Project 2 - Flight Attendant Simulator

Hayley Davies

Unit 7 P01

P1 - Identify the relationship between UX, usability and utility.

Usability relates to how easy a UI is to use. A UI is easy to use when it's easy to learn, efficiently made, memorable, has error checking and satisfying. A UI that's easy to learn will give the user a better experience as they don't have to navigate and get annoyed that they have pressed 3-4 buttons before finding what they need. You can make a UI easy to learn by labelling it well and also copying what other UIs do to follow a standardized pattern which is intuitive to the player. The efficiency of a UI allows a user to navigate it more quickly, this means that they don't waste time looking for something so they use the product more, this again means that they have a better user experience. User experience relates directly to how the user feels about a UI. If they have a bad experience for whatever reason, it will likely ruin the product as they may feel overwhelmed. If they have a good UX, then the user will feel more comfortable with the product.

P2 - Explain how style and typography can impact a design.

The design of a UI can be impacted by the style and typography of said UI. The style of a UI can relate to a lot of factors, such as colours and placement of UI elements. The typography relates to the font choice and the size of that font. Both of these can affect the Utility, Usability and UX of the design. For example, if the buttons are placed all over the place, it can be unclear for the user and just makes the program look messy and less professional, same goes for typography, where if you use different fonts and irregular font sizes where not needed, it can cause the program to also look messy and unprofessional.

P2 - Explain how style and typography can impact a design.

An example of using style poorly would be using an inconsistent colour scheme and placing the UI elements in random places across the screen. For a main menu, this would look like:

An example of using style well would be using a consistent colour scheme and placing the UI elements in a consistent order. For a main menu this would look like:

P3 - Research current user interfaces focusing on the principles explored in P1 and P2.

This UI showcases Civilization V. The UX here is initially very poor as there is a lot going on. However, once you learn the UI, the experience is much better. This UI has a lot of Utility and conveys all the information you need to know, like how much gold, culture and faith you have and are gaining each turn, along with what you need to do before the end of the turn.

P3 - Research current user interfaces focusing on the principles explored in P1 and P2.

This UI showcases the Project Cars 2 HUD whilst you race. Whilst not interactable, this displays a lot of vital information to the player. In the bottom right corner, you can see your speed, gear, revs, engine temp, remaining fuel, vehicle damage, tyre wear, temp and pressure, break wear and temp and the suspension information. In the bottom left, it showcases the times between each racer, so how far away the person in front and behind is. The top left showcases the current lap, players position and whos in first, second and third along with who is in front and behind the player. The top center showcases the rear view mirror so you can see what exactly is behind the player. The top right showcases the track layout so you can see which corners are coming up next, along with other player positions on the track. All of this has a lot of utility, is fully customisable making it extremely usable and providing a great user experience.

P4 - Present to peers, your understanding of UI. Presentation must cover topics learn in P1, P2 and P3.

Slide 1

FLIGHT ATTENDANT SIMULATOR

UI Presentation

Slide 2 - Utility

- Relates to the functional aspect of the UI
- Heavy balance between **Utility** and **Usability**
- More **Utility** means more functionality
- Not enough **Utility** impacts **UX** negatively.
- Too much **Utility** often impacts **Usability** negatively by complicating UI systems
- Image showcases all the ways that data can be functionally shown to a user

Slide 5 - Client Specification

- Our **client brief** consisted of two **limitations**;
  - Repeating patterns, remembering and increasing number of things; and
  - PC **Virtual Reality platform**
- Our UI must follow the principles of **Usability/Utility/UX**
- With this in mind, we must make sure our UI fits within the **VR ecosystem** which gives us a lot to play with

oculus

Slide 6 - UI Designs

- Functional Layout
- Usable
- Lots of Utility
- Lots of information
- Common sense navigation

Slide 3 - Usability

- **Usability** is about how easy a UI system is to use
- Relates to its simplicity
- A UI system should use common sense to navigate
- Relates to the flow of a UI system
- Provides most of the **UX**
- Image showcases the link between **Usability**, Common Sense and Simplicity

Slide 4 - UX

- UX means **User Experience**
- How the user finds a UI system to use
- Relates to the visual information of the UI
- Less clutter means better **UX**
- Better **Usability** means better **UX**
- Image shows the main components of a good **User Experience**
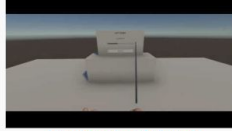
Slide 7 - UI Designs
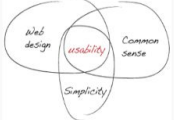
- Functional Layout
- Usable
- Lots of Utility
- Lots of information
- Common sense navigation

Slide 8 - UI Prototype

https://youtu.be/c1TuCkIApx4

P4 - Present to peers, your understanding of UI. Presentation must cover topics learn in P1, P2 and P3.

Here, I have created a multitude of potential UI designs for in my game.
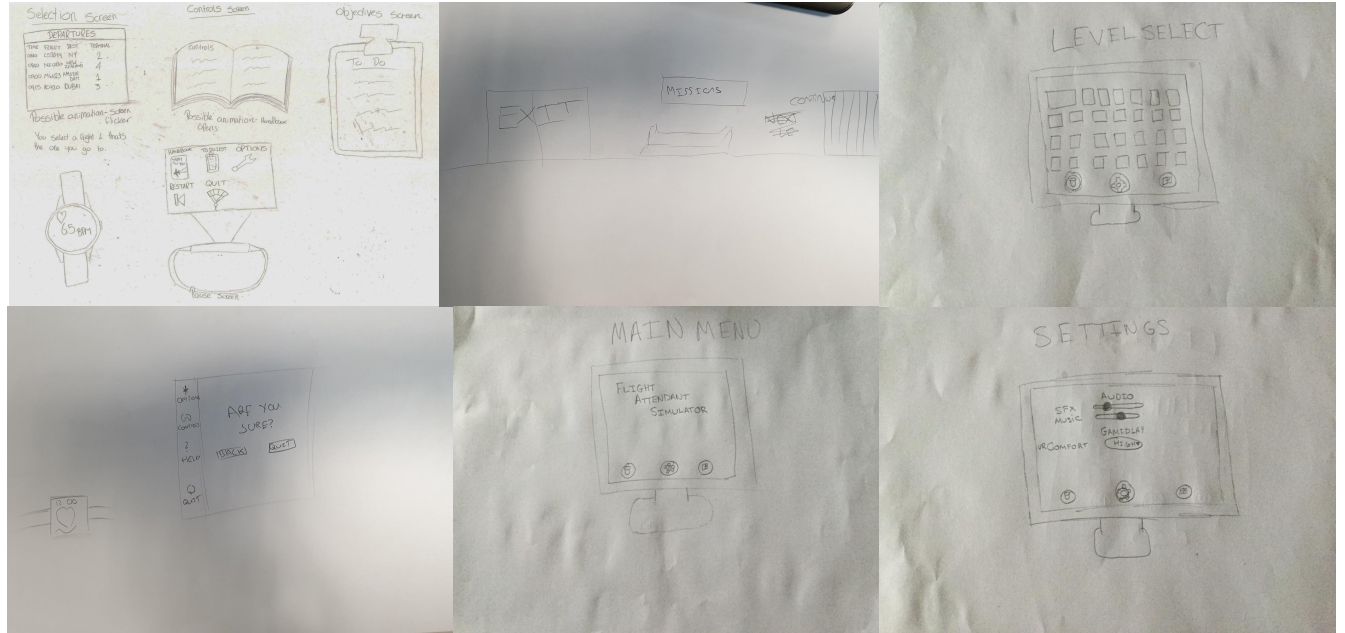
M1 - Demonstrate an understanding of the larger relationship between technical and artistic design.

The technical design regards the technical limits of the hardware and engine with regards to the UI. The Artistic design regards the visual aspect of the design, regarding how it looks. Certain hardware can constrain a UI and what it contains, for example, a controller UI will be different to a keyboard and mouse UI, or a touch screen UI because the user is physically constrained by the designer as to what they can press, where as, on a mouse/touchscreen, they can press anywhere on that screen. Some UIs get around this by emulating a cursor on the screen, such as Splatoon 2 on the Nintendo Switch. Sometimes, the engine itself can limit a UI, so UIs don't have to be on a 2d plane, but can instead be a 3D visual thing, for games in VR for example. A 2D engine like GameMaker: Studio can't deal with 3D and therefore this is impossible. The technical limitations can come down to file type also. The best format for a UI element would be an SVG file as Vector graphics don't lose quality when scaled where as a JPG would as this is Bitmap. Sometimes, file sizes come into play, especially in the past where games were stored on a disc or cartridge and weren't digital. This meant that everything would have to be technically optimised which could reduce the artistic integrity.

M2 - Define the client brief, research a solution. Include usability, utility, UX and limitations of platform.

We have been tasked with making a game fitting to two limitations. Our brief consisted of a sentence which we could interpret how we wanted and our target platform. "Repeating patterns, remembering and increasing number of things" and the PC Virtual Reality system. With this in mind, we decided to make a Flight Attendant Simulator game where you have to take orders, remember them and hand them out. This fit our client brief.

First of all, our platform. At college, we have an Oculus Rift, and I have one at home, along with a few other members in my team so that is our platform.

Limitations of Platform:
User Interfaces within VR are much different to the more mainstream platforms, this is due to the nature in which it works, UI's are no longer restricted to a single two-dimensional plane, they can be fully integrated into a three-dimensional space. This is what I would like to focus on doing, something more interactive than a bog standard UI, something that isn't limited, something the player can look around and see the scope. For our game, I would like to see the player using the UI from inside of an airport, a big space with lots going on, something that's direct and immersive – how VR is meant to be played. We are limited in the sense that you can't really do UI navigation, and the built in UI system within Unity is difficult to use with VR; its more for mice and keyboards and controllers.

M2 - Define the client brief, research a solution. Include usability, utility, UX and limitations of platform.

<u>Usability:</u>
It is essential for a UI to be easy to use or it may deter the player from accessing the game to its fullest extent. We would aim to have the UI be extremely intuitive and follow the standards of other VR games. The best thing we can do is use the pointer system prevalent in other games in VR. I would personally like to use button icons which are intuitive, maybe with tooltips. This is better that showing the player a lot of text; visual information is more engaging than buttons that state what they do on them.

However, although we want a visual looking UI, we still need to make sure we don't have a lot going on, on one page, as it could confuse the player on what is actually happening on screen and what the different things do. So we need to make sure that when it's implemented, that it isn't cluttered and the colour scheme works well. If colours blend in too much also, it would be too difficult to understand so colours are also very important.

<u>Utility:</u>
The UI system within the game would have a fair amount of options. Primarily related to audio and VR options. Graphics settings aren't something we can implement as VR makes this difficult, so a higher end computer would be necessary for our game. However, the UI would still have the utility it needs. A VR Comfort option would be needed to control any potential nauseating events, like turbulence or walking. We would also allow the user to change the volume, this is a must for all games.

M2 - Define the client brief, research a solution. Include usability, utility, UX and limitations of platform.

<u>User Experience:</u>
For our UI, the user experience is a big thing. In VR, it's a new experience, for some people, it may be their first time in VR and with this in mind, the UI needs to give a good user experience. If we make an interactive UI environment, then this is a good thing to showcase as it shows that a lot can be done with UIs in VR. This could be similar to how Lego Star Wars works for example, where the UI is less about a screen and more about the world. I believe this would give the user a good experience. We need to make sure that a new user can easily understand what each aspect of our UI can do and what it changes. We have to make sure the typography of our UI is readable, if it's not legible, it won't make sense to even the most experienced VR users.

All of this is so important, because if it's hard to understand, people would be less inclined to play the game, which would cause sales to drop, ultimately losing money.

D1 - Critically evaluate the produced prototype documentation.

The prototype I have chosen to work with is the monitor design, this is shown to the below. I feel like this fits in well with my game and what we are trying to showcase. This is a fairly basic, but intuitive design and I believe that it will fit within the context of the game. The prototype made consists of 3 screens, a Main Menu screen, a Level Select screen and a Settings screen. They all follow the same simplistic design choice and I have tried to not clutter the screen with information; opting for icons instead of text.
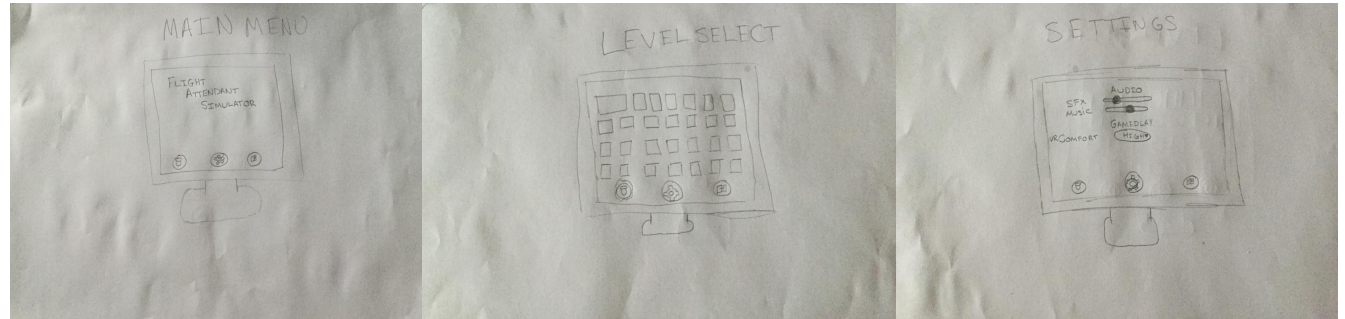
D1 - Critically evaluate the produced prototype documentation.

<u>Positives:</u>

The main positive about this design, is that it has good usability, the UI is clear to read and easy to understand what everything does. This means, that because everything is self-explanatory, the user should be able to use the UI to its fullest extent – this is from the perspective of a programmer however, and programmers often overlook user experience for utility.

Another positive is that the UI prototype has a fair amount of utility, this comes from the options menu allowing the volume to be changed, along with how comfortable people feel in VR. Overall, this should provide a good user experience.

Another positive comes from the fact that the design isn't cluttered, and showcases as much information as I feel the player needs to know. As the player, you don't have to go through and learn the ins and outs of a new UI because its different to everything that already exists, instead, you can jump right in and access the game to its fullest extent without much intuition.

D1 - Critically evaluate the produced prototype documentation.

Negatives:

The negative of this design comes from how it will be used. Being a VR game that we are making, this makes it difficult to actual code sliders because none of us have made a VR game before, and it will be done in a way which makes sense to the programmer. This means that sliders might not work within the game and we will have to alter the design. Other UI elements might cause issues with the VR interaction and this will cause the design to be altered.

Another negative is that there aren't any graphics options, this is because of how taxing VR is on a computer. We have chosen a low poly art style, along with low quality textures by default – as they are mostly flat colour textures. This means that quality settings aren't needed.

Things like resolution also, this can be affected in the likes of SteamVR, as trying to change the resolution in VR can cause issues when done poorly so not messing with this is a good idea.

Unit 12 P01

D1 - Enhance Game Pitch with Prototype

Video Link: https://www.youtube.com/watch?v=KgJcmbgiPUc

Game Alpha Prototype (Only Works On Oculus VR):
https://drive.google.com/file/d/1klh9_xL-umquYblwoc9WHw5q3ObWkf9e/view

The prototype created showcases a rough idea of what our game will be when completed. For this, you have to speak to the customers, find out what they want and then get that for them and place it down in front of them. This doesn't showcase all of our final mechanics but it does showcase our core mechanic of taking orders and giving them out; Repeating Patterns and Remembering and Increasing Number of Things. Although this didn't cause us any problems. We will most likely move over to the SteamVR plugin as this provides much more useful tools, such as release on all VR platforms (WMR, Vive and Oculus devices). However, this will lock us down to the Steam Ecosystem; which isn't necessarily a bad thing for consumers.

Unit 7 P02

P5 - Create a user interface prototype with three different visual styles using designs produced in P4.

This showcases my main menu screen with an options menu. The main menu contains 3 buttons, Play, Options and Quit. Doing exactly what they describe. The options menu showcases a volume up and down button and a back button. The bar in the middle shows what the volume is at currently.

P6 - Collect peer feedback for prototype visual styles from both learners and tutors.

After getting feedback from my classmates and tutors. The main issue with my UI is a lack of feedback to the player as to what button they are pressing. As I am making a VR game, the default Unity UI system doesn't work like it does with a keyboard and mouse - normally, if you hover over a button, it will tint sightly so you know what is being pressed. Instead of changing the colour, I will instead opt to make the buttons slightly larger so they stand out more.

P7 - Improve on the previously created prototype based on peer feedback from both tutor and learners.
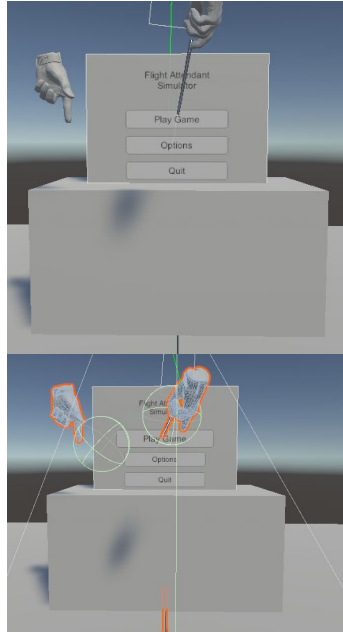
Here you can see, a before and after of the menu being used. Before is above, where they play button doesn't change size, and below showcases the play button getting bigger when it's hovered over. This gives the player more feedback so they know exactly what button they will press. This helps improve the user experience with the UI.

M3 - Analyse the produced user interface focusing on principles explored in P1, P2 and M1.

The prototype of the UI menu is very simple and easy to navigate for the player, with the game being virtual reality it needs to be clear and easy to click, the pointer makes it very easy to navigate around the menu as the player can clearly see what it is doing and where they are about to go, the buttons getting bigger when hovered over give the player better feedback as they can tell what they are about to press and gives them an indication that the menu is working and is interactive. The design of the UI is very bare and simple, it is very simply laid out with only 3 buttons for the player to use on the main menu, one which takes the player to the options menu which has a obvious back button to take the player back to the main menu. Each button is clearly labelled for the player so they can easily identify what to press. There is little to none artistic design in this prototype version of the UI menu, with basic typography and no colour, the layout is very standardized which will be very familiar to the typical player, I was focused on getting the technical side of the UI completed so it is intuitive to the player and easy to navigate which gives them a good user experience as soon as they start the game, encouraging them to continue on and play.

M4 - Compare and contrast the prototype design with three current UI designs.

Beat Saber:

Compared to Beat Saber, the prototype design is fairly similar. Both this prototype, and Beat Saber, use a similar pointer system, which helps aide the player in seeing exactly what they are pressing. This is true for most, if not all, VR user interface systems. Another similar thing, is using a World Space canvas to showcase what the game does.

The biggest difference between the two, comes from the fact that the prototype designed is on a monitor, which is fully opaque, where as, the Beat Saber UI, is a slightly transparent floating screen - like a hologram. This fits with what Beat Saber is and its style. But our prototype also does this.
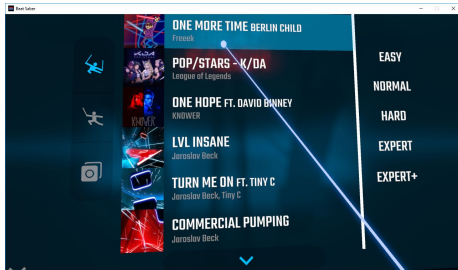
M4 - Compare and contrast the prototype design with three current UI designs.
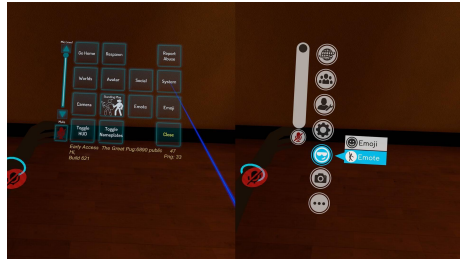
<u>VRChat:</u>
Again, the pointer and world space canvas are the two things that make the prototype similar to the UI used in VR chat. This shows us that it's a good system to use and that it's also intuitive, meaning our design should give a good user experience and be extremely usable.
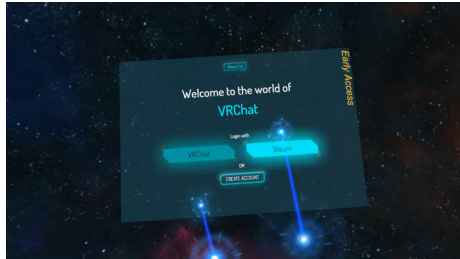
The difference again, comes from the UI in VRChat being more of a holographic display, where as the prototype I made, is more of a real world UI. Another difference comes from VRChat having more of a HUD style - especially with the top image to the left. I have not designed a HUD style UI, not even one which can be shown and unshown. This is because I don't want to clutter the player's vision as it doesn't fit with the game's style and it would likely annoy players.

M4 - Compare and contrast the prototype design with three current UI designs.

Project Cars 2 (VR):
The prototype UI created is much different to to the Project Cars 2 one. This stems from Project Cars 2 being a VR-optional game. This means that it doesn't use a world space UI, but instead a screen space UI, and doesn't use the pointer system. In the lower image to the left you can see this. Where you are looking with the headset, displays a cursor which is used to highlight the buttons on the menu. You must then press this with the A button on a traditional controller or Steering Wheel; VR controllers are not supported.

Project Cars 2 also features a HUD which our game doesn't.

Overall, the UI in Project Cars 2 doesn't really compare to the prototype I have created because it's used so differently.

Unit 7 P03

P8 - Produce final assets for a UI. Assets must include 5 types of information interaction.
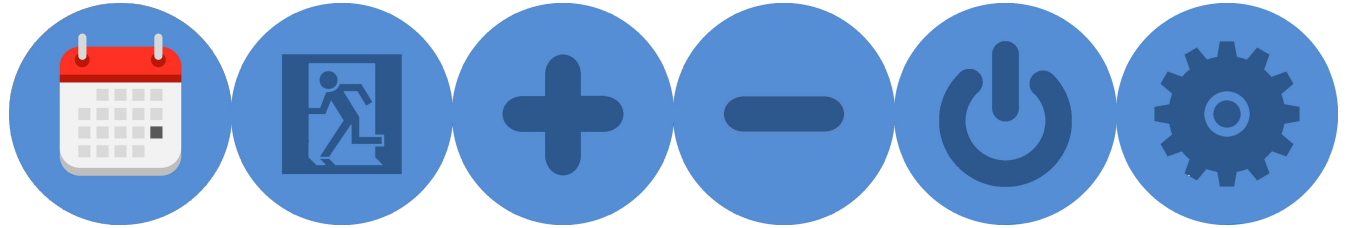
These are the UI icons that I have made for my game. Going from left to right, there is a calendar, which is my level select/play button, a back button which is an exit sign, a plus and minus button for volume changing which change the values on a slider, a power button to quit the game and a cog to open the options menu.

P8 - Produce final assets for a UI. Assets must include 5 types of information interaction.
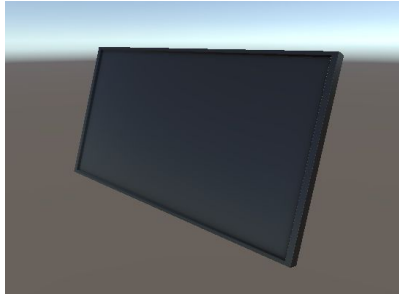
I have also created a 3D model of a monitor for use in my game, this is what the main menu UIs are included on. I have also made an airport asset which isn't explorable, but it does add space in the background for my menu. I feel like this adds a lot of information for the player.
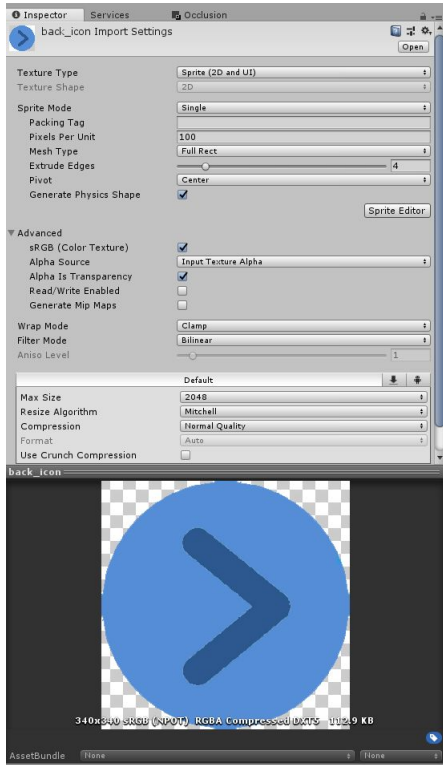
P9 - Import art assets using the methods taught in the implementation techniques of the unit content.

I have imported all of my image assets in the same way for my UI. These settings can be seen in the inspector window to the left. I have set the Texture Type to be a Sprite as this is the setting for UI. I imported the assets by simply dragging and dropping them into the editor.

P10 - Set up the layout for the user interface using the imported art assets.

This is my Main Menu. This shows an image and three buttons. The image displays "Flight Attendant Simulator", the name of my game. The buttons, going from left to right, are a Level Select (calendar), Options (cog) and Quit (power button). As you can see in the bottom image, when you hover over these, they display text telling you exactly what they do. Only one of these will display at a time, and will disappear when you no longer hover over them.

P10 - Set up the layout for the user interface using the imported art assets.

This is my options menu. It consists of seven textboxes, two sliders and 7 buttons. The plus and minus buttons increase and decrease the volume output for Music and SFX individually. The arrows, change the VR Comfort between Low, Medium and High - this affects the amount of turbulence the player will endure. And the back button is in the lower corner with an escape symbol on it. As previously stated, the back button has a piece of text that showcases above it when it's hovered over. This gives the player more feedback so they know exactly what the button does.

P10 - Set up the layout for the user interface using the imported art assets.

This is the final UI screen that I have. This is a "How to Play" screen and tells the player what they are meant to do before they start playing the game. There are two buttons on this page, a back button (escape sign) and the play button (calendar). They again, show text above them to tell the player what the button does before they pressed it. I chose for this screen to exist before playing the game, so that its almost forced that players read this and have an idea of how to play the game, this is because a "How To Play" button would likely never be pressed.

P11 - Setup functionality ensuring the user interface is able to be navigated.

This video showcases me using each of the buttons on the menu screen of my game. This shows me navigating through the level select menu, the options menus and the main menu. This can be fully navigated.

https://www.youtube.com/watch?v=zscZDUPjSdc&feature=youtu.be

P12 - Setup main menu, which is visible upon starting the game.

As you can see in the criteria for P11, the menu opens up straight away when the game loads. This showcases menu when the player starts the game.

M5 - Set up functionality for the game options section of the main menu.

As you can see in the two images, changing the volume options, affects this directly in the game's volume mixer. These options change the volume options within the project, changing the SFX and Music volume both affect the game's volume levels. This functionally works and is showcased in game. The video shown in P11 showcases this feature further in an easier to tell way - as its the actual build and not running for the engine's game view.

M5 - Set up functionality for the game options section of the main menu.

Again, to the left, images are shown which portray the graphics options. Here, you can enable and disable post processing, as the game will lag a lot on lower end hardware with post processing enabled. As you can see, this works in the game, removing bloom and colour correction from the game when disabled. The video shown in P11 showcases this feature further in an easier to tell way - as its the actual build and not running for the engine's game view.
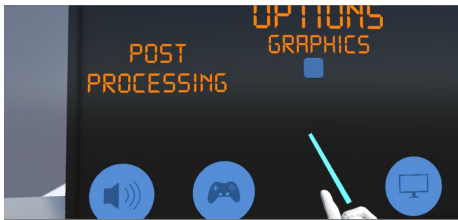
Unit 11 P03

P7 - Identify suitable Foley sounds for use in one computer game full-motion video.

P7 – PO3 – Identify Suitable Foley Sounds for Use in One Computer Game Full Motion Video

Game Title, Start and End Time & Clip URL: Horizon: Zero Dawn All Cutscenes Movie (0:30 – 1:30)
https://www.youtube.com/watch?v=nVv34qRnsxE

Sequence Time	Description of sounds heard in 15 second section?	Purpose identified sounds serve in communicating the sequence narrative?	How do you think identified sounds have been created (studio Foley? Field recorded on location? Digitally produced using software instruments?)	What sounds would you replace identified sounds with for ADR production?	How will you produce the replacement sounds?
00:00-00:15	Ambience	Builds up to the magic of the world	Using a variety of instruments like wind chimes outside with the wind	The ambience	Using a wind chime and leaves blowing in the wind.
	Rost Talking	Providing dialogue to the player to set up the scene of the world	Voice actor in a studio	The dialogue	Using my voice
	Baby noises	To show the innocence in this world	Voice actor in a studio	The sound the baby makes	Using my voice
00:16 – 00:30	Baby noises	To show the innocence in this world	Voice actor in a studio	The sound the baby makes	Using my voice
	Rost talking	Points out that the baby isn't his, but instead that he has adopted it	Voice actor in a studio	The dialogue	Using my voice
	Baby blowing raspberries	To show the innocence in this world	Voice actor in a studio	The sound the baby makes	Using my voice
00:31 – 00:45	Rost talking	To build into the world	Voice actor in a studio	The dialogue	Using my voice
00:46 – 01:00+	Ambience	To invoke feeling for the player; to hype them up	It's the same initial ambience just with a	The ambience	Using a wind chime and leaves blowing in the

The overall feeling of the video is to give a sense of fatherly love. This is reflected within the videos sounds. Both with dialogue and the magicalness of the ambience. The video in itself showcases the world that the player is going to be led into.

P7 - Identify suitable Foley sounds for use in one computer game full-motion video.

P7 – PO3 – Identify Suitable Foley Sounds for Use in One Computer Game Full Motion Video

Game Title, Start and End Time & Clip URL: The Last of Us Part II – E3 2018 Gameplay Reveal Trailer | PS4 (0:58 – 1:58)
https://www.youtube.com/watch?v=V5vBo_MI39I

Sequence Time	Description of sounds heard in 15 second section?	Purpose identified sounds serve in communicating the sequence narrative?	How do you think identified sounds have been created (studio Foley? Field recorded on location? Digitally produced using software instruments?)	What sounds would you replace identified sounds with for ADR production?	How will you produce the replacement sounds?
00:00-00:15	Ambience	Music which displays the lax nature of the trailer juxtaposed with the world itself being a hostile place	Likely a band working alongside the lead composer.	The music in the background. Trying to keep the same BPM as the old music.	Use secondary sources to make the audio track.
	Male talking	Begins a general discussion which again appears to be relaxed again. This again is juxtaposed to the world we were shown in the first game. He outlines the premise of a character we have yet to see in the trailer, a character who we played as in the first game.	In a recording studio with a voice actor	Replace the voice	Record my own voice with edits.
	Ellie talking	Responds in character as we are used to.	In a recording studio with a voice actor	Replace the voice	Record my own voice with edits.
00:16 – 00:30	Discussion continues	Follows on and give the player more info about the game	In a recording studio with a voice actor	Replace the voices	Record my own voice with edits.
00:31 – 00:45	Clapping	Shows that the in game audience is entertained	Using the voice actors likely with them clapping.	Replace the clapping	Record multiple clapping tracks and merge them
	Discussion continues	Follows on and give the player more info about the game	In a recording studio with a voice actor	Replace the voices	Record my own voice with edits.
00:46 – 01:00+	New character appears	Highlights the contrast between this and the first game. Outlines that Ellie now trusts more people. The new character shows disgust towards	In a recording studio with a voice actor	Replace the voices	Record my own voice with edits.
Concluding summary of the overall sound design of this sequence?					

In this trailer, the overall sound design relies on the dialogue spoken by the characters. With this being a sequel, most people watching this will likely know what the game is already about. The overall sound design encapsulates a conversation between some new characters which alludes to the relationship dynamics within the game. The ambience showcases that the game is set in a more peaceful community area where people don't fear what lurks in the dark.

P7 - Identify suitable Foley sounds for use in one computer game full-motion video.

P7 – PO3 – Identify Suitable Foley Sounds for Use in One Computer Game Full Motion Video

Game Title, Start and End Time & Clip URL: The Walking Dead: The Final Season Episode 3 Trailer (0:02 – 1:17)
https://www.youtube.com/watch?v=V5vBo_Ml39I

Sequence Time	Description of sounds heard in 15 second section?	Purpose identified sounds serve in communicating the sequence narrative?	How do you think identified sounds have been created (studio Foley? Field recorded on location? Digitally produced using software instruments?)	What sounds would you replace identified sounds with for ADR production?	How will you produce the replacement sounds?
00:00-00:15	Clicking of a spinning of a revolver	To showcase AJ's knowledge and ability to use the gun. Can also be seen as a sign of cockiness or naivety of the character as they are playing with it like a toy	Studio Foley	The sound of the revolver	Something which clicks, like a drawer or one of those party hand clapper things.
	Water being thrown onto someone	Shows man being tortured, builds into part of the episode	Studio Foley	The water splashing	Throwing water into a bath
	Clem talking	Explains what she wants	Recording studio	The dialogue	Voice over
	Horse drawn cage being dragged	Flashes back to previous episode to remind the player of what took place last time	Studio Foley		Dragging a chair across a laminate floor
	Man talking	Puts up a fight, plays true to the character and show that they are loyal to their leader	Recording Studio	The dialogue	Voice over
	Lighting lighter	Showcases the torture which is about to ensue.	Studio Foley	Lighting the lighter	With a lighter
00:16 – 00:30	Clem talking	Speaking to another character to build to the next part of the trailer	Recording Studio	The dialogue	Voice over
	AJ talking	To show the nature of the character at them not being bothered by witnessing something traumatic at a young age	Recording Studio	The dialogue	Voice over
	Man screaming	He's being tortured, builds to the contents of the episode	Recording Studio	The screaming	Voice over
	Louis talking	Builds to the next line in the trailer	Recording Studio	The dialogue	Voice over
	Clem talking	Outlines the basis of the episode	Recording Studio	The dialogue	Voice over
00:31 – 00:45	Walkers	Noise of them groaning. Outlines the danger the character/s will face.	Recording Studio	Groaning of walkers	Voice overs mixed together
	AJ talking	Outlines a premise. Shows the evolution of the character and their thoughts on the situation. It shows that the character mentally is older than they are physically (about 4-6 years old)	Recording Studio	The dialogue	Voice over
	James talking	Outlines part of the narrative of the story	Recording Studio	The dialogue	Voice over
00:46 – 01:00+	AJ talking	Continues his statement from earlier, about eyes. He finalises the statement which outlines the evolution of the character.	Recording Studio	The dialogue	Voice over
	Spinning of a revolver	To showcase AJ's knowledge and ability to use the gun. Can also be seen as a sign of cockiness or naivety of the	Studio Foley	The clicking of the revolver	Something which clicks, like a drawer or one of those party hand clapper things.

		character as they are playing with it like a toy			
	Lilly speaking	To showcase the narrative, and the fact that she will not be defeated easily.	Recording Studio	The dialogue	Voice over
	Lee talking	Brings nostalgia of a familiar voice back from Season One. This brings mixed feelings to the character.	Recording Studio	The dialogue	Voice over

The overall sound design of this sequence relates to what happens within the episode. As it is a trailer, it uses sound to keep the viewer encapsulated in the video by using loud noises, the abrupt cutting off of audio and silence to stop the viewer from looking away. The purpose of this is to get people to buy the game.

P8 - Synchronise selected audio to one computer game full-motion video.
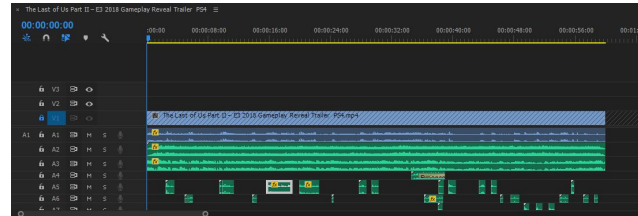
Here, you can see that I have used 6 audio tracks to convey my work. These tracks add both vocals and ambience to the video to make it feel more lived in. Some of these tracks, specifically the vocal ones, needed to be cut down using the Razor Tool in order to create pauses between an audio snippet or remove audio that didn't need to exist, like misspoken words or random noises like breathing which were visible at the start or end of vocal recordings. To line up some of the tracks, I needed to cut them in parts where I didn't fit with the same pace as the characters did in the original.
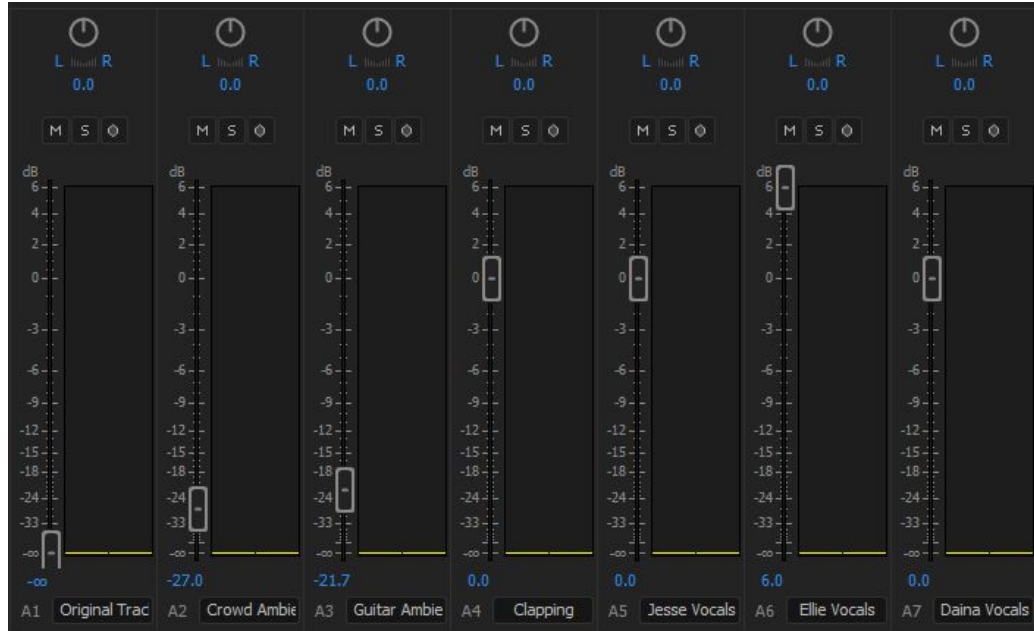
P8 - Synchronise selected audio to one computer game full-motion video.

This video showcases how my audio has been synchronised to the video. You can see that as the lips move, they are speaking even though this is a dubbed track.

Link: https://youtu.be/frjlO_78sjI

P9 - Mix and balance all audio levels to ensure they do not peak or clutter the mix.

To the left, you can see all the audio tracks shown within the mixer. I have muted the original track entirely as I may need to use it at a later date. I have turned Crowd Ambience to -27dB, Guitar Ambience is at -21.7dB, Clapping, Jesse Vocals and Daina Vocals are both at 0dB and Ellie Vocals are at 6dB. I had to change these in order to reduce or increase the sounds from certain tracks. Things like ambience shouldn't be prevalent unless you listen for it as to not disturb the vocals. I have boosted Ellie's voice because she is the main character in this situation meaning that what she says is the most important and shouldn't be missed by the audience.

M3 - Apply two spatialisation techniques to the audio content to replicate the spatial aspects of the video.

I have applied 2 spatialisation effects to the audio. A Convolution Reverb to the Guitar Ambience and a Studio Reverb to the Clapping sound. I used a convolution reverb to make the guitar sound like it was in more of an acoustic space, to add the desired effect of clearing up the audio to make it sound more professional. I used a studio reverb on the clapping sound to again make it sound clearer and to improve the quality of the audio. Studio reverb makes the sound appear as though it was recorded in a studio environment. This means that the sound is dampened and doesn't echo as much
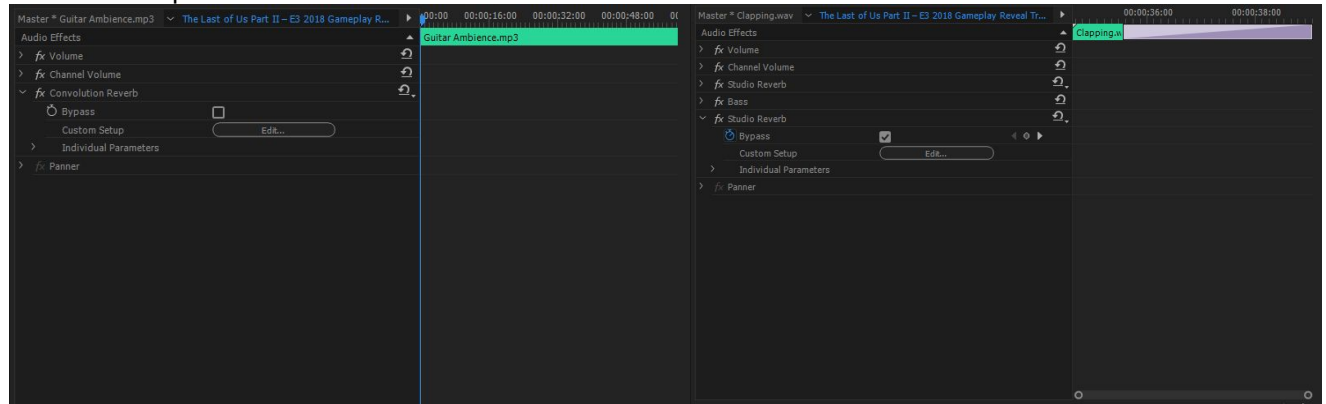
M4 - Produce high-quality audio using equalisation and compression to ensure the final product has impact.
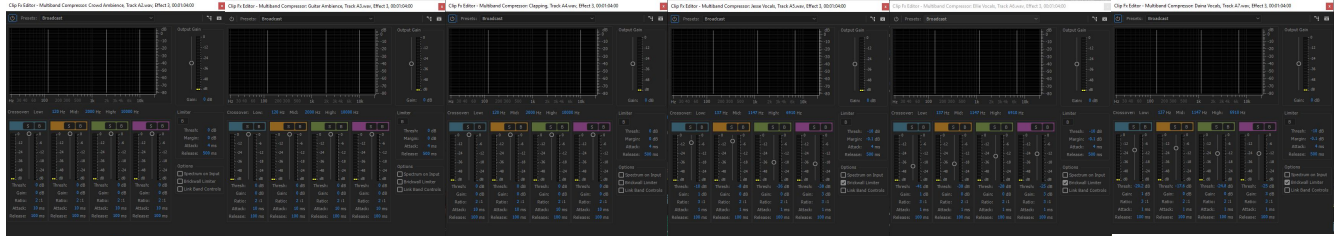
I have used a multiband compressor to ensure that all of my audio tracks follow a consistent volume. A compressor prevents certain bands of audio from being too loud, or out of place, thus improving the impact of the final product. The compressor works by singling out and changing the volume of specific audio bands. There's 4 bands on my compressor, low tones, low-mid tones, mid-high tones and high tones. These can be singled out and changed accordingly - say if in the high tones, there is some unwanted noise, I can change the volume of only the high tones to make that less prevalent within the audio track.

M4 - Produce high-quality audio using equalisation and compression to ensure the final product has impact.
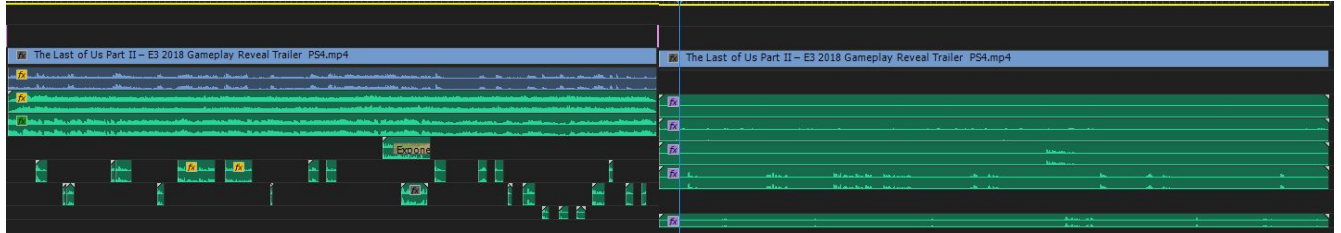
For my project. I turned each of my audio tracks into their own track. This optimized my tracks for compression and made it easier. The picture on the left showcases before optimisation and the one on the right showcases after. This made it easier to apply compression because it meant that I could edit each track as a whole instead of small snippets. This made the process easier.
This wasn't difficult to do, I went to File > Export and exported the audio only from the selected track.
Video Link: https://youtu.be/TLo9kXPzHIk

Unit 11 P04

P10 - Analyse and evaluate the software tools that were used to record, process and arrange audio.

I used three software tools to record, process and arrange my audio as part of this unit. These are, Adobe Audition, Adobe Premiere Pro and the Unity Game Engine. Being a quick learner, not a lot was difficult when I first started using the software. I've dabbled with Audition and Premiere in my own time before and have been using Unity for a couple of years. Premiere Pro had the largest learning curve, with it being more complex than Audition and it being a piece of software I don't really use often.

I did have some difficulties when first using the software. With Audition, this was properly applying effects to the audio and actually making the audio sound the way which I wanted it to. For Premiere, the main issue I had was syncing the audio to fit the video. For Unity, the issue I first faced was actually coding the audio, because I've never handled audio within Unity before. However, a lot was easy to do, such as sequencing and clipping the audio in Audition, sequencing both the video and audio elements within Premiere and applying audio and sorting the audio objects within Unity.

P10 - Analyse and evaluate the software tools that were used to record, process and arrange audio.

Some more advanced processes that I used were cutting audio tracks, this was done in both Premiere and Audition where I removed parts of the audio which aren't needed, such as me narrating the start of the audio clips for my foley sounds and any audio which was overrun. Applying effects to the audio was also more advanced, depending on the exact effect. I have added multiple effects across all my sounds with effects such as Reverb and Pitch Shifting. Another more advanced audio technique I did was actually mixing and balancing the audio. I did this in Audition, Premiere and Unity, this was done so that the audio conveys more impact within the sequences and so that no audio track overpowers another track.

P10 - Analyse and evaluate the software tools that were used to record, process and arrange audio.

The most challenging thing about the software was not knowing how to properly use it; specifically when it comes to Audition and Premiere. The most challenging thing was trying to figure out how to use the programs as they have a somewhat confusing UI to them which makes it difficult to find what you want. Once I understood the UI properly, I could use it to a more advanced extent. The most difficult editing technique was applying spatialization effects to the project and making them sound realistically fit into the environment they were present in. This was difficult because I didn't know which effect to use specifically and which parts of the effect I should edit, this was mostly a trial and error thing for me to do.

P11 - As part of a technical report, compare and contrast recording practices and techniques used in P1 and P2.

When recording my audio, the placement of the microphone was an important factor in getting the best quality of my audio, if the microphone was too close, the audio could become distorted and if the microphone was too far away then the audio wouldn't be picked up. Depending on which microphone was used, affected the orientation of that microphone. For my foley sounds, I placed the microphone about 30-60cm from the audio's source so that the audio was picked up but wouldn't result in distorted audio. For my vocal recordings, I used my headset at home, the microphone on this was about 5cm from my mouth.

P11 - As part of a technical report, compare and contrast recording practices and techniques used in P1 and P2.

For the most part, the audio I recorded was fine when recording outside of a studio environment. Some of the audio tracks had to be re-recorded due to wind or other external factors such as people. Whilst recording certain sounds, my audio didn't sound good due to the loud noise and the echo of that sound. For example, the toilet flushing didn't quite fit with my game. This was due to it being a more enclosed space in real life, meaning that you could tell that the sound reverberated differently to what it should have in my game.

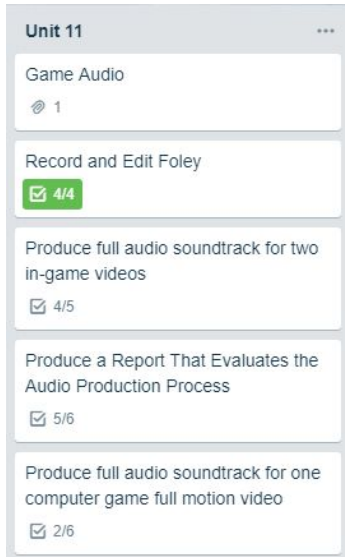## P11 - As part of a technical report, compare and contrast recording practices and techniques used in P1 and P2.

In my house, the recordings were clear for the most part, but I recently got a new dog who likes to bark a lot, especially when he hears something outside, this meant I had to record some audio tracks two, three or even four times to get a clear audio recording. I also did recording inside of college, however, the room used doesnt have sound proofing and there is a pipe which makes a lot of noise in that room, this affected the quality of my audio and meant that I had to record my tracks multiple times. Also, the room used is the classroom cupboard which means the whole class needed to be quiet in order for me to record my audio.

P12 - Demonstrate an awareness of the constraints and limitations on the sound designer within the industry.

I think that I managed my time well during my time producing the audio. I used the Trello platform to aid me in completing tasks and meeting deadlines. However, audio isn't my strong suit and that means that it was often left until last minute, rushed and was half-arsed. I feel like the time management method used was useful not only to the audio but to the rest of the course. For the two projects, I have followed a sprint planning method, this being 2 week sprints for the first and 3 week sprints for the second project. This meant that my time was managed better than it would have been without this tool in place.

Unit 11

Game Audio
📎 1

Record and Edit Foley
☑ 4/4

Produce full audio soundtrack for two in-game videos
☑ 4/5

Produce a Report That Evaluates the Audio Production Process
☑ 5/6

Produce full audio soundtrack for one computer game full motion video
☑ 2/6

P12 - Demonstrate an awareness of the constraints and limitations on the sound designer within the industry.

With an indie studio, there will often be no more than 1 sound designer working on the project. This person would most likely have to do more than just sound design too, because the less people you hire, the more money you keep. An indie developer could possibly use a free piece of software such as Audacity for the audio editing or something inexpensive, such as the Adobe Suite. An indie sound designer would spend as little money as possible to record their audio, they may rent out a studio space for a few days, or work in their normal working environment, depending on the budget. This will affect the quality of the audio too. On the other hand, a AAA sound designer will have a lot more budget and therefore equipment available to them. They will likely have a dedicated space to record their audio and have more expensive software. They will also have a team of members working on the audio, this could be as small as 10 or as big as 60, if not more.

M5 - Reflect on how the game engine was used to implement the audio in P6.

I used the Unity3d game engine to implement my audio. I did this because the game engine handles audio on its own and all I had to do was program the triggers so that the sounds played when they were meant to. All 10 of my sounds were implemented into the game engine by dragging them into a folder and attaching Audio Source components to the objects where the sounds played.

After doing this, the game engine has a lot of sound features. I can set up sounds to be 2d or 3d spatial within the environment. 2D sounds in engine, don't have a radius, so they will play at a set volume forever. 3D spatials sounds however, have a roll off which can be setup in unity. This means that they will play at full volume within a certain distance to the audio source and this will get quieter until eventually, the sound can no longer be heard.

Unity also has its own volume mixer so that if audio is too loud when it goes into engine, it can be turned down which helps mix all of the tracks so that no track is too loud or too quiet in respect to all of the other sounds.

I found programming when the audio should play as the easiest part.

M6 - Identify and discuss appropriate and effective techniques for undertaking sound spatialisation.

- Synthesized reverb is the electronic creating of sounds to edit audio. This could be something like adjusting the pitch of an audio track. Auto tune is a type of synthesized reverb.
- Convolution reverb is adding space to an audio track. So, if I was to take a guitar recording, I can use convolution reverb to make that guitar sound like it was recorded in a studio, outside or any other space by playing around with the sliders for the reverb.
- Amplitude automation changes parts of the audio to make parts quieter or louder, such as bass boosting or vocal boosting.
- Frequency filtering allows you to edit specific frequencies to make them louder or quieter. Say, for example, the audio has a small electronic buzzing in the background, using frequency filtering, you can silence that specific frequency so you can't hear the electric buzz.
- Phasing relates to the use of 2 or more audio channels. Phasing occurs when two microphones are far apart and record audio at different times. For example, hitting a desk with a microphone 1m away and one 10m away. The one at 1m away will pick up the sound first and thus be out of phase with the one 10m away. This means that the audio may become out of sync or be heard more than once from 2 microphones.

M6 - Identify and discuss appropriate and effective techniques for undertaking sound spatialisation.

In my project, I used pitch shift predominantly, this was to make the characters sound less samey, as it was me doing all the vocals, I needed to make sure that you can tell who is speaking. For female characters, I made the pitch higher, and for male ones, I made the pitch lower.

I used several spatialisation techniques in my project. This was to make the audio sound more professional and make it so that it sounds correct. With my scene being set inside of a busy, bar like area, there shouldn't be much echo and the sound reverberates differently to how it would in a more open environment, such as a church. I used a convolution reverb on the guitar ambience setup to make it sound like it's in the actual environment, I chose the classroom preset within Premiere Pro as this most closely emulates a bar environment in my opinion.

I used a studio reverb with the (Default) preset for my clapping sound as this gave the effect I was looking for of making the clapping sound more realistic, as it was just me doing a single clap into a microphone and duplicating that. The reverb effect made it sound like different and multiple claps rather than just one stock clap. I also did a bass boost on this to make clap more impactful and realistic.