Nyctophobia

[nik-tuh-foh-bee-uh]
noun, Psychiatry.
1.
an abnormal fear of night or darkness.

(Source: https://tinyurl.com/y7d4jkau)

Group 28, New Media
Creative Technology, University of Twente 05-11-2017

Table of Contents

General Introduction

Story of the game

In our game, the main character walks around at night trying to get to their senses. They start with limited sight and hearing, which can be improved through pick-ups. Only when your senses are fully regained, will you be able to escape your fear. While wandering through the disorienting and dark map, they will encounter several obstacles such as pits of lava, murderous mannequins, deadly traps and huge spider webs (and their hosts). Giant spiders will chase you until death if you do not outrun them.
When the character has fully regained their sight and hearing, they will see that the place they were running in was actually their house.
Nyctophobia requires you to use your superior speed, agility and intelligence to survive.

Assets imported

We used a great amount of assets in our game, which are listed below. All images included here are screenshots made by Joep.

Models

- **Axe**: We used an axe from a medieval weapons pack in our swinging axe trap. This trap is the only trap we placed over a bridge, in order to avoid spiders. There were a lot of different interesting weapons in this pack, but none proved to be actually useful.
  Source: Free medieval weapons (Unity Asset Store)

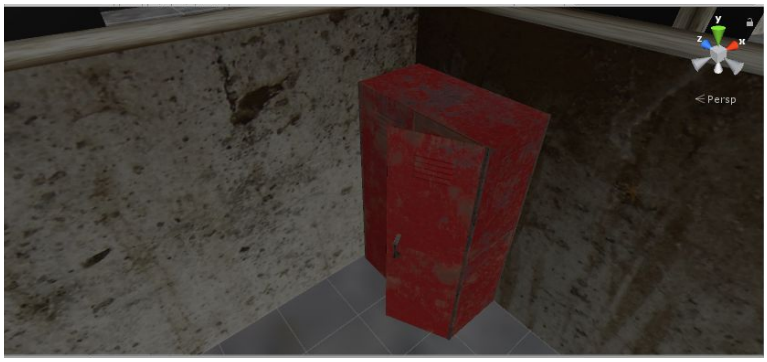
- **Barrels**: We used oil barrels as obstacles and extras in our scene. They are often used in combination with other (imported) objects such as pallets or crates.
  Source: Free asset (Unity Asset Store)

- **Crates**: We used crates, like other imports, to make the scene look more realistic, diverse, and overall less boring. We used them in different sizes, different combinations and different stacks.
  Source: crate (Unity Asset Store)
  

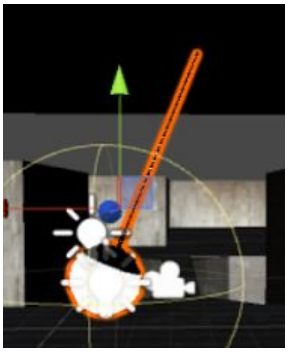
- **Fire**: We used an imported particle system as a fire that show up in vision when you burn because of the lava.
  Source: FlamesOfThePhoenix (Unity Asset Store)
  

- **Garbage**: We wanted our scene to look industrial and abandoned, as well as scary. That's why we used barrels, crates, pallets etc. but also piles of garbage. This package had a variety of four different types of garbage piles, and we used three of them. The objects are pretty big, so we didn't have to combine them with other imports and we could use them as obstacles as well as decoration.
  Source: Garbage Heap (Unity Asset Store)
  

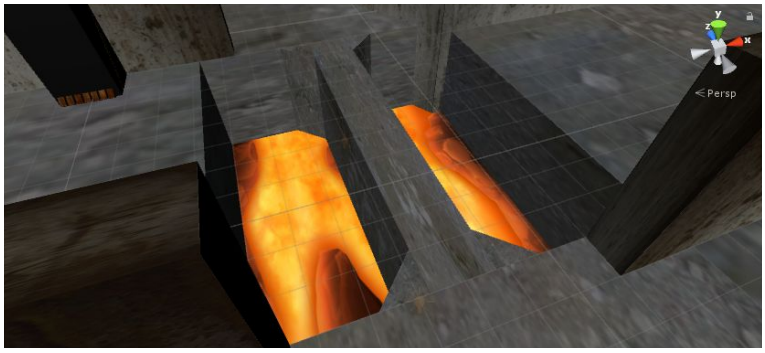
- **Industrial metal cabinet**: Used a few times around the map as decoration, often in combination with other (imported) objects. Only once is it used as a trap.
  Source: AdventureForge (Unity Asset Store)



- **Lamps**: We only used these imports in our end video, because our main scene isn't supposed to have much light. We used them as decoration in our end video.
  Source: Lamps pack (Unity Asset Store)



- **Lava**: We used lava for our lava pits. This is an imported moving texture of flowing lava. The pits are located at different places in the game and at the sides of bridges.
  Source: lava (Unity Asset Store)



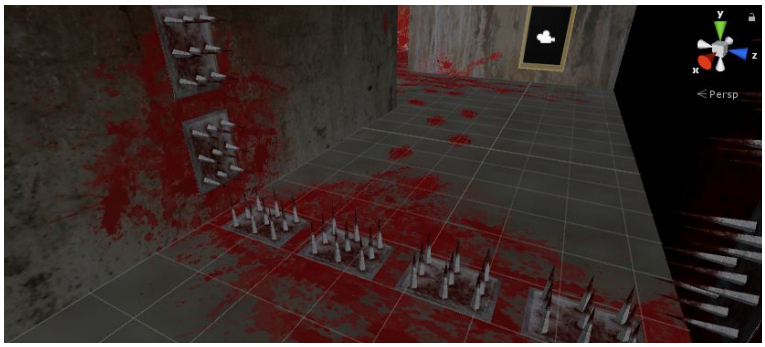
- **Machete**: We only used this two times, once in a trap and once for decoration. This trap consists of a mannequin that storms out of a metal cabinet and attacks you with the machete.
  Source: Machete01 (Unity Asset Store)
  

- **Mannequins**: We used mannequins, at first, as decoration, but later in traps as well. We added a lot to this import ourselves: texture, animation, lightning and a script to have the mannequin's head always face us. Whenever you're near a mannequin you'd also hear creepy whispering.
  Source: Mannequins (Unity Asset Store)
  

- **Mirrors**: We wanted to use mirrors in order to give the main character more credit, because otherwise you'd almost never see yourself. They are also used to give you a look at the giant spiders chasing you. This import is often used in combination with bloodstains and mannequins.
  Source: MagicMirror (Unity Asset Store)
  

- **Painting**: We wanted to add paintings as well as mirrors. But when we imported this painting there was only one option for a painting, so we only used it once to give a small hint of the place you're running in actually being a house.
  Source: Paintings (Unity Asset Store)
  

- **Pallets**: We used pallets as obstacle as well as decoration. Often used in combination with different types of pallets or barrels. Used in a variety of types, sizes and colors.
  Source: Wooden Pallets Pack (Unity Asset Store)
  

- **Spikes**: We used spikes in our traps. Walking over these would hurt the player. The traps are used to force the player to keep paying attention while running around.
  Source: trap3 (Unity Asset Store)
  

- **Toy**: We also added a jack-in-the-box, which a very creepy toy. At first we wanted to animate it and use it as a jump scare, but we later decided not to due to lack of time. We used this toy to laugh at you at the end of two dead-end paths, because seeing and hearing one of these toys would almost certainly make you think you'd die.
  Source: JackInTheBox (Unity Asset Store)

- **Water tank**: We used a water tank because it fitted well with the barrels. Used only once as decoration.
  Source: water_tank (Unity Asset Store)

Sound-effects

- **Ambient sound:** This sound is the same as the ambient sound on the Nazi zombies map *Nacht der Untoten* on *Call of Duty: World at War*. It is made to enhance the creepiness of the environment.
  Source: https://www.youtube.com/watch?v=OUE6MyBppG8
- **Axe sound:** We also have a sound effect for our swinging axe. It sounds like something flying through the air very fast.
  Source: https://www.youtube.com/watch?v=ZV8xUOlR5qA
- **End Clip:** A calm and positive sound to improve the atmosphere.
  Source: https://www.youtube.com/watch?v=GmEwuZGu74M
- **Heartbeat:** Two different types of heartbeats (rushed and calm) that make you feel more like a part of the game.
  Source: https://freesound.org/s/332812/
  Credit: Loudernoises
- **Jack-in-the-box laugh:** An evil laugh whenever you encounter a jack-in-the-box.
  Source: https://www.youtube.com/watch?v=pVY1-v97Mic
- **Jumpscare:** A screaming sound when the mannequin bursts out of the closet. It is the same sound you hear during the jump scares in *Five nights at Freddy's*, a game famous for its jump scares.
  Source: https://www.youtube.com/watch?v=pRMBTTfFNNg
- **Mannequin whisper:** A creepy whispering sound to make it feel like the mannequins are alive.
  Source: https://www.youtube.com/watch?v=EKjYnJ6s9GQ
- **Pick-up sound**: We used this as the sound you'll hear when you get a pick up.
  Source: https://freesound.org/s/171696/
  Credit: Nenad Simic
- **Plop sound:** We used this sound in the end video whenever an element becomes normal.
  Source: https://www.youtube.com/watch?v=vJ507XRaslc
- **Spider sound:** The spiders make a sound when they come closer, it ensures you feel chased and want to run away.
  Source: https://www.youtube.com/watch?v=5yf_jxlyVss

Assets made

We made a lot of things ourselves as well. Some elements were not included in the final game, but deserve to be mentioned. All unsourced images below are screenshots made by Daniela.

Models

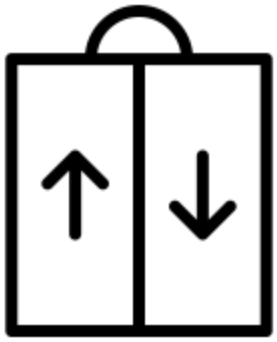
- **Emergency exit signs:** These signs light up when the player is able to exit their nightmare. It is a scaled cube with an image.

Source: (https://tinyurl.com/y7qf4zej)

- **Instruction screen:** The instruction screen consists of a canvas with an image on it. The image is edited in Photoshop.

Source: (https://tinyurl.com/yalbhg2q)

Source: (https://tinyurl.com/mxvcjsv)



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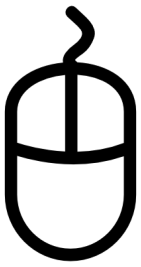

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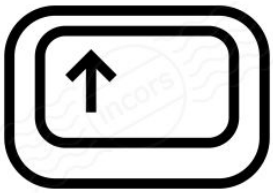
Source: (https://tinyurl.com/y94kucq2)

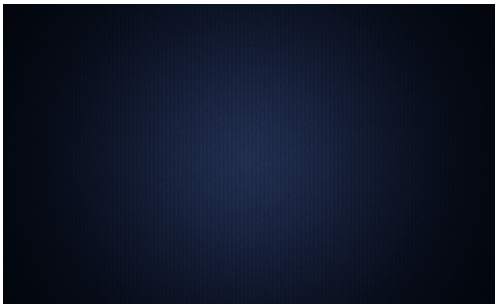


Source: (https://tinyurl.com/y8p8e2c2)

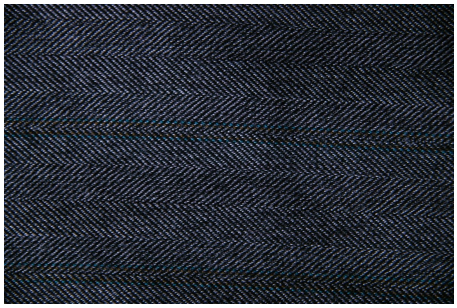
- **Lift:** The lift is the way to exit the nightmare. Its doors will open when you have fully regained your senses. It consists of several scaled cubes and planes with an image to show that it's a lift.

Source: (https://tinyurl.com/yc5j9jof)

- **Main character**: A humanoid and rigged 3D-model. Two main characters were created due to great errors in the first one, which demanded a new model. Both were textured with Lambert and Blinn textures. The hair of the main character was textured with the use of hairPhysicalShader. For some clothing, images were used.
    - Both images were used for pants of respectively the first and second created main character.



Source: https://tinyurl.com/yd9r4jdz



Source: https://tinyurl.com/ycrybl8n

    - This image was used for the shirt of the first main character.

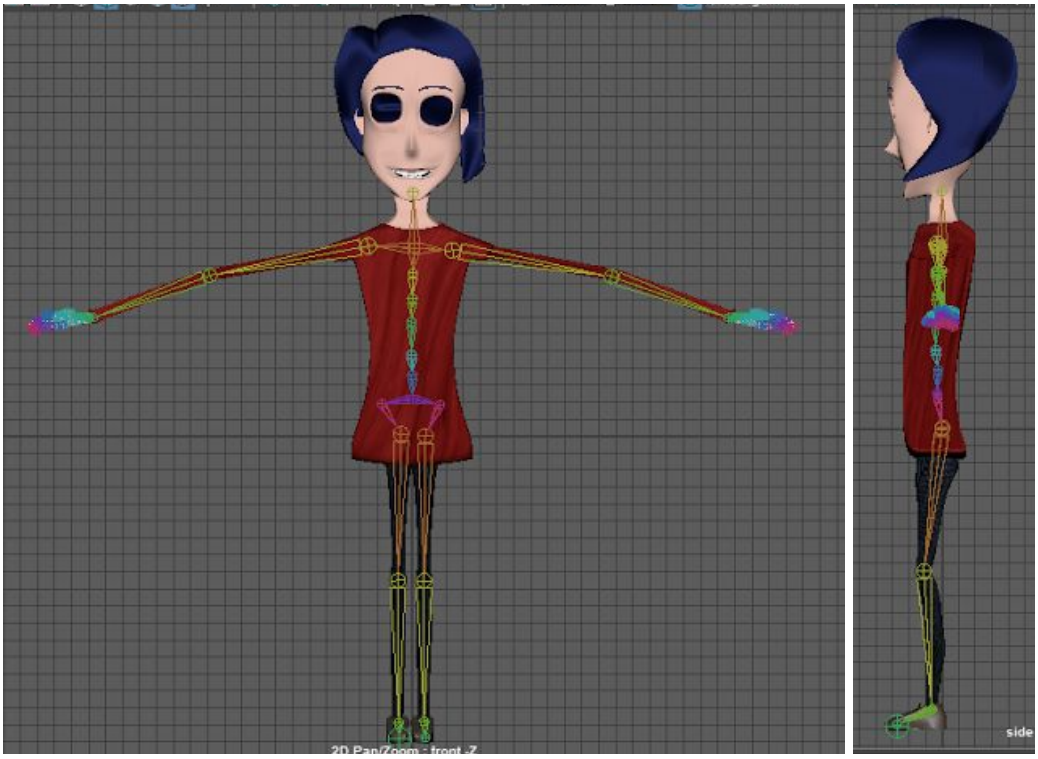
Source: https://tinyurl.com/ybxbcm96

- This texture image was created in Adobe Photoshop to mimic dark circles around the eyes of the first main character.

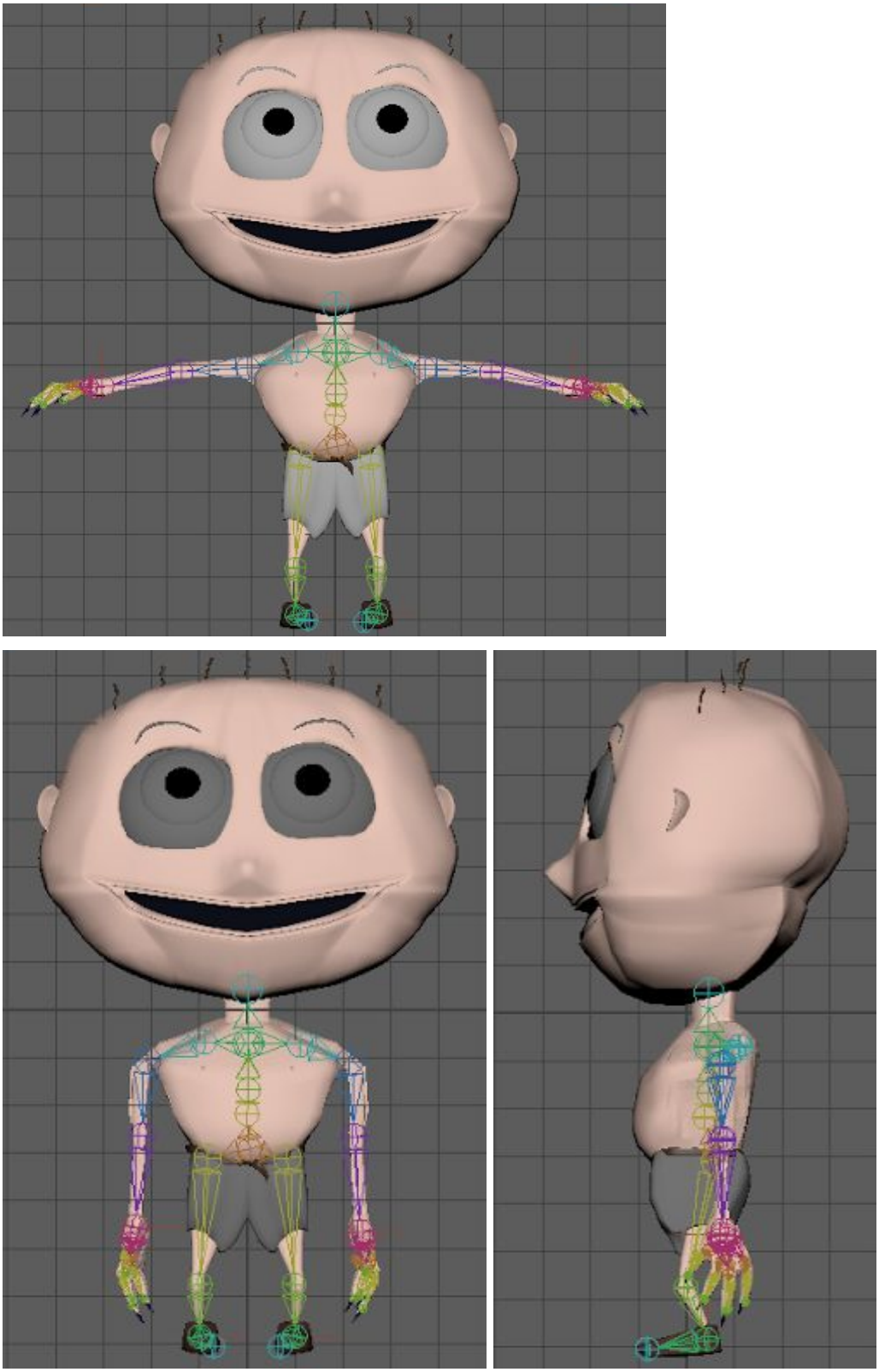
- This image was created in Adobe Photoshop to create an eyeball for the first main character.

- For the second main character, both sight pick-ups were used as eyeballs for the character.

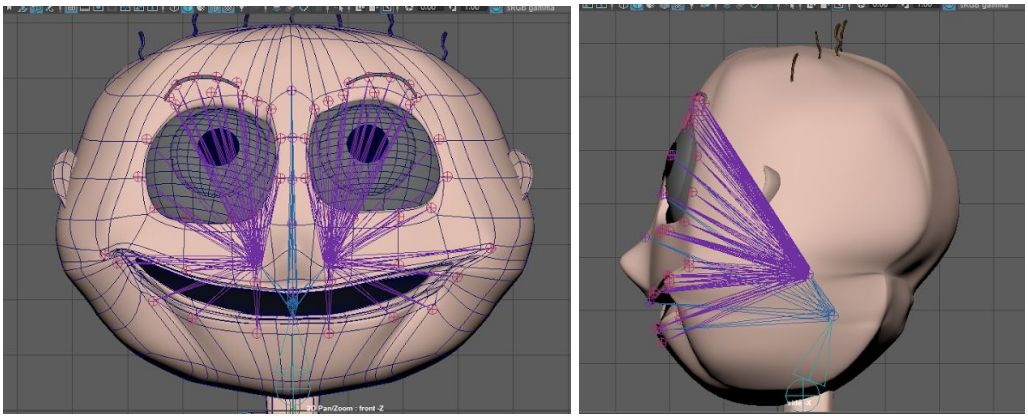
- The rig used for the first main character contained a skeleton of normal joints.



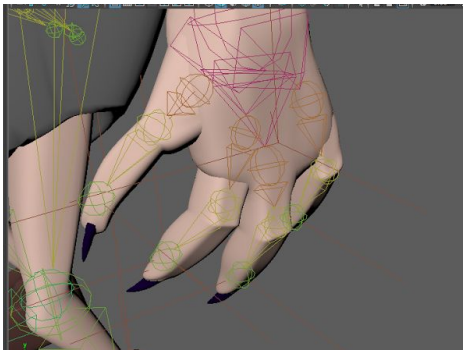
- The rig used for the second main character contained a skeleton of normal joints and four IK handles, two connected to each shoulder and hand and two connected to each hip and foot. At first, there were also IK handles in each finger, but these were later removed because they were not necessary. The same goes for a facerig that was added to enhance animation. However, due to lack of time the facerig was removed.



The used rig for the second main character

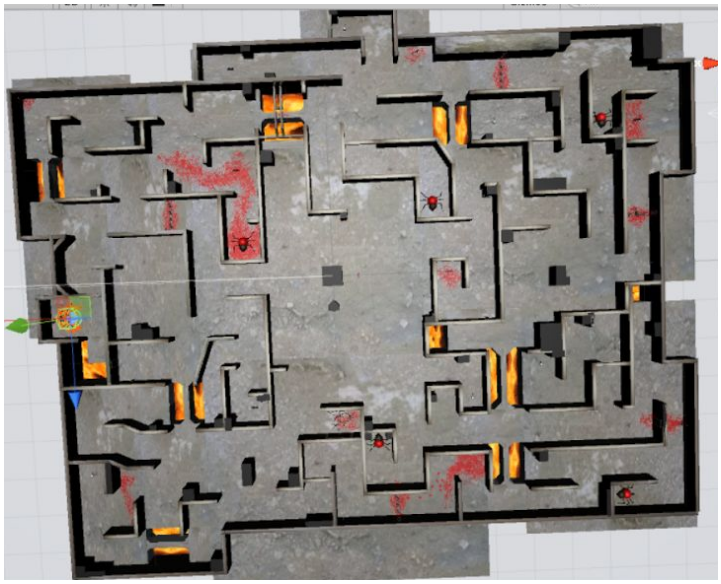


The deleted facerig for the second main character



The deleted IK handles for the second main character

- **Map**: The place in which the main character will walk around, trying to escape while finding their senses back. It is actually their house, but the player only sees that at the end of the game. The map consists of scaled cubes with different textures. Inside, there are several assets placed to make the game more challenging. It is all made in Unity.



Source: (https://tinyurl.com/y95tcqbb)

Source: (https://tinyurl.com/ycbzxofn)

Source: (https://tinyurl.com/y7hmmbny)

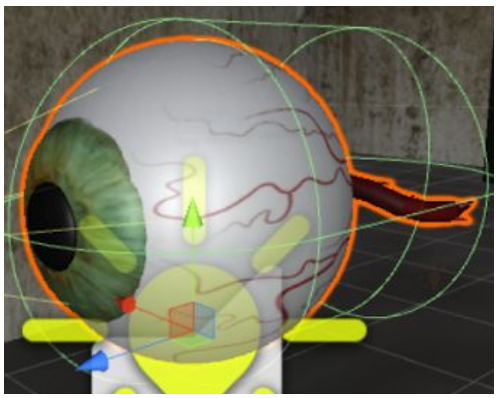
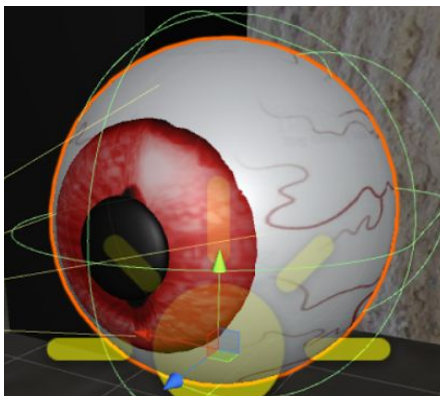
Source: (https://tinyurl.com/y7u5ncl5)

Source: (https://tinyurl.com/ycnck6jb)

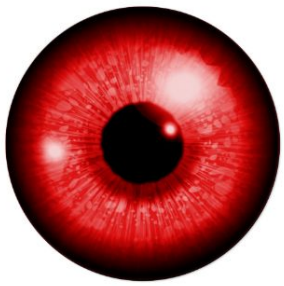
Source: (https://tinyurl.com/ybbyzo42)

Source: (https://tinyurl.com/yapwkl6l)

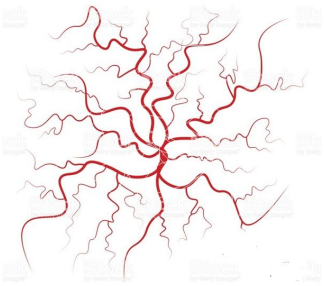
- **Pick-Ups**: There are five different types of pick-ups: one green (positive) eyeball, one red (negative) eyeball, one speaker (positive), one muted speaker (negative) and a pink heart (full health). All icons are modeled in Maya. The textures for the eyeballs are images and the rest is shades using Lambert

Source: (https://tinyurl.com/ybkawq4x)



Source: (https://tinyurl.com/y96r5zjj)



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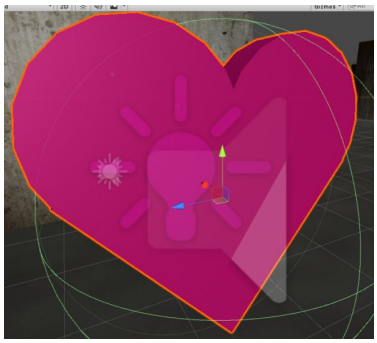
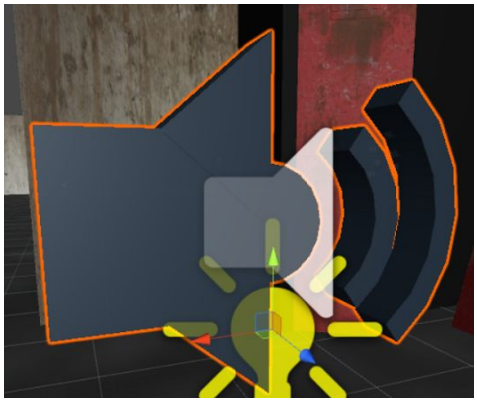
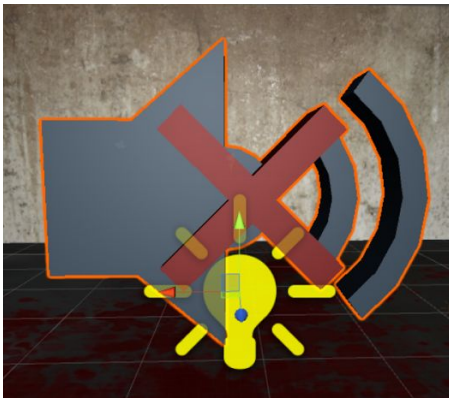
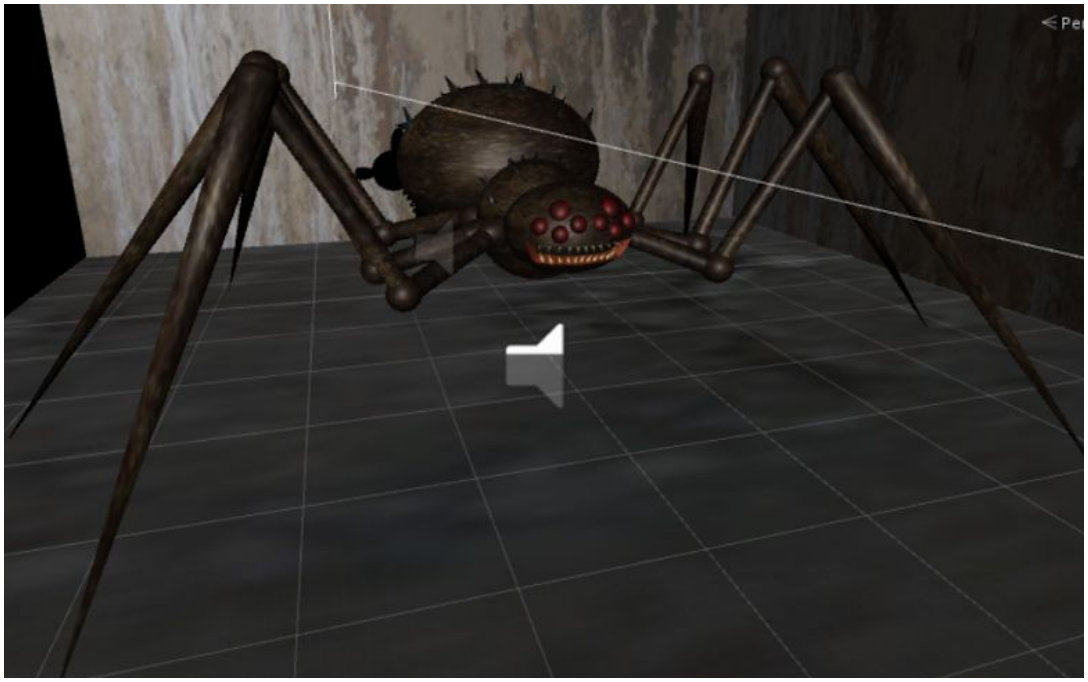
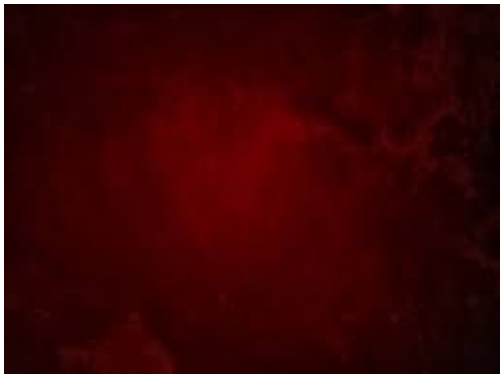






- **Spiders**: The spiders are the main enemies and they will continuously chase the main character until he's dead or has won the game. They were modelled and rigged in Maya. Several images have formed the texture of the spider.





The spider eyes
Source: (https://tinyurl.com/y94llpnx)

The gums in the mouth
Source: (https://tinyurl.com/yb7lezvy)

The inside of the mouth
Source: (https://tinyurl.com/ycozf73o)

The skin of the spider
Source: (https://tinyurl.com/y7ct4bau)

The teeth of the spider
Source: (https://tinyurl.com/ycxcugkd)

Animations

End clip

This scene is created in Unity and shows the world turning normal. The industrial metal cabinet is set from rusty to clean, the texture of one mannequin changes to a barbie doll and it gets smaller, the axe turns into a moving lamp, the spider becomes tiny and its web turns into a curtain.

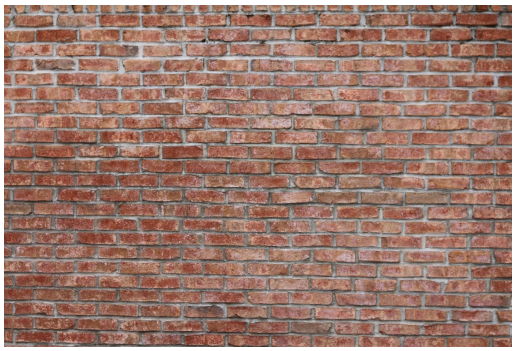
Barbie doll skin
Source: (https://tinyurl.com/ydhfay87)

Curtain
Source: (https://tinyurl.com/y7oqlewb)

End text/screen
Source: (https://tinyurl.com/y8q4o9am)

Floor
Source: (https://tinyurl.com/ycc4mvz4)

Hair for the barbie doll
Source: (https://tinyurl.com/yb99lzgj)

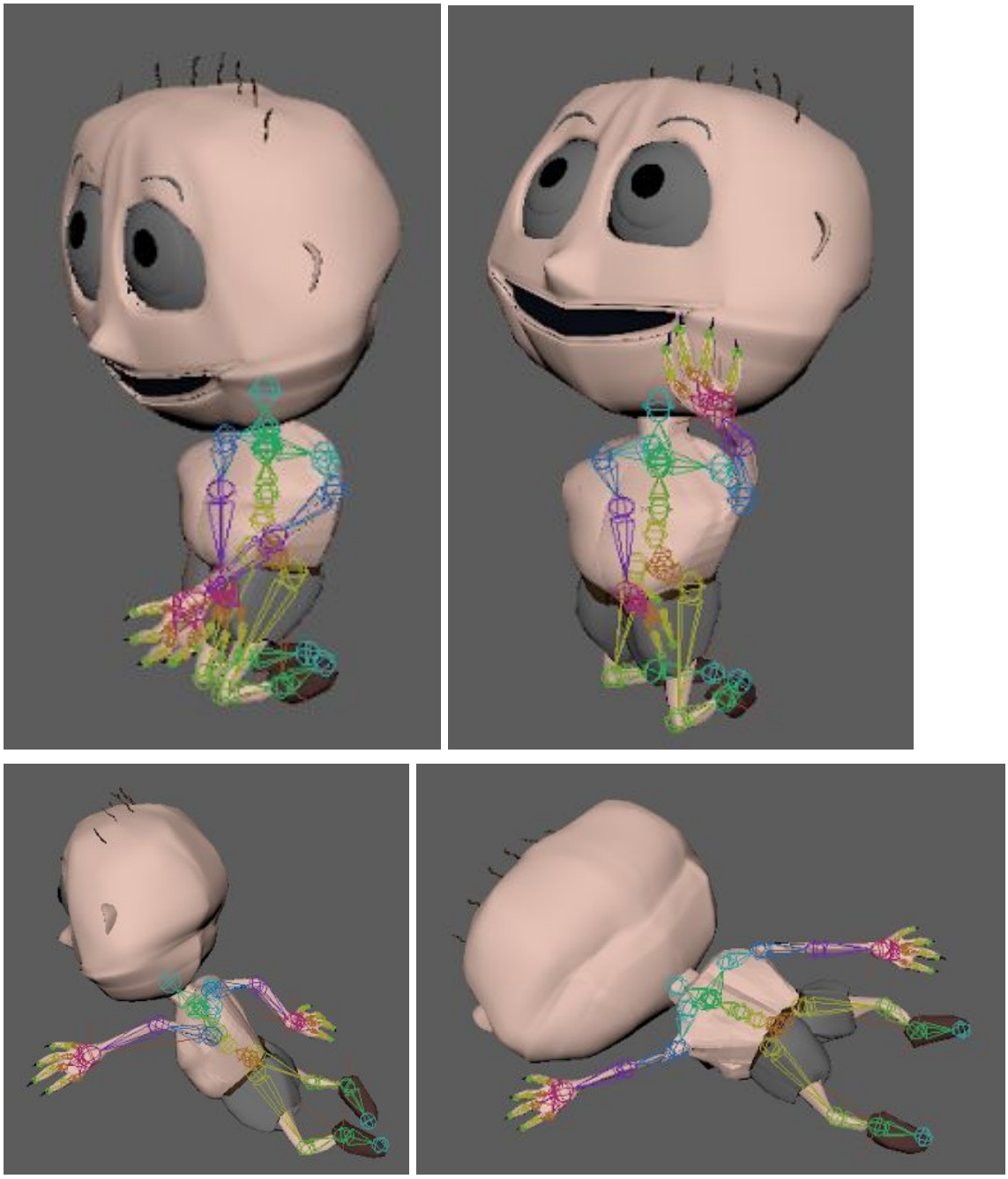


Wall
Source: (https://tinyurl.com/y8r5byor)

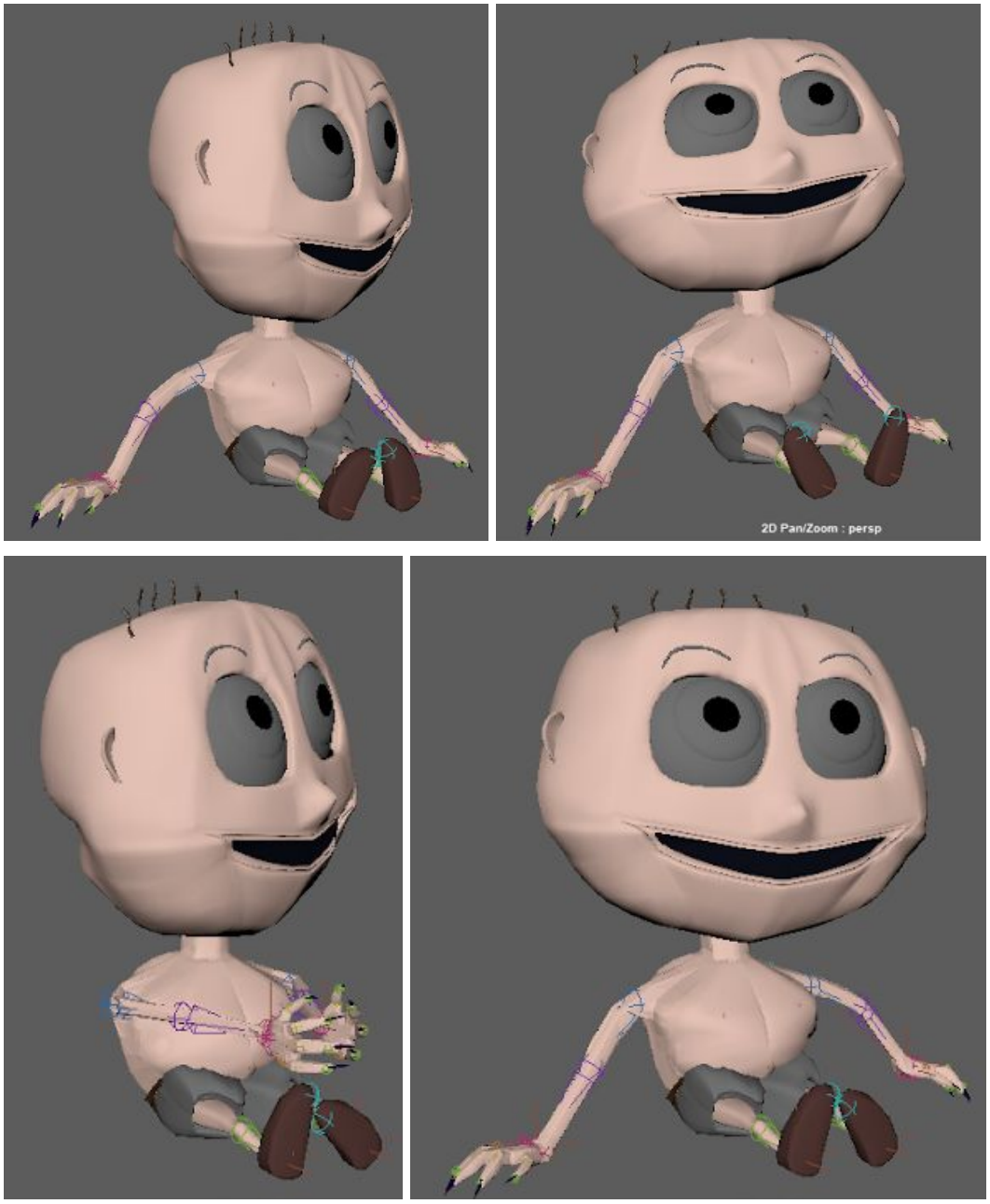
Wall
Source: (https://tinyurl.com/y9uy8kmd)

Main character

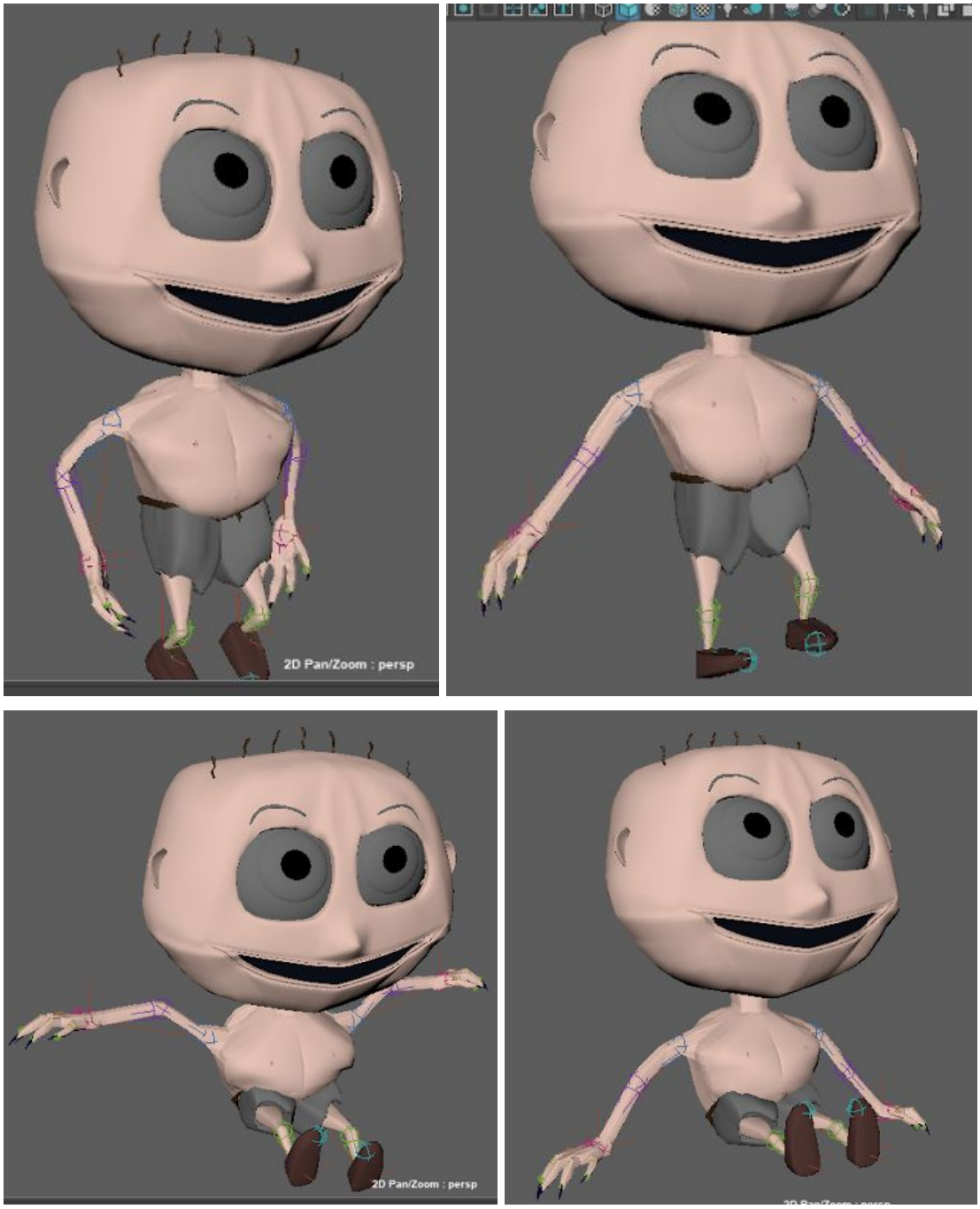
- **Die Animation:** This animation is used when the player has no more health and dies.



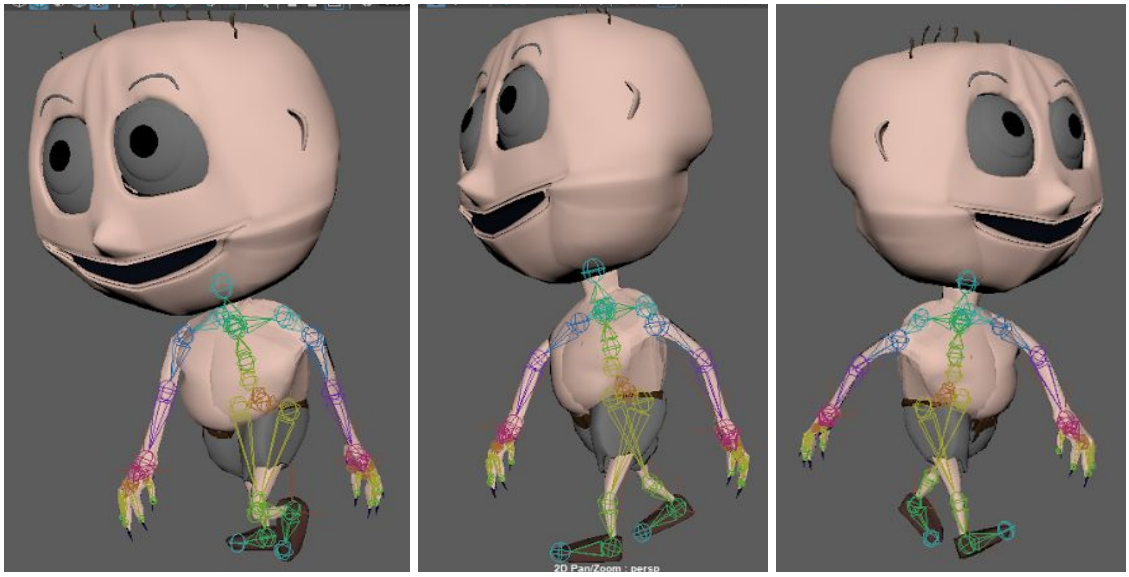
- **Idle Animation:** This animation is made for when the player does not press any keys for 5 seconds. When kids get bored and sit down, they either explore the environment through movement and touch, or through sight. The latter is used in the idle animation, in which the kid looks around and moves their feet. Touch is also used a bit, when the kid claps their hands or taps the ground.



- **Jump Animation:** The jump animation precedes the idle animation. When kids get bored, they like to sit on the ground so the main character will also move towards the ground.

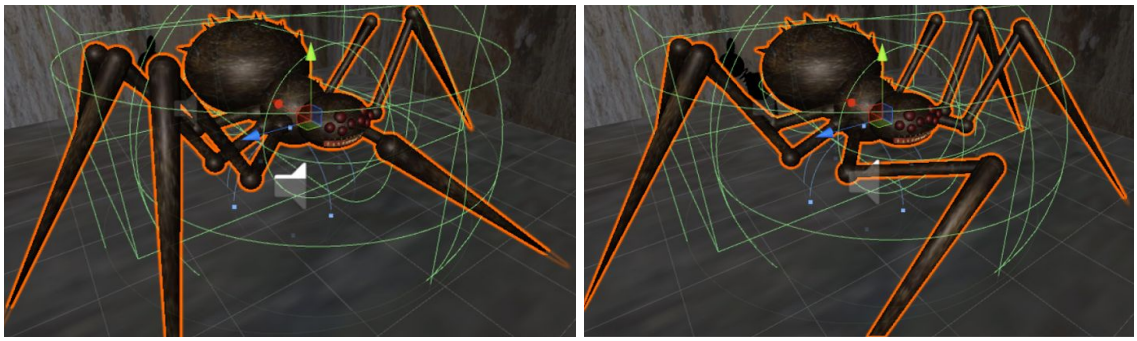


- **Walk Animation:** This is a walking cycle used throughout the game, to enhance the feeling of the player moving forward. It can also be seen in the end clip.

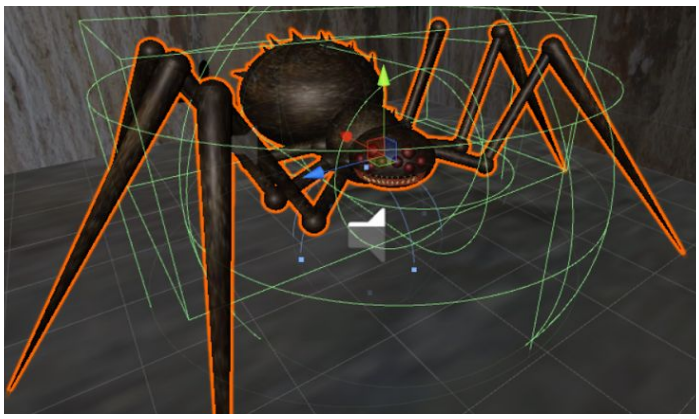


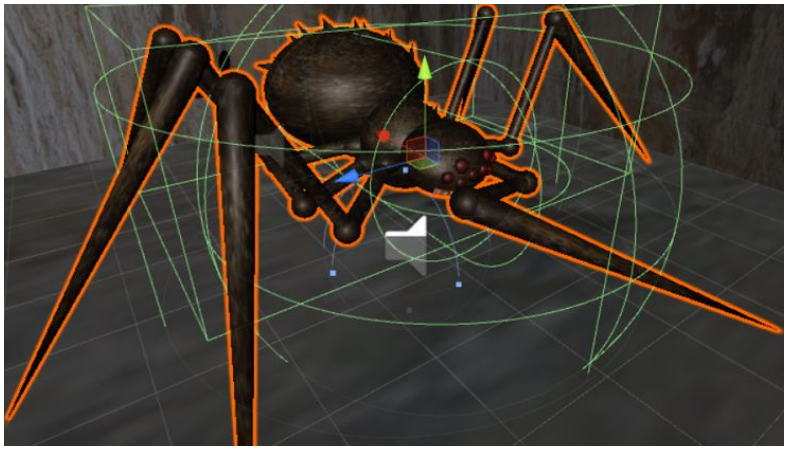
Spider

- **Attack Animation:** When the spider is near the player, it will start attacking with its fore claws, dealing damage.

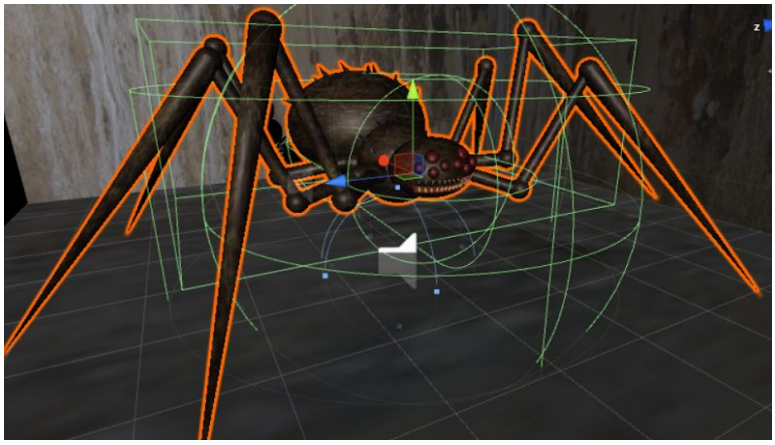


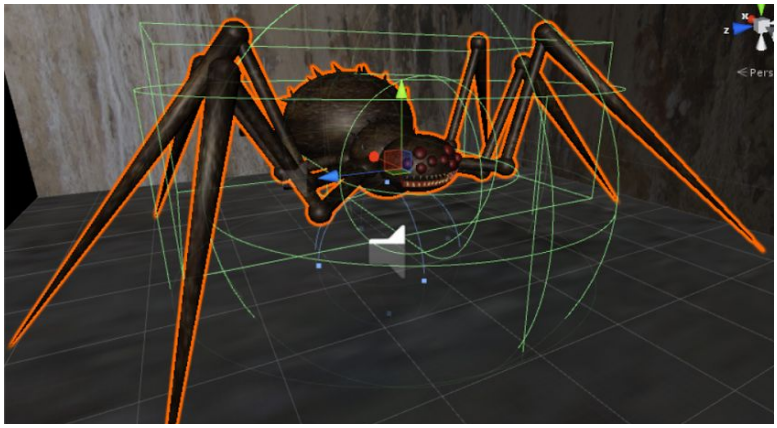
- **Idle Animation:** When the player is dead, the spiders have fulfilled their purpose. They don't have anything to do and will go in idle mode. It will look around looking for something else to kill and occasionally look on their imaginary watch, a joke made as that is a very human thing to do.





- **Walk Animation:** The walking cycle throughout the game. The spider lifts half of its legs per step, two from one side and one from the other. These are relatively subtle movements so you cannot see the movement well on the screenshots.





Sounds

- **Breathing:** Used to make the player feel more connected to the game. Also to indicate how much health the player has left and therefore adding more stress elements in the game.

- **Dying sound:** This sound was used whenever the player died. It doesn't matter if the spiders, the lava or the traps killed the player.
- **Footsteps:** This sound was used to make the user feel more connected to the game. While walking, you hear your footsteps.
- **Hurt:** You can hear this sound whenever the player takes damage.

Project schedule

Projects never go as planned, and this project wasn't an exception. In the text below you can see the original planning and the real process.

Our original planning and work distribution

25 september - 1 october

Together: Specify the storyline, make a lot of drawings of the different parts as guidelines.
Joep: start modelling the powerups
Daniela: start modelling the main character

2 october - 8 october

Joep: finish the powerups, start working on the intro video
Daniela: rig the character and create the animation setting

9 october - 15 october

Joep: finish intro video, make the power up tunes. Start modelling the monsters
Daniela: create game setting, make the background tunes

16 october - 22 october

Joep: finish the monsters
Daniela: make the outro video, make the creepy sounds

23 october - 29 october

- **24 october:** Record foley sounds (we have a Math test then in the morning, the rest of the day is free)
  Joep: put everything together (integration)
  Daniela: finish the outro video, create the menu screen, create test forms and a list of attention points

29 october - 7 november

Together: (Play)testing, debugging, improvements, add extra parts to the game if there is enough time.

8 november

Project presentation

Planning can vary based on the amount of work we have to do for other subjects and assignments. We have to spend a lot of time testing and improving our experience to make it a good project.

Joep: Monsters - power ups - intro - power up tunes - integration
Daniela: Main character - setting - outro - background tunes, creepy sounds - menu screen

→ Main character
    Modeling - Texture - Rigging - Animation - Controls - Scripting
→ Monsters
    Modeling - Texture - (Rigging) - Animation - Scripting (Follow the player, appear randomly)
→ Power ups/downs
    Modeling - Texture - Animation - Scripting (Effects, let them disappear if picked up)
→ Background tunes for animation
→ Power up tunes
→ Creepy sounds
→ Integration
    Connect everything - Buttons
→ Menu screen
→ Setting
    Modeling - Texture - (Animation) - Environment animations - Environment game
→ Videos
    Intro (sitting in a room) - Outro (standing in a playground)

How it actually went

Week Nr	**Joep**	**Daniela**	**Together**
Week 1: 12 hours	Sketch enemies Model power-ups, spiders 7.5 hours	Sketch main character 2.5 hours	Specify story and map 3 hours
Week 2: 30.5 hours	Texture, export, animate, code spider Add health and points Create, code traps 19 hours	Model main character 13.5 hours	-
Week 3: 17.5 hours	Model map Animate, code power-ups Add spider sounds 12 hours	Rig main character Select and edit sound effects 7.5 hours	-
Week 4: 27.5 hours	Add obstacles/decoration Start texturing Add mannequins, map 14.5 hours	Walk cycle Sketch and model new main character Background music in FMOD 14 hours	-
Week 5: 29.5 hours	Add swinging axe, sounds and trap to mannequin, exit signs,	Finish model new main character Rig character	-

	spider webs 15.5 hours	Create playtesting forms 17 hours	
Week 6: 76 hours	Debugging, end clip, extras Working on the report 32 hours	Animation, export main character Foley sounds Mix sound effects in FMOD, implement in Unity Idle cam Second phase playtesting Processing playtesting in report Working on report 43 hours	First phase playtesting Processing playtesting results in game/balance the game 6 hours
207 hours	100.5 hours	97.5 hours	9 hours

There is clearly a big difference between the planning and the real process, but that was to be expected. We hoped to work 50% with each program, but that turned out to be impractical and unreachable. Daniela worked most in Maya and FMOD, while Joep did a lot of things in Unity. Joep worked a lot on this project while Daniela did more work for other subjects like Sound Engineering, Game Design and 3D Graphics, for which we also had to work in pairs. It also came in handy because that way Daniela could do more with the programs that were needed in these subjects, while Joep practiced a lot on Unity and C#.

Troubles

- We had a lot of trouble with the main character, which was not modelled and rigged well so Daniela had to start over. She made a different character which forced us to change the story. We also skipped the intro video, because we thought that revealing that the main character is a baby would take away some of the suspense in our game.
- When the new character was made, the problem occurred that Daniela couldn't export it to Unity and it didn't become smooth if it was exported. One animation looped only a small part of the animation and the other animations didn't even play. After using the settings Bake Simulation (Maya) and Bake Animation (Unity) everything was fixed. However, it took a long time to find that out. In the meantime, Joep added more extras such as traps and imported objects.
- The spiders were Joep's job this project. It was the first thing he did and after some trouble they could be exported into Unity. He animated them in Unity and in the end that saved us a lot of trouble.
- For the end video we wanted a blurry vision when waking up, but we didn't find a way to make it possible unless buying Unity Pro. So we didn't use that, only the blinking was implemented in the end.
- The doll parts we used for the mannequins didn't have limbs we could bend, so they have straight arms and legs sadly.

- We had some imports that made our game go a extremely slow. We wanted to have a fire for example, but it took so much processing power that it can't be included.

Technical description

Implementation of interaction and game mechanics

It is an actual game so there is quite some game mechanics and interaction in the game. You move the player with the use of the arrow keys or WASD. Other controls are also implemented in the game, like jumping, sprinting and looking around. The environment is hostile above all, but can be helpful to the player as well. It is hostile because it is dark, disorienting and filled with traps. All together it is far from ideal for our player. It can also aid the player in the sense that the player can pass certain bridges that the spiders can't. And there are power ups located in our environment that the player can pick up.

You can win by regaining all your senses and entering the lift. The challenge is added through obstacles and enemies that hurt you. You can die when there's no health left. The health bar in the game adds this element.

We want the player to feel lost, scared and lonely so we do not give a lot of info about playing the game to intensify the tension. There are also not many boundaries in our game. You can walk around the whole place, but there are walls and obstacles that prevent you from going everywhere. The spiders will also push you in a certain direction, because they keep following you. That will result in the player walking a great distance before finishing the game.

There is also some interaction between the spiders and our player. The spiders chase and try to kill our player, that is their purpose. The player can't do anything about this except for avoiding the spiders and trying to win the game, so the spiders will go away. This is one of the game mechanics that makes our game interesting. Unkillable enemies certainly can be annoying, but it adds to their scariness. It also makes the player feel more hopeless and it makes the player need the pick ups even more, since they aid the player in avoiding the spiders.
I tend to compare the spiders with *Pyramid Head* from *Silent Hill* in the sense that they are scary, reiterative, immortal enemies. In *Silent Hill* you have to hide or flee from this iconic boss, in our game all you can do is flee.
Note: Although the spiders are bigger than the player, greatly outnumber our player and are unkillable, they are slower and have a big interval between their attacks.

Another interesting and unique game mechanic in our game is the taking away of the player's sight and hearing. Contrary to other games, our game gets easier over time (if you play it correctly that is). The environment and enemies don't change, but our player gets better because he gets better sight and hearing (the effect that these values have is described in the next chapter).

One more element in our game that I'd like to include in this section, even though it is quite small, is the fact that the 'finish' in our game, the place you go to at the end, is located at the start in the middle of our map. It is built like a spider web. The player can go from the middle to the edges and walk around. Different parts of our map are only connected via the middle (with the exceptions of bridges). This means that whenever the player crosses a bridge from one part of the map to another the spiders have to bypass via the middle of the map. This means that the middle is one of the most dangerous places to be when the game has been going on for a while and it is advisable to lure the spiders away before going there. This difficulty towards the end of our game, keeps it exciting. To amplify this effect, not only the elevator, but also the health restoring pick up is located in the middle.

Scripting and game logic

Our game is about getting your senses back. This means that the senses should influence our game in order to give the player an incentive to go and get them back. We made it such that the senses only influence the game exactly the way that is ideal for the player.

A better sight value:

- Increases the intensity of the player's flashlight
- Increases the range of the player's flashlight
- Increases the angle of the player's flashlight
- Increases the time the player can look at the minimap when the flashlight is turned off
- Increases the speed with which the player's sight recovers after walking through a spider web
- Is needed to win the game

A better hearing value:

- Increases the distance from which a player can hear a spider
- Increases the volume of the spider sound at the same distance, since the sound increases linearly when the spider is in hearing range of the player.
- Doesn't increase other sounds like footsteps, whispering, ambient sound or any other sounds.

The player can move at a speed of 5 and run at a speed of 6. The spiders move at a speed of 3 on average towards the player or the point closest to the player, if the player is at an unreachable place. The spiders wait for 25 seconds before they start chasing the player. This is because new players have the habit of waiting in the middle at first or try to pick up the life pick up (which can't be picked up if the health is smaller than 0 or equal to 100).

The player has 100 health and loses 10 if he walks through a trap and 15 if he is attacked by a spider. If the player is locked in, he can push the spiders back while not losing all of his health, because the spiders have a rather long interval with which they can attack. The player loses all

of his health when he drops into a lava pit and is set on fire. The player can restore his health by getting the life pick up, located at the start position at the game.

The player starts off with a sight and hearing value of 25. This can drop to 0 minimum and increase to 100 maximum. One pickup is worth 25. There are 8 power ups and 2 power downs for each sense. This is because the player should always be able to win the game, even after getting both power downs.

Description of animation

Main character

We have a walk, idle and death animation. If the character is walking then we play the walk animation. If he dies we play the death animation. And if he doesn't move for 5 seconds, he sits down. And then we loop an idle animation, where he looks around.

- **Die Animation:** With the use of IK handles and a rigged skeleton the animation was created. It is 200 frames long. With the use of 'Bake Simulation' the animation was able to be exported to Unity.
- **Idle Animation:** The idle animation loops endlessly. It is used when the player does not press any keys for a certain time. With the use of the IK handles and the rigged skeleton the 370 frames long animation was created. With the use of 'Bake Simulation' the animation was able to be exported to Unity.
- **Jump Animation:** With the use of the IK handles and the rigged skeleton the 120 frames long animation was created. With the use of 'Bake Simulation' the animation was able to be exported to Unity.
- **Walk Animation:** With the use of the IK handles and the rigged skeleton a walking cycle was created. The animation is 95 frames long and loops (almost) flawlessly. With the use of 'Bake Simulation' the animation was able to be exported to Unity.

Spiders

We do something similar with the spiders. When they are chasing the main character we use a walk animation. If the character is in range we play the attack animation. And if the character dies we play an Idle animation, where the spiders starts looking around and checks its imaginary watch. The animation was done in Unity. There are six copies in the game with each different stats to prevent the spiders from grouping together too much. They all look for the main character. The attack, idle and walk animations are respectively 60, 250 and 90 frames long.

Traps

We also used animation for traps in our game, such as the swinging axe and the mannequin in the closet. These animations speak for itself. The axe animation is simply looped infinitely in 60 frames. And the mannequin in closet animation starts if a trigger is entered by the player. It is 73 frames long.

Elevator

We use an animation for the elevator door as well. If the player has all of his senses back the door goes down, and if this is no longer true, if the player accidentally picks up a power down for example, the door goes back up.

End video

Lastly we used a very long animation as an end video. Where we show mannequins and spiders and other scary things our player has encountered in the game turn into non-scary things. This is the only animation in which we also animated UI, to imitate the blinking and waking up of the player. This animation is 895 frames long. Most elements are scaled down and their textures are changed.

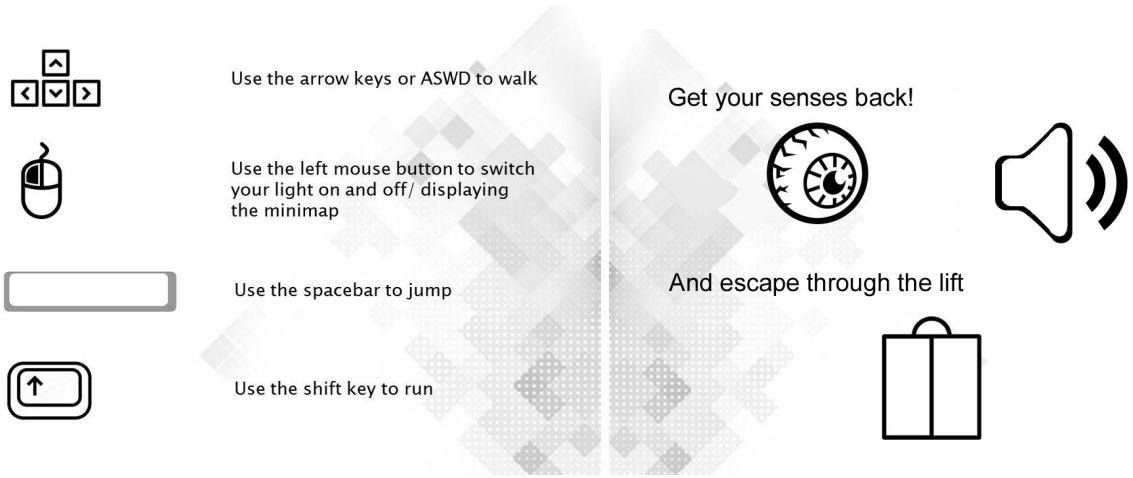
Description of sound effects

- **Ambient sound:** This sound is the same as the ambient sound on the Nazi zombies map Nacht der Untoten on Call of Duty World at War. It is unedited and loops infinitely.
  Source: https://www.youtube.com/watch?v=OUE6MyBppG8
- **Axe:** We also have a sound effect for our swinging axe. It sounds like something flying through the air very fast. The volume is also depending on the distance from the player to the axe. This sound is connected to the axe and loops infinitely.
  Source: https://www.youtube.com/watch?v=ZV8xUOlR5qA
- **Breathing:** Used to make the player feel more connected to the game. Also to indicate how much health the player has left and therefore adding more stress elements in the game. It is a foley sound recorded by Daniela in four takes and then put in a multi-sound in FMOD. There is also an extra, rushed, breathing that is played when the health is below 30. When health is 0, there is no breathing. The parameter used for that is Health. It is also used in the Heartbeat and Dying sound effect.
- **Dying sound:** This sound is used whenever the player died. It doesn't matter if the spiders, the lava or the traps killed the player. It is a multisound of 5 sounds recorded by Daniela. It is edited in FMOD and will only play when Health is 0.
- **Footsteps:** This sound was used to make the user feel more connected to the game. While walking, you hear your footsteps. It is a multisound of 4 sounds recorded by Daniela. It is edited in FMOD and will always play.
- **Heartbeat:** Two different types of heartbeats (rushed and calm) that make you feel more like a part of the game. They are edited in FMOD and loop infinitely. If the Health parameter is below 30, the rushed type will play. When Health is 0, there is no heartbeat.
  Source: https://freesound.org/s/332812/
  Credit: Loudernoises
- **Hurt:** You can hear this sound whenever the player takes damage. It is a multisound of 8 sounds edited in FMOD. When the parameter Damage is set to 1, the sound will play.

- **Jack-in-the-box:** We use the evil laugh sound effect whenever the player is near a jack in a box. These are only placed at dead ends of paths and encountering one means you'll almost certainly die. They are played when the player is in a range of 5.
  Source: https://www.youtube.com/watch?v=pVY1-v97Mic
- **Pick-up:** We use a sound for our pick ups as well. This sound is already described in our imports section. This sound is also unedited and in an infinite loop.
  Source: https://freesound.org/s/171696/
  Credit: Nenad Simic
- **Scream:** The scream is used as a sound effect for a jumpscare. It is played when the mannequins bursts out of the closet unexpectedly. It is the same sound you hear during the jump scares in Five nights at Freddy's, a game famous for its jump scares.
  Source: https://www.youtube.com/watch?v=pRMBTTfFNNg
- **Spiders:** This sound is used to indicate how close by the spiders are. It is a very crunchy and disturbing sound and associating it with being chased by huge spiders doesn't make it any better. This sound is also unedited and in an infinite loop.
  Source: https://www.youtube.com/watch?v=5yf_jxlyVss
- **Whispering sound:** We use a creepy whispering sound for when you're around the mannequins. This sound is meant to imply that the mannequins are in fact alive and talking about you. They are played when the player is in a range of 10.
  Source: https://www.youtube.com/watch?v=EKjYnJ6s9GQ

Unity design of the project

Our game in Unity is divided in 3 levels. We have an introductory level, which does nothing except displaying the controls of our game for a certain time, before the LoadLevel1 script starts the main level.



Intro level: The controls of our game

The next level is our main level. This level is basically our entire game. You start in front of the elevator and have to return there with all of your senses back to finish our game. If you make it

into the elevator your flashlight is turned off, making the screen black, and after a second your are sent to the next level by the LoadEndVideo script.

The last level is the end video. This starts off with a black screen and you wake up, and get to see the end video.

The player's movement is controlled by the FirstPersonController script. This script is a standard asset from Unity so I won't elaborate on this any further.

Basically everything else from our player is controlled by the playerHealth script. This script contains the health of the player, obviously.
This script also contains the OnTriggerEnter function that allows the player to pick up power-ups, allows the player to get hurt by traps and sets the trigger to burn the player if he drops into lava.
This script also contains the code for the UI elements. The values for sight, hearing and health are updated here and the damageImage and WebImage are displayed via this script.
This script also controls the player's animations.

One thing that the playerHealth script doesn't control is the flashlight. The flashlight is controlled by the flashlight script. This script checks if the times you pressed your mouse button is odd or even and turns the flashlight on and off depending on this value. This script also displays the minimap, since this is dependent on the flashlight.
There originally was a playerAttack script that would rayCast and check if you hit a spider or anything but a spider, but we decided not to use this.

The playerDeath script is for when the player dies. We switch cameras in order to make his death more dramatical. This script also allows you to restart the game if you died. There is also a script called Idle, which does almost the same thing. The only difference is that in playerDeath, your movement is turned off so you cannot move when you're dead. In Idle, you can start to move whenever you want to, and the camera will move back to first person view.

The enemies are controlled by the EnemyMovement script. This script sets the destination of the spiders' Nav Mesh. It also sets the values for the animations, so that the correct animations are played at the correct time.

Another interesting script is the Whispering script. This is used for other types of audio as well, but originally for the whispering of mannequins. This script plays an audio fragment at a volume that is depending on the distance to the player.

The other scripts are pretty self-explanatory.

Final Game Design assignment

Game principles

The game as a whole

We were thinking about what kind of theme we wanted our experience to be and looked on the internet. We quickly found out we both found liked a horror-themed project so we dug into that. A Tim Burton related experience was something we then stumbled upon and Daniela designed her first character based on that. We thought about something with senses and losing them, when we found out you can only implement sight and hearing in a game. Quickly, we thought of a chase-like exploring game in which you have to find your senses. Initially it was supposed to be caused by drugs.

When the character changed, we thought of something else that causes hallucination: night terrors. Children are usually afraid of the dark and they can imagine some really scary things even though they are not there. When you find your senses, everything literally and figuratively becomes clear. The child is just seeing those scary things. The end video makes everything a coherent whole, as it explains what's going on in the game-part.

Tetrad

Aesthetics: Our game is not focused on being pretty, it has to be creepy. That is mostly done through different creepy sounds as the setting is pretty dark. It iis industrial and relatively empty to give the player enough movement space. There are some creep elements like the spiders, blood and mannequins that amplify the creepy feeling.
Mechanics: The controls are given through the instruction screen. WASD/arrow keys, shift, spacebar and mouse are used. You can look at the minimap but only for a short amount of time so you cannot use it too much, that would make it overpowered. You cannot go outside the map and you cannot attack the monsters. You can pick-up the pick-ups unless the bar is full, then you'll walk through them. When you fall in the lava, you die immediately.
Story: It is a pre-scripted game. The kid is scared of the dark and lost their senses. When these are found back, the dark will turn out to be less scary.
Technology: The technology used in the development in this game is all on a PC/Laptop. We used the programs Maya, Unity, FMOD and Audacity for the game.
As mentioned before, it combines things of other horror games like Silent Hill and Call of Duty. Pick-ups and monsters chasing you are no new elements. These pick-ups influencing your senses is probably not new either, but this combination does form a new whole. The thing that sticks is the creepy atmosphere and its elements. The spiders that are chasing you are the most outstanding ones.

Space/world created

It is a continuous, three-dimensional game. If our game would be totally finished, you would also be able to kill the spiders and climb on objects. That would add more interaction to the game,

which is fun. You might also be able to choose a character and have different powers based on the choice made. Changing around the interactions would have little to no effect as most actions are already happening irregularly. Choosing the character at the end of the game, however, would make the game less versatile.

Playtesting

The playtesting went in two phases: in the first phase it was just our game, in the second one we had implemented remarks from the first phase.

Playing the game

We let our playtesters play the whole game. The first group did not have an introduction scene, the second group did. The first group got introductions from us because they did not have an introductory scene to go to. The second group didn't get any instructions except for "Don't die, good luck.". It turned out to be pretty clear to most people what to do. Only the minimap was sometimes forgotten.

Method, demographic and setting

When doing the playtesting we used observation during the testing and a survey at the end. The participants were asked to think out loud. At least one of us was present during the playtesting. Our six playtesters consisted of 1st to 3rd years Creative Technology students. Therefore, they do have some more knowledge about game design and modelling etc. than average people. They also have more interest in this topic, which means they might give more suitable feedback and honest feedback.

The playtesting happened partly in the SmartXp (first phase) and in Daniela's house (second phase). Each playtesting round took about 10 minutes, including filling in the survey. Each player played at least one time.

Survey

Our survey contained of a couple of questions that participants had to fill in after finishing the playtest. The most important things we wanted to know was if the instructions were clear and if it was a balanced game. A fun-factor is of course also important to know.

- Was it clear what to do? Why? Why not?
- Were there enough power-ups?
- Would you want to play it again?
    - Yes - No - If changes are implemented
- Do you think the game is hard/unbeatable? Why?
- Did you think the game was scary? Why?
- Do you have any other remarks?

Results

The biggest issue was the lack of information for the players. You don't know what to do and you don't know where to go. That's why we added the instruction scene and the minimap.

Playtesting made it clear that we did not have to improve anything on the environment, as it is dark so you don't notice if something is very detailed or not. The environment is scary enough, as many people said things like "Aaah, I don't like this!" or "The sound is really creepy." while playing the game. People got really disoriented when playing our game, as we hoped. Many times, we heard the sentence "Have I been here before?" in an interested tone. People did not hate the game for getting lost, they actually liked it! They wanted to play it again, and win again!

Testing also helped us make the game more balanced. In the beginning, had more spiders and less pick-ups which made the game almost undoable. By scaling down the amount of spiders to six and adding more pick-ups, we were able to make the game more fun for people because they could actually win.

After the first playtesting, we implemented these improvements and tested again. These people told us that the minimap was not very useful because you can barely see anything, so we gave it a bigger range. The instruction scene was very useful for the players. The amount of pick-ups was still too low so we added more until we had 8 per kind (so eight green eyes and eight speakers). After the second playtest, it was clear that the amount of pick-ups was just right. It is still challenging to win the game, which is nice. People wanted to jump on obstacles, which made us think that we might have added that in the future if there was enough time. There were some remarks about the dying sounds, because they kept looping even though that wasn't the goal. This caused dying to become a bit sexual so we changed that. Another thing mentioned was that people couldn't exit the game when they won, so we added that.
People want to know what they have to do so instructions were needed. A win-lose setting motivates players to win the game so it had to be challenging enough, but not too challenging. That is why balancing is so important. Chasing players also adds motivation because everyone runs away from creepy stuff.

Game-likeness

According to Jesse Schell's book *The Art of Game Design*, our project definitely is a game. It has a goal (get to your senses and escape), it can be won and lost (survive or die) and it's an interactive project, you control the player and the spiders (and the rest of the game) respond to what you're doing. The internal value are the sense values that need to increase, that's what the game revolves around. We try our best to make it a closed system so the player is sucked in the game, because that makes it creepier. The game is quite hard, which implies a challenge and the rules in the game clearly state the boundaries of the player.

If we were to make the game a non-game, it would still be fun, but for a shorter time. You don't die, so you can walk around and look for all the creepy stuff on the huge map. You can watch the end video whenever you feel like it. Unless that counts as winning, then you can only walk around. The pressure and fear elements make the game fun.

Usertype

Our experience is most suitable for people that do not get stressed easily, are familiar with game controls and like horror games. There is a lot of pressure and fear elements that make the game creepy. The suitable usertype made us focus more on the creepy stuff and what really triggers people. What makes you feel chased, what makes you scared? The feeling that

someone is standing behind you is a common element that scares almost everyone, so we wanted to stress that feeling. You have to be a bit familiar with game controls because both hands are necessary for playing the game. You have to be familiar with that.

We didn't change the player type during the project, because the horror element interested us both and was also liked by other people. We only added the 'familiar with game controls' part because we added more control options to the game.

We didn't focus on a specific gender as horror is something that is attractive for everyone. That was only confirmed when we didn't get any big differences in the playtesting results, with a 50/50 male female distribution. We looked at a minimum age of 16, because children might get too scared.

Applying lenses

Lens #1: The Lens of Essential Experience, Chapter Two, Topics 1, 2 and 5

This is something we did throughout the project. We wanted our players to have a horror-like experience, it is all about scariness and pressure. This Lens helped us stay on the right track. Horror is characterized by dark settings, creepy sounds and jumpscares. That is exactly what we wanted to implement in our game (and what we did). We wanted the players to have a scary but still fun experience. According to our playtesting, that succeeded!

Lens #9: The Lens of Unification, Chapter Five, Topic 1

With the Lens of Unification, we tried to make the game a coherent whole. The creepy elements in the game are not in one direction besides creepy and deadly, and the story didn't completely add up, but we tried to keep them within the theme. We found it pretty nice to use this Lens because we didn't know how to make the story and the random elements fitting and this Lens helped us.
Our theme is horror, so scary stuff has to be in it. We already implemented a lot of horror-elements in the game itself, but the story didn't really fit and the elements weren't a whole. The main character is a baby/little kid, so the most scary thing they can encounter are nightmares. That's how we thought of the story behind Nyctophobia. It had to fit the theme to make the game a coherent whole. The story also made the elements a bit more coherent, but that's certainly something we could have worked on more.

Lens #31: The Lens of Challenge, Chapter Eleven, Topics 4 and 5

Challenge is a big part of our game and with the use of this Lens we made sure the game was not too hard or monotonous. The enemies and traps throughout the game in combination with the limited sight unlock a great variety of challenges. In the end, we added more extra things (traps) because that kept the game interesting and challenging in new ways. Because you have a health bar, there is value connected to being safe and avoiding the enemies and traps. At first, there were too many enemies which made the game too hard. With the use of this Lens, we made sure it wasn't just because we were bad at the game that it was too hard. We asked other people to test it and it turned out to be too challenging. Because the spiders follow you, the absolute end is hard as all the spiders will be walking towards you in the center of the map. That way, the game stays challenging in different ways.

Lens #48: The Lens of Accessibility, Chapter Twelve, Topic 2

With the Lens of Accessibility, we encountered the fact that people might not even know what to do. In the playtesting, we asked and observed if the playtesters knew what to do. Apparently they didn't, as we had to tell them first and then make an instruction page.
The game has some similar elements to other games, but it's not easily recognisable at first. While playing, it all becomes pretty clear.

The game is dark, so not very attractive if you glance one time, but it will suck you in. We wanted to enhance that element as well, make it more accessible, by adding more real-life sounds like breathing and walking.

Lens #49: The Lens of Visible Progress, Chapter Twelve, Topics 2 and 5

At first, we didn't have the sight and hearing bars, we just had the healthbar. That didn't give an indication to people how much progress they made. You can see it because your eyes see more, but that's it. When testing the game ourselves, it became clear we needed more progress bars so we implemented those. This Lens also made us think about adding more progress in the game, so we added negative progress: power-downs. We also wanted some hidden progress, so we added the lift doors that opened as soon as the sight and hearing bars were full. You cannot see it, but it did happen so there was definitely some progress.

1. Ideas for basic games

We thought of a theme we both liked, which turned out to be horror. We combined elements from existing horror games into a new kind of game. At first we made a setup with these elements. Then, with the use of Lens #9, we made sure the game became a whole, adding the explanation later. The gameplay itself had to be logical and coherent. With the use of Lens #1, we made sure the whole game revolved around our theme. Our greatest focus was put on experience, people had to get scared.

2. Worlds/spaces and narrative/storylines

We didn't really add a great storyline, the only real story part was seen in the end video. The gameplay had a clear flow, however. You gather power-ups while spiders start to follow you. You eventually, you can go back to the lift to escape, while you are surrounded by spiders. You barely make it, and then you see what it was really all about. The creepy elements in the game come back irregularly, keeping the player interested. Each time the player is a bit more at ease, they will encounter a mannequin or a trap or a spider which will keep them awake. The story progress was made visible with the use of Lens #49, to give a sense of time passing. There are no other indications than the sense bars and the lift, because the setting stays the same. The spiders move, but they remain at an amount of six spiders. Lens #48 helped us keep the player interested in the game. It made sure they were sucked in it.

4. Puzzles, interfaces, aesthetics and technology

You look for power-ups and you also look for a way out. Those things are strongly related. The puzzle-element in our game is the location itself. It's dark and disorienting so you don't know if you've been there, if you've already taken the power-up. You don't know what you can expect and you see new things each time. These things aren't necessarily pretty, but they look good and play on the right feelings. With the use of Lens #31 we made the game challenging enough to keep the puzzle-element in the game interesting, but not too challenging. Lens #1 made sure we used the right aesthetics in the game to stick to the theme and give the players the experience we wanted to.

5. Player styles

Exploration is something every player first does. Then they encounter something creepy and realise they have to hurry. Spiders chasing the player motivate them to keep walking. The different mannequins, traps, jack-in-the-boxes and bloodstains everywhere motivate the player to explore, look further. The creepy sounds also motivate the players to keep walking. That way, we steer the players in the right direction: they want to escape so they want these power-ups. The emergency exit signs are very relatable to the normal world, you know you have to follow them if you want safety. This is also used in our game to bring the player to the exit, the lift. Lens #1 made sure pushing the players in a certain direction was done within the style of the game, and that it came naturally to the players. Adding the sense bars after consulting Lens #49 motivated the players to continue playing. The difficulty of the game, the challenge (Lens #31) was also a big aspect within our game that pushed players to keep playing.