

JL 3D Modelling Production Diary

by Joe Lee

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Introduction to 3D modelling

By Joseph Lee, 2405184

Week 1, 1/10/2024 – 4/10/2024

During the first week of 3D modelling practice using Maya[1], I completed the tutorial, although I had previous experience with Maya[1], I had to refresh my memory on the basics again, the tutorial provided by Maya[1] covered the basics like camera movement, scale, rotate and move tools and their application to objects. The tutorial served as a good refresher on the basics.

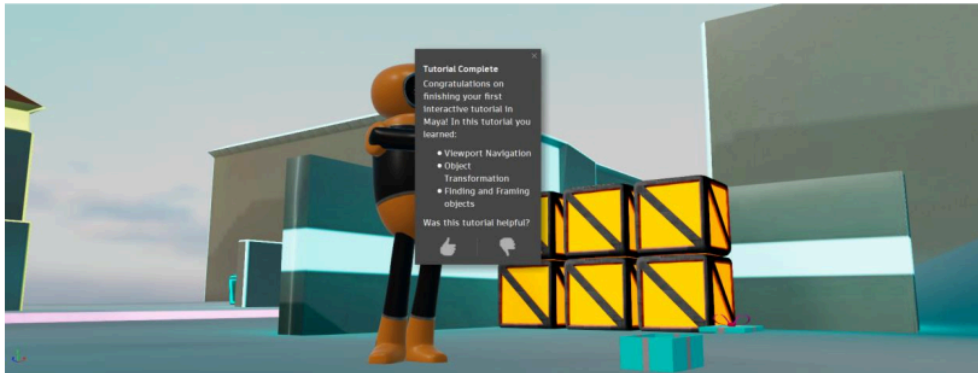


Figure 1, a photo of the Maya[1] tutorial

Also in the available tutorials was the sculpting Tutorial, which I completed due to my unfamiliarity with sculpting, the tutorial featured and showcased the usage of face, vertex and edge selection tools, which allow for further manipulation of an object to suit the needs of the user. I found this tutorial to be highly educational and would prove to be helpful during the upcoming weeks.

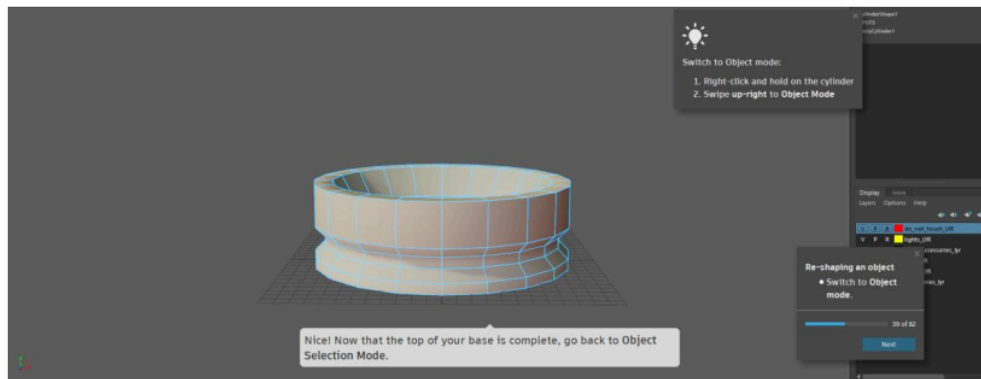


Figure 2, a photo of the sculpting Maya[1] tutorial

Week 2, 07/10/2024 – 11/10/24

During the second week of 3D modelling, I began working towards the assignment brief, the model that I chose to create first was the lamp-post, as I believed it would be the most simple to complete, using Maya[1], and using a reference for what style of lamp-post I wanted to go for as shown below;



Figure 3, a photo of a lamp post [2]

Using the above image as reference, I started to work on the lamppost, however, did not end up finishing it just yet, this is due to my indecisiveness when it came to what type of lamppost I would create. However, below is the progress that was made during this weeks' work:

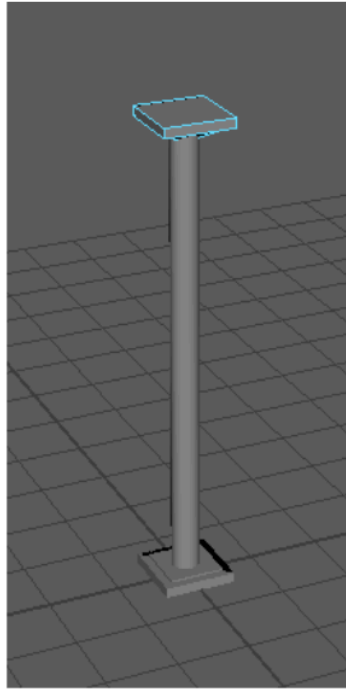


Figure 4, the start of the lamp post

Week 3, 14/10/24 – 18/10/24

Deciding to move onto a different part of the assignment brief, I decided on the 17th to move onto the soda can next, this required me to make more advanced usage of the sculpting skills I learned back during the first week, to create as close as possible to what a soda can looks like with all its details, however it didn't work out exactly as intended, but still looked impressive for a first-time attempt at such a level of detail.

Below is the finished model:

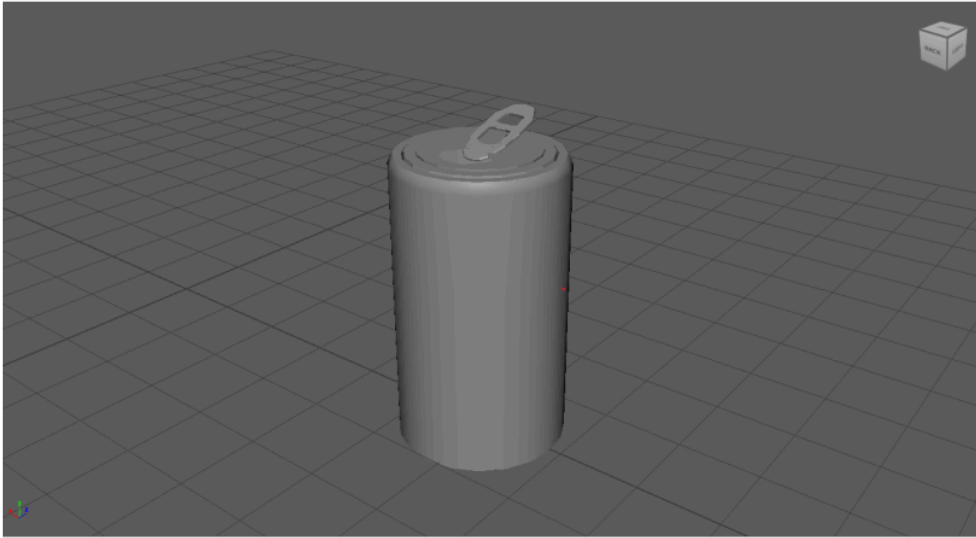


Figure 5, the completed can model.

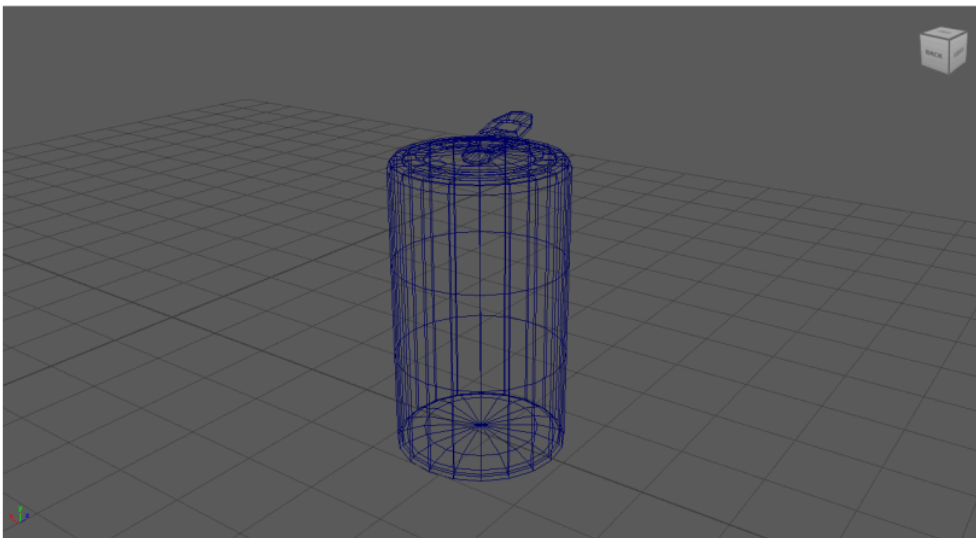


Figure 5 (alt), completed can model wireframe

Furthermore, one important tool that was used here was the Quad-Draw tool, which was used to create the opening tab at the top of the can, the quad-draw tool can be used by going to the top menu, specifically "Mesh Tools" and then to "Quad Draw" while having the object you want to edit selected.

Week 4, 21/10/2024 – 25/10/2024

During the course of this week, I began the creation of the house 3D model for the assignment brief, due to my own issues in being decisive in what style to go for, I did not manage to complete this within one week, much the same as the lamp post. As it stands, the result I accomplished with the time was a relatively simple and didn't feature any form of complex modelling, only requiring me to use basic modelling divisions, and object manipulation like scaling.

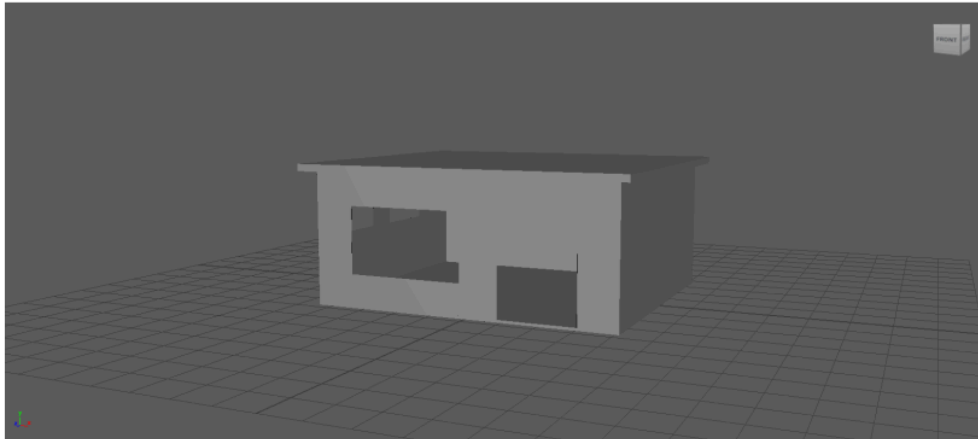


Figure 6, the house (work in progress)

Overall, week 4 was not as productive as other weeks, due to a small issue of burnout I was experiencing at the time, which is undoubtedly evident by the drop of quality between the previous soda can and the current state of the house.

Week 5 – 28/10/2024 – 01/11/2024

During the fifth week, I decided to take a rest from the assignment brief, as it had been giving me burn out, I instead opted to go on a mini-passion-project of sorts, to create the solar system. Unfortunately though, while only having very rudimentary texturing skills, below is what I managed to create in this time:

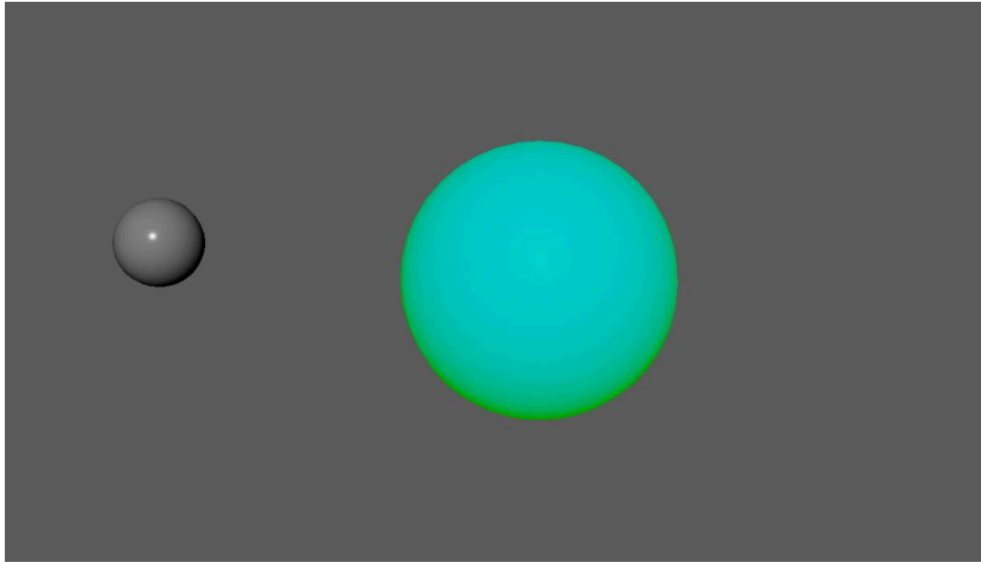


Figure 7, The "Earth" and the moon

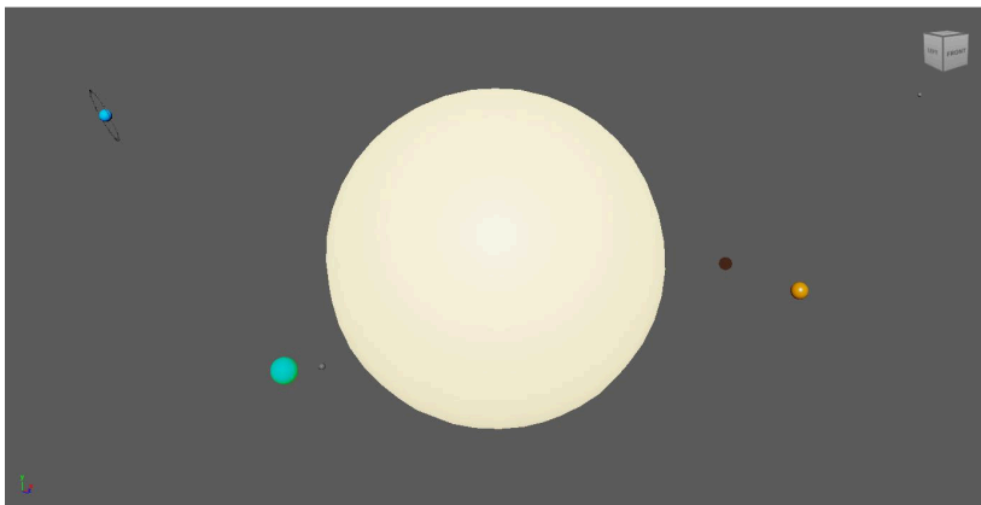


Figure 8, the sun to scale, with the earth, moon, mercury, venus, and Uranus in frame

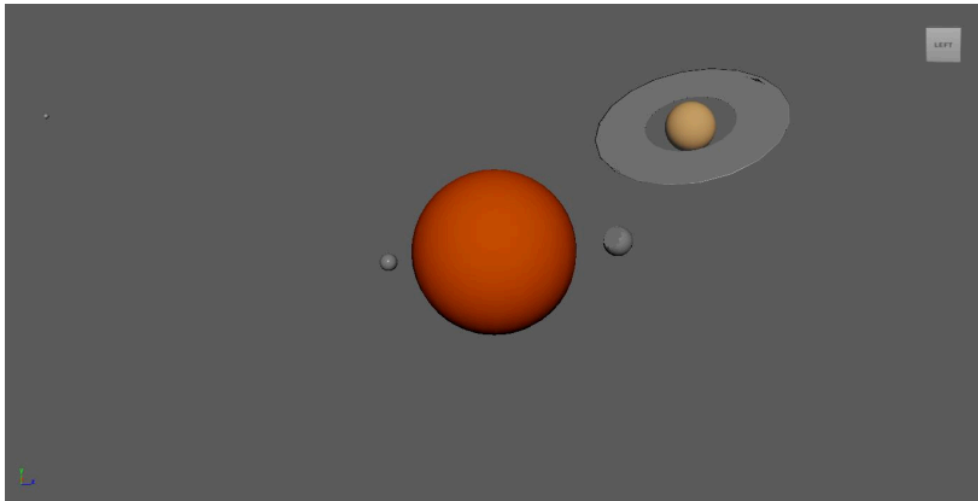


Figure 9, Mars, phobos and deimos with pluto, and more noticeably, Saturn in the distance

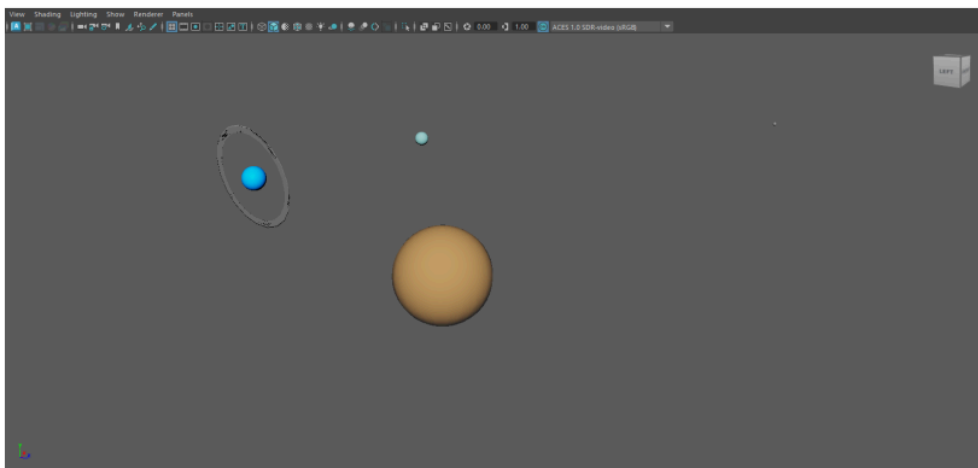


Figure 10, Jupiter, Neptune, Uranus ,and pluto in frame.

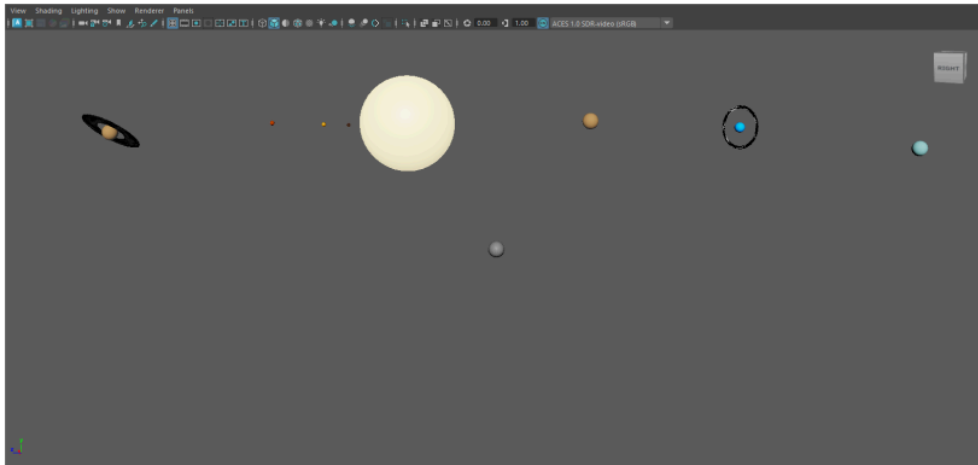


Figure 11, POV of the solar system from just behind pluto

Although this was only a short, mini-project to make myself feel fit to working on the assignment brief again, I thoroughly enjoyed this side project, even though it isn't the most impressive thing, one thing that I think I did really well though through the mini project was the sense of scale, for example, in Figure 9, Saturn appears to be very close, however, through figure 11, it's clear the distance between the two is large, while obviously not being 1-1 with the real thing, I tried to use my Maya[1] skills to create a sense of scale that would be at least slightly realistic.

Week 6 – 11/11/2024 – 15/11/2024

Following the previous week, with a bit more determination after recovering from burnout, I decided to aim to start, and complete, the cup and saucer from the assignment brief.

Although the modelling process I used for the cup and saucer was also relatively simple as with my other models, I believe the cup and saucer stands out as one of the more detailed models I've done, I think that for that reason, it shines over my

other models, below is the model that I produced.

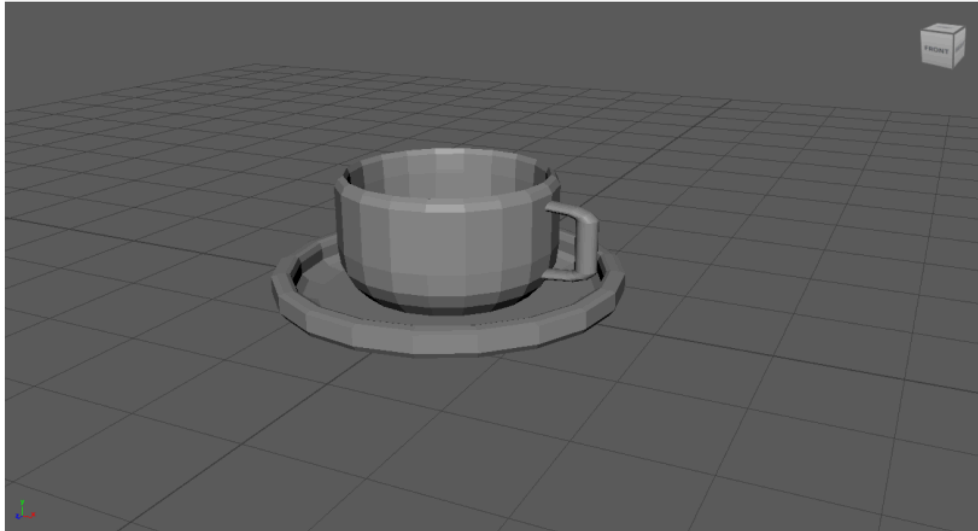


Figure 12, cup & saucer

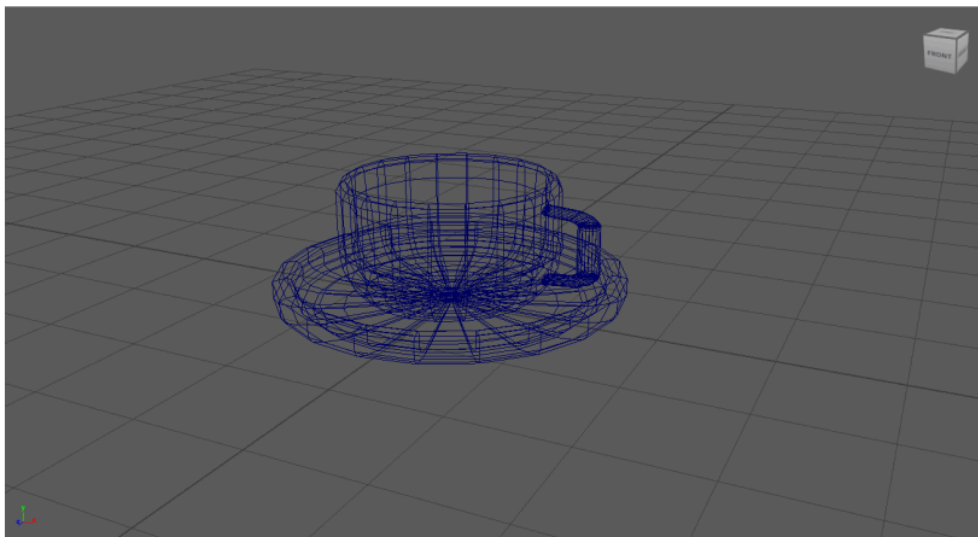


Figure 12 (alt), Cup & Saucer wireframe

However, that being said, of the issues that I believe my modelling work, excluding the lamp post, suffers from currently is a lack of referencing. With my other models, I have been going purely off of images in my head of how I think the objects should've looked. A more educational and professional approach would have been to research references for the objects, that way more detail could be done. Furthermore, another flaw that my models share in common is a lack of detail, the most amount of genuine close-up detail is in the soda can, but I believe that if I had used references, and had

not suffered from burnout, I could have made much more detailed and intricate models.

Week 7, 18/11/2024 – 22/11/2024

On the seventh week, I decided to complete the rest of the remaining models needed to complete the assignment brief, the remaining models needed to be completed were as follows:

- Finish off the 3D lamp post
- Finish off the 3D house
- 3D Dumpster

Throughout this process, the house was undeniably the one that took the longest, this is due to struggling with roof designs that I should make, and once again like the last week and previous weeks before, I didn't think to research for ideas and instead opted to go from the top of my head. However, one positive of this is that I made things that were entirely unique and original to myself, which is one of the only positives of this approach, in future though, it would be a good idea to make use of my own creative mind while supporting and solidifying those ideas with references and with ways to channel those ideas more effectively.

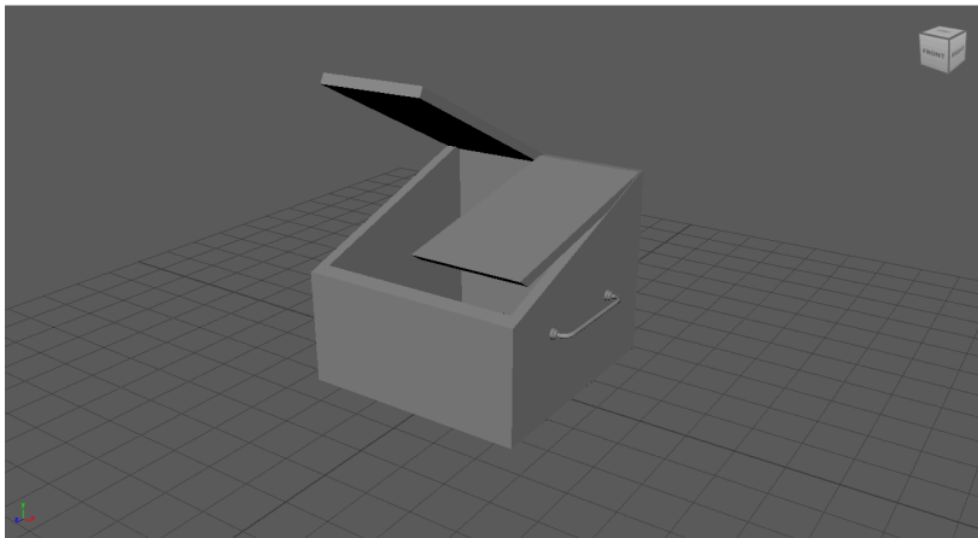


Figure 13, 3D Dumpster

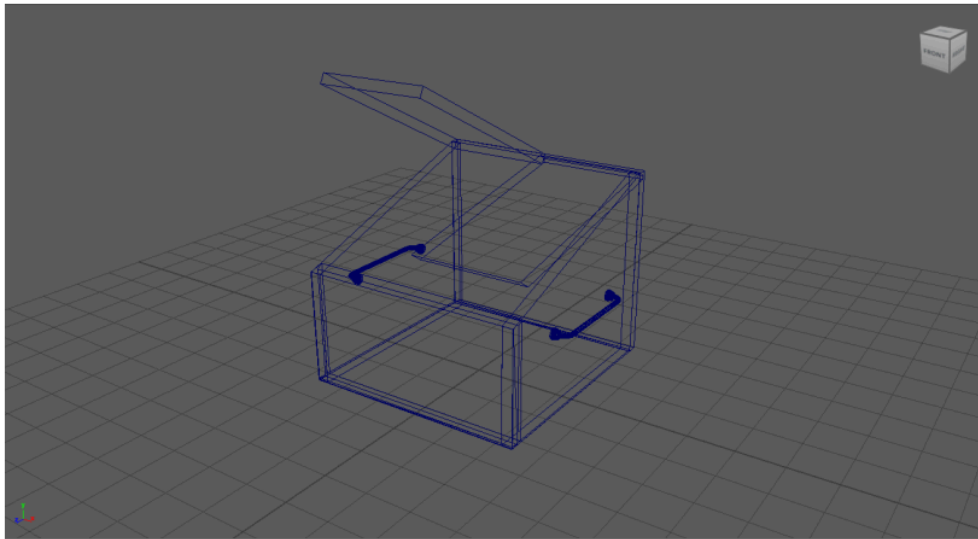


Figure 13 (alt), 3D Dumpster wireframe

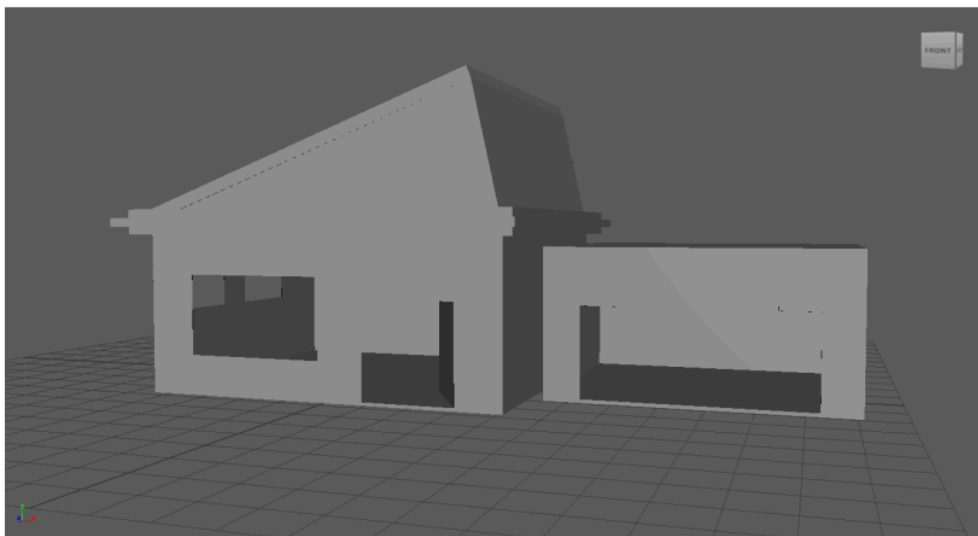


Figure 14, completed 3D House

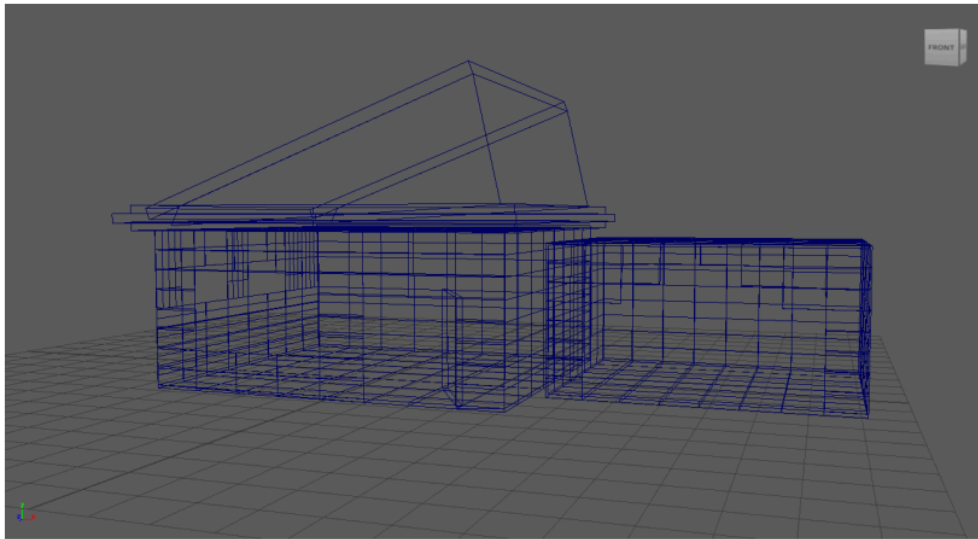


Figure 14 (alt), completed 3D House wireframe



Figure 15, completed lamp post

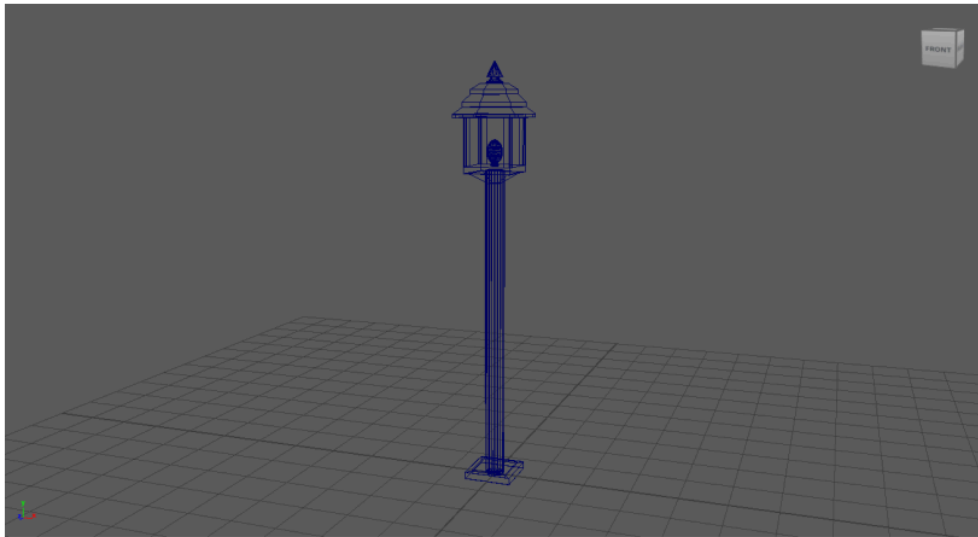


Figure 15 (alt), completed lamp post wireframe

When completing the originally existing previous models I decided, especially within the case of the house, that I should incorporate extra details to add more to the model, like for example, the garage next to the house and the house having an open door. In the case of the lamp-post, the light inside the lamp-post has been fully modelled by myself, a close-up version of the image shows the level of detail added here;

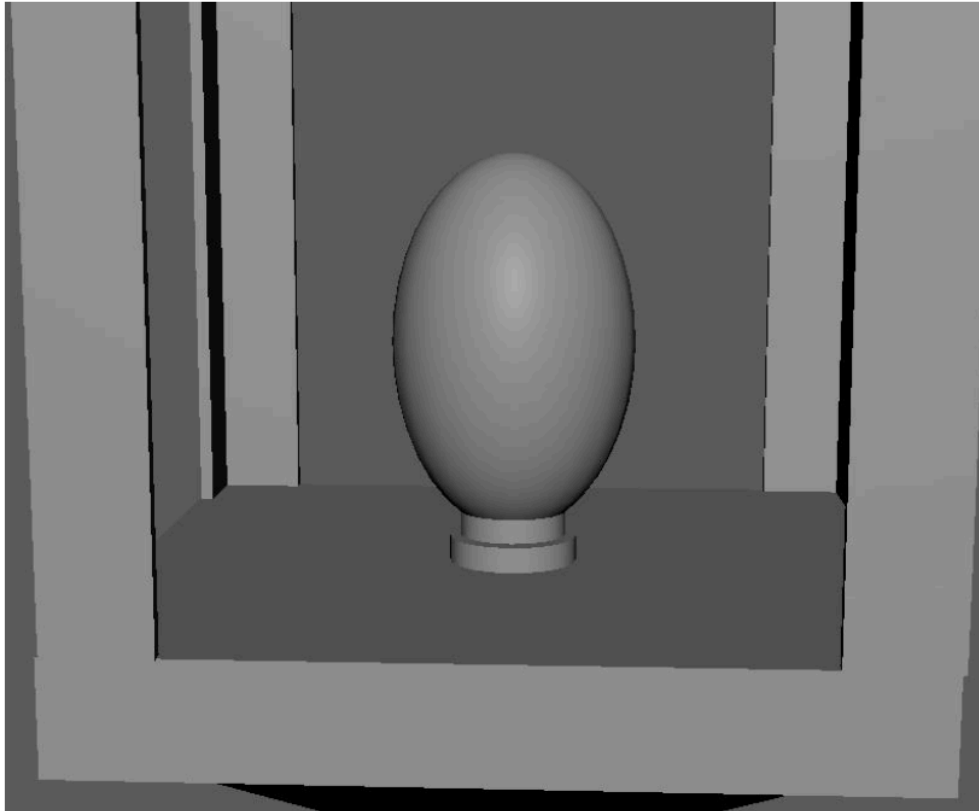


Figure 16, an image depicting a close-up of the lamp-post model, to show the light inside

One way I could've improved this specific part is by introducing a shader to make the light look like it was on. However, although it would've been a nice addition, it's possible that it might not be accepted if I had added any form of shaders.

Week 8, 25/11/2024 - 28/11/2024

During the 8th and final week of any modelling work I did, I decided to try out a relatively new tool that I hadn't used before, the circularize tool. Using the circularize tool, I created circles within cubes, as shown below.

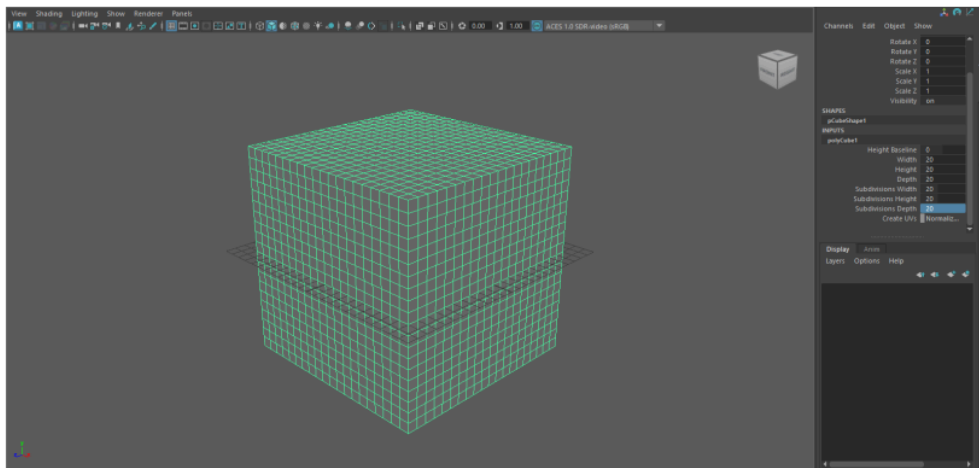


Figure 17, a scaled-up, cube that's had subdivisions added.

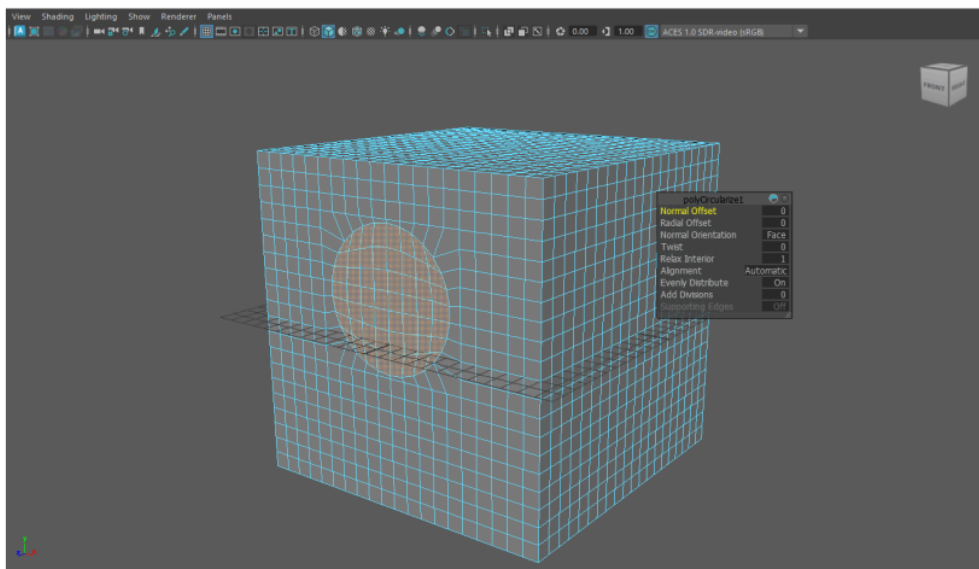


Figure 18, what happens when you use the circularize tool.

Here in figure 18, the circularize tool was used, this is accessed by having the object that you want to use the tool on selected, then, change the selection mode to face select, select as many objects you want to circularize (it's most optimal to select in a square), and then go to "Edit Mesh" and then click on the "Circularize" tool. This will, in my case, create the image in figure 18.

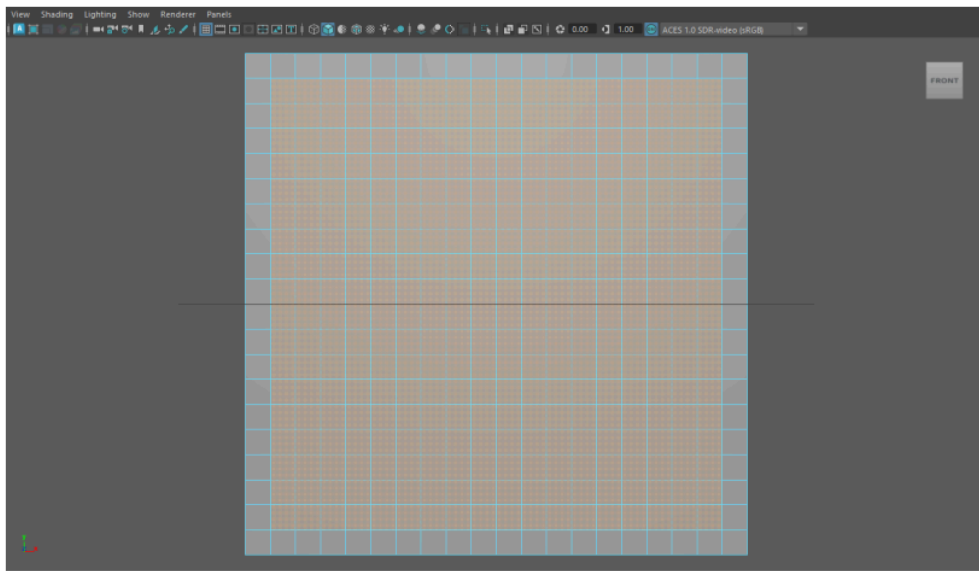


Figure 19, another attempt at a more interesting circularize

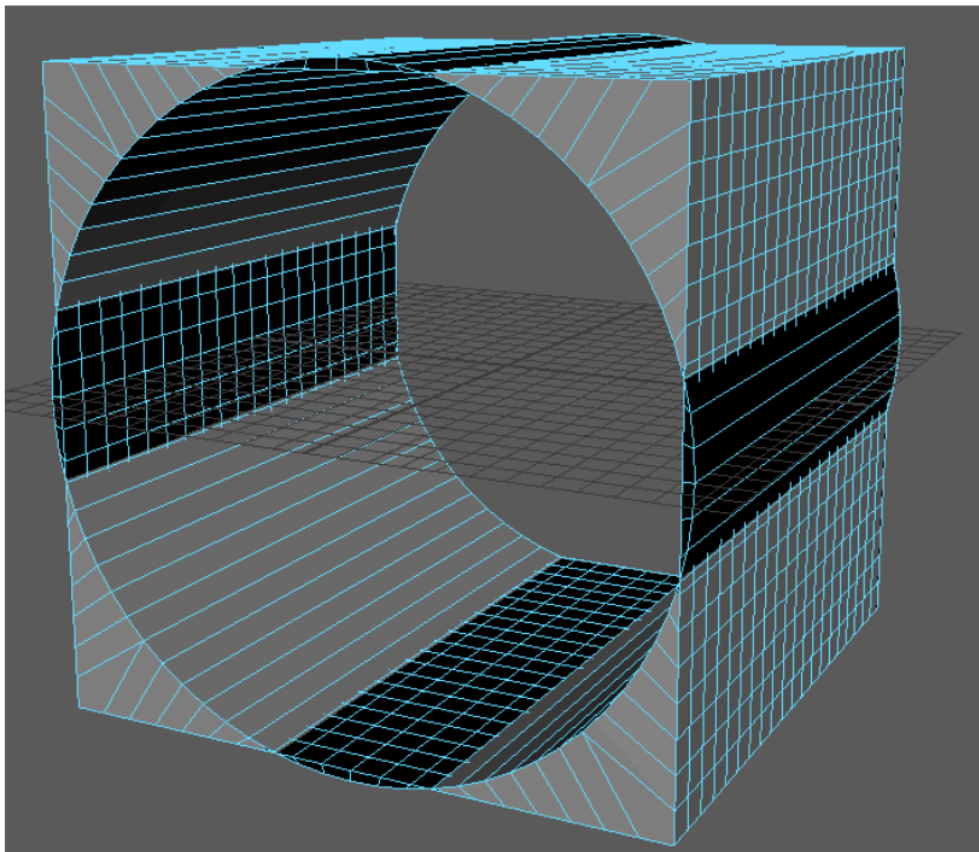


Figure 20, after deleting the highlighted segment in Figure 19

Here, an issue is brought up, and the first issue I faced technical-wise, this is an issue where the circularize does not have enough room and makes the inside of the cube extend outwards past the outside of the cube. This is however, fixed easily with the usage of the radial offset tool.

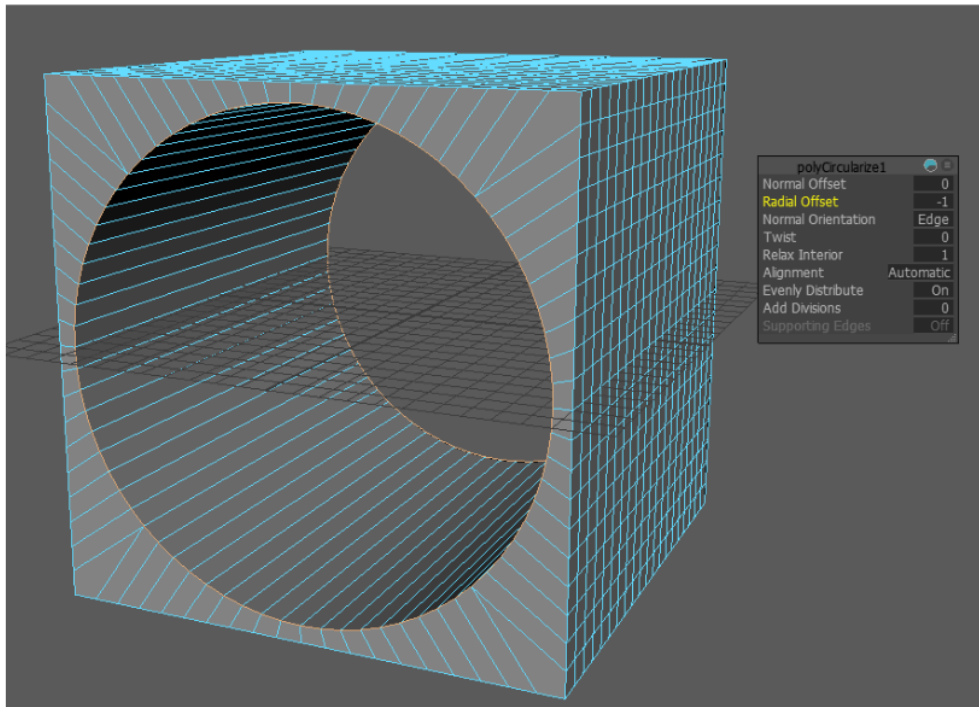


Figure 21, the radial offset tool used to scale the size of the circularize.

Overall

Overall, I believe my performance in creating the 3D models was good. However, it must be noted that one of my biggest flaws throughout this assignment was my lack of proof of creation besides the final products, this was due to a mix of issues that I faced while creating the models. One of the biggest of these issues that I faced was my inability to keep up with the lecture, I originally tried to screenshot as I progressed through the creation of the models. However, doing so meant I would miss important parts of the lecture and would be stuck each time, due to the fact that I was already competent enough to be able to create models quickly, I elected to only screenshot once I was done to be able to maximise my learning. Upon reflection, this is an issue that could've been solved if I'd communicated with my lecturer. In conclusion, my skills that I should develop are my communication skills, my researching skills, and my patience, to be able to take things at slower paces, to allow for better documentation.

Bibliography

[1] Maya 2025, [software], San Francisco: Autodesk, 2024

[2] *Contemporary Lamp Post*. Available at:

<https://www.britishironworkcentre.co.uk/shop/contemporary-lamp-post> (Accessed: 11 October 2024)

JL 3D Modelling Production Diary

GRADEMARK REPORT

FINAL GRADE

67 / 100

GENERAL COMMENTS

Thanks for the submission Joe. In the future with a production diary, I'd advise using it as a working document that you regularly reference and update as you work with quick, reflective bullet points.

There is some good reflection on show here with IEEE referencing used and bibliography. It is good to see figures under images - but make sure you have a figure/image list either at the opening or end of the document, listing each figure.

I'd liked to have seen more external research completed and logged also (tutorials for example). This is something to remember going forward, as there are a lot of marks available in all modules for showing external research being used and applied.

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19
