



**Lunar Hunt  
RPG Game**

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**Prince of Songkhla University International College**  
**A Report Submitted to respond the requirements of (142-455)**  
**Project in Digital Media and Animation II**  
**2nd Semester, Academic Year 2021**



## Project in Digital Media and Animation II

2nd Semester, Academic Year 2021

### **Report Submission Form**

#### **Lunar Hunt**

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Towards fulfillment of the requirement for Bachelor of Science Degree in  
Digital Media Program at  
Prince of Songkla University International College, Hat Yai Campus

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## Executive summary

### 1. Project title

Lunar Hunt

### 2. Project duration

7 December 2021 - 29 March 2022

### 3. Department, Faculty, and Institute

Prince of Songkhla University International College (PSUIC)

### 4. Project adviser / co-advisor

**Project Advisor:** Aj. Jitrapol Intarasirisawat

**Co-advisor:** Assist. Prof. Dr. Athitaya Nichot

### 5. Keywords

Misinformation; RPG game, 2D game, Fake news, Serious game, Pixel art;

### 6. Research area

Game development, Misinformation, Fake news, Pixel Art

## Abstract

"Lunar Hunt" is a game that educates players on the dangerous world of spreading misinformation. People today are exposed to and drowned in an endless amount of data. As a result, it is typical for information to be twisted in order to take advantage of people who are easily misled. To be more precise, misinformation can be transmitted through social media to entice others, such as teenagers and kindergarten children. These young individuals may lack critical thinking skills, making it difficult for them to identify whether or not the information they hear can be trusted. Thus, the purpose of this game project is to increase awareness and knowledge of fake news, and to take on misinformation. The game will be a 2D RPG featuring a tale of a young boy searching for his lost father in a nearby town. But after being interrupted by misinformation, he embarked on a quest to battle against fake news and discover the culprit. The game mechanics are intended to test the player's cognitive abilities to deal with misinformation through evidence-based thinking method.

# Chapter 1 Introduction

## 1. Research problem and its significance

One of the problems of today's world is the abundance of information that everyone has to consume. Naturally, not all information is perfect. Information can be misleading to target an unsuspecting victim or the information could stem from an unfiltered misunderstanding, which then spreads to others. One of the solutions to solve this problem is to create more awareness. Thus, game project Lunar Hunt, the 2D role-playing game, will help players become safer from fake news. The game can do so by providing game features to help with investigating information.

## 2. Objectives

- To make 2D role-playing game as a learning medium about fake news.
- To encourage players to make decisions based on evidence rather than personal belief.

## 3. Expected Outcomes

- The players have learned or practiced the method on how to perceive information.
- The players understand how misinformation can affect the lives of people.

## 4. Scope of the project

### 4.1 Project creation

- Create a 2D game with Unity engine

### 4.2 Target Group

- Age 13+
- Likes role-playing game

## 5. Required Equipment for the project

This section will talk about the equipment which are needed to work on our game project Lunar Hunt. The list will only show what Tonnam Somchanakij used to work on his responsibilities on game scriptwriting, game design, and game development.

### 5.1 Hardware

Hardware is the physical equipment needed to work on our game project Lunar Hunt.

#### 5.1.1 Personal Computer

##### Specification

**Computer Model** Legion Y740-17IRHg

**CPU** Intel(R) Core(TM) i7-9750H CPU @ 2.60GHz 2.59Ghz

**RAM** 32 GB

**GPU** Nvidia Geforce RTX 2060

#### 5.1.2 Mouse

**Model** RZ01-0265 Gaming Mouse

#### 5.1.3 Keyboard

**Model** Logitech K200

#### 5.1.3 Computer Monitor

**Model** LG 22MP47HQ-P

### 5.2 Software

Software are programs uses to work on our game project Lunar Hunt.

### **5.2.1 Unity Engine**

Unity Engine is a game development software that is capable of making games. Lunar Hunt will use Unity Engine to create 2D game

### **5.2.2 Visual Studio 2019**

Visual Studio 2019 is an integrated development environment (IDE) used to write computer programs. In project Lunar Hunt it is used to write C# code to make the game work.

### **5.2.3 Figma**

Figma is a vector graphics editor suited for prototyping early design. Flowcharts and early user interface design can be created using Figma.

### **5.2.4 Google Docs**

Google Docs is a web application for writing texts and documents. Scriptwriting, and game design concepts are mostly written in Google Docs.

### **5.2.5 Ink by Inkle**

Ink is “a narrative scripting language for games” that helps with writing stories and shows it as a prototype for testing.

### **5.2.6 Github**

Github offers services of hosting cloud-based versions control systems. This makes it easier to develop game prototypes with records of prototype versions.

## Chapter 2 Literature Review

### **1. Background of the problem**

#### **1.1 Misinformation and fake news**

##### **1.1.1 The possible society outcomes of misinformation**

Previous research studies (Anderson & Rainie, 2017) have shown that there are many outlooks on how society will handle online misinformation. These outlooks came from the 1,116 respondents who were asked what will happen in the next ten years in the world of online information whether fake news will take over the internet, or there will be effective approaches to encounter fake news. This research has evaluated the respondents' explanation into the following five different outcomes, including, "Not improve because of human nature", "Not improve because technology becomes more challenging", "Improve because technology helps filter misinformation", "Improve because people are adaptable", and "It is up to funding support on the production of accurate news and educating public how to identify fake news and reliable sources of information.

Based on the findings in this article, project Lunar Hunt was initiated with the aim to help society fight against fake news. A serious game will be developed to raise public awareness about the prevalence and the effects of fake news and encourage players to rely on evidence when deciding whether the information can be trusted.

### **2. Related Work**

#### **2.1 Studies on games for education**

##### **2.2.1 Serious Games**

As defined from Classifying Serious Games: the G/P/S model (Djaouti et al., 2011), Serious Games are games developed to connect knowledge and technology for a serious solution. An example of serious games for education is Lure of the Labyrinth. The game is a mathematical multiplayer online game designed for the classroom to teach

children mathematics. Serious games were also used in healthcare. For instance, Fatworld is a management game, in which players need to manage the daily life of their avatar to maintain a good healthy life. September 12th was developed for a political purpose. The game basically simulates possible consequences of players' actions where they may choose to kill innocent villagers instead of terrorists.

### **2.2.2 History of games and education**

The research paper Video Games in Education (Squire, 2003) has described that games have been used for educational purposes throughout history. Examples of serious games include AlgaBlaster, Reader Rabbit, or Knowledge Munchers which were used to improve the study's exercises. Video games in simulation and strategy games also help learners understand a concept of the system according to reality. High detailed simulation games can be used in risker practices such as military training for pilots. Low detailed simulation games are helpful to present important concepts in a more simple approach such as SimEarth which simulates natural systems of the earth. The same research mentions other academic work by Dominick on videogames and violence stated there has been no clear evidence of the game's side effects that playing games will lead to violence.

### **2.2.3 Potential of educational games**

In Harnessing The Power of Games in Education (Squire & Jenkins, 2003), the research gives five examples of video games for education. The first example is Civilization III to learn about history. The second example is to use video games to improve historical thinking by role-playing as people from historical time. Third example is Prospero's Island, a historical game based on the story by Shakespeare which encourages literary analysis. The Fourth example is to include the surrounding environment as gameplay for video games which can be achieved with tools such as PDA. Fifth example is the game called "Biohazard: Hot Zone", where an emergency situation, such as the gas attack in shopping malls, is simulated. The game can be potentially used to teach players how to handle such a critical situation.

#### 2.2.4 Using narrative forms from role-playing games to education

In a research paper titled Linking capabilities to functionings: adapting narrative forms from role-playing games to education (Cherville, 2016), the study has implemented the education system to mimic how role-playing games progress its objective. The teacher assumes an NPC's role, who gives out different objectives for students to complete according to what previous tasks they have done. The scores' evaluations are used as experience points where students will keep collecting them to level up, similar to role-playing games.

### 2.2 Related game projects

#### 2.3.1 The Bad News game

The bad news game is an interactive online website game. This game allows players to assume the role of misinformation creator. The Gameplay is a parody of using popular Twitter apps to spread false information. The player can choose between 2 options to interact with the game. (Roozenbeek & van der Linden, 2019)

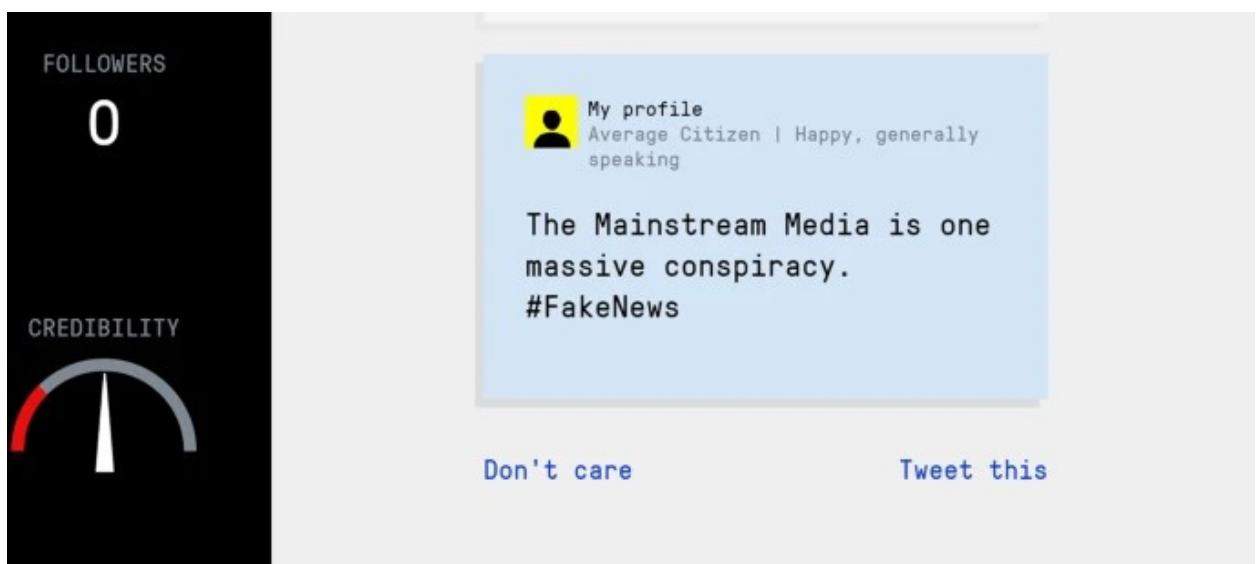


Figure 1: The Bad News game

In comparison to our game, the Bad News game was designed as a web game which controls how to spread fake news like using social media applications while Lunar Hunt will be a role-playing game in which players will roleplay the main character to find evidence. Lunar Hunt will use more in-game environment and game mechanics that most people are familiar with as compared to the Bad News game. The following table concludes the comparison.

<b>The Bad News game</b>	<b>Lunar Hunt</b>
Web-like browsing	Role-Playing Game
Learn by making fake news	Learn by finding evidence
Choose between 2 options to play	Several input needed ie. walking, interacting.

Table 1: Comparison between Fake It To Make It and Lunar Hunt

### 2.3.2 Factitious

Factitious, released by the American University Game Lab, focuses on testing players to find out if an online news is real or fake. The gameplay includes a gesture interface to swipe right for real and left for fake, showing hints of a news source to help players detect fake news. (How the Factitious news game helps people learn to detect fake news, Hone, 2018)



Figure 2: Factitious gameplay

In comparison to our game, Factitious was designed as a web game which feels like reading news on mobile devices while Lunar Hunt will be a role-playing game in which players will roleplay the main character to find evidence. Lunar Hunt will use more in-game environment and game mechanics that most people are familiar with as compared to Factitious. The following table concludes the comparison.

Factitious	Lunar Hunt
Reading news in mobile device	Role-Playing Game
Learn by spotting fake news	Learn by finding evidence
Swipe left or right to answer.	Several input needed ie. walking, interacting.

Table 2: Comparison between Factitious and Lunar Hunt

### 2.3.3 Fake It To Make It

Fake It To Make It is “a social-impact game about fake news”. The game was created to increase player awareness on fake news (Warner, 2017). The game mechanics make the player become the fake news website manager to lure people into viewing ads for money.

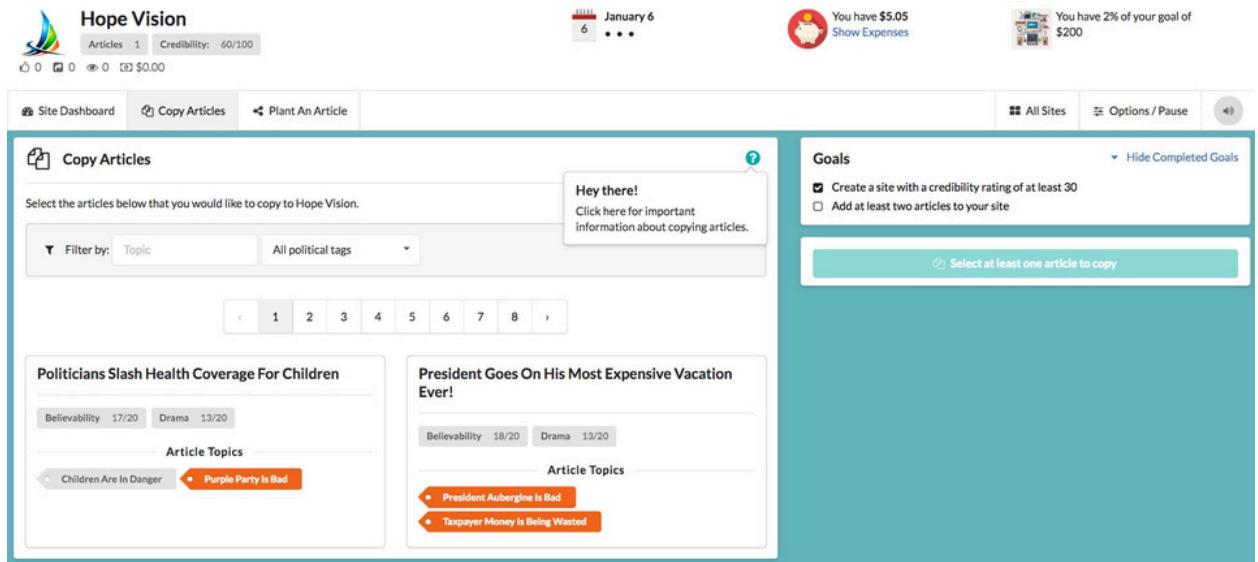


Figure 3: Fake It To Make It gameplay

In comparison to our game, Fake It To Make It was designed as a business management game in which players have to make misleading news to get more traffics and money while Lunar Hunt will be a role-playing game in which players will roleplay the main character to find evidence. Lunar Hunt will use a more in-game environment as compared to Fake It To Make It. The following table concludes the comparison.

<b>Fake It To Make It</b>	<b>Lunar Hunt</b>
Fake news website manager	Role-Playing Game
Learn by spreading fake news	Learn by finding evidence

Table 3: Comparison between Fake It To Make It and Lunar Hunt

### **2.3 Influence of game mechanics from existing games**

Our Lunar Hunt game design, especially the gameplay and concept of pixel art games, is influenced by previous game titles.

#### **1.4.1 LiEat**

LiEat (Miwashiba, 2014) is an RPG game with a story about a con artist who adopts a girl who can eat manifested lies. The game mechanic is straightforward thus the game gives less feel of a visual novel game. For game mechanics, LiEat has enough features for its storytelling. Players can move around as one of the game characters and interact with other NPCs and objects. The game has a battle system where players can fight the enemy. However, such a battle is not challenging.



Figure 4: LiEat with dialogue box



Figure 5: LiEat in battle



Figure 6: LiEat portraits scene

#### Similar features

- Made in 2D with Pixel Art Style
- Top-down view
- A role-playing game that feels more like a visual novel

In comparison to our game, LiEat was designed as a role-playing game to tell the story of the main characters solving the lies of other culprits while Lunar Hunt will be a role-playing game to tell the story of the main character finding evidence among the town of fake news. The following table concludes the comparison.

<b>LiEat</b>	<b>Lunar Hunt</b>
Turn-based combat system	No combat in the game
Can not move diagonally	Can move diagonally

Table 4: Comparison between LiEat and Lunar Hunt

What LiEat has for influence in Lunar Hunt, is the style of storytelling and its aesthetic style of using pixel arts as visuals. LiEat with the world settings of medieval fantasy can be used as one of the references for Lunar Hunt world settings.

#### 1.4.2 CrossCode

CrossCode (Radical Fish Games, 2018) is an action-RPG game about characters playing the game in their world. This game has an open-ended world in which enemies are scattered around the map. The puzzles in this game include interactable objects around the map. There are many game mechanics in CrossCode because it is an action-RPG game that has to keep players engaged. CrossCode has an open world map with enemies to fight and interactive puzzles to solve. The main story of CrossCode gives players tasks to complete to progress the story, these tasks include talking to an NPC, fight certain enemies, explore and find another town etc.



Figure 7: CrossCode exploration and combat



Figure 8: CrossCode map layout

### Similar features

- Made in 2D with Pixel Art Style
- Top down view
- Each region has room for player to explore

In comparison to our game, CrossCode was designed as an action role-playing game with lots of features to entertain the player with story, puzzles, and battle system while Lunar Hunt will be a role-playing game which focuses more on telling the story and has mechanics of connecting evidence. Lunar Hunt will use more game mechanics to simulate connecting evidence in the story as compared to CrossCode. The following table concludes the comparison.

<b>CrossCode</b>	<b>Lunar Hunt</b>
Has different routes of exploration in the game's maps	Has simple route of the game maps
Progress the story by battle, puzzle, and other interaction	Focus on connecting evidences to solve the problem

Table 5: Comparison between CrossCode and Lunar Hunt

What CrossCode has for influence in Lunar Hunt is its combat system and the feel of exploration in the open world filled with puzzles. The art style also uses pixel art which can be used as one of the studies on how action can be animated and used in pixel art.

## Chapter 3 Methodology

### Preliminary design and development plan

#### 1. Planning Process

##### 1.1 Game Concept Design / Game Mechanic design

The game mechanic design takes priority on the necessary features first. These necessary features are often very common among video games in the similar genres. In particular, Lunar Hunt is a role-playing game, which will include features that typical role-playing games commonly have, including, speech dialogues, game maps, collectible items, interactable NPCs

The game design will then focus on what game mechanics will make Lunar Hunt different from other games. Besides using typical game mechanics commonly used in most RPG games, a quest system will be introduced in Lunar Hunt. In particular, when the main character, Sebastian, takes a quest from an NPC, he will have multiple choices to decide an answer. The quest will reward players for choosing the right answer which requires them to gather evidence before making decisions.

In the game project Lunar Hunt, there are designs that focus on the mechanics of the game. These include ideas of how these features will work out, and early visual design on how they could work

The screenshot shows a Google Doc with the title 'Lunar Hunt: Game Design Document'. The left sidebar contains a table of contents with sections like 'Game Structure', 'Game Play', 'Basic Control', 'Combat Control', and 'Levels'. The main content area is titled 'Game Play' and contains a 'Basic Control' section. This section includes a table mapping buttons/mouse actions to game movements and interactions.

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.

Figure 9: The game design idea written in Google Doc

## 1.2 Game Character design

Designing characters is another important process to keep players engaged in role-playing games. They should make the player think they are real and capable of having impacts in the story of the game.

When designing the characters, it is commonly started with the question “What is the role of this character?”. Later on, the concept of visual design and character personality will be based on that said role. For example, in Lunar Hunt, Sebastian is the main protagonist who has just arrived in the town and is determined to search around the town for evidence. Therefore, his character will be designed with visual elements, including rucksacks and forest hunting attire to help when investigating the area around the town. He is given a skeptic personality compared to other characters to make him a good candidate to solve the problems in Lunar Hunt.

## 1.3 Game scriptwriting

Role-playing games require stories to keep players engaged. Lunar Hunt lets players read the games' story through the dialogue box which players will keep reading in the game. Story writing in video games is different from story writing in movies or plays. The complexity of writing a story will be affected by how much control and interaction the player can do in the game.

### 1.3.1 Story writing

The priority in story writing is to write how the story will flow from start to finish. Lunar Hunt's lore was designed in the big picture first, which consists of “what will this chapter be about?”.

The scriptwriting draft was done mostly in google doc. Which will be used in Ink editor on the making process. This report's section includes the synopsis.

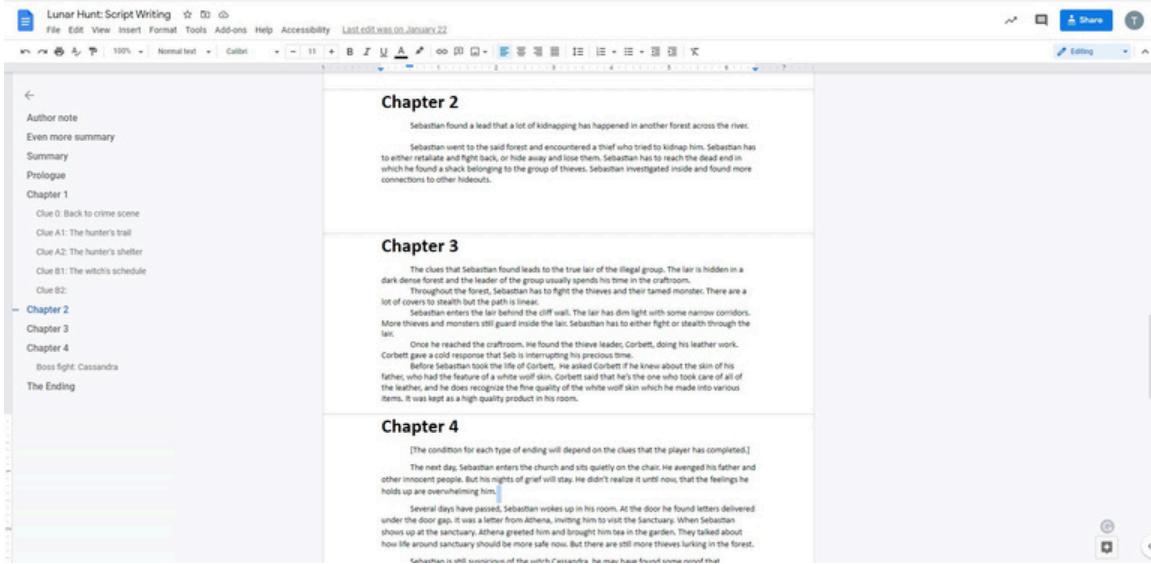


Figure 10: The written scripts in Google Doc

## Synopsis

Sebastian, a half-beast race which is constantly being hunted, traveled with his father to reach a safe place, The Sanctuary. However, just before they reach the town, a thief has kidnapped Sebastian's father and left Sebastian behind. Sebastian had no leads to find the thief so he started searching for clues from The Sanctuary.

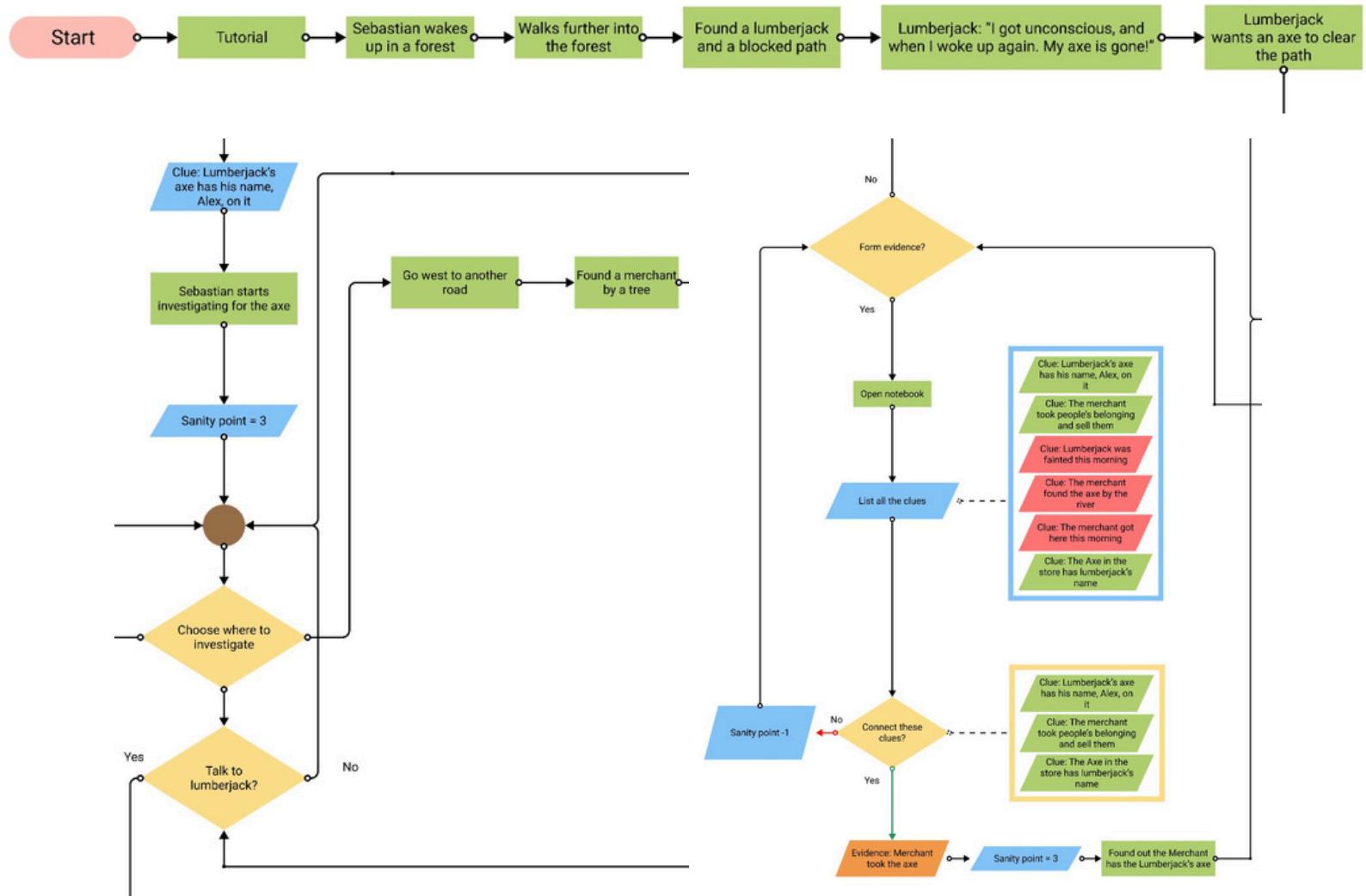
Sebastian had suspected that the town's leader, Cassandra, could be the culprit. He still accepts Athena, the witch apprentice, to help find other leads about his missing father. During his investigation, he found out about Cassandra's acts of spreading misinformation. This made Sebastian plan to stop Cassandra's scheme and expose her wrongdoings. In the end, Sebastian continues his search for his father and found him locked in the basement. Sebastian stays in the town to keep other people safe.

### 1.3.2 Game script flowchart

The dialogues and scenes in Lunar Hunt may change depending on the player's actions in the game. It is important to have a roadmap on how the game will progress depending on different conditions. For the key story progress in Lunar Hunt, it is manageable to make a flowchart on how the story can progress. On a smaller scale like managing independent tasks, it is also manageable to write the game script in flowchart.

### 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"



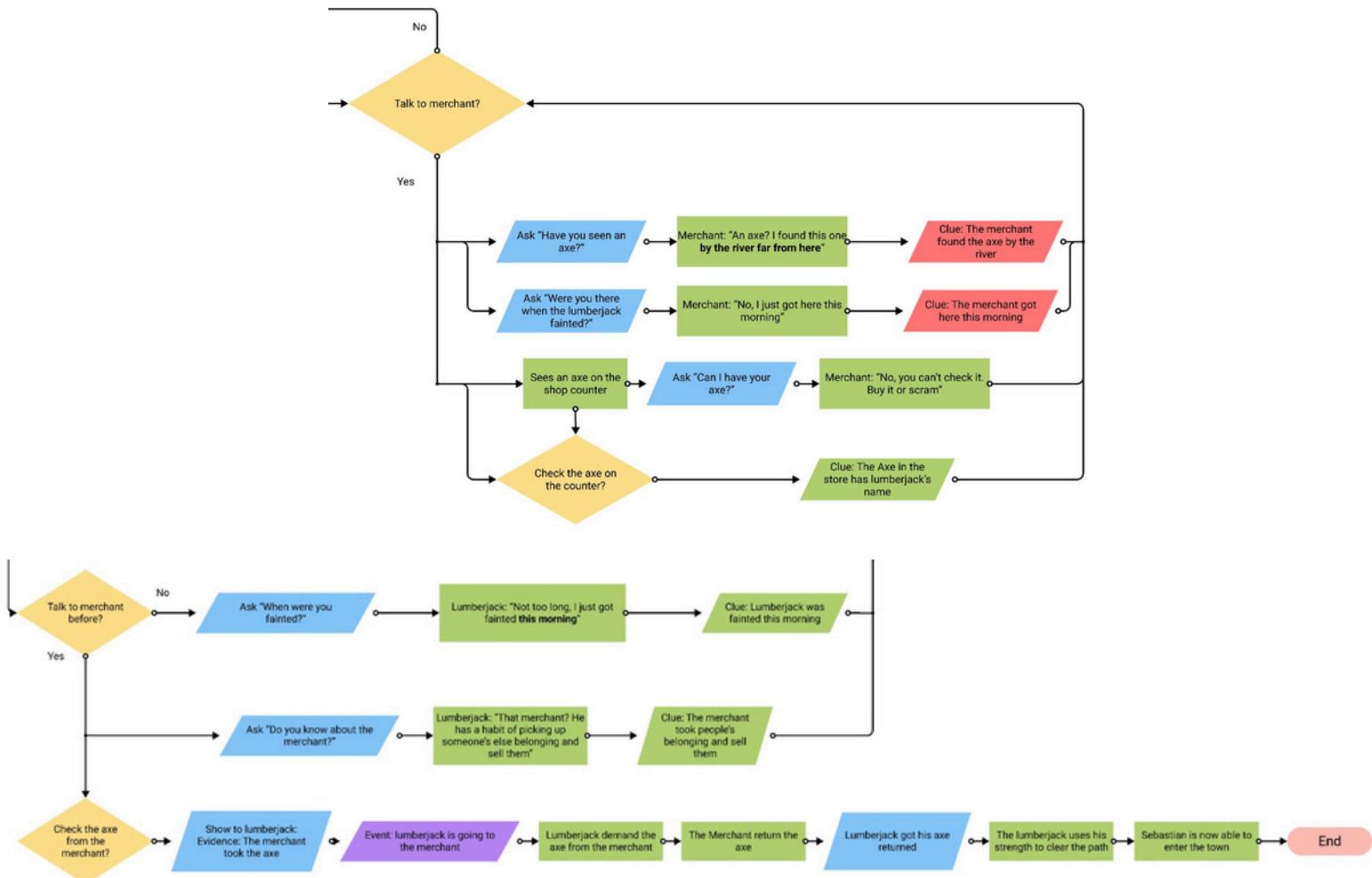


Figure 11: A game script flowchart for chapter procedure

## 1.3 Draft of Testing Process Evaluation and Finding

### Data collection design

This design of data collection will be used after the project makes a testable prototype. This design is subjective to change when there's a better implementation.

#### 1.3.1 Population and sample

In order to test the game, the chosen population should at least have certain characteristics to give some structured answers. The required characteristics are as follows.

- Patient enough to read game dialogue (Therefore, prefer an age of 13+)
- Has an interest in video games
- Has an interest in role-playing games
- Has an interest in anime-related content

#### 1.3.2 Statistical tool

The preferred statistical tool design is the questionnaire. The reason behind is its flexibility to give out to other people in which they are free to answer anytime they are able to.

The questionnaire is designed to have options to answer in ratings of 1 to 5. The example of questions is as follows.

- Is the game's playtime length reasonable?
- How suitable is the game's graphics?
- How suitable is the game's system?
- How interesting is the game's storytelling?
- After the game session, Are you more knowledgeable on the effect of Fake News?

- After the game session, Are you more knowledgeable on Evidence-based thinking?
- How satisfied are you with the game?

## 2. Creation Process

During the creation process, the researcher had the role of developing the game through scriptwriting and utilizing the Unity engine.

### 2.1 Scriptwriting

Writing the story is important for a game, but the method is not quite the same as writing a story for a movie script. Scriptwriting for video games would have to take into account that the player has the ability to interact with the game. This would be even more dramatized on role playing games (RPG), which would have more options for the response choices in the game's conversation.

#### 2.1.1 Scriptwriting flowchart

Lunar Hunt is a story driven game. However, what made the story more complicated was the mechanics of choosing responses in the game. Therefore, the needs of drafting branches of questions and answers should be planned.

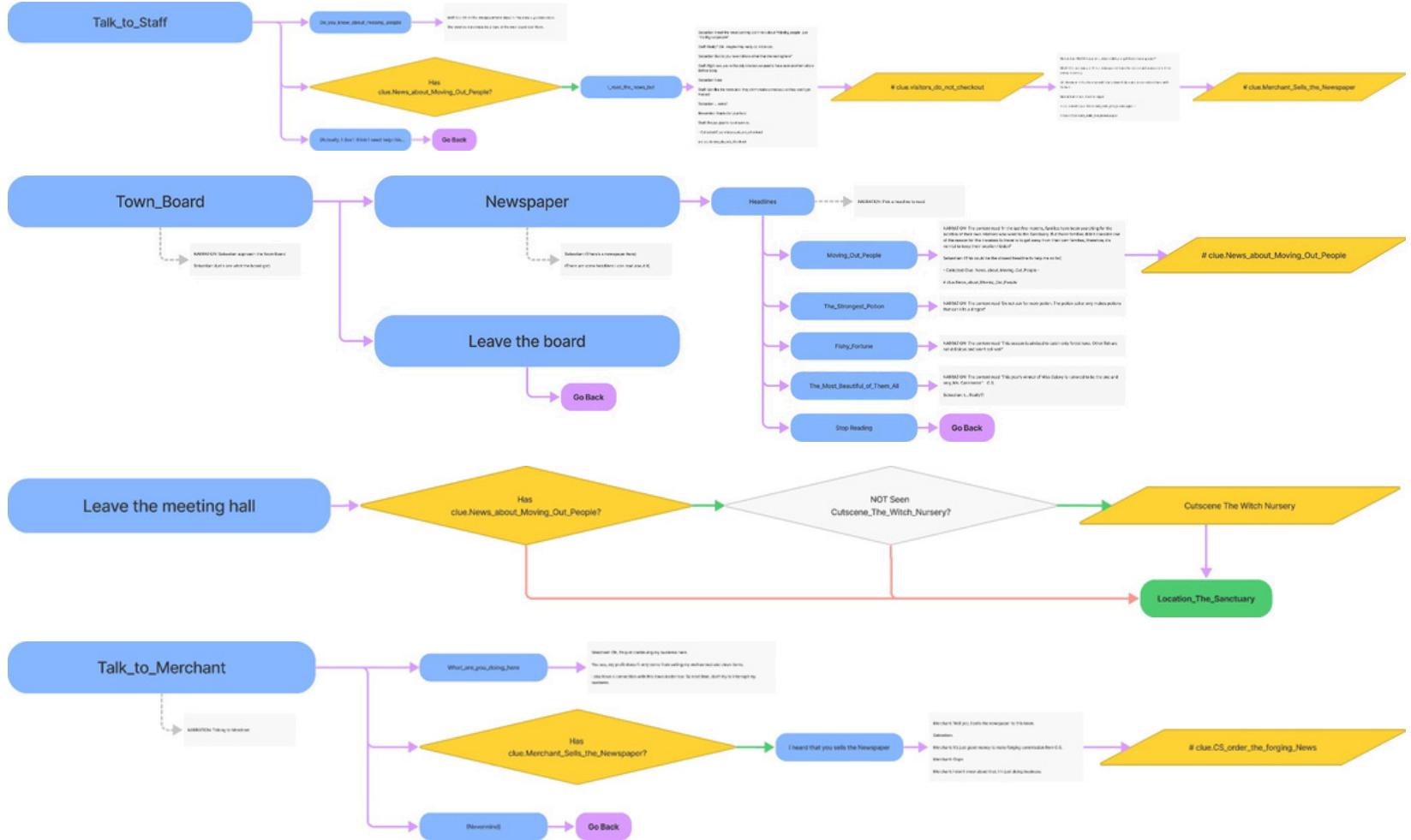


Figure 12: Scriptwriting flowchart made in Figma

### 2.1.2 Ink Editor by Inkle

Lunar Hunt has dialogues that have branches and conditions to interact with. This made the dialogues system become more complicated. Thus, the use of Ink Editor would serve the purpose as both a scriptwriting prototype and a story system provider.

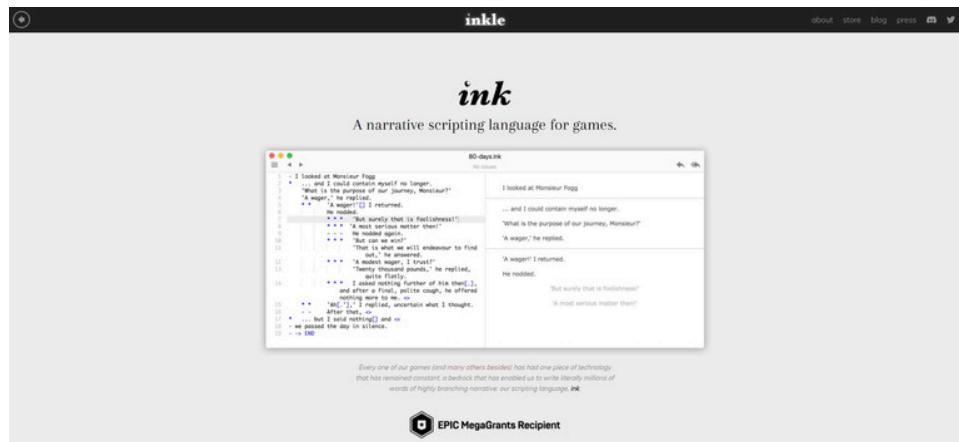


Figure 13: Inkle homepage.

#### 2.1.2.1 Go to the next conversation

In Ink Editor, typing the divert arrow ( -> ) would lead to what the Ink language calls a “knot”, which would store the story.

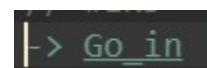


Figure 14: The divert arrow would bring the next conversation in Ink Editor.

#### 2.1.2.2 Choosing response choices

The + sign was used for a static response, which inferred that the player could choose to use it repeatedly.

The \* sign was a one-time only response. Once chosen, the player would not be able to choose it again.

```
= Headlines
    #noSpeaker
    Pick a headline to read.
    + [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
```

Figure 15: Writing choices in Ink Editor.

#### 2.1.2.3 Response choices with conditions

Each choice would have conditions written inside the curly brackets ( {} ) on how they could show itself as an available choice. For example, a choice would become available if one of the clues was collected.

```
== Talk_to_Merchant ==
    #speaker.Merchant
    What do you want from me?
    //Tutorial
    + {Talk_to_Lumberjack} {not Talk_to_Lumberjack.About_the_axe} [Have you seen an axe?] -> Have_you_seen_an_axe ->
    //chapter 1
    + [What are you doing here?] -> What_are_you_doing_here ->
    + { Cluelist ? Merchant_Sells_the_Newspaper } {Cluelist !? CS_Order_to_Forge_The_News}
        [I heard that you sells the Newspaper] -> I_heard_that_you_sells_the_Newspaper ->
    + [(Nevermind)] {EndCon()} -> END #END
    - -> Talk_to_Merchant
```

Figure 16: Choices with conditions.

#### 2.1.2.4 Tags

Ink Editor has a feature that includes “tag” as a method to signal what the unity engine has to do on that line. In Ink Editor, a tag can be called by typing the “#” symbol followed by the text.

The following were the tags used for Unity and their purposes. It should be noted that the text inside the bracket represented any text that would be used after that tag.

**#debug:** When there is something wrong with the prototype, this tag would be used for debugging on the flow of the story played in the ink system.

**#END:** Signals that the conversation of the Unity engine has ended, which would make the dialogue box close itself.

**#OPEN:** Signals that the conversation of the Unityengine has started.

**#speaker.[name]:** Informs the Unity who is the current speaker in the conversation.

**#noSpeaker:** Informs the Unity that there are no speakers in the conversation, so the Unity would call the “Narrator” as the speaker instead.

**#clue.[name]:** Signals to the Unity to collect a clue for the player.

**#timeline[name]:** Signals to the Unity to play a timeline, which plays as a cutscene.

**#knot.[name]:** Informs the Unity about the next story knot that the Unity would trigger.

**#scene.[name]:** Makes the Unity load the next game map.

**#spawn.[name]:** Sets the player’s spawn position on the next loaded game map.

**#timelineState.[name]:** Sets the state of the game level to remember how the NPCs and objects have moved somewhere else.

**#transition.open:** Signals faded black screen animation to open.

**#transition.close:** Signals faded black screen animation to close.

```
= 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.

### 2.1.2.5 Prototype with Quill

Quill is a web app that turns Ink script into a testable prototype with links. This could be used to inform others on how the story would progress.

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.

Automatically replay my story as I make changes

Choose a sample (or write your own):

```

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 ItemList = {}
8 VAR MaxList = 0
9
10 LIST ItemList = Original_Newspaper
11
12 LIST ClueList = News_about_Moving_Out_People_Visitors_do_not_C
13
14 LIST EvidenceList = CS_Faked_The_News
15
16 LIST KeyList = Empty
17
18 //creation 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   - CountList = LIST_MIN(list)
35   - CountList = 1
36   - MaxList = LIST_COUNT(list)
37   - ListHave(list)
38
39 --> function ListHave(ref list) ==
40   ( CountList <= MaxList;
41   - Listings(list)
42

```

[Play Ink \(Start Fresh\)](#) [Play Ink \(Replay Choices\)](#) [Get Permalink](#) 

Figure 18: The Quill web app.

## 2.2 Unity Engine

The Unity engine is where the interaction between the media assets, stories, and game design is integrated. The programming is done with C# language.

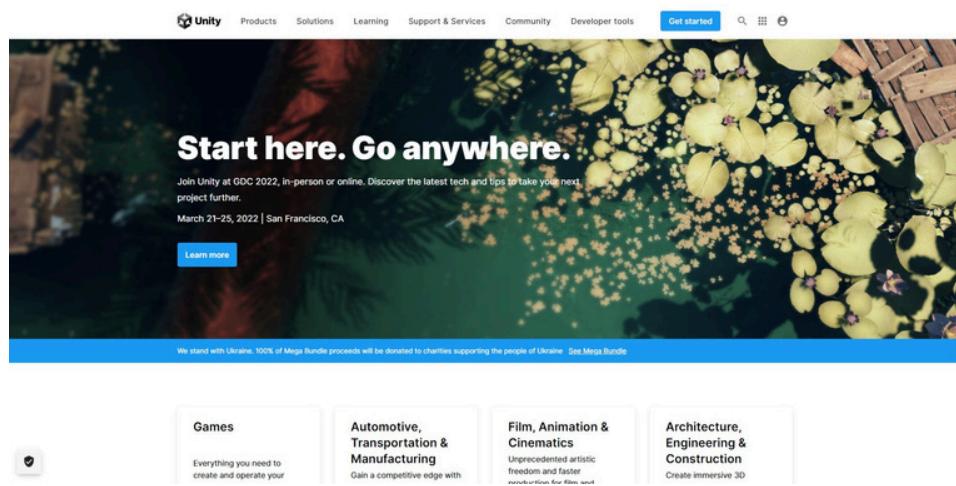


Figure 19: Unity's website.

### 2.2.1 Game UI

The UI is a window that shows on the screen. It has buttons that players can use to do certain actions, i.e., the “start” button to start playing the game.

#### 2.2.1.1 Main menu

The main menu is the first page that the player can navigate through.

**Start game:** Continue to the next scene, which is the tutorial.

**Settings:** Go to the settings menu to adjust the game's audio volume or full screen mode.

**Exit:** Quit the game.

#### 2.2.1.2 Moving background

The background of the main menu is a screenshot of the game map. The screenshot is then added as an image, and then adds animation to pan from right to left with a seamless loop transition.



Figure 20: Main menu UI.

### 2.2.1.3 UI Tutorial

Players would see the pages of the tutorials on how to play Lunar Hunt. These pages would be as follows:

- How to move and interact.
- How to progress through the dialogues.
- How to open the in-game menu.
- How to form evidence.



Figure 21: Pages from the UI tutorial.

#### 2.2.1.4 UI dialogue

When a dialogue is running, a dialogue box would appear at the bottom of the screen for the player to read.

**Portrait:** The image of the speaking character.

**Speaker's name:** The name of the speaking character.

**Speech text:** The text on what the character is talking about.

**Response buttons:** The choices of the responses to choose for the next conversation.



Figure 22: UI for the game dialogues.

#### 2.2.1.5 In-game menu UI

**Section buttons:** Once clicked, the button would open the page of the submenu.

**Clue menu UI:** Shows the collected clues for the player and forms an evidence feature.

**Setting menu UI:** Settings options are here.



Figure 23: Pages of the in-game menu.

### 2.2.1.6 Notification UI

The notification UI would appear when there were new items collected during the investigation.

#### Notification box

The notification box would appear at the center of the screen with the text on.

#### Notifier queue

When there are multiple notifications at once, the notifier system would store each notification in a list of queues.



Figure 24: The notification box on the screen.

### 2.2.2 Game camera (Cinemachine)

The game camera is the equipment that follows the player in the game.

#### 2.2.2.1 Bounding box collider

Cinemachine cameras can be bound by an object collider in the Unity. This object collider could have a customized shape to suit the game map layout.

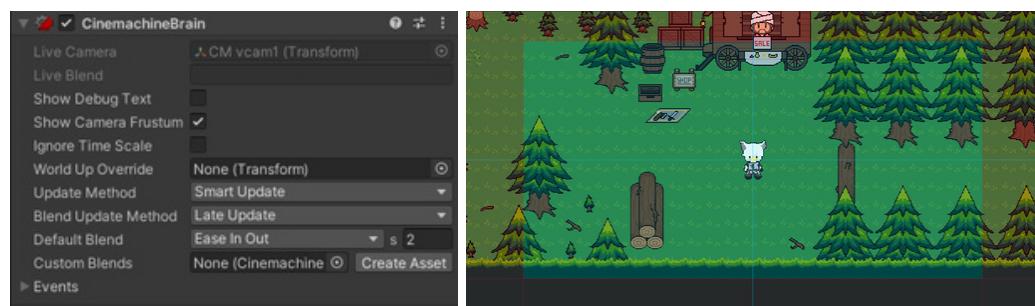


Figure 25: The Cinemachine camera in the Unity.

### 2.2.3 Controllable player

#### 2.2.3.1 Walking

Walking is a basic action that the player could do in order to explore and investigate the game.

#### 2.2.3.2 Interacting

Players are able to interact with the NPCs and objects in order to continue the game.

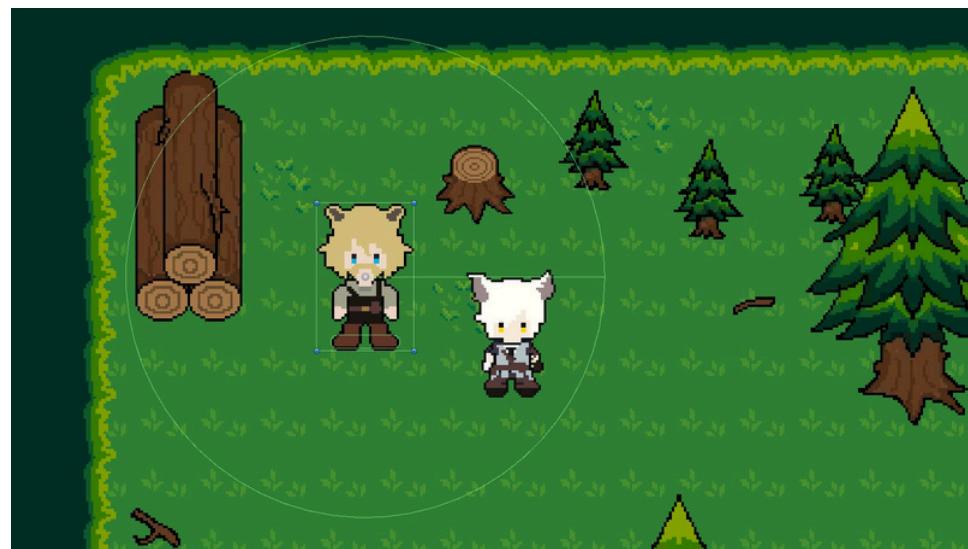


Figure 26: The player is within the interactable range.

#### 2.2.3.3 Continue the dialogues

When the dialogue is open, the player could press the space bar key to progress through the dialogue.

#### 2.2.3.4 Open the in-game menu

Pressing the Tab would open the in-game menu.

## 2.2.4 Interactable NPCs

The NPCs in Lunar Hunt are the characters that the player would talk with to obtain more clues.

### 2.2.4.1 Store conversation topic

Each NPC would have a value called a “knot name” that they would talk about. When the player interacts with the NPCs, that said topic would be sent to the Ink system and continue the conversation.

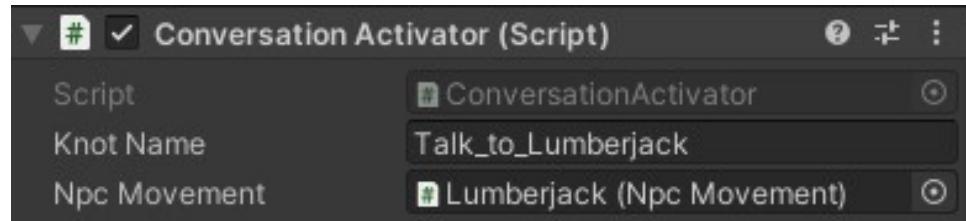


Figure 27: The value in the inspector.

### 2.2.4.2 Start the conversation

When the player interacts with the NPCs, the conversation would start.

### 2.2.4.3 speakerObject

One of the scripts is named speakerObject.cs. This is a scriptable object. which stores information about the speaker's name and portrait image.

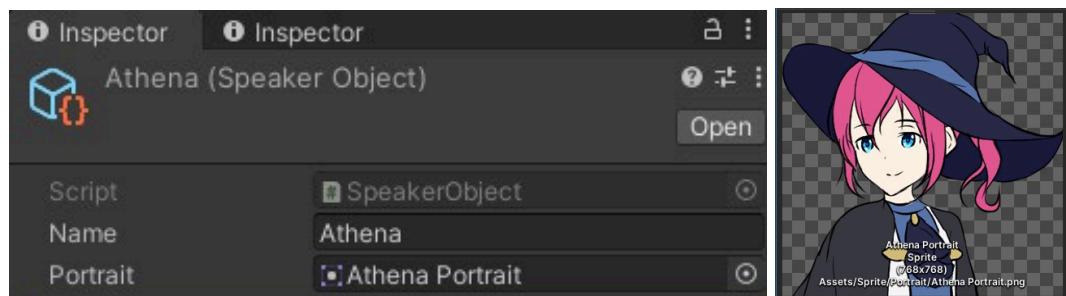


Figure 28: Data that the speakerObject holds.

### 2.2.5 Importing art assets to the Unity

The art assets that are used in Lunar Hunt can be imported directly to the Unity. However, it still needs tweaking in order to make it work.

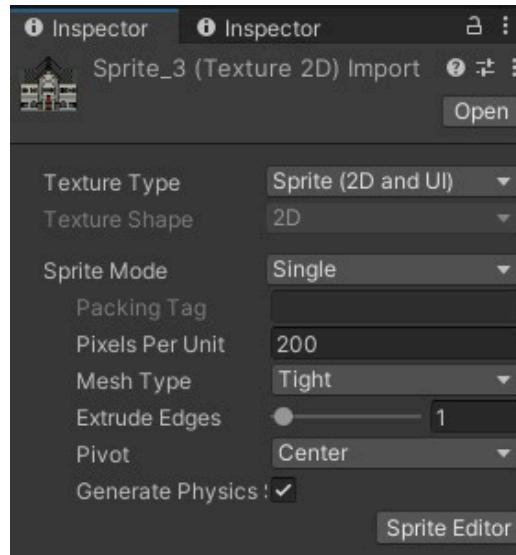


Figure 29: Image asset inspector.

#### 2.2.5.1 Pixels per unit

When working with pixel art assets, the pixels per unit should be set precisely in order to make the pixel size be the same as other objects.

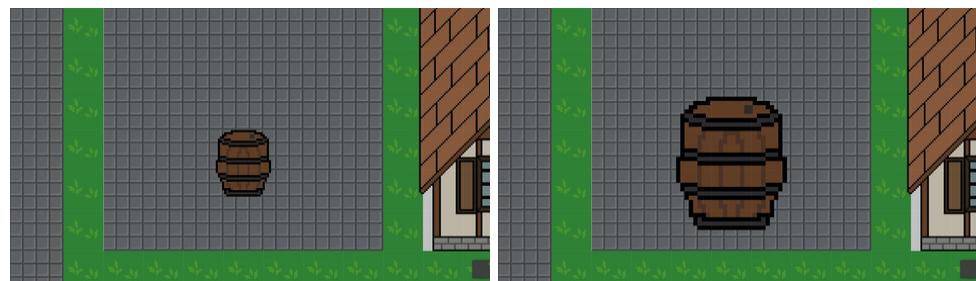


Figure 30: The picture on the left shows the correct pixel per unit of 100, while the right side is wrongly set to 100.

### 2.2.5.2 Sprite editor

By default, imported art assets would consider themselves as a “single sprite”, which would mean that the image would be used as a single object in the game. However, a method of using a sprite sheet, an image that includes several smaller images, could help save time on adjusting values; such as, pixel per unit.

### 2.2.5.3 Multiple sprites

Useful on a sprite sheet, the Unity could automatically detect many images in the asset. This would help a lot to use these multiple sprites as animation assets, or as a single sprite sheet of common objects in the game.

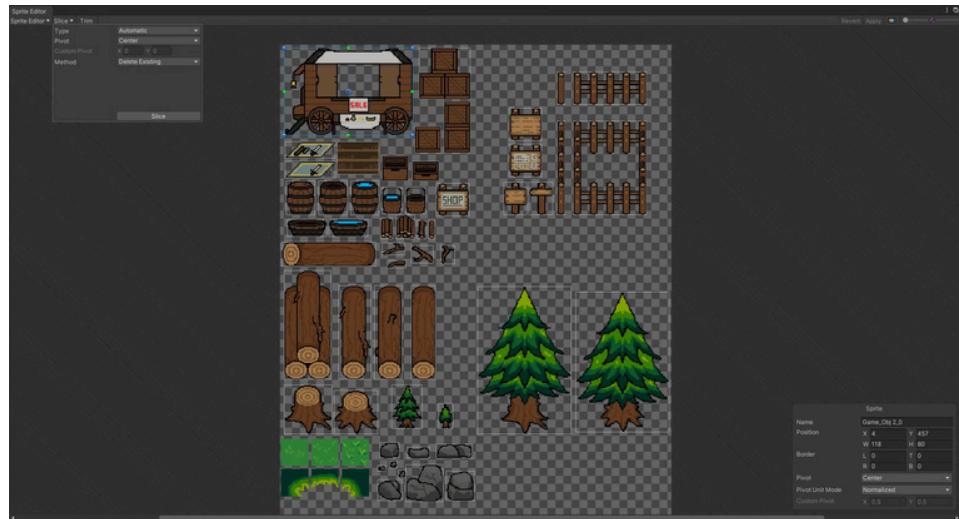


Figure 31: Auto slice multiple sprite.

#### 2.2.5.4 UI border

The sprite editor could help the border of the UI to become responsive. This would allow the UI box of the game to have varying width and height sizes.

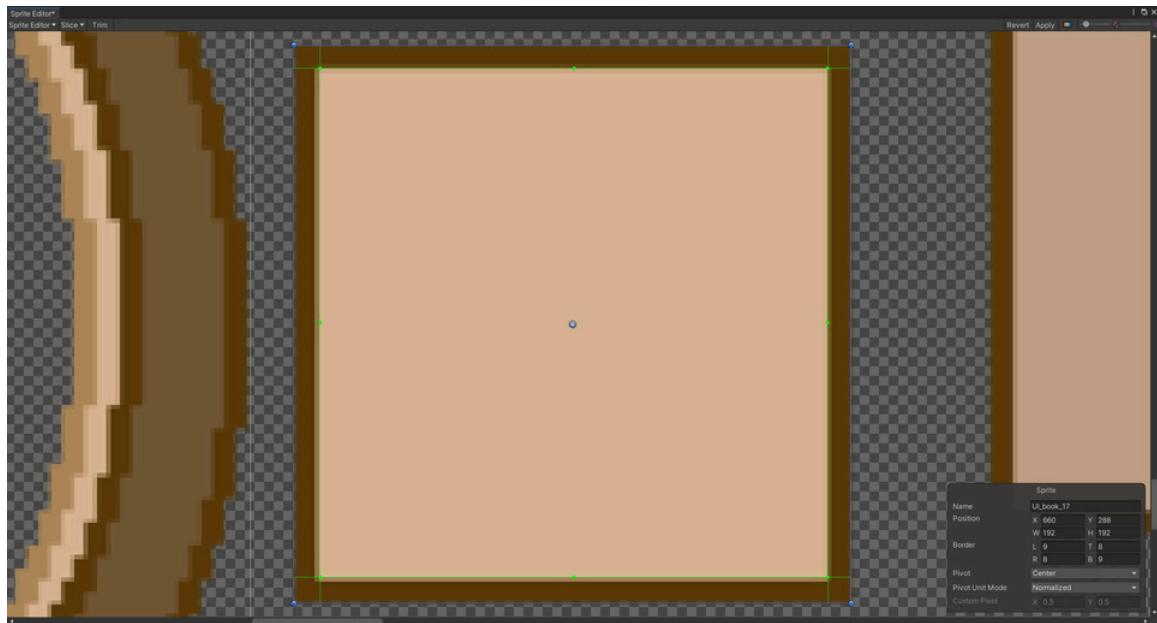


Figure 32: UI border of the in-game menu.

#### 2.2.6 Animator control

The Unity has a component called “Animator”, which works on controlling the animation on the game objects.

##### 2.2.6.1 Characters animation

Characters, including Sebastian, which the player controls, and the NPCs that the player can interact with use an animator control that decides how the animation would happen depending on the rule of the value and sets.

### 2.2.6.1.1 Idle

This is basic base animation, which Sebastian and other NPCs would use when they are standing still. It should be noted that there is Idle animation for facing four directions: Up, down, left, and right. However, most NPCs only have one idle direction.

### 2.2.6.1.2 Walking

This is used by Sebastian when he is walking around to investigate the town.

### 2.2.6.1.3 Chopping

This animation is used by the lumberjack when he is clearing a blocked pathway.

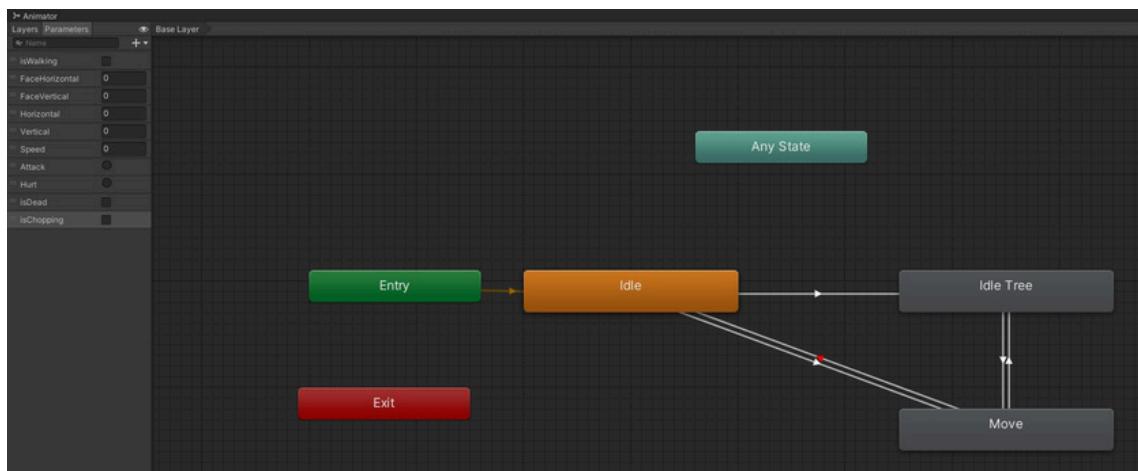


Figure 33: Sebastian's animation relationship.

### 2.2.6.2 Characters facing a direction

When a dialogue is running, the animator controller would detect which direction the character is facing. Nevertheless, there would be two values used in the calculator, which are “facingHorizontal” and “facingVertical”.

#### 2.2.6.2.1 facingHorizontal

Is the character facing to the left or right side?

### 2.2.6.2.2 facingVertical

Is the character facing to the top or bottom side?

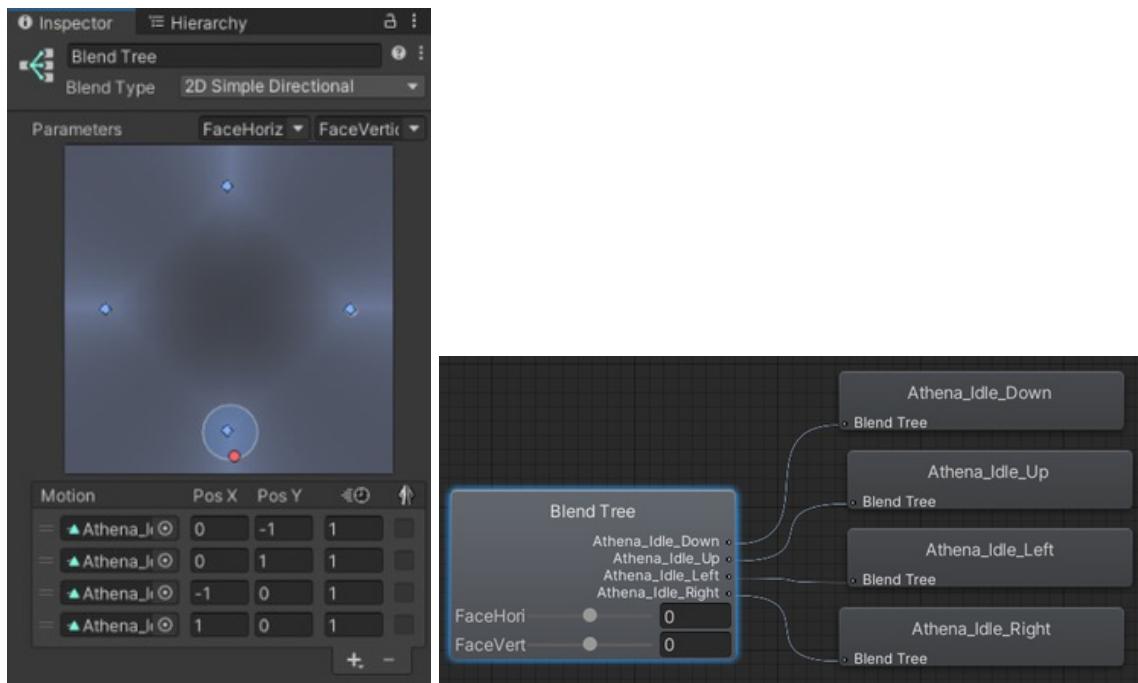


Figure 34: The two variables that detect the faced direction.

### 2.2.6.3 UI animation

The animator component is also used in the game's UI. Most UI animations have a “Start” and “End”.

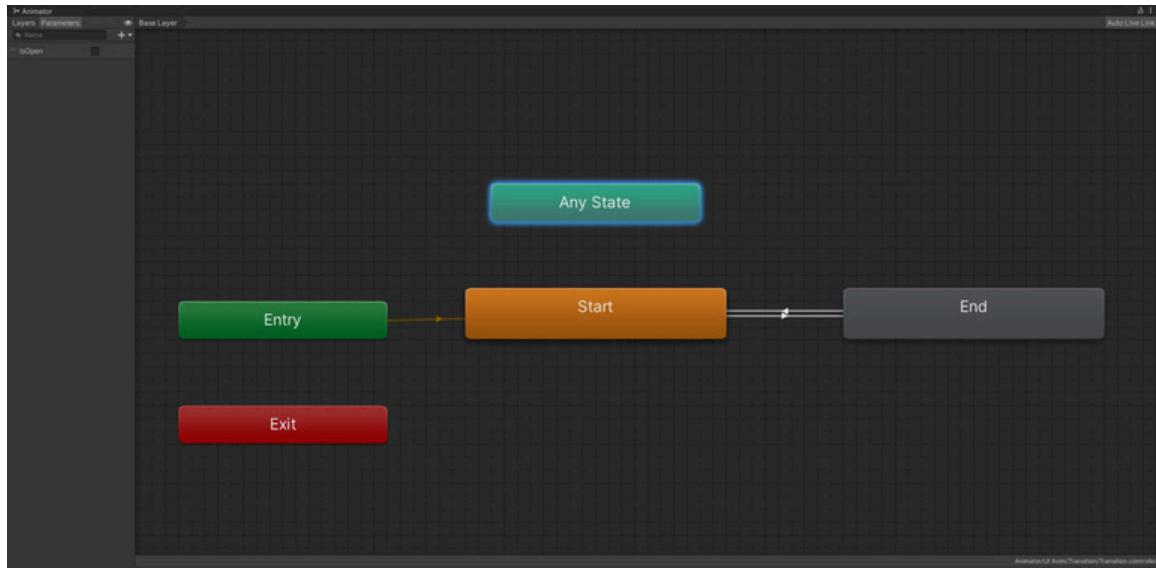


Figure 35: The start and end state the relationship.

### 2.2.7 Object system

Anything that is added to the game's workable scene; such as, the player's character, NPCs, trees, houses, etc. are called the “Game Object”. Each object can have different programming scripts to serve each of their purposes. However, this section would inform about the object’s placement in the game map.

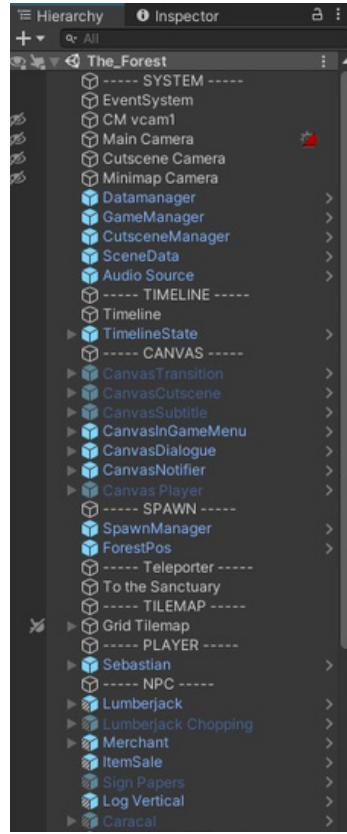


Figure 36: Game objects in the hierarchy.

#### 2.2.7.1 Depth perception with object's Z value

While this feature is not mandatory for the objective of the game, this would help players to have more freedom roaming around the game. Normally, most classic RPG games do not let players walk behind an image of the object.

When a game map is loaded, every object would update their Z value to be equal to a Y value. This would simulate how objects that look further up the screen would be behind objects that are placed below the screen.



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

#### **2.2.7.1.1 NPCs' and objects Z value**

Because NPCs and objects are put in the game map and never move around, the Z value would be updated at the start of the game map loaded.

#### **2.2.7.1.2 Player's Z value**

Because the player's character is always moving, the Z value would also be updated whenever the player moves around.

#### **2.2.7.2 Object's collider**

In this game project, there were two uses for the Unity's collider, excluding the collider for the camera. The first was using a collider as something physical that blocked the movement of the player. The second was to use it as a trigger, which also made interaction possible for the player.



Figure 38: Different objects and their physical collider.



Figure 39: NPCs with their interactable collider.

#### 2.2.7.2.1 Player, NPCs, and objects

These objects would have a collider at the bottom of its sprite, which would simulate itself as a base of the object. If the player walked just above the collider, the player's sprite would stay behind the object's sprite.

#### 2.2.7.2.2 Wall collider

This collider would serve to simulate how a player's sprite could not go beyond the wall.



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

## 2.2.8 Game map system

The game maps in Lunar Hunt are created using tilemap with a number of scripted behaviors.

### 2.2.8.1 Game map levels

Lunar Hunt has several maps that the player can explore to find more clues.

#### 2.2.8.1.1 The Forest

This would be the first map that the player would be introduced to.

#### 2.2.8.1.2 The Sanctuary

This would be the main town where the player could find most NPCs and interaction.

#### 2.2.8.1.3 The Meeting Hall

This would be the hall that has the recorded information that the player could investigate.



Figure 41: The game maps developed in the Unity.



### 2.2.8.2 Tilemap

The tilemap would be helpful to create the game level by importing the art assets as grid images for drawing the map.

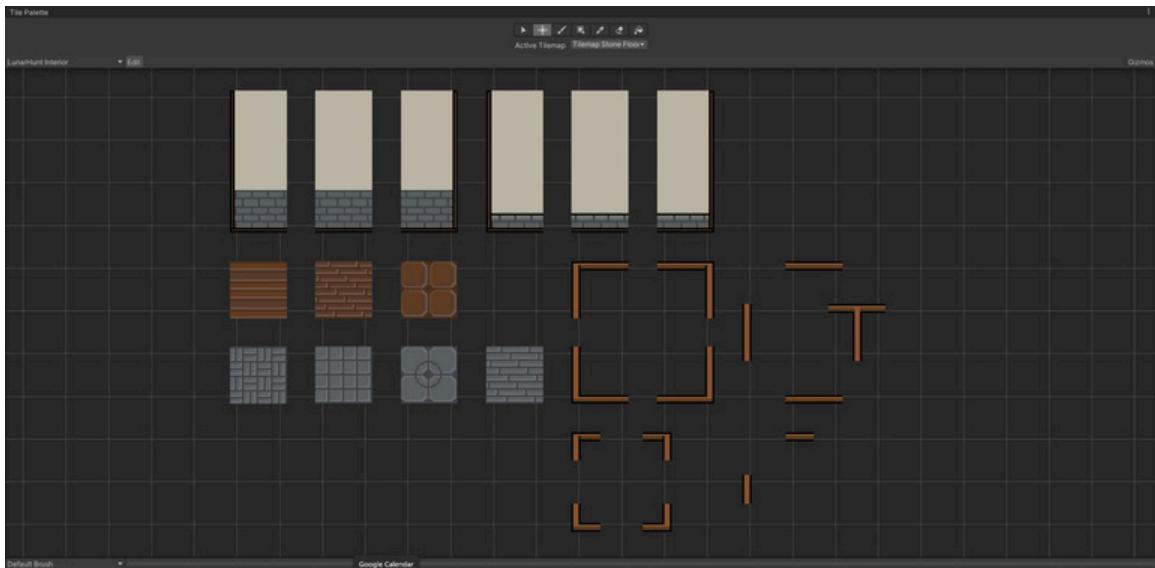


Figure 42: The tilemap assets window.

### 2.2.8.3 SceneData

In every game level, there would be a SceneData object, which would hold information about the game level's name and story data.

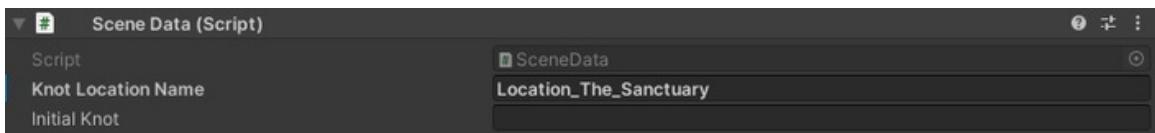


Figure 43: SceneData component window.

### 2.2.8.4 Moving to another map

With several maps to interact with, there would be scripts written to make sure the player would travel to the next map correctly with the in-game information intact.



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

#### **2.2.8.4.1 Teleporter**

In the game level, there are invisible game objects that would serve as a teleporter to the next game level. Each of them stores data on where the player would go and which spawn point they would appear in the next level.

#### **2.2.8.4.2 Spawn point**

Each teleporter would have a stored number to identify where the player should appear in the approaching game map.

#### **2.2.8.5 Minimap**

The minimap would be shown at the top left to show information; such as, the current location of the player. This feature could be helpful to give the player the direction they would need to reach a character or place.



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

#### **2.2.9 Inventory system**

The game has an inventory system that would keep track of the collected clues and evidence. This system would also update itself to the UI clue in order to make “form evidence” work.

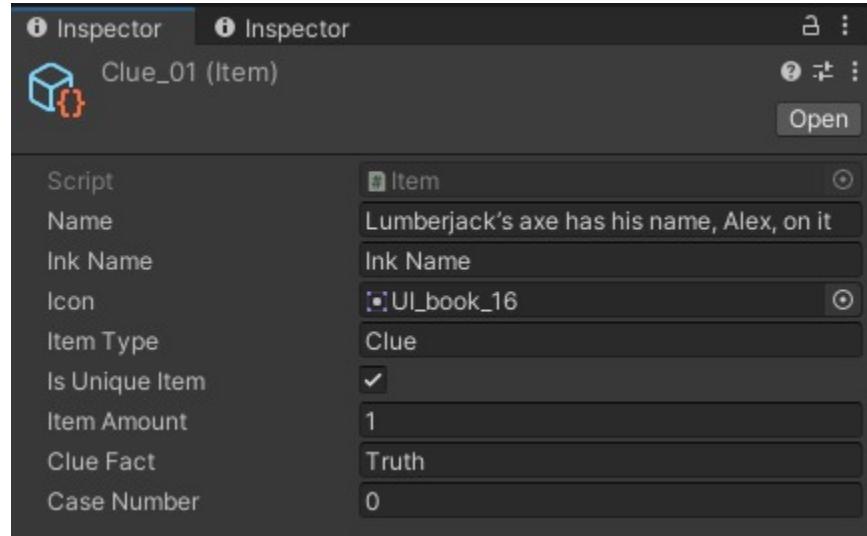


Figure 46: Item data.

#### 2.2.9.1 Clue

The clue is the basic piece of information for players to collect and form evidence.

#### 2.2.9.2 Evidence

Evidence is the result of forming clues and rewarding the said action. Evidence is a plot device that lets the player progress through the story.

#### 2.2.10 Forming evidence

When the player opens the “Form Evidence” section from the in-game menu, they could select clues in order to form evidence.

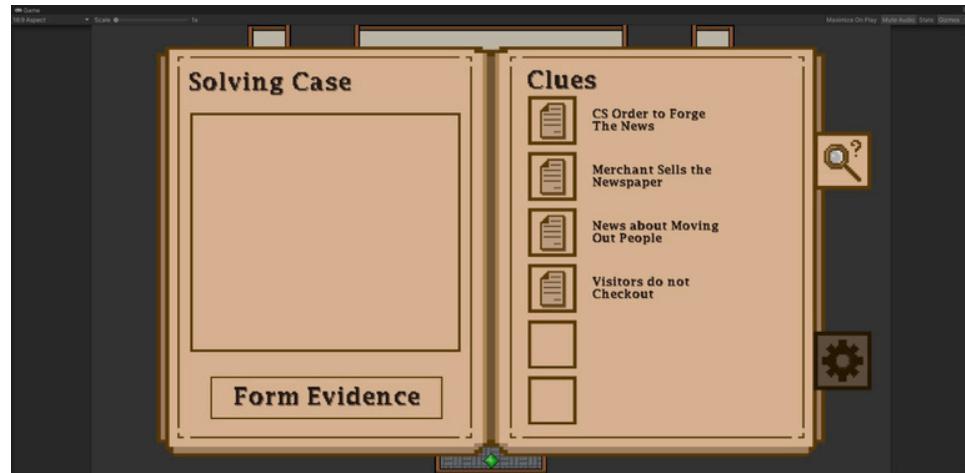


Figure 47: The form evidence UI menu.

#### 2.2.10.1 Evidence requirement

Each piece of evidence would have a recipe on what clues would be needed to form the evidence.

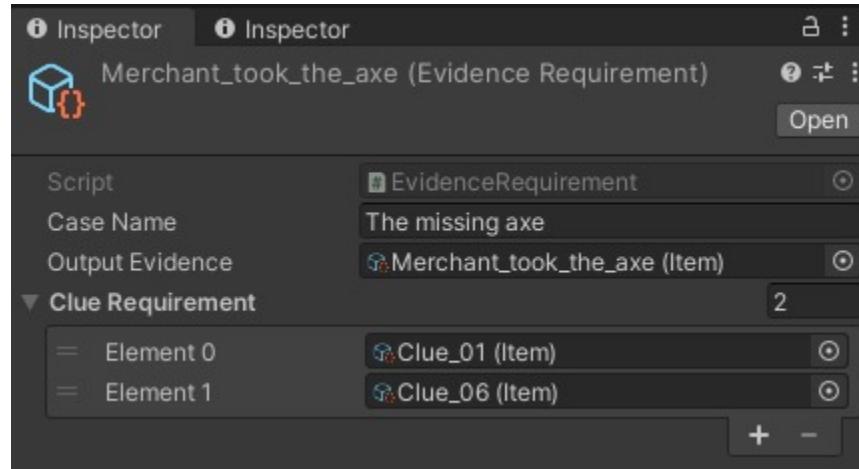


Figure 48: Evidence requirement data.

#### 2.2.10.2 Selecting a Clue

Clicking on clues at the right side of the menu would select the clue. Clicking on the “Form Evidence” button would perform the forming of the evidence.

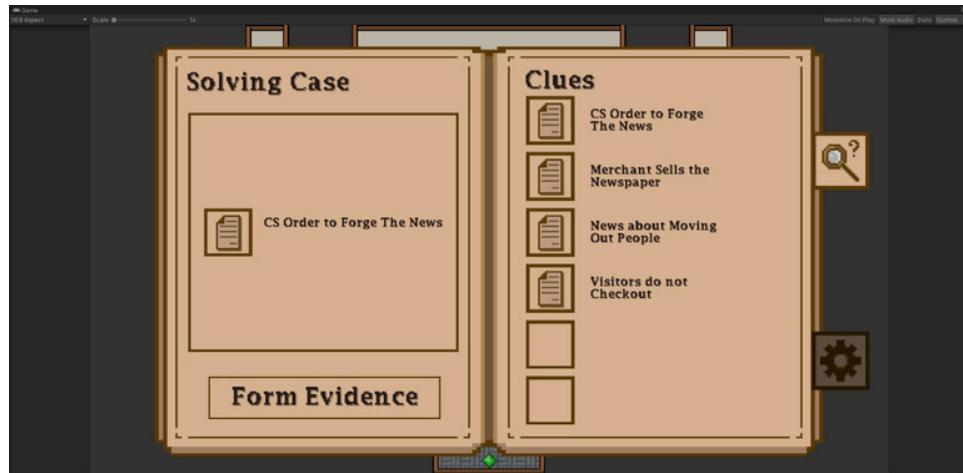


Figure 49: One clue is currently selected to form evidence.

### 2.2.11 Ink to Unity implementation

The Ink Editor, which is used in the scriptwriting part, could be used together with the Unity. However, there are scripts that would need to be written in order to communicate the Ink Editor and Unity together.

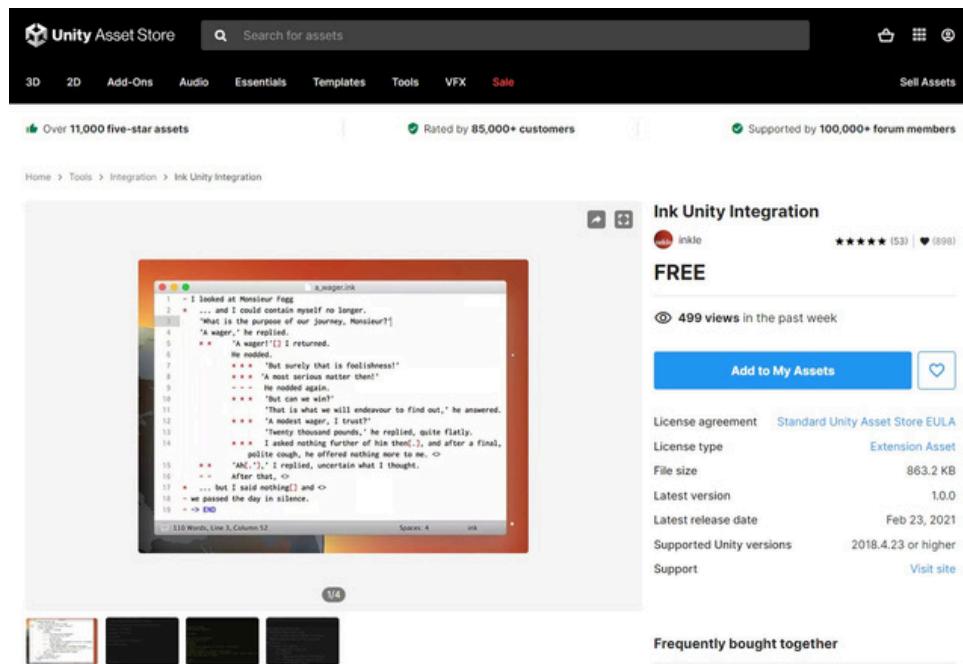
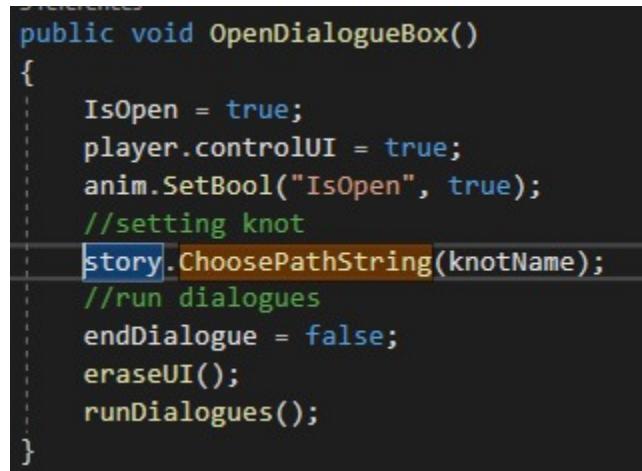


Figure 50: The Ink Editor to Unity asset page

### 2.2.11.1 Access the story with a knot

The Unity can use “ChoosePathString”, which would choose the part of the story from the Ink Editor system and show it to the game.



```

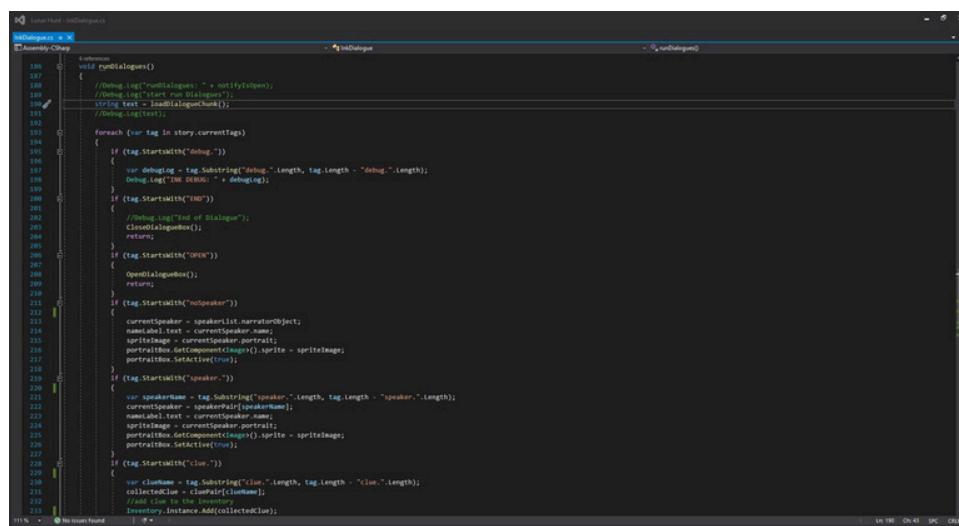
public void OpenDialogueBox()
{
    IsOpen = true;
    player.controlUI = true;
    anim.SetBool("IsOpen", true);
    //setting knot
    story.ChoosePathString(knotName);
    //run dialogues
    endDialogue = false;
    eraseUI();
    runDialogues();
}

```

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

### 2.2.11.2 Using tags

The Unity could read the tag from the Ink Editor as a string, where the Unity could use the string to see what actions it would need to do.



```

void runDialogues()
{
    //Debug.Log("runDialogues: " + notifyIsOpen);
    //Debug.Log("start run Dialogues");
    string text = loadDialogueChunk();
    //Debug.Log(text);

    foreach (var tag in story.currentTags)
    {
        if (tag.StartsWith("debug"))
        {
            var Debuger = tag.Substring("debug.".Length, tag.Length - "debug.".Length);
            Debug.Log("INK (INFO): " + Debuger);
        }
        if (tag.StartsWith("INK (INFO)"))
        {
            //Debug.Log("End of Dialogue");
            CloseDialogue();
            return;
        }
        if (tag.StartsWith("OPEN"))
        {
            OpenDialogueBox();
            return;
        }
        if (tag.StartsWith("notSpeaker"))
        {
            currentSpeaker = speakerList.narratorObject;
            nameLabel.text = currentSpeaker.name;
            spriteImage.sprite = speakerImage;
            portraitBox.GetComponent(spriteImage).sprite = spriteImage;
            portraitBox.SetActive(true);
        }
        if (tag.StartsWith("speaker"))
        {
            var speakerName = tag.Substring("speaker ".Length, tag.Length - "speaker ".Length);
            currentSpeaker = speakerPair[speakerName];
            nameLabel.text = currentSpeaker.name;
            spriteImage.sprite = speakerImage;
            portraitBox.GetComponent(spriteImage).sprite = spriteImage;
            portraitBox.SetActive(true);
        }
        if (tag.StartsWith("clue"))
        {
            var clueName = tag.Substring("clue.".Length, tag.Length - "clue.".Length);
            collectedClue = cluePair[clueName];
            //Add clue to the inventory
            inventoryList.instance.Add(collectedClue);
        }
    }
}

```

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

## 2.2.12 Timeline system

The Unity has a timeline, which are mostly used as cutscene makers. However, this game project Lunar Hunt also used it for setting the game map's state.

### 2.2.12.1 Cutscene with the timeline

The timeline in the Unity would take references of the game objects and then each layer could adjust the animation of the object, including moving it around the scene. The timeline editor could switch between the main camera and cutscene camera during the cutscene.

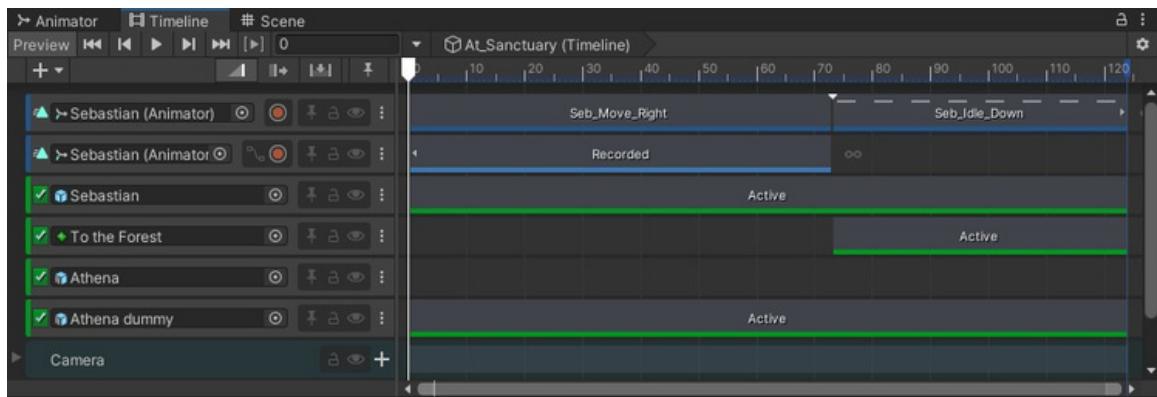


Figure 53: The timeline editor.

#### 2.2.12.1.1 Timeline signal on the prefab object

Timeline also has a feature called “signal”, which could be put on any point of the timeline to signal the unity on what action it needs to do.

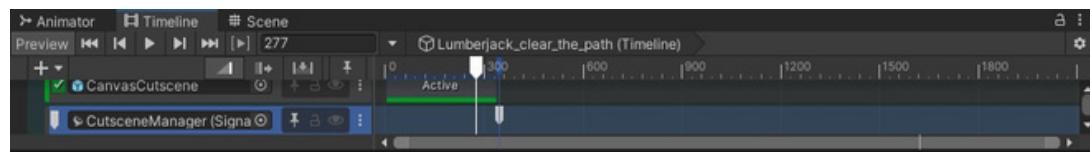


Figure 54: The signal on the timeline editor.

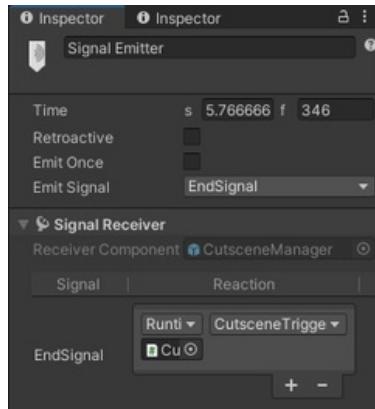


Figure 55: The signal on the inspector editor.

#### 2.2.12.2 EndSignal

This signal would tell the Unity that the timeline has ended.

#### 2.2.12.3 OpenDialogue

This signal would make the UI dialogue open by itself and load the stored conversation.

#### 2.2.12.2 SceneState with the timeline

SceneState is a script, which is written to set the state of the game level with its own surroundings. When the player moves to a game map, SceneState would run the timeline, which would be made to run in one frame and change the state of the game map.

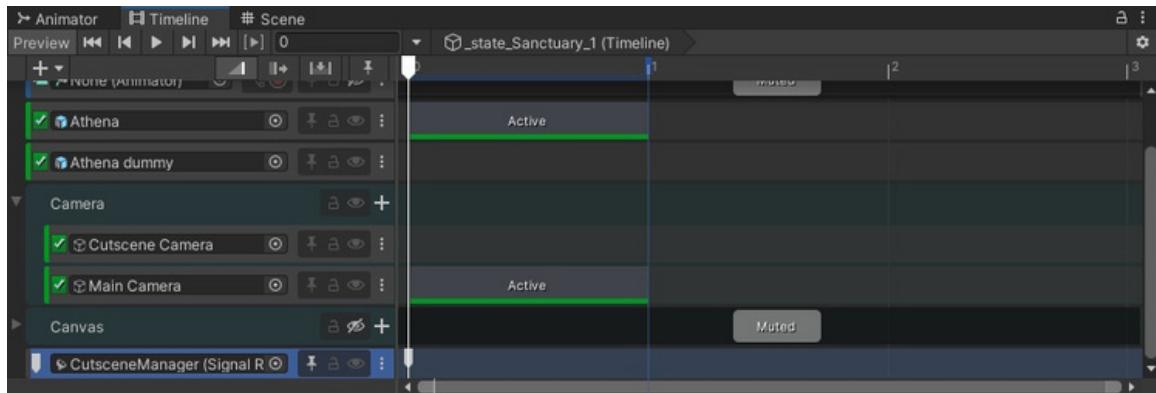


Figure 56: The one-frame timeline made for SceneState.

### **2.2.13 DontDestroyOnLoad()**

When the player moves to another game level, the Unity engine would load another game scene, which would be like a package of game objects. However, keeping the stored in-the-play data is not quite straightforward. As such, `DontDestroyOnLoad()` would be used in order to maintain the important game objects that are holding the data.

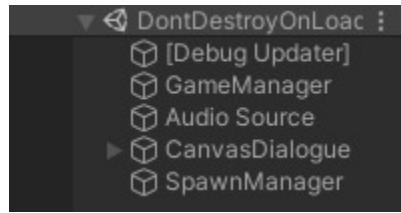


Figure 57: The objects that use `DontDestroyOnLoad()`.

#### **2.2.13.1 Remove the same `DontDestroyOnLoad()` object**

If there is the same type of `DontDestroyOnLoad()` object, the script would remove the new one that would be received from loading a new scene.

### **2.2.14 Audio**

The “Audio” component could be assigned separately on each game object.

#### **2.2.14.1 Audio source**

This is the component to add on a game object to trigger sound.

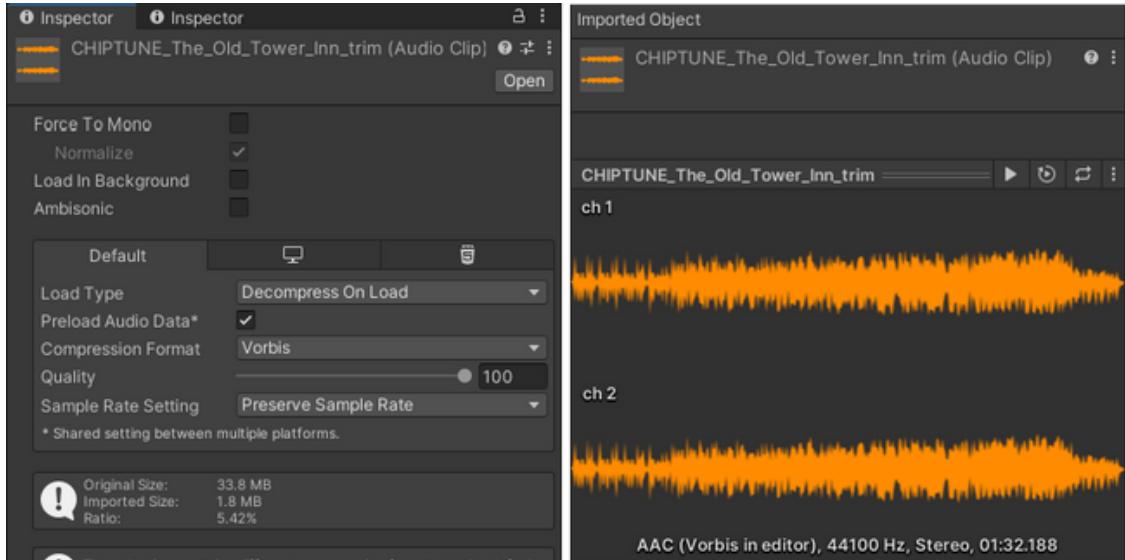


Figure 58: The audio component.

#### 2.2.14.2 Main Mixer

The triggered sound would be sent to the main mixer, which would control the overall audio volume.

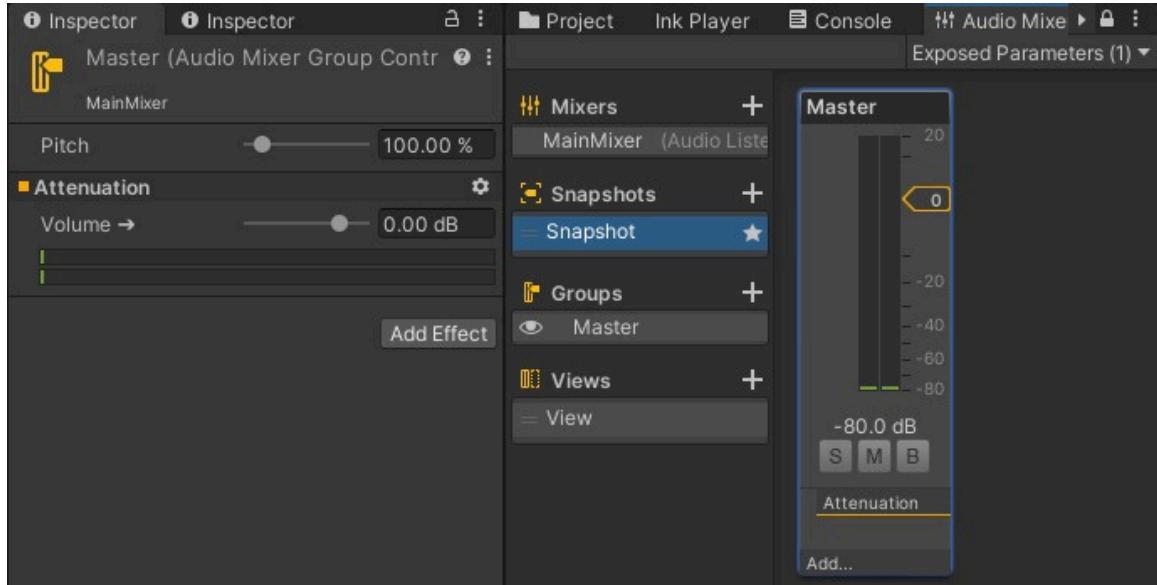


Figure 59: The main mixer asset.

#### 2.2.14.3 Volume setting

The volume would be adjusted via the volume setting, which would be shown on the settings menu.



Figure 60: The volume setting.

### 2.2.15 Control input state

When the game is operating, there would be variables stored whether a certain system is running or not.

Variables/Scripts	PlayerMovement.cs	PlayerControl.cs	InkDialogue.cs
ControlUI	X	X	
NotifierUI	X	X	X
timelineBlock	X	X	X

Table 6: The relationship of how an active value would stop which scripts.

### 2.3 Github

Github is very useful for providing version control in case the game's programming scripts or Unity editor are broken. Github also provides the Github Desktop to simplify the version control process and Github pages for developers to have their own web domain for use of their programming.



Figure 61: The GitHub website.

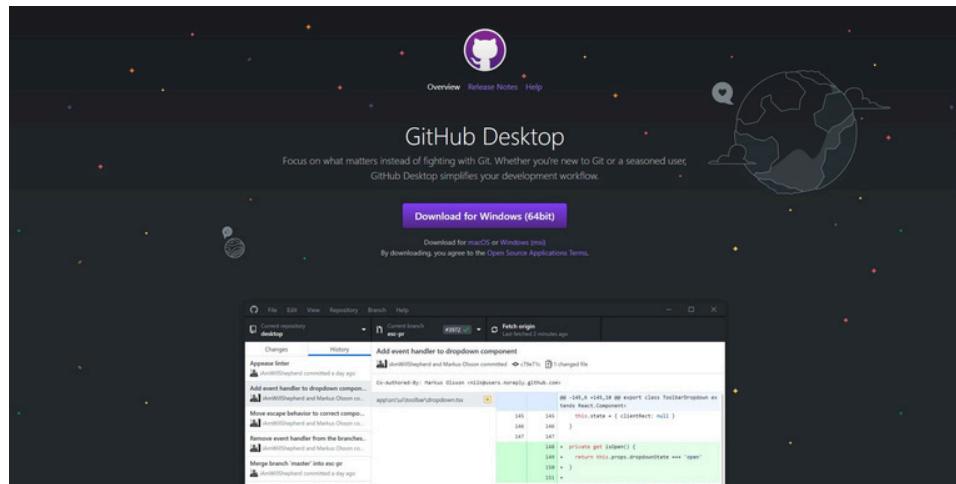


Figure 62: The GitHub desktop.

### 2.3.1 Github version control

While developing the game on Unity, Github would have a feature to manually save a version of the Unity project and save it to the web. If the developer encounters errors or unsolvable problems, Github would have the saved version that could still roll back.

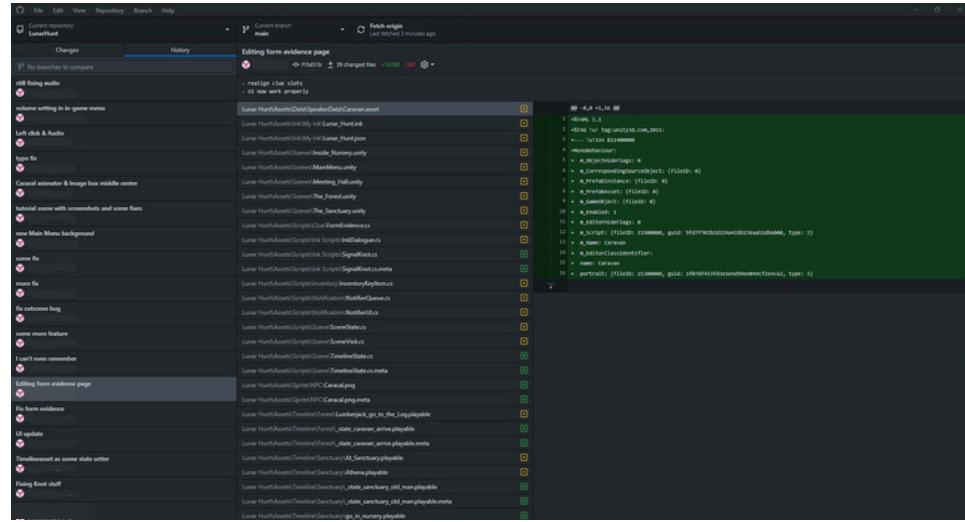


Figure 63: Github desktop's history list of project versions.

### 2.3.2 Github page

The web domain using the Github page would be very useful to share prototypes to use for the evaluation process.



Figure 64: Game prototype on the web.

## Chapter 4 Evaluation and finding

### 1. Project result (Evaluation)

#### 1.1 The questionnaires

The questionnaire has the following four sections.

- 1.Individual information
- 2.Link to game's prototype
- 3.Questionnaire on the game's prototype
4. Suggestions

Section 1 of 4

**แบบสอบถาม Lunar Hunt - Battle Against**

แบบสอบถามนี้ใช้สำหรับการทดสอบความพึงพอใจในโปรเจกของชั้นศึกษาปีที่ 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

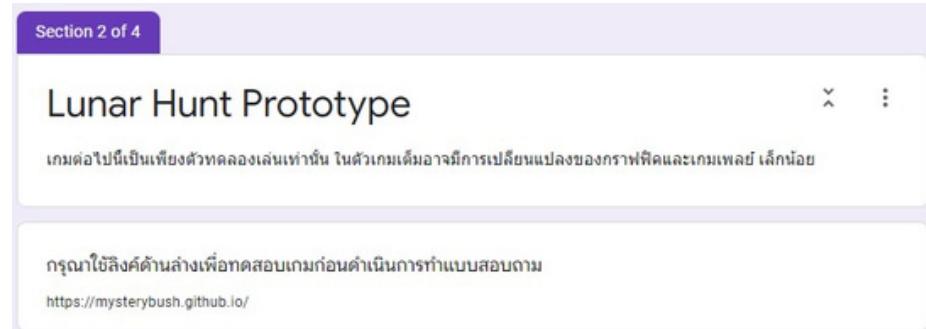


Figure 66: Section 2 of the questionnaire with link to game prototype

Section 3 of 4

### ประเมินความพึงพอใจและความเหมาะสมของโปรดเจด

Description (optional)

รายการประเมิน

ระดับความพึงพอใจ: 5 - มากที่สุด, 4 - มาก, 3 - ปานกลาง, 2 - พอ, 1 - ไม่ดีเลย  
Satisfaction level: 5 - Great, 4 - Good, 3 - Okay, 2 - Bad, 1 - Very Bad

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

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

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

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

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

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

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

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

หลังจากการเล่น คุณจะรู้มากขึ้นเกี่ยวกับผลกระทบของ Fake News มากน้อยขนาด (After the game session, Are you more acknowledgeable on the effect of Fake News?) \*

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

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

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

ความพึงพอใจโดยรวมจากการเล่นเกมมีมากน้อยขนาด (How satisfied are you with the game?) \*

1 2 3 4 5

น่ารังสึก (Very Bad) ○ ○ ○ ○ ○  
มากที่สุด (Great) ○ ○ ○ ○ ○

Figure 67: Section 3 with questions about the game prototype

Section 4 of 4

ข้อเสนอแนะ คำติชม หรือความรู้สึกที่อยากรorch

สำคัญจากล้วนที่จะช่วยในการปรับปรุงโปรดเจตนาไว้

ข้อเสนอแนะ (Comment) \*

Long answer text

Figure 68: Section 4 asking for suggestions and comments

## 1.2 The respondents' response

### 1.2.1 The respondents' personal data

#### Gender

Out of 15 respondents, there were 7 male and 8 female respondents. This is a balanced result of gender.

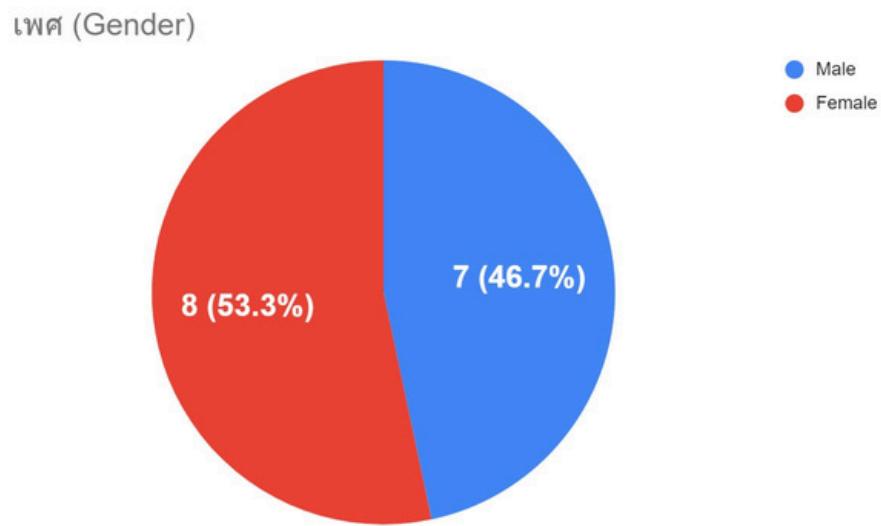


Figure 69: Statistics of gender

## Age

Most respondents' ages are between 15 to 21 years. This makes the respondents ages mostly from mid-teen to young adult.

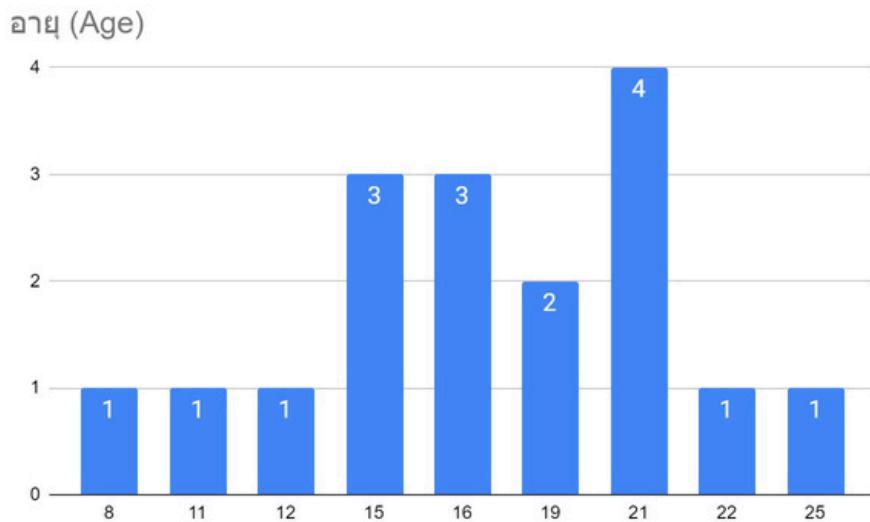


Figure 70: Statistics of age

## How much do you know about RPG gameplay?

The respondents who took the questionnaire are mostly average (score of 3) to confident in playing RPG (score of 5)

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

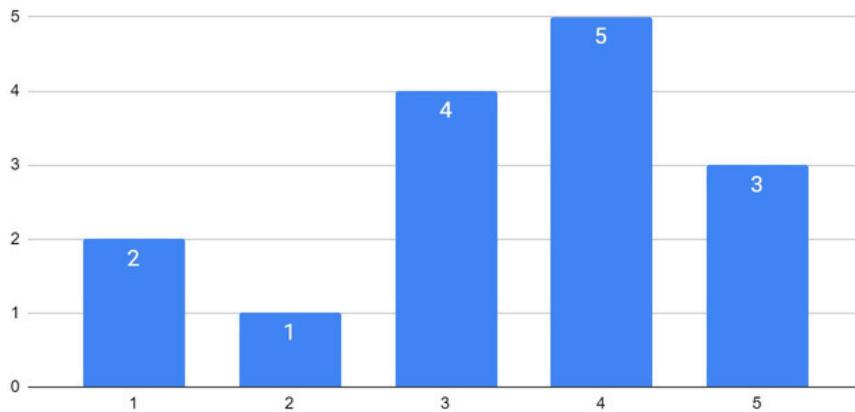


Figure 71: Statistics of “How much do you know about RPG gameplay?”

### 1.2.2 The respondents’ opinion of the game project

#### Is the game's playtime length reasonable?

6 out of 15 respondents answered the game’s playtime is suitable.

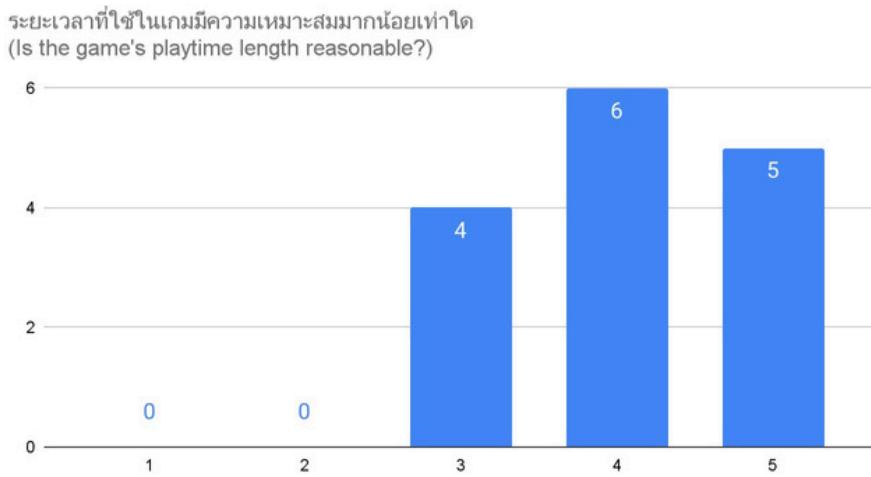


Figure 72: Statistics of “Is the game's playtime length reasonable?”

#### How suitable is the game's graphics?

12 out of 15 respondents answered the game’s graphics are suitable. The rest of the 3 respondents answered that it’s very suitable. This shows that the game graphics are very well received.

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

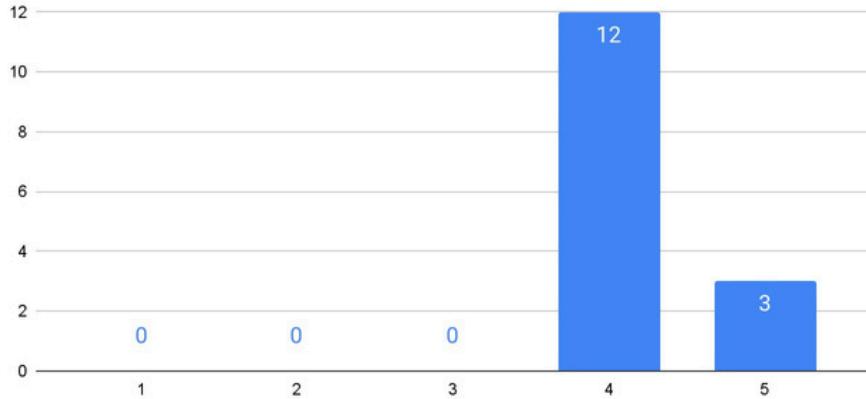


Figure 73: Statistics of “How suitable is the game's graphics?”

### **How suitable is the game's system?**

8 out of 15 respondents answered that the game's system is suitable.

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

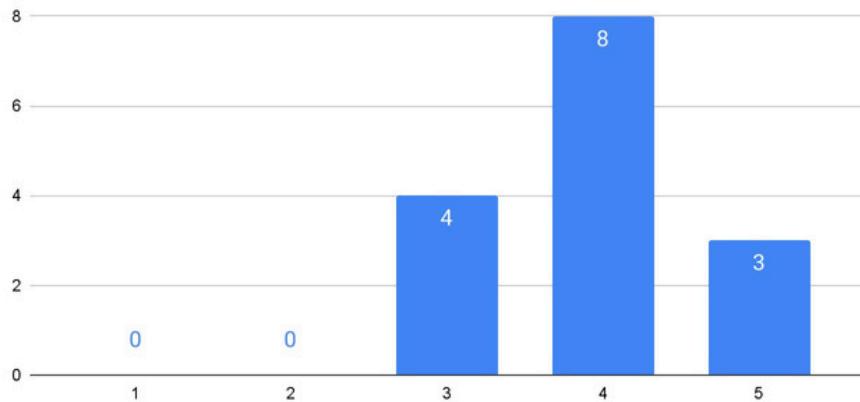


Figure 74: Statistics of “How suitable is the game's system?”

### **How interesting is the game's storytelling?**

8 out of 15 respondents answered that the game's storytelling is suitable.

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

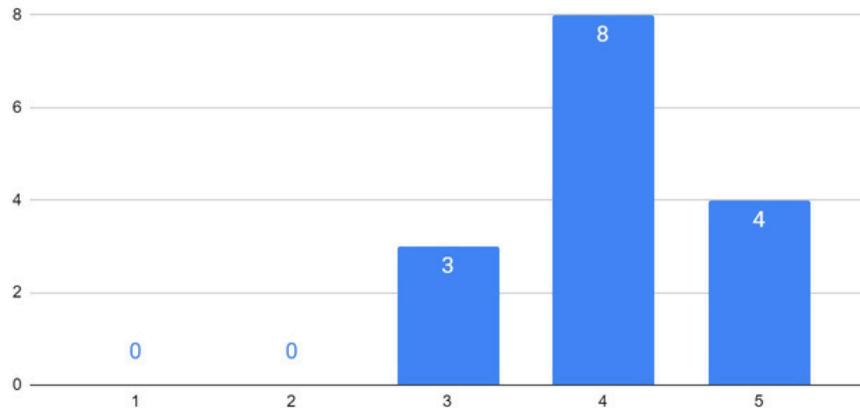


Figure 75: Statistics of “How interesting is the game's storytelling?”

#### **After the game session, Are you more knowledgeable on the effect of Fake News?**

7 out of 15 respondents answered that it really helps to be more knowledgeable on the effects of fake news.

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

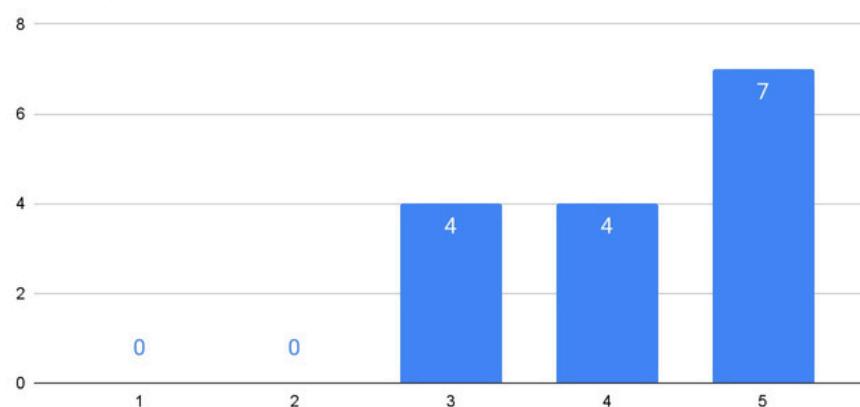


Figure 76: Statistics of “After the game session, Are you more knowledgeable on the effect of Fake News?”

### **After the game session, Are you more knowledgeable on Evidence-based thinking?**

9 out of 15 respondents answered that it really helps to be more knowledgeable on Evidence-based thinking.

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

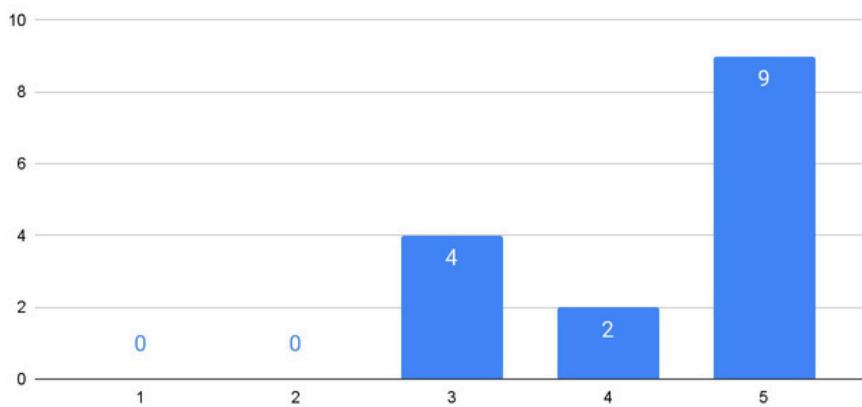


Figure 77: Statistics of “After the game session, Are you more knowledgeable on Evidence-based thinking?”

### **How satisfied are you with the game?**

9 out of 15 respondents are very satisfied with the game.

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

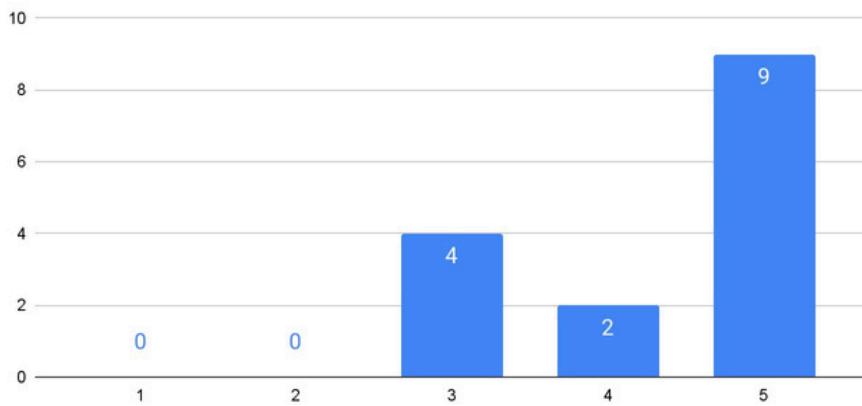


Figure 78: Statistics of “How satisfied are you with the game?”

### 1.2.3 The respondents' suggestion

The suggestions are mostly about how the game should improve. There are suggestions about improving the game's story, graphic, audio, and game mechanic.

#### 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 ของปุ่มนี้เป็นแบบบาร์อยู่ปุ่มเดียวกับ การเม้าพคดจะช่วยทำให้เก็บตู้สบให้ได้มากขึ้น  
อนาคตถ้าหากมีการเพิ่มโหมดยากกว่านี้การเพิ่มroundtrackหรือเสียงตัวละครลงไปเล็กน้อยจะช่วยเพิ่มความน่าสนับใจขึ้น

should have some hint

อยากรู้ให้มีความซับซ้อนกว่านี้

เกมน่ารักมากค่า สู้ๆค่า😊

Nice game , interesting graphics

โดยรวมดีแล้ว แต่อยากให้ตัวละครตอบที่กำลังพูดอยู่ใช้ลายเส้นเหมือนกัน แล้วก็อาจจะมีเสียงตอนเลือก button

Figure 79: Suggestions from the questionnaires

## Chapter 5 Conclusion

### 1. Conclusion

From the result of developing game project Lunar Hunt. The respondents were mostly satisfied with the creation of the game prototype. Their opinions on how the game objectives, to educate players on effects of fake news and evidence-based thinking, were also well received. The respondents were also interested in other game's content such as the story, graphic, and game mechanics. Still, the suggestions voiced that the prototype can further improve in several different aspects. The game story should be more developed to have more clues and evidence for the player to solve. The graphic will be more appealing if the characters' portrait art are put into the game. The game mechanic should guide players to complete each evidence by giving the player more hints. These suggestions will be taken into consideration for improvement.

### 2. Discussion and Suggestion

To discuss the questionnaire. The scoring was evaluated on satisfaction values. Which means the respondents can answer depending on their feelings with no comparison for definition. To elaborate, the question about "How much do you know about RPG gameplay?" is the most vague question in the questionnaire because there was no set definition on how many hours, games played, or other method of self-study about RPG games to be considered as proficiently mastered in RPG games.

The feedback from the respondents on improving the game are all valid. It's agreeable to improve the game's story, graphics, and mechanics. Although the most challenging one would be creating a soundtrack for the game because admittedly, the skill for musical skill was not focused for this project. Another solution for the game's soundtrack is to find free-to-use music on the internet which has the challenge of finding the right one.

## Bibliography & Credit

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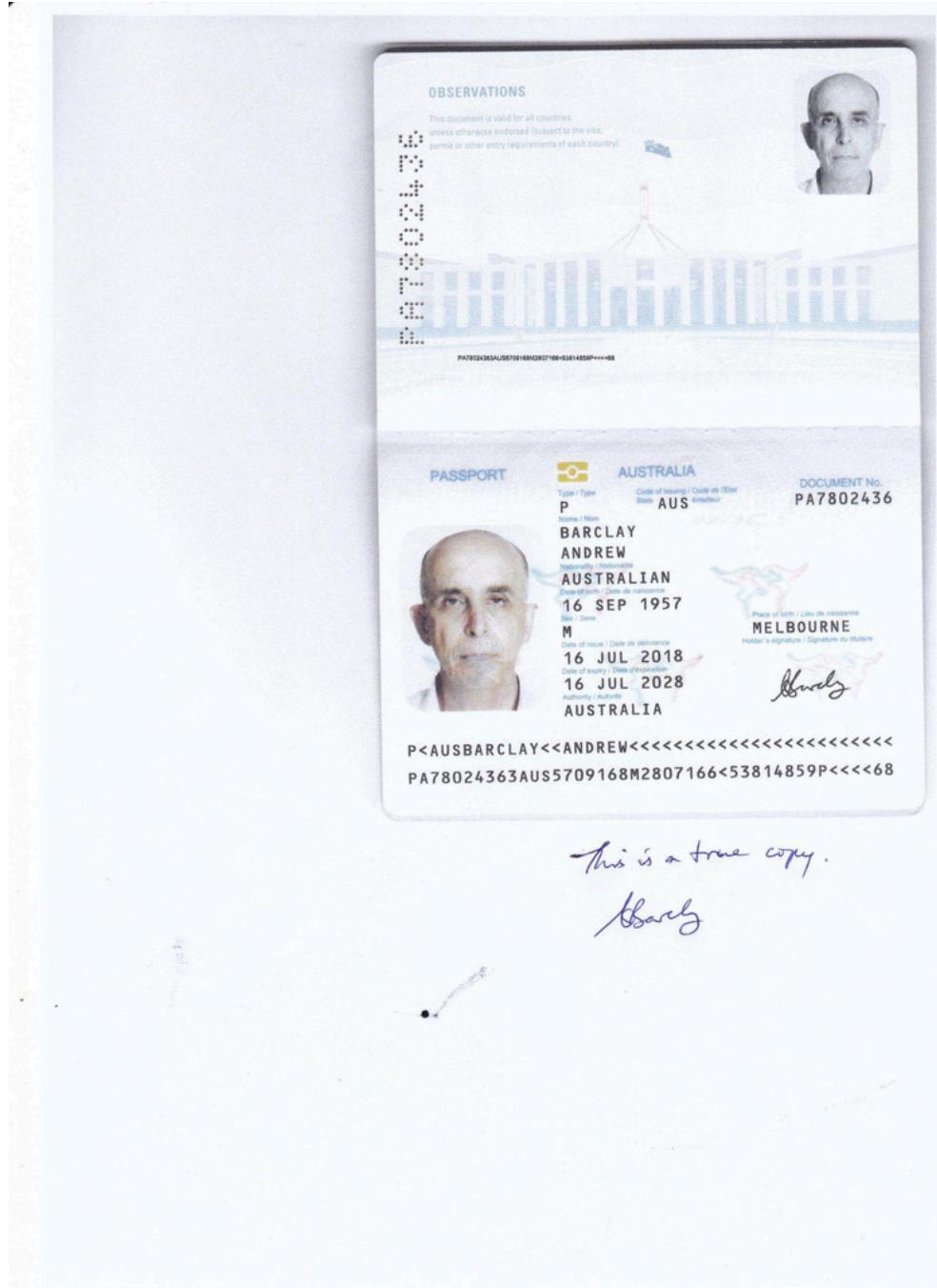
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## Appendix



## 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](#)

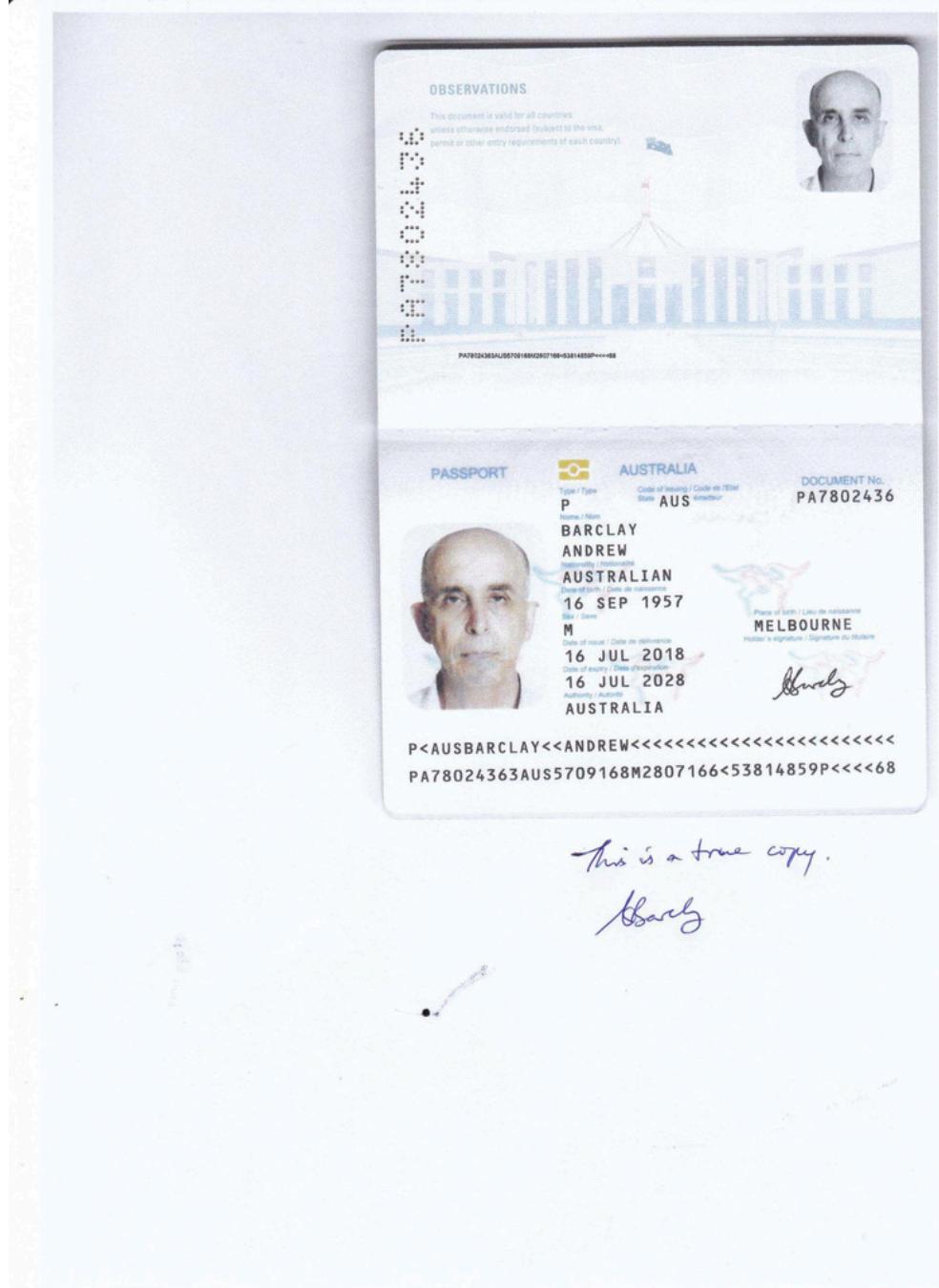
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Lunar Hunt's scriptwriting prototype



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



## Proofreader's passport