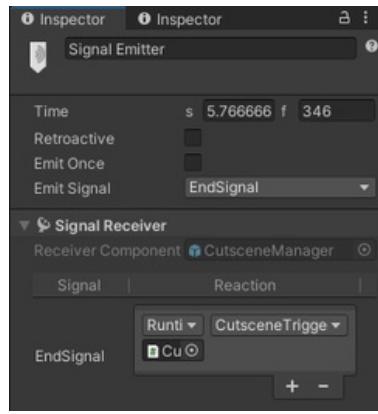


Figure 55: The signal on the inspector editor.

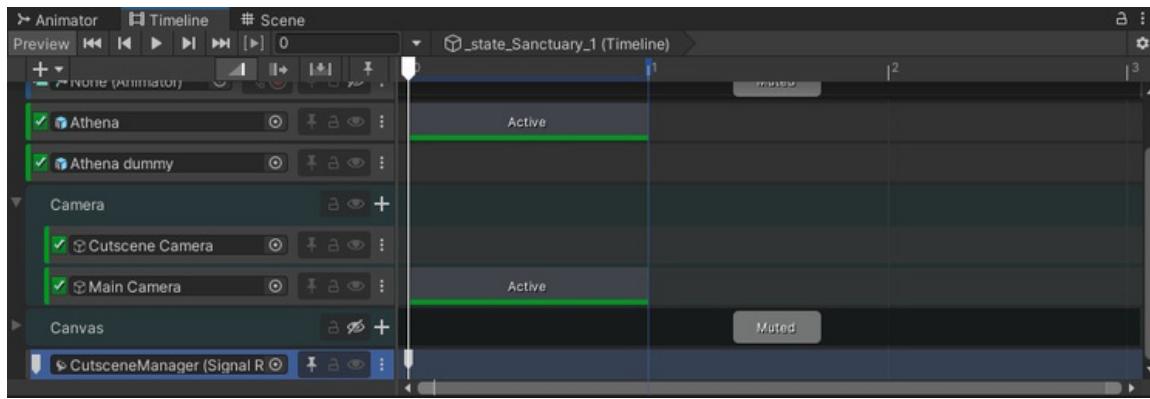


Figure 56: The one-frame timeline made for SceneState.

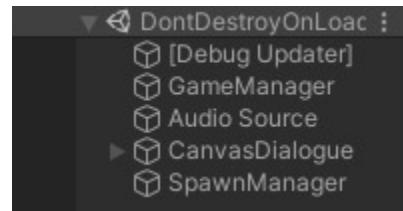


Figure 57: The objects that use DontDestroyOnLoad().

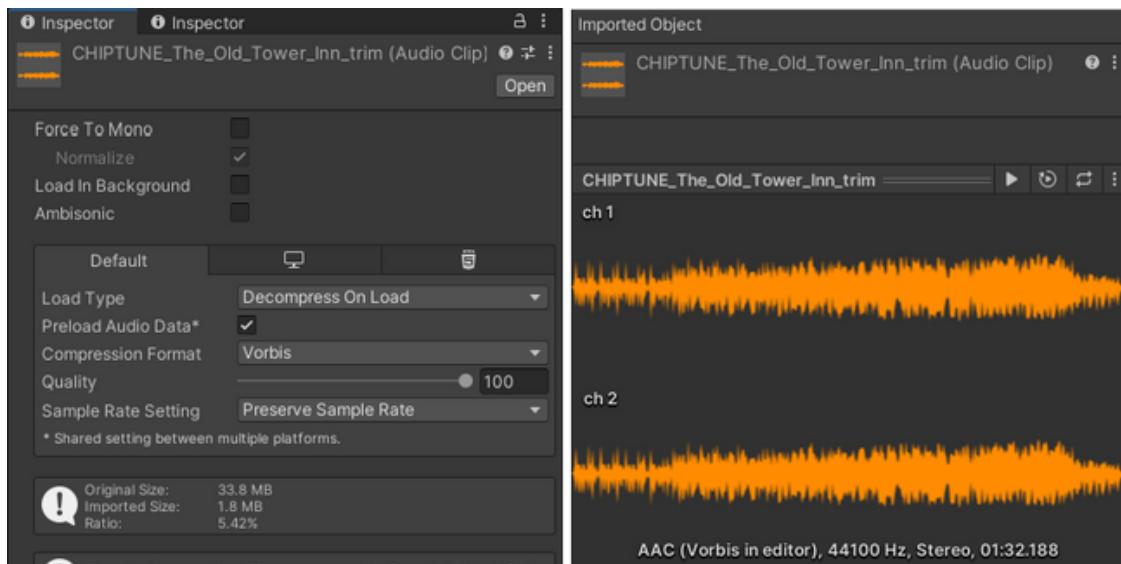


Figure 58: The audio component.

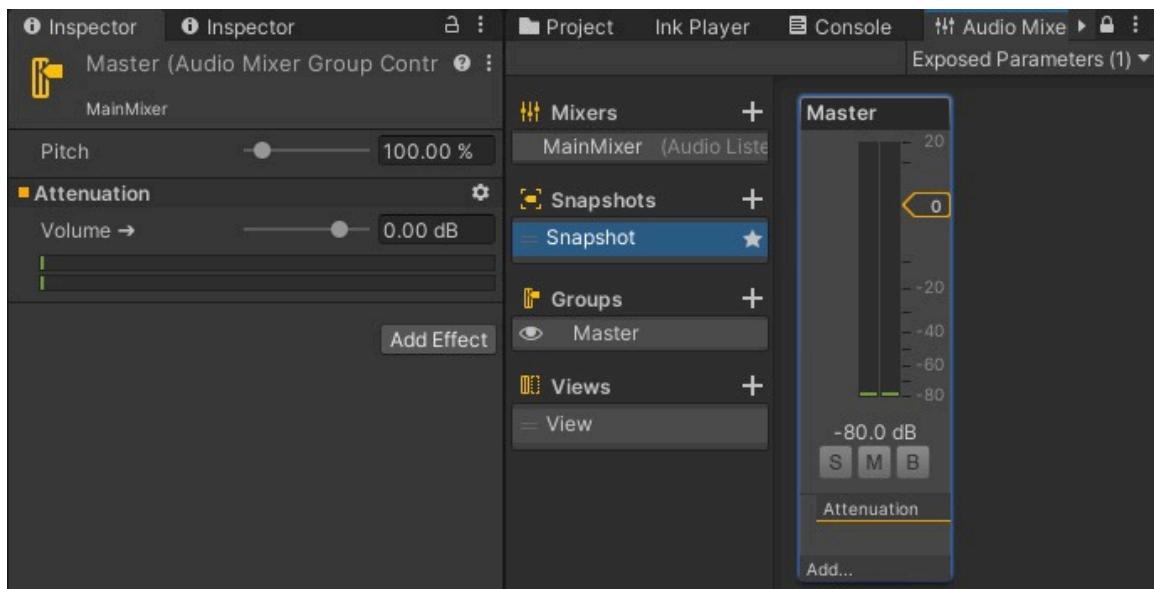


Figure 59: The main mixer asset.



Figure 60: The volume setting.



Figure 61: The GitHub website.

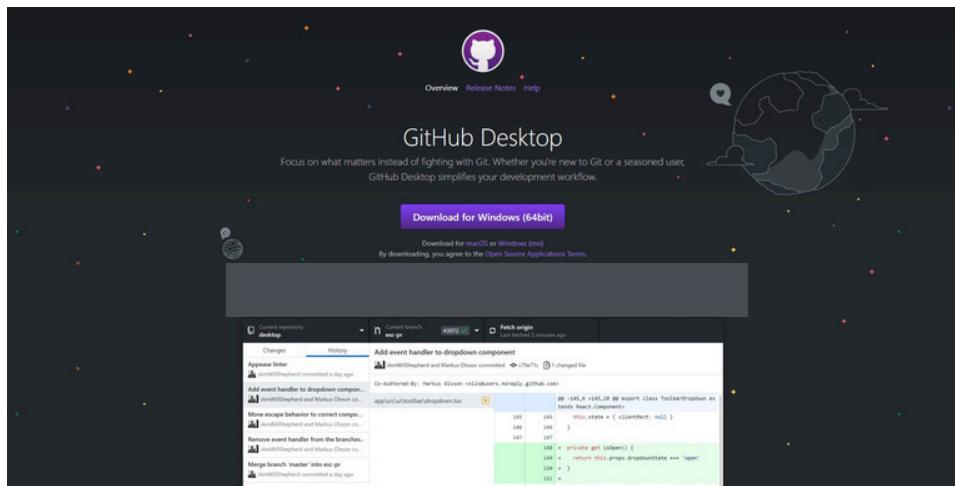


Figure 62: The GitHub desktop.

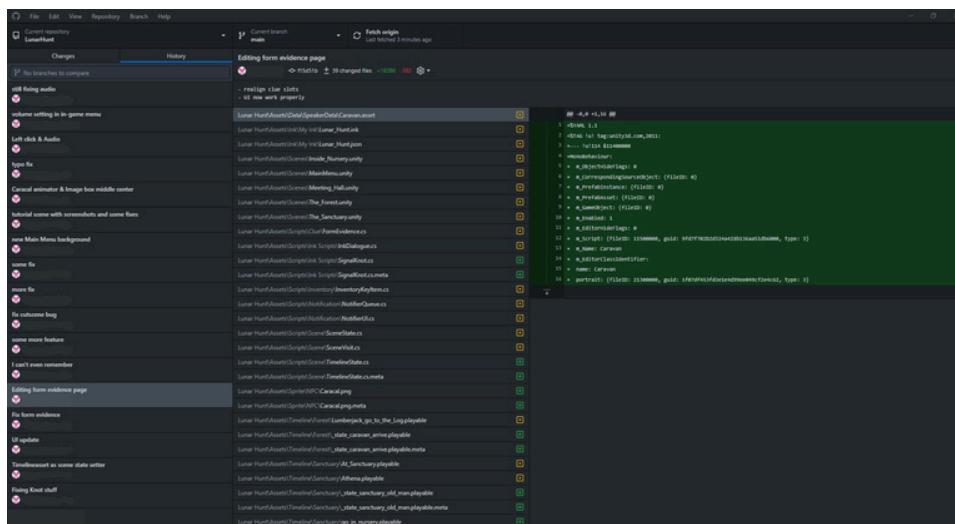


Figure 63: Github desktop's history list of project versions.



Figure 64: Game prototype on the web.

Section 1 of 4

แบบสอบถาม Lunar Hunt - Battle Against

แบบสอบถามนี้ใช้สำหรับการทดสอบความพึงพอใจในโปรดักของนักศึกษาปีที่ 4

เพศ (Gender) *

ชาย (Male)

หญิง (Female)

Other...

อายุ (Age) *

Short answer text

คุณมีความรู้ความเข้าใจเกี่ยวกับระบบการเล่นเกมแนว RPG มากน้อยเท่าใด? (How much do you know about RPG gameplay?) *

1 2 3 4 5

น้อยที่สุด (Bad) ○ ○ ○ ○ ○ มากที่สุด (Good)

After section 1 Continue to next section

Figure 65: Section 1 of the questionnaire asking for personal information

Section 2 of 4

Lunar Hunt Prototype

เกมต่อไปนี้เป็นเพียงตัวทดลองเล่นเท่านั้น ในตัวเกมเดิมอาจมีการเปลี่ยนแปลงของกราฟฟิกและเกมเพลย์ เล็กน้อย

กรุณายืดลิงค์ด้านล่างเพื่อทดสอบเกมก่อนดำเนินการทำแบบสอบถาม

<https://mysterybush.github.io/>

Figure 66: Section 2 of the questionnaire with link to game prototype

Section 3 of 4

ประเมินความพึงพอใจและความเหมาะสมของโปรดัก

x

:

Description (optional)

รายการประเมิน

ระดับความพึงพอใจ : 5 – มากที่สุด 4 – มาก 3 – ปานกลาง 2 – น้อย 1 – น้อยที่สุด
 Satisfaction level : 5 – Great 4 – Good 3 – Okay 2 – Bad 1 – Very Bad

ระยะเวลาที่ใช้ในเกมมีความเหมาะสมมากน้อยเท่าใด (Is the game's playtime length reasonable?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

ภาพกราฟฟิคในเกมมีความเหมาะสมกับตัวเกมมากน้อยเท่าใด? (How suitable is the game's graphic?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

ระบบของเกมมีความเหมาะสมกับตัวเกมมากน้อยเท่าใด? (How suitable is the game's system?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

เนื้อเรื่องในเกมมีความเหมาะสมและน่าสนใจมากน้อยเท่าใด? (How interesting is the game's storytelling?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

หลังจากการเล่น คุณตระหนักรู้ถึงผลกระทบของ Fake News มากน้อยเท่าใด? (After the game session, Are you more acknowledgeable on the effect of Fake News?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

หลังจากการเล่น คุณตระหนักรู้ถึง การคิดวิเคราะห์โดยใช้ข้อมูลที่น่าเชื่อถือมากน้อยเท่าใด (After the game session, Are you more acknowledgeable on Evidence-based thinking?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

ความพึงพอใจโดยรวมจากการเล่นเกมมีมากน้อยเท่าใด? (How satisfied are you with the game?) *

1 2 3 4 5

น้อยที่สุด (Very Bad)

มากที่สุด (Great)

Figure 67: Section 3 with questions about the game prototype

Section 4 of 4

ข้อเสนอแนะ คำติชม หรือความรู้สึกที่อยากรแชร์

ค่าตอบจากส่วนนี้จะช่วยในการปรับปรุงโปรเจกต์อีกด้วย

ข้อเสนอแนะ (Comment) *

Long answer text

Figure 68: Section 4 asking for suggestions and comments

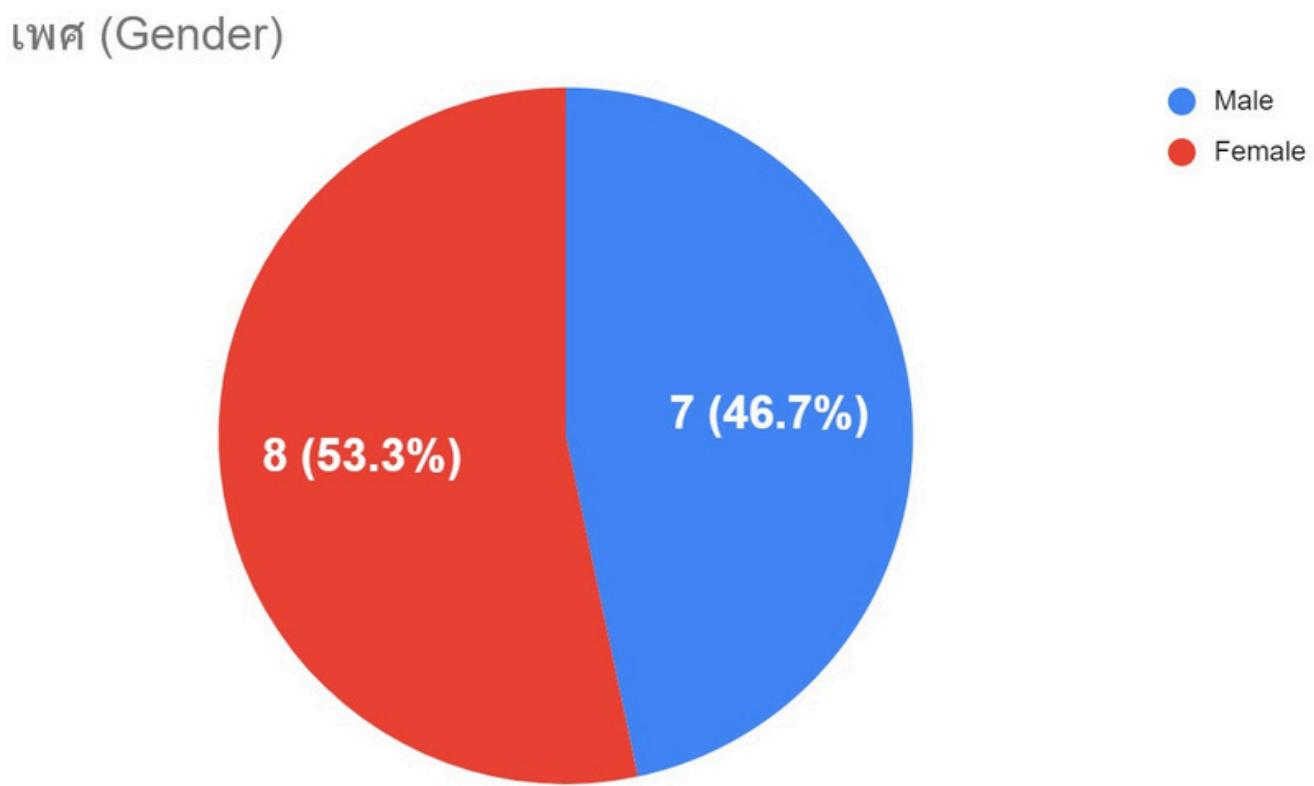


Figure 69: Statistics of gender

อายุ (Age)

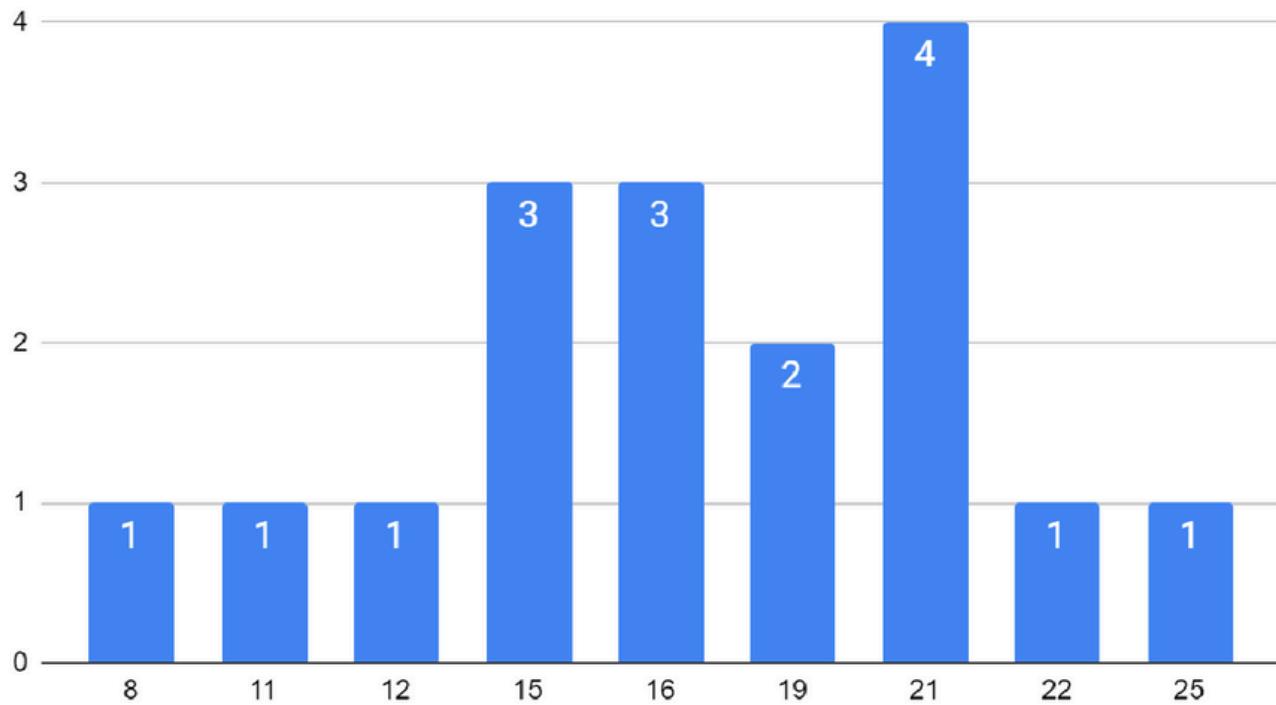


Figure 70: Statistics of age

คุณมีความรู้ความเข้าใจเกี่ยวกับระบบการเล่นเกมแนว RPG มากน้อยเท่าใด?
(How much do you know about RPG gameplay?)

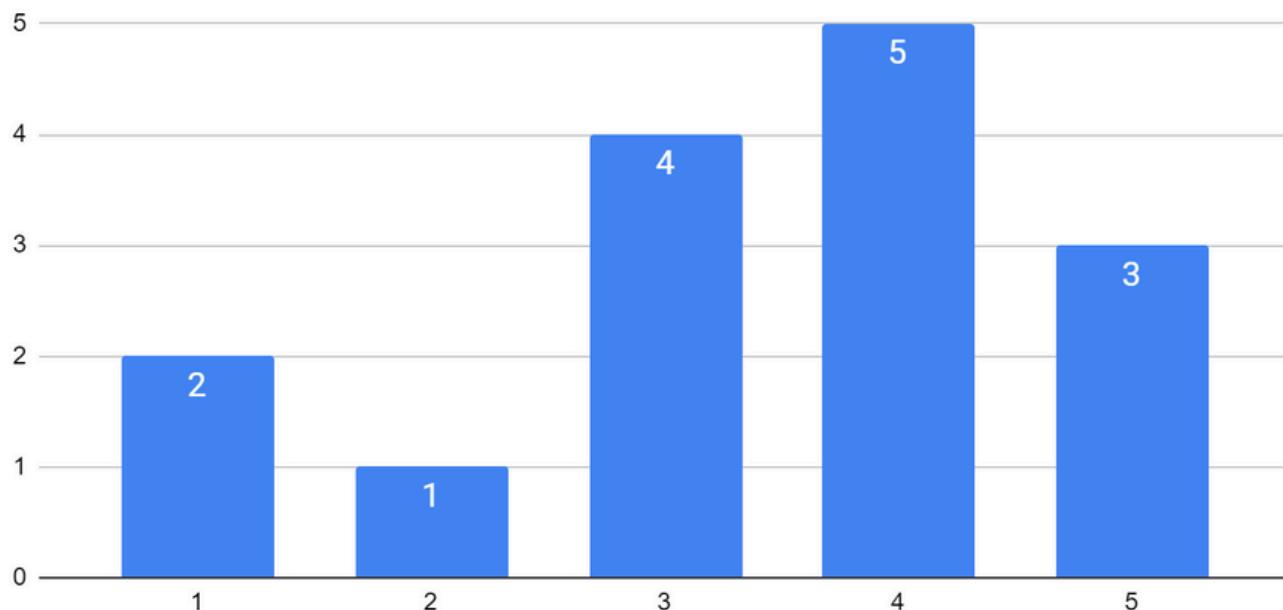


Figure 71: Statistics of “How much do you know about RPG gameplay?”

ระยะเวลาที่ใช้ในเกมมีความเหมาะสมมากน้อยเท่าใด
(Is the game's playtime length reasonable?)

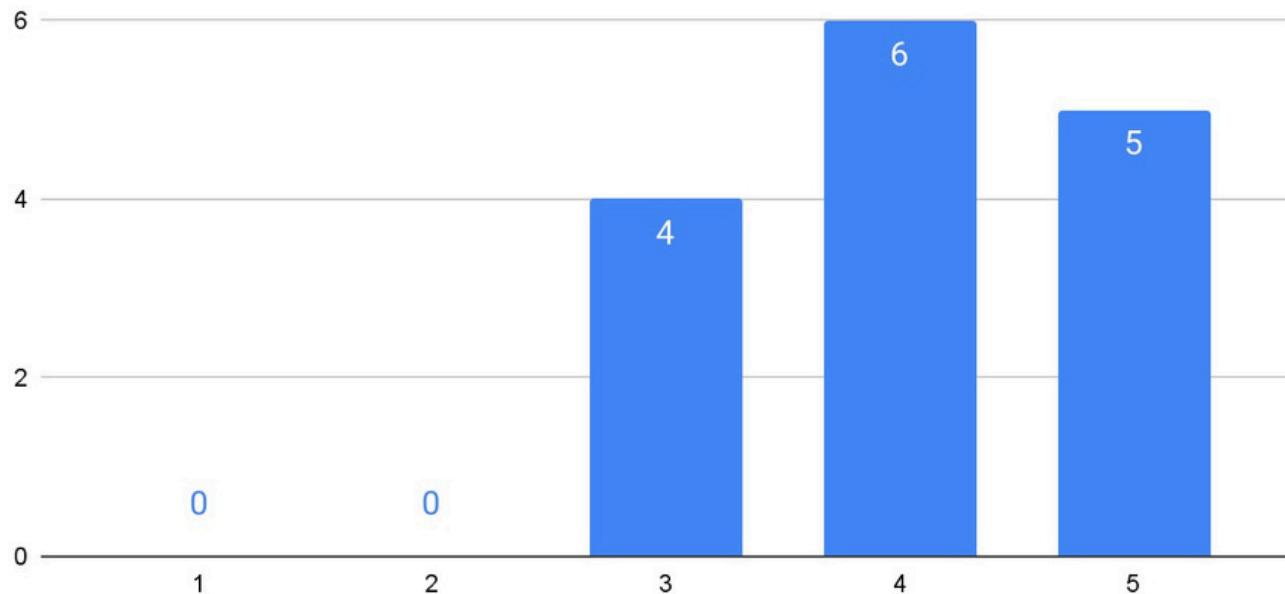


Figure 72: Statistics of “Is the game's playtime length reasonable?”

ภาพกราฟฟิคในเกมมีความเหมาะสมกับตัวเกมมากน้อยเท่าใด?
(How suitable is the game's graphics?)

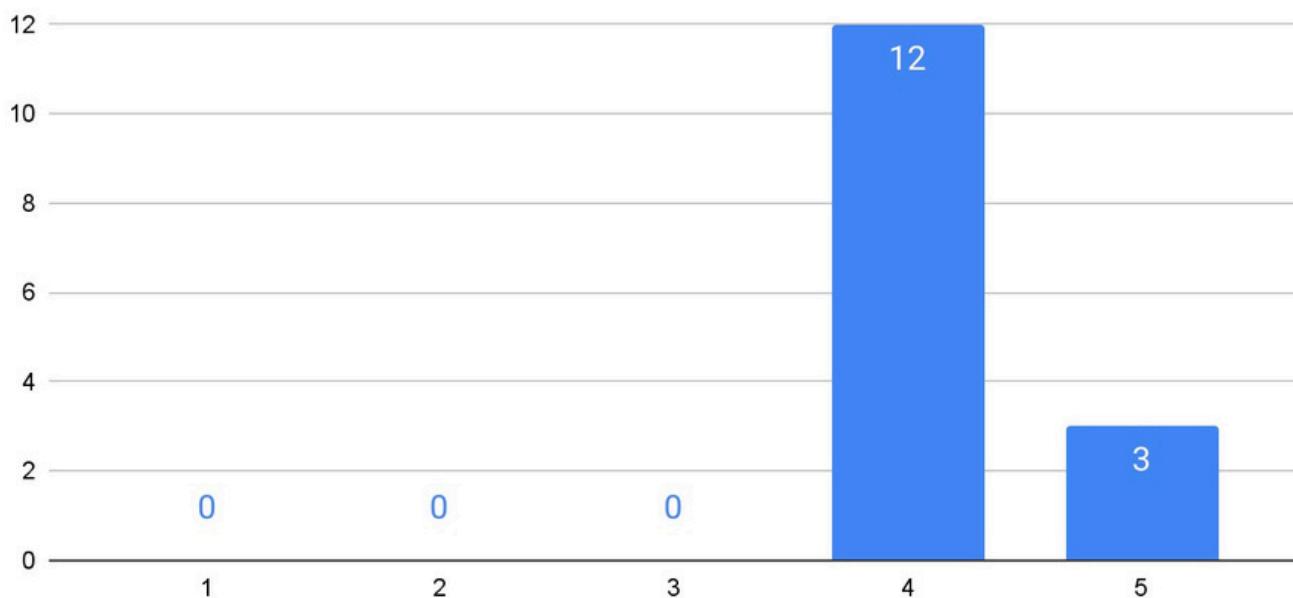


Figure 73: Statistics of “How suitable is the game's graphics?”

ระบบของเกมมีความเหมาะสมกับตัวเกมมากน้อยเท่าใด?
(How suitable is the game's system?)

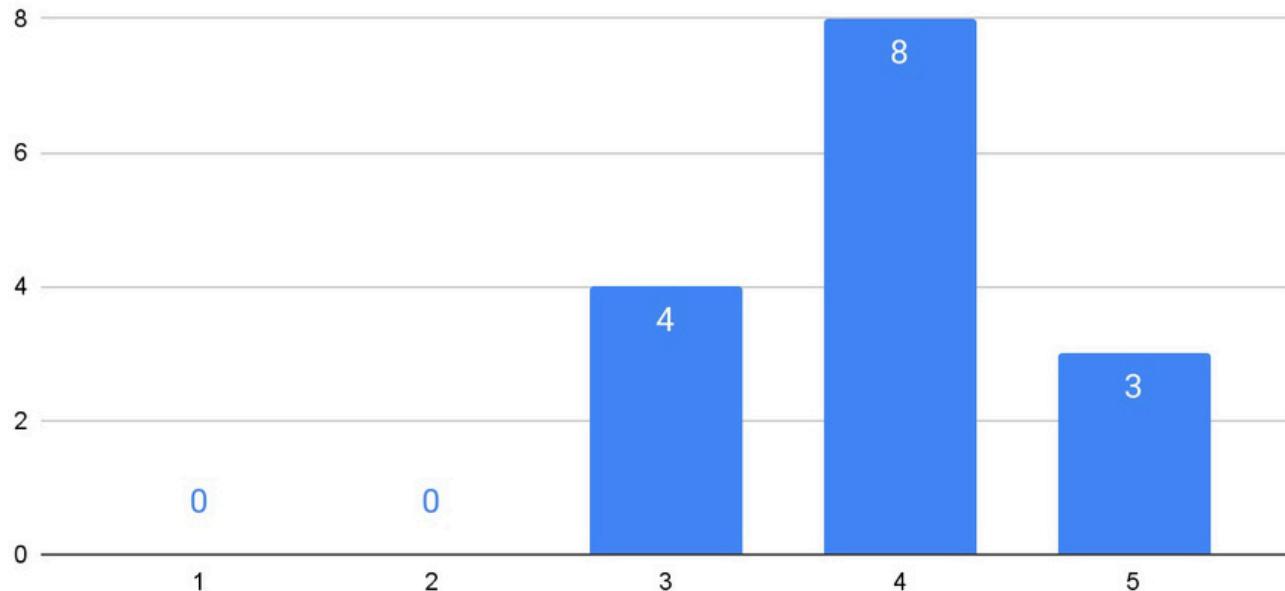


Figure 74: Statistics of “How suitable is the game's system?”

เนื้อเรื่องในเกมมีความเหมาะสมและน่าสนใจมากน้อยเท่าใด?
(How interesting is the game's storytelling?)

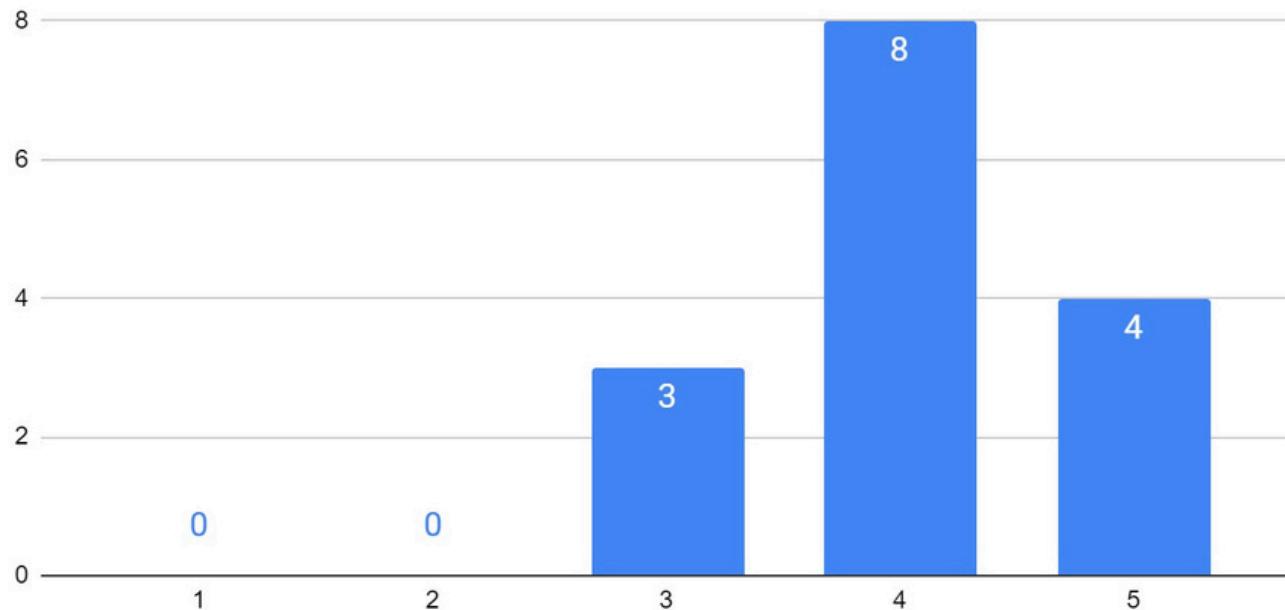


Figure 75: Statistics of “How interesting is the game's storytelling?”

หลังจากการเล่น คุณตระหนักได้ถึงผลกระทบของ Fake News มากน้อยเท่าใด?
 (After the game session, Are you more knowledgeable on the effect of Fake News?)

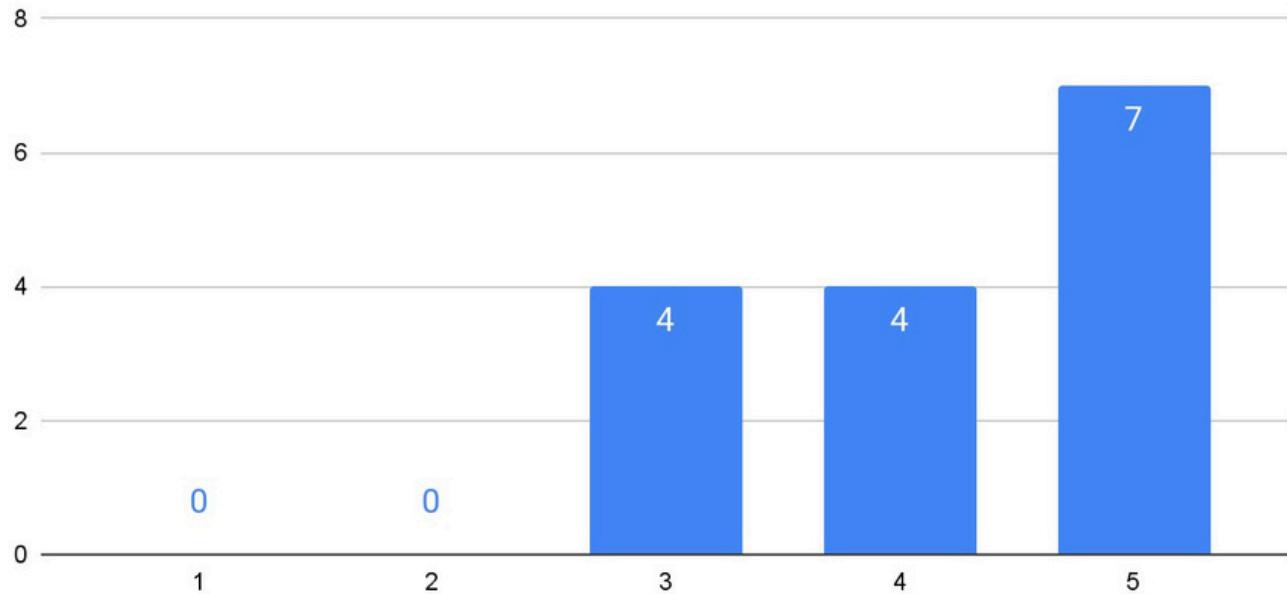


Figure 76: Statistics of “After the game session, Are you more knowledgeable on the effect of Fake News?”

หลังจากการเล่น คุณตระหนักได้ถึง การคิดวิเคราะห์โดยใช้ข้อมูลที่นำเสนอเพื่อมากรู้เท่าใด
 (After the game session, Are you more knowledgeable on Evidence-based thinking?)

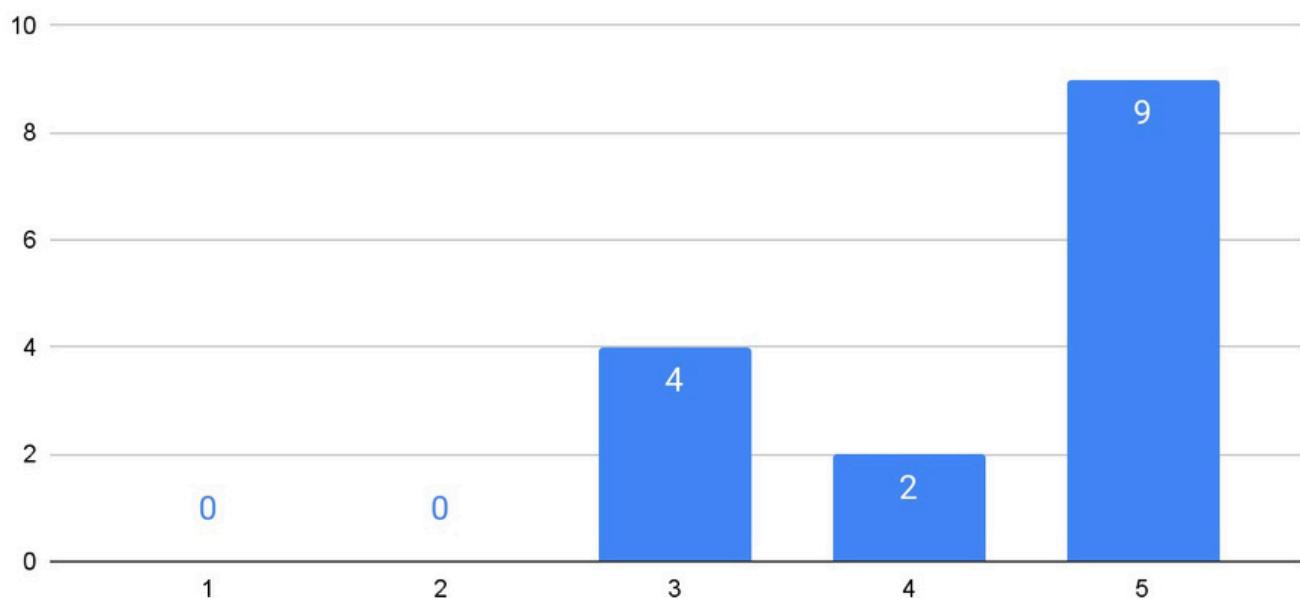


Figure 77: Statistics of “After the game session, Are you more knowledgeable on Evidence-based thinking?”

ความพึงพอใจโดยรวมจากการเล่นเกมมีมากน้อยเท่าใด?
(How satisfied are you with the game?)

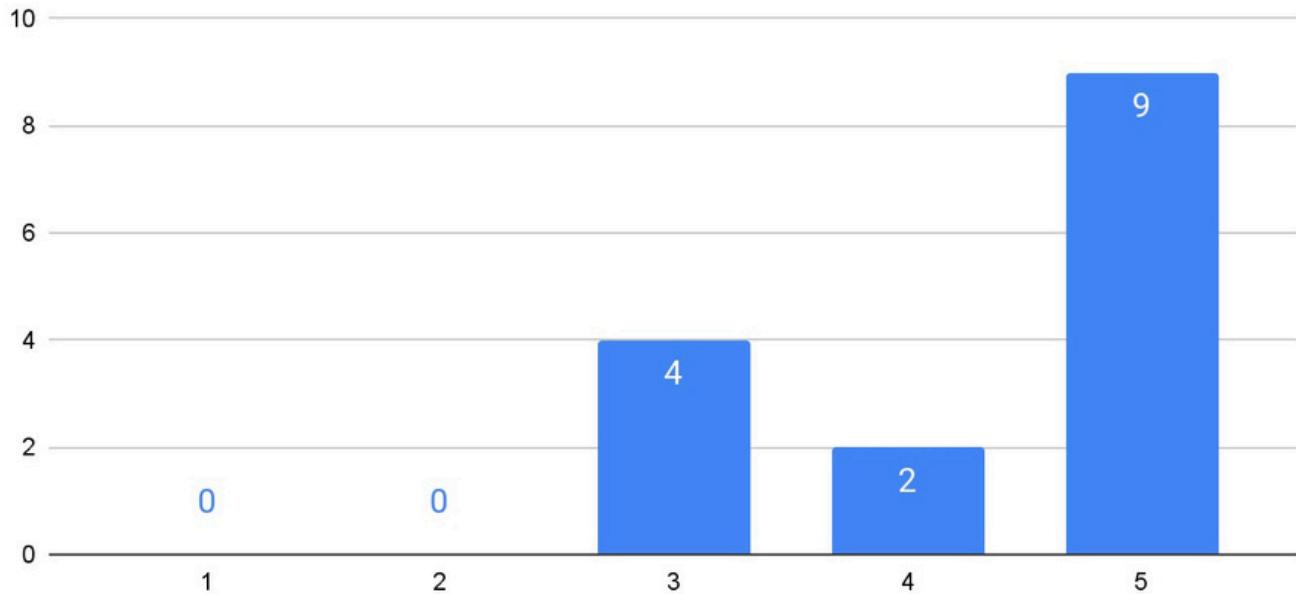


Figure 78: Statistics of “How satisfied are you with the game?”

ข้อเสนอแนะ (Comment)

I like this game very much. The only thing that don't like is the typo. For the suggestion, I want to make it a bit longer. Actually, what I meant by longer is that we could play longer, so that we can get more evidence.

ถ้าเป็นไปได้อยากให้ action ของปุ่มอยู่ตัวเดียว กับ การบีบภาพดูจะช่วยทำให้เก็บถูกเส้นใจได้มากขึ้น
อนาคตถ้าหากมีการต่อยอดมากกว่าการเพิ่ม soundtrack หรือเสียงตัวละครลงไปเล็กน้อยจะช่วยเพิ่มความบ่าสบลงขึ้น

should have some hint

อยากให้มีความซับซ้อนกว่าเดิม

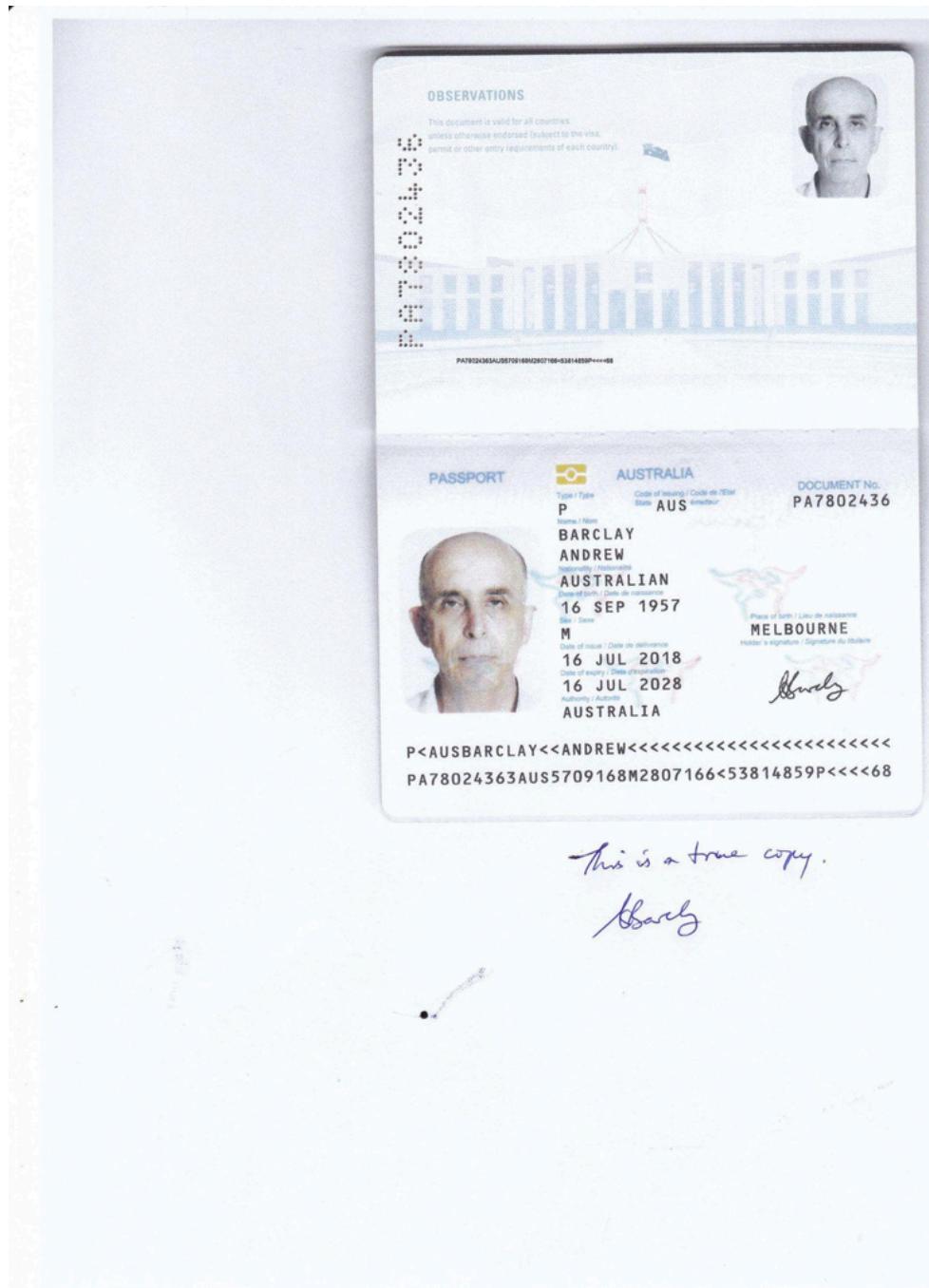
เก็บบ่ารักมากค่า สู้ๆค่า🌟

Nice game , interesting graphics

โดยรวมถือว่าดีมาก แต่อยากให้ตัวละครตอบที่กำลังพูดอยู่ใช้ลายเส้นเหมือนกัน และถ้าจะมีสีของตัวละครจะดีมาก

Figure 79: Suggestions from the questionnaires

Appendix



Proofreader's passport



Lunar Hunt's game prototype



<https://mysterybush.github.io/>

Welcome! Enjoy playing this story.

If you'd like to try writing one of your own, see the main Quill page.

--- Lunar Hunt ---

[Start Game](#)

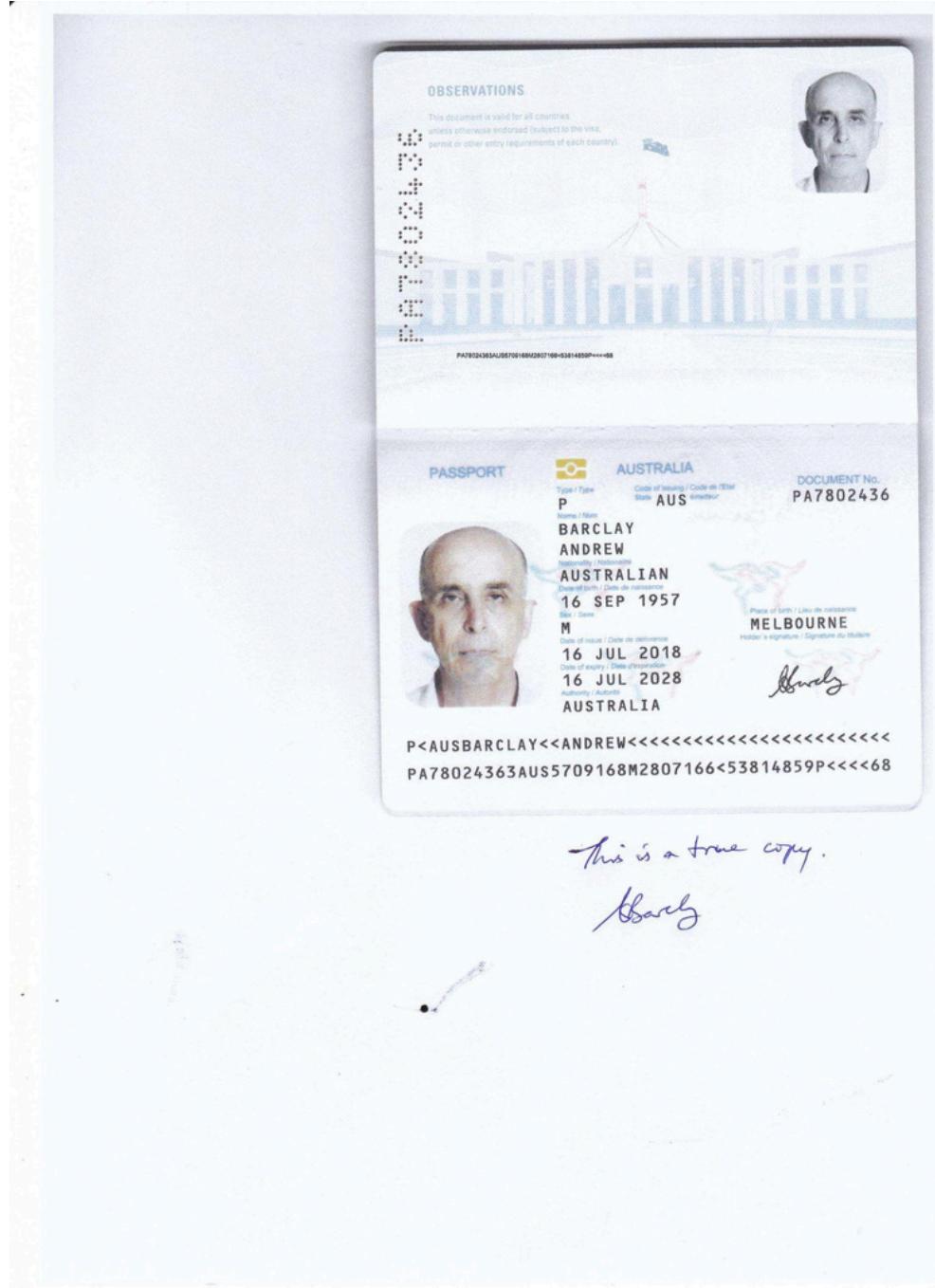
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[About](#)

Lunar Hunt's scriptwriting prototype



<http://jeejah.xyz/quill/play/2c5b9b6dnll>



Proofreader's passport