

Dion Bowen

Remake of Games (HNC) Dion Bowen - A1 Monarch Project

CCSW - HNC - Games (Dion Bowen)

GODZILLA PROJECCT

GDD Document

GDD

This is a GDD for a similar Godzilla type game that is being worked on and I will update and edit it as a go along and add bits to it.

GAME DESIGN DOCUMENT



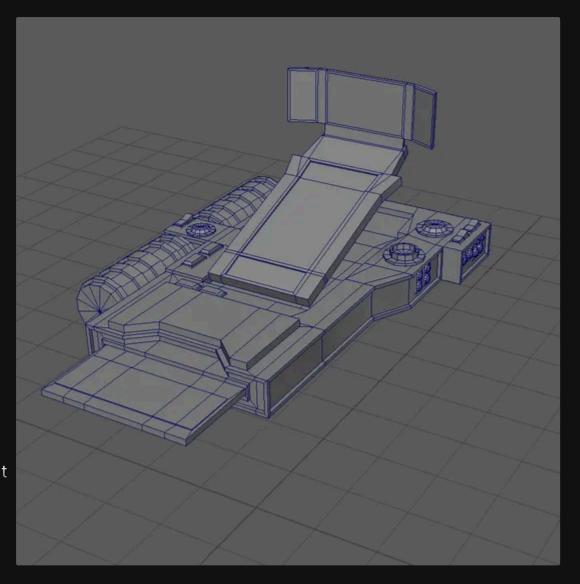
Monster on Monster

Prepared By: Your name Dion Bowen Last Updated: 24/02/2025

Modelling, Textures and Unwraps

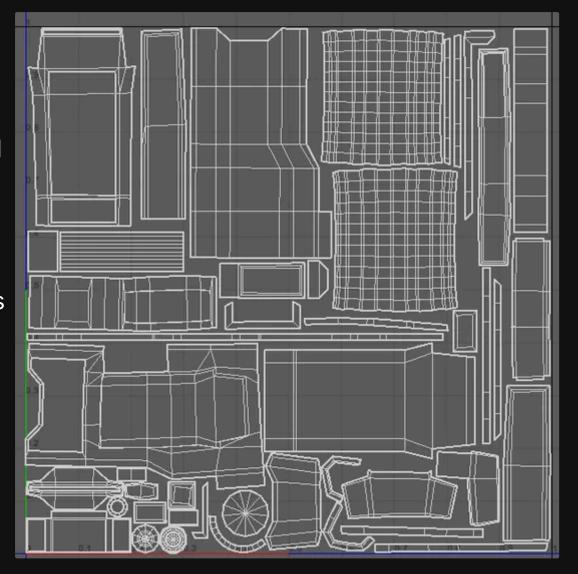
Orca Machine (Prop) Model

I modelled this orca using a cube at first, I added in sections with the quick draw tool and then moved edges and verts around and extruded faces to create the basic shape. Then for the screen in the middle I did the same thing but I wanted to add an indentation for it so I duplicated it and then used the Booleans to create a indentation from the shape I created, then with the other one extruded the top edge to make the screen and continued to do that to make the middle sections, then for the buttons and dials I used cylinders and cubes again extruding and bevelling them to make them look more like buttons and dials, then I extruded the base of the mesh out



Orca Machine (Prop) UV Unwrap

For this UV unwrap I had to take time and cut out ever section individually and unfold them bit by bit and place them in the grid as I went along, the shapes used was basic shapes like cubes and cylinders so was pretty straight forward but once I cut them out I went on to use the optimise option to make them more optimised for the UV then I rotated them and moved them inside of the grid to create this UV unwrap.



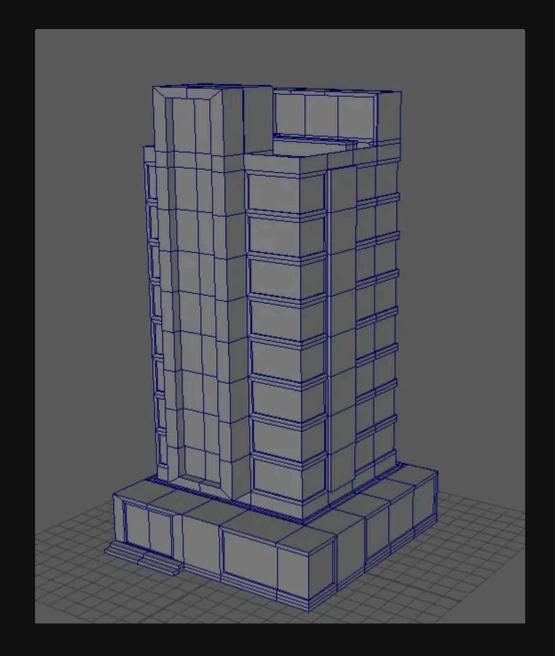
Orca Machine (Prop) Substance Texture

This is a fairly simplistic texture that I made inside of substance painter, using the base materials from with inside the assets library, after baking my mesh maps I went on to applying different metal materials and using a black mask face select to put it on the areas I wanted and just repeated this for each area of the model. Then I went on to find images of the screens used for the Orca machine and I imported them in as an alpha lined them up and resized them and again black mask and face select to make them look like the screens are on.



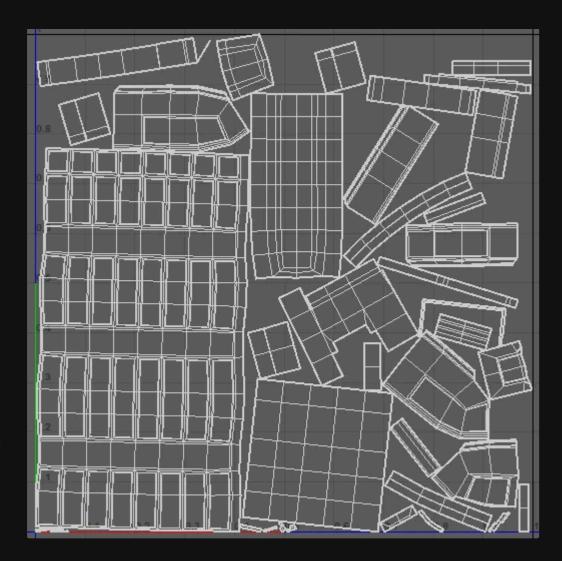
Building #1 Maya Model

This is a model I made inside of Autodesk Maya 2025. It is of a building that I intend on putting in game. It is all one object and is made from a basic cube primitive I kept on extruding faces and adding offsets and moving verts and edges until I was satisfied with how it looked, I followed a concept that I had drawn within my sketchbook and I changed a couple bits of it as I went along building. But i kept it true to the original concept that I did for this building. I used various different tools through this model, such as: Extrude, Target weld to help manipulate some of the verts as well as quick draw for adding in some extra lines where needed. Overall a fairly basic model but with a



Building #1 UV Unwrap

Using the UV editor inside of Maya I started to unwrap this by cutting it into sections as it was all one object and I started with the main shaft of the budling buy using the cut tool to cur that odd then I proceeded to do the same for the roof section cutting odd each bit in chucks and blocks. Once i got it cut into each section I then went onto break them down further by cutting them into shapes then using the unfold tool to flatten them and then went round each cut out section and repeated this until I had all the flattened shapes cut out. I then resized and arranged them and went onto position them within side the space of the grid making sure to use up as much space as I could. This is a screenshot of the complete UV unwrap for my Building Model.



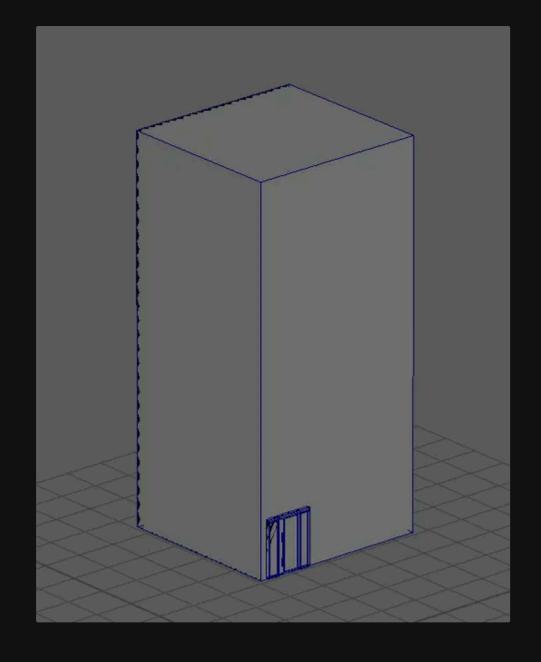
Building #1 Substance Texture

So for this texture I added a marble texture that was there and used the sliders to make it more white and adjusted the height of it too. then added a black mask and used face select and applied it to the areas I wanted. Also I went onro work on making the windows and glass at the top of the building by firstly adding the opacity texture set channel and changing the base material used so that it would show the opacity on the model. Then I went around applying the black visor material for the small windows using a black mask and face select and then I had to download a glass material to then import for the top part along the roof. I went round each side adding different



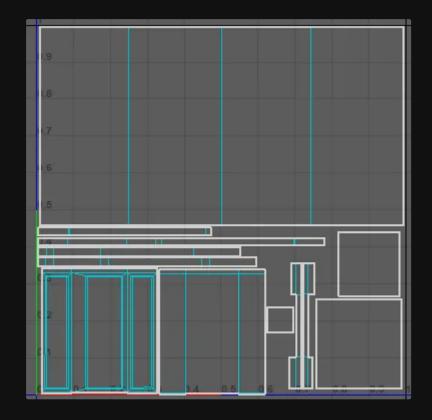
Building #2 Maya Model

This is another building I made inside of maya but I intended on making it very simplistic as possible only using two cube primitives. One for the main building and one for the door, all the tools I used for this super basic idea was the resize tool and the extrude tool. I had an idea in mind already so I just made this one to be super low poly and simplistic.



Building #2 UV Unwrap

For this unwrap it was very straight forward and basic only tow shapes. I simply just used the cut tool and cut along the edges of each shape then flattened them with the unfold and resized and used move to position them into place whilst using all available space inside the grid.



Building #2 Substance Texture

Within substance painter there was a winnowed wall texture I saw whilst working on my previous building so I made a basic model in Maya and went into substance painter to use this material by dragging it on and positioning it so it looks seamless. I went round trying to add more details in here and there like the door handle and the door frame using different pre loaded materials inside substance. I added a glass visor for the door glass window and added the opacity texture set to allow it to look more like glass.



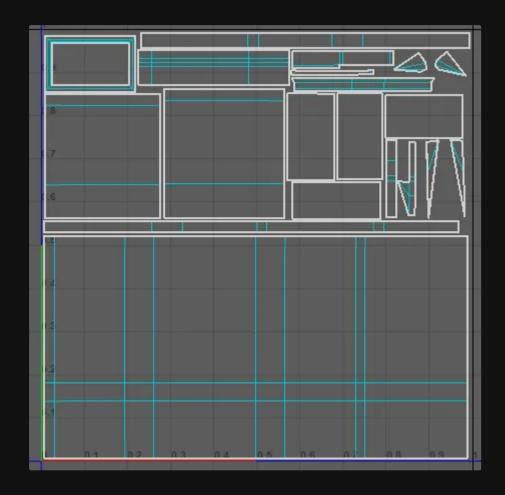
Building #3 Maya Model

For This Building I wanted to make some form of connivance store for in game city but also after seeing how the previous one turned out decided to keep it simple again with little amount of polys so made it out of a basic cube primitive and did the same for the door and window. Only using extrude tool to set offsets and extrude then the move tool to manipulate the edges and the verts then I placed all my bits together using the move tool and lined them up before using combine to make it all one object I also extruded the top of the roof out a bit and bevelled the edge and added little support struts with another cube primitive and then I combined it all again to make this simplistic building.



Building #3 UV Unwrap

Very straight forward UV Unwrap of a each section, I treated them as cubes broke it all up using the cut tool and then unfold to flatten them I had to use the cut and sew for the bottom shape of the door when I was unwrapping it but once I cut and flattened all my pieces I straightened some of them as well and then I moved them all into position using as much of the space on the grid I could to the make this UV unwrap.



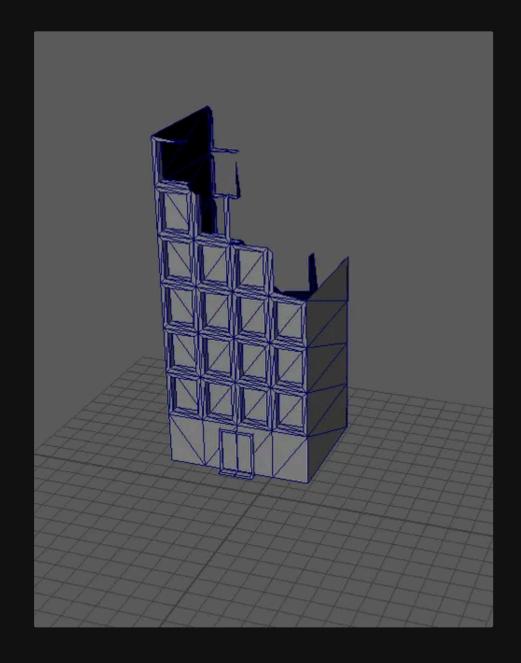
Building #3 Substance Texture

To make this texture in substance painter I firstly bakes the mesh maps and then went into find a window and wall material I liked I placed it in and added a black mask and face selected where I wanted the texture to go, I did this for all the basic materials used. But once I Looked at it I wasn't too happy so I used the eraser to remove the brick showing behind the windows and then I went and made a window image inside photoshop and imported it as an alpha and applied that to the glass window and then I added the door and sign image as well.



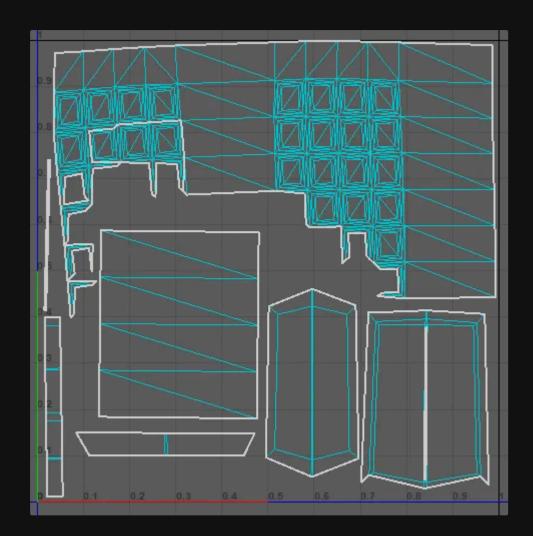
Destroyed Building Maya Model

For this model I went onto to make a destroyed building, using a cube and resized it to a cuboid. Then I added in some sections using quick draw then went onto using the extrude tool to make faces for the windows using the offset and not keeping faces together, then I extruded them inwards to do that. Then I went onto make a simple door again using the same process and then once the building was built I had to make it destroyed. Firstly I did my UV unwrap of the model first as it would make it easier to unwrap before I destroyed it, however once I did that I selected my object and I went into FX and applied a shatter of 5 shards and removed the ones I wanted to get rid of by



Destroyed Building UV Unwrap

So with this UV unwrap I simple done what I have been doing previously by dissecting the model and cutting out each section and flattening it with the unfold then moving a resizing to put it into place. With this unwrap I had to unwrap it as when my model was a whole object as I used the shatter effect and I deleted some of the model which left a gap in my UV so I resized and positioned some of the other parts of the door to try utilize as much space of the grid as I could.



Destroyed Building Substance Texture

Firstly I wanted to make cracked brick so I found a painted crack inside of the materials in substance painter so i applied that and changed the colour and went onto add a black mask and apply it to the faces of the wall. I used this technique of using materials and adding a black mask for the rest of the model but using glass window material for the windows and then a rusted metal for the door frame. Finally for the door I used a high resolution image of a door and imported it as an alpha and placed it in place to make it look like a door.



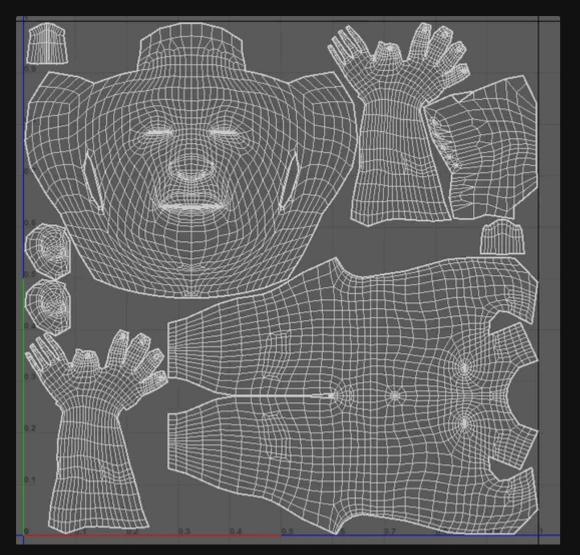
Game Monster Model

Here is the base model for my monster which was generated by the Autodesk character generator. Once I made it on there I imported it into maya for a few tweaks and changes to the actual model to make it to my liking and fix a few issues to it I also need to make sure that it had a skeleton rig attached to I could use Mixamo to add animations to it so I could make it fight within my game.



Game Monster UV Unwrap

This is the UV created for the monster I had to make sure everything was lined up with in the lines and that it wasn't too far out of proportion so it would lay on the textures correctly after I made tweaks to the model.



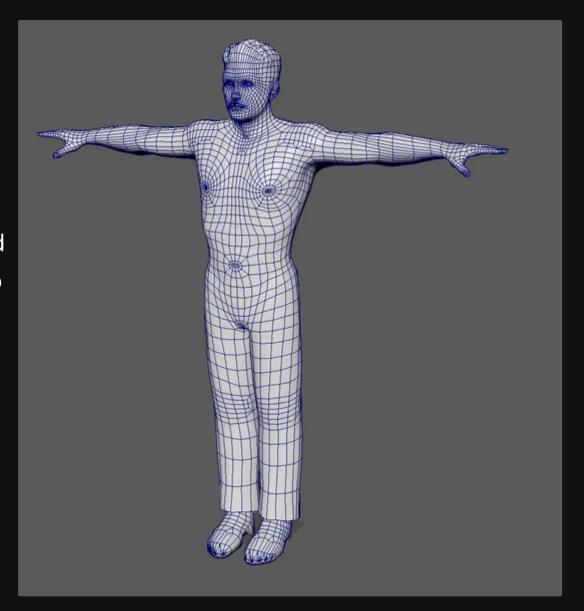
Game Monster Textures

These was the textures that was made and I imported them into substance painter to show how they would look on the and can easily edit any changes if needed to.



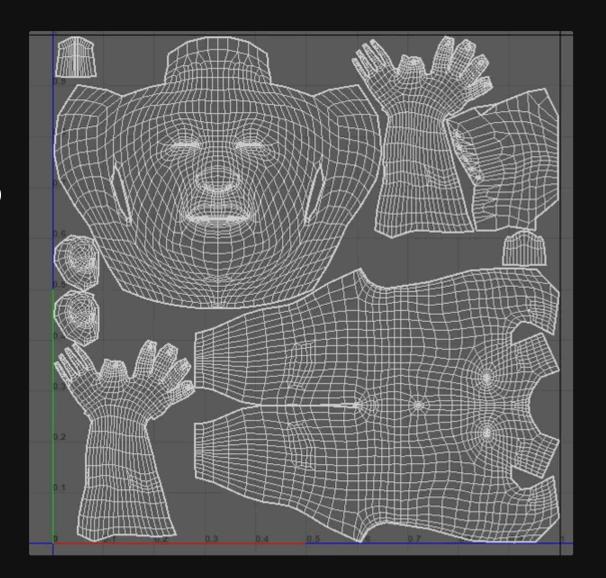
Game Character Model

Just like the model for my monster I used the Autodesk Character generator to help aid and assist in the making of my character and then imported it into maya to make any changes or tweaks where needed.



Game Character UV Unwrap

Here is the UV unwrap for the game character it is similar to the monster one that was made but again made sure it was all correct and lined up after any changes that I made



Game Character Textures

Within substance painter I imported the texture and I went int o the properties and changed the eye colour to be more lighter as they was far too dark when I tried to import the character into my game but once I was happy with the changes I applied the texture to the model.



Final Models (Final Renders)

Orca Machine (Prop)

This is a screenshot of my final render of an orca machine which can be used as a prop or interactive object within game. Sketch fab link:

https://sketchfab.com/3d-models/orcamachine-

b113c0c8d8304521b1c793591c7aeb47



Building #1

This is the final render of a building that I concepted and made I did also change a couple things from the original design but this is what it ended up to look like.

Sketch fab link:

https://sketchfab.com/3d-

models/building-1-

1d7dd018106340c388a12ac12ded9975



Building #2

This is a final render of a more simplistic building that I made only using a cube for the actual building and another one for the door and then textured to look like this.

Here is the link to Sketch fab for this model:

https://sketchfab.com/3d-

models/building-2-

141a206f4aad4a42ac1c6e9dfb035f9f



Building #3

This is another building I made in maya and textured with substance painter, I wanted to keep it simplistic like I have done previously and I wanted to make it into some form of shop so running with my American style buildings I used as a refinance image to help create this.

Sketch fab Link:

https://sketchfab.com/3d-

models/building-3-

0169f430b3eb439b95104899d12362b4



Destroyed Building

This is a screenshot of my final render of a damaged and destroyed building that I made in Maya and textured in Substance, it is a low poly model and I uploaded it to Sketch fab the link is:

https://sketchfab.com/3d-

models/destroyed-building-

c74559b30a09454ca2cb637604f97d64



Game Character

Here is the final render of the character that I am going to be using inside of my base game, I used the Autodesk tool to create this model.

Sketch fab link is:

https://sketchfab.com/3d-models/game-

character-

87e3f016e7d64c9ba1b65a6afb815dc4



Game Monster

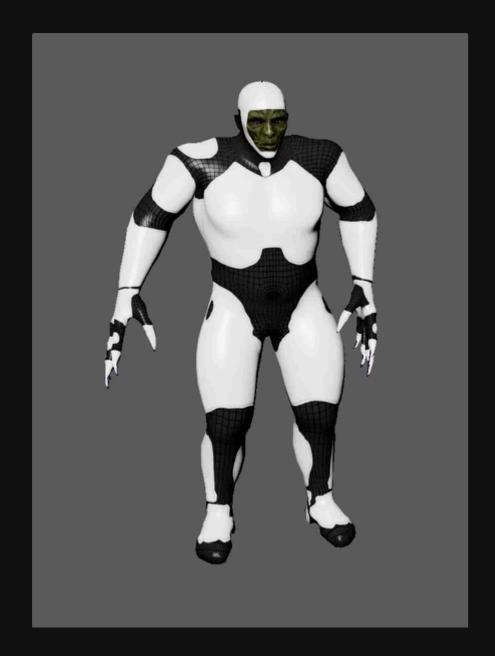
This monster model is the final one that I will be using and this is the final render of it I used the Auto desk tool to help me create this creature.

Sketch fab link is:

https://sketchfab.com/3d-models/game-

monster-

465b031859f54ee4a7cf0c735cb375a3



Game Engine and learning new UE5 features/effects

Player Start Position

so within my base game on unreal engine I needed a place for the character to start and be interacted with and move around so used this simple player start feature within unreal and placed it into my game scene and tested it and this is where my character will spawn in every time.



Ambient Background Sound

So for this I wanted to add some ambient background sound for dramatic effect so in order to do that I found audio file and downloaded it as a .wav file which is supported inside of unity once I imported it into the content draw I right clicked and created a sound cue from the audio file once that was done I went into the properties to adjust the volume modifier and tones of it and then I dragged it into the scene to make the base game have some ambiance go on while walking around and exploring.

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Sound Effects

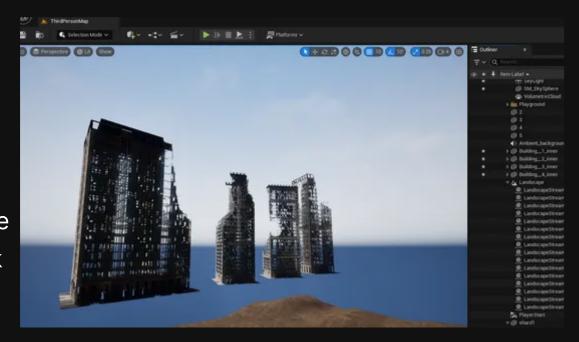
The game needs sound effects which I am adding as I go along how ever I managed to give my character footsteps by finding a correct sound effect and creating a sound cue. After that I went into the characters walking and running animations and at every key frame its foot hit the floor I added the sound effect and repeated this until the end of the animation and clicked save and apply to allow the characters footsteps to be heard.

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Background Buildings

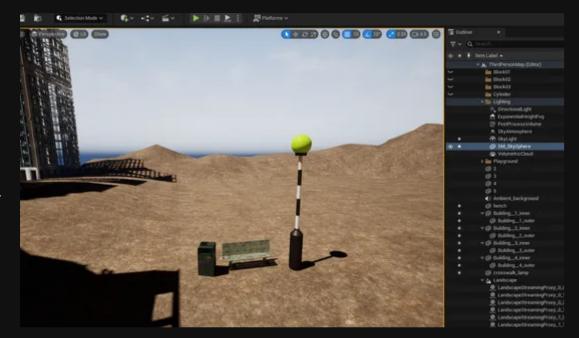
This is a Model pack that was found within sketch fab that is free to use and also has textures, I will use these and place them in the background of my scene to fill out the background and make it look more like a city. The sketch fab link fir this is:

https://skfb.ly/otBXq



Environment Props

Here are some environment props that I will use in areas that are needed to add a bit more detail and make it look even more city like. I found these props for my game that are free to download and use over on sketch fab. The sketch fab link is: https://skfb.ly/oPREQ



Shatter Effects

For this to happen I had to make sure my object was shattered. Withing unreal engine there is an option to do this but I had already made the object shattered within Maya so I imported the fragments and made them parent one of the shards so I can move it about as one object. Once I did that and placed it into the world it just floated and didn't do anything. So I went into each shards component settings made sure each shard has physic and a collision as well as mass so that it fell and that the gravity option was checked. and it worked to create this effect inside of the game engine.

Sorry, your video is being prepared. This usually takes a few minutes.

Base Set up of Game

This is a screenshot of my base game that is made within unreal engine 5 it has basic functions of player, spawn, lighting, movement and also consists of a few buildings and also has sounds this will be a base template that I will use and continue to expand upon to create and finalise a final project.



Effects / Tools Used and new ones learnt

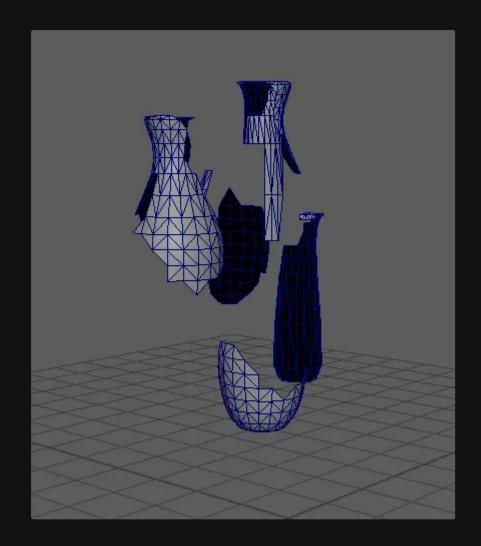
Fire / Smoke Particle effect

Withing Unreal engine 5 I wanted to create a fire effect so to do this I went into the content draw and fight click and added a new Niagara system, then chose the fountain template. Once placed in I open the editor and went onto edit the effect by changing velocity speed values as well as the particle size values. I played around with these for a while until I was happy with it. Then I went into the render options and downloaded and added a seamless fire texture to the already existing particles to make it look like fire. I then went onto adjust he scale sprite size options until il looked more like and then let it run to make this effect.

Sorry, your video is being prepared. This usually takes a few minutes.

Shatter Effect

Firstly I created a vase model using cylinder primitive and using the quick draw tool and the resize tool to manipulate verts and edges to make it resemble a vase once I made the model I went onto apply the shatter effect. Firstly I went over to change the mode over from modelling to FX and then I deleted the model history by type to clean it, Once that was out the way I clicked on effect then simply the shatter option I moved the slider over to add in 6 fragments and clicked apply which simply made my model shatter like this.



Autodesk Character Generator

I found a tool that allows me to make and design characters to place into a game engine online that is supplied and make by Autodesk using this tool I was aloo able to add clothing and textures to the character and when exporting it also allowed the character to be rigged and animated. I will use this too to help me with my own game.



C++ (Learning and evidence)

Hello World (The basics)

This a simple basic line of code using C++ showing the basics, the very rest line is a comment in green which can be seen with the // which will comment out any texts after it and this text will not be read as part of the code, it is used to show comments on the code so others can read and understand it. Lines that start with a # are known to be the directives that are read. They are interpreted before the compilation of the program itself. In this code the #inculde <iostream> tells to include code known as a header iostream which will allow output operations such as the output for this program that is Hello world to be displayed on the screen. Blank lines are nothing to the program it just

```
// My first program in C++ - Dion Bowen
      #include (iostream)
      int main()
      {std::cout<<"Hello World";
Link to this code: @ [copy]
options compilation execution
Hello World
Normal program termination. Exit status: 0
```

V

Variables - Loop / counting

C++ used to repeat a block of code to a specific number and the loop starts with i being 1 and to repeat until it reaches 5 going up in increments of 1 each time.

Link to the code: https://cpp.sh/?
https://cpp.sh/?
<a href="mainto:source=state="mainto:source=state="mainto:source=state="mainto:source=state="mainto:source=state=s

```
// code blook to be executed - Dion Bowen
       #include (iostream)
       using namespace std;
    5 - int main() (
           for (int i = 1; i <= 5; ++i){
              cout << i << " Dion ";
   10 }
   11
Link to this code: @ [copy]
options compilation execution
1 Dion 2 Dion 3 Dion 4 Dion 5 Dion
```

User Input (Addition) - Execution

This is the execution of the program shown when adding using the basic calculator code

Link to the code:

https://cpp.sh/?

source=%23include+%3Ciostream%3E%0A%0Ausing+nam espace+std%3B%0A%0Aint+main()%0A%7B%0A++++int+ x+%3D+5%2C+y+%3D+9%3B+%2F%2F+Manualy+change d+the+numbers+here+%0A++++int+sum%3B%0A%0A++ ++cout+%3C%3C+%22First+Number%3A%22%3B%0A++ ++cin+%3E%3E+x%3B%0A%0A++++cout+%3C%3C+%22 Second+Number%3A+%22%3B%0A++++cin+%3E%3E+y

V

options compilation execution

Type First Number 8

Type Second Number 6

The Answer is: 14

User Input (Subtraction)

Using the code for the addition I went back into the editor and changed line 14 to be able to do subtraction.

```
1  // Dion Bowen - User Input
2  #include <iostream>
3
4  using namespace std;
5
6  int main()
7 * {
8  int x, y;
9  int sum;
10  cout << "Type First Number";
11  cin >> x;
12  cout << "Type Second Number";
13  cin >> y;
14  sum = x - y;
15  cout
16  << "The Answer is: " << sum;
17 }</pre>
```

User Input (Subtraction) - Execution

This is the execution of the subtraction code after I typed in the numbers for that to be able to do the simple equation

Link to the code:

https://cpp.sh/?

source=%23include+%3Ciostream%3E%0A%0Ausing+nam espace+std%3B%0A%0Aint+main()%0A%7B%0A++++int+ x+%3D+5%2C+y+%3D+9%3B+%2F%2F+Manualy+change d+the+numbers+here+%0A++++int+sum%3B%0A%0A++ ++cout+%3C%3C+%22First+Number%3A%22%3B%0A++

1 + 0 = 0 1 = 0

V

options | compilation | execution |
Type First Number 22
Type Second Number 9
The Answer is: 13

User Input (Division)

Once I did subtraction I went back to to the editor and used / on line 14 to edit the code to be bale to divide.

```
1  // Dion Bowen - User Input
2  #include <iostream>
3
4  using namespace std;
5
6  int main()
7 * {
8  int x, y;
9  int sum;
10  cout << "Type First Number";
11  cin >> x;
12  cout << "Type Second Number";
13  cin >> y;
14  sum = x / y;
15  cout
16  << "The Answer is: " << sum;
17 }
18</pre>
```

User Input (Division) - Execution

I inputted the numbers into the execution which allowed the program to simple division.

Link to the code:

https://cpp.sh/?

source=%23include+%3Ciostream%3E%0A%0Ausing+nam espace+std%3B%0A%0Aint+main()%0A%7B%0A++++int+ x+%3D+5%2C+y+%3D+9%3B+%2F%2F+Manualy+change d+the+numbers+here+%0A++++int+sum%3B%0A%0A++ ++cout+%3C%3C+%22First+Number%3A%22%3B%0A++ ++cin+%3E%3E+x%3B%0A%0A++++cout+%3C%3C+%22 Second+Number%3A+%22%3B%0A++++cin+%3E%3E+y

V

options compilation execution

Type First Number 18

Type Second Number 6

The Answer is: 3

User Input (Multiplication)

Finally I went back into the code and edited it once more for multiplication on line 14 I inputted an * which is used to represent multiply.

```
1  // Dion Bowen - User Input
2  #include <iostream>
3
4  using namespace std;
5
6  int main()
7 * {
8  int x, y;
9  int sum;
10  cout << "Type First Number";
11  cin >> x;
12  cout << "Type Second Number";
13  cin >> y;
14  sum = x * y;
15  cout
16  << "The Answer is: " << sum;
17 }</pre>
```

User Input (Multiplication) - Execution

This is the simple multiplication execution I did by inputting these numbers on this one.

Link to the code:

https://cpp.sh/?

source=%23include+%3Ciostream%3E%0A%0Ausing+nam espace+std%3B%0A%0Aint+main()%0A%7B%0A++++int+ x+%3D+5%2C+y+%3D+9%3B+%2F%2F+Manualy+change d+the+numbers+here+%0A++++int+sum%3B%0A%0A++ ++cout+%3C%3C+%22First+Number%3A%22%3B%0A++

 $1 + \sin 10 = 75 = 100 =$

V

options compilation execution

Type First Number 6

Type Second Number 14

The Answer is: 84

Base Game - (Unreal Engine)

Base Game - Demonstration

This is the base game demonstration of the Monster on monster game project I have created within Unreal engine 5 using the skills and tools that I have learnt along the way and put them all together within this project and then complied it all into this short video to show that.

Sorry, your video is being prepared. This usually takes a few minutes.

Studio Time / Practice

Modelling Practice

Prop challenge. practice skills by making these props



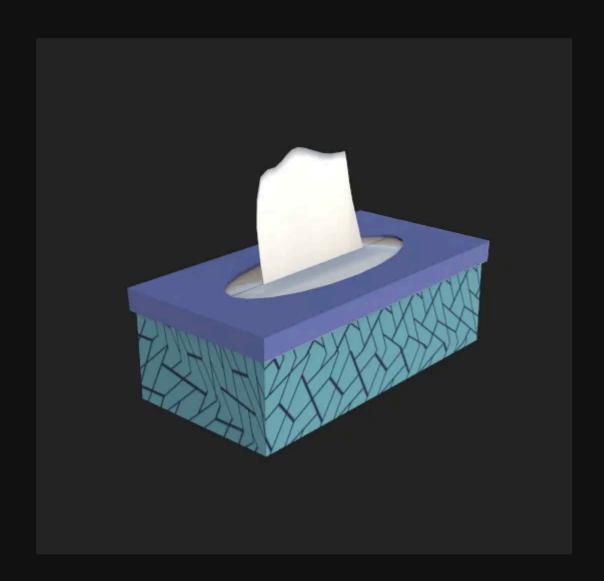
Tissue Box

Sketch fab link:

https://sketchfab.com/3d-models/box-

of-tissues-

b59a77f67e3443e490e4e699dec47564



Painting

Sketch fab Link:

https://sketchfab.com/3d-

models/painting-

4307b9412dd3414d8d5c4d15db8205ac



Small Potted Plant

Sketch fab link:

https://sketchfab.com/3d-

models/potted-plant-

c06916c059c94e58ae61785566348607



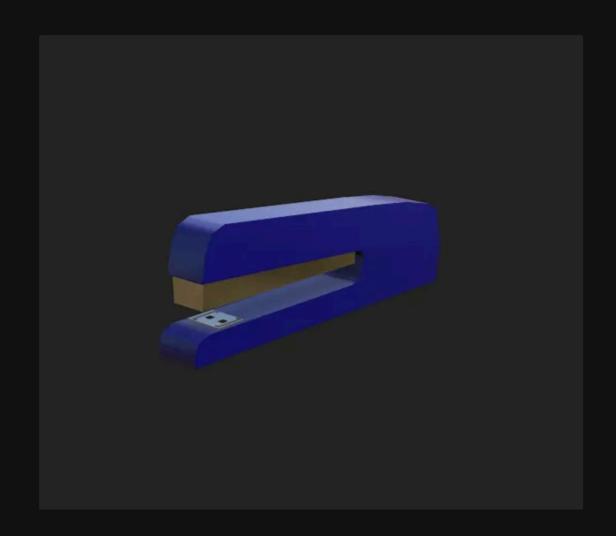
Stapler

Sketch fab link:

https://sketchfab.com/3d-

models/stabpler-loe-poly-

dafda7ffacf145bfab33e521b5c47a8d



Soda Can

Sketch fab link:

https://sketchfab.com/3d-models/soda-

can-speed-cola-

89beb20eec7849df8f3027ad9efd4615



Chest

Sketch fab link:

https://sketchfab.com/3d-models/chest-

758add74c2474a5fa0d10041c89bbb19



Coffee Mug

Sketch fab link:

https://sketchfab.com/3d-models/coffe-

mug-

95ce4f63cb5245e4aef30fb4b2ba9113



Junk Food

Sketch fab link:

https://sketchfab.com/3d-models/junk-

food-

9ea4d975ba3d42578e33d0d8cc45da13



Scissors

Sketch fab link:

https://sketchfab.com/3d-

models/scissors-

29b1eddecfad46f598d0f6a27955f38f



Headphones

Sketch fab link:

https://sketchfab.com/3d-

models/headphones-

5ba562f8353e4444b5c53729b3eb6a1c

