

Week 1

Date

7/10/2024

Introduction

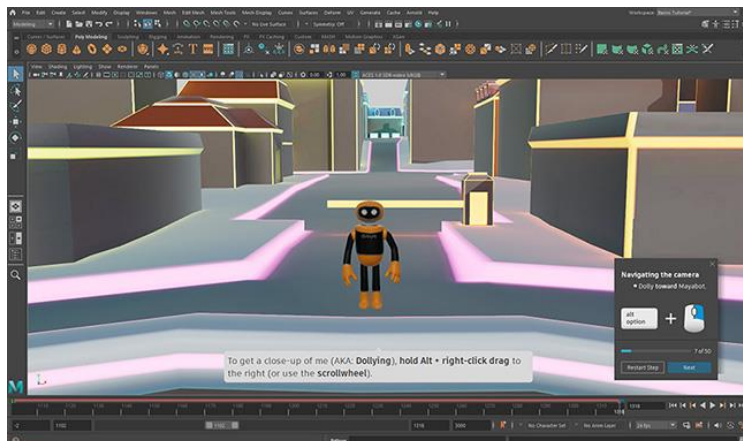
I have been learning in some tutorials from Maya the basic of moving the virtual camera to focus to the main character by placing some cubes.

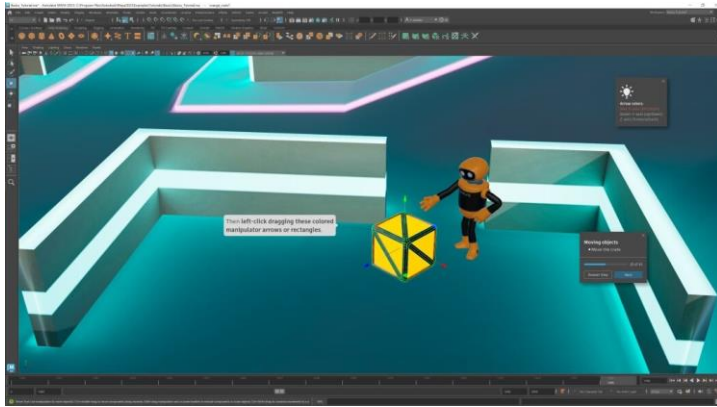
We also have been trying to model a lamp and making other simple shapes to practice more, using also references of images in google chrome.

References (including the information of the images and videos) (Make a list)

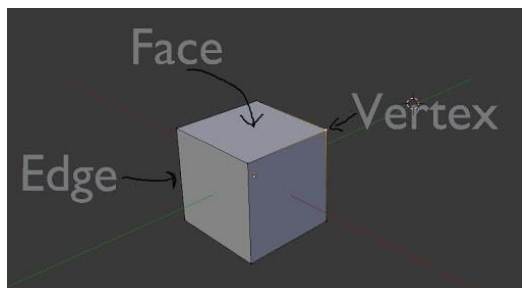
I have been following the steps through the Maya tutorial.

For the lamp and other shapes, I followed the explanation step by step of the teacher during the lesson. And images of lamps in google chrome.





This is some of the images of the tutorial of Maya I have been trying to follow.



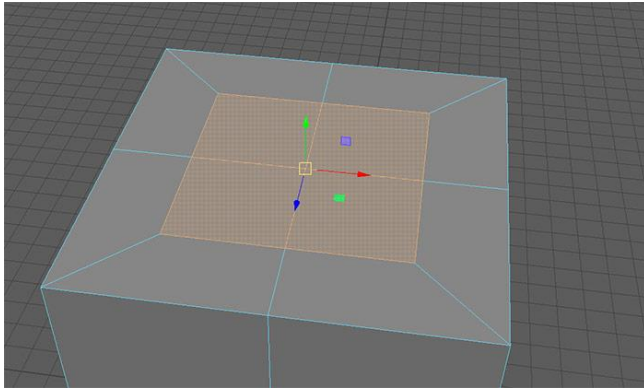
The three-dimensional principal sides of the cube.

Reflection (show the problem and the solution)

I needed to repeat the steps several times to remember and get use to the different options of the program.

I have been having some confusion when trying to make the edges look less noticeable as the vertex of the edge. I then selected just the sides of the faces of each square I wanted to edit to make the edge smoother.

Seeing some examples of different lamps helped to have a better idea when modelling the shape.



This an image also from google but is the same exercise we when doing the square in the middle of the edges deeper to create depth.

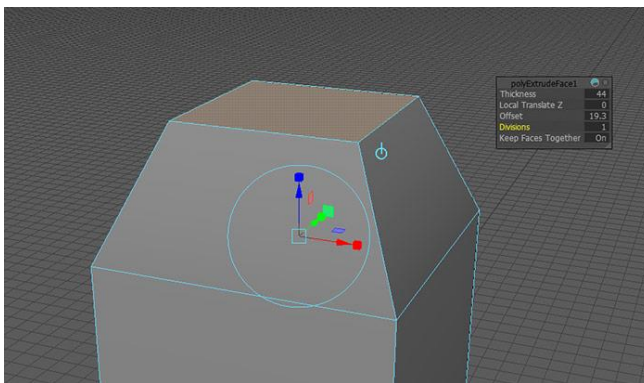


Image example when creating a cube on top another one and making it more inclined from the four vertices above.

Bibliography

- Maya, Autodesk, 2024
- Lamps, Google chrome, 2024
- A few examples of images of the process when creating the shapes like “Focus on These 11 Modelling Tools for Beginners”, Google, 2024

Week 2

Lamp-post

Date

14/10/2024

Introduction

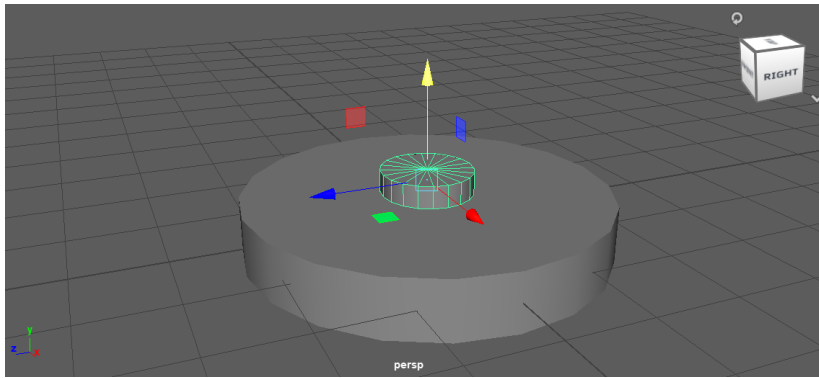
The idea in this exercise is to try to make a 3D lamp in Maya. I will follow the steps to make a Pixar style lamp, starting with basic shapes like a cylinder as the base and then the support for the head and the bulb of the lamp. The head where the bulb is inserted will be made from “Polygon Primitives” in the “Pipe” option and the rest of the shapes will be made directly from cylinders and the sphere for the bulb until it acquires the desired shape.



Fig. 1 (Google: Beacon Electrical, Lloytron L945BK Swing Poise Hobby Desk Lamp Black)

During the process I have been following the steps through a tutorial.

- 1- First, I insert a cylinder and then scale its width and length with “Scale Tool” with the indication of the arrows, to make the base of the lamp.
- 2- Next, I add another cylinder in the centre of the base, but this time I scale it down to a very small and very thin size.



(Screenshot from Maya)

- 3- I insert this time a cube to create the bulb holder. I scale it very thinly and long, and then I move it with the “Move Tool” just to one corner of the small centre of the base where it will be placed. I rotate it with the “Rotate Tool” to finally position it correctly.

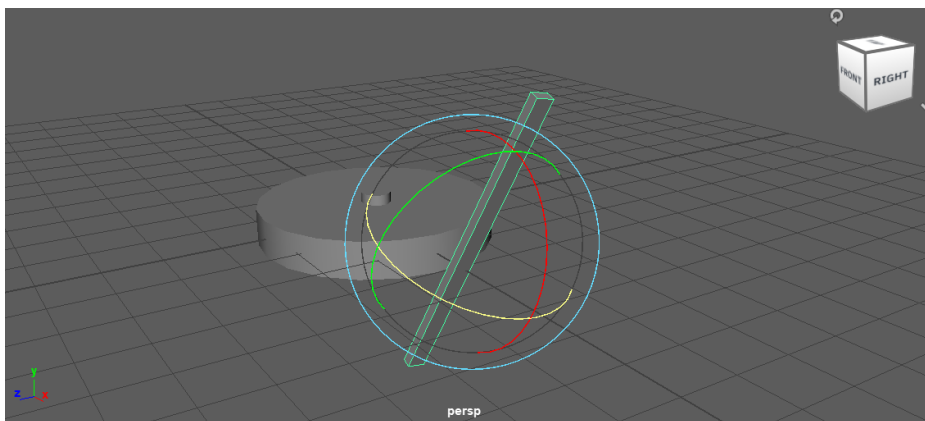
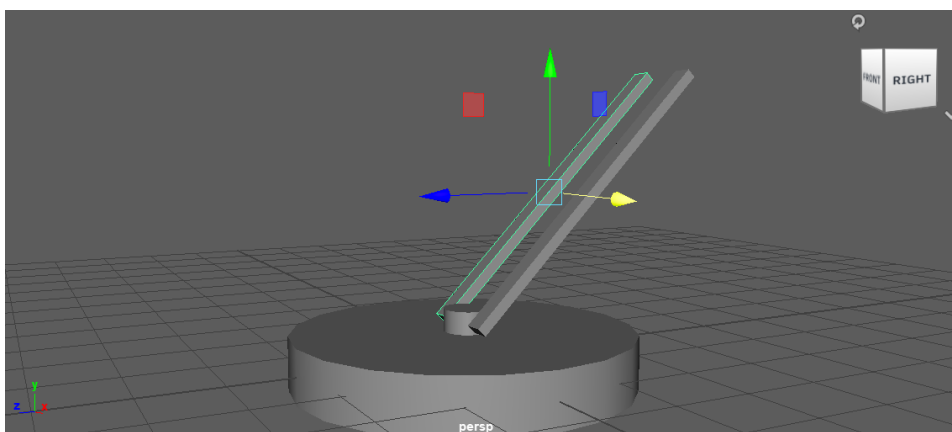


Fig. 2 (Rotate Tool)

- 4- Once the last piece is positioned correctly, I press the “Ctrl + D” key to duplicate it and move it (Move Tool) to the side of the other corner of the small centre base.



- 5- The piece is duplicated again with “Ctrl + D”, but this time it is positioned on top and rotated to the other side, it is placed between the last two pieces. Finally, I scale it a little larger until it touches both pieces in the centre.
- 6- To create the head of the lamp I go to the “Create” option, then I click on “Polygon Primitives” and click on the “Pipe” option, this is to make it directly as an empty cylinder and without the two bases above. Then to compose this piece with more faces I go to the attributes section on the right of the screen, I press where it says “Poly Pipe”, I change the radius to “4” and in “Subdivisions Height” I also put the number “4”.

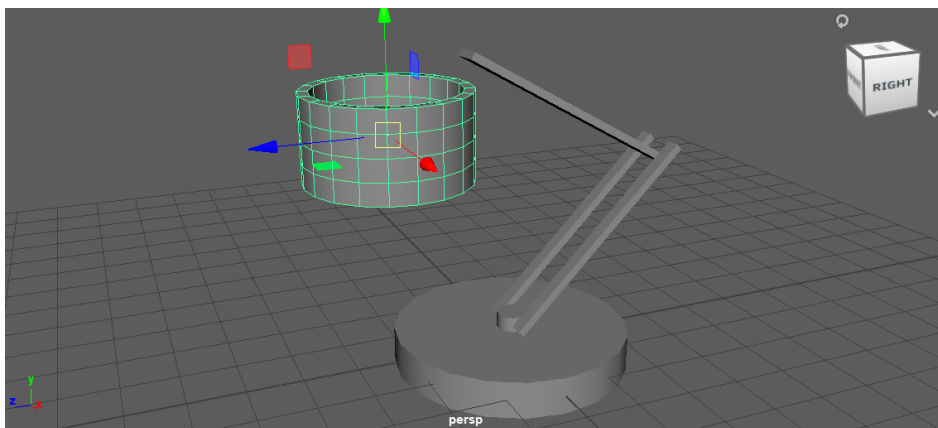
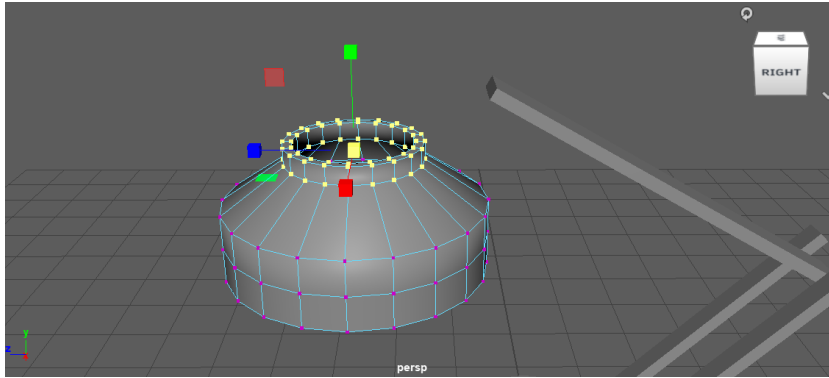
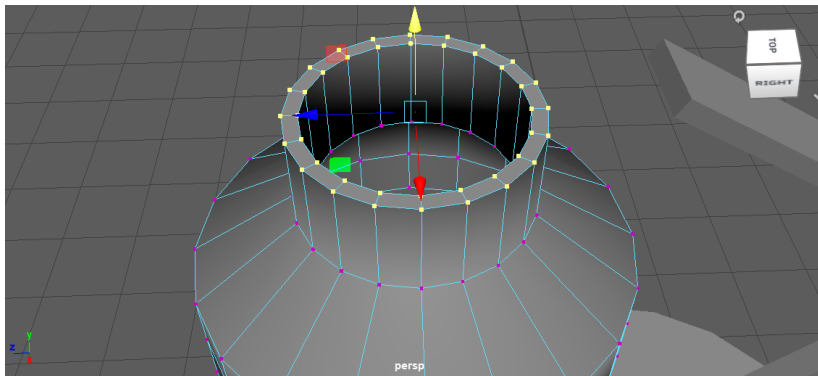


Fig. 3

- 7- The head of the lamp is scaled and moved towards the corner of the top piece.
- I go to “Vertex” mode and select everything around the vertices of the second row and in the “Scale Tool” I scale it inwards to give it more depth, giving it a different shape.



- 8- Then I select also the first row of vertices in “Vertex” mode and in “Move Tool” I move with the up arrow to lengthen it further. Holding down the right click mouse button I select this time “Face Mode” and then I select the faces in the bottom row and scale it up a bit.



- 9- To close the top part of the lamp head, like making a cover, I select “Edge Mode”, double click on a line to select all and in “Edit Mesh”, I press “Extrude” and scale it a little inwards (first centring the arrows with “R” key making sure it goes in that direction). Then I repeat the same process from “Edit Mesh”. Again in “Extrude” I move it more towards the centre and thus finally be able to close it by going to “Edit Mesh” but this time to “Merge Centre”.

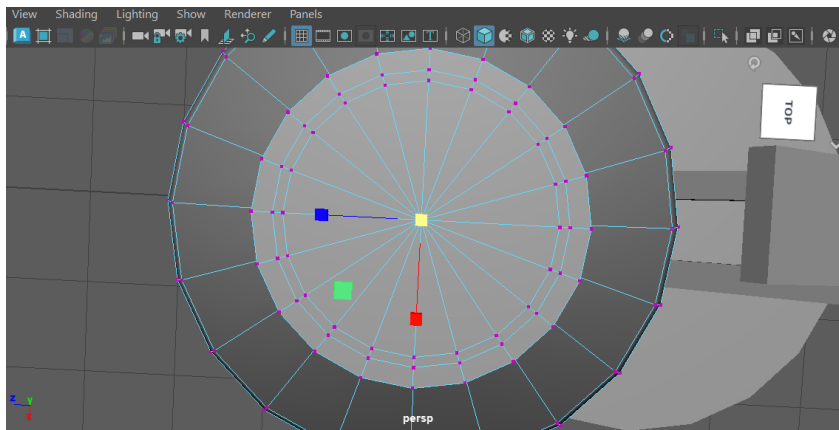
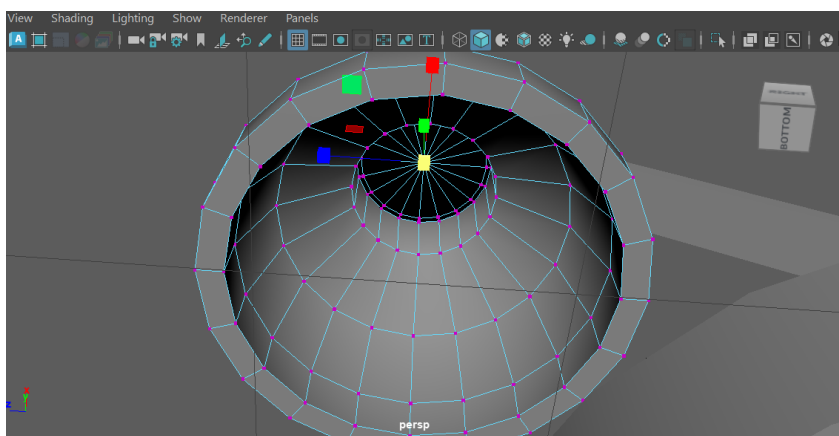
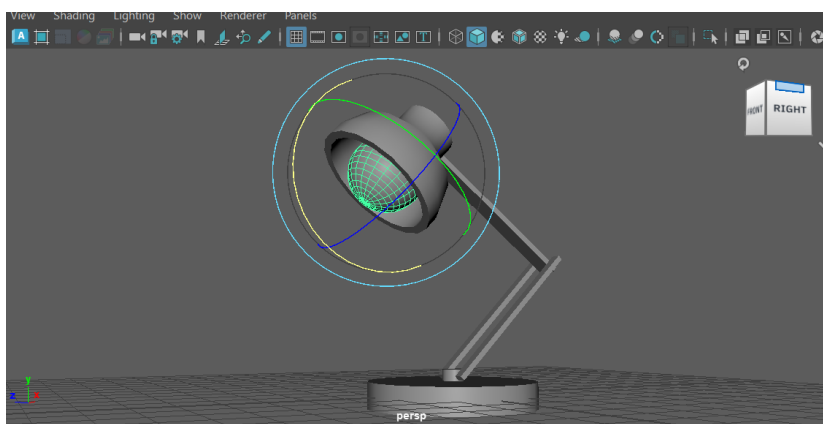


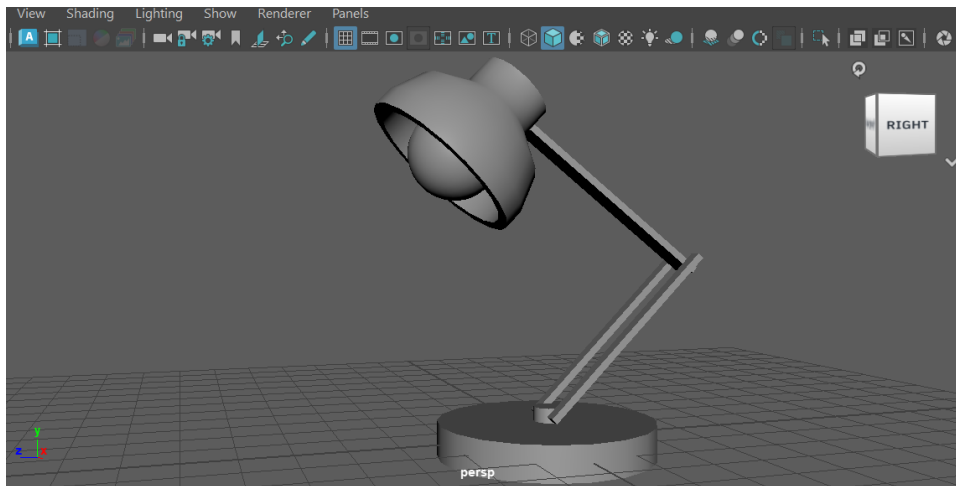
Fig. 5



10- Then I go back to “Object Mode” so I can rotate it and move it up in the right position.

11- Finally, I insert a sphere like the lamp bulb by scaling it, positioning it and rotating it inwards.





(Final look of the lamp)

Reflection

- **Fig. 2 & 3:** Rotating the first piece of the bulb holder was a bit confusing until I finally got the desired position by changing the perspective as many times as necessary until the result.

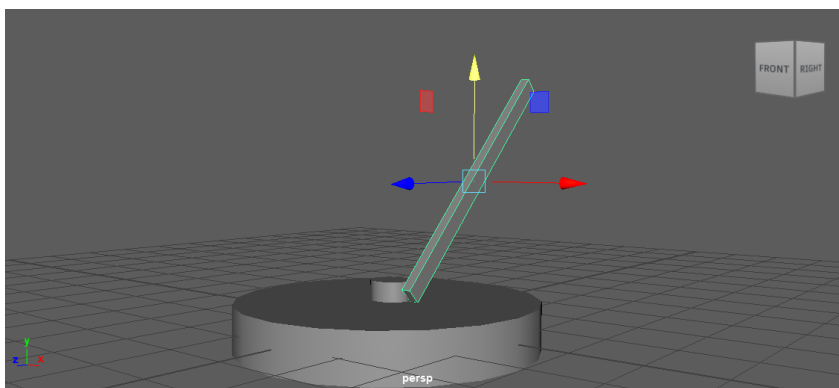
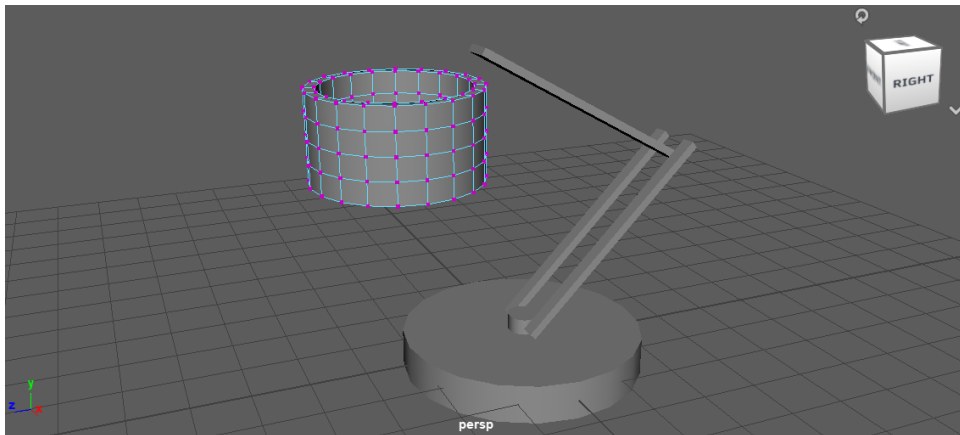


Fig. 3 (Now is well rotated)

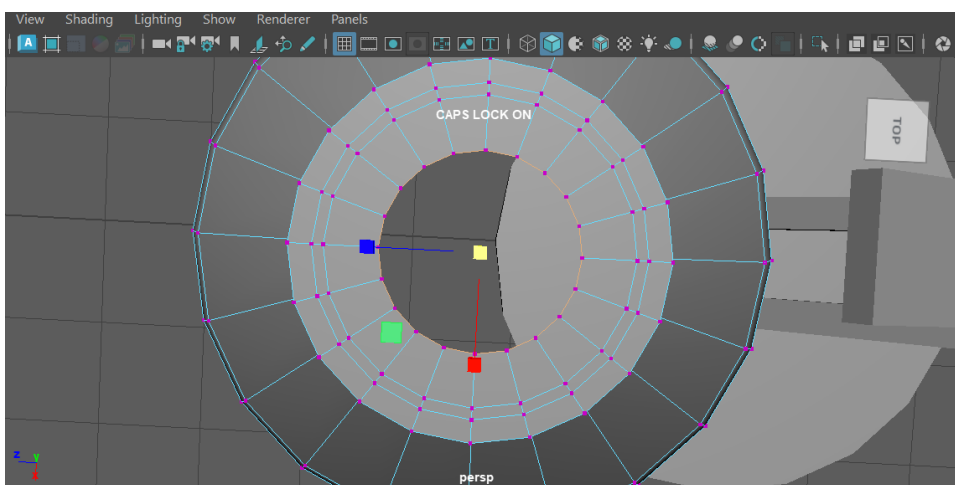
- **Fig. 4 & 5:** I had another issue when trying to scale the lamp head, because I hadn't noticed that I had to change the radius number and the Subdivision Height in the Poly Pipe section, so that there were 4

rows of faces and thus scale the second row from the vertices in Vertex mode.



(Fig. 5)

- **Fig. 5:** Another mistake during the process was when I forgot to make sure that all the vertices are selected so that when I scaled or moved it, I wouldn't have to repeated it.
- **Fig. 6 & 7:** Almost at the beginning with the “Extrude” option (in step nine to make like the top cover), the arrows, to make the shape inwards, were not positioned in the centre, but it was solved by pressing “R” on the keyboard.



(Fig. 7)

Bibliography

- Maya, Autodesk, 2024
- Modelling a lamp in Maya Autodesk, Jaque Romero – Diseño, YouTube, 2021

Image List

- **Fig. 1** (Google: Beacon Electrical, Lloytron L945BK Swing Poise Hobby Desk Lamp Black)

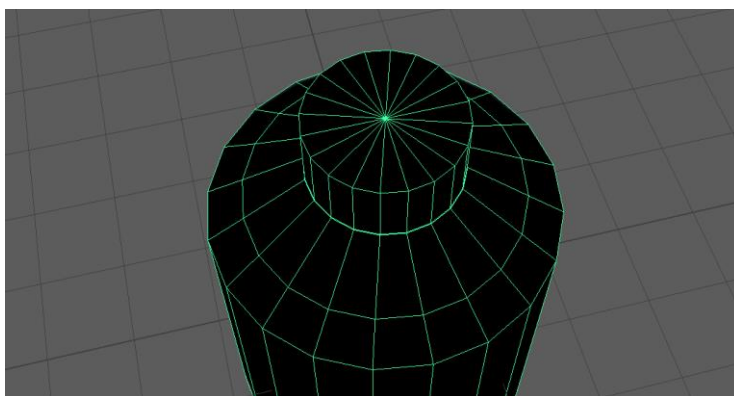
Week 2

Date

17/10/2024

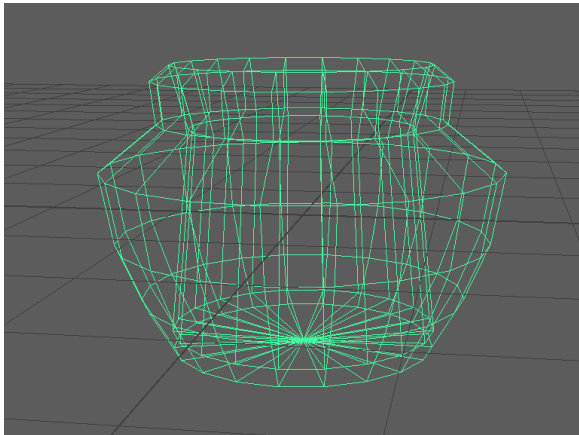
Introduction

During the lesson we were trying to make a jug starting with a cylinder and a small bridge.

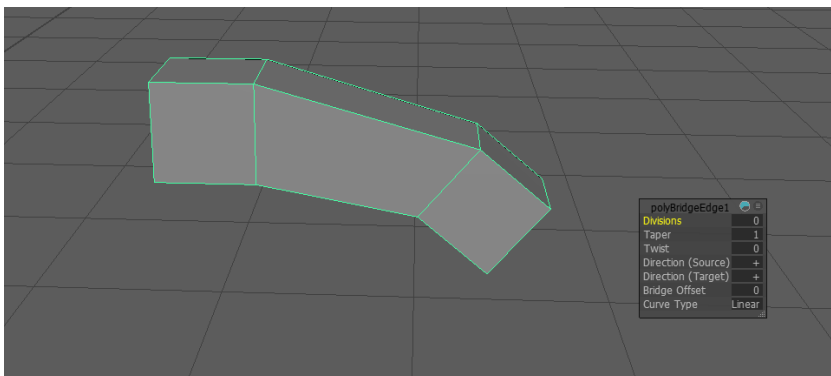
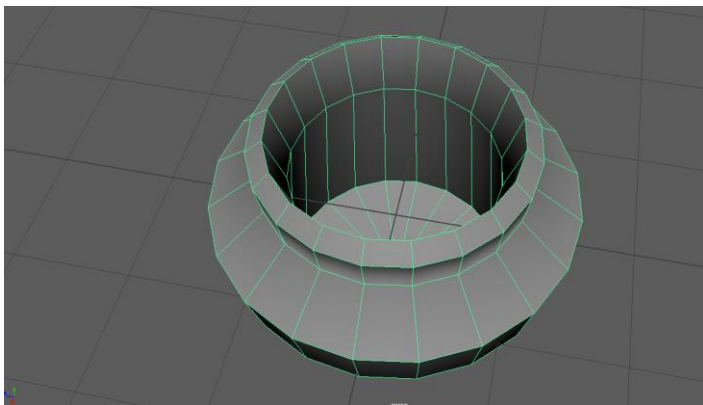


Starting with a cylinder I scale it to a bigger size and then with the Move Tool, I extend it further up to make it taller. Then in Vertex mode I select the first of the top vertices and scale it inwards.

I select again the vertices of the same row and this time I move it (Move Tool) a bit up and in “Edit Mesh” I select the “Extrude” option to cover the empty piece from the top.



When creating the base of the jug we can see it from the inside to have a better view, by pressing the number “4” in the keyboard and to go back to the previous view I press the number “5” in the keyboard.



To create the bridge, we started adding two cubes, each one in one side, one moving it a bit further up and the other one down. Then trying to delete one side of the face with the “Face” mode.

Week 3

Soda Can

Date

24/10/2024

Introduction

The idea of this 3D model is to create a soda can from a reference image, starting with a Polygon Cylinder and for the can lid with a Polygon Plane. Mainly also with an image of a can lid, that will help with another technique to make the 3D modelling process better.



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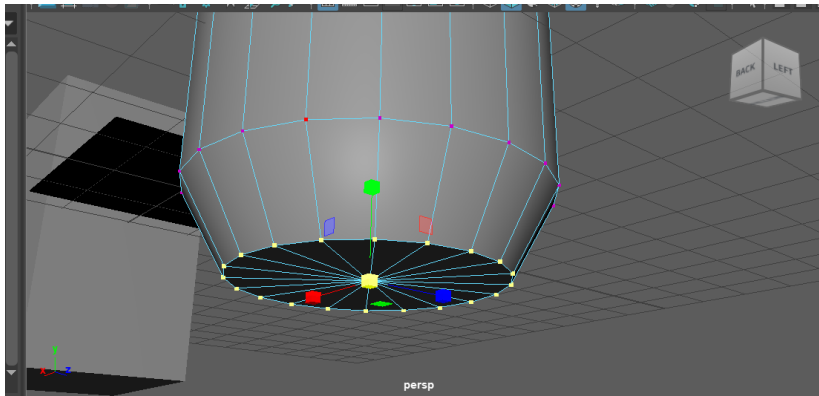
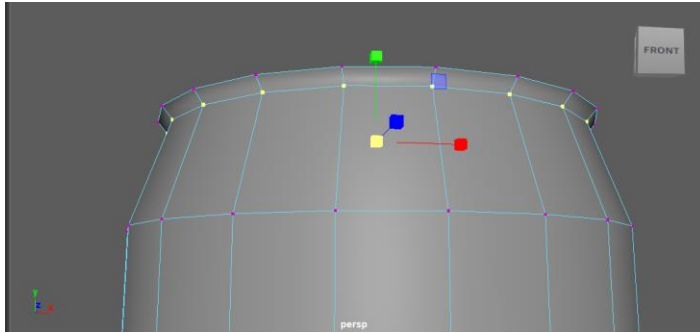
Fig. 1 (Google: Getty Images, “40 Soda Can Top Open Stock Photos, High Res Pictures”)



Fig. 2 (Google: Sprinkles, “Soda Can”)

During the process I have been following the teacher’s steps during a lesson and through a tutorial.

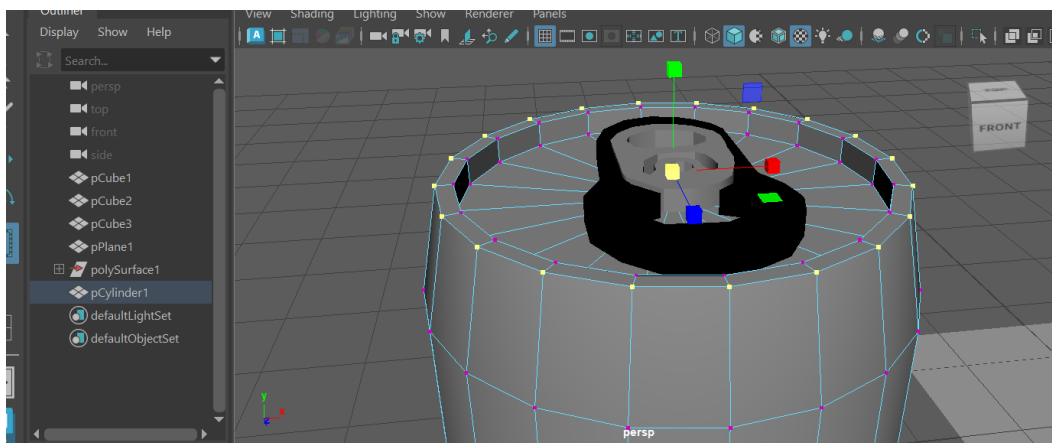
- 1- First, I add a cylinder in the center of the perspective view.
Then I go to the Channel box in the part that says “Inputs” I click on “polyCylinder1” where I can increase the subdivisions like 20.
I scale and move the cylinder until the desired size.
- 2- In the “Mesh Tool” I select “Insert Edge Tool”, then I click on an edge and without letting go of the mouse I click and drag it a bit down from the top and then making sure to exit the insert edge Loop mode with the “Q” of the keyboard.
Also holding the “Ctrl” key I can add another edge loop and drag it up a little bit from below the cylinder.
- 3- Now that I have more geometry I can shape it more. I go to “Vertex” mode and select all the vertices from the top. I press “R” key to center it and be able to scale it a bit inwards and the same process for the last line of vertices at the bottom scaling it down.



(Screenshot from Autodesk Maya, showing the scene when scaling way down from the last line of vertices)

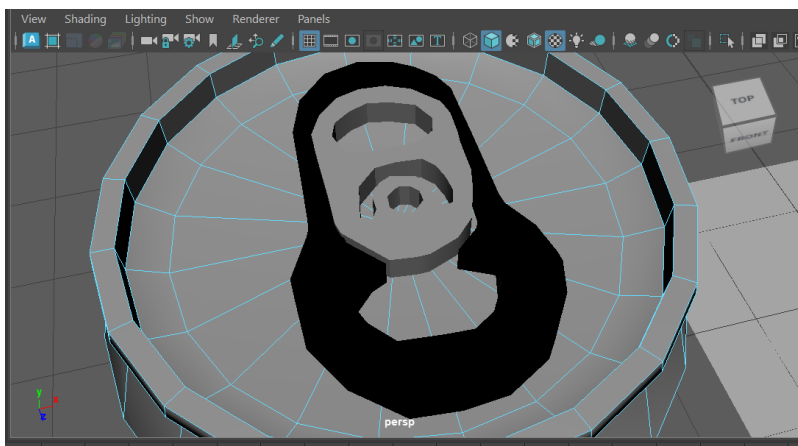
4- I include another Edge Loop from above, selecting “Mesh Tool” and “Insert Edge Loop”, but this time I’ll just lower it a little to make the outside edge of the can lid.

And the last one is at the bottom, in the middle of the other two edge loops to create more shape to the soda can like in the image example.



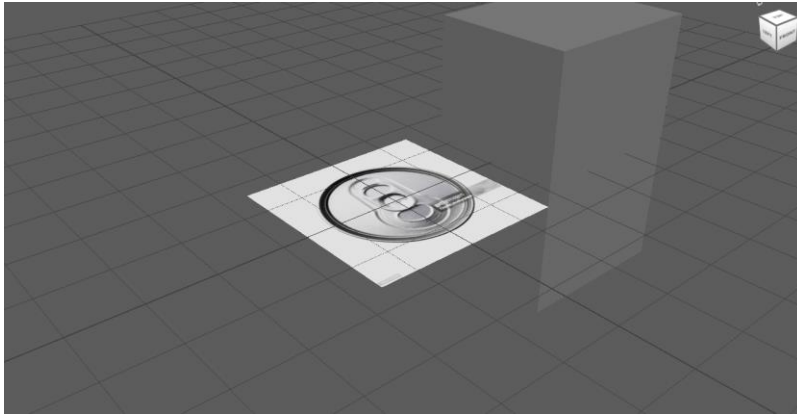
5- To make the edge of the lid from the top perspective, first I double right click to “Face” mode and select all the faces of the lid. This time I will use a different tool from “Edit Mesh” by selecting “Connect”, it already creates a round edge loop and then I can now insert another Edge Loop in “Mesh Tool” and then I drag it closer to the end of the lid side. I press “Q” to exit when having selected the edge loop.

6- In “Face” mode, I select all the faces of the top of the lid but this time without selecting the faces from the edge. I go to “Edit Mesh” and select “Extrude” to create depth to the lid can. I move it down with the row (creating less thickness) and I can also rise the number to “0.2” in the right box with the “Offset” option to even create more the shape of a soda can.



More of the process when creating the lid of the soda can:

1- This time for the lid soda can, I select the Polygon Plane. I import the image of a lid can and place it on top of the Polygon Plane to then help me when creating the shape with another tool.



- 2- In “Mesh Tool” I select “Show Modeling Toolkit” and then on the right side of the screen I click on the “Quad Draw” option to draw the shape of the lid that comes up with a blue colour and part by part, from vertices, I complete all the shape of the first piece. After all the shape is complete, I give it volume when all the faces of the piece are selected, from “Edit Mesh” to “Extrude” I give it more Thickness. The same process with the last piece that is in the center of the soda can.

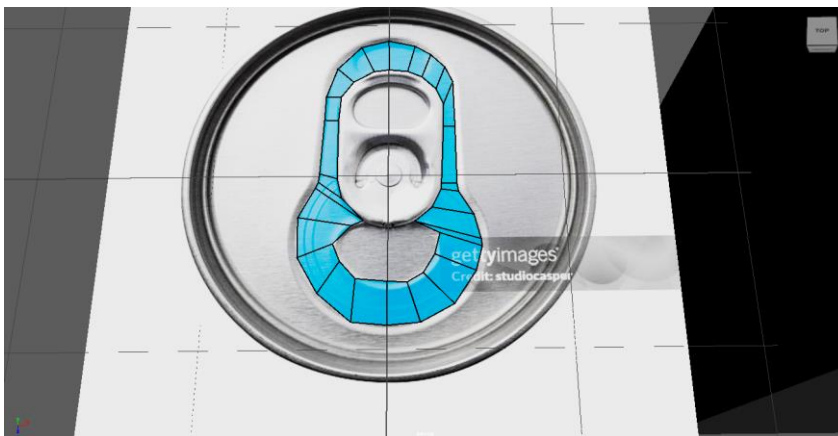
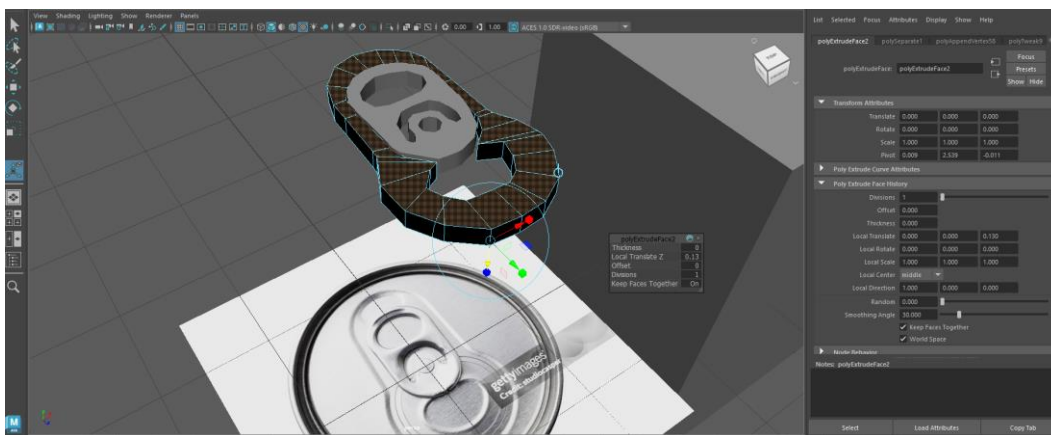
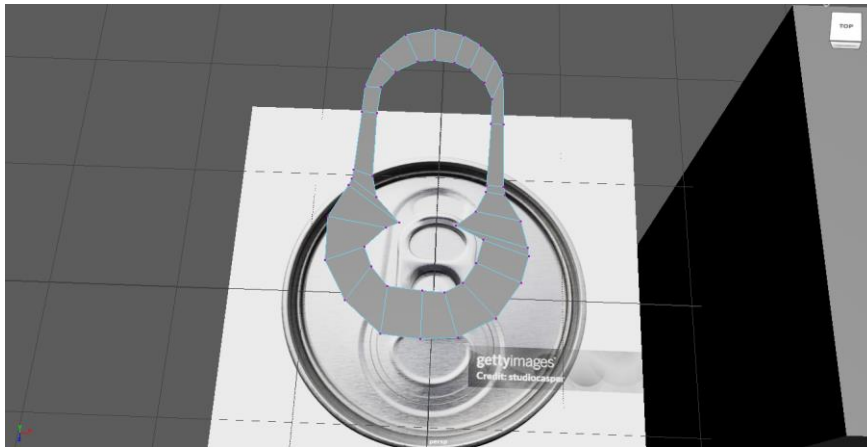
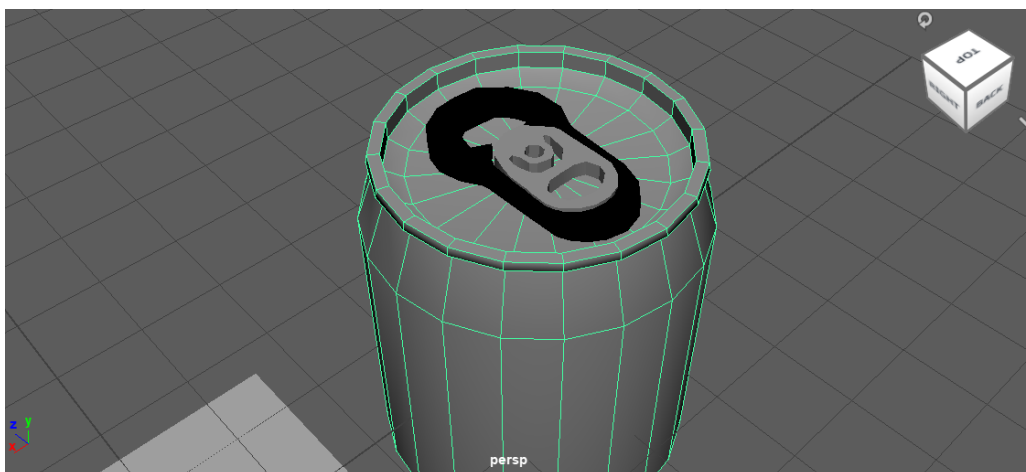


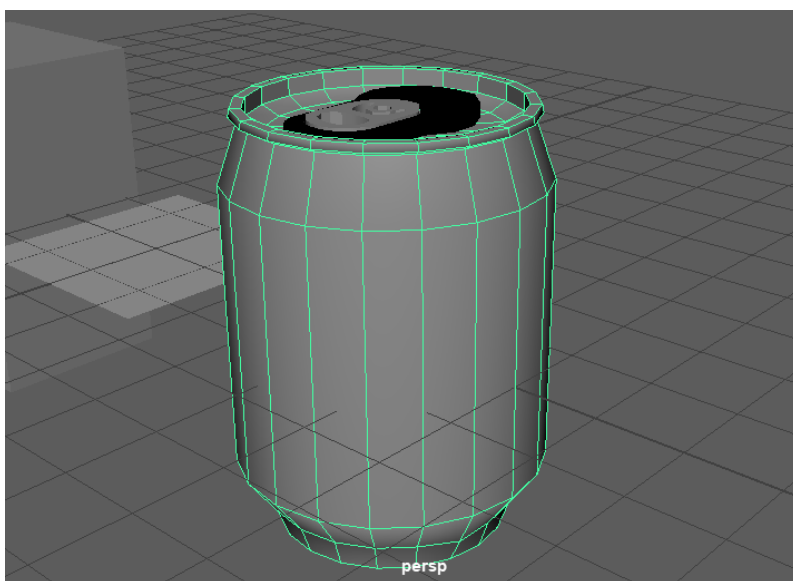
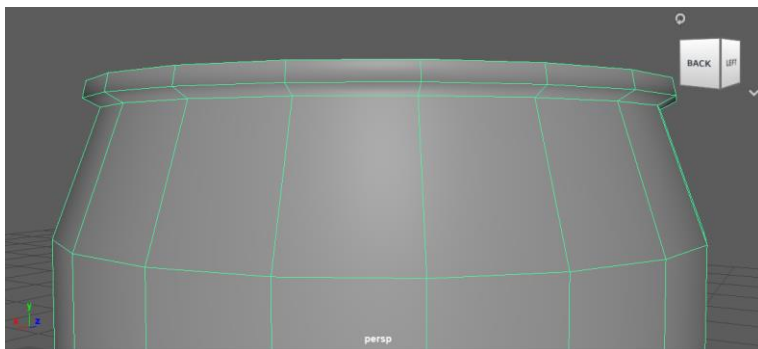
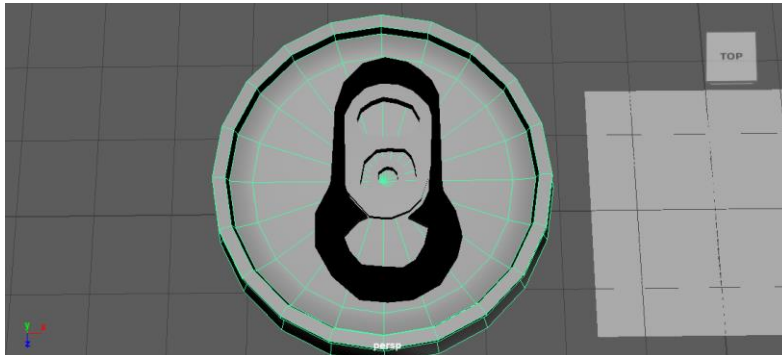
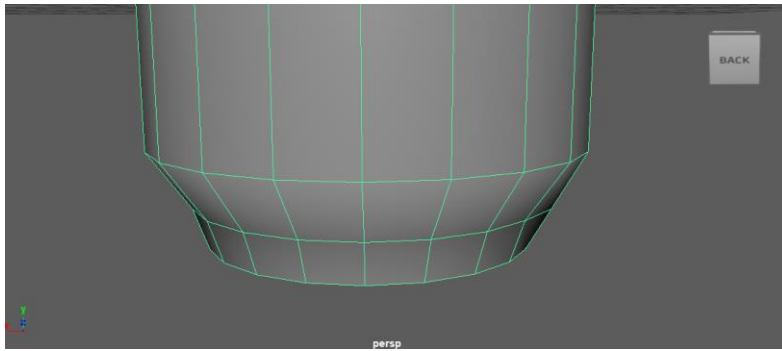
Fig. 3 (Quad Draw option with Autodesk Maya)



3- In Object mode I move both pieces just on top of the center of the soda can lid.



(Final look of the Soda Can)



Reflection

- I was having trouble realizing how to get out when having selected the Edge Loop in Mesh Tool, but just by pressing the “Q” key I could select the vertices again without any problem.
- **Fig. 3:** I needed to be careful when creating the shapes of the two pieces of the lid can so that all the parts fit together with Quad Draw, making the entire shape of the piece look correctly.

Bibliography

- Maya, Autodesk, 2024 and 2025
- (For the lid of the soda can I followed my teacher’s steps during the lesson).
- Autodesk Maya 2018 - Soda Can Tutorial, 3dEx, YouTube, 2017.

Image List

- **Fig. 1** (Google: Porcelite Cappuccino Cup 16oz/455ml, Coffeecups.co.uk)
- **Fig. 2** (Google: Sprinkles, “Soda Can”)

Week 4

Cup & Saucer

Date

4/11/2024

Introduction

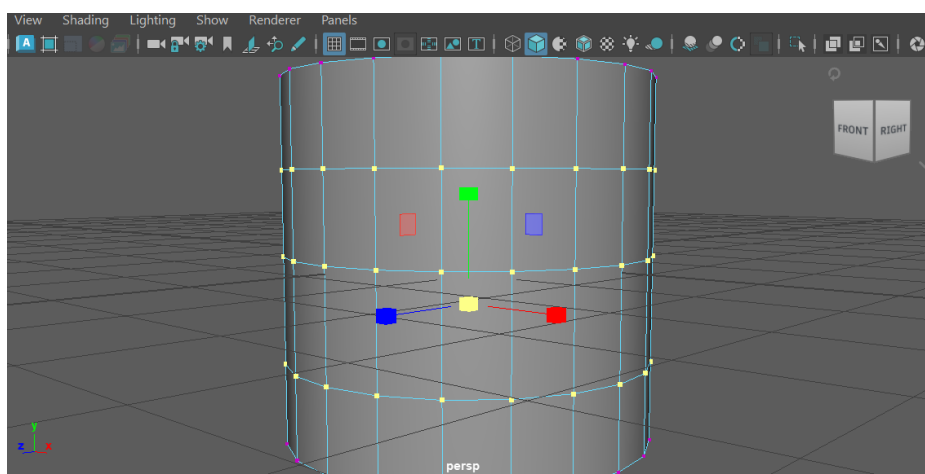
In this 3D modeling exercise, I will try achieving the shape of a cup and a saucer. For the cup I will start with a cylinder and then creating the hole and the handle. For the saucer, I start by scaling a cylinder down to create the saucer base.



Fig. 1 (Google: Porcelite Cappuccino Cup 16oz/455ml, Coffeecups.co.uk)

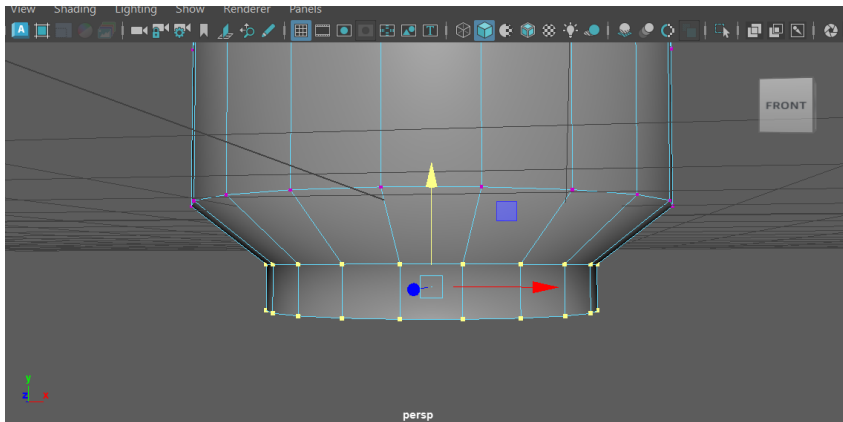
Cup

- 1- First, I add a cylinder and scale it a bit bigger. I select “Mesh Tool” to “Insert Edge Loop”, this is to be able to scale and give it more shape to the bottom and top of the cup. Then I move it almost on top of the edge of the cylinder and I place another “Edge Loop” but this time almost in the bottom.

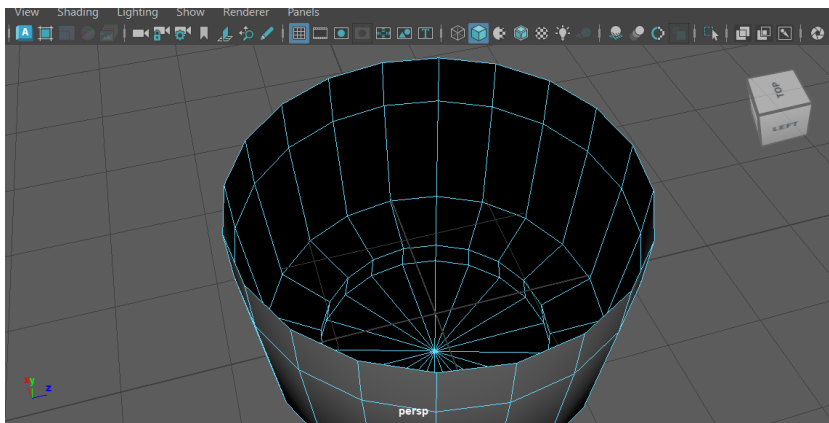


- 2- I select the last two rows of vertices (in “Vertex” mode) to scale them down and thus create the bottom base of the cup and with the

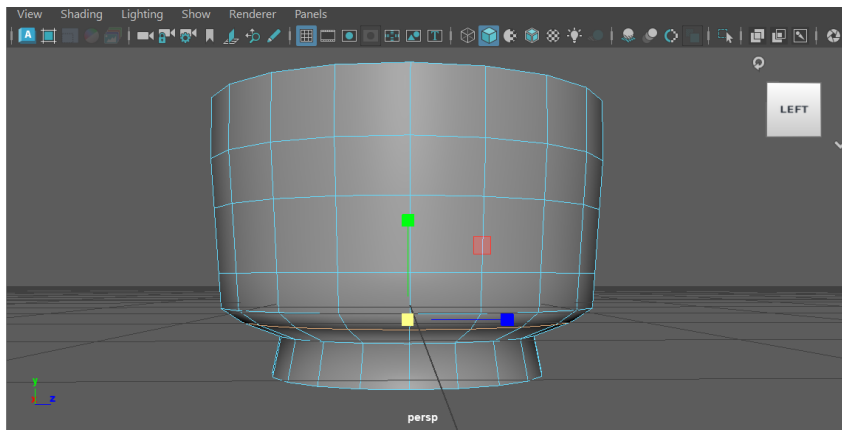
“Move” tool I move it further up, to make the base of the shape shorter. I also move a bit down the third line of vertices.



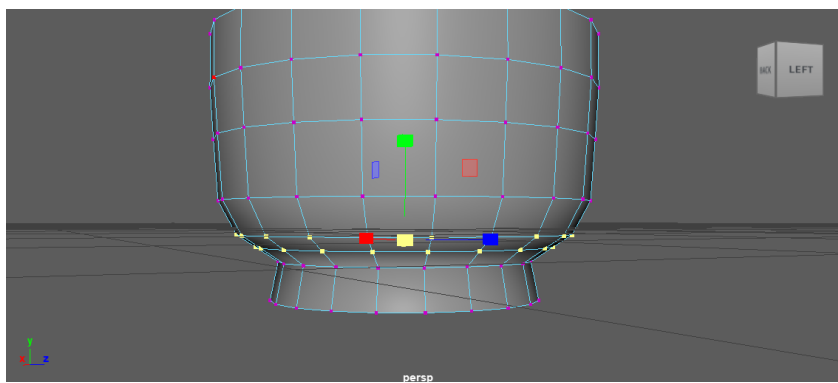
- 3- To remove the top, I select all the faces and then press “Delete” on the keyboard.



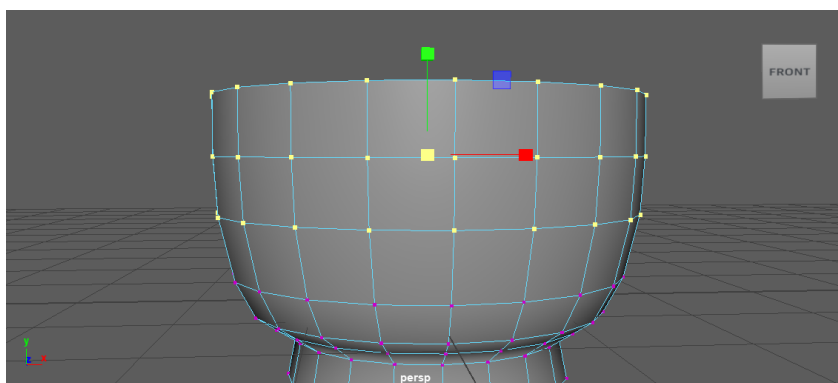
- 4- I change it to “Object Mode” and introduce three more Edge Loops, in “Mesh Tool”, in the middle of the cup and below to give it more shape by scaling it outwards and inwards.



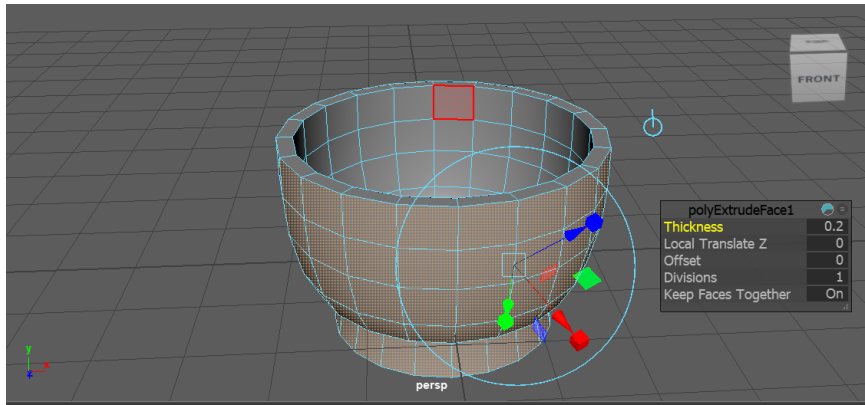
The two rows below I scale it inwards.



And the three horizontal rows of vertices at the top of the cup I scale it outwards.



- 5- To give more volume to all the cup I click on “Edit Mesh” and with “Extrude” I increase the Thickness option to 0.2, located in the small right box of the screen.



- 6- Now to make the handle of the cup I first must be in “Face” mode and select the first face on one side and fourth on the same row. In “Edit Mesh” I go to “Extrude” and then I move both outwards a little with the “Move Tool”. Next, I go to “Edit Mesh” and click on “Bridge” this time, that will create another shape joining from the other side to the other and then in “Vertex” mode I select the vertices in the corners to move it further inward until the desire shape for the handle cup.

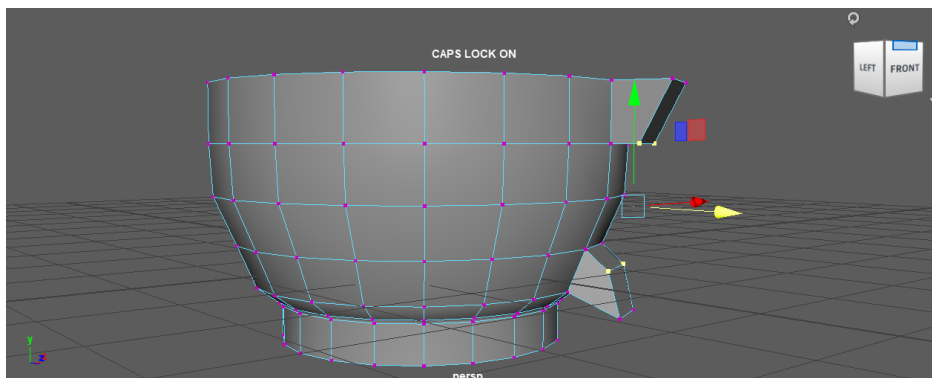


Fig. 2 (Also, I have moved the vertices of each corner of the two front faces inward, giving it like the shape of a beak)

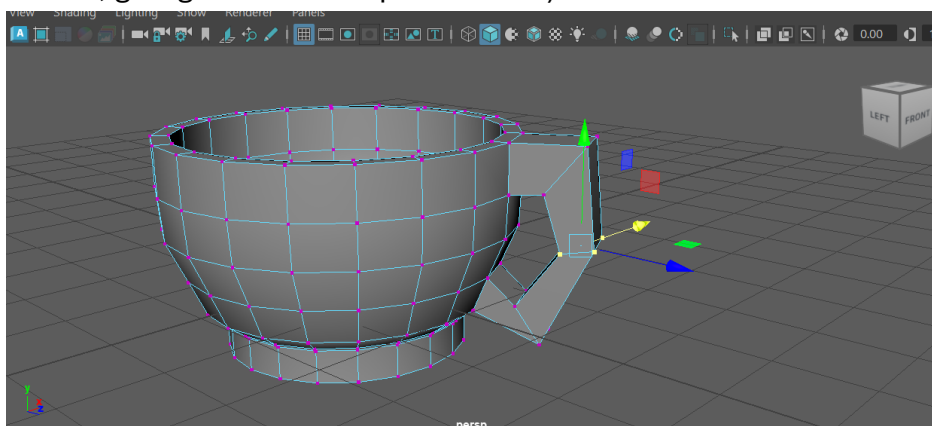
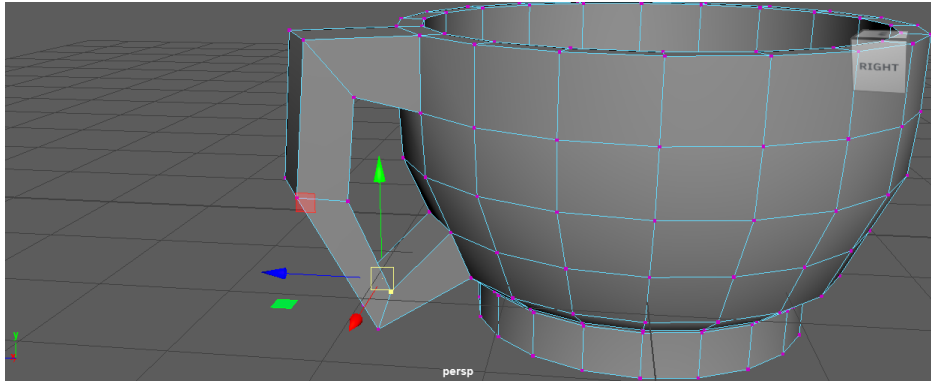
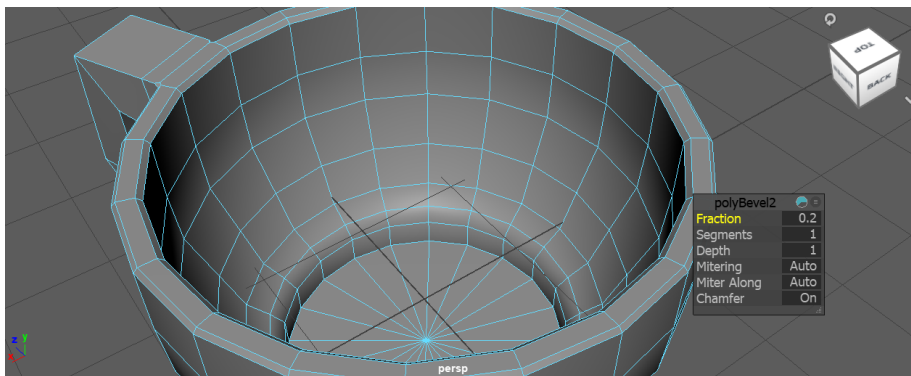


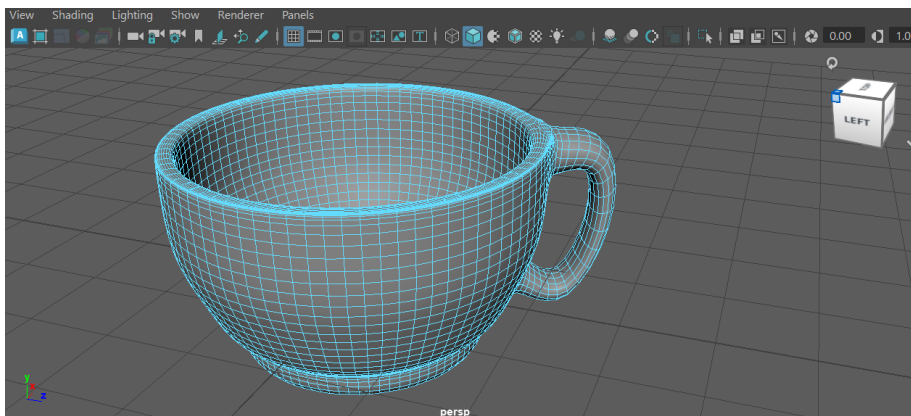
Fig. 3 (Moving the vertices of the three corners with “Vertex” mode)

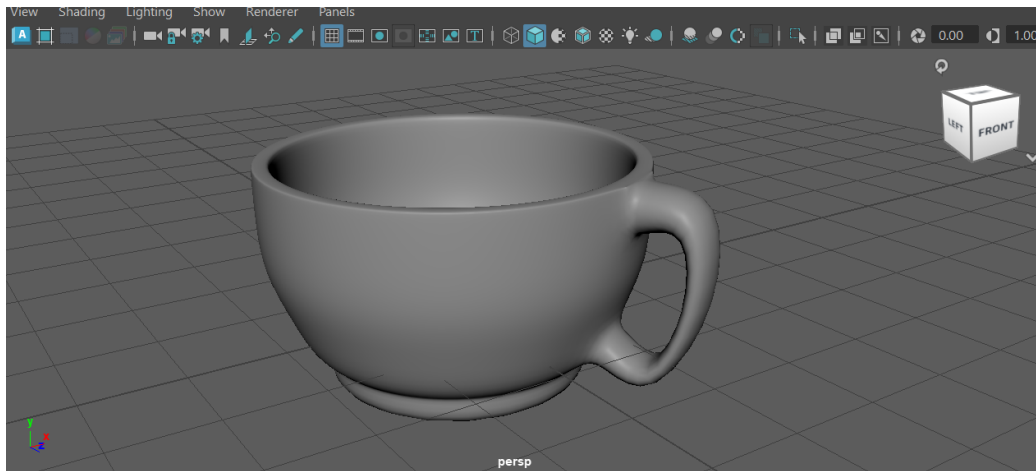


- 7- To give more curve to the top of the cup, first in “Edge” mode I double click on an edge above and I go to “Edit Mesh” and then to “Bevel”, in the small box at the right side of the screen I change the “Fraction” to 0.2. Finally, I do the same with the other corner of the top of the cup.



- 8- To finish the cup, I make the corners and edges look less pronounced for a better appearance. For that, I go to “Mesh” and select “Smooth”, only with slight effect, up to number 2 of smoothness.

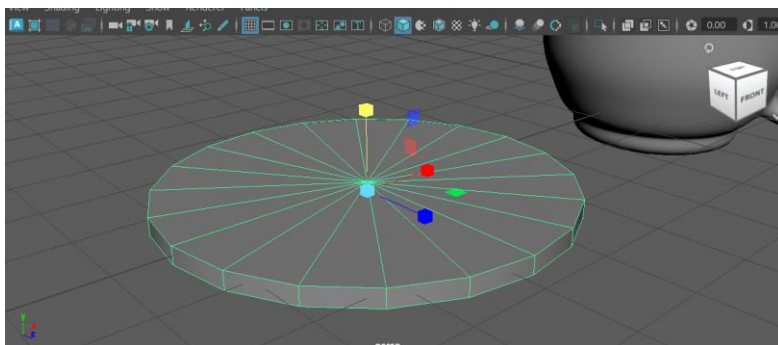




(Final look of the cup)

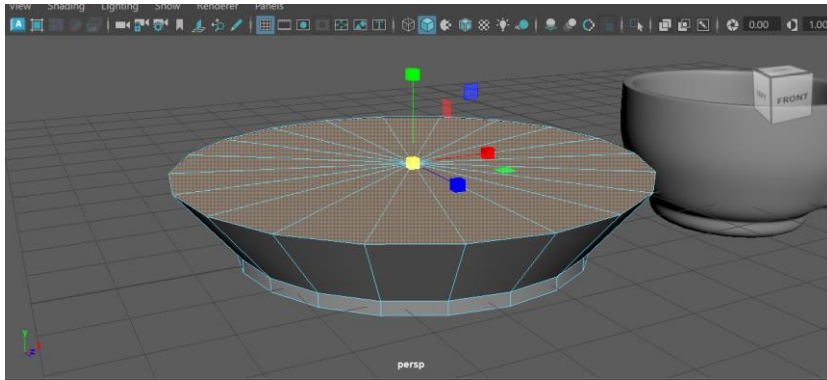
Saucer

- 1- First, I add a cylinder and scale it larger and flatter down.



- 2- I select all the top faces of the cylinder. In “Edit Mesh” I click on “Extrude” and increase up the Thickness to add more volume to the base.

For the next step, I “Extrude” again, this time is going to be taller. Then in the Scale Tool, from the center, I move all inwards until the desire shape.



- 3- Again, I “Extrude” increasing the Thickness up a little. Then I scale it, so that the upper part opens more outwards.

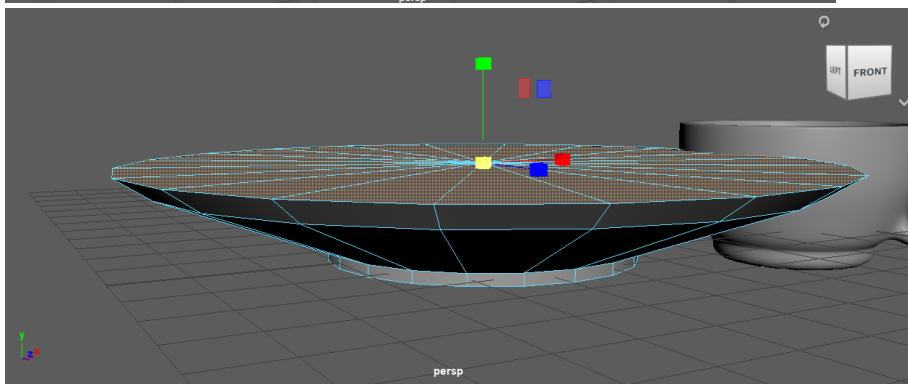
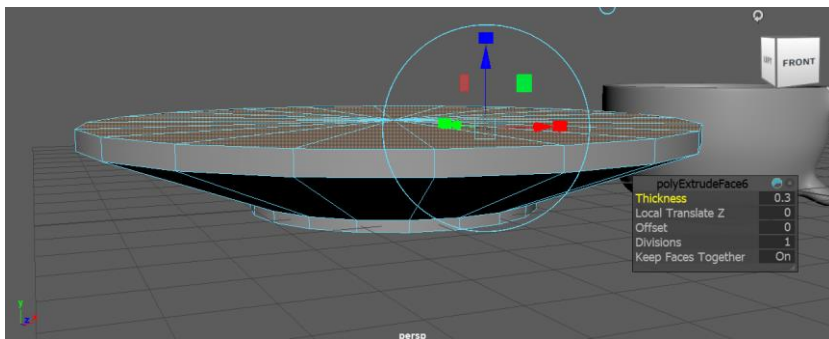
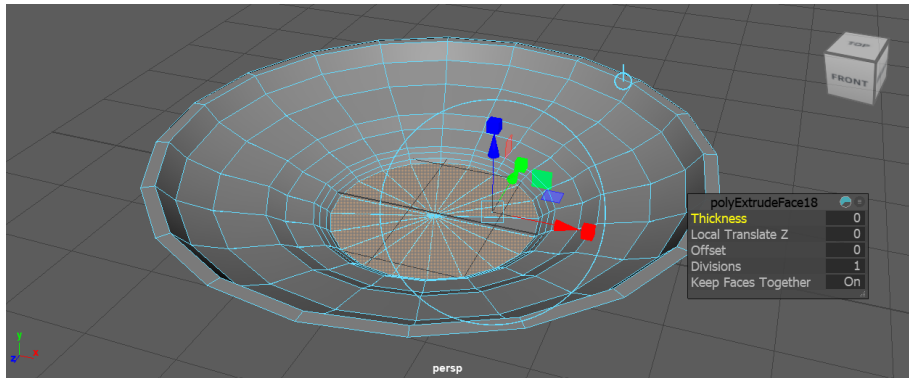


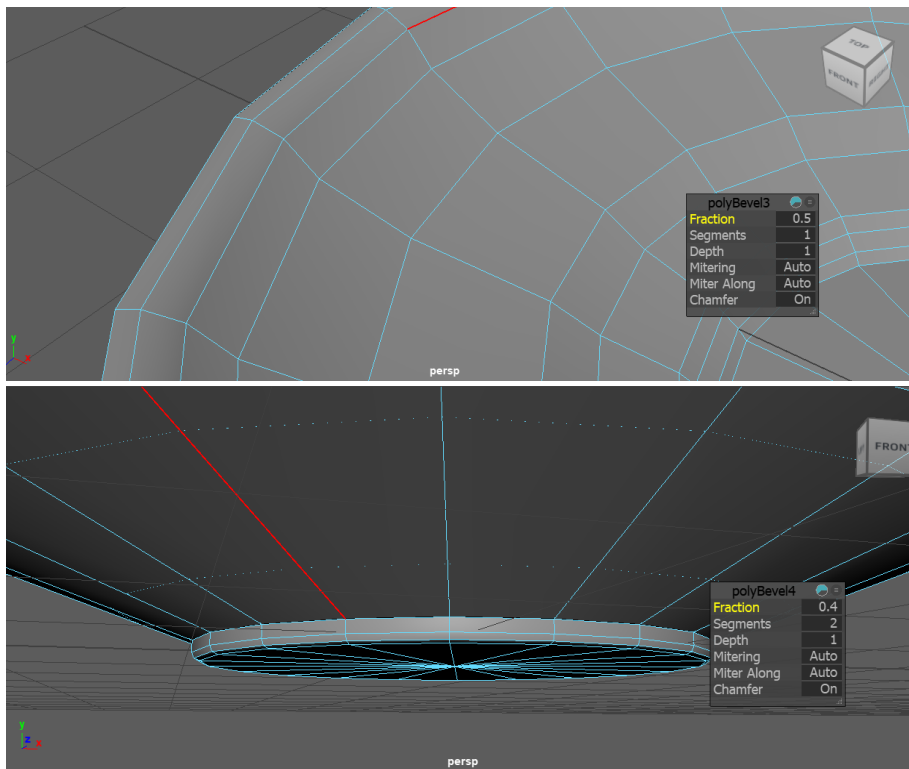
Fig. 4

- 4- Once more, in “Edit Mesh” I “Extrude” (I center it by pressing the “R” key), also by holding the “Shift” key while scaling just a bit inwards to create the edge of the saucer.

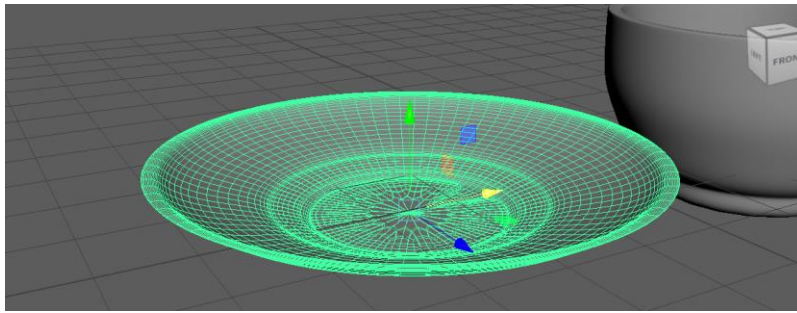
To create depth to the saucer, I click on “Edit Mesh” to “Extrude”, then move down a bit and scale it also inwards to make it a bit smaller, the same process a couple of times until I reach the end below of the saucer base and so do it correctly little by little.



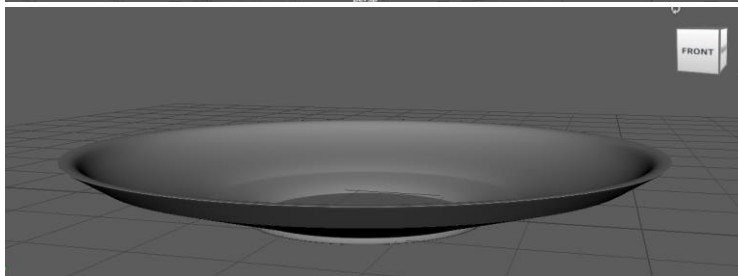
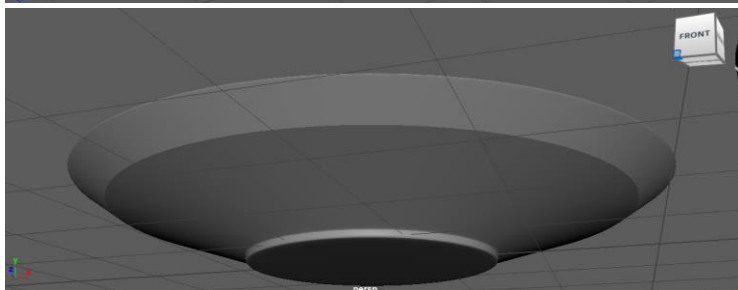
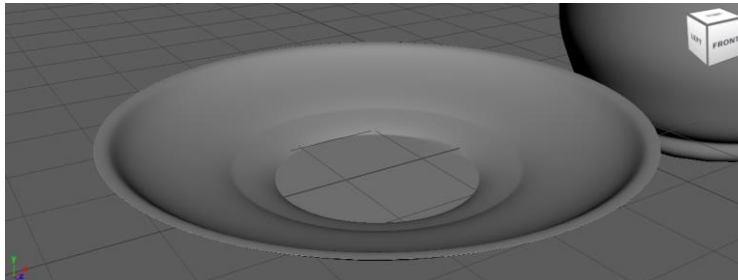
- 5- To make the top and bottom edges not very harsh, I select “Bevel” in “Edit Mesh”, the Fraction for both sides will be 0.4 and Segments 2.



- 6- Finally, I select “Mesh” and then to the “Smooth” option so that the corners and edges can be softer, it can look more realistic as a saucer.

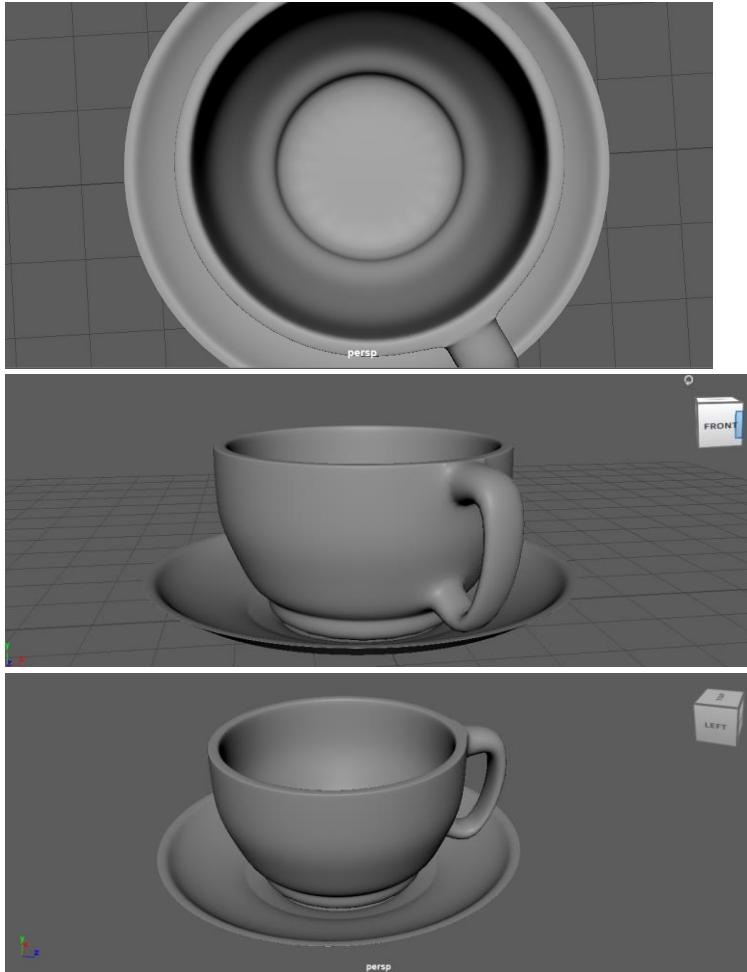


(Final look of the saucer)



Cup & Saucer (5 screenshots)





Reflection

- **Fig. 2:** The first two pieces of the cup handle I made it smaller at the beginning when going to Extrude so when I click on the “Bridge” option it didn’t have enough space between the body and the handle cup. So, I needed to make larger the first two pieces of the handle, to have the correct space between them.

Image List

- **Fig.3:** When moving the corner vertices inward, I didn’t do it right at first when placing it correctly because I had to make sure it was centered when moving it by looking different perspectives of the cup, so it wouldn’t go to the right or left side.

- **Fig. 4:** When making the bottom from inside of the saucer, at first it didn't turn out well because I had to try to go little by little several times with the same process of going down with Extrude and scaling it also a bit smaller each time, until I reach the bottom. I could have avoided creating more faces each time when I was scaling it, but in the end, it gave a good result.

Bibliography

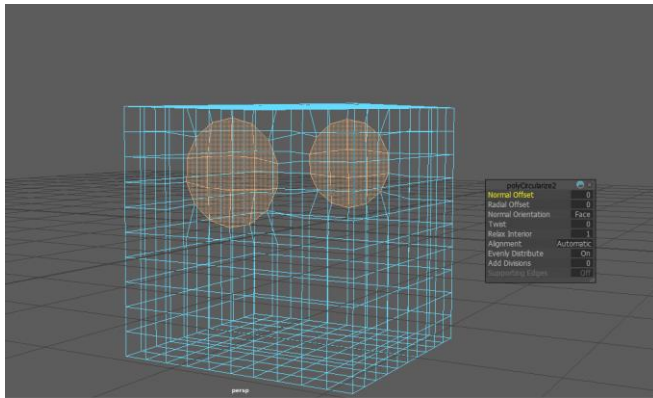
- Maya, Autodesk, 2024.
- Maya Simple Cup Modeling Tutorial, JS 3d Modeling, YouTube, 2023.
- Autodesk Maya 2023 Tutorial Model a Coffee Cup, Parveen 3D Artist, YouTube, 2022.
- Maya 2020 Modeling Tutorial Simple Plate Turn CC on, Aneta V, YouTube, 2021.
- **Fig. 1**, (Google: Porcelite Cappuccino Cup 16oz/455ml, Coffeecups.co.uk)

Week 5

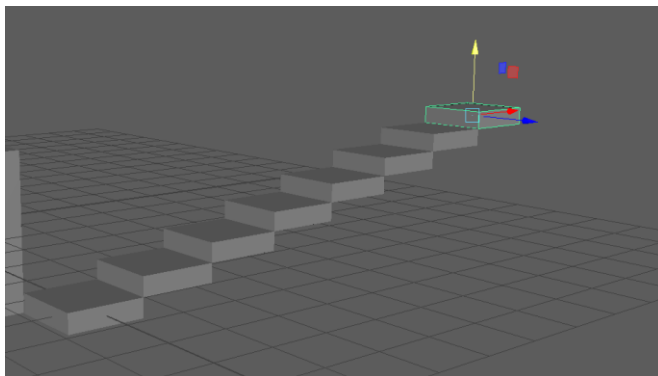
Date

14/11/2024

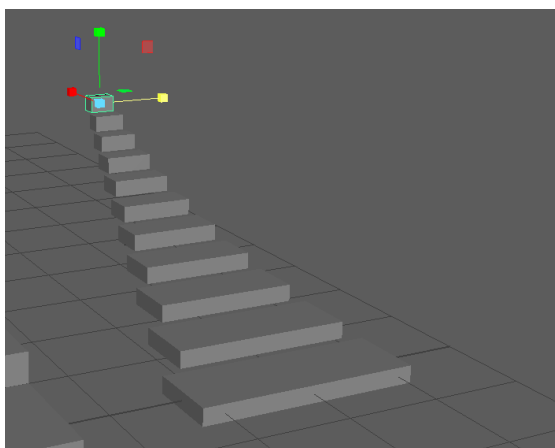
Some exercises that we have practiced in class:



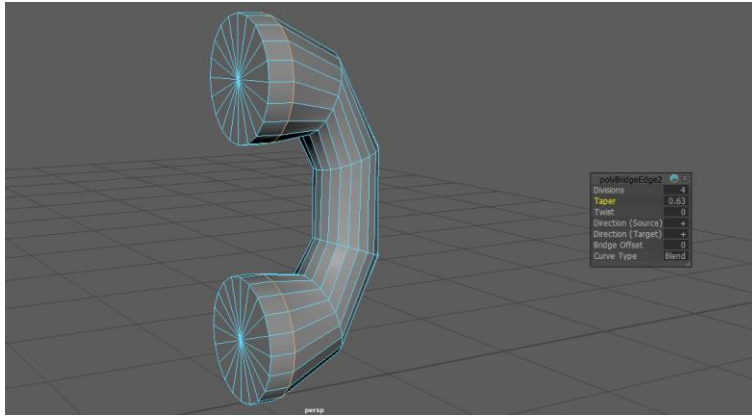
(Select faces then **Edit Mesh** to **Circularize** and finally **Bridge** in **Edit Mesh**)



(1. Duplicate cube 2. Shift + D)



(1. Duplicate cube 2. Scale, Shift + D)



(First, in object mode I combine both cylinders in **Mesh to Combine**. Select the edge and click on **Bridge**)

Week 6

House

Date

23/11/2024

Introduction

The idea of this project is to try to create a simple house in Autodesk Maya by starting with a cube. I will use specially the **Extrude** option in this project when giving depth to the windows and doors. I think the new challenge would be when doing the roof and if I create a fence around the terrace.

I have been doing some research (the images shown below) to have a few examples of houses to create in 3D. I think the design of the house that most convince me is **Figure 1**, it can be a good start when creating a 3D house for the first time.



(Figure 1 & 2)



(Figure 3)

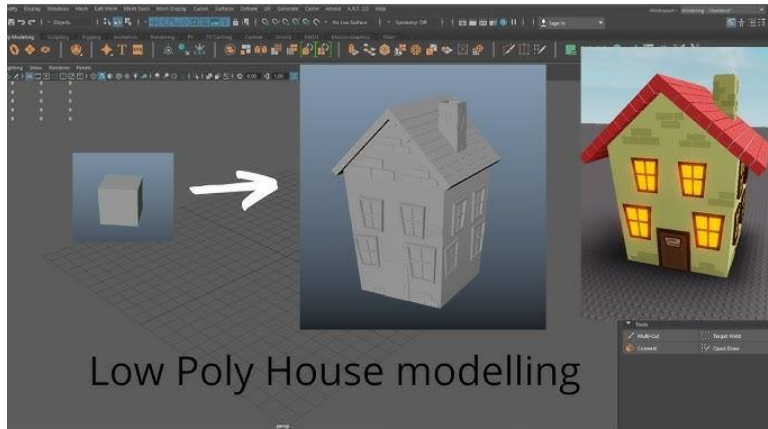
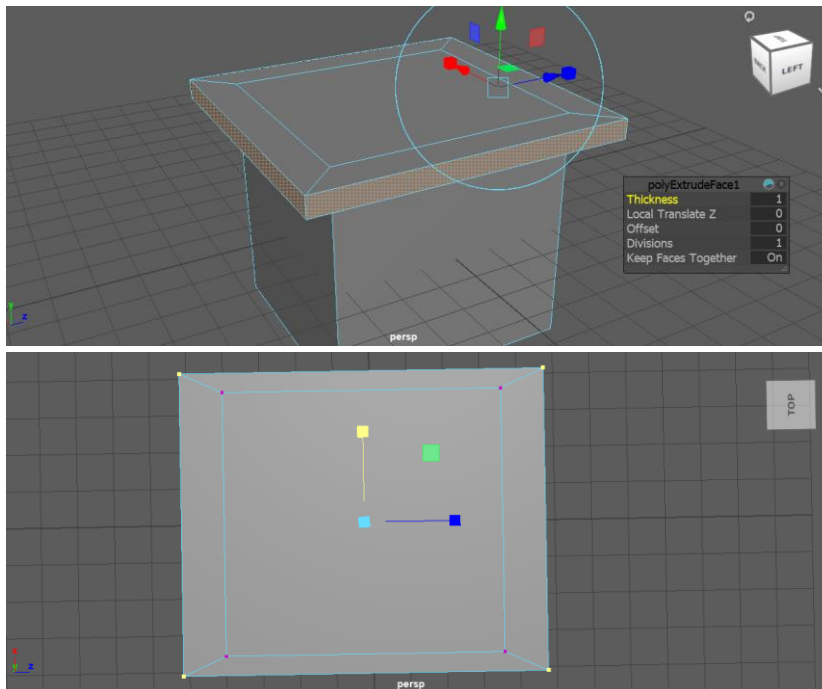


Figure 4. Another example of creating a house: How to model low poly house in Maya, msprenders, YouTube.

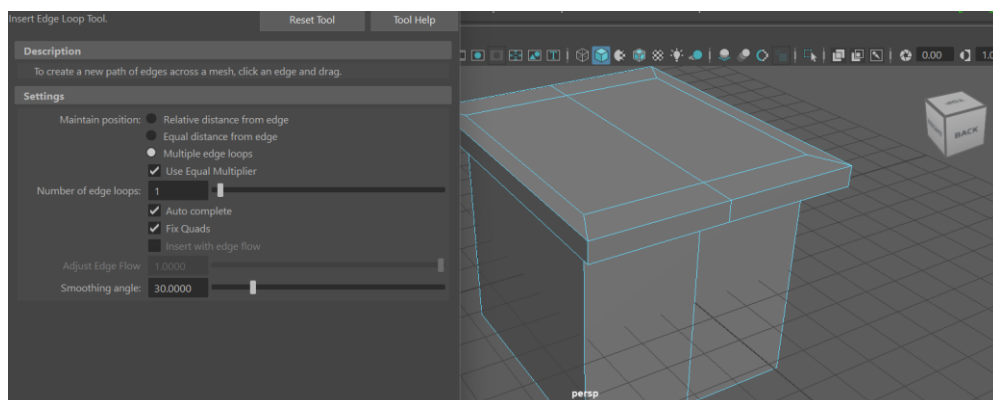
- 1- First, I add a cube and scale it bigger. Then in **Mesh Tools** to **Insert a Loop**, it will be placed almost at the top of the cube, increasing the **Thickness** to **1**.

In **Face mode** I select the four faces that it was created when I insert a loop, to **Extrude** outwards doing the shape of the roof. Also, in

Vertex mode I select the four vertices which are in the corners of the ceiling to scale it inwards.

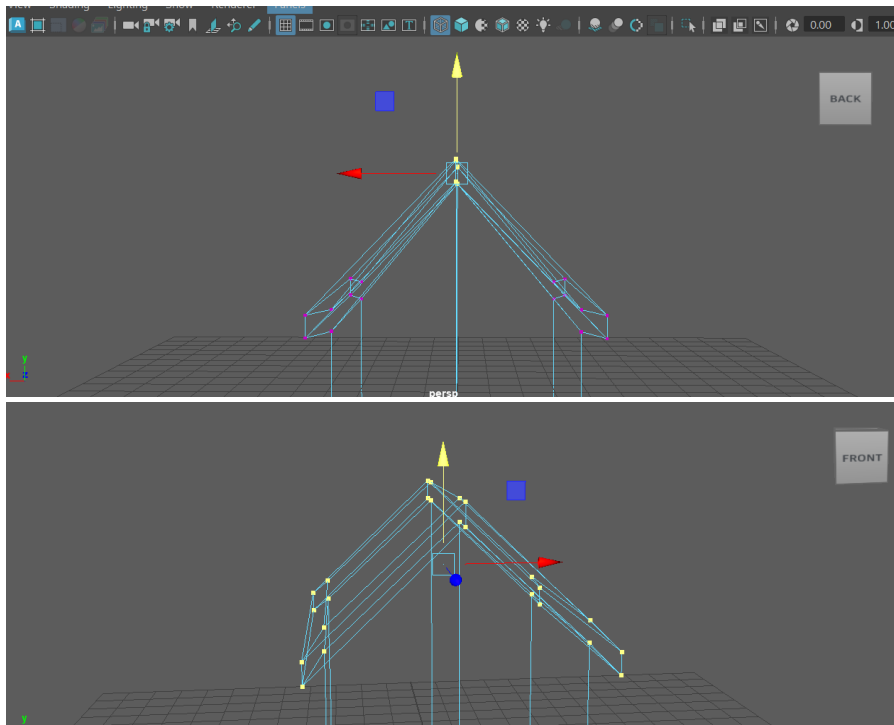


- 2- Next, I will insert another edge Loop but this time in the middle. I go to **Mesh Tools**; I click on the right side with the shape of a square and I choose the numbers of **Edge Loops**, to just **1** edge loop and then I click on the center.

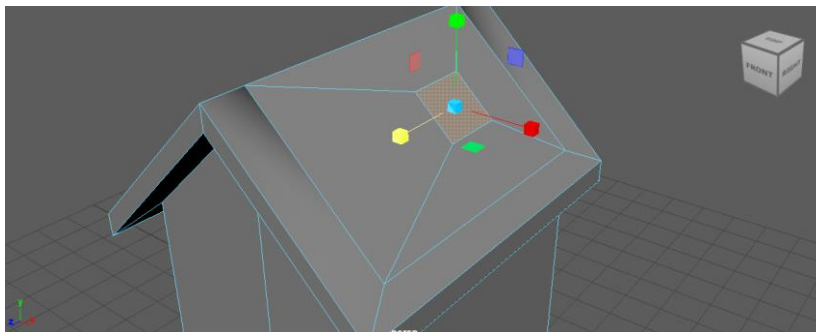


- 3- Now I will make the roof taller by selecting the vertices that is found in the middle above, which would be the base of the roof. Then with the **Move Tool** I click on the up arrow, I press until I have the desire

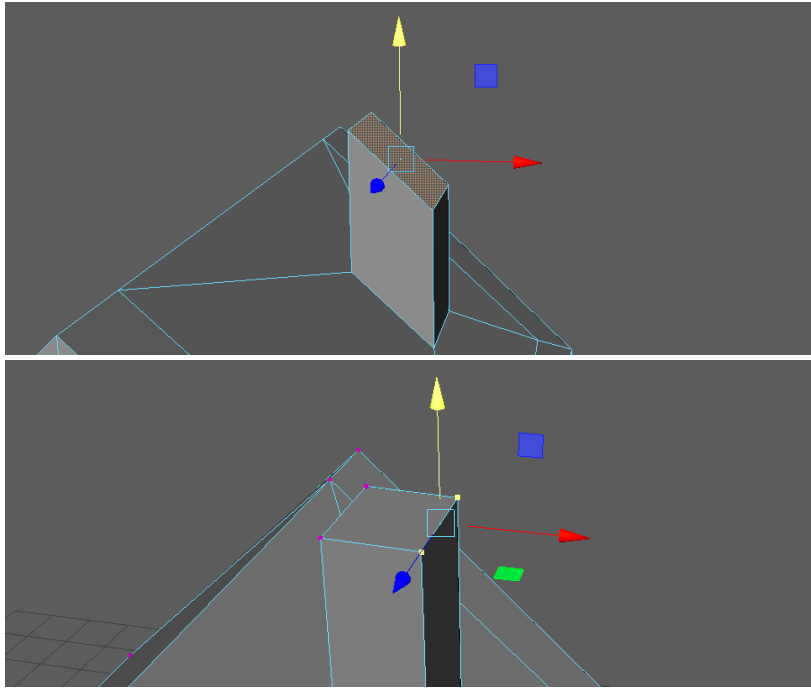
height. I also move down only with the vertices of the sides and all the roof but just a little.



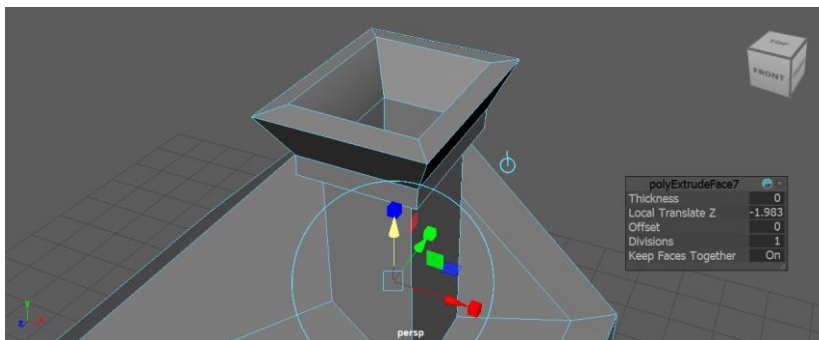
- 4- To make the chimney, in **Face mode** I select one face on the right side of the roof and in **Edit Mesh** I click on **Extrude** and scale it smaller and then I move it to the right side.



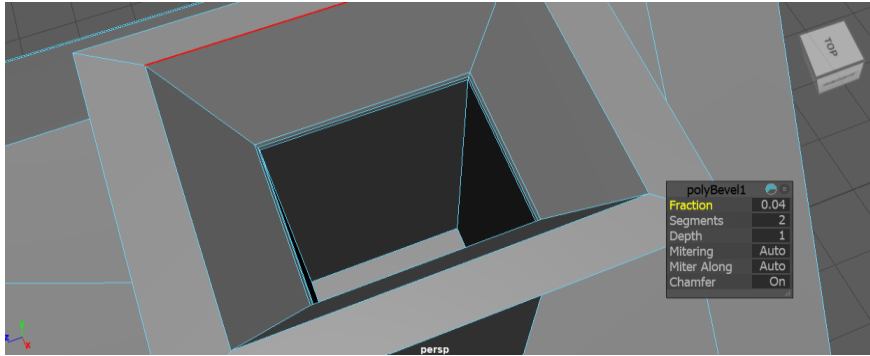
- 5- Once is done, I **Extrude** again, but this time to give more shape to the chimney by moving it up a little. Then in **Vertex mode** I select the two vertices that are tilted to the right above the chimney and move them up to the same height as the left side.



- 6- To give the chimney more shape, I **Extrude** two times more, **moving** it up and **scaling** at the second time outwards when extruding. Then I will scale inwards the face of the base of the center of the chimney and to finish, I **Extrude** the base moving it downwards.



- 7- The next thing I am going to do when selecting the four surrounding edges (situated above and inside the chimney) is to go to **Edit Mesh** to **Bevel** changing the **Fraction** to **0.04** and **Segments** **2**.



8- In **Mesh Tools**, I select Insert **Edge Loop** and in the channel box that appears on the left I choose the **Equal Distance from edge** option. I then click on an area at the bottom of the house and move it almost to the top.

Next, I will create two more edges when making the door. I select on **Mesh Tools** and then **multi-cut**, I click on the edge that is higher and from there a blue dot will appear and then I click on the edge below, the line between the two automatically appears and I move it to the correct position. I do the same process with the other side.

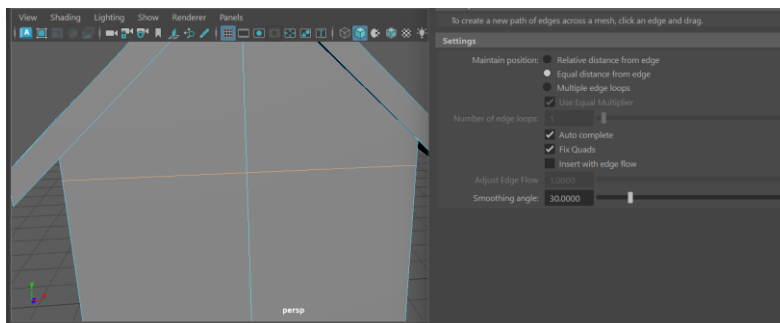
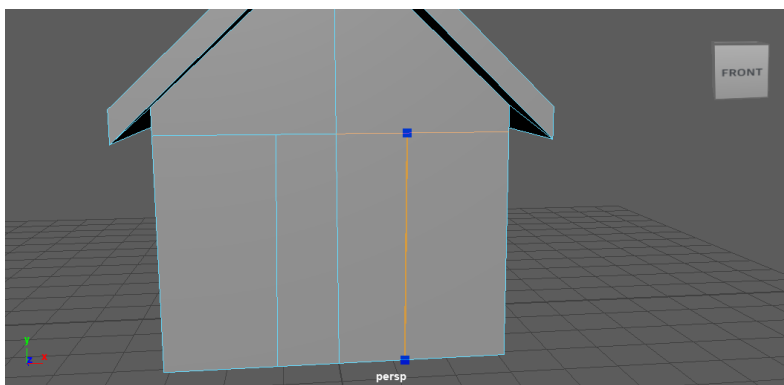
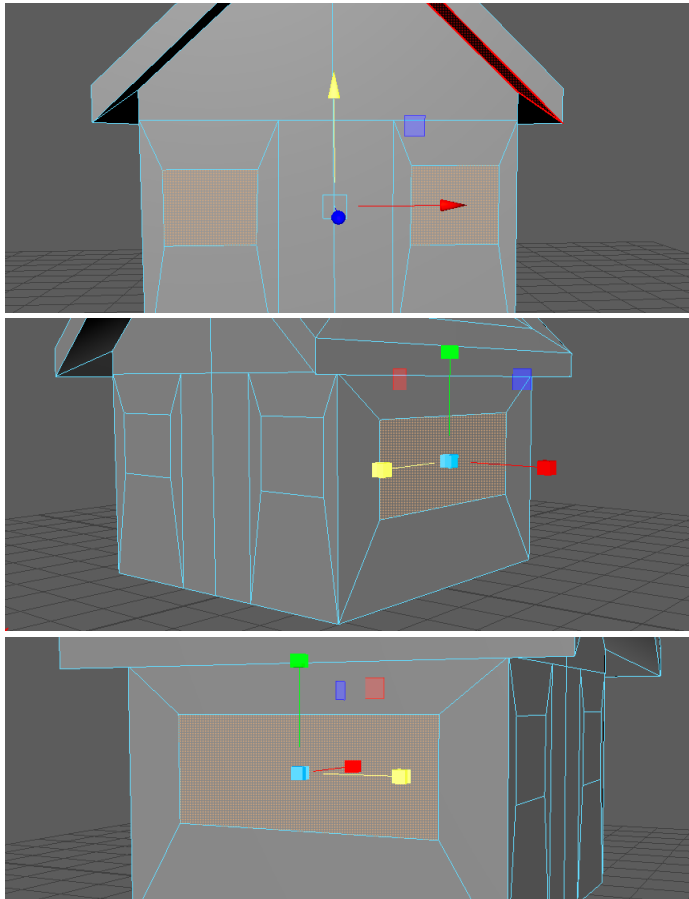


Fig. 5

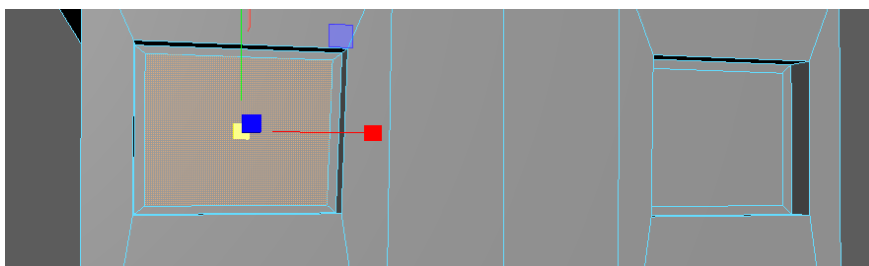


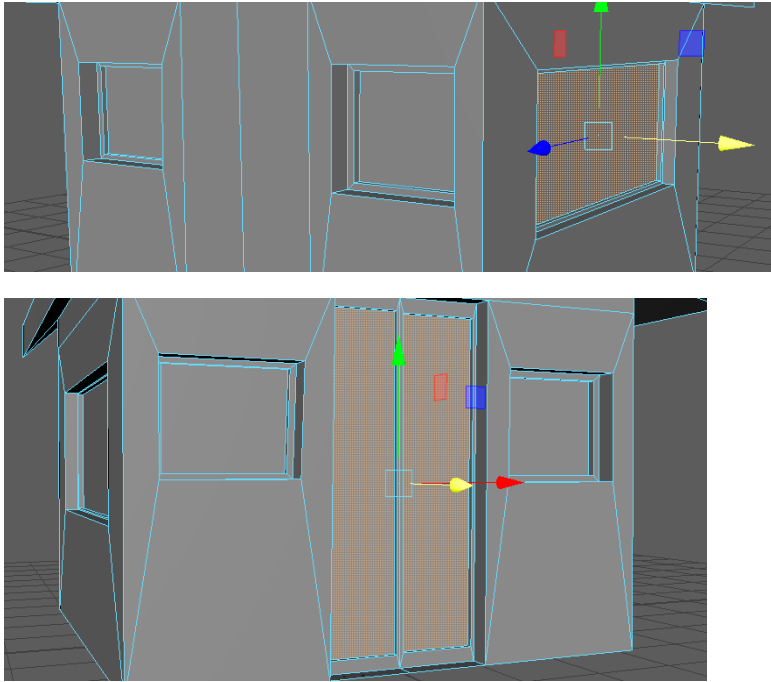
9- Now, to start creating the windows, in **Face mode** I select one side that is front of the house later in the option of **Edit Mesh** I select

Extrude and with the **Scale** and **Move tool** I make it smaller, a bit longer and move it further up. The same with the other side.
And for the other two sides of the house, I will also do the same but by scaling it I stretch it more.



10- To give more shape and depth to the four windows and door I go to **Edit Mesh** to **Extrude** from there with the **Move tool** I move further inward, the same will be done on the same window and door but scale a little smaller and again giving it depth.





But making sure that the two faces of the door will be scaled separately at first.

11- In **Edge mode** I will select only the edge that is right in the middle of the door, and from there I will go to **Edit Mesh** to the **Bevel** option. At the right appears a channel box where I change the **Fraction** to **0.1** and **Segments 2**. This will create a better shape and some more space.

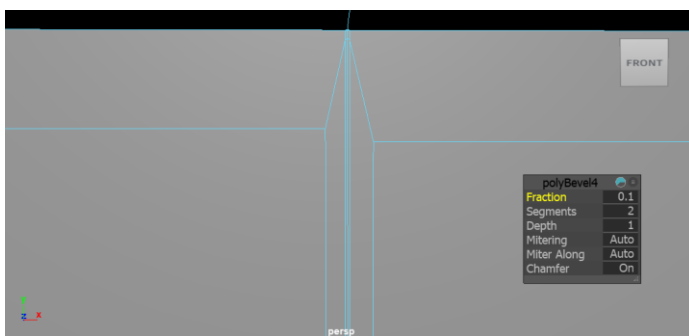
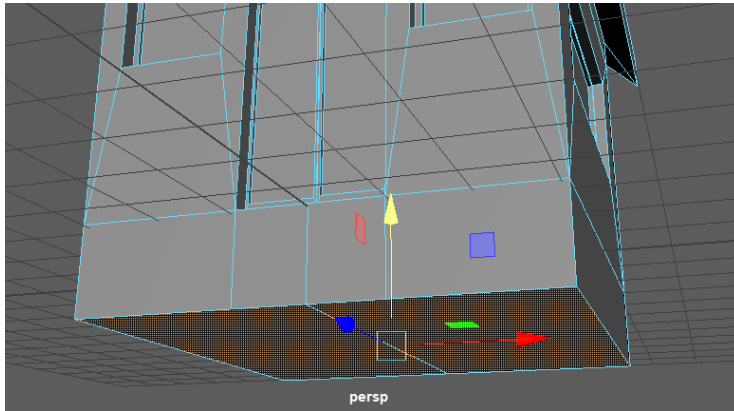
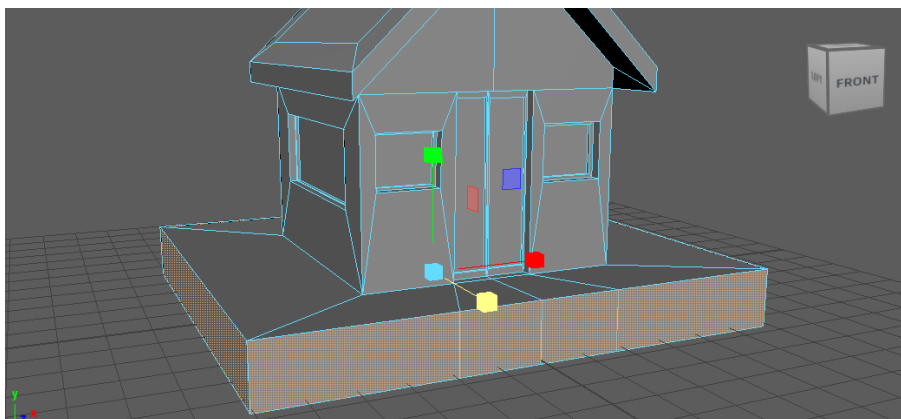


Fig. 6

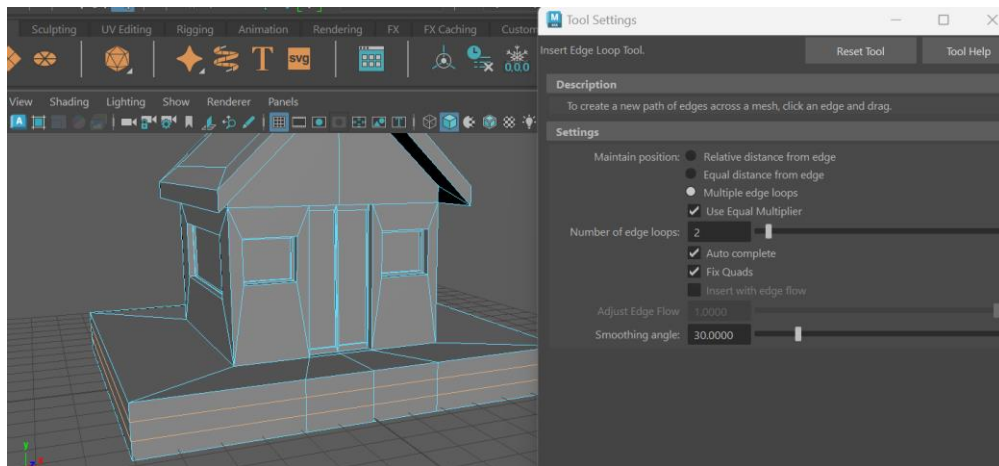
12- Now in **Face mode** I click on both bottom faces of the house and with **Extrude** option I move further down to create height and stairs for the entrance of the house.



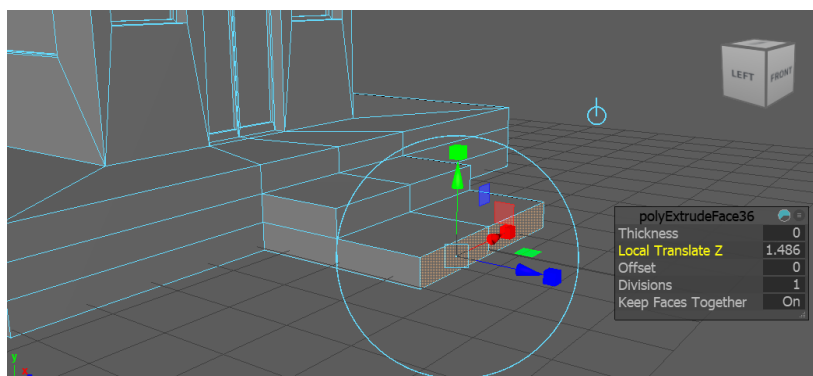
13- In **Extrude** I **scale** the faces of the bottom of the sides of the house to give more volume to what would be like the terrace.



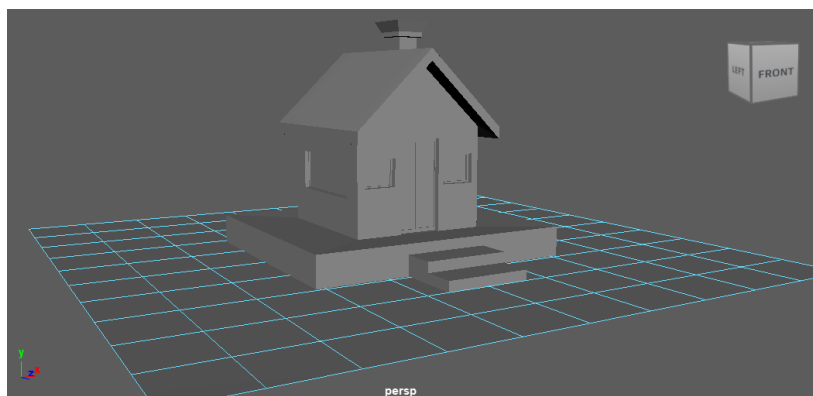
In **Mesh Tools** I select **Insert Edge Loop** and, in the **Tool Settings**, I change to **Multiple edge loops** and then **Number of edge loops** = 2. Finally, I click at the bottom side of the terrace.

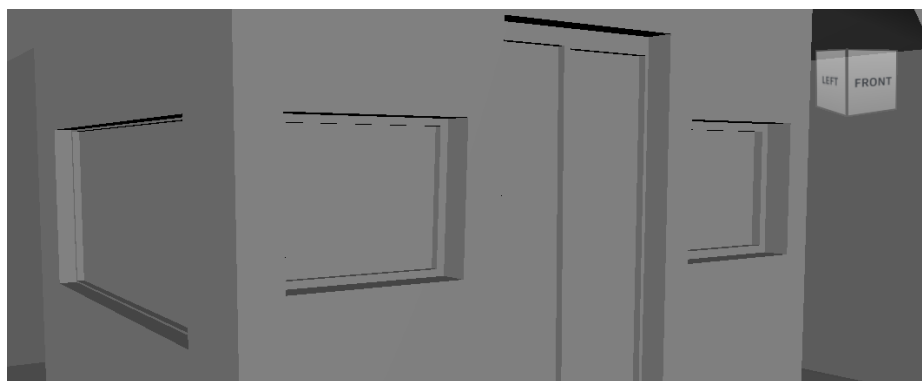
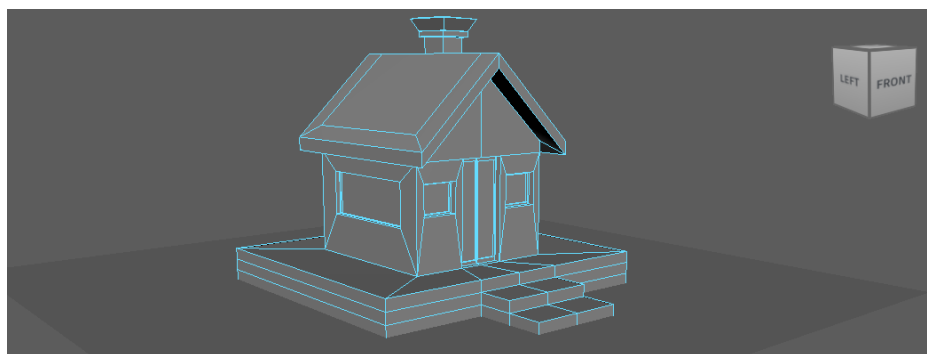


14 – Now, to create the stairs I will select four **faces** that are in the bottom front and center of the house, then I will **extrude** a little outwards and again but this time I only **extrude** the two faces that are in the bottom row.



15- To finish, I will add a wide **Polygone Plane** to be the ground.





Reflection

- There have been many times that I have had to Extrude and be careful when scaling by going slowly to get it right.
- **Fig. 5:** In this project I got used to the quick way of creating two or more edges when changing to Multiple edge loops in the Tool settings when Inserting an Edge Loop in Mesh Tools.
- **Fig. 6:** In Bevel it has helped me to round and enlarge the vertices and in this case the edges.

Bibliography

- Autodesk, Maya, 2025
- Modeling in Maya 3D House, Innovledia, YouTube, 2022

Image List

- **Fig. 1:** How to Model a 3D House in Autodesk Maya / 3D House Modeling Tutorial, Innovledia, YouTube, 2022
- **Fig. 2:** Maya Modelling – How to Model a House in Autodesk Maya 2017, 3DWolf, YouTube, 2017
- **Fig. 3:** How to Model a Cartoon House in Maya 2018, MH Tutorials - The Modeling Hub, YouTube, 2018

Dumpster

Date

30/11/2024

Introduction

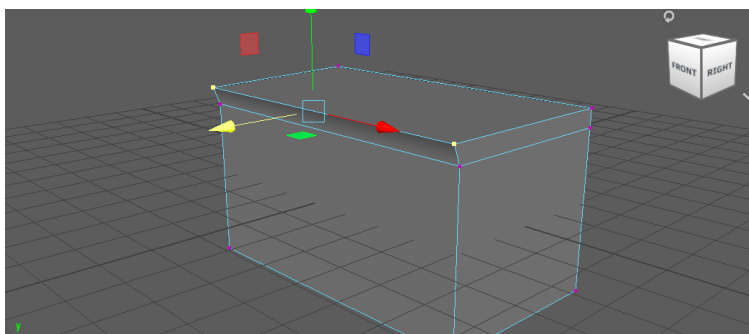
In this project I will model a dumpster starting with a cube it will almost be the same as the dumpster image shown below. The challenge in this

exercise would be to shape the details and depth that are shown outside at the edges of the dumpster and the cover.

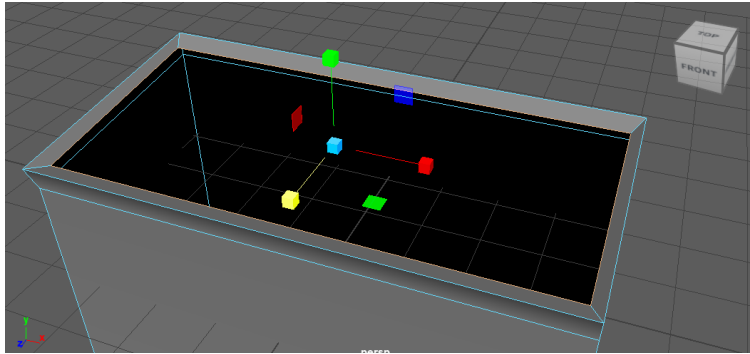


Fig. 1 (Image: What Can You Put in the Dumpster at Your Apartment?, Hignell Rentals Blog, Google)

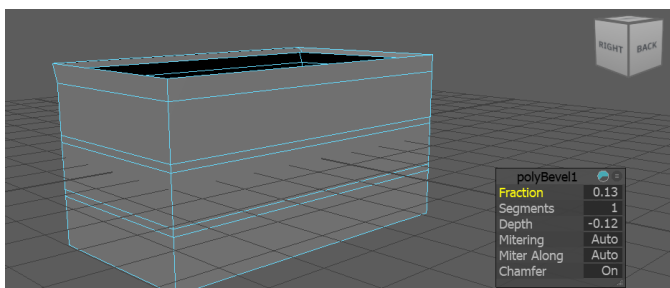
- 1- First, I add and **scale** a cube. I **Insert an Edge Loop** in **Mesh Tools** and I move it almost to the top, then with the **Move** tool I move a little outwards the two vertices that are on one side above.



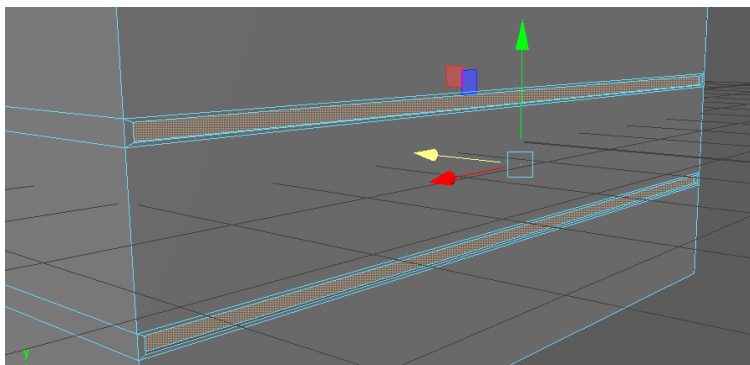
- 2- The next thing I would do is delete the face above by clicking **Delete** on the keyboard. I double click on an **edge** at the top and in **Edit Mesh** I go to the **Extrude** option and scale it a little inwards.



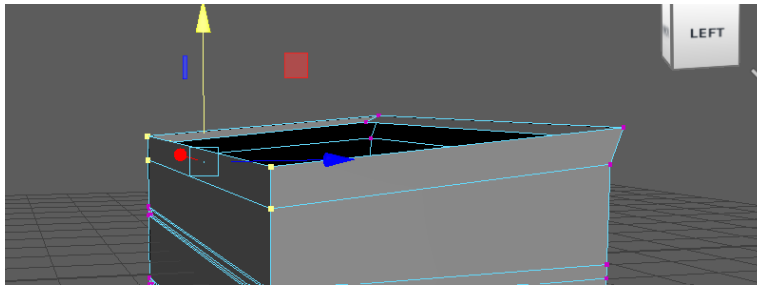
- 3- Now, I will add in the middle two edge loops in **Mesh Tools** to **Insert an Edge Loop** and I change the number to 2 edge loops with the Tool settings. Then in **Edit Mesh** to **Bevel** I change the **Fraction** to **0.13**.



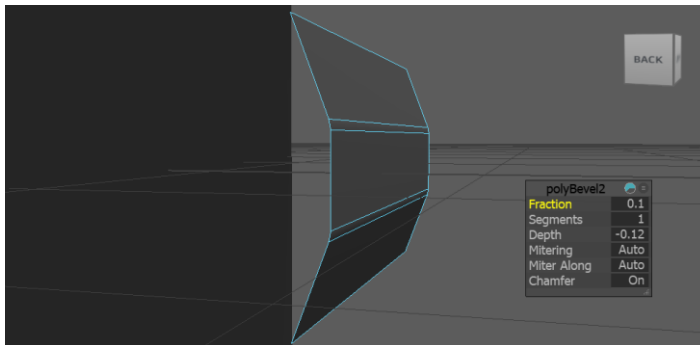
- 4- From there I select the two faces that are in between and in **Extrude** I **scale** it just a little and by selecting again in Extrude I **move** both faces inwards.



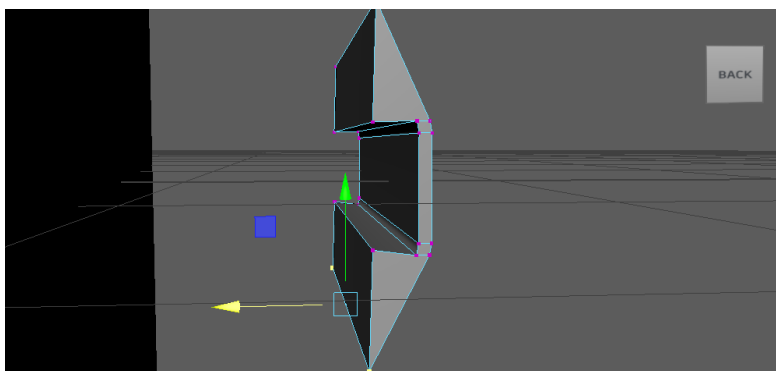
I also select the first two lines of vertices and with the **Move Tool**, I move it down, so that the dumpster is somewhat inclined.

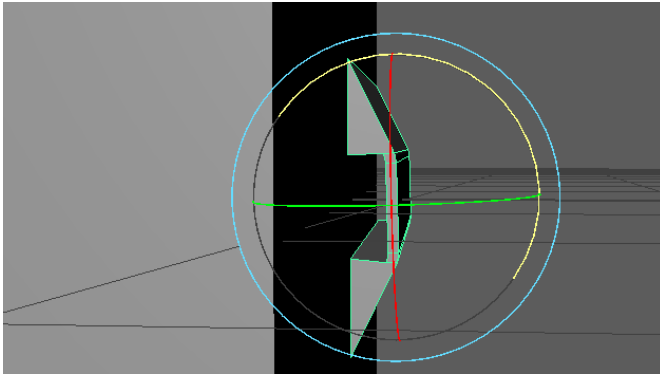


- 5- I add another cube, and I scale it. Two **Edge Loops** are added and then in **Bevel** I change the **Fraction** to **0.01**. Then I delete by selecting the faces, leaving only half of what was the cube. I select the middle face and **move** it outwards.



- 6- With all the **faces** selected I go to **Edit Mesh** to **Extrude**, and I **move** it outwards. Then I first select the **vertices** of the second row from one side above and **move** it down a little, I do the same with the vertices of the first row below but moving it up. In **Object Mode** I **rotate** and I **move** it to position correctly on one side of the dumpster.





- 7- I add a **cylinder**, scale it very fine and small and select all the **faces** from the bottom half to delete it. I place it on the edge of a top corner and **duplicate** it with **CTRL+D** and then I **move** it to the other side.

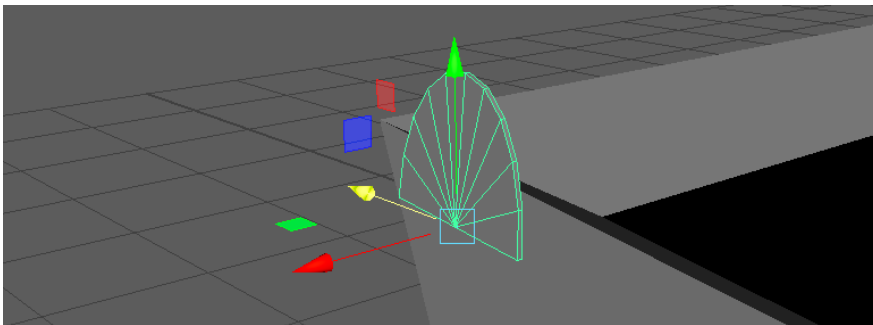
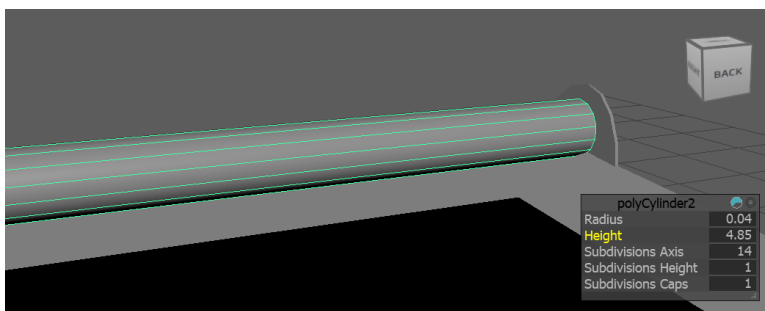
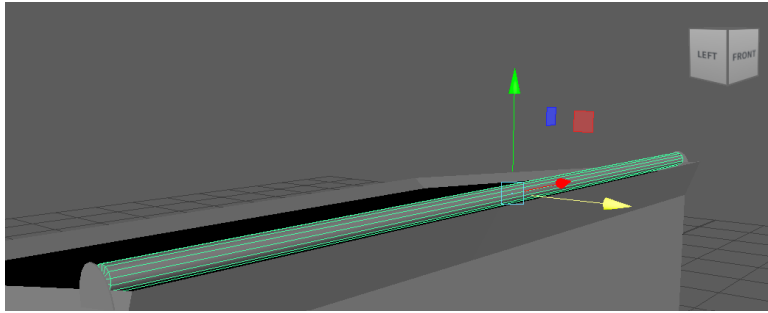


Fig. 2

- 8- I insert a **cylinder** changing the **Radius** to **0.04** and the **Height** to **4.85** so when placing it fits on the two ends of the two small pieces created from the previous step (7-), to then make the lid of the dumpster on the next step.





9- Now to make the lid I insert a **cube**, **scale** and **move** it on top of the dumpster. Then I delete the bottom faces to only leave the top part for now. In **Face mode** I select first one of the faces, I go then to **Mesh Tools**, I insert **6 edge loops** and in **Edit Mesh** to **Extrude** I change the **Thickness** to **0.1** and **Offset** to **0.05** I do the same to each of the faces.

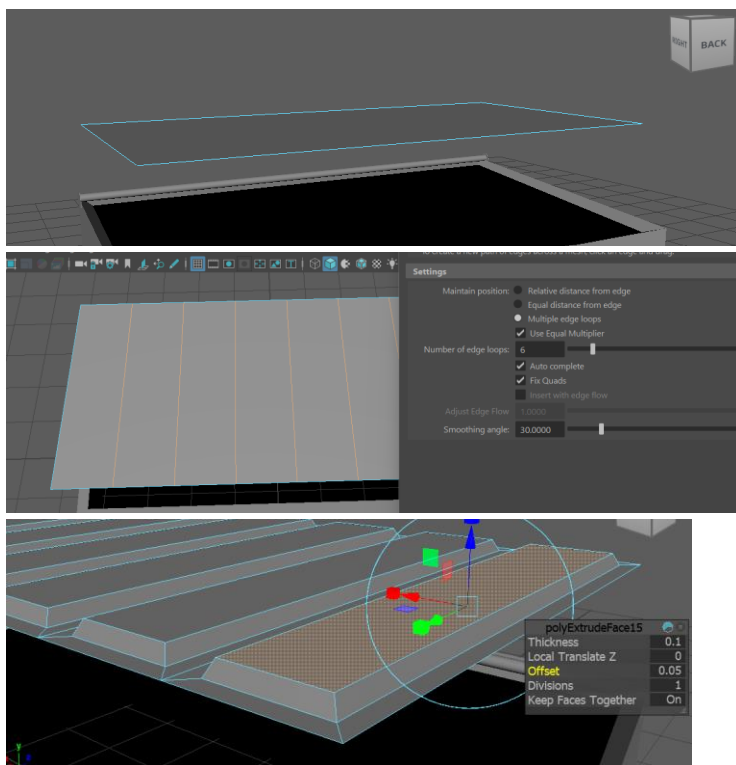
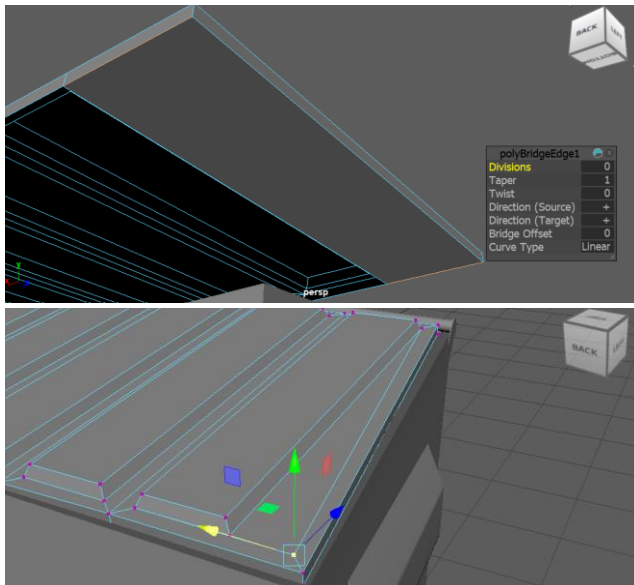


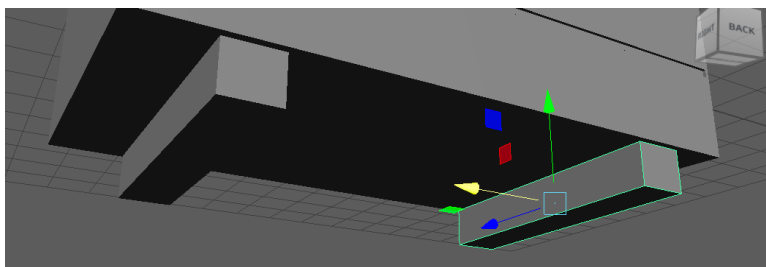
Fig. 3

10- Next, I give a little more thickness to all the surrounding edges by double clicking on an **edge** and then select **Extrude** option.

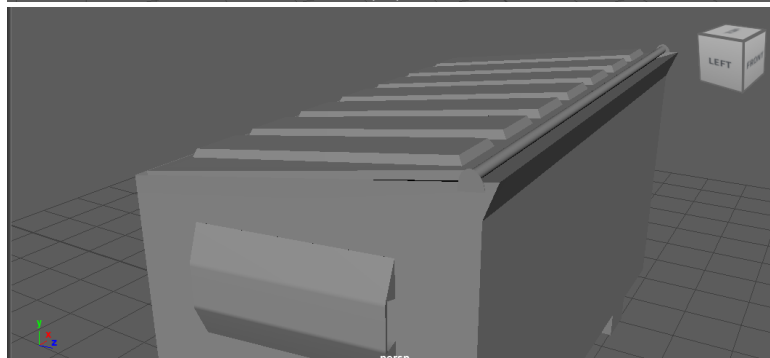
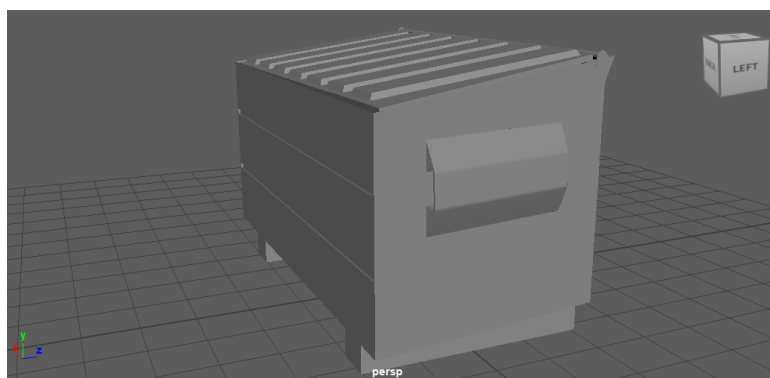
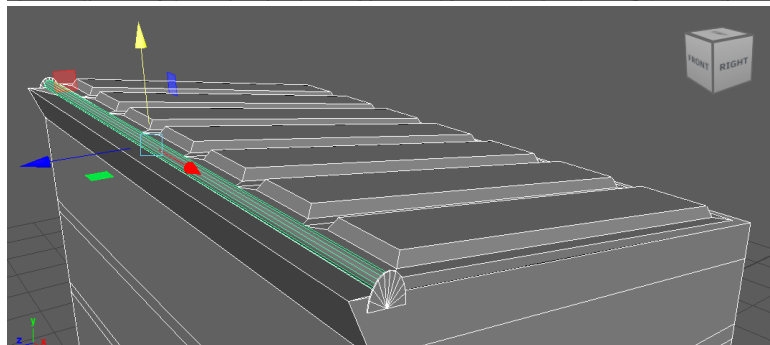
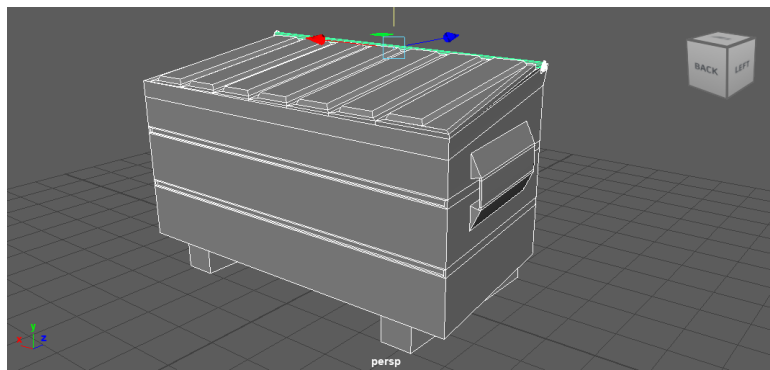
To close or join as another layer, I select an **edge** from one end and another at the same time, situated on the same face and finally in **Edit Mesh** I click on **Bridge**. The same process is repeated with the rest.



11-To finish, I will include some supports on the bottom base of the dumpster, to do this I will need to insert another **cube**, **move** it and **scale** it until it has the correct shape and position. I duplicate it with **CTRL+D** on the keyboard and then move it to the other side.

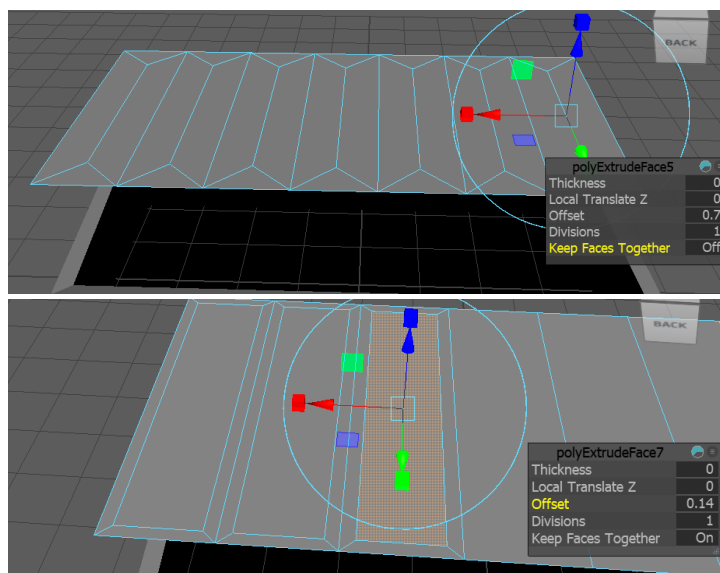


Final look of the Dumpster:



Reflection

- There was a time when adding volume towards the bottom of a mesh made everything look black and to solve it, I added thickness this time in the direction above and it returned to the previous look.
- **Fig. 2:** There was a part where I didn't follow the steps in the tutorial because they didn't work for me, or I couldn't find the options when dividing only a part of one side into several edges to make it protrude upwards from the dumpster. What I did in the end was to insert a cylinder and delete the faces of the middle and what is the volume.
- **Fig. 3:** In section 9 I had an issue when extruding several faces at the same time and what I did in the end was go one by one until I got the right shape.



Bibliography

- Autodesk, Maya, 2024
- Modeling Dumpster in Autodesk Maya 2019, 3DWolf, YouTube, 2019

Image List

- **Fig. 1:** What Can You Put in the Dumpster at Your Apartment?, Hignell Rentals Blog, Google. <https://blog.hignellrentals.com/what-can-you-put-in-the-dumpster-at-your-apartment>