*Assessment Task 1 – Write a Modular Complex System Brief*

*Audio Manager “…” – Julian Pahor*

***Purpose:***

The purpose of this system is to greatly streamline the implementation of audio within Unity. Making it easy to essentially plug and play audio from multiple sources and easily change how they interact with one another.

Functionality:

Unloading + Preloading audio for distance based environmental sounds (memory management)

References:

<https://github.com/jackyyang09/Simple-Unity-Audio-Manager>

https://assetstore.unity.com/packages/tools/audio/master-audio-2022-aaa-sound-212962

***Reliant Libraries:***

This system will primarily use Unity’s default libraries but will also include the use of UIBuilder package.

I will also be looking into using Unity’s burst compiler to try and optimize the code to its fullest.

***Mathematical Operations:***

Asd

***Advanced Algorithms:***

-Audio Clip selection randomization (Repeats / No Repeats)

***How it will be made modular + Intergration:***

It will be implemented as a package that can be pulled into any unity project with some a thorough read.me guide to introduce all the functionality provided. I am also considering adding some automated audio bundle creation using Resources.Load and detecting correctly named audio files to automatically group them together in scriptable objects.

<https://gamedevbeginner.com/unity-audio-optimisation-tips/#preload_audio_data>

Notes:

Updating Waveform in real time for fades / loading waveform texture

Use burst jobs

AudioClip.SetData is non destructive and only relevant per play session

Any Fades / audio clip changes will have to be Set on load

Project Settings > Audio > Max Voices

Manually Pausing / Playing continuous audio sources

Compatibility with exposed mixergroup parameters?