Unit 5 Assignment

Task 1

I must analyse different requirements in media products.

Sound is used in several types of media to improve the experience. Sound is also used as a way of building tension for user, this is important for a horror game/animation as it keeps the viewer on the edge of their seat and invests them more into the story, this is because it creates a feeling of unrest or expectation, which can develop an emotional experience for the listener. Tension may be produced through reiteration, increase in dynamic level, gradual motion to a higher or lower pitch, this could also mean that if the sound is longer then it will create a longer period of unrest and anticipation for the viewer giving a larger emotional response to them. Sound also improves visual effectiveness in media as without sound, the visuals would just be a collection of pictures that the audience would struggle to understand. It is the sound in film that adds contextual information and sets the right tone or theme for each scene therefore improving it visually.

Task 1.2

Now I must research into the different methods of recording sound for my animation.

Recording sound is quite complex and while most people think it is just recorded by a microphone it requires a lot of specialist equipment. For example, one of the pieces used is a studio mono microphone. This is a large type of microphone that is in all recording and radio studios. These microphones are used for an actor or presenter to speak into. The next type of equipment used is called a shotgun microphone. This is a piece of equipment that is mounted on a camera to record high quality location sound. The microphone is changes based on the setting of the recording, for example when outdoors an ultra-directional microphone is used, this is when the microphone picks up sound from all directions. When indoors a directional microphone is used, a directional microphone is used to pick up sound from just one direction. Finally, a non-directional microphone is used when in cramped interiors and picks up sound equally from each direction.

Stereo microphones are non-directional but are excellent for picking up live music and are even useful for recording wild tracks as they pick up a range of sounds.

Boom poles are poles that allow your microphone securely and swivel it

in range of directions that will allow you to easily change position and follow your sound source. Another piece of equipment used when recording sound is a windshield, windshields are foam covers that are placed on both studio and on-location microphones. They are used to soften the blast of sound when it is being recorded to achieve a smoother output. The next piece of equipment used are acoustic isolation panels.

There are various methods and techniques of recording sound that I could apply to my animation. One of them is automatic gain control, this increases the amplitude of an electrical signal from the original input to the amplified output. This is an effective way of distorting audio to create a unique sound that could not be created otherwise. This could help in my animation as it could be used to create the sound of gunfire or the sound of a spaceship. When creating the sounds, I must alter the audio levels the create the perfect volume for the sounds, different microphones will have slightly different output levels which could lead to sounds being too loud or too quiet if not adjusted.
My animation will not include any type of voice or narration.

Task 2

For this task I must research several types of genres and the techniques of digital animations.

Vector-based animation

There are several different types of animation, the first genre that I will be researching is 2D vector-based animation. Vector based animations, (computer generated 2D animations), use the exact same techniques as traditional stop motion animation but in a digital form. This gives the designer a more diverse set of tools to create. In digital animation a technique called tweening is used. This is used in animation to create intermediate frames, called in-betweens, between two keyframes. This creates the illusion of movement by smoothly transitioning one image into another without having to move it by hand. **Most 2D animation software use a timeline, this is the part of the animation of the animation software that represents the progress over time. 2D vector-based animations and graphics particularly in cartoon genres like anime, are still used for stylistic, low bandwidth (The maximum data transfer rate of a network.) and faster real time renderings.**

Figure 1 shows an in-engine screenshot of the creation of a vector-based animation.

Figure 1

Computer generated imagery.

Computer generated imagery (CGI) is when digital technology and software is used to generate animated images and graphics. It simulates physical processes and materials to create both still images and animated films. CGI is created using different methods, one of them is using algorithms to create complex fractal patterns. CGI is crucial for producing both two-dimensional elements like text, objects, backgrounds, or environments, and three-dimensional elements such as characters, landscapes, and complete scenes. High-quality, detailed CGI is used to create visual effects and composite images that are either highly realistic or convincing enough to engage the audience. On the other hand, inferior quality rendering can lead to visual inconsistencies and unconvincing effects.

Figure 2 show an image of a CGI animation being created.

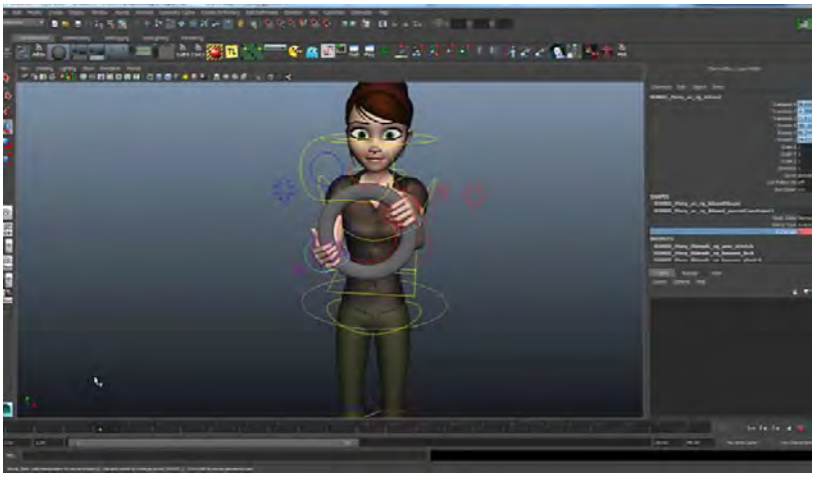

Figure 2

3D computer-based animation

The second animation type that I will be researching is 3D computer-based animation. 3D computer-based animation is the process of creating digital images in a 3D environment and making them move. This gives the illusion that these digital

objects are moving through a 3D space and adds realism and believability to an animation that may otherwise come across as quite static and flat. There are plenty of techniques used in 3D computer-based animation. One of the techniques used is called Motion-capture. This is a technique where the movement of a real-life character are recorded, and computer software then maps a model onto the captured video. This must be performed by paid actors and is an expensive technique, but the movements of the actors create a realistic animation.
Another technique used in 3D animation is Chroma keying. Chroma keying is a technique that uses a blank colour to isolate a subject from the background of a scene. The process works by identifying a specific colour in the footage and then replacing it with another image or video, this could be an animated background.
Most modern animations, particularly blockbuster film productions made by companies like Disney, use the technique of 3D animation where the characters and sets appear rounded and more realistic.

Figure 3 shows an in-engine screenshot of a 3d animation.

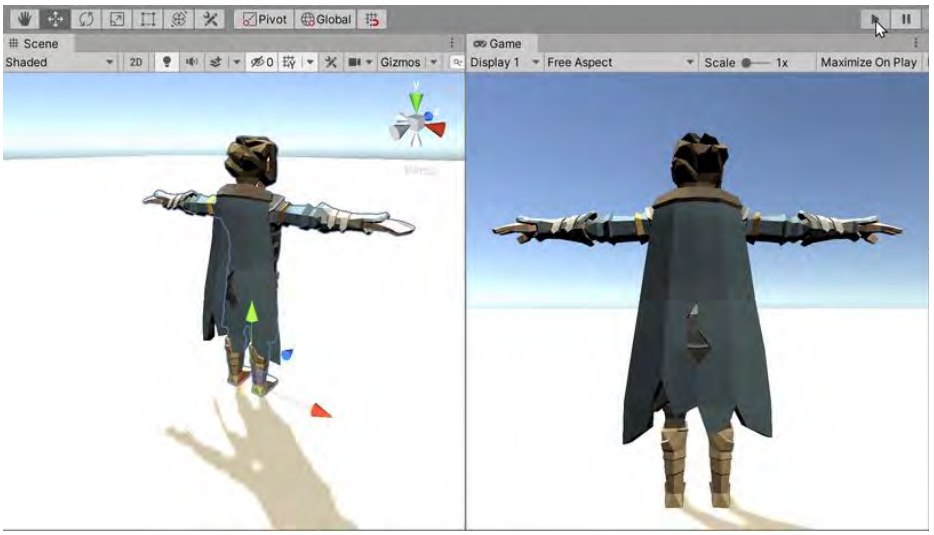

Figure 3

Motion capture

The third type of animation technique that I will be researching is Motion capture. Motion capture is a technique of animating, it is the process of recording movement of objects or people via a virtual skeleton, it works by recording the actors using various key points on their bodies, which are then distinguished to create the virtual skeleton. It refers to them using that information to animate the digital characters, the animator then moves the limbs, eyes, mouth, clothes on different key frames to then sync with the movements of the actors. This allows for more believable and more realistic movements This technique of animating is mainly used filmmaking and game development.

Figure 4 shows the process of motion capture.

Figure 4

Traditional animation

The next type of animation I am researching is traditional hand drawn animation. This is a traditional type of animation, also known as cell animation, or hand-drawn animation. This is an animation technique where each frame of the film is drawn by hand as this style was popular before the invention of computers. The main technique used in traditional animation was one where the animators draw images on a transparent piece of paper fitted on a peg, they then used a coloured pencil one frame at the time to create a smooth and seamless animation. The Animators also usually test the animations with very rough drawings to see how many frames they would need for the action to work.

Figure 5 shows a keyframe from the jungle book which is a traditional hand drawn animation.

Figure 5

Stop motion.

Finally, the last animation type that I am researching is stop motion/clay motion cut outs. Stop-motion is a filming technique in which positions of real-life objects are photographed frame by frame to produce the appearance of movement. Stop-motion is used in numerous ways. To create a 3D animation some animators, use clay to create 3d models that are easily moveable and adjustable. With this they can create keyframes by taking a picture of the clay model and slightly adjusting it to fit a pose/position in every individual frame. **Lighting plays a significant role in stop motion as animators must create and adjust the light and the reflections to match the scene that is being created. They also must use steady shots to make sure that the animation comes out smooth and not jittery. Keyframes are also used in hand drawn animation, they are the major important poses that define the scene. Another technique used is called breakdowns. A breakdown is a pose at the turning point of a motion path, they come between the keys and define what the motion from key to key will be.**

Figure 6 shows a scene from Walis and Gromit. And it is a photograph of the process of someone creating a stop motion animation out of clay.

Figure 6

Task 3

For this task I must create a storyboard and sketches for a 30 second animation.

There are several ways of animating using frames. The first way is by using keyframe animations, keyframe animations perform movement of computer-generated objects or characters. This method creates smooth playback of animated objects between key moments.

The next way of animating is called stop frame animation or stop motion. Stop frame animation involves the animation of static objects frame by frame. In the film

industry, stop frame animation is used within widely known productions based on figures made of clay or other bendable material.

For my animation I think that I will use Stop frame animation/Stop motion. This is because I feel that it is more practical and if I create my animation this way, I will be able to tweak it the way I want to and make it look more like how I imagined it.

Animation covers many different styles and genres so there is a very large target audience. Although animation has a large target audience it can be noted that styles have become more popular with specific target audiences. For example, Anime, manga, and certain comics have become popular and have developed a following.

The purpose of audio in animation is to direct the audience's attention to important events, create an atmosphere, set a certain mood, and to add depth. In my animation the sound will help the audience feel more engaged and immersed. This is because with sound in the background the audience will have more context on what is going on in the animation.

The purpose of the animation itself is to entertain the target audience that will view my animation. My animation contains features that will target a younger audience, this being the vibrant, cartoon, simplistic art style, and the light-hearted exaggerated sound effects that I will use to portray what is happening. A younger audience will also be interested in the simple story. The length of my animation will be a crucial factor, while it will be only around 30 seconds it will be enough time to tell a story and will keep the viewer interested by not boring them.

The software used will be Adobe animate as I have used it before and have become familiar with it. I will use a variety of different assets, most of which will be self-made, but I will use a few ready-made assets if I am running short for time, or the asset is too complex or difficult to make. The shape tool inside Adobe animate is useful to use as it can be deformed to create the shape that I want, the brush tool is also useful for creating my own shapes from scratch giving me a lot of creative freedom.

Task 4

Using Animate, Illustrator or After effects I must create a 30-60 second animation.

The animation that I am creating is about an alien and an astronaut. In the animation the alien lands on a planet where an astronaut is stranded. He is then ambushed by the astronaut; the astronaut then steals the alien's spaceship and escapes the planet he was previously stranded on. The purpose of this animation is to tell a compelling story and to create entertainment for the viewers.

The software that I will be using to create this animation is Adobe animate. While quite difficult to learn Adobe animate is a useful software to create my animation in. The assets will be made in Adobe illustrator as it is easy to use. It is also useful for

exporting the asset as the file type I want without losing quality.

A Bitmap graphic is created from rows of different coloured pixels that when together form an image. A bitmap image only uses two colours as each pixel is either black or white. A bitmap file contains uncompressed data, making it ideal for storing and displaying high-quality digital images, they are particularly good at producing photographic quality images. Unfortunately, this means that the overall file size is a lot larger, and the image looks worse and more pixelated from close up. A Bitmap uses the format of bmp, gif, PNG, JPG, XPM, and PPM.

On the other hand, a vector graphic is an image created using a sequence of commands or mathematical statements that place lines and shapes in a two-dimensional or three-dimensional space. The Vector file formats are PDF, SVG, Cdr, WMF, and PostScript. Vector images are good as they can infinitely adjust size without losing resolution, they also use a smaller file size. Although they are less useful for more complex images.

For the animation I will be using vector-based graphics. This is because Vector files a lot smaller than bitmap making them more accessible and usable. I am also choosing vector graphics as they are less detailed than bitmap so they will match the art style and theme of my animation. They also can be resized and zoomed in without losing quality and can be compressed without losing quality.

T**ask 5**

For this task I must analyse the effectiveness of my animation and evaluate the effectiveness of the audio.

The animation that I have created for this assignment was quite effective, I feel that overall, my animation has turned out well. Although it was quite short for time and some of the animation feels rushed, I think that I have created a good and smooth animation that contains seamless transitions, a fitting story, a well-designed theme, **and believable sound effects**. However, I would like to have made my animation a little bit longer as I feels a bit too short, I also wish that I would have put more research and time into planning the animations as did not have a perfect example/base to create my animation on. The software was quite difficult to use as it crashed a few **times and was sometimes quite delayed and unresp**onsive, I also feel that I had limited tools for creating, for example I could not find a way of creating a gradient effect, so I had to use a ready-made asset, I also **found that When I placed an asset on top of another they became one asset leaving me with no way to separating them. This was not useful as it was difficult and took a lot of time to replicate each asset on every frame. I also could find a way to export the animation with the sound I created. However the software was relatively easy to use in some instances as I was able to create all my assets inside of the software, the animating of the assets where quite complex as it took me a while to figure out how to animate the assets using the keyframes, and it**

also took me a while to figure out how to make the assets in each frame match the location of the assets in the previous frame. Overall, the appearance of my animation looks good, it uses a cartoon and simplistic style that matches the theme well and is easy to create. The limitations of software restricted me to easily add audio. The shape tool came in handy to create the assets for my animation, it allowed me to create the shapes that wanted for my assets, the shapes used in the assets made the animation appear cleaner and more simplistic. I also used the paint brush tool to sketch the terrain, this was useful as it made the world feel less flat as I was able to draw uneven edges at different heights, the paint brush tool also let me cover up any lines or mistakes I had made. Another tool that was useful was the bucket, this let me fill the outline of the terrain I had drawn with colour, I also used this on several different assets to give them the colour I wanted.

Some of the improvements that can be made to my animation are that I could make it longer. Although my animation is around 30 seconds if the animation was longer, it would allow me to add more to the story so that it might make more sense. It would also allow me to end the animation less abruptly and create a more conclusive end. I could improve the some of the sound, for example the gunfire is too loud as the audio level seems larger than all the other sounds, this makes the sound of the gunfire quite annoying. I could also have added more of an ambient sound in the background of the animation as sometimes my animation can feel slightly lifeless and empty. I could also add some narration or dialogue to make the animation feel more complete and to make sure that it makes sense to the viewers. While the animations of the characters look good, I could have added a more diverse set of movements, for example there could be more poses for the characters, they could move around more as for the most part they stay in the same spot. If I had added more context to some of the scenes it would have helped the animation a lot, for example during the animation instead of the alien climbing out of the spaceship as I intended, the scene cuts to the alien outside the spaceship. Maybe if I animated the alien climbing out of the spaceship it would have added more context to what is happening in the story giving the viewer a better understanding while also making the animation look more impressive and professional.

UAL L3 Diploma Creative Media Production & Technology

Diary/Journal of activities

Date	Unit No.	What is it you need to do?	What did you do and how did you do it?	Referencing/ bibliography	Knowledge/Skills obtained
30/10/23	Unit 5	I must analyse and research different requirements in media products.	To do this I researched what goes requirements of sound in different media products. I looked at several different websites and then wrote down the information that I found.	https://www.google.com/search?q=why+is+tension+used+in+sound&oq=why+is+tension+used+in+sound&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIHCAMQIRigATIGCAQQIRgVMgcIBRAhGJ8F0gEKMjUxMzFqMGoxNagCALACAA&sourceid=chrome&ie=UTF-8 https://journals.sagepub.com/doi/10.1177/09567976221121348	I learned that Tension may be produced through reiteration, increase in dynamic level, gradual motion to a higher or lower pitch. **Tension is used mainly in horror films/game to create anticipation.**
5/2/2024	Unit 5	I must research into the different methods of recording sound for my animation.	To do this I looked at several different websites to find recording methods. I also wrote about the equipment use for example mono microphones, stereo microphones, and boom poles. I also wrote about the different range of directions that follow the source of the sound being recorded and the different microphones used in various locations.	https://globalmusicinstitute.in/10-sound-design-techniques-that-will-change-how-you-sample-2/	I learned that it is important to change the audio levels to match the volume of what you are recording and that distorting sounds is useful for making a unique effect. **I Learned that a boom pole is a multi-sectioned, extendable**

					microphone holder that is made to get the microphone as close as possible to the thing being recorded.
20/2/2024	Unit 5	I must research several types of genres and the techniques of digital animations.	To do this I looked at a variety of websites to find the different techniques and methods of different animation types. The genres that I researched about where Traditional animation, 2D vector-based animation, 3D computer animation, CGI, motion capture, and stop-motion. After I found them, I wrote them down and explained what the genre was and what the technique was, I also added images of each genre to give context to the reader.	https://bteccomputing.co.uk/digital-animation-techniques/ https://www.lifewire.com/introduction-to-vector-animation-140890	**I learned that in traditional animation in the animators drew images on a transparent piece of paper fitted on a peg, they then used a coloured pencil one frame at the time to create a smooth and seamless animation.** **I also gained knowledge in stop motion as I learned, Lighting plays a significant role in stop motion as animators must create and adjust the light and the reflections to match the scene that is being created.**
21/2/2024	Unit 5	I must create a storyboard to plan out my animation.	To do this I used a piece of paper and a pencil, I then created the boxes and drew the keyframes I would use for my animation. I included information on the animation like the colours I would use, the length of the scene, and the description of what was happening in the scene.		**I learned that the colour code for green is #008000.** **I learned the colour code for orange is #FFA500.**

21/2/2024	Unit 5	**I must research keyframes and the audience and purpose of my sound**.	**To do this I looked at a variety of different websites discussing keyframes and stop-frames. After I found information I wrote about both types of animating methods and compared them both. After I did that, I wrote about the purpose of my animation is and its target audience. Finally, I researched the purpose of sound and looked through websites to find information, After I found information I wrote about the purpose of sound in my animation.**	https://www.adobe.com/uk/creativecloud/video/discover/keyframing.html#:~:text=To%20create%20an%20action%20in,Effects%2C%20Animate%20and%20Character%20Animator. https://www.dictionary.com/browse/stop-frame https://www.asoundeffect.com/why-is-sound-important/#:~:text=Sound%20is%20important%20because%20it,to%20determine%20what%20we%20see.	**I learned that a stop-frame involves the animation of static objects frame by frame.** **I learned that a keyframe is a frame that performs the movement of computer-generated objects from basic shapes to cartoon characters.** **I learned that sound is used in animation to direct the audience's attention to important events, create an atmosphere, and to set a certain mood.**
8/3/2024	Unit 5	**I must research vector and bitmap images and choose which type I will use for my animation. Then I must write about the software used.**	**To do this I researched about vector and bitmap images. I then compared both types of graphics and wrote about their file format. After I decided what graphic type I was going to use, I wrote about the software that I will use for making my animation. Finally, I wrote about the purpose and description of my animation.**	https://www.techtarget.com/whatis/definition/vector-graphics https://kb.iu.edu/d/afmr	**I learned that Bitmap graphics are created from rows of different coloured pixels that when together form an image.** **I learned that Vector graphics are created using a sequence of commands or mathematical statements that place lines and shapes in a two-dimensional or three-dimensional space.**

11/3/2024	Unit 5	I must create the animation that I planned in adobe animate.	To do this I first created a new project, after that I created my assets in the software, I found it easier to do this as when creating assets inside the software it is easier to animate and I do not have to worry about the compatibility of the asset. I only used I readymade asset for my project. The readymade asset that I used was a gradient background for the sky, I used this as I was difficult to create a gradient inside of animate.	I used Adobe animate.	**I gained knowledge in Adobe animate, for example I learned how the keyframes work and was able to create several different keyframes.**
5/3/2024	5	I must analyse the effectiveness of my animation and evaluate the effectiveness of the Audio.	To do this I spoke about the appearance of the animation, the art style, and the theme. I also wrote about how easy the software was to use and the limitations it had. Finally, I talked a bit about the technical aspects of my animation and any improvements that I could make to it.	I used Microsoft word.	**I learned that making my animation longer will improve the animation by giving more time to tell a more well-rounded story**.