

Name: Jared Nickson

Student Number: 2305434

Student Email: 2305434@student.uwtsd.ac.uk

Assignment Title: Live Group Presentation – Group Project

Module Title: Level Design and Development

Module Code: ACCA5041

Presentation Video Link:

https://www.youtube.com/watch?v=ok_BaPrden0



Visor Cap:



- Did I face any issues when modelling this?
- Any technical difficulties in Unreal Engine 5 regarding this model?



This is the diamond image I used on the hat



PowerPoint Presentation Link:

[Jared Nickson - Level design group presentation.pptx](#)

Script:

Hi, my name is Jared, and for this assignment we are to work in groups to create a playable level and environment prototype, developing it for a game idea or a hypothetical product in a genre of our teams choosing. We will present our work in production teams with each individual demonstrating their own contributions. Each team member will divide the task equally so that each member will have an equal amount of work by the end of the project.

So, to begin with, what were we each tasked with doing during the project?

What I was tasked with was creating a range of assets and a few animations that will be core to the gameplay experience. Specifically, for our Level Design assignment I will highlight the assets relevant to this assignment, anything that I do not mention will be mentioned in our other assignment Indie Game Development where these assets will be relevant to that assignment.

My other team members, Rebecca, Chloe and Justin, were also tasked with creating core assets for our gameplay. For example, Rebecca was tasked with modelling most of the Jewellery in our game, and was the creator of the original level block out which I later made an expansion of, and we each collectively agreed that Rebeccas original level would be the games Tutorial level or First level, and that my expansion would be the second level, she was also tasked with modeling the vault and the animation for the vault door opening, she was also responsible for creating a range of other models like chairs, keypad for the vault door, a baton, a desk monitor and other essential items for creating an outstanding final product.

Chloe was tasked with the designs of the menu user interface, the background art design and the designs of the storefront, she also was responsible for a few models too – these being, jewelry stands and jewelry themselves, all of which are crucial to the variety of our final product.

Justin also had a couple of essential models for our variety in our final product, these being assets such as chandeliers, a gun, office lights, jewelry, money, chairs and tables all of which are crucial to keep the vibe of a jewelry store alive.

We each frequently messaged each other on both teams and discord and everyone was mostly cooperative, however there were some issues in communication between team members which led to our planned game prototype to not turn out to what vision we had expected to deliver. However, this being said, we have all gained vital experience with how we can become more efficient and effective as a team for future group projects. For instance, there were times when we underestimated the tasks we had at hand, often downplaying their priority assuming it won't take that long to create, this led to our gap in judgement on if we can model the models in the presumed amount of time we thought we could make them, so for in future projects we should prioritize the highest priority assets first and not do the easiest or quickest models first so that we are not in a panic trying to get the harder things done nearing the deadline, this was a crucial error in our judgement and I myself plan on countering this in a possible future project.

We each uploaded our works on either the team's files section Rebecca created or Teifion's shared Google Drive. We did this so that everyone has access to each other's work to use in the level.

So, what is our game about?

In our stealth based heist game, the player will play as a thief who will infiltrate a Jewlery store with many guards and customers present. The player is tasked with navigating the store, dodging guards and customers and is to take as much Gold, Money and Jewelry as possible in time before the police arrive at the scene.

We have decided to target our target audience to players aged 16+, this is because of the inclusion of weapons like knives, guns, and stun guns. We also aim to include animations of the death or immobilization of guards, customers and the player themselves. We decided that the target audience should not be players aged 18+ due to the fact the game does not include blood, gore or body dismemberment. Our game will be targeted at those who enjoy Stealth based gameplay, and heists in games.

So, now, the assets relevant to our Level Design assignment will now be mentioned.

Firstly, I decided to create a hat for the guard to make them seem more authoritarian and intimidating, this hat is similar to a German SS visor cap, this inspired the design because of the authoritarian feel, and I think it would make sense for guard protecting a huge vault in a jewelry store.

I didn't encounter many troubles when modelling the hat, it was sort of confusing trying to make the curve at the surface or top of the hat due to the high number of vertices and edges overlapping, but despite this it turned out better than I expected.

However, one of the main issues was that I couldn't merge this with my Guard model actor in Unreal Engine, this was due to the fact the Guard had a skeleton which Unreal wouldn't let me merge things too. I merged the hat with any other actor that doesn't have a skeleton, and it worked fine, so I'm not entirely sure of the issue.

I also found an incredibly helpful YouTube tutorial on how to model a character in maya, this video is relevant because I learned how to apply symmetry to my objects in maya which makes 1 side of the object to be mirrored on the other side as if you were modeling it on both sides at once. I also learned that there was a tool where I can make the faces transparent to easily see the edges and vertices for flexibility in modelling.

I next created a security camera; I didn't have any trouble modeling this model as the object was rather simple to model. I based this design on a standard ball security camera you would see in shops. I thought this design of security camera is hard to see, you can't exactly tell where the camera inside the casing is pointing towards which fits perfectly with a jewelry store with a big vault, and here is the design I based it off of.

I then created glass cabinets that would hold jewelry, I didn't encounter any issues modelling it, however I did run into an issue with the opacity of the glass in Unreal Engine. I couldn't get the glass to appear opaque in Unreal Engine, I applied the texture maps correctly too. This is how it looked in maya, after looking at this again I have come to understand that I may not have lowered the opacity levels enough which makes it still reflective, and to prove i can do what I am saying, here is the same model with only a glass texture and lowered opacity in Substance Painter. For future assets that include glass I

believe I must decrease the opacity significantly to avoid issues of nontransparency in Unreal Engine in the future.

And here is the tutorial I followed that guided me in creating opaque glass textures in substance painter.

I was then to make a fridge; I modeled a fridge so that it can be included in the break room just before the vault door. This is to add to the appeal that the store feels lived in, including a fridge for the staff to get supposed food from. I didn't have any difficulties creating the fridge as it was quite simple to make, however it was quite dark in Unreal Engine which caused me to add significant lighting to actually see the fridge.

I then created mugs for the guards; they are to be placed onto the tables to hint at the fact the guards are using them. I carefully placed them on the tables and offset them to make it appear that they are frequently used. I did not encounter any hinderances when creating these models, however I did find the modelling of the handle a bit difficult, not difficult as in hard to model, I just wasn't sure how I wanted the handle to look, so because of this I included grooves on the handle where the fingers are to be placed. Another point worth mentioning is that I couldn't find a good pottery or glass texture in substance painter, so I used a plastic texture and lowered the roughness to make it appear glossy and pottery like.

I then created a table, this table will be the front desk where a guard will be standing by, I decided to make the textures a bright oak so that it stands out from its surroundings, I believe it fits well with the modern aesthetic of how the store is textured. I didn't encounter any issues when modelling this either.

I also expanded the store layout from Rebeccas original level, Rebecca originally made a level block out and where we could have specific assets in the block out, however I thought the original layout was quite small and cramped and that the player would either find it too difficult to traverse due to the Guards spotting them immediately, or that it would take seconds to walk across the entire length of the jewelry store. So, I decided to create an expansion from Rebeccas original level block out so that it gives the player more freedom of movement. I decided to add walls and numerous cabinets to block out the guard's vision and enable the player to more easily play a stealth role. We both agreed that Rebeccas

original level would serve as a tutorial level for the player, and that my expansion from Rebeccas original would serve as the first proper level.

I textured this jewelry store using marble and metal textures in Unreal Engine, I believe it makes the jewelry store look pristine and modern looking, which is exactly what I envisioned a jewelry store to look like. I also believe the dark feel of the store would work well for a thief using the shadows as an advantage.

And here is a couple of shots from the inside of the store:

After looking at this, I believe I placed too many security cameras which makes it too difficult for the player to navigate with stealth, so if I were to do this again, I would use much less security cameras to give the player a chance at robbing the store.

I then decided to create a simple landscape; I did this because I didn't like how the levels were floating midair and I wanted to make it seem that the levels were actually on earth, although it also does look a bit odd that the levels are now in the middle of nowhere, nevertheless, I think it also gave me some experience with Unreal Engines Landscaping tools.

So, what do I think went well in this project?

I believe we effectively conveyed a jewelry store theme, and I also believe it turned out excellently. However, there were many points we should improve on, communication was a slight issue as once everyone picked their assets, everyone was doing their own separate things with not much updates on what everyone is doing, I believe it would be better for us as a team to see where everyone is at and if anyone is struggling or needs some help. Another thing for me is that I believe it would have been better to create a variety of the same type of asset, so that it doesn't look repeated, take the glass cabinets for instance, they all look the same.

And here is my Bibliography in IEEE Format: