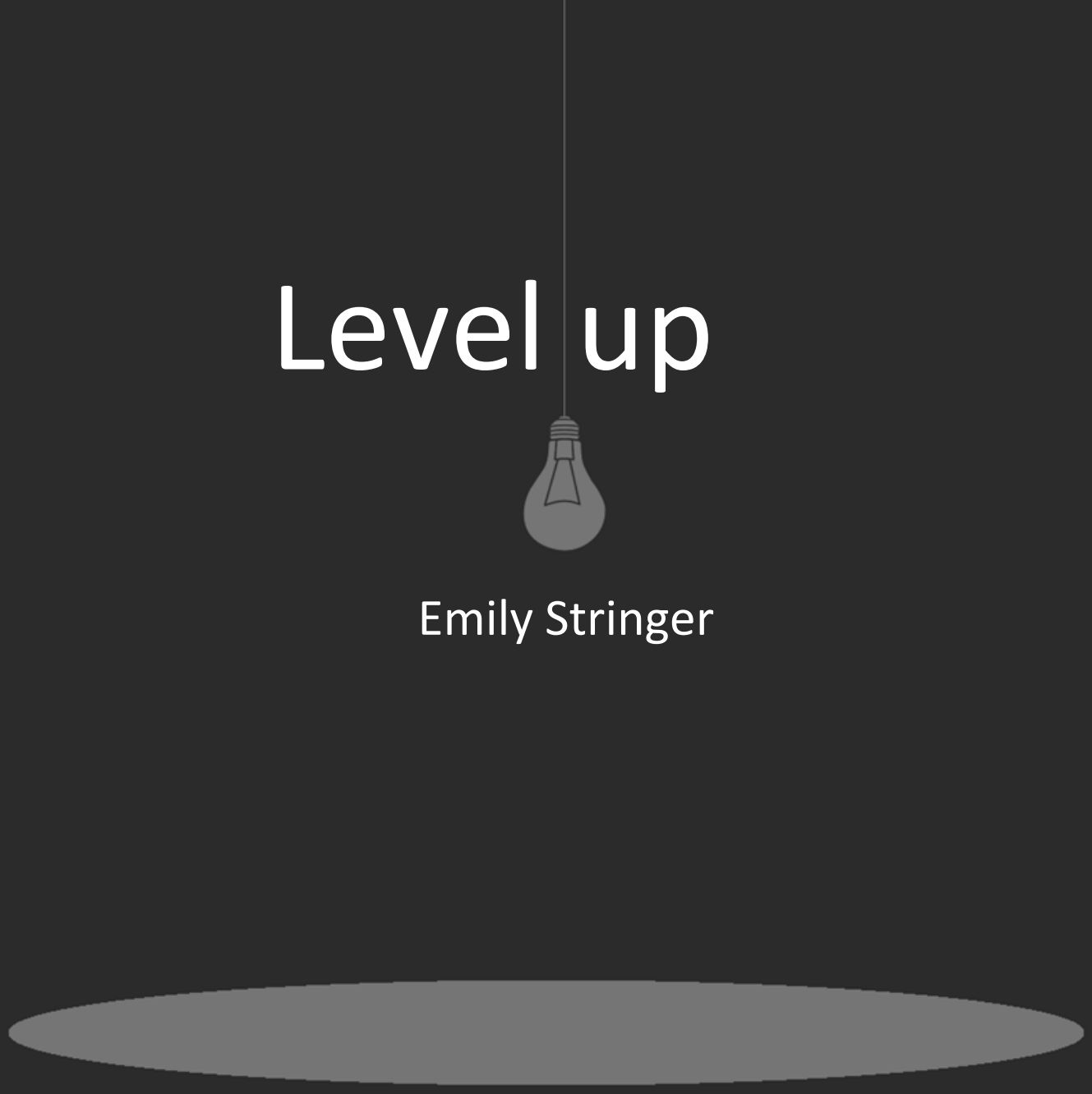
Level up



Emily Stringer

Silent hill 2

https://www.youtube.com/watch?v=5UCO3nzxnDU

(0:00-0:12) Here an ominous mood is set for the player with the absence of all sound save their own footsteps as they walk up the stairs. There's a sense of foreboding, as you know something bad is about to happen, and the player is left with their thoughts and footsteps. The idea of having no background sound also emphasises the player's own movement.

It creates dread, but also maybe excitement at what lays at the end of the staircase.

(0:38-0:55) When the cut-scene starts there's a whining noise coupled with a noise similar to a clock striking. The atmosphere is dark and there is a sense of anxiety created through the noise. (1:09-1:22) There is then a jarring sound which builds with the character's conversation in intensity, it foregrounds the character's actions and indicates that something is going to happen. (1:22) This noise morphs into the growl of the monster, once again indicating the villain and the danger.

Some of the sounds in this scene were likely digitally made, like the theme during the conversation. Though some were likely recorded like the voice acting and maybe the other side effects like footsteps

Until Dawn

https://www.youtube.com/watch?v=KggWKsEbLLE

(10:07-10:33) The ambient sound of the waterfall dominates the scene, even the dialogue, which adds realism but also draws the player's attention to their surroundings. It helps paint the forest as mysterious and ominous. (10:34-10:42) There is a slight build up of background sound over the waterfall, the subtle noise adds to the sense of foreboding. (10:42-10:44) This screech breaks up the environmental sound quite suddenly, adding an element of fear, (10:45-10:46) the character's dialogue then tells the player that the sound was important.

With this game's cinematic approach, it's very likely the sound is all organic, whether it be location based or voice acting.

Pokemon HG/SS Mt. Sliver

https://www.youtube.com/watch?v=etu4WBnQmxc

(2:33-2:38) Here the usual cheery music stops when the player leaves the cave, rather suddenly and jarringly it is replaced with silence and an ominous wind (ambient sound). The singled out wind accentuates the idea that something big and important is about to happen. It's foreboding, but instead of being negative, it's more anticipation. The only other audio is the player's footsteps, which direct the player to their sprite whilst also adding to the foreboding atmosphere.

The text box sound effect(2:39) helps to direct the player and informs them of the presence of text.

(2:39) Red's battle theme furthers his status as the strongest opponent , the (2:39-2:49) start builds slowly and foregrounds a much faster paced tune.

These sounds were likely all made digitally.

The legend of Zelda- Majora's mask

https://www.youtube.com/watch?v=JKthJn_RW48&list=PL6F8DB193B0A0122B

(1:11-1:28) In the opening to the game the background music starts off more upbeat. The longer, consistent sounds also reflect the player's surroundings and the depth of the forest. It adds curiosity but also immerses the player within the environment. The addition of Epona's footsteps further draws attention to the player, ensuring realism.

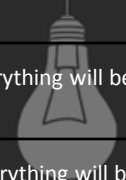
(1:35-1:47) Here the music stop for a brief second before it builds up, becoming faster and faster with the addition of new sounds. The persistent banging noise adds a sense of desperation and immediacy making it clear something bad is going to happen. It creates a sense of action and expectancy when introducing the character of Skull Kid. It tells the player that this character isn't good from the beginning without the need for speech. His laugh (1:46) furthers this idea of an enemy.

These sounds were likely made digitally, especially the background music.

Sound terminology

		RESEARCHED DEFINITION	DESCRIBE THE RELEVANCE OF THE RESEARCHED TERM TO YOUR OWN LEVEL UP PROJECT?
SOUND DESIGN METHODOLOGY	**Foley Artistry**	Sound effects added to a movie or game post-production to enhance the audio. These tend to be everyday sounds like footsteps or banging, which may have not been captured to a high quality at the time https://www.sound-ideas.com/Page/what-is-foley.aspx	This technique was used when creating our sounds since they were added over the game in order to recreate ordinary sounds like footsteps.
	Sound Libraries	A collection of sound files https://en.wikipedia.org/wiki/Sample_library	We used our own collated sound library in our project consisting of the sounds we recorded and the final edited sounds
SOUND FILE FORMATS	**Uncompressed**	An exact copy of the original audio source https://lifehacker.com/5927052/whats-the-difference-between-all-these-audio-formats-and-which-one-should-i-use	This was used in the form of .wav files
	.wav	An example of an uncompressed format. It's universal in execution. It is utilised for storing waveform data and allows recordings to be saved with different sampling rates and bitrates. https://fileinfo.com/extension/wav	This was the file format used in my project thus was what I exported my Audition files to.
	.aiff	An example of an uncompressed format only it's specific to Apple products, commonly used to burn CDs https://lifehacker.com/5927052/whats-the-difference-between-all-these-audio-formats-and-which-one-should-i-use	I will not use this in my project as no apple products will be used
	.au	An audio file created in Audacity https://fileinfo.com/extension/au	I will not use this in my project since Audacity won't be used
	.smp	A file created by SmartMusic, a music practice application https://fileinfo.com/extension/smp	I will not use this in my project
	Lossy Compression	A type of compression that permanently removes redundant information in order to lower the file size. http://whatis.techtarget.com/definition/lossless-and-lossy-compression	We used this in the form on .mp3
	.mp3	A type of lossy compression commonly used to store music https://fileinfo.com/extension/mp3	This was the format our raw sounds were recorded in

AUDIO LIMITATIONS	**Sound Processor Unit (SPU)**	SPUs change the way that sound is processed with the goal of improving the overall quality and ensuring it sounds like the artist intended https://www.jmlaudio.com/what-is-a-sound-processor/	I will not use this in my project
	Digital Sound Processor (DSP)	DSPs take a digital signal and process it in real time to improve the single for clear sounds, faster data or sharper images http://www.futureelectronics.com/en/Microprocessors/digital-signal-processors.aspx	I will not use this in my project
	Random Access Memory (RAM)	Computer memory that can be accessed randomly without touching an preceding bytes https://www.webopedia.com/TERM/R/RAM.html	RAM will be used when processing my sound
	Mono Audio	When all audio signals are mixed together and played through a single audio channel http://www.mcsquared.com/mono-stereo.htm	I will not use this in my project
	Stereo Audio	When audio signals are played through two separate channels http://www.mcsquared.com/mono-stereo.htm	This is how my sound will be displayed
	Surround Sound	Audio played through three channels to give a result closer to the real thing https://www.webopedia.com/TERM/S/surround_sound.html	I will not use this in my project
	Direct Audio (Pulse Code Modulation – PCM)	A method used to digitally represent sampled analogue signals. It is the standard for of digital audio in computers and CDs. https://en.wikipedia.org/wiki/Pulse-code_modulation	I will not use this in my project
AUDIO RECORDING SYSTEMS	**Analogue**	Cassettes and vinyl- the sound is recorded physically as grooves http://www.dummies.com/consumer-electronics/understanding-digital-sound-and-analog-sound/	I will not use this in my project since everything will be done digitally
	Digital Mini Disc	A small CD which had the advantage of being recordable before the CD was https://electronics.howstuffworks.com/question55.htm	I will not use this in my project
	Compact Disc (CD)	A disc that stores data as small notices and is read by a laser optical drive https://techterms.com/definition/cd	I will not use this in my project since everything will be done digitally
	Digital Audio Tape (DAT)	A magnetic digital tape smaller than a cassette http://www.obsoletemedia.org/digital-audio-tape/	I will not use this in my project since everything will be done digitally
	MIDI	Or Musical instrument digital interface, is a standard for transferring digital instrument data https://techterms.com/definition/midi	I will not use this in my project
	Software Sequencers	A music sequencer is a piece of software which allows the user to edit sounds https://en.wikipedia.org/wiki/Audio_sequencer	Adobe Audition, the software we used in this project would be an example of this
	Software Plug-ins	Code which enables a program to extend its functions http://www.bbc.co.uk/webwise/guides/about-plugins	I will not use this in my project
	MIDI Keyboard Instruments	A MIDI keyboard is typically a piano style electric keyboard used to send MIDI signals https://en.wikipedia.org/wiki/MIDI_keyboard	I will not use this in my project



AUDIO SAMPLING	**File Size Constraints - Bit-depth**	Bit depth is the number of bits of information in each sample, which directly corresponds to the resolution of the each sound https://en.wikipedia.org/wiki/Audio_bit_depth	I will have to consider bit depth when exporting my sounds
	File Size Constraints - Sample Rate	The number of samples of audio carried per second measured in Hz http://wiki.audacityteam.org/wiki/Sample_Rates	I will have to consider sample size when exporting my sounds





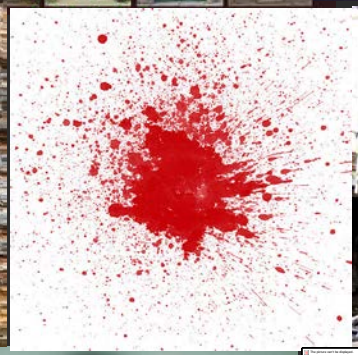






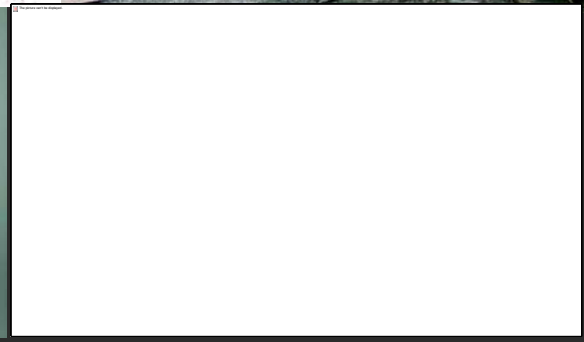
I'LL KILL HER♡

I WAS
NOT CRAZY




SCHOOL BUS



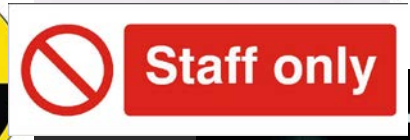






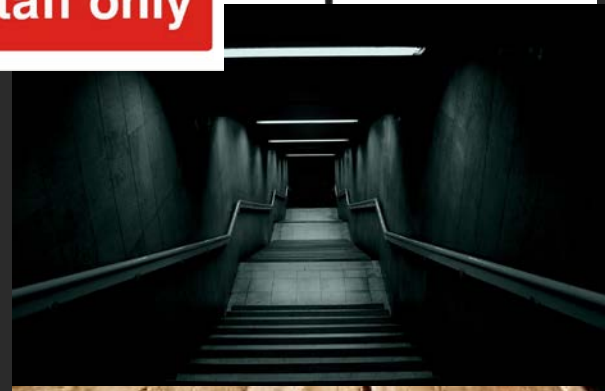


KEEP OUT



Staff only


05/12/2013

BE KEPT CLEAR

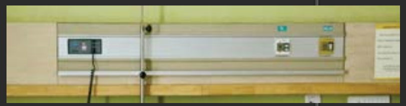


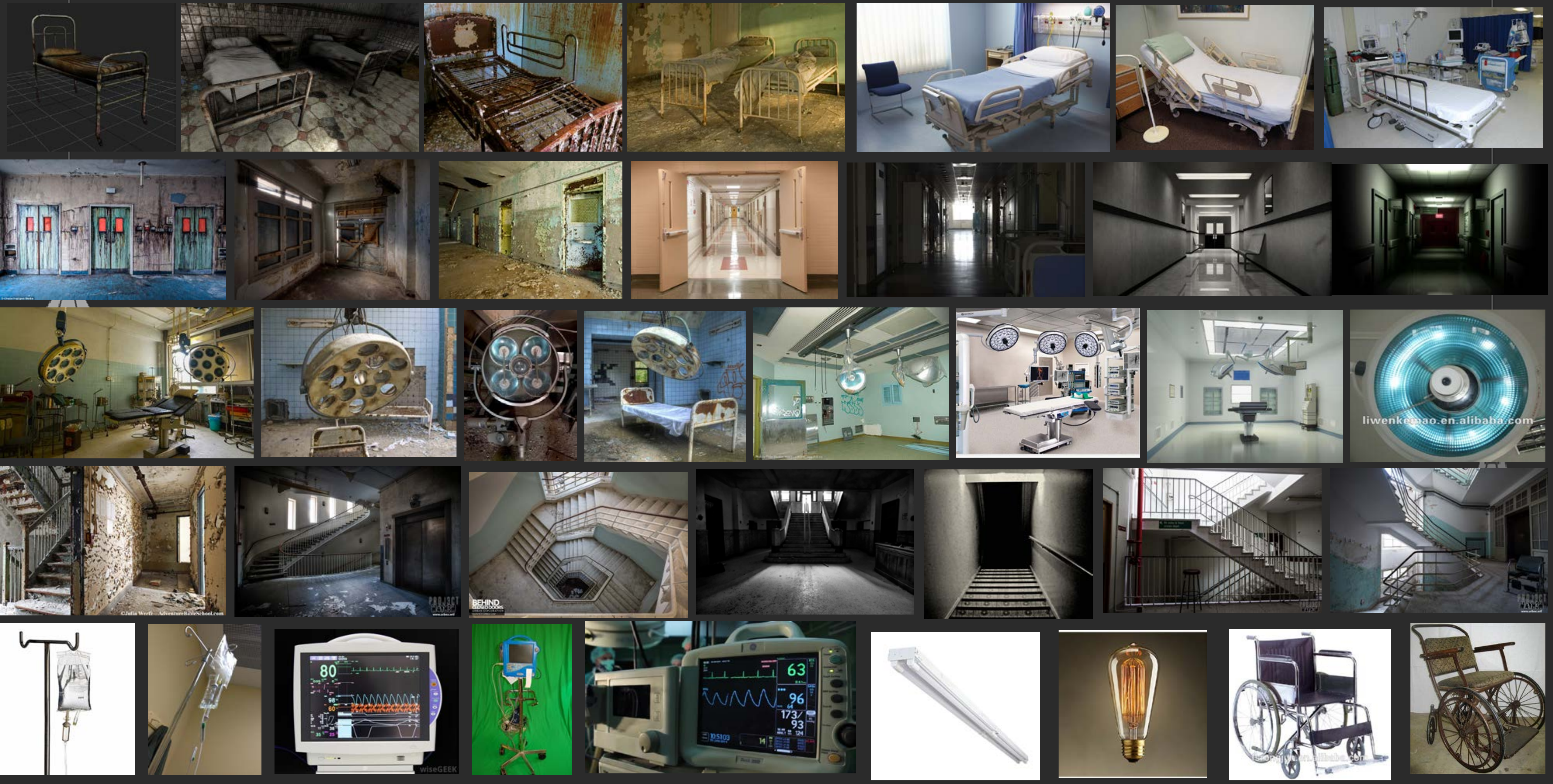
The End
Is Near



Assets

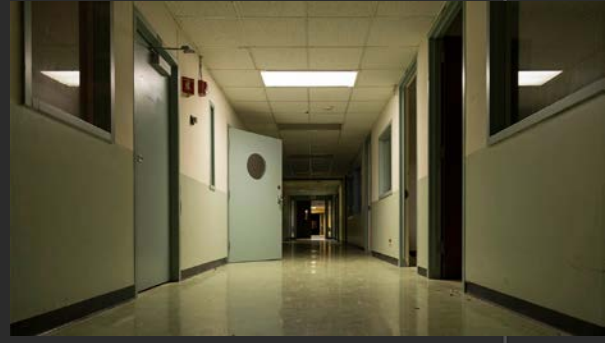

KEEP OUT
Staff only




liwenkemao.en.alibaba.com
BEHIND CLOSED DOORS
80
63
96
wiseGEEK

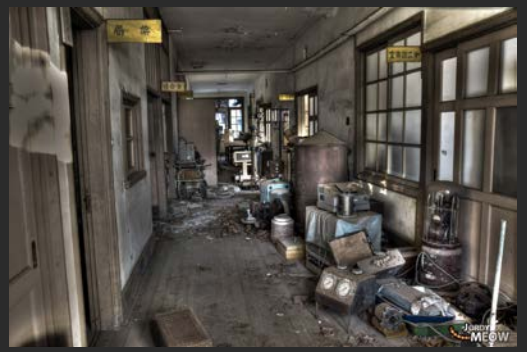




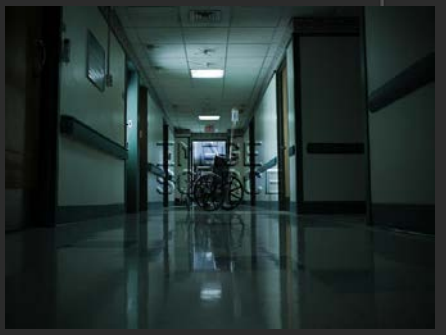



The End
Is Near


BE KEPT CLEAR

BEHIND
CLOSED DOORS
URBAN EXPLORATION





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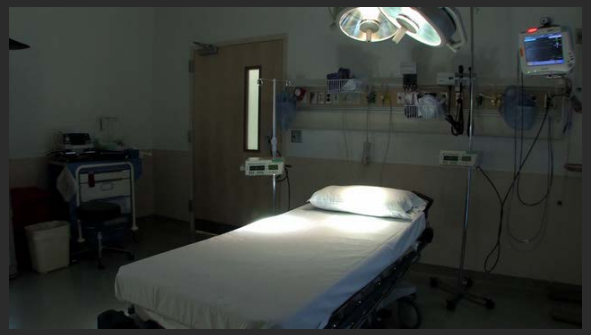
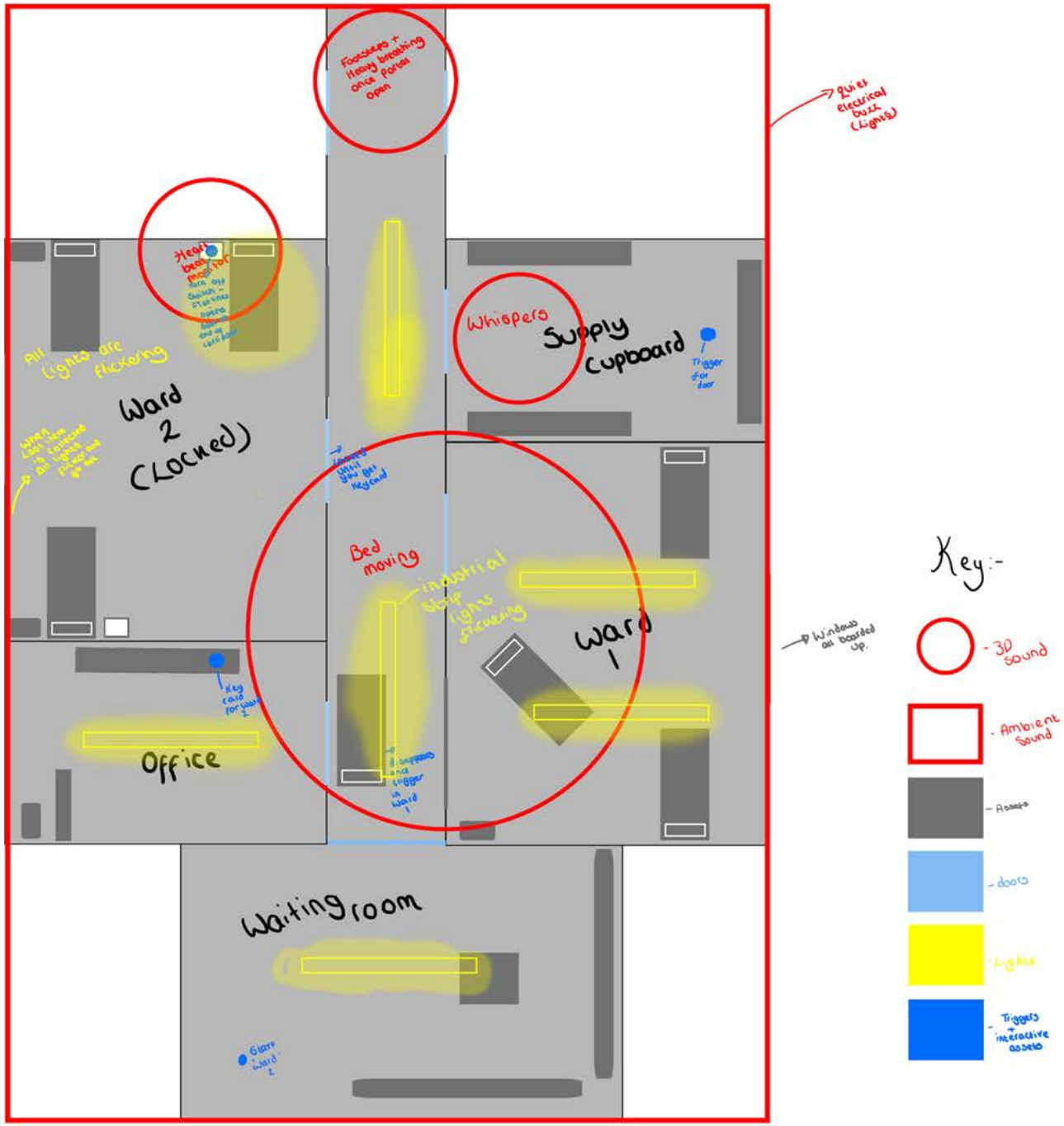


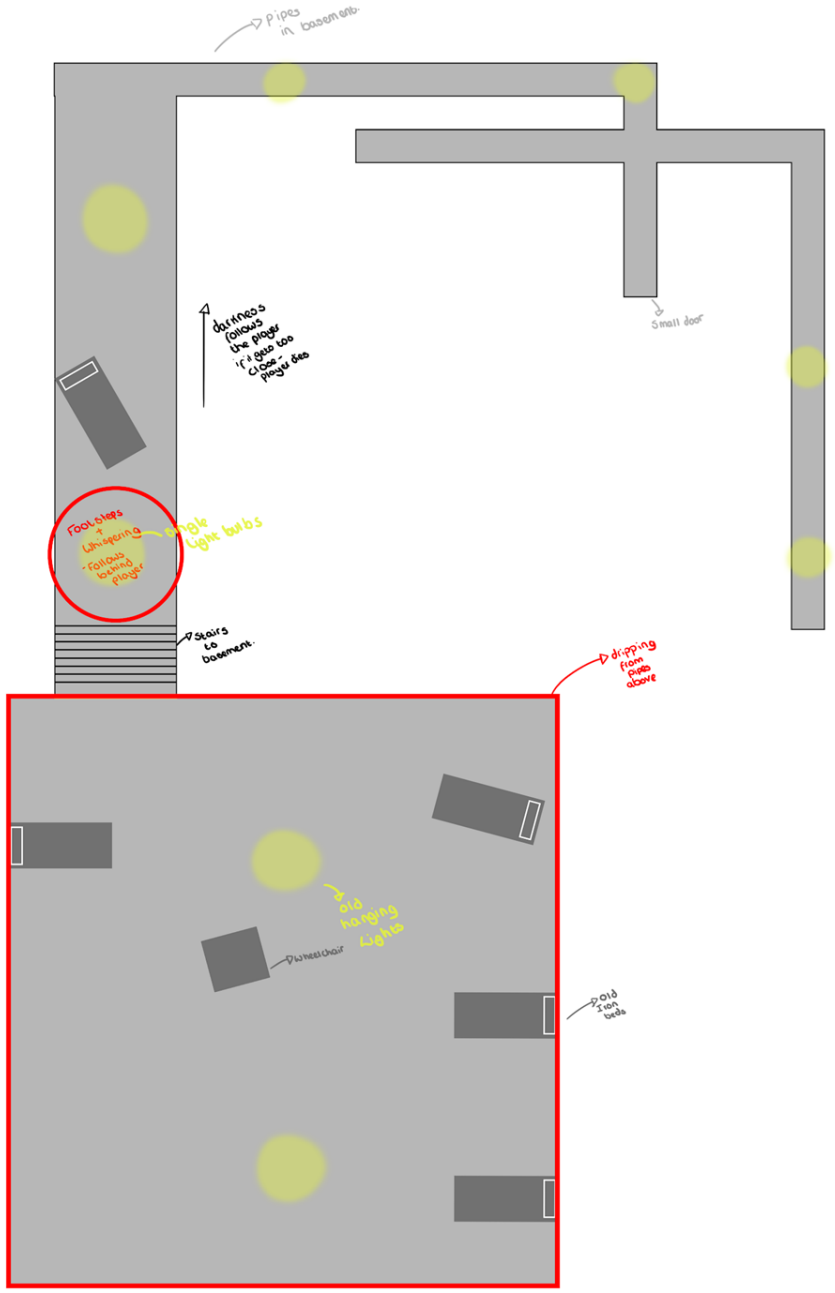
New ward (1)



This is the first map I created for the first level. My initial idea was to have a modern hospital ward and then the second on an old-fashioned one.

The red indicates sound, the grey assets, the light blue doors, the yellow lights and the royal blue key assets.

Old Ward (2)



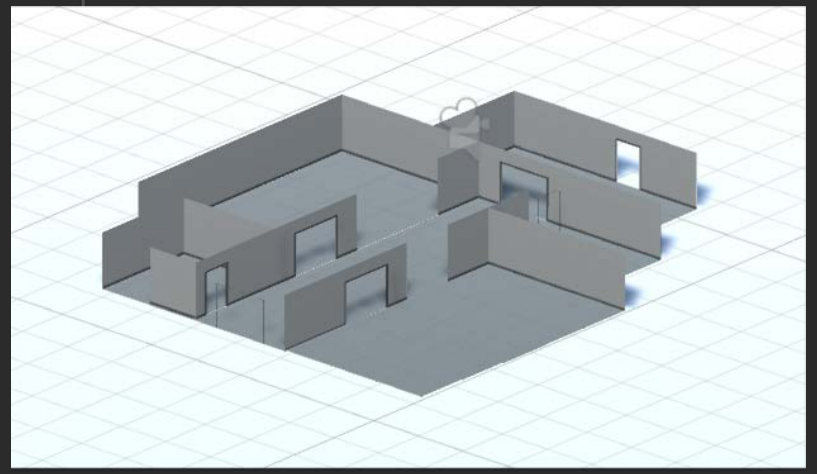
This is the second map I designed. The large room is an empty ward which then leads to stairs and then to a network of dark corridors.

Player starts in waiting room, with the vague idea of needing to get to ward 2 (which is initially locked). There is a bed blocking the office so they have to go to either ward 1 or the supply closet. Get so far into the supply closet and a trigger moves the bed and a sound plays. They can then get into the office and retrieve the key card. In ward two there is a bed with a spotlight- turn off the heart monitor, which triggers the lights to flicker more and there's a new sound of footstep, your heartbeat and breathing.

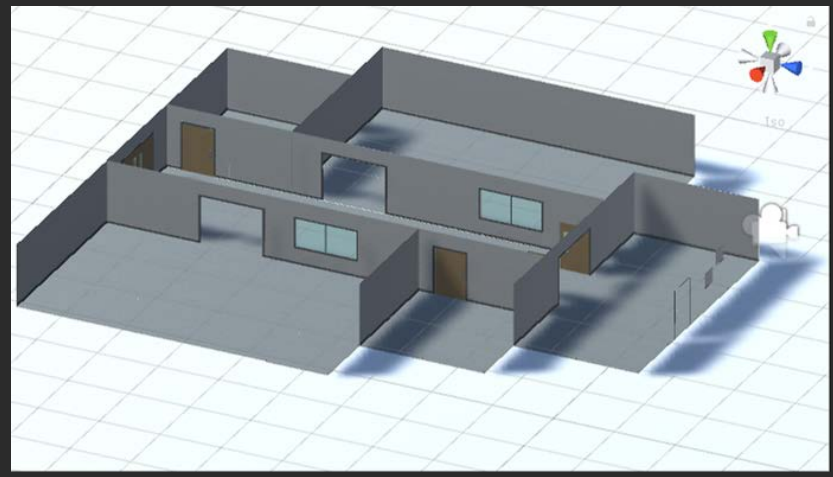
Once you get through the door and into the old section the player has to get to another door, which leads into basement corridors. Here they are chased by the sounds until they reach the end.

Modular pack

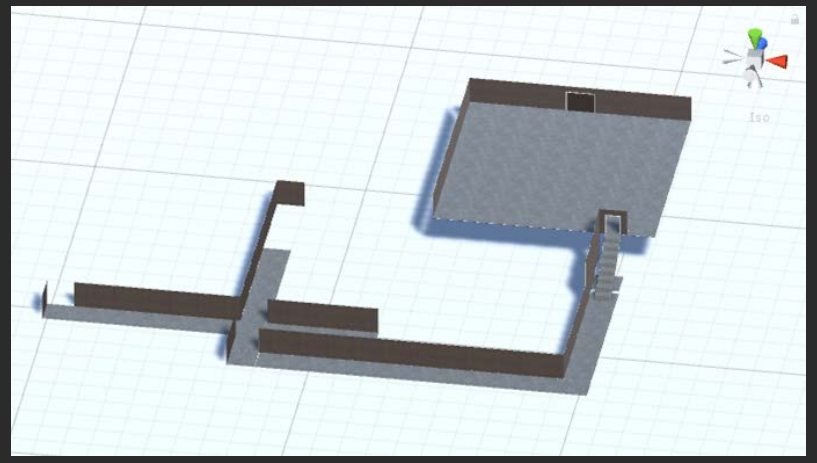
For ease of building, I created a modular pack including walls, door frames, floor, ceilings and windows for my levels. These pieces were all built to specific measurements so that they all work seamlessly together. These were then textured in Max depending on which room they would be in before being imported to Unity where they all snapped together.

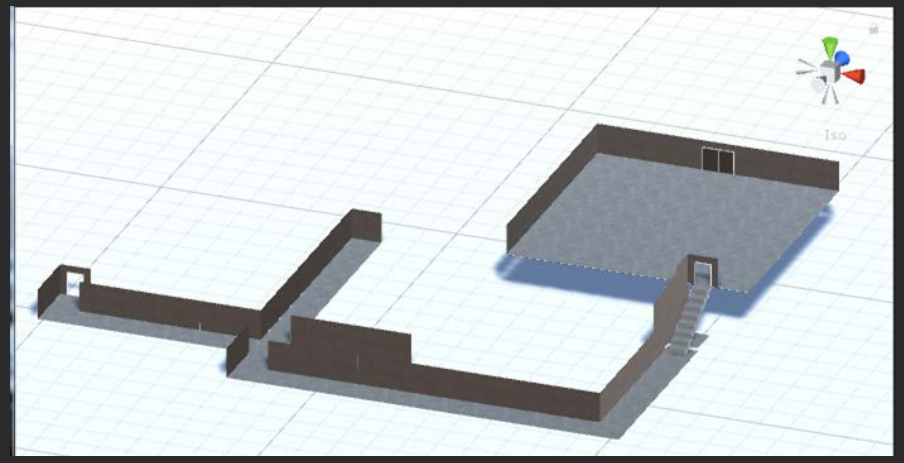


Here I have started to block out my first level using the textured modular pack.



And here I have added the doors and windows

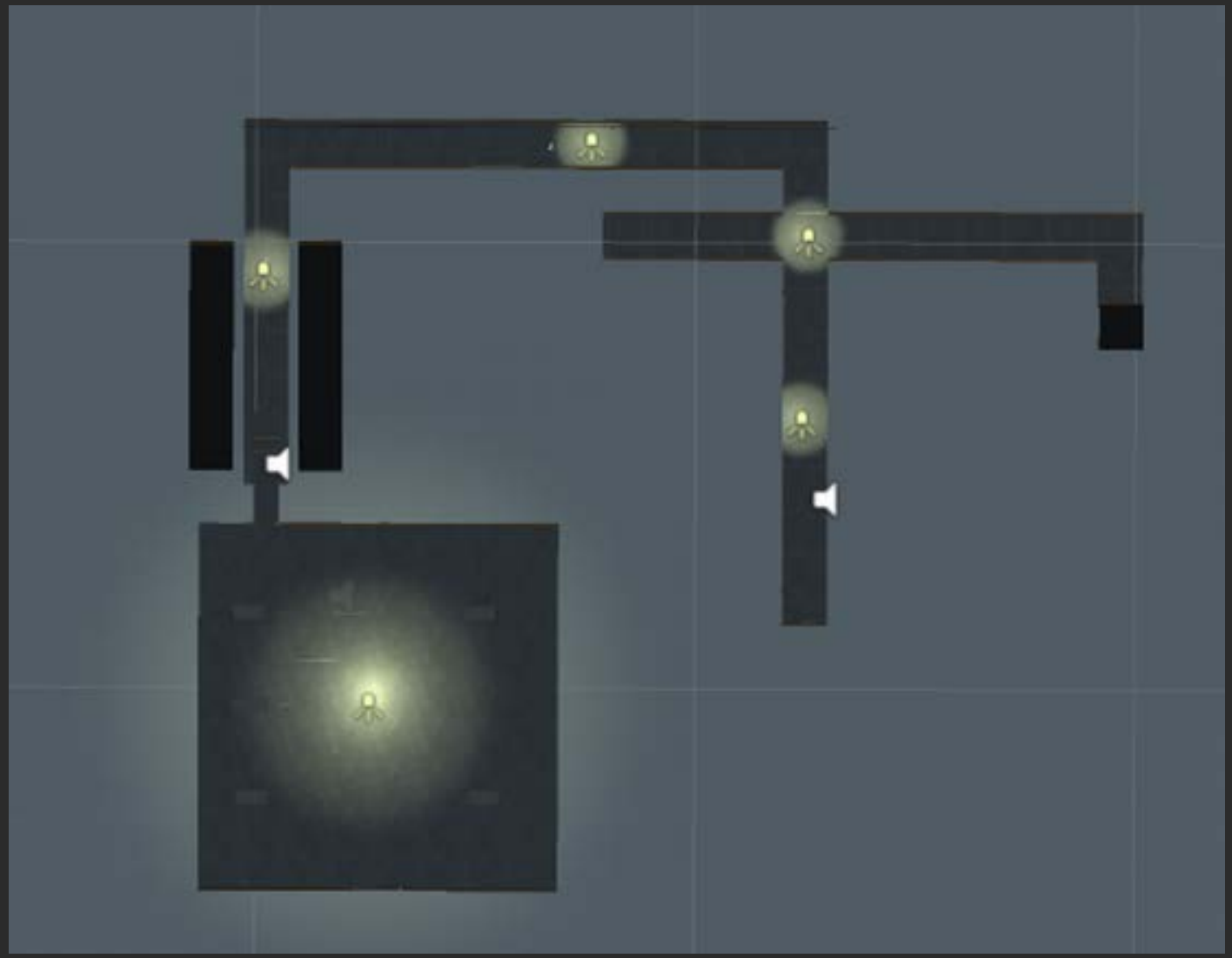




Then here is the block out for my second level

Here’s a quick overview of my first level all blocked out. Here you can see where the audio is as well as the lighting.

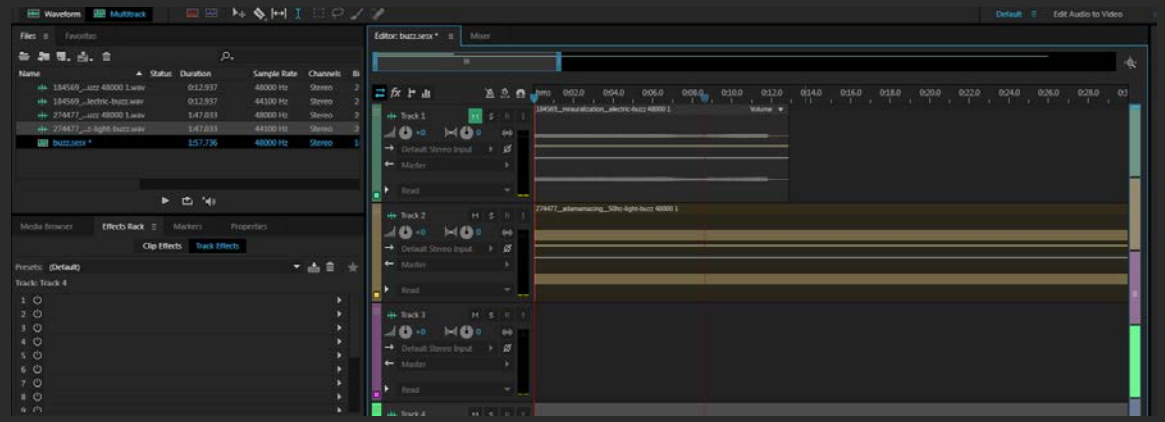
To add atmosphere, I made it so that the lights flickered and the lighting in the level was low meaning low visability



And here’s the overview of my second level blocked out.

Electrical buzz

My primary sounds were recorded either by voice or with assets and then uploaded as raw files. From here I then used Adobe Audition in order to edit and manipulate them to fit my game.



The ambient sound for my first level will be an electrical buzz caused by the faulty, flickering lights.

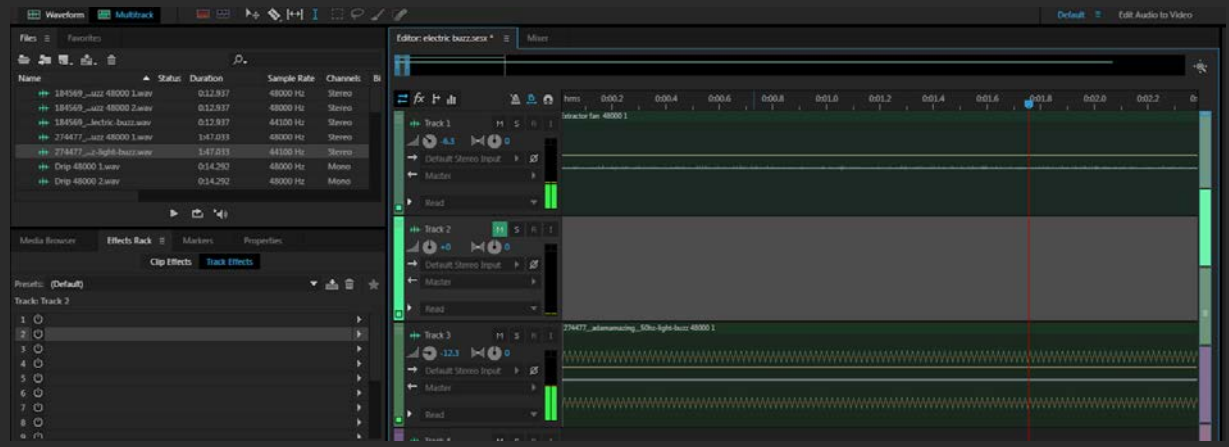
Here I have download two secondary source sounds, one which is an electrical buzz, the other a low hum. I started by cutting down the hum so that it was the same length as the buzz and then ensured that they looped without stopping.

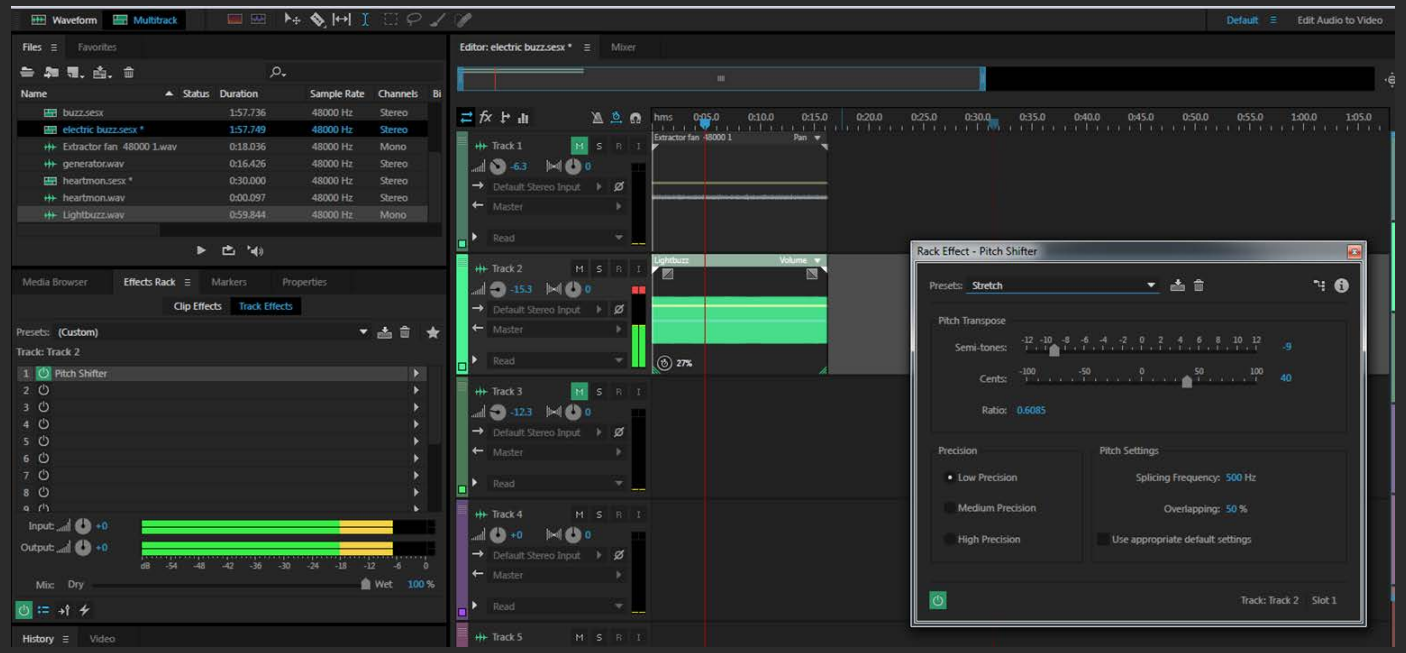
https://freesound.org/people/MrAuralization/sounds/184569/

https://freesound.org/people/adamamazing/sounds/274477/

Then with the focus on primary sources, I decided to scrap one of these sounds in favour of the sound on an extractor fan I recorded myself to imitate a generator. I made sure this looped well and then added a the above hum in order to add more depth to the sound and make it sound denser.

https://freesound.org/people/nicola_ariutti/sounds/335365/

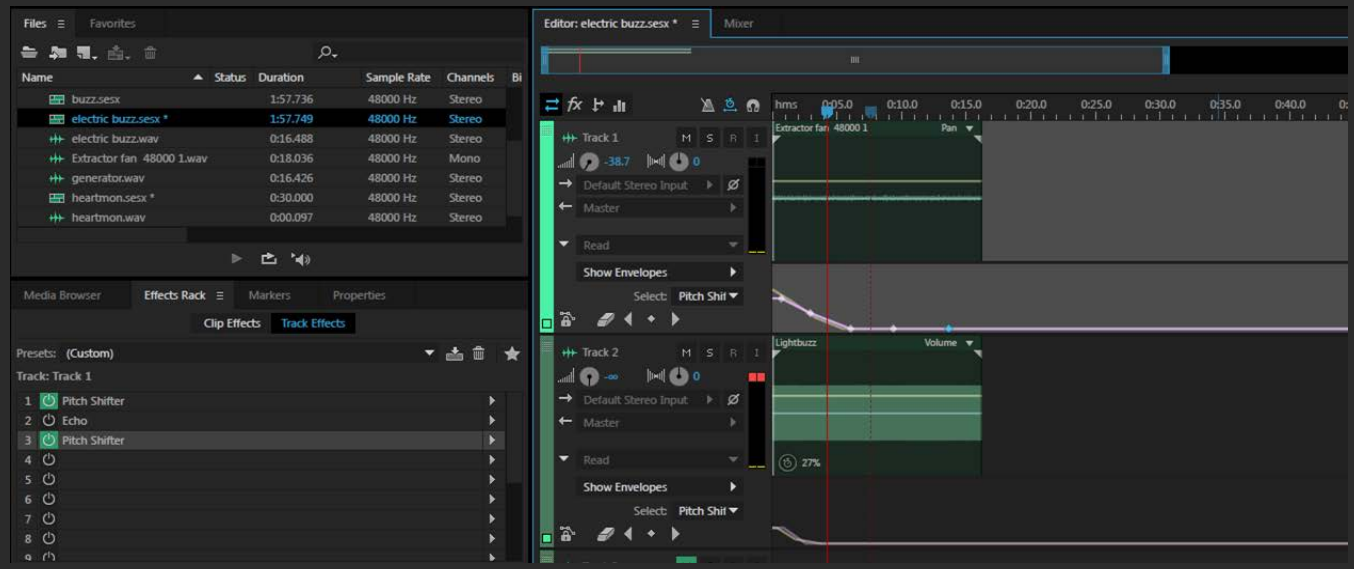




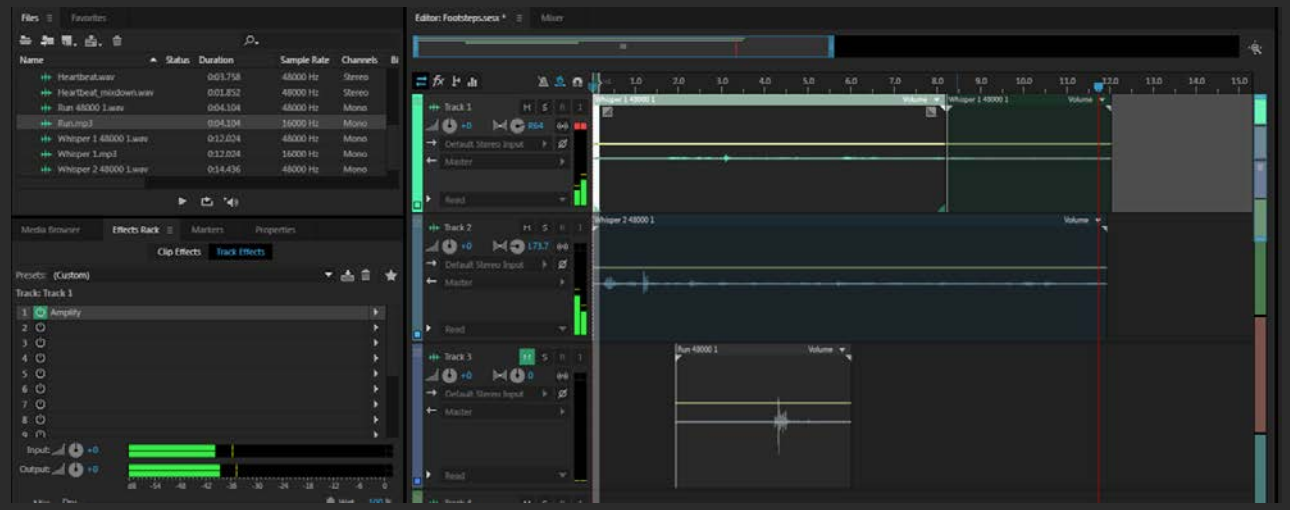
I then decided that this noise didn't loop as seamlessly as I wanted it too, so I decided to find a new one. Here I am changing the pitch of this buzz,

https://freesound.org/people/nicola_ariutti/sounds/335365

I then needed to make the sound the lights would make when the power is turned off. I changed the volume and pitch at specific periods in the track using keynotes in order to fade it out. This will be a seperate sound triggered when the player flicks a switch.

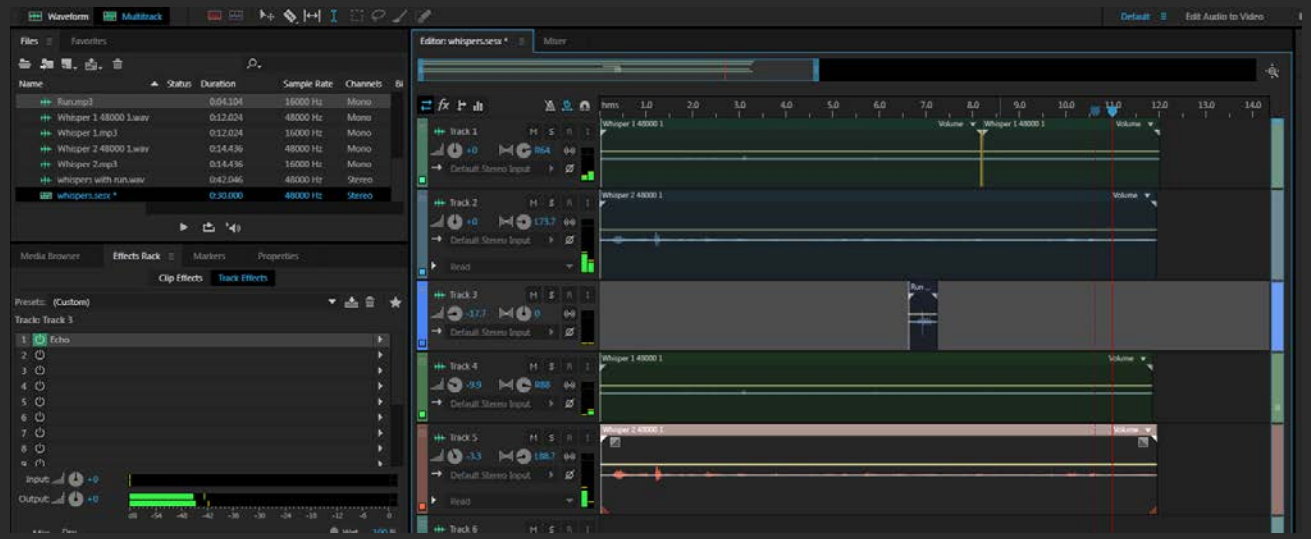


Whispers

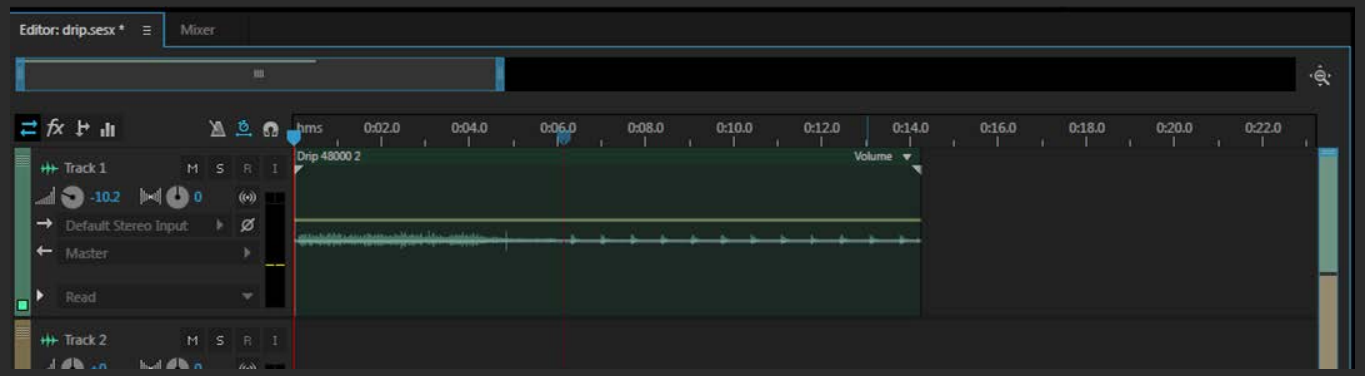


Here I have added three clips I made, two of incoherent whispering and the third the word ‘run’. First I changed the output so that one recording plays predominantly in the left ear and the other the right to try and make it sound 3d and realistic.

I then went on to adding a slight echo to both of the main sounds in order to make them sound more ominous. I then duplicated them and added a distortion filter to make them sound deeper and less coherent. I played these through the same ear split and made them quieter than all the other channels.

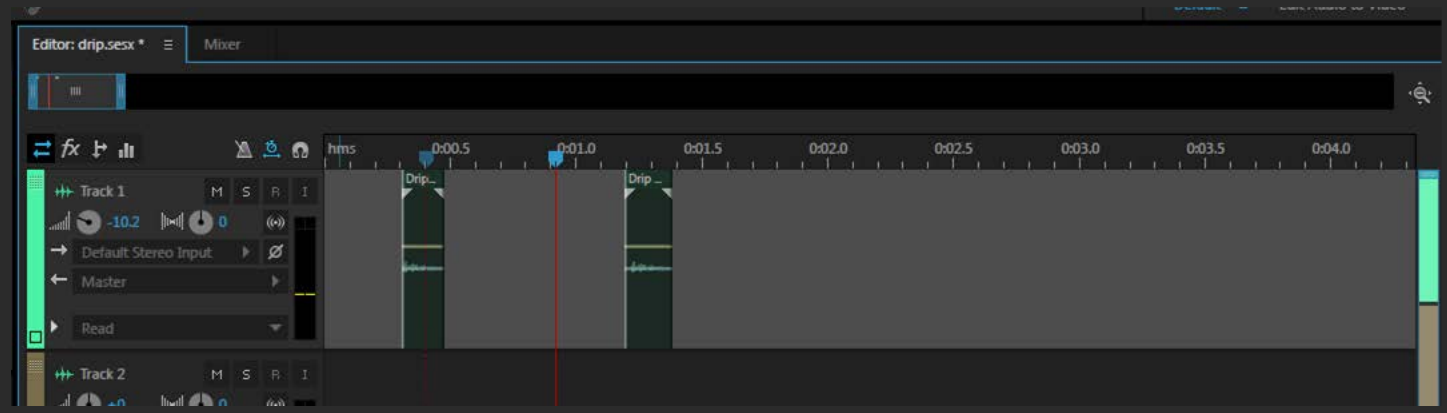


Drips

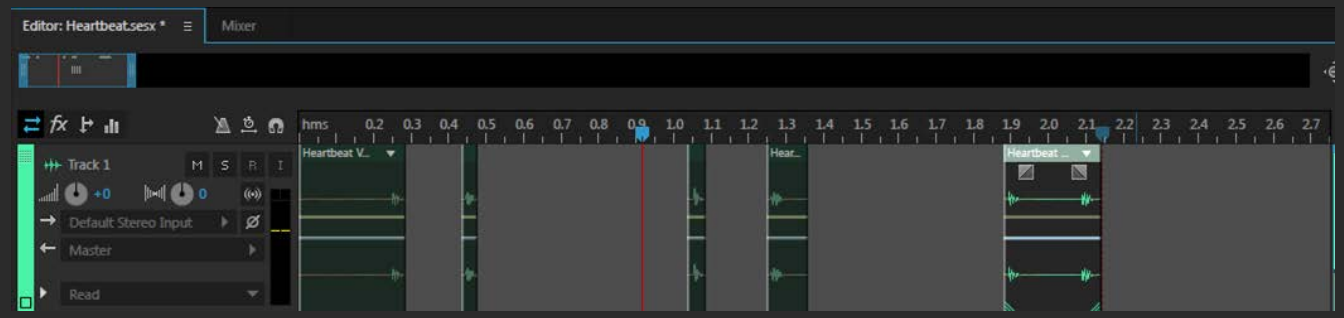


Here I recorded a dripping tap and then brought the recording into Audition. I cut the first section off so I only had the dripping noise left

I then decided to cut this up further to eliminate background noise and also single out the drip, which I could then loop.

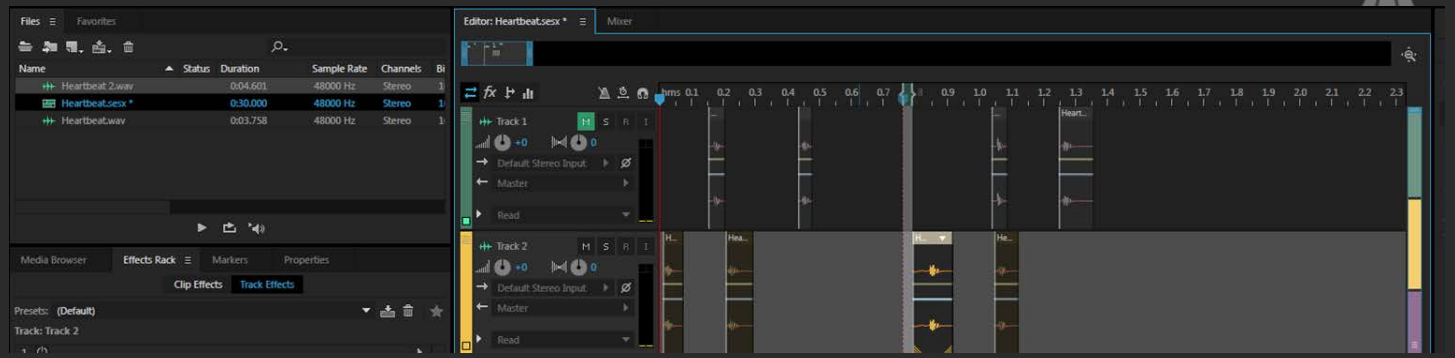


Heartbeat

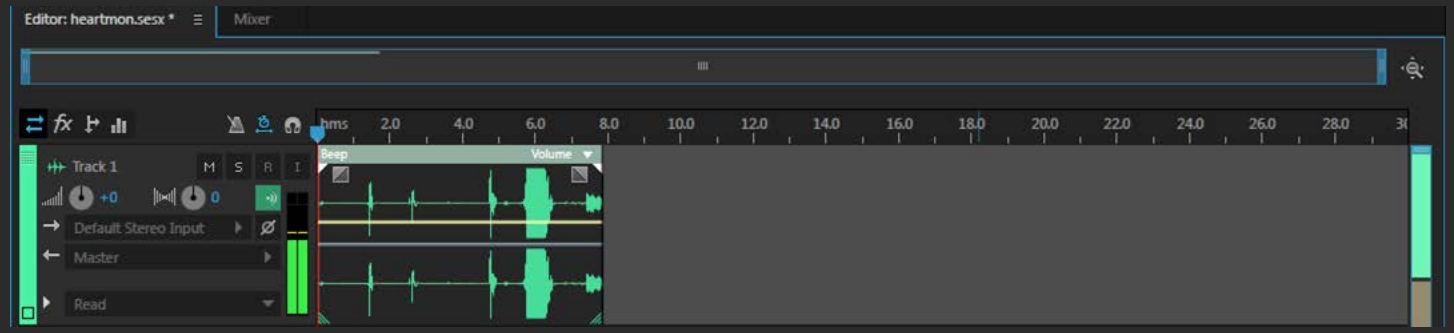


Here I brought in a primary sound I had previously recorded.

I then cut this up into two different channels so that they could be heard through different ears.

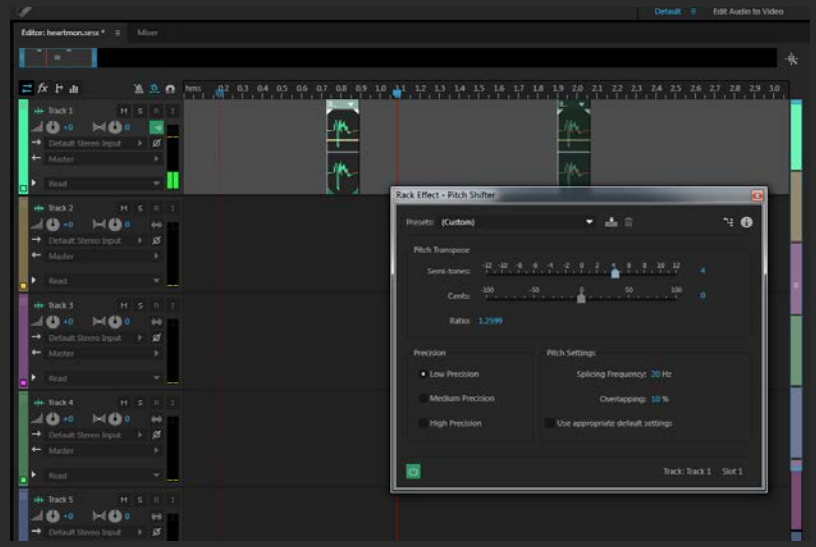


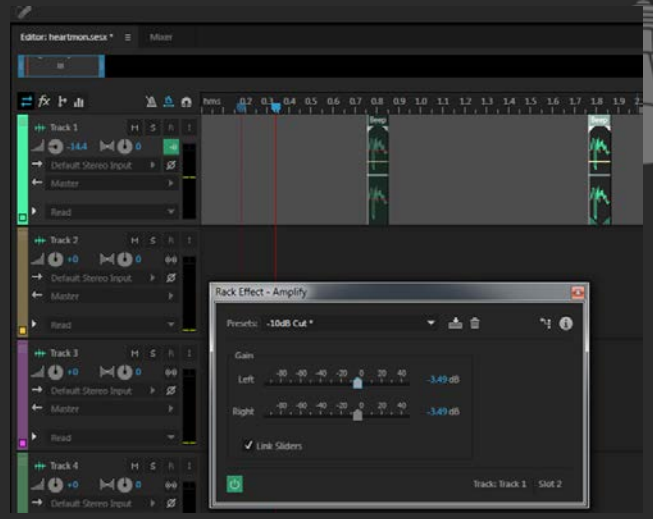
Heart monitor - beat



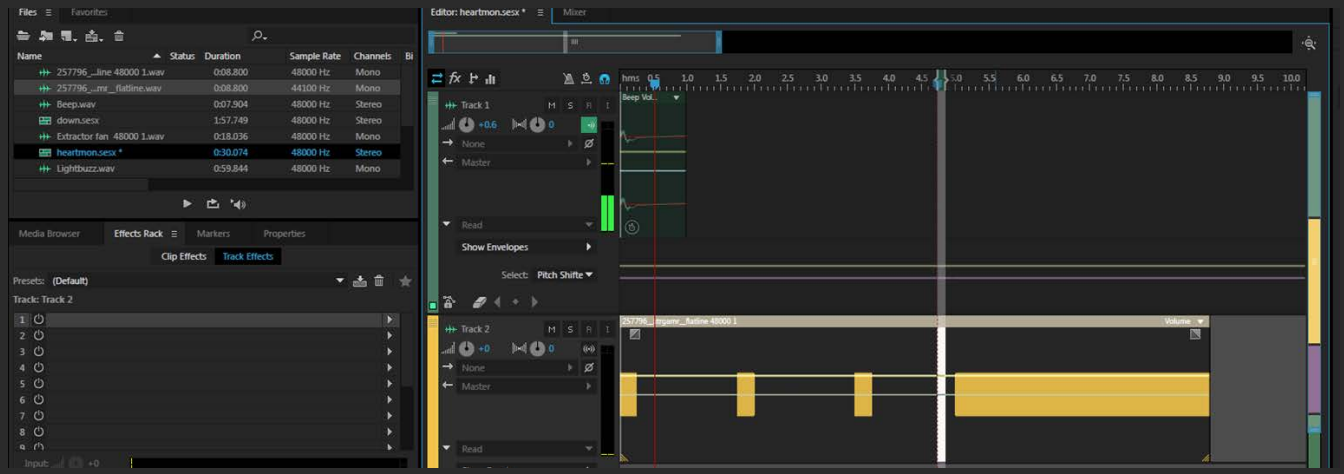
Here I imported a sound I recorded using my voice.

I then cut up the track so I had two evenly spaced ‘beeps’. I changed the pitch to make it higher and more like an actual machine, and then I amplified it in order to make it louder and jarring





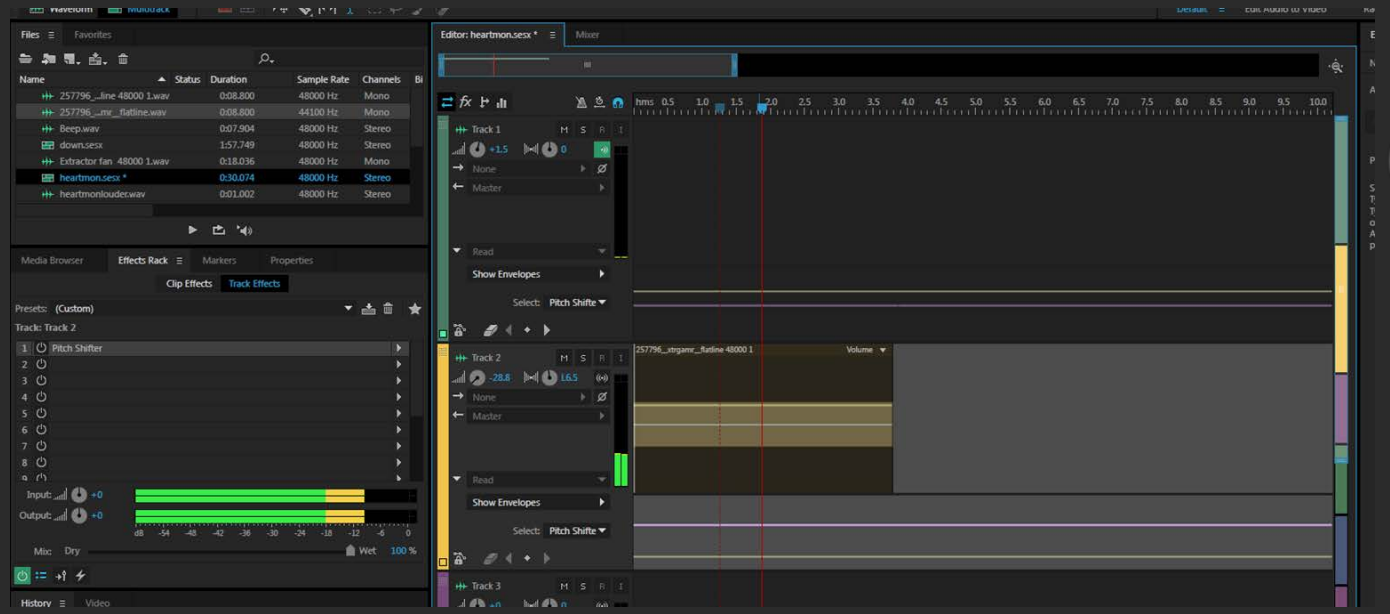
Flatline



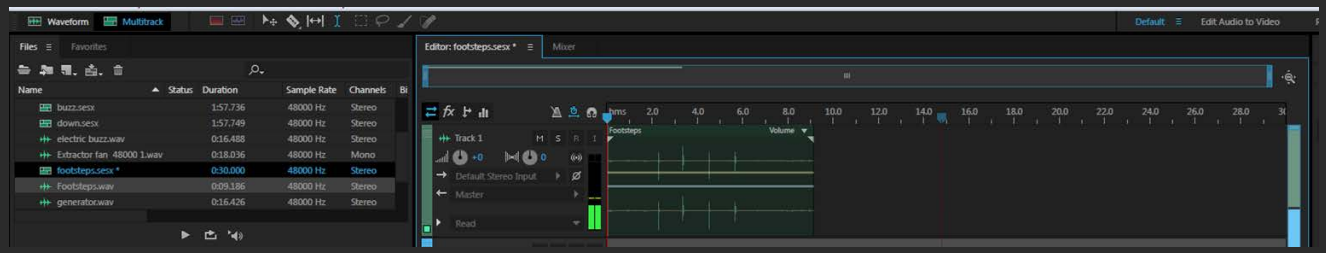
After the heartbeat I needed a flatline. I tried to create this using my current ‘beep’ but I found this difficult so I imported an existing sound

https://freesound.org/people/xtrgamr/sounds/257796/

Here I have said sound and have changed it’s pitch and volume to better match my own ‘beep’

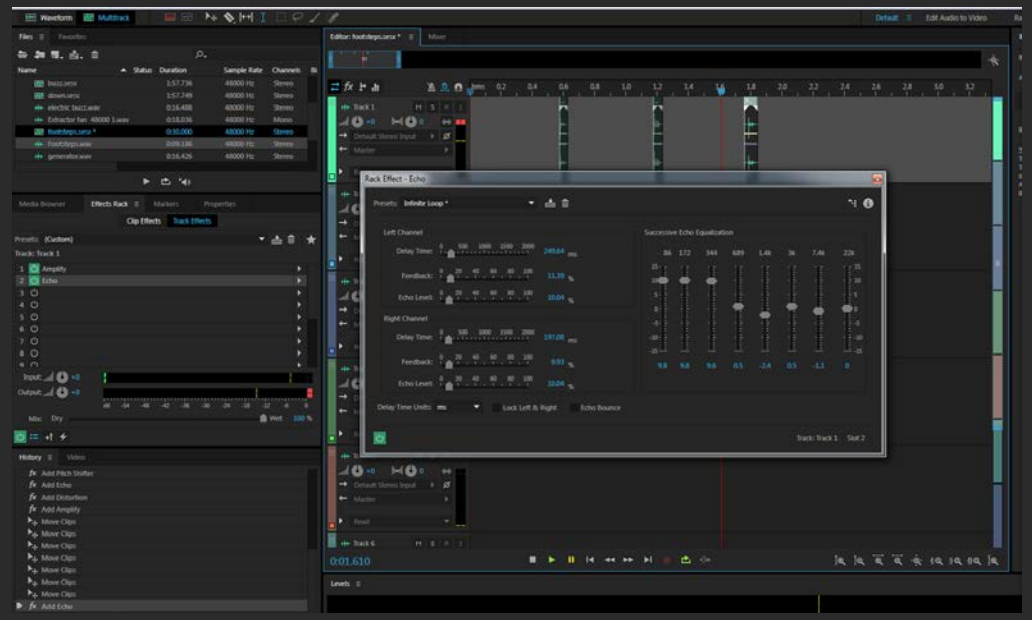


Footsteps



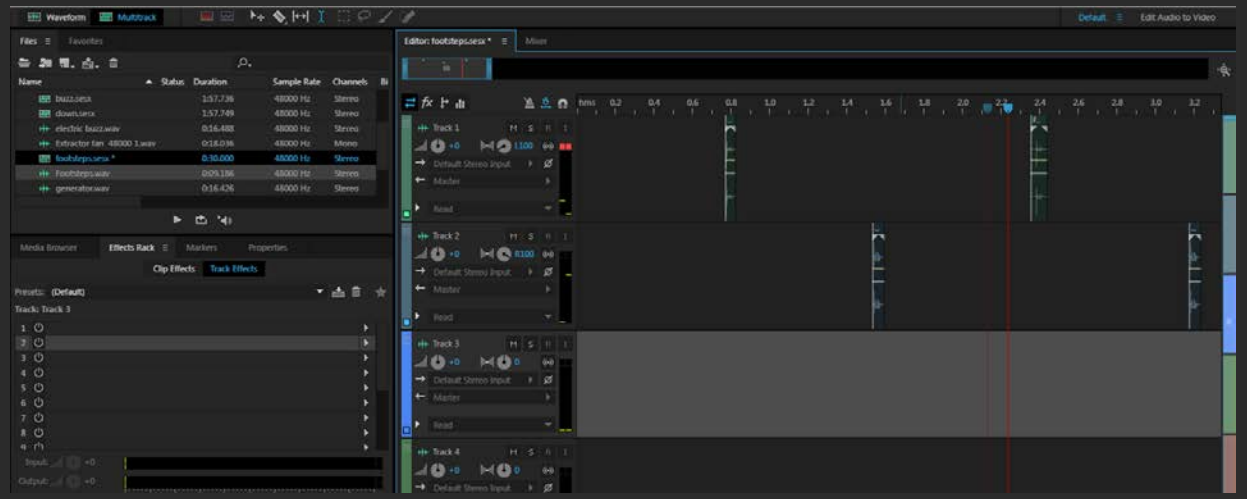
Here I imported a recording of me walking to use as footsteps

I then separated the actual noise from the background noise and deleted all the unwanted elements

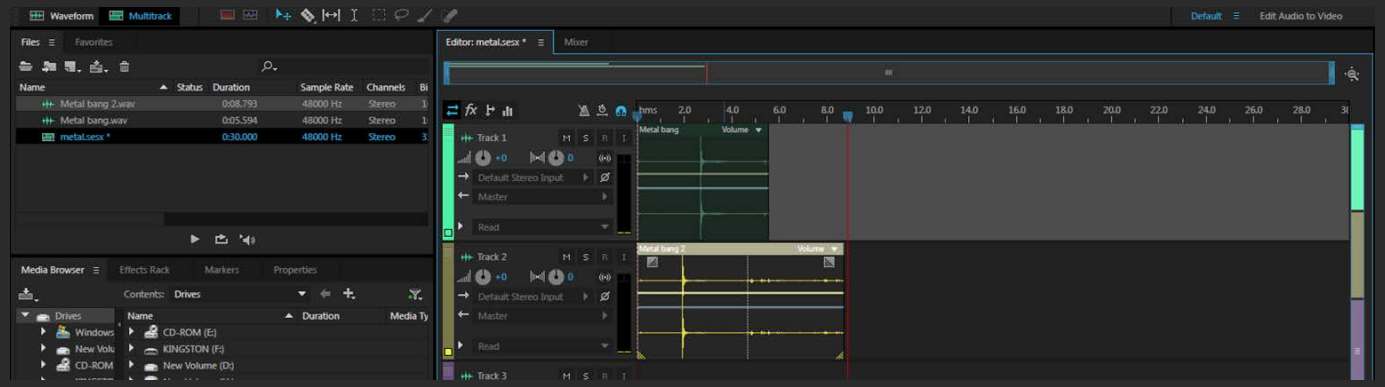


I then went on to adding an echo so that the footsteps sounded eerier and like they were on the floor on my hospital

Here I ensured there were four steps in each loop, this way I could change the output so that each step is heard in a different ear adding a 3d effect to the sound

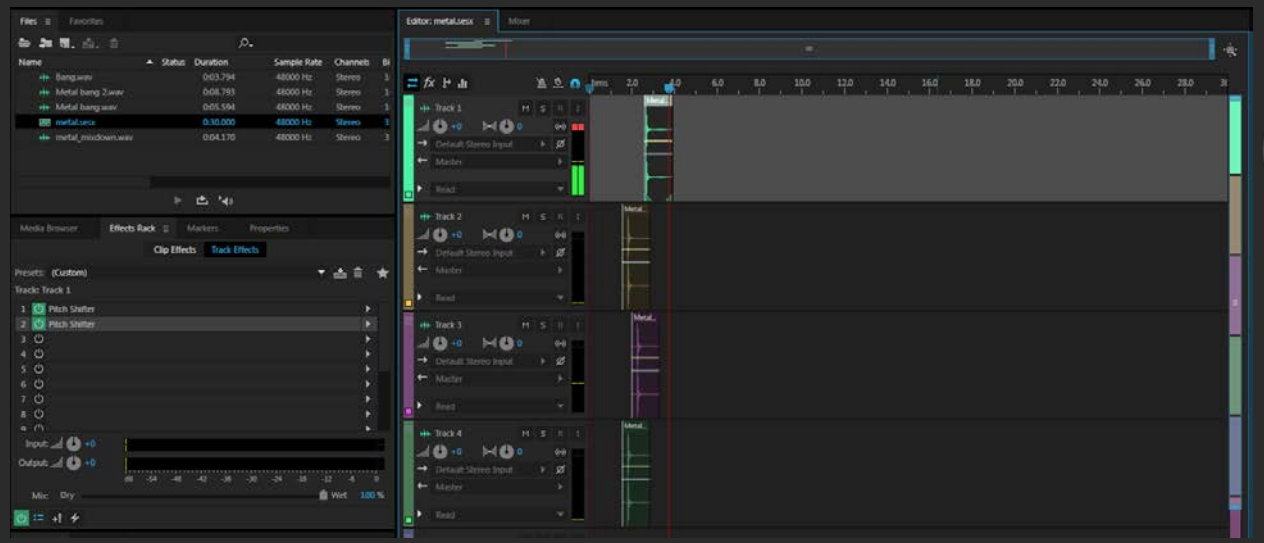


Metal



Here I imported two sounds of metal colliding. This was for when the beds move.

I then took these and messed with the pitch to make them more realistic. I also cut them up and duplicated them in order to have a larger noise



Unity

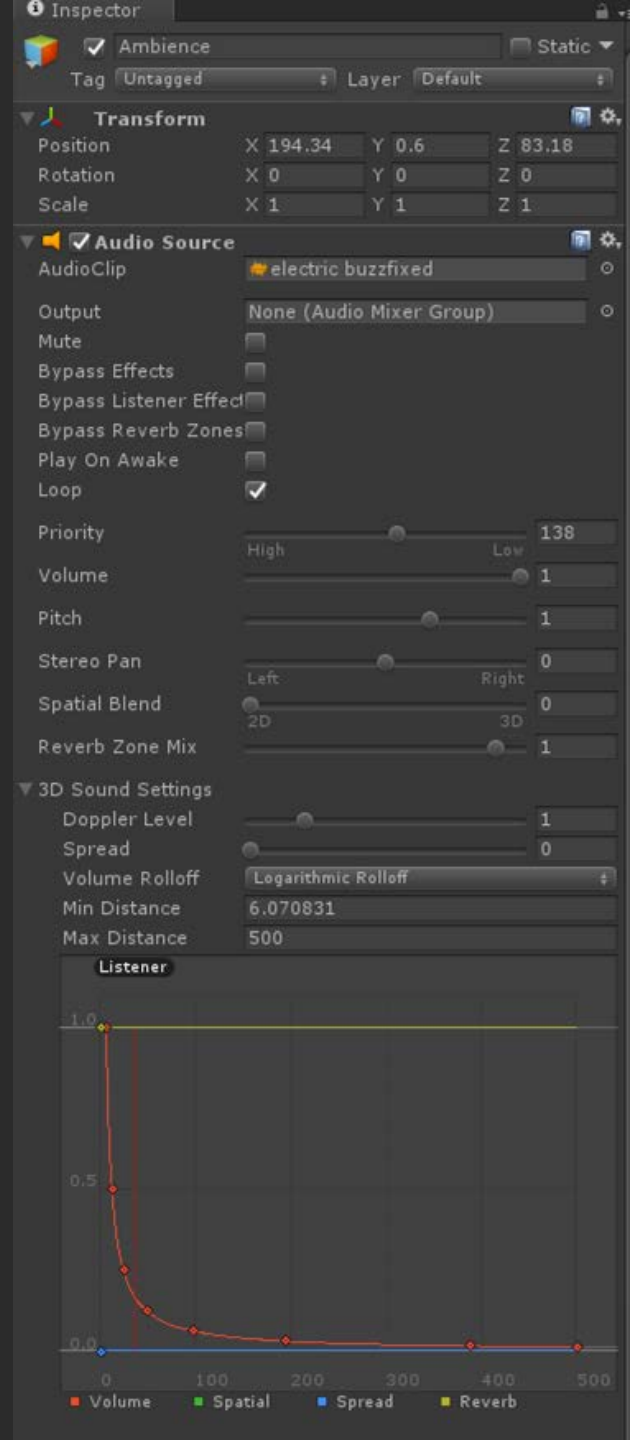
```
36
37      if(other.name=="Portal"){
38          if(keyfound==true){
39              transform.position.x = 225;
40              transform.position.z = 91;
41              transform.position.y = 3;
42              drip.gameObject.SetActive(true);
43          }
44
45      }
46
47  if(other.name=="Portal"){
48          if(keyfound1==true){
49              transform.position.x = 196;
50              transform.position.z = 90;
51
52          }
53      }
54
55
```

I started off making a portal which would teleport the player to the other level once they had collided with the heart monitor and then touched the final double doors. When they teleport to the next level the dripping ambient sound plays.

```
if(other.name=="Heartrigger"){
    keyfound=true;
    Destroy(other.gameObject);
    Light1.enabled=false;
    Light2.enabled=false;
    Light3.enabled=false;
    Spotlight.enabled=false;
    GetComponent.<AudioSource>().clip =powerdown;
    GetComponent.<AudioSource>().Play ();
    flatline.gameObject.SetActive(false);
    lighttest.gameObject.SetActive(false);
    lighttest2.gameObject.SetActive(false);
    lighttest3.gameObject.SetActive(false);
    lighttest4.gameObject.SetActive(false);
    lighttest5.gameObject.SetActive(false);
    buzz.gameObject.SetActive(false);
    flatline.gameObject.SetActive(false);
}

if(other.name=="KeyObject1"){
    keyfound1=true;
    Destroy(other.gameObject);

}
}
```

When the player touches the heartbeat monitor, the ‘power down’ sound plays once using the getcomponent<audiosource>, this also turns off the flatline.

On the left is an example of the an audio source on the terrain, this one is for the main ambient noise- the low, electrical buzz. There are also audio sources for the other ambient sounds like the dripping in the second level.



Here are all the different scripts on my FPC along with their respective sounds. Most of the scripts follow a similar pattern of sound either being played or stopped when an object is collided with.

On the right is the script for the trigger in the second level by the doorway, which plays a whisper. The second is footsteps within the maze of corridors.

Below that is the script for picking up the key card. The flatline plays whilst the regular beep is stopped.

The one below is for the trigger in the store room which plays a metal clanking noise and also moves the bed so the player can progress.

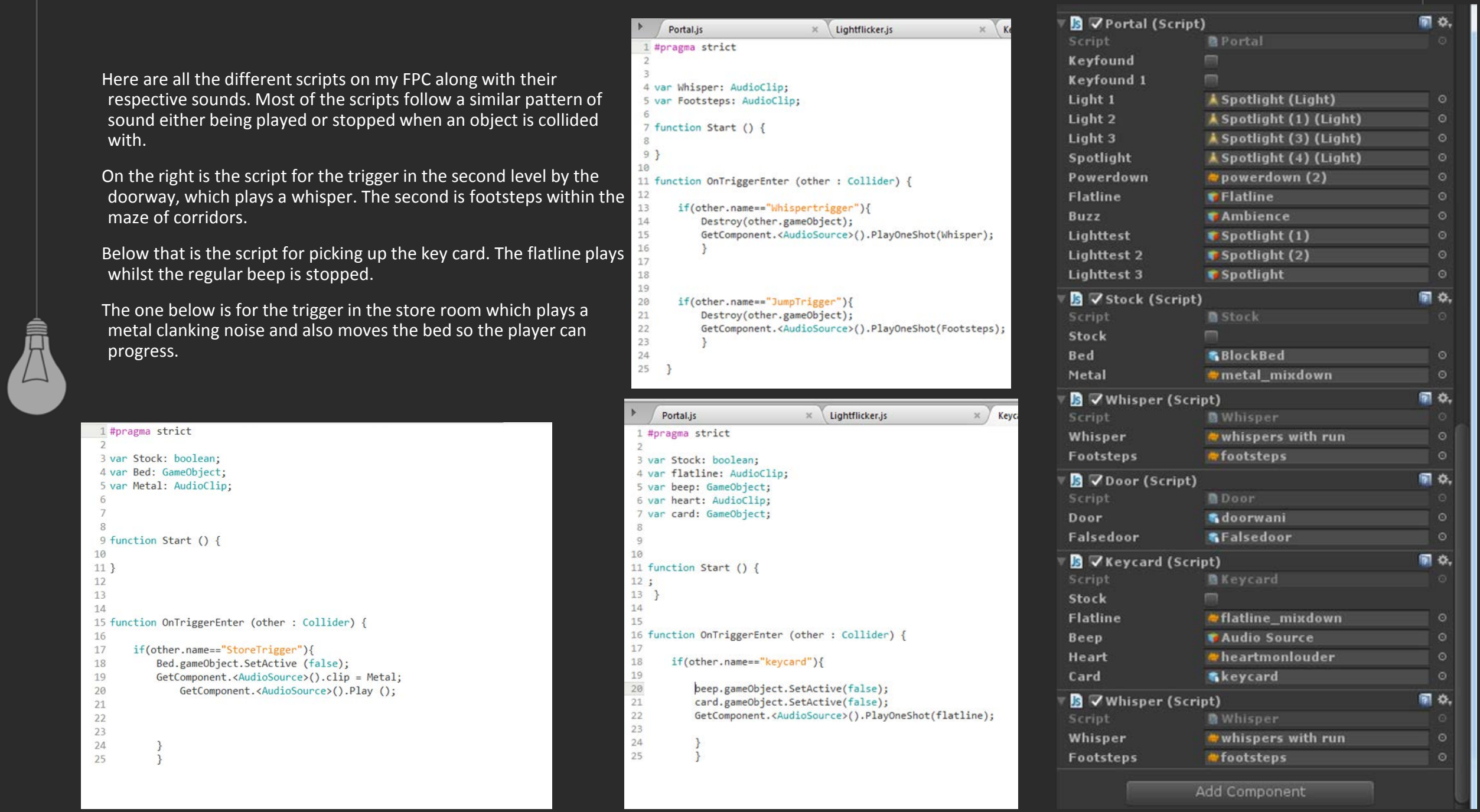
Portal.js | Lightflicker.js

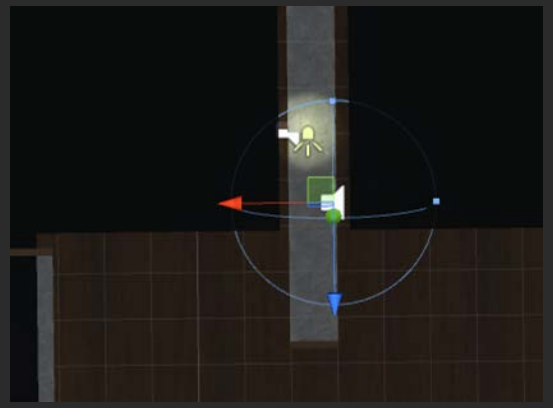
```
#pragma strict

var Whisper: AudioClip;
var Footsteps: AudioClip;

function Start () {

}

function OnTriggerEnter (other : Collider) {

    if(other.name=="Whispertrigger"){
        Destroy(other.gameObject);
        GetComponent.<AudioSource>().PlayOneShot(Whisper);
        }


    if(other.name=="JumpTrigger"){
        Destroy(other.gameObject);
        GetComponent.<AudioSource>().PlayOneShot(Footsteps);
        }

 }
```

Portal.js | Lightflicker.js

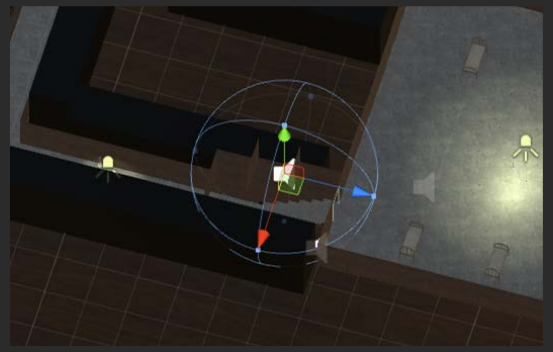
```
#pragma strict

var Stock: boolean;
var flatline: AudioClip;
var beep: GameObject;
var heart: AudioClip;
var card: GameObject;


function Start () {
;
 }


function OnTriggerEnter (other : Collider) {

    if(other.name=="keycard"){

        beep.gameObject.SetActive(false);
        card.gameObject.SetActive(false);
        GetComponent.<AudioSource>().PlayOneShot(flatline);

        }
        }
```

```
#pragma strict

var Stock: boolean;
var Bed: GameObject;
var Metal: AudioClip;


function Start () {

}


function OnTriggerEnter (other : Collider) {

    if(other.name=="StoreTrigger"){
        Bed.gameObject.SetActive (false);
        GetComponent.<AudioSource>().clip = Metal;
            GetComponent.<AudioSource>().Play ();


        }
        }
```

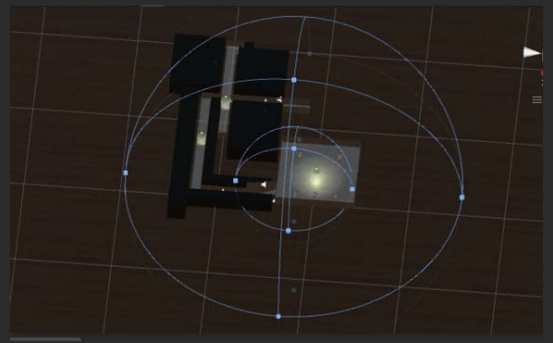




Here is the footsteps sound, which plays when the player enters a dead end



Here is the whisper sound, which plays when the player walks down the stairs in to the maze



Here is the ambient dripping sound for the second levelling.

Here is the ambient sound for my first level, the electric buzz.

Here you can see the 3D sound for the heartbeat monitor, the flat line, which is also connect to this just uses the sound file thus is heart everywhere

Evaluation

Walkthrough- https://vimeo.com/257204462
Sound design video- https://vimeo.com/257202761

In this project I was tasked in demonstrating sound design within a unity level. Said level needed to be horror themed and I picked psychological horror as my starting point. From here I researched how sound was used in existing games to create atmosphere and enhance the gameplay. I then decided on what sounds I wanted and mapped out my level.

The level had to have two separate sections so I wanted to theme mine around an abandoned hospital, the first level being set in an empty modern-day hospital, the second in an old-fashioned hospital with connecting corridors. I chose this because abandoned places tend to hold an eerie atmosphere thus I thought it be a perfect setting for a horror game. Similarly, hospitals tend to hold emotion and also a sense of fear, especially when empty. I was relatively happy with my level design, especially the corridor section, where the horror feel would be easy to create. I decided to add more detail to my level with hints to a story by making a certain path the player has to follow. They have to enter the store room to move the bed out of the way of the office and then get the key card to open the door to the last ward in order to progress to the other level. Here I added extra with an animation on the last door when the player touches the lock to open said door. When it came to my assets, I used 3DS Max to model, but my goal was to make them as simple as possible in order to focus on the sound and code.

In terms of coding, the main script dealt with the portal from the modern hospital to the old one, this was allowed once the play collided with the heartbeat monitor, turning it off. There was also a script that plays a sound and moves the bed when the player walks into the store room and one attached to the key card that then allows the player to enter the final ward with the animated door. There was also the teleportation script that allowed the player to move to the next level when certain conditions were met. I then also considered the lighting and included a script that makes the lights flicker randomly. I liked this effect and think it adds atmosphere to the game considering the overall limited lighting. It helps add a sense of unknown with limited vision. Overall, I was happy with the coding aspect and I think that this more set path in the game helps the gameplay aspect.

The majority of my sounds were recorded by myself, with the exception of a couple that were taken from online sources where I couldn't record them myself. I then edited these sounds in Adobe Audition in order to make them suitable for my game. I was happy with my final sound outcomes as they fit with what I needed for my planned game. There were a couple of sounds that didn't make it into the final build, including the heartbeat and heavy breathing, due to my own constraints. The rest of the sounds I managed to code into my game whether they were ambient sounds like the buzzing and the drips or 3D sounds like the beating from the heart monitor. Editing sounds was a new thing for me, I hadn't used Audition before thus this was my first experience with it. I think that I managed to use this software effectively within the project once I got the hang of it, thought I feel like with more time I could have extended and bettered my sounds.

I feel that even though I completed this project, it wasn't my strongest outcome. I think the outcome left more to be desired and it didn't completely match my expectations at the start of the project. If I were to do this project again, I would take more time to add the sounds that I ended up not using into the game, because I think that sounds like the heartbeat, if properly implemented would have enhanced the gameplay and immersion for the player. I would also spend more time on the assets and maps in order to make them more realistic and appealing, which would in turn help the immersion. I think if I would have spent more time on the actual level there would definitely be improvements to be made. I think I have learned a lot from this, I need to divide my time more effectively, but also put more time in overall to the project. I did try to improve upon the level at a later date, but found this much harder than if I had made sure everything was perfect early on and I think rushing ahead was my biggest downfall. It was the realisation later on in the project that succeeding to the correct the core issue of the buggy FPS by increasing the size of the size of the environment only proved to disregard all the work I had done with the sound, and this wasn't something I had the time or means to improve. So I reluctantly decided to keep the FPS as it was with the hope that my sound could still be showcased. If I had more time, I definitely would have gone back and tried to re-code the whole level, if not scrap it and build it all over again. But, I had to make a decision on whether to attempt this in the time left and struggle or leave it, look back reflectively and learn from my mistakes. That said, I liked my initial design, and the idea of if being set in a hospital. I also liked the overall feel and theme of the game.