COMP-1871 REFLECTIVE LOG

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# Lab Task 01

## Ambience

A computer screen shot of a room

Description automatically generated

After getting comfortable with the attenuation system, I discovered that audio game objects don’t have to strictly have to use spheres unlike in Unity. Using the box shape for the inner/outer radius attenuation settings, it helped me to prepare sounds related to ambience. When giving ambience to the engine room, I was able to fit the whole box radius into the room to make sure the player only hears those sounds when in that area.

## Game Analysis

Bomberman 64 was my chosen game because the limitations of audio in older game titles. When filling in the descriptions, I explained short summaries of the purposes for why those sounds were playing, as to show what they indicate towards the player.

## Challenges

Transferring from Unity to Unreal took a while to get familiar with. How both game engines approach sound are different. Instead of creating a audio source and applying a sound clip to it, Unreal Engine has each sound file contain their own properties. Once I started to understand how to use the tools Unreal Engine provides, I was then able to apply sound settings with ease.

A screenshot of a computer

Description automatically generated

This would also by my first time coding through event graphs. While it felt intimidating at first, the lab tasks helped me understand how to get specified audio clips to play when an event is called. Reading the name of the nodes and understanding the concept that instructions run through node whiles helped me figure out what to do with the PlaySound2D node.

The chosen gameplay of Bomberman 64 contained many sound queues happening all at the same time. This proved difficult to keep up with, however it allowed for more sounds to record in a short span of time.

# Lab Task 02

## Sound Recording

To capture sounds outside, I chose a Tascam paired with earphones to hear back recordings with. When it came to ambient sounds, I would capture a minimum of two minutes considering given feedback from another student that shorter ambient audio files come off as repetitive. I took advantage of a water bottle I purchased and recorded sounds of myself drinking from it, as I figured it would suit for survival games that require hydration. The bottle cap would provide useful for collision sounds, as I’d tap it on different surfaces such as metal or concrete.

With the sounds recorded, a USB cable was used to connect the Tascam into a computer. This allowed me to drag the files from the micro SD onto the computer. I kept all the files as more sounds meant different opportunities.

## Sound Clean-Up

For all sounds, fade in and out effects were applied for all Tascam recordings used, This assured no pops can be heard in the clips. Before using the normalise effect, various sound removing features were used. Using the noise reduction tool helped remove unwanted background noise that could be heard in the Tascam recordings.

A screenshot of a computer

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A screenshot of a computer

Description automatically generated

While noise reduction was used for removing most background noise in sounds, hiss reduction and sound remover worked better with other sound files.

## Challenges

Before taking recordings with the Tascam, it was worth learning how to use one first and getting some practice before I felt confident going outside with it. When getting recordings of places such as the Greenwich Market, I avoided spots where I was likely to capture other people’s conversations. This proved difficult to do as I wanted to make sure the ambience audios were past two minutes, but with so many people in one area, some recordings included people walking past the Tascam while talking.

# Lab Task 03

# Lab Task 04

# Lab Task 05

# Lab Task 06

# Lab Task 07

## Adaptive Music

A screenshot of a computer

Description automatically generated

The timeline editor had to be adjusted, so that the music could play at a normal pitch when on land, and at a lower pitch when submerging into water. The starting point was dragged up to one, and the end point was lowered down to zero.

## Challenges

The music file plays through a meta sound source because originally I planned to adjust the pitch through float parameters. Whenever the pitch value were to change however, it’d cause the music to start from beginning. In the end, the pitch multiplier attribute of the audio component was adjusted instead. Alongside the pitch multiplier, the volume multiplier was lowered so that sound effects could be heard easier.

# Lab Task 08

# References

**There are no sources in the current document.**

# Appendix A

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