ASSIGNMENT 1:

DOCUMENTATION PROCESS

AVA HALES

CHESTER THE VIKING

Assessment 1 – Character Modelling and Sculpting

RESEARCH AND CONCEPT DEVELOPMENT

Chester's Traits

Race: Scandinavian

Age: 23

Sex: Male

Height: Not sure

- For the height, the general idea is that my character has massive shoulders and a large torso, however very short and stumpy legs.

Weight: Not sure

- Following on from the height, I want my character to be stocky, but not fat. Very muscular, but due to his height and broad shoulders, he will be quite heavy

Build

- As previously stated, Chester is going to have a very wide build, with really wide shoulders. I would also like him to have very large and oversized arms, similar to the character Wreck-it-Ralph [Figure 1], Mr Incredible [Figure 2] and the Viking in [Figure 3]

[Figure 1] – Wreck-it-Ralph

https://wreckitralph.fandom.com/wiki/Wreck-It_Ralph_(character)

I really like the build, weight and height of Wreck-It-Ralph. He captures the massive arms, hands and shoulders that I would also like my character to have as well as the short legs. In addition, I really like the nature Ralph gives off, he is strong but friendly, warm and affectionate. Like a gentle giant.

Other features he possesses that I would like to mimic are his facial features - his eyes are close together, his nose is unrealistic and cartoon like and his ears stick out

[Figure 3] – Viking

https://clement_malarge.artstation.com/projects/mqr1ea

[Figure 2] – Mr Incredible

Mr Incredible had large shoulders, and small legs, but he is much leaner than Wreck-It-Ralph, which is something I would like for Chester.

https://the-incredibles.fandom.com/wiki/Robert_Parr

I also really like this Viking, who has a very large build that captures what I want in my character. I also love his clothes and his props!

Occupation: Viking

Attire and Props:

- Refer to [Figure 4], [Figure 5], [Figure 6]

[Figure 6] – Viking

https://www.pinterest.com.au/pin/341358846759593817/

As seen here in Figure 6, it could also be interesting to leave some of the Vikings upper torso exposed, with his skin covered in tribal tattoos

[Figure 4] – Viking from Assassins Creed Valhalla

https://www.thegamer.com/stuntman-cosplay-eivor-assassins-creed-valhalla/

Looking at all three Viking images here, I would like my character to be messy and rough. I would like him to wear multiple layers of clothing, including fur around his neck, a tunic, woollen trousers, boots etc.. I am not entirely sure about the finalisation of his props and clothing yet as I would like to model his base first and work from there.

I am also undecided about his hair, whether it be short and spiky, like Wreck-it-Ralph, or long and ratty, like the Vikings seen here. I do however, like the long hair and shaved head on the side. In addition, I'm also unsure about facial hair as I have never modelled hair before, and I don't know the challenge it may pose as yet.

[Figure 5] – Viking

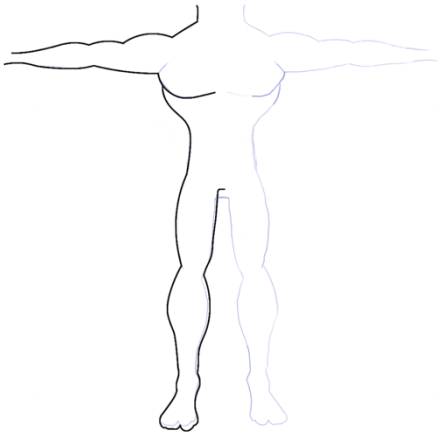
https://www.artstation.com/artwork/d0ggK

Figure 5 is really interesting as it encompasses the scale of the arms, I would like my character to possess

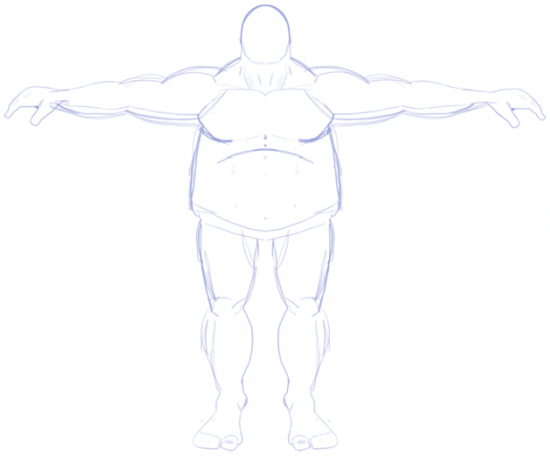
DELIVERABLE 1:

MODEL SHEET

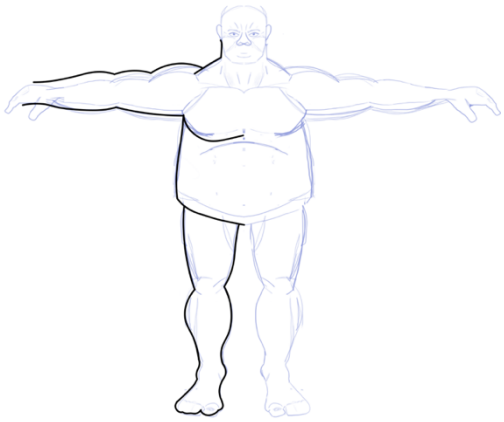
1. **Experimenting with proportions and starting to use tablet**. I initially begun by creating sketching the male body, working out its basic anatomy and working with the tablet for the first time.



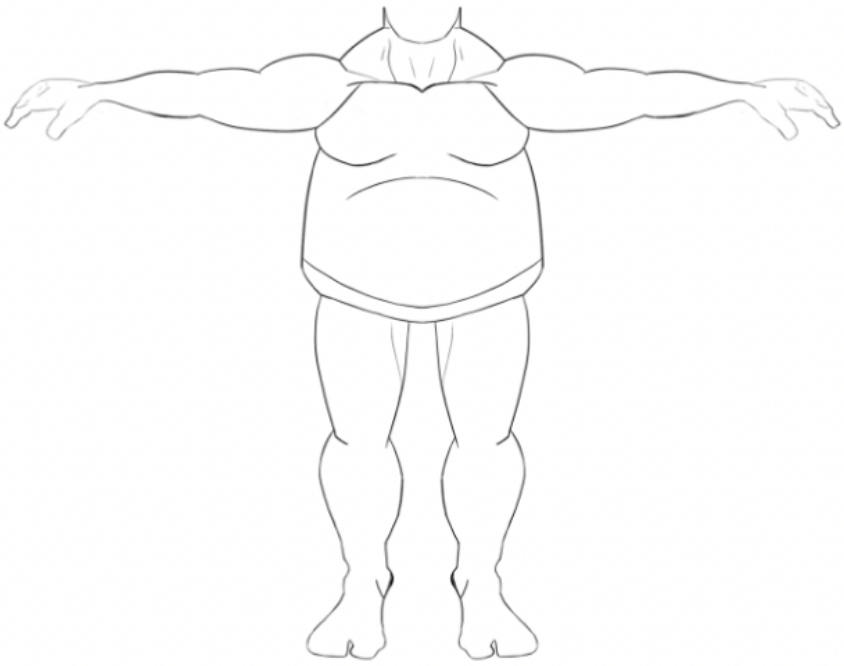
2. **Sketching**. Once I was relatively comfortable with the tablet and I started sketching the outline for my character



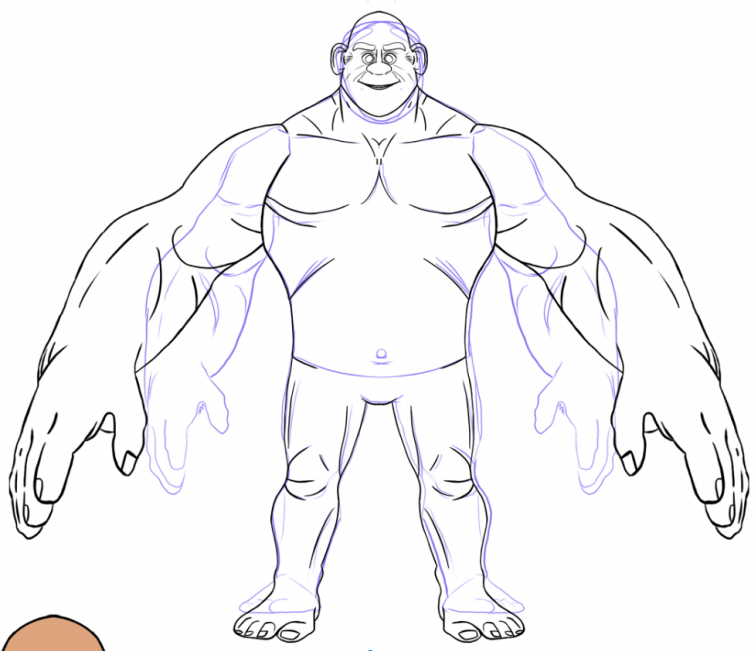
3. **Outline**. I then added another layer and created single stroke lines. This step was difficult, and it involved trailing different brushes and flow percentages



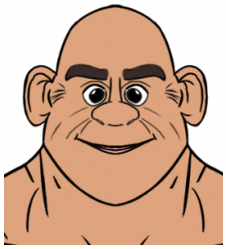
4. **Result:** While I am satisfied with process of sketching my model sheet, I am not satisfied with the result. This character really does not encompass the characteristics I want to create. It is far too proportional and not interesting enough.

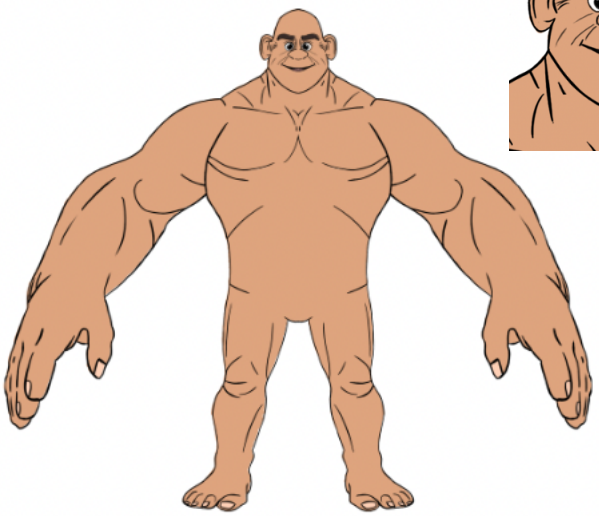


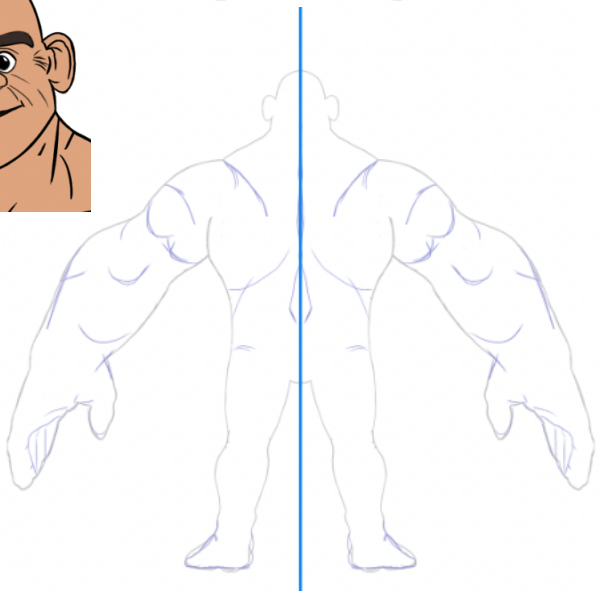
5. **Second Attempt.** After doing much more research, here is my second attempt at my base mesh, I am far more satisfied with this attempt being able to encompass the enlarged and oversized arms compared to the little legs. I also much prefer the blend between the abdomen/stomach and the legs. Have also began developing the face however this is not final and only a general idea.



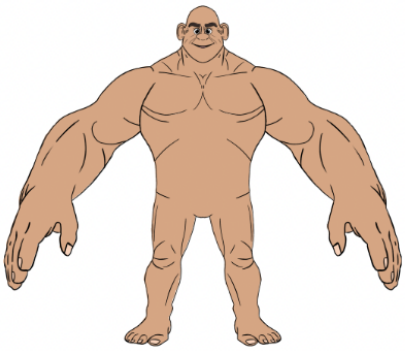
6. **Back.** Next, I added began developing the back of the character, I duplicated the outline of his body and use the symmetry tool to adjust the muscle lines. The most difficult part here was to adjust the feet and flip the hand position.

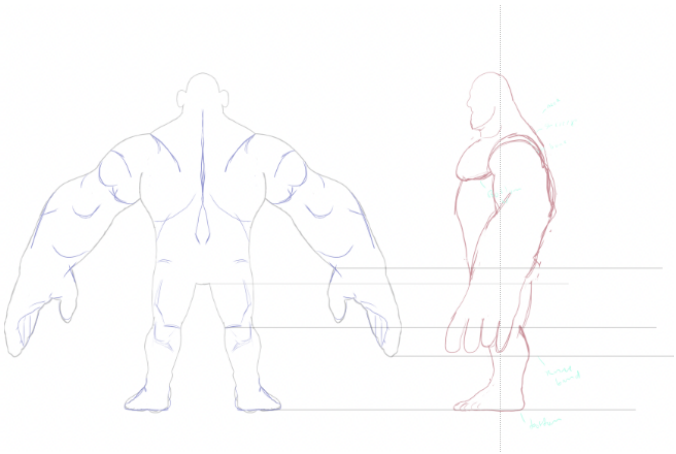


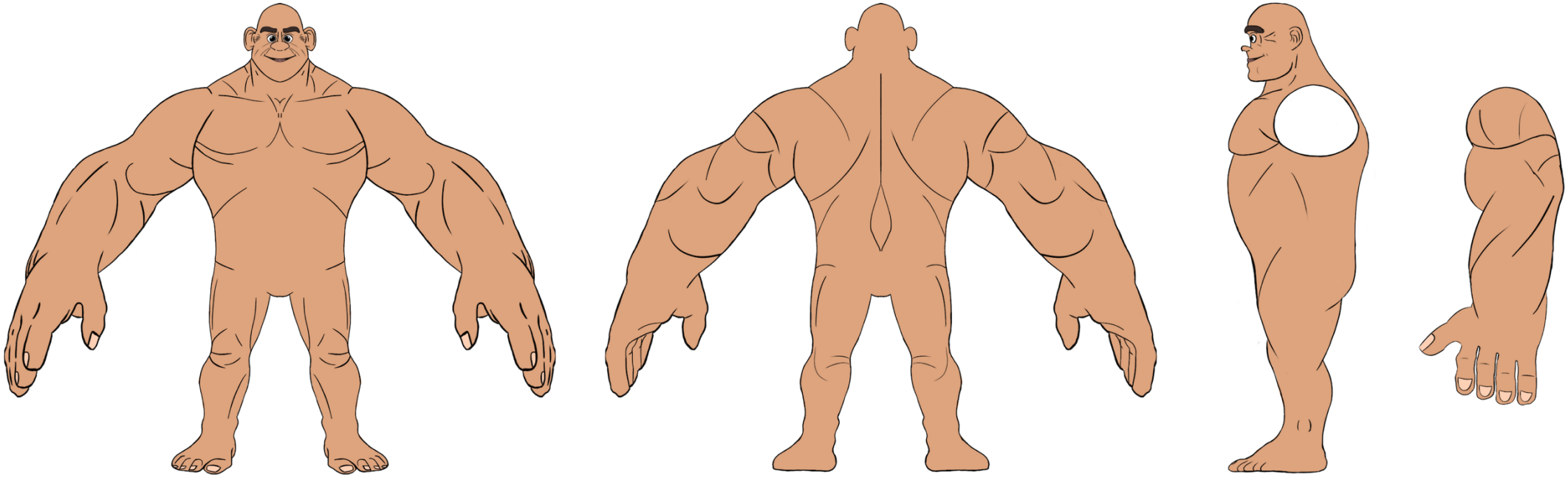




7. **Side.** By far, developing the side of my character was the most difficult, and unfortunately, had to be done the quickest as time was becoming a significant issue. Using the grid tool in combination with adding lines, I was able to appropriately proportion important elements of the body, including the end of the lowest finger, the bend at the wrist, the bottom of the foot, etc… His head was also very difficult and took a lot of cropping and moving. I decided to go for the cartoon like button nose and large wide eyes. As per the recommendation, I also separated the arm from the body to visualise the groin and leg region which was previously hidden by the arm



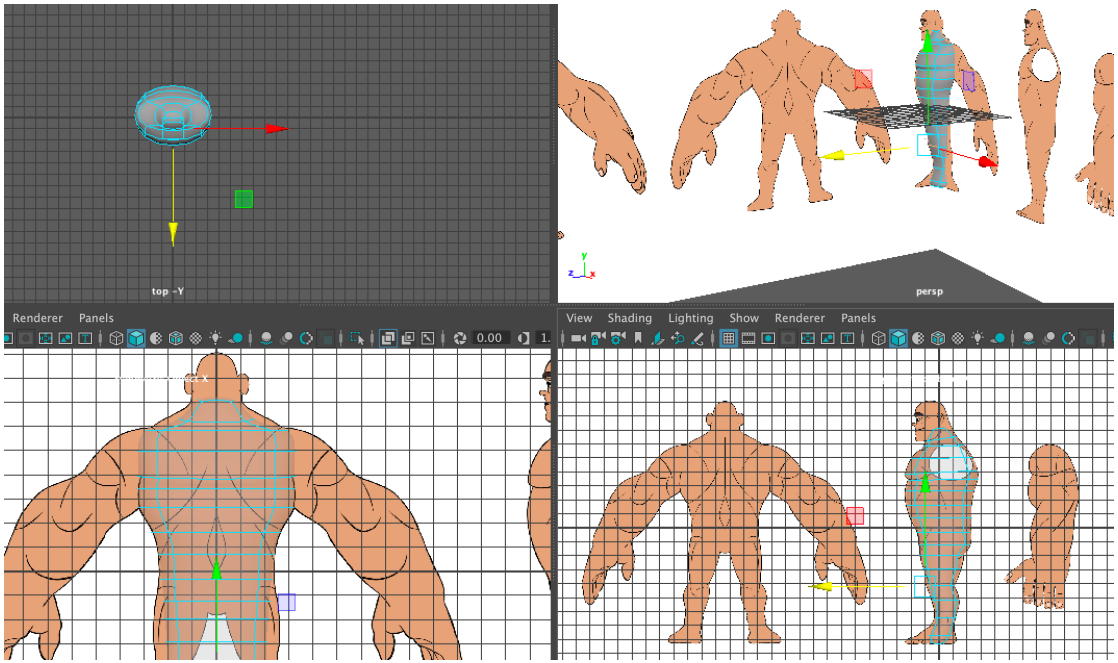


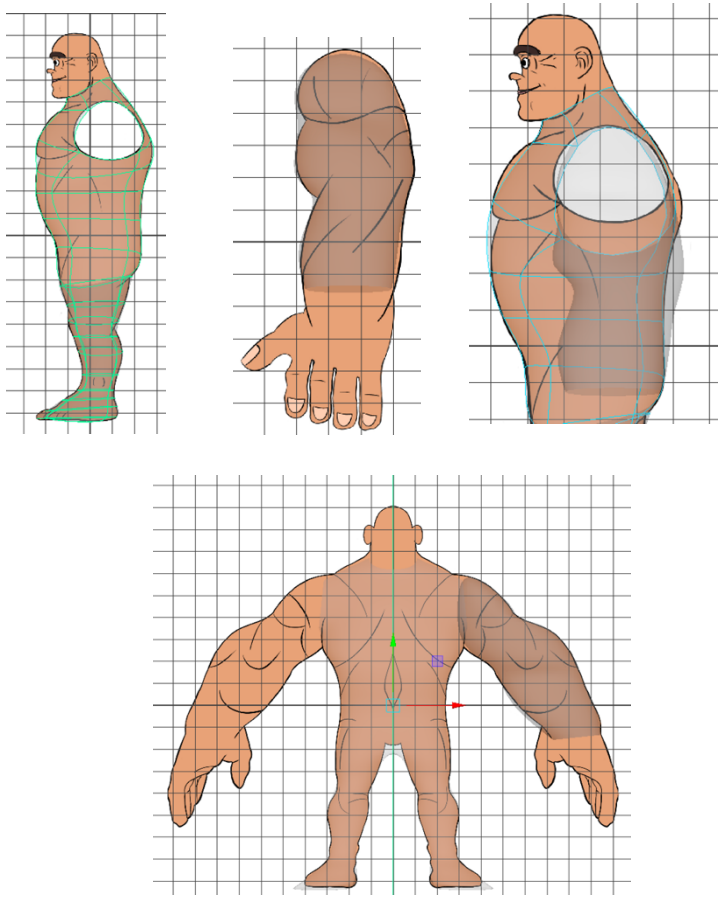


DELIVERABLE 2:

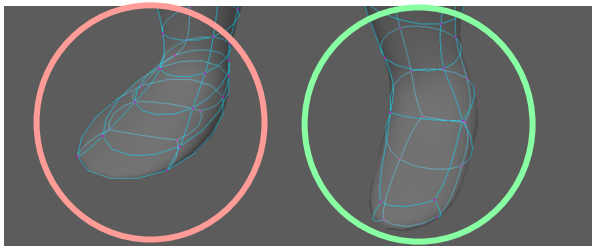
BASE MESH

2. **Body outline.** The process of developing the base mesh was relatively simple as it involved using modelling techniques that I was very familiar with previously, a new technique I did learn however is merging vertices of one object to another, this allowed me to connect the arms, head and feet to the body. Importantly his technique involved me switching between low poly views and high poly views. After model the main body chunk, I also stopped working with symmetry as it would be easy to work on one side then at the end of the process, mirror the whole body. Some new techniques I used included using x-ray on the shading, the lattice tool and the mirror tool. Below are some images of the base mesh process:





1. **Feet:** When it came to modelling the feet, I took 2 attempts. The result of the first process was, while leaving me with a shape that matched my model sheet, it was distorted and messy – at this point I realised I had significant flaws in my model sheet that I then had to adjust

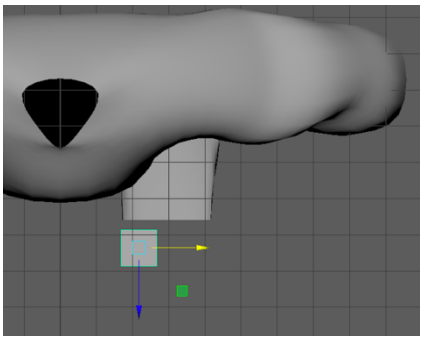
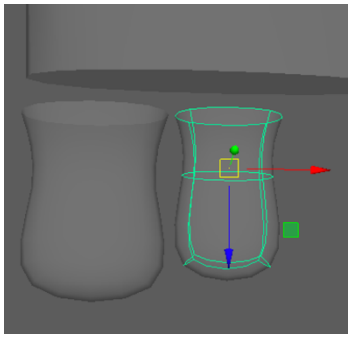
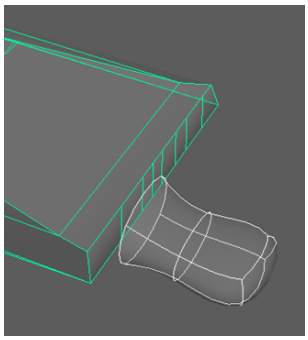


Shape of First Attempt

Shape of Second Attempt

1. FIRST FOOT MODEL ATTEMPT

Initially, after following the model sheet and modelling the foot shape, I then created toes, when attempting to join these toes, I used the multi-cut tool on the foot base to create holes where I could connect the vertices. This did not work after joining the first toe, so I decided to scrap this process and start again

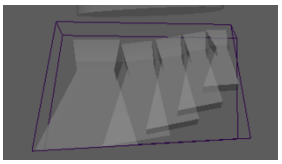
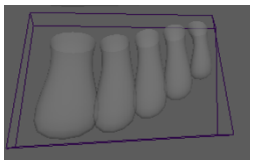




2. SECOND FOOT MODEL ATTEMPT

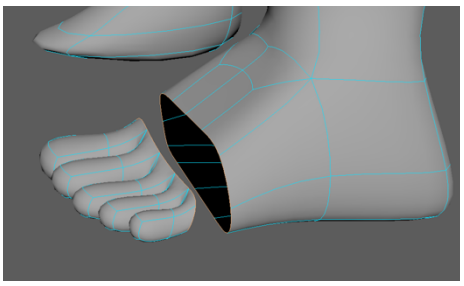
As the first process did not work, I did some research and watched some tutorials on how others tackled this process, following similar steps I did the following

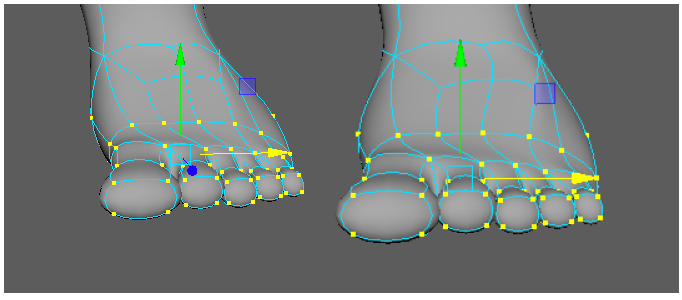
1. Re-Modelling the Foot: As seen in my model sheet, the feet turn outward – this was the first issue that needed to be fixed. I created a front on

2. Toes: I then developed the toes, using a separate polygon cube for each toe and kept to my initial shape of fat Shrek like toes. A tool that I had never used before was the "Lattice tool" which was used in many of the research tutorials I gave it a try which made minor, yet necessary alterations to the toes

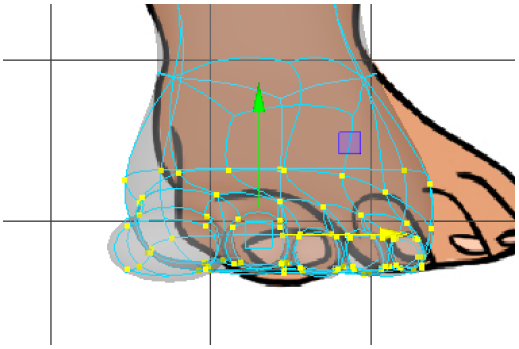



3. Combining the Foot and Toes: Finally, I combined these shapes and merged the vertices. I then used the move tool to make minor adjustments to the overall feet and here is the result:



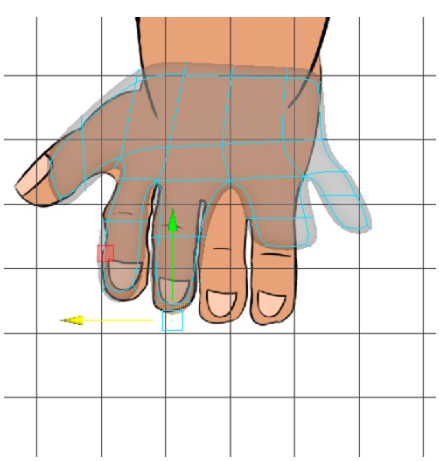
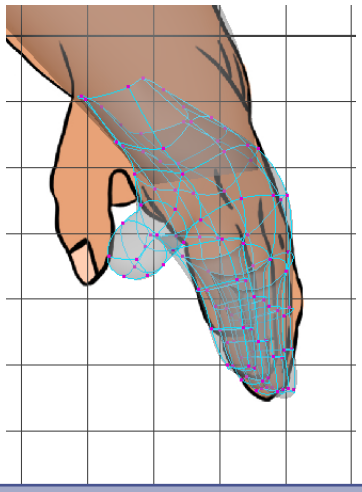
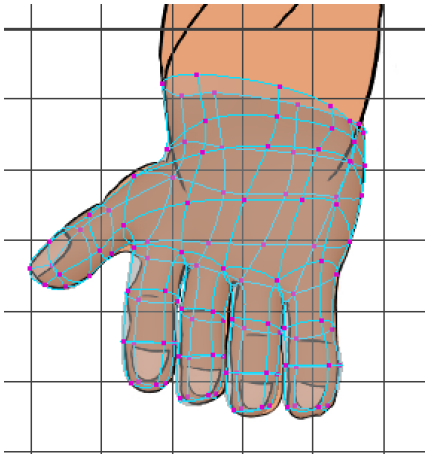


Difference between model sheet and base mesh: As you can see, there is significant difference between the model sheet and the base mesh. At this point, I will go back and made the required alterations to the model sheet



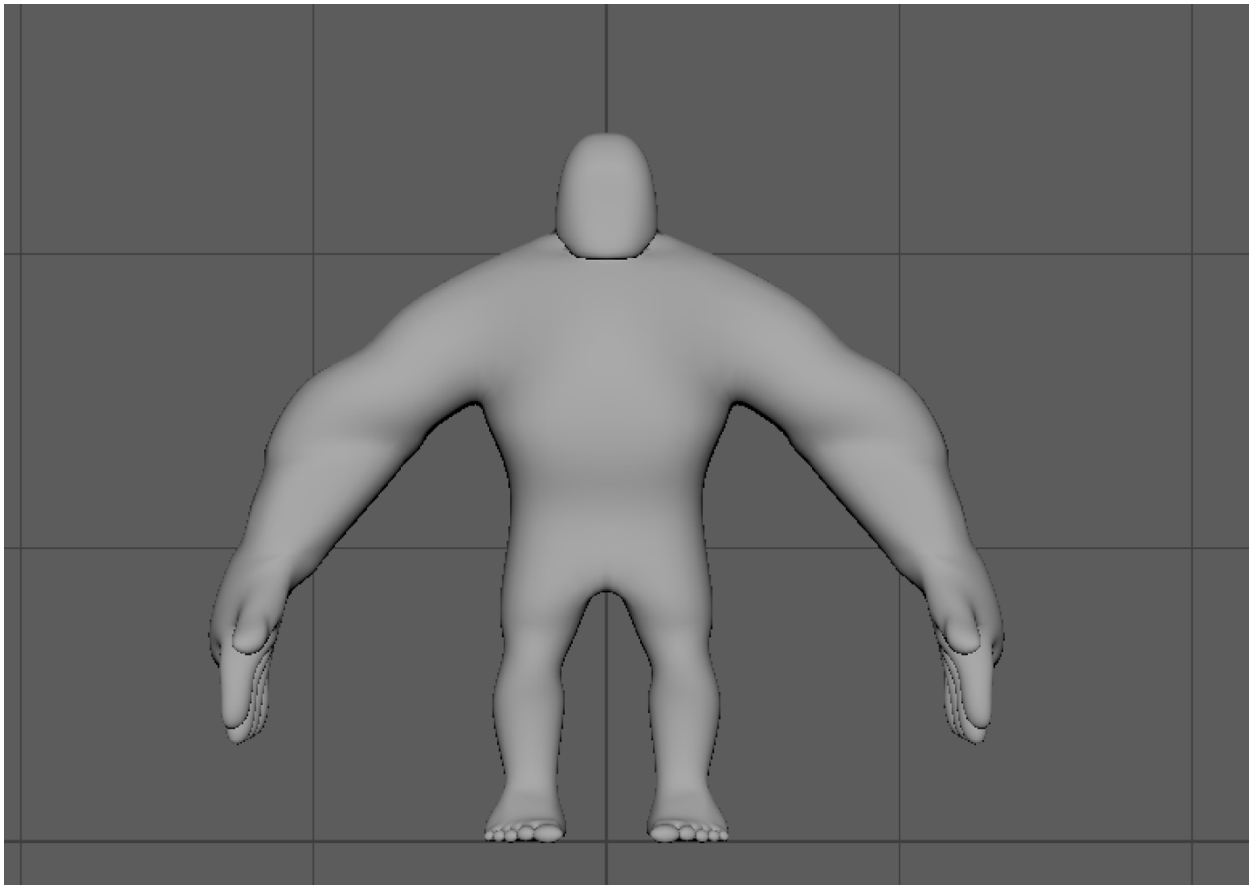
3. Hands

1. Hand Development: I ran into a similar issue when modelling the ands as I did with the feet – that my model sheet was not accurate enough, I followed the model sheet as closely as I could – however there were some slight differences including the positioning of the thumb:

4. Final Alterations

Finally, I went in adding a head to the shoulders, I then deleted the left side of the body, and used the mirror tool to ensure my character had perfect symmetry.

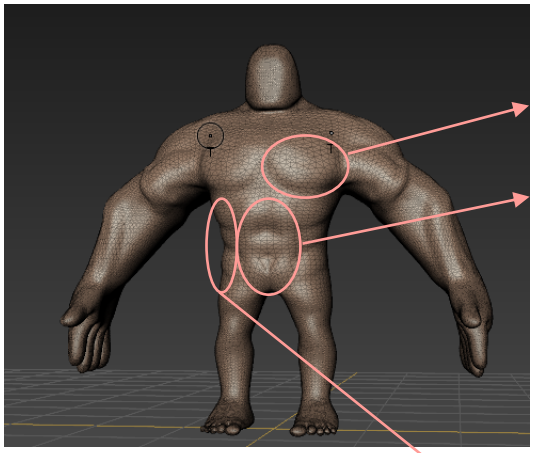


DELIVERABLE 3:

SKULPTED MESH

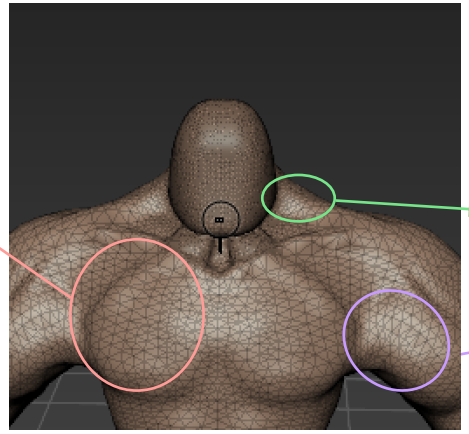
SKULPTED MESH – MUDBOX

1. **Mapping out main muscles:** Initially, I begun by sculpting the main muscle outline into the character. For the majority, this involved me using the 'Wax' tool to layer on a significant amount of additional shape to the body. Once I had the main layout finished, I went in with the 'smooth' sculpt tool. Later on, to create more refined detail, I used the 'Grab' tool and the 'Foamy' tool with a steep fall off.



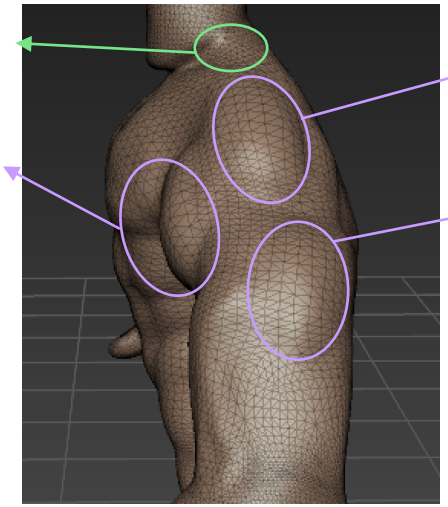
Pectoral Muscle

Abdominal Muscles



Trapezius Muscle

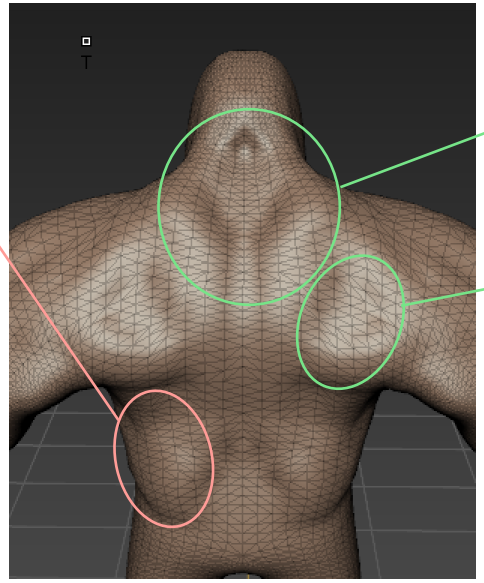
Biceps



Deltoid

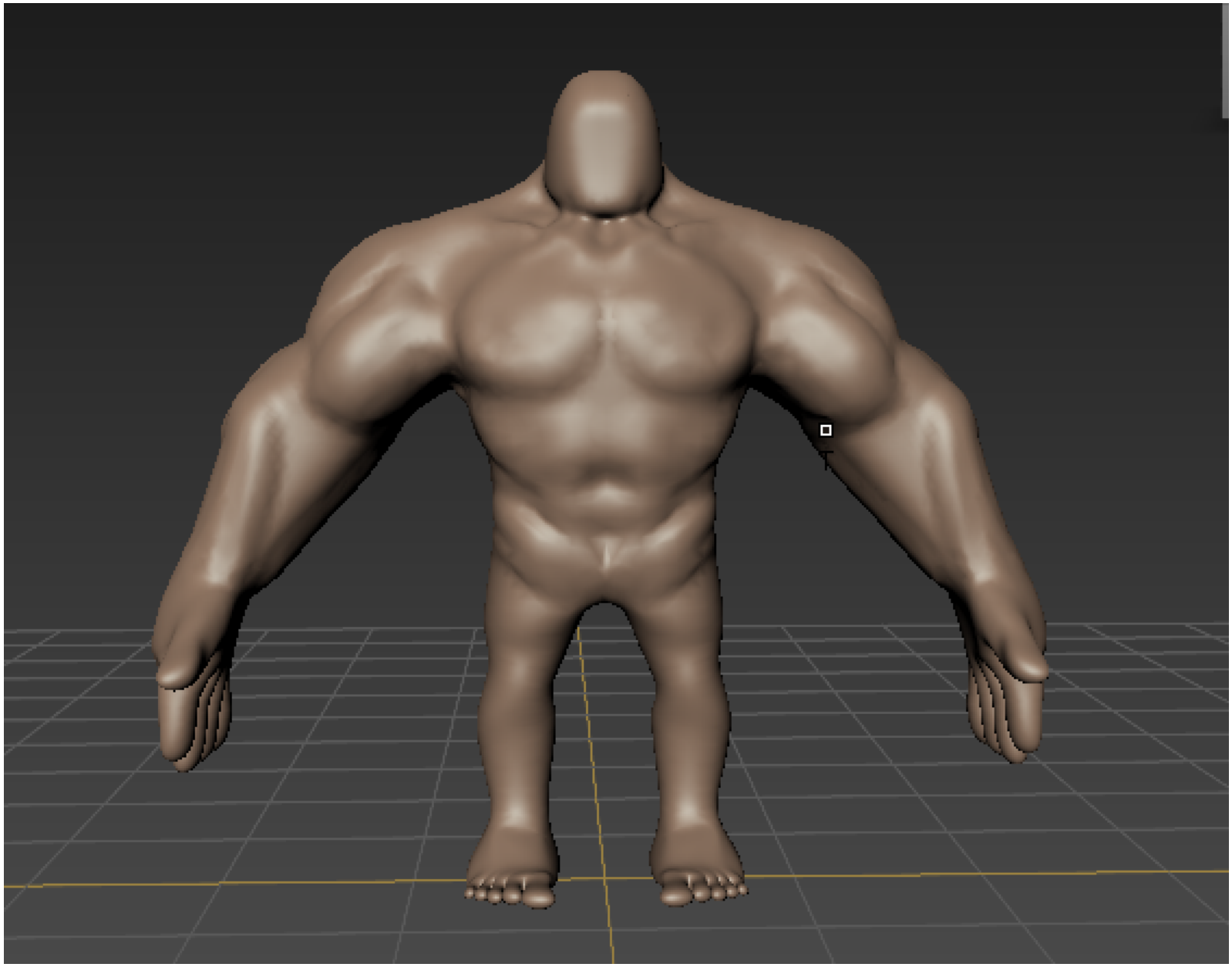
Triceps

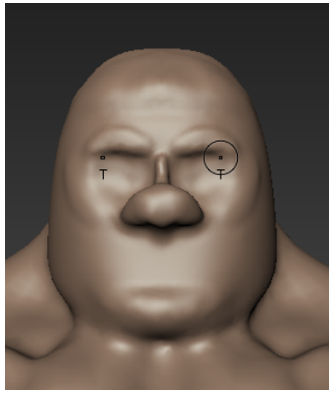
Latissimus Dorsi

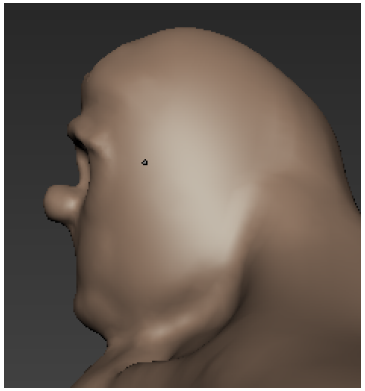


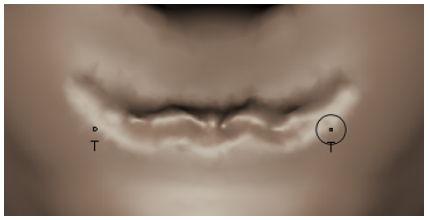
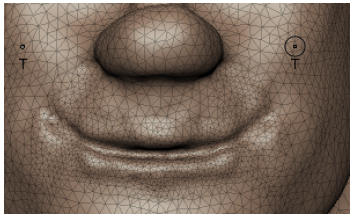
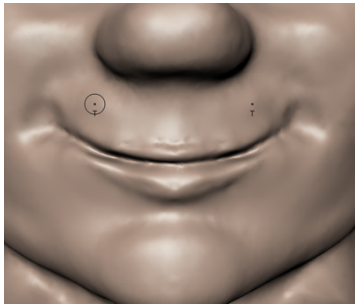
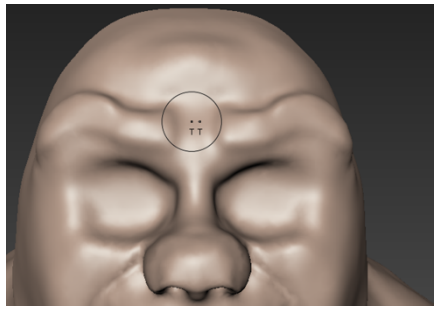
Trapezius Muscle

Teres Minor/ Teres Major



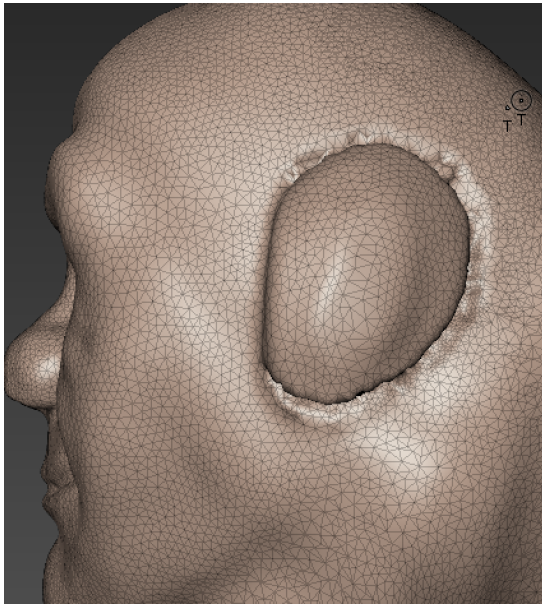


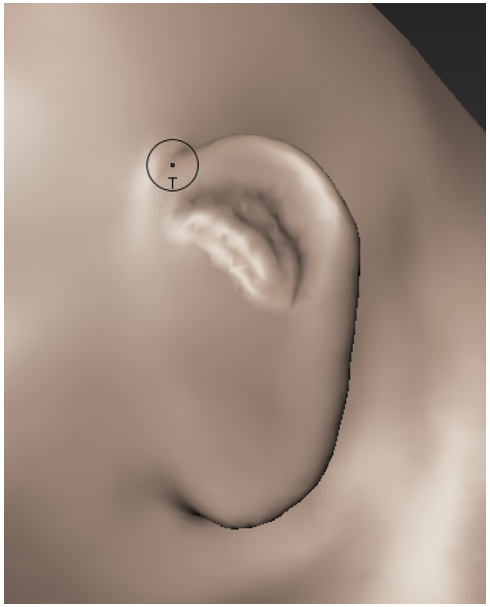


2. **Development of face:** I then began to work on the face. After ensuring 'tessellation' was turned on – I started by adding the main features, including the nose, eye socket, and eyebrow bone. Heavily using the 'Grab' tool I could then shift the placement of these features.

3. **Mouth:** The mouth was by far the most difficult element to sculpt. I followed the nasolabial founds, which are the indentations on either side of the mouth to map out the size and shape of the mouth. The mouth itself was sculpted by using a combination of the 'foamy' tool with inversion turned on to cut out deep regions, the 'smooth' tool, to soften previous moves, and most interestingly, the 'pinch' tool, which allowed me to create sharp crevices.

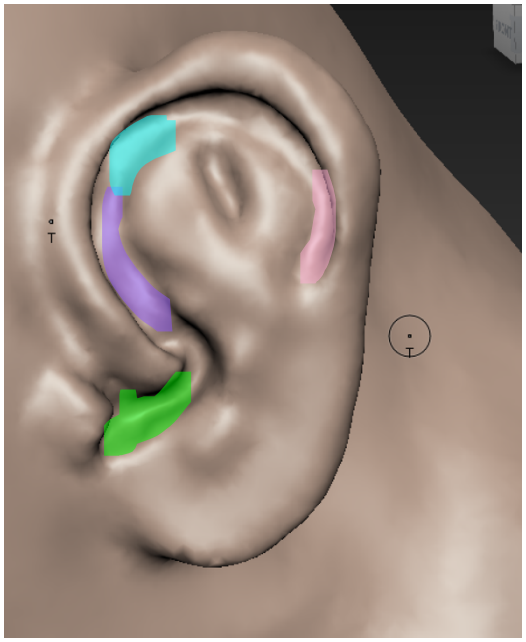




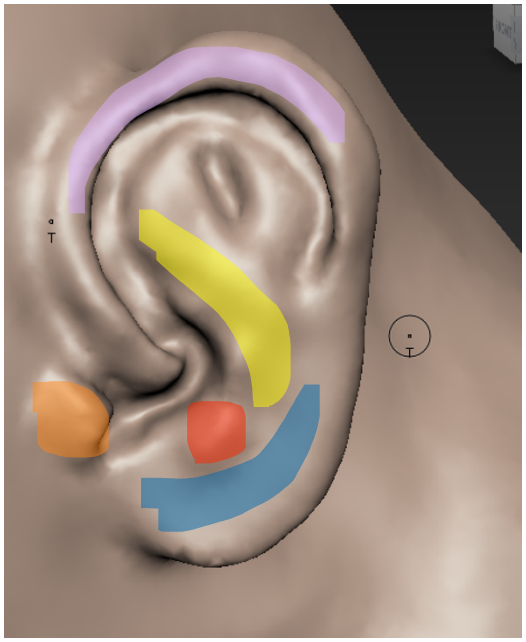
6. **Issues with the inbuilt stencil:** I tried multiple times using the inbuilt ear stencil, but this did not give me the outcome I wanted. As suggested in my research and from my model sheet, I wanted to go for massive ears that stick out really wide from my characters head.

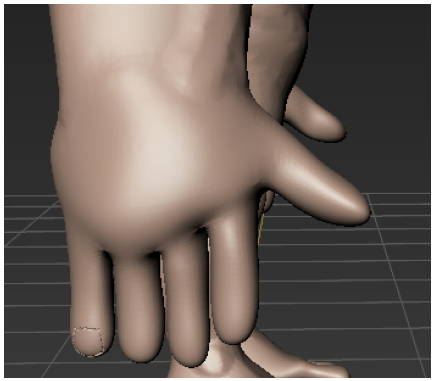
5. **Ear Shape:** Initially, I began by adding the ear chunk to the side of my characters head. I significantly used the 'grab' tool, foamy' tool, 'wax' tool, 'smooth' tool and 'pinch' tool in similar ways that I have previously explained.

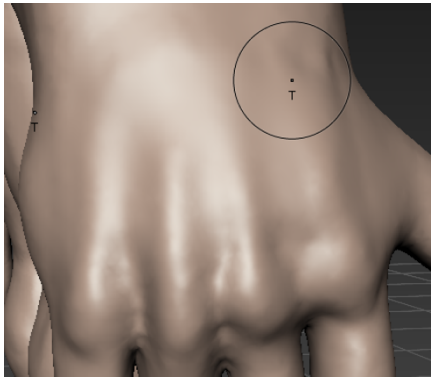
4. **Ear Detail:** Once I was satisfied with the ear shape, I went in with the 'foamy' tool that was inverted to scrape out regions such as the concha (purple), the triangular fossa (blue), the external auditory canal (green) and the fossa of helix (pink)

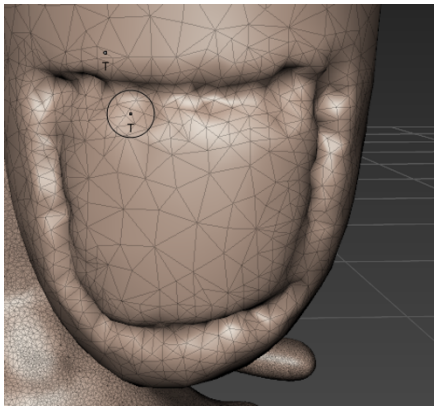


Using the 'sculpt' tool, the 'wax' tool, and the 'foamy tool' without the invert on – I then went in and added the protruding elements of the ear – including, the truncus (orange), the helix(purple), the antihelix (yellow), the antitragus(red) and the lobule (navy)





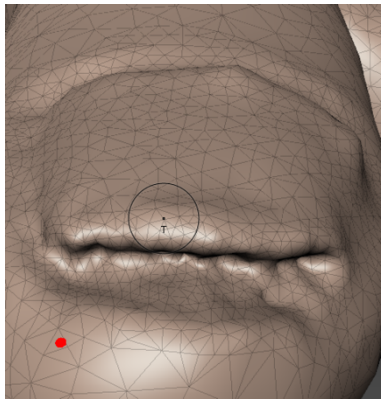


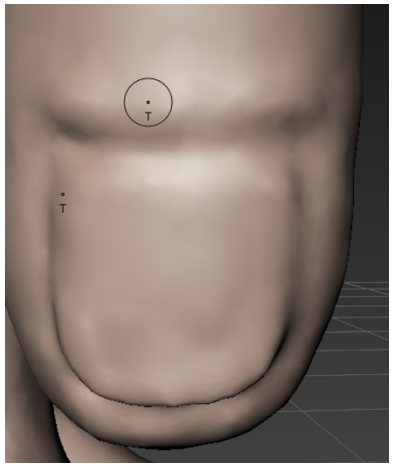


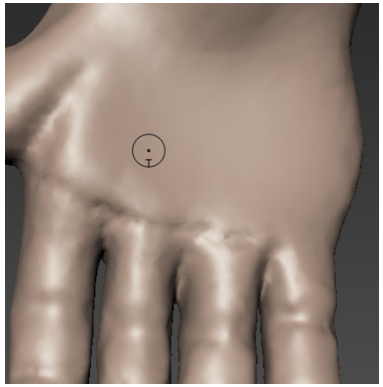
7. **Knuckles:** I initially started by adding knuckles to the hands. This was done using the 'bulge' tool, followed by the 'smooth' tool. I then added lumbricals, using the 'wax' tool, then proceeded with the inverted 'foamy' tool to create deeper crevices between the knuckled

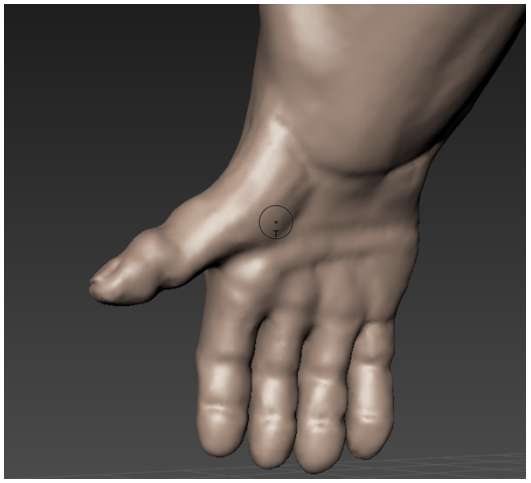
8. **Nails:** The nails for both the toes and fingers followed the following process:

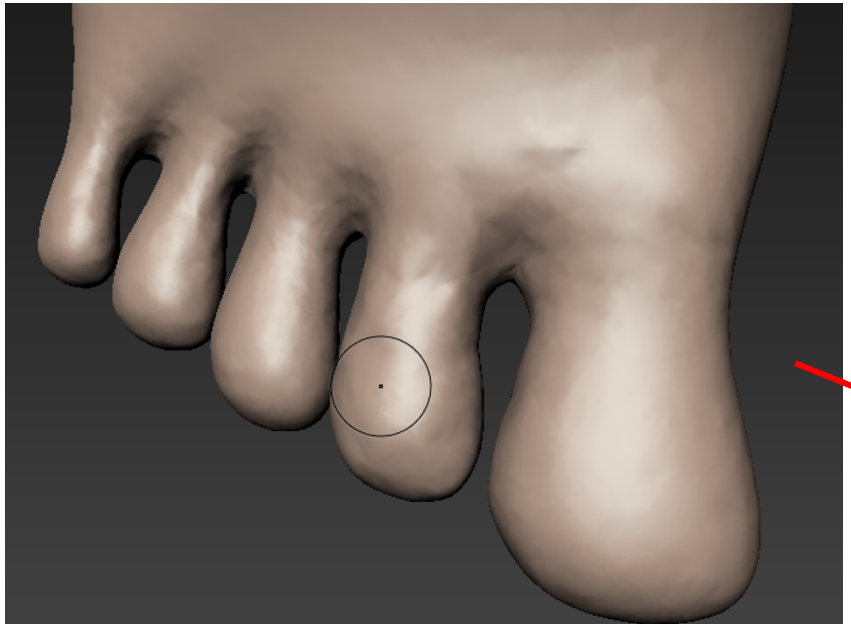
   - Calving out the region for the fingernail using the inverted 'foamy' tool.
   - Using the 'smooth' tool to soften the indent over the proximal nail fold area.
   - Finally, using a combination of the 'grab' tool and the 'pinch' tool, I was able to extend the nail over the finger and pinch the paronychium area

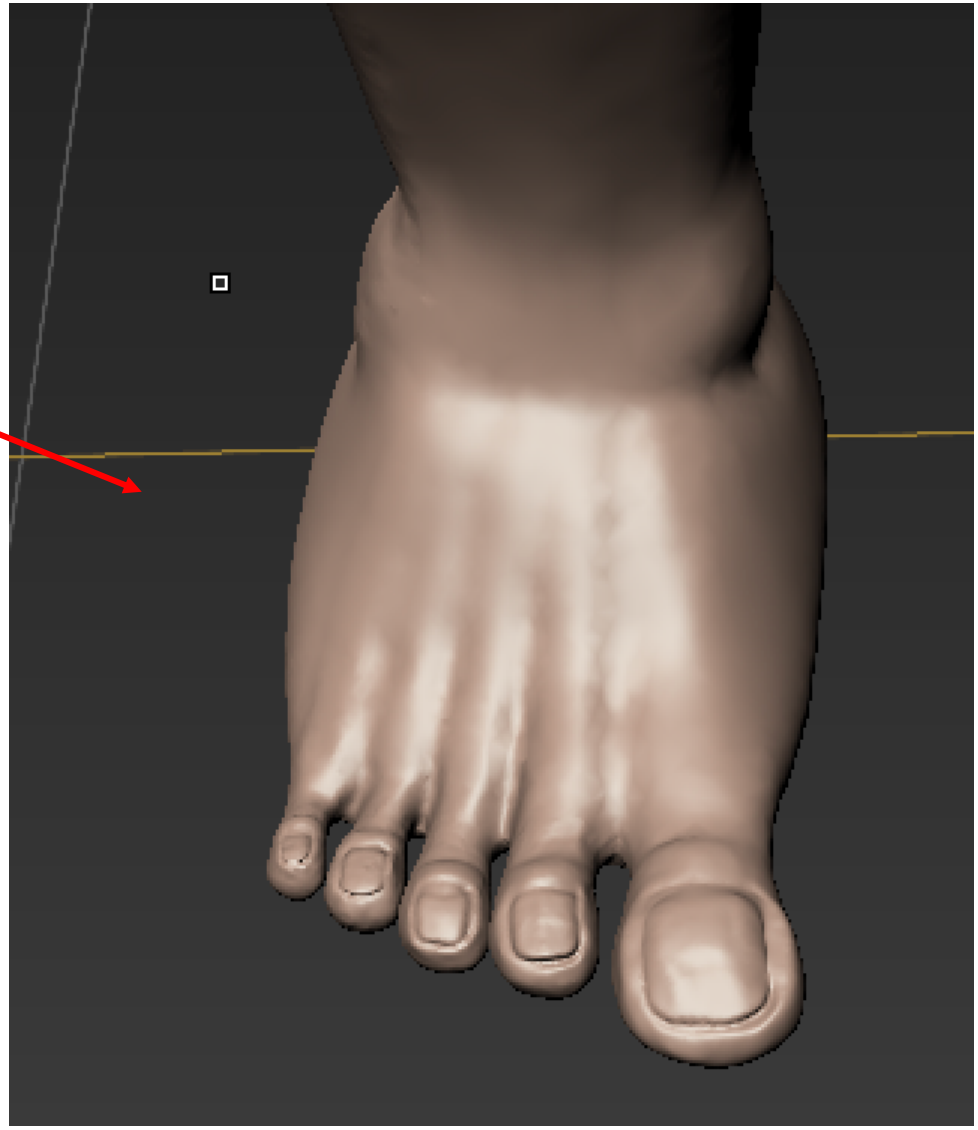




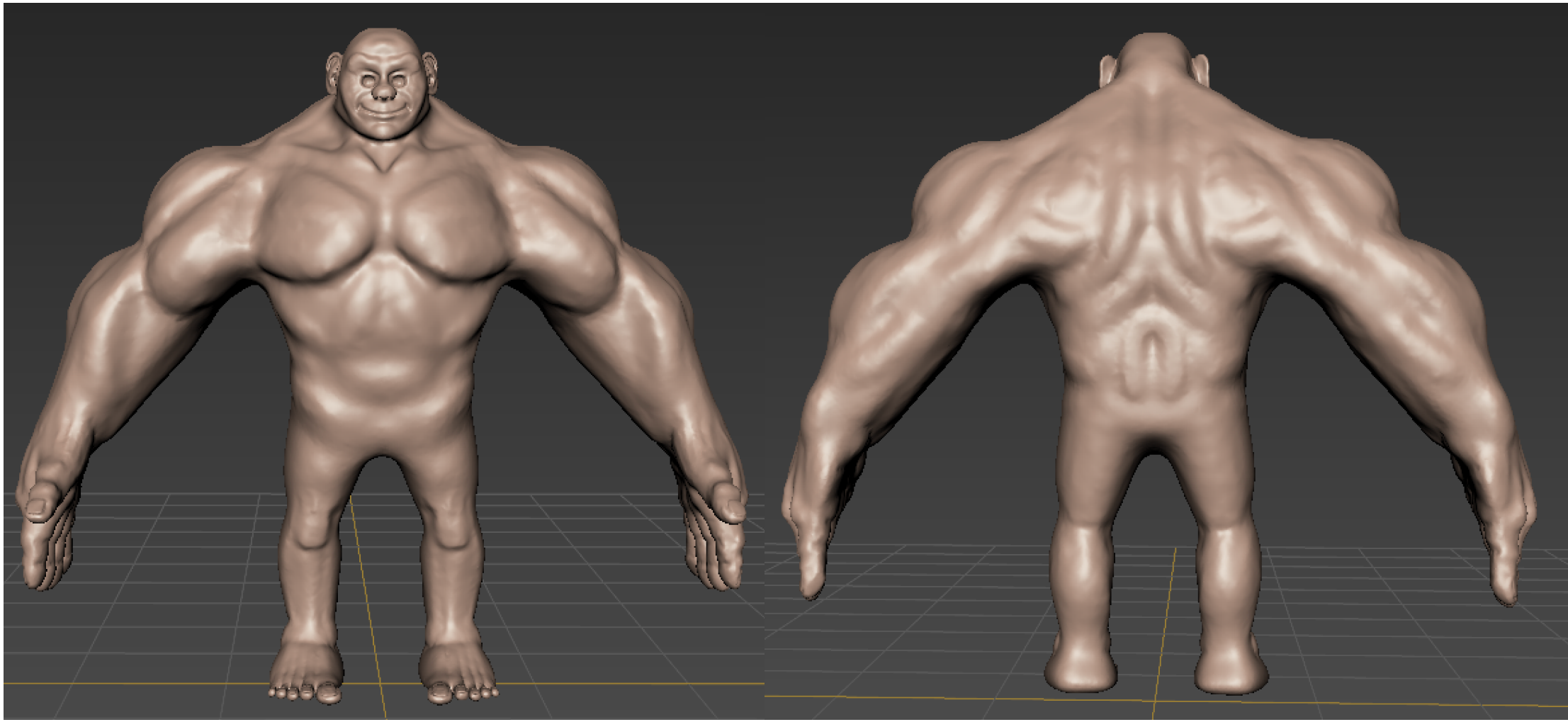






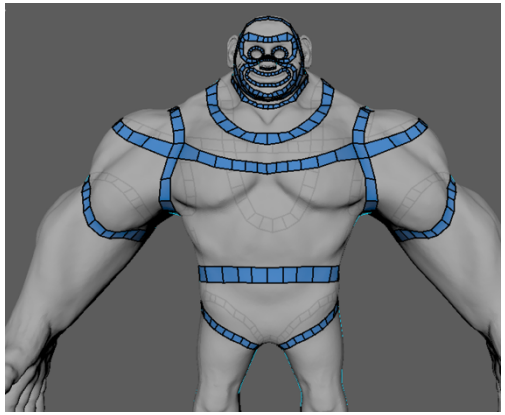


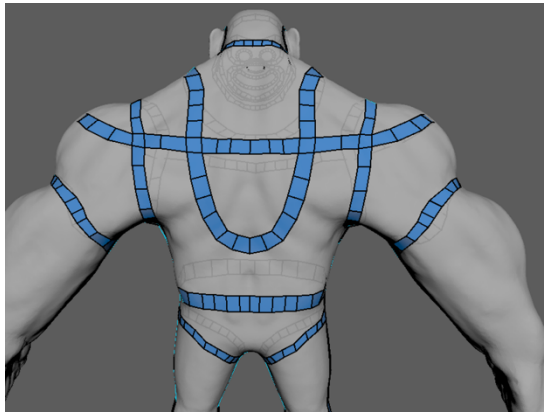
3. **Feet:** the process of developing the feet and the toenails was similar to that of the hands, the only issue being time consumption as I had to individually sculpt each toe.



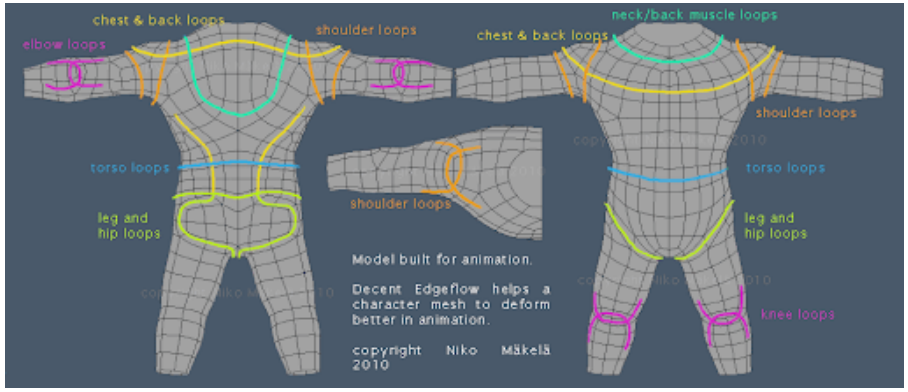
DELIVERABLE 4:

RETOPOLOGISED MESH



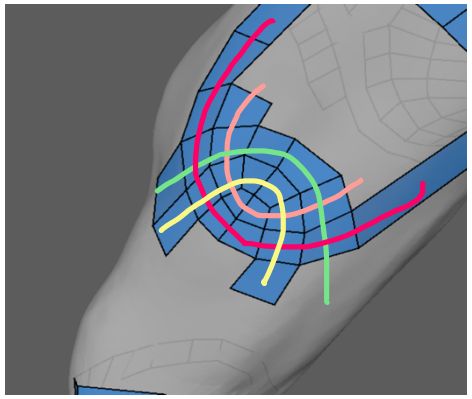


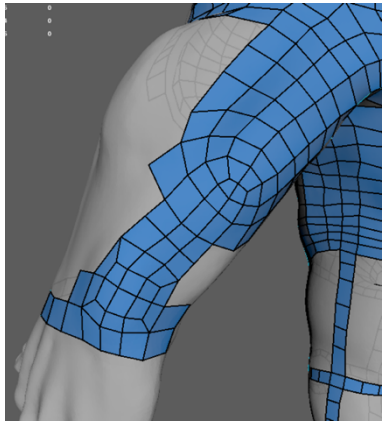
1. **Adding Main Edge Loops:** Following the general structure of the edge loops in the tutorial as well as in the figures below, I added the main edge loops to retopologies my character. I chose not to add edge loops for the buttocks area, and I initially also did not add the edge loops to more difficult areas such as the knees, elbows or feet yet.

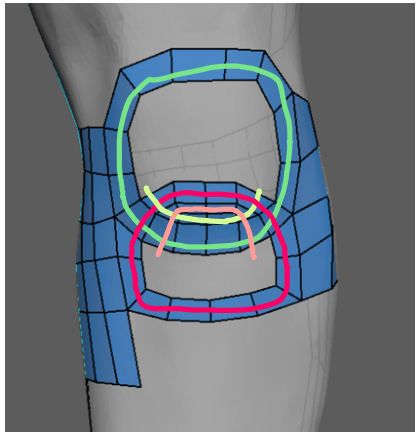


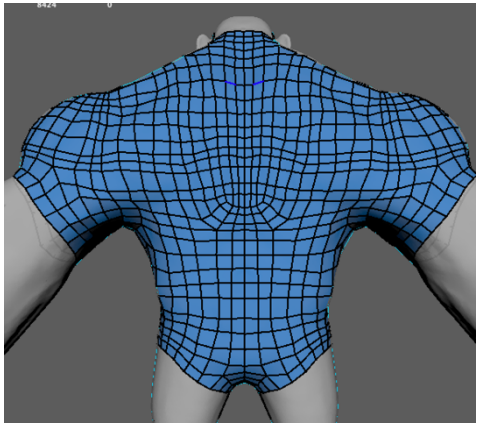
http://www.cgmascot.com/design/modeling-for-animation-body/

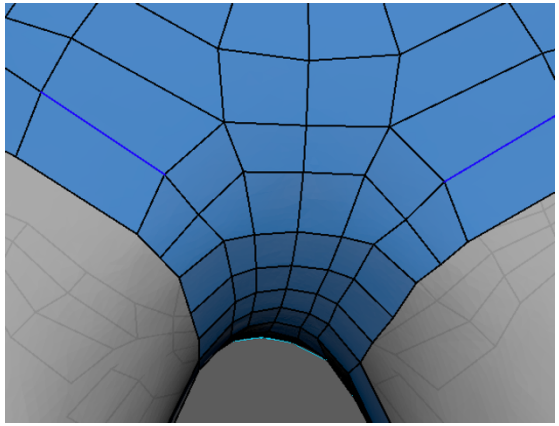
2. **Elbow and knees:** Below, using different colours, I have outlined edge loops for the elbow, and the knees, this was not difficult, just significantly time consuming as it took multiple attempts and a lot of trial and error.









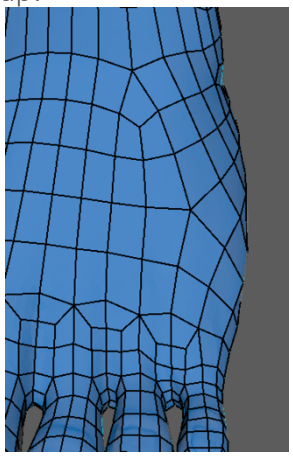


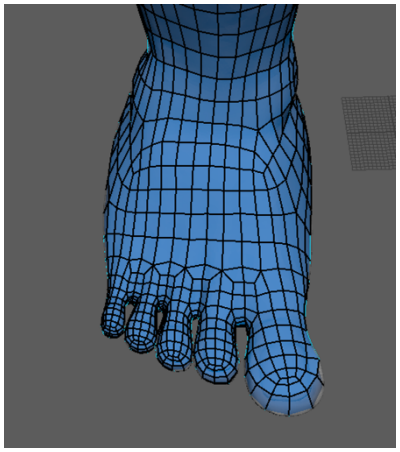
3. Issues: After some time and lots of trial and error, I began to run into loading issues. Where adding a simple edge loop or extrusion would yield a 15-20 second delay from my computer. This computer delay made everything extremely difficult – where I was unable to really try new things or fix significant mistakes as it would take far too long!

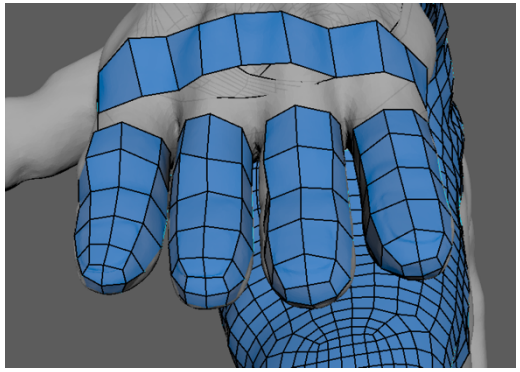
4. Solutions: I tried many different ways to fix this issue, including turn off 'symmetry' and deleting half of the mesh. While this did reduce the loading delay somewhat, this really did not do all that much. I ended up having to create an entirely new maya scene and imported my previous scene save. Unfortunately, however, I did not meet this solution to relatively late in the development process – whereby for the vast majority of my development, I had to put up with this computer delay.

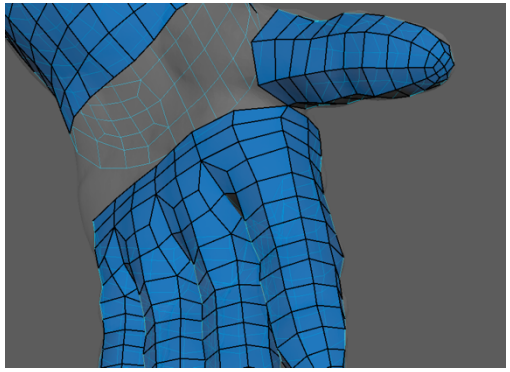
5. Video: Below I have attempted to add a screen recording of this computer delay - **can be viewed in Adobe Acrobat**

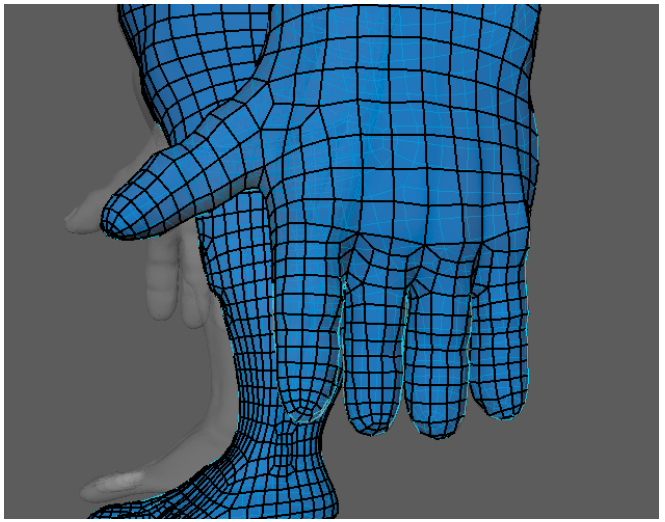
6. **Feet and Hands:** The hands and feet were always beginning simply, and at the very end did not match up – which is why both took multiple attempts at developing. For both the hands and feet, the top was developed very smoothly, but when it came to wrapping around the whole object and matching all lines ensuring there were no triangles kept posing as a significant challenge – the only real solution to this was trial and error, and eventually, my retopology matched up!

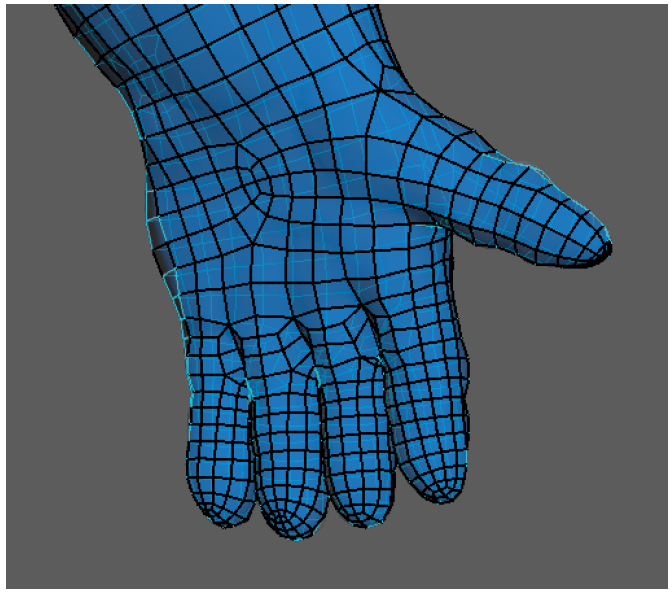


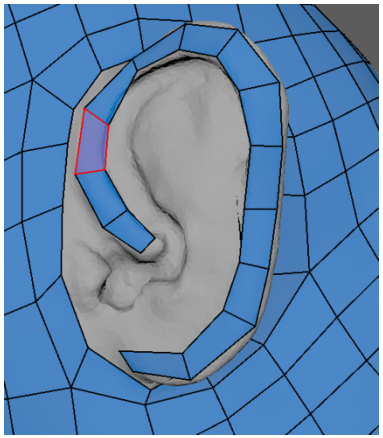
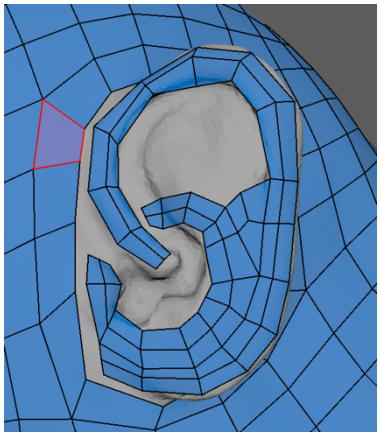
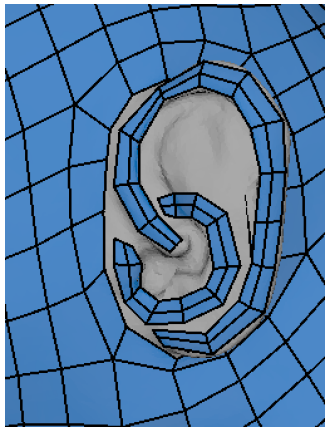
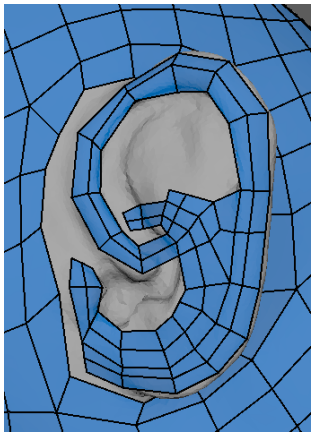




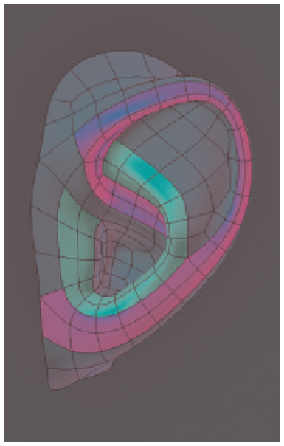






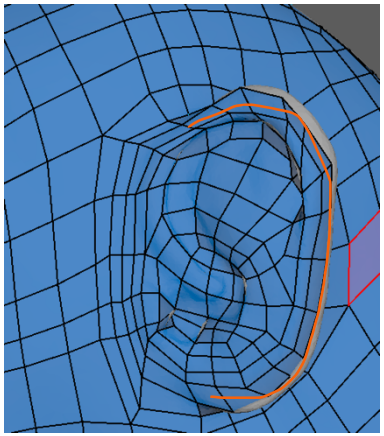
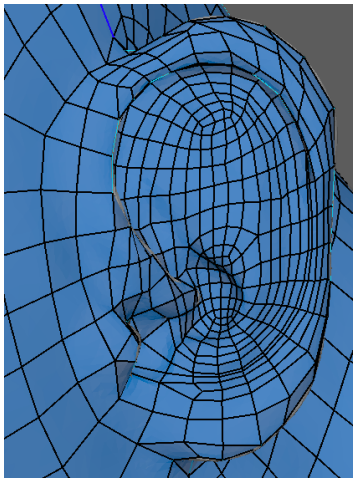
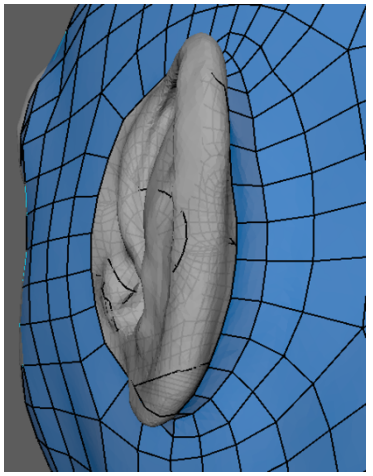
7. **Ears:** The ears were by far the most difficult part to retopologies. I followed **Figure …** to map out the edges, and filled in the remaining space.



8. **Issues:** The main issue I faced here was the appropriately wrapping the quads around the helix (shown in orange)

9. **Solution Attempt 1:** to first try and solve this issue, I added a significant amount of edge loops, and after a while, my ear began to lose its simple and original edge loops

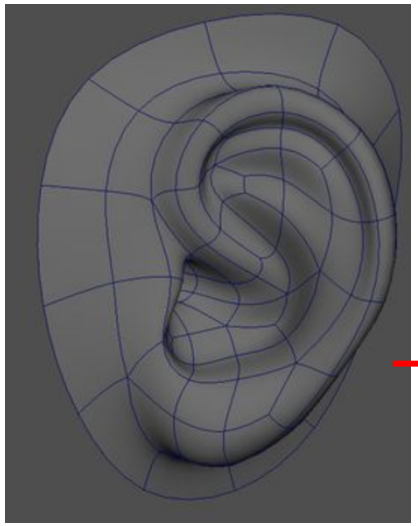
10. **Remodelling:** I then decided to remodel the entire ear as it was too difficult to attempt to fix each small issue. I did however, keep some of the additional loops on the back of the ear

http://what-when-how.com/Tutorial/topic-7757dk4o/Blender-Master-Class-a-Hands-on-Guide-to-Modeling-Sculpting-Materials-and-Rendering-127.html

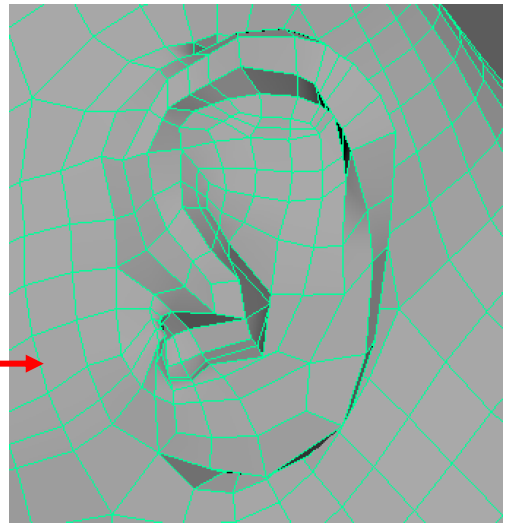
11. **Solution Attempt 2:** For this attempt, I decided to follow a different reference image – seen in figure… . Following a similar structure, the following images reflect the retopology process:

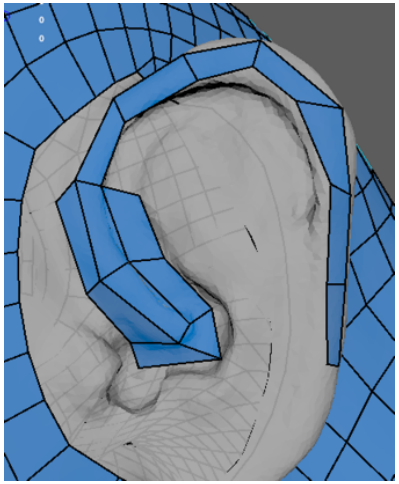
Figure

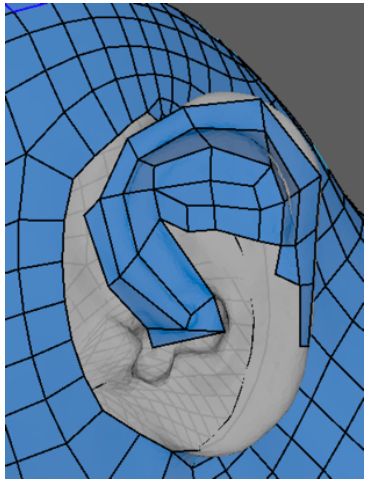


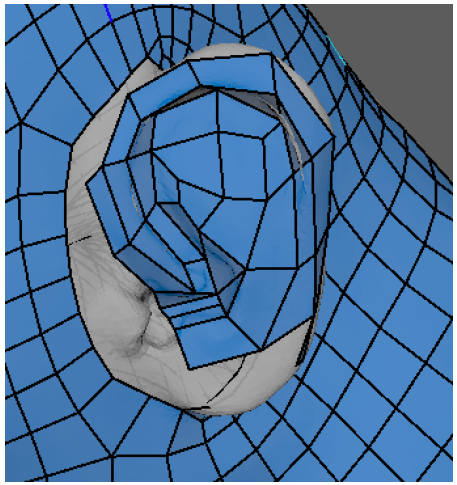
https://www.pinterest.com.au/pin/538532067933951985/

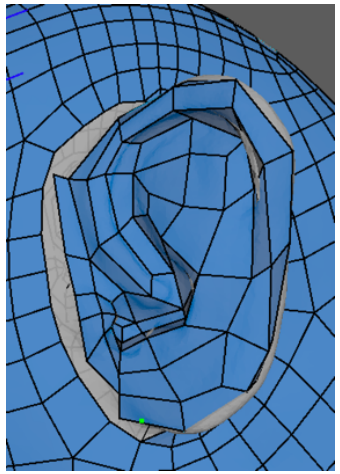
My Ear

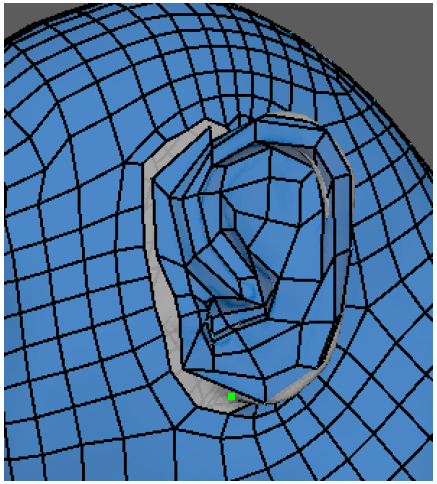




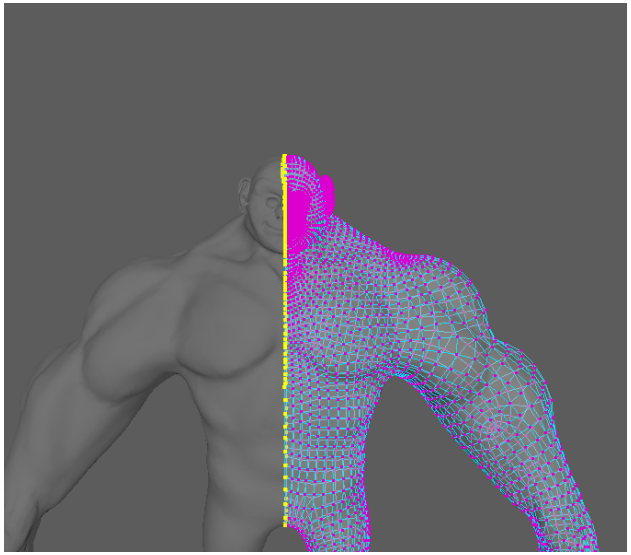




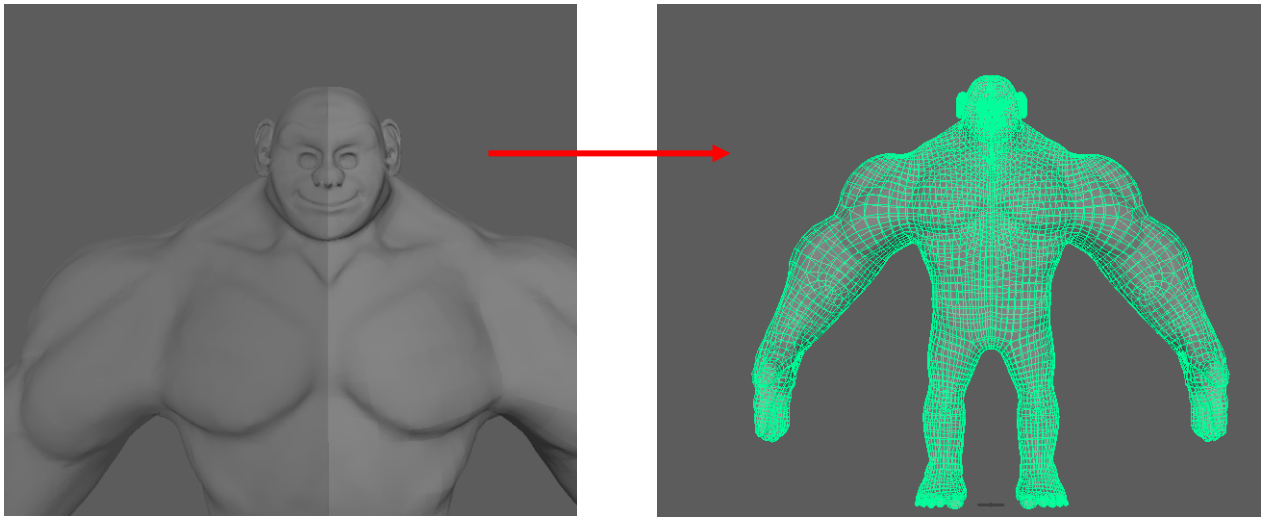




12. **Selecting Vertices:** As I was unable to use the 'symmetry' tool across the entirety of the modelling process – I used 'Vertex Selection' to select the central loop, and used the 'Input line menu of operation' to align the vertices to '0' on the x-axis



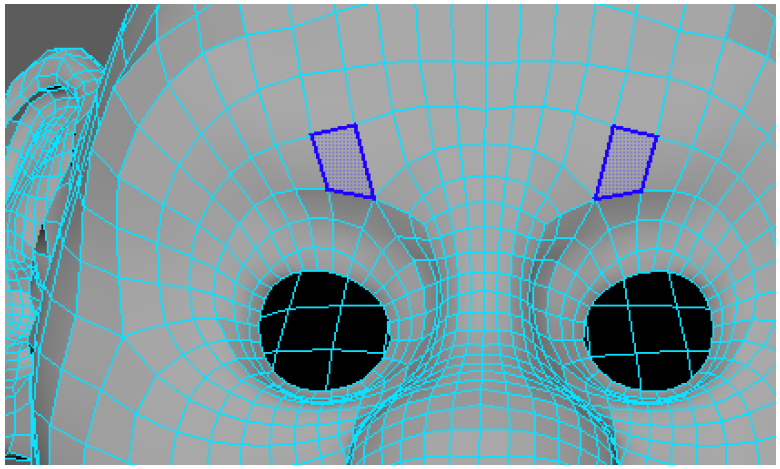
13. **Mirroring:** Once the vertices were selected, I used the 'Mirror' tool to mirror the shape and fill the right side of the characters body



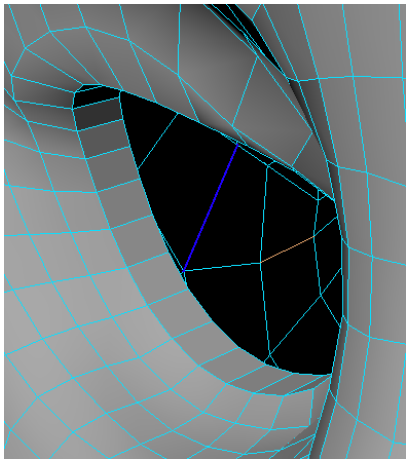
MODDEING THE FACIAL FEATURES

1. **Eyes:** To model the eyes, I turned off live surfaces, I then removed the inner eye (1) and extruded the faces backwards into the head (2). I did this multiple times until I had an adequately sized eye socket (3). I then used the 'merge to centre' tool and deleted every second line (4) so that the face contained quads only (5). Finally, I added a sphere, removed every second line in the pupal, deleted the back faces and duplicated it so there were 2 layers of eyes (6).

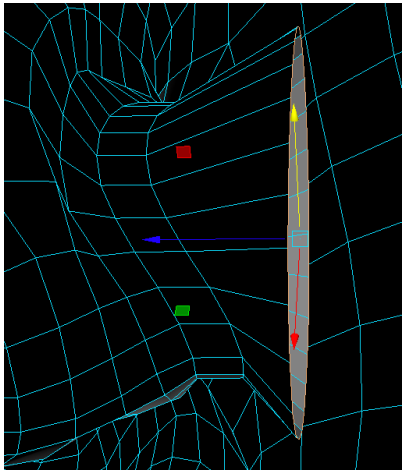
(1)



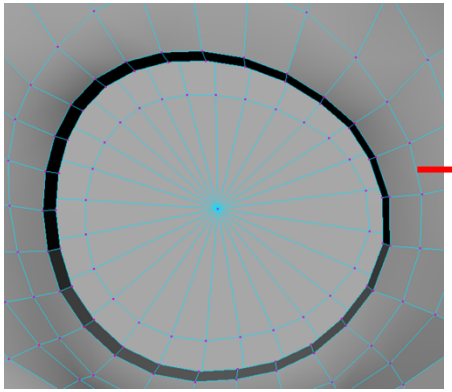
(2)



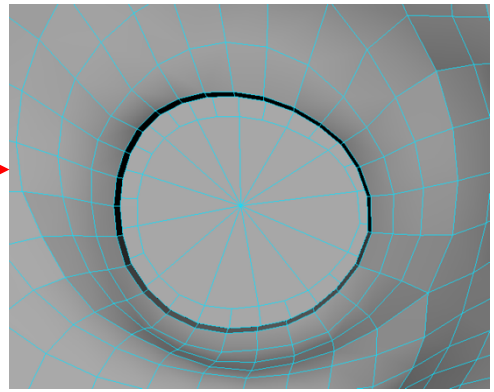
(3)



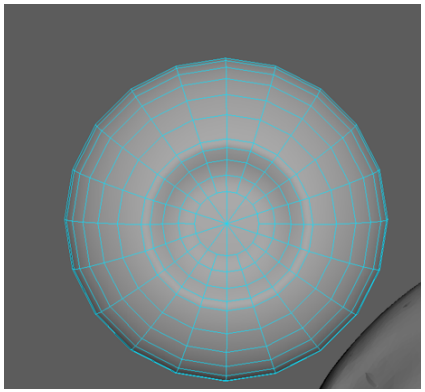
(4)



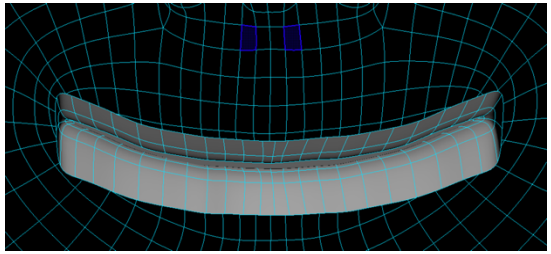
(5)

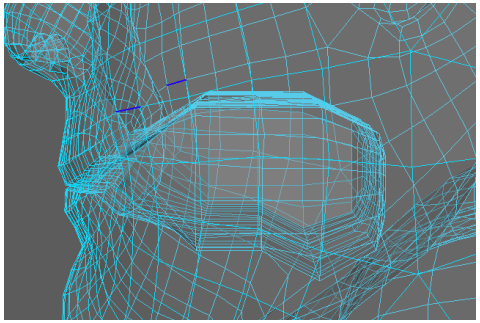


(6)

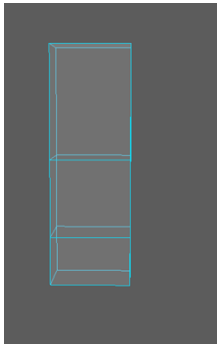


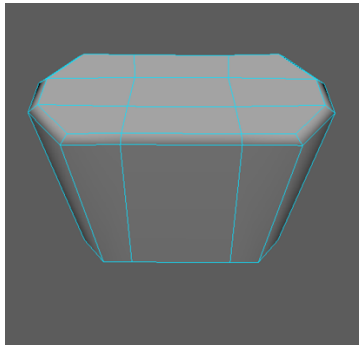
2. **Mouth:** Moving on to modelling the mouth, I used similar techniques to that when creating the eye socket.

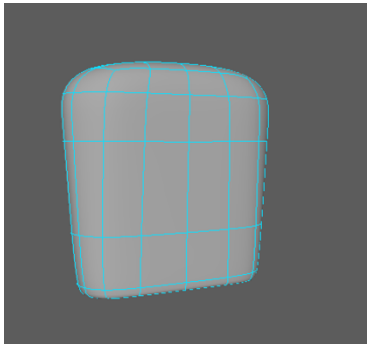




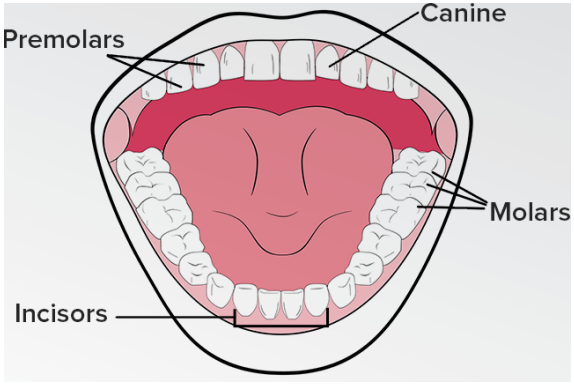
3. **Teeth:** Modelling the teeth simply involved using a 'polygon cube', adding additional edge loops to ensure only quads were used – I then used the 'move tool', the 'rotate tool', and the 'scale tool' to create the shape of a general tooth

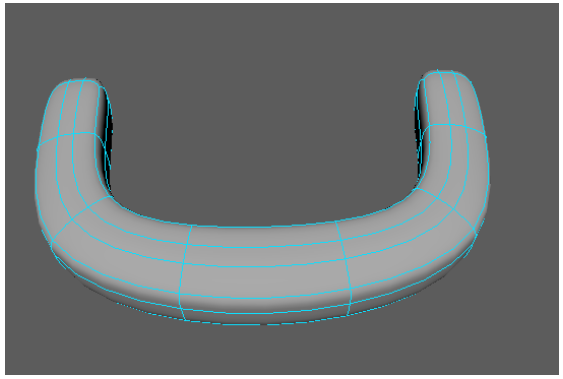


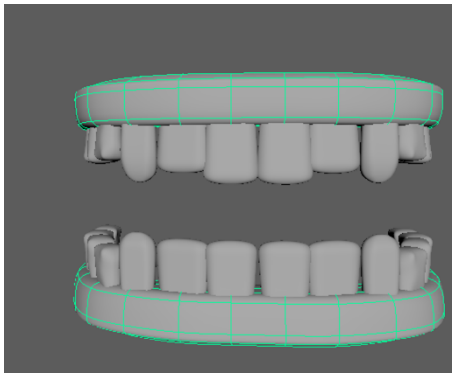


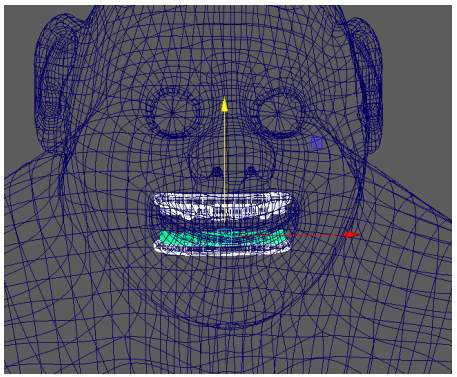
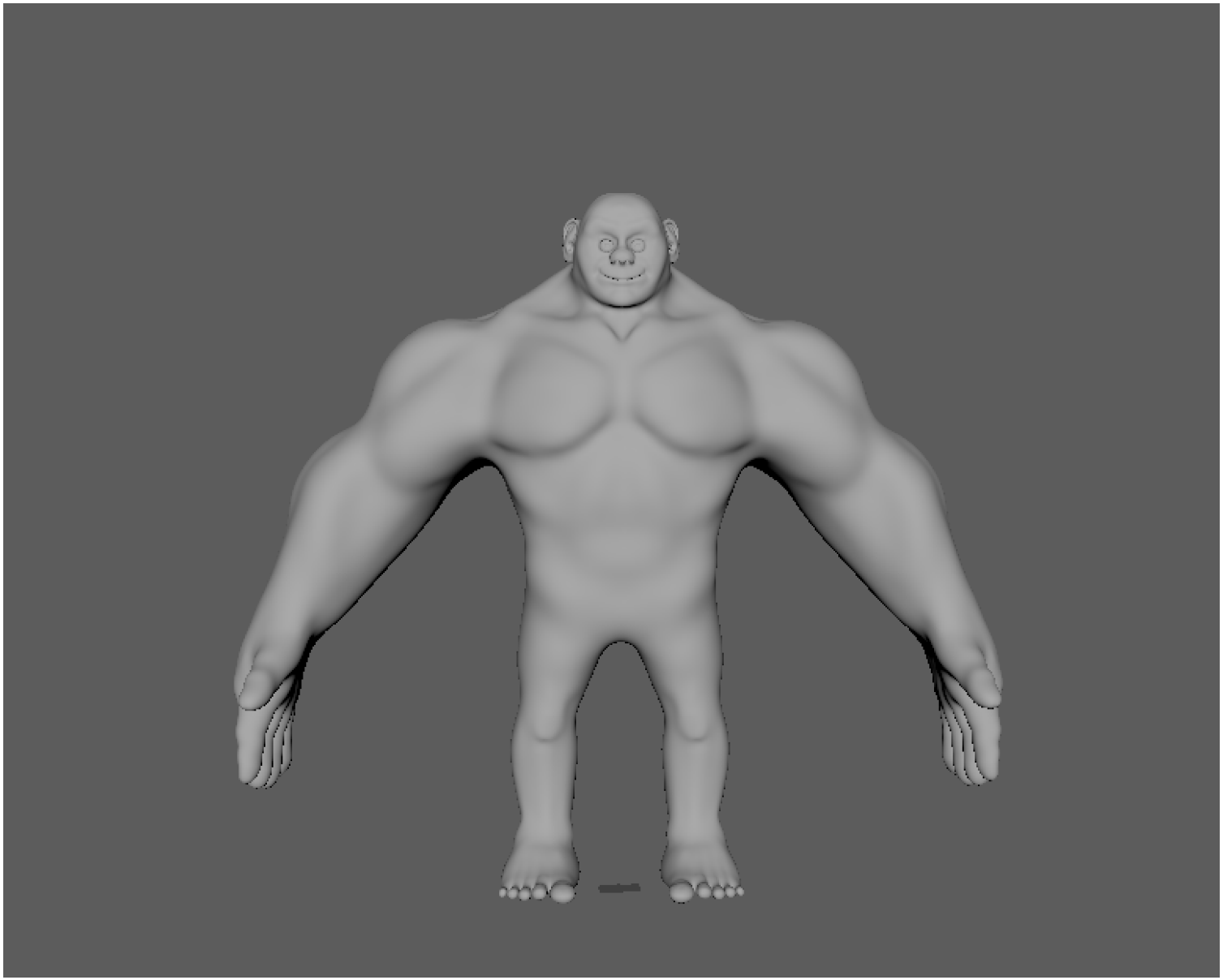


4. **Gum and Tooth alignment:** Finally, I cloned the teeth moving back to the molars and slightly altered the shape to separate and distinguish the different types of teeth (Figure…)





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