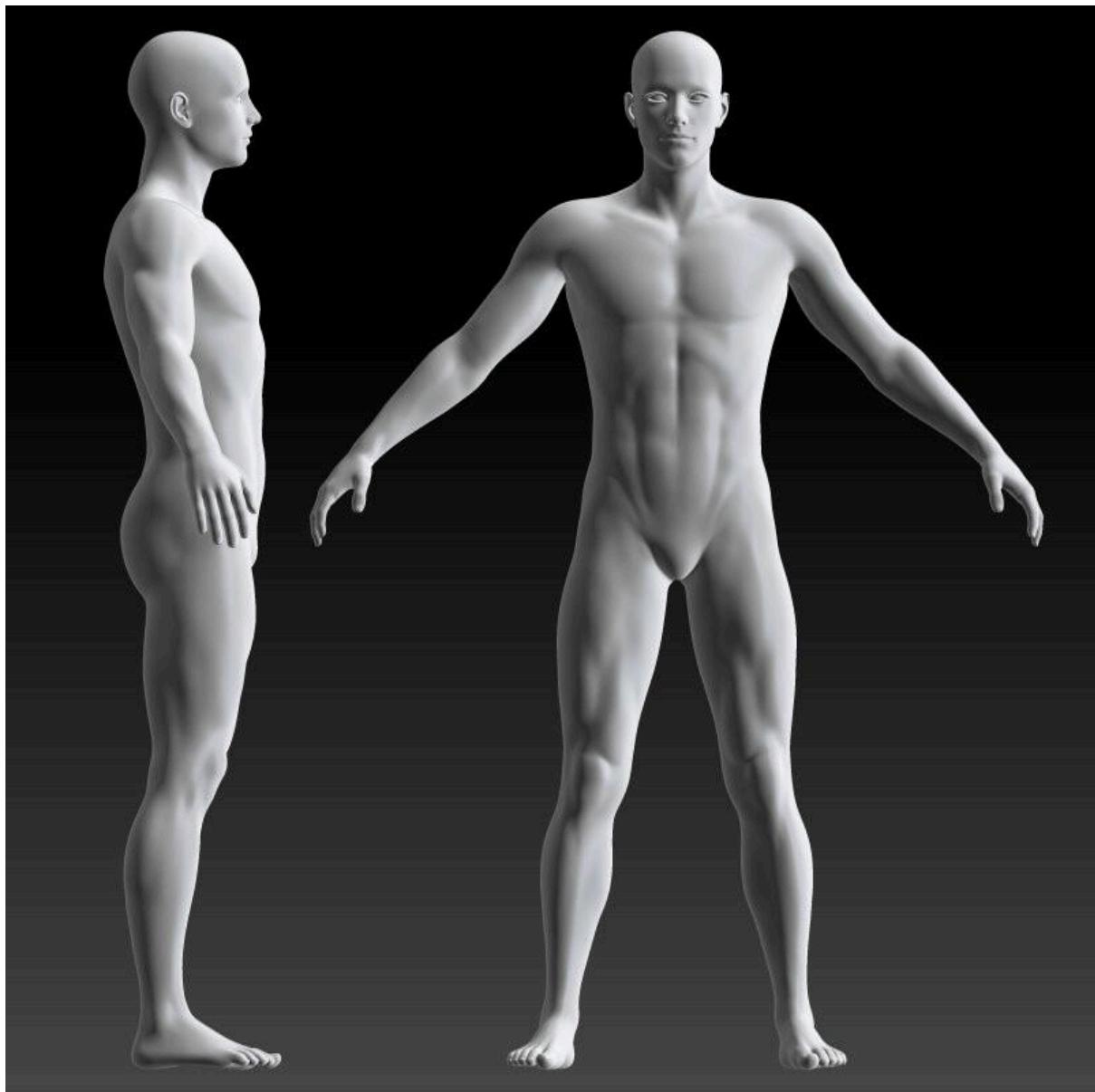


## Body

The first thing I did was create the body. I found some resources online; these being a video tutorial with an image linked, that I downloaded.

[https://www.youtube.com/watch?v=mlwVxDuhpUM&list=PLVbLKk9jIFuhEb7oKhNNj2-SjDKKRCL\\_g](https://www.youtube.com/watch?v=mlwVxDuhpUM&list=PLVbLKk9jIFuhEb7oKhNNj2-SjDKKRCL_g)



I created a plane and rotated it 90 degrees in the x axis then copied it and rotated it 90 degrees in the z axis. In the material editor I created a physical material and applied a bitmap and selected the image. I dragged and dropped the material onto both planes and scaled them in all axis' to look natural and in proportion with each other. I then moved them so that they lined up where I wanted to create my model.

## **Torso**

For the torso I used a cylinder converted to an editable poly. I used the quickslice tool to get more vertices and I selected the lines. I cut and scaled them in the x and z axis to fit the reference image. I did this from the front and right viewpoint until I was content with my model. I also moved individual vertices for finer adjustments. I made this shape invisible when working on the arm.

## **Limbs**

To make the limbs (one arm and one leg) I used a similar method of creating a cylinder for each of them, converting it into an editable poly and rotating and positioning it so it matched the reference image. I used quickslice and scaled the axis on the lines I cut so it matched the image. I adjusted individual vertices to make them look more natural. I positioned limbs on the torso and used attach. I copied and positioned vertices and created polygons to fill the gap between limbs and body.

### **.Foot**

To make the foot I used cut to shape a polygon at the bottom of the leg that faces forward. I used extrude to bring it out. I made cuts on the foot so that I could manipulate the vertices with better precision. I moved vertices on the foot to make it look natural.

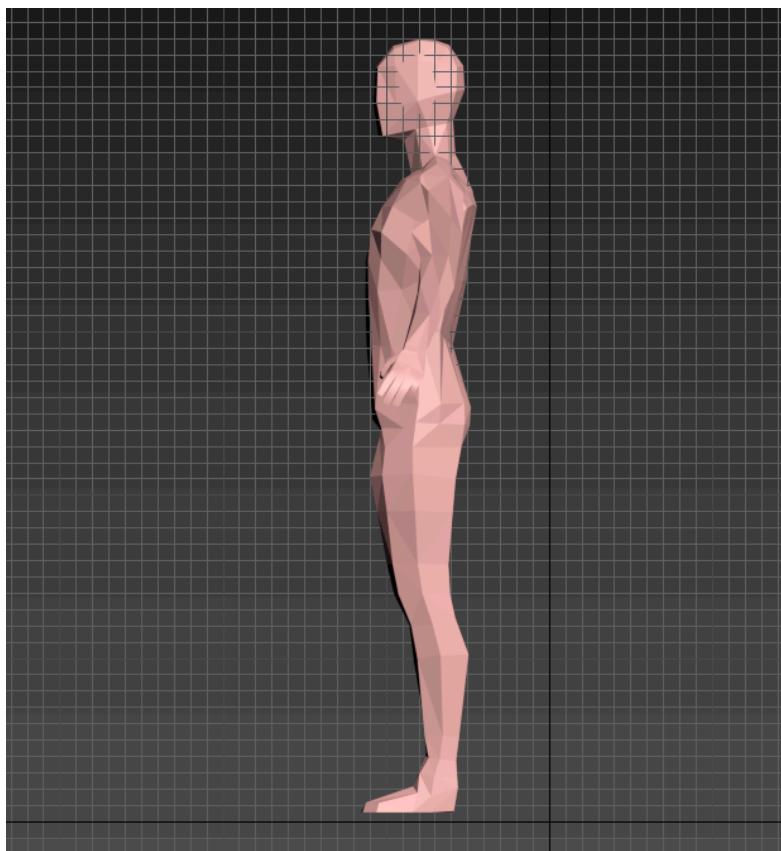
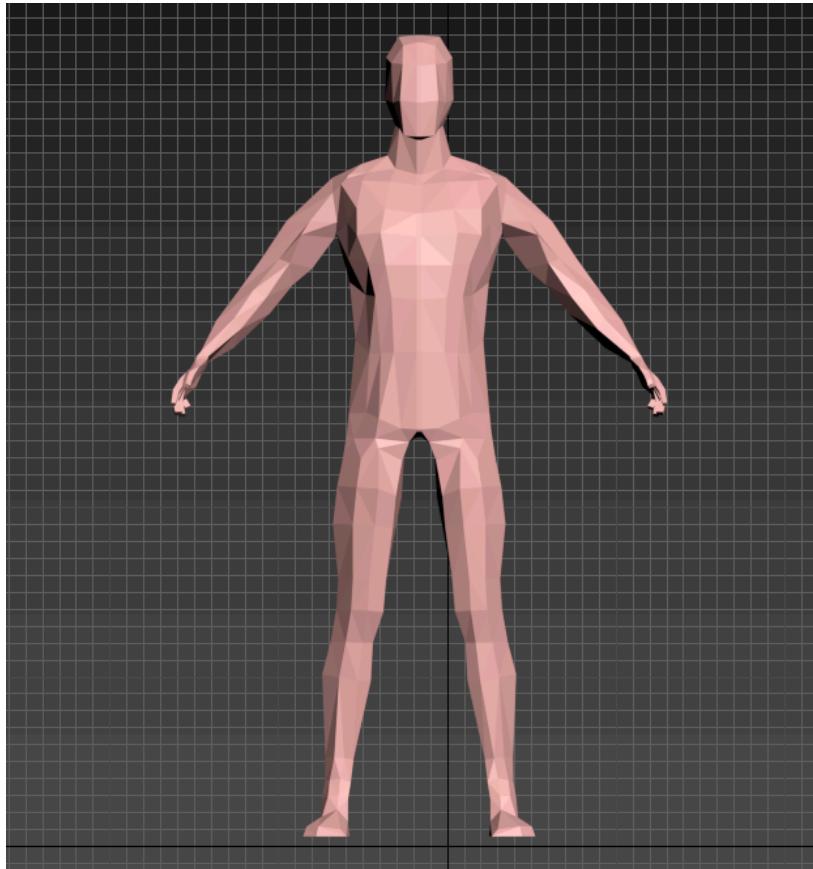
### **Hand**

For the hand I used a plane converted to an editable poly. I used split to separate fingers and shell to add thickness. I used extrude to bring out the thumb and used cut and adjusted the vertices appropriately to better shape the hand. I made the hand on the wrong side so I mirrored it. I then attached it in the same way I did for the limbs to the arm.

### **Head**

I used extrude to bring out a shape for the head. I then used cut/quickslice and scaled x and z axis on cut vertices to shape the head. I then adjusted individual vertices. This was not the final head, just a placeholder.

I deleted the vertices on half of the body as I only made 1 of each body part on the left side of the person. I mirrored the model, lined it up, used attach and created a line of polygons down the middle connecting both sides.



I applied mesh smooth.

## Clothes

I used a video tutorial for this step.

<https://www.youtube.com/watch?v=tTxJ9ND4UeA>

I selected polygons where I wanted a piece of clothing to go. I detached as a clone and applied push.

Push values:

Top, jacket: 20

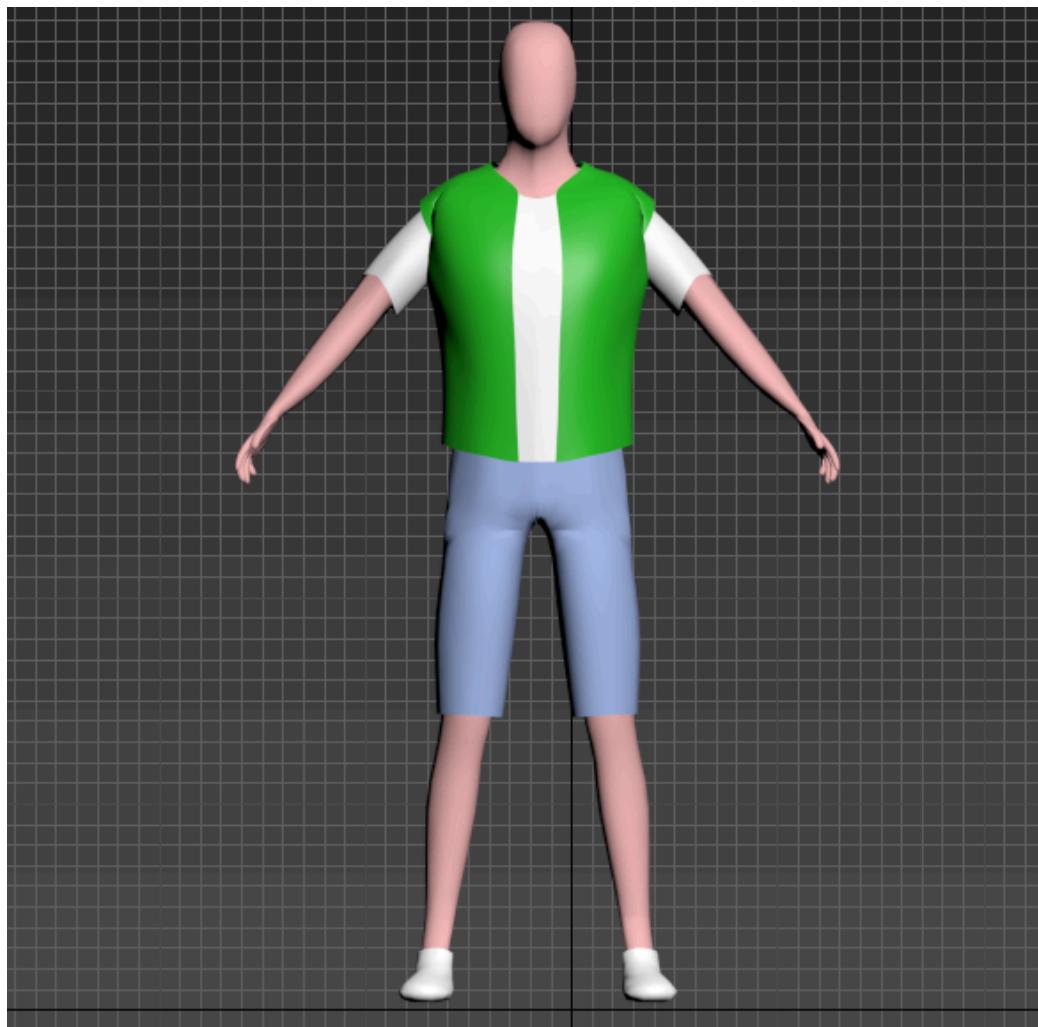
Shorts: 15

Shoes: 10

I applied mesh smooth to clothing items.

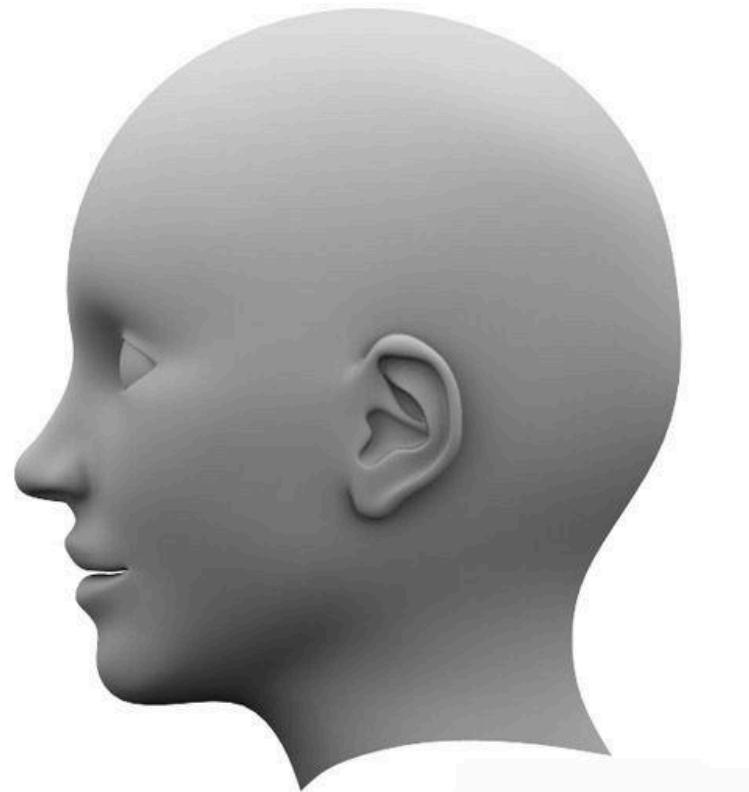
For shoes I copied the top layer of vertices and scaled inwards for the x and z axis. I created polygons to join the vertices and make the gap between the foot and shoe smaller.

I made the jacket green, shorts blue, top and shoes white.



## **Head**

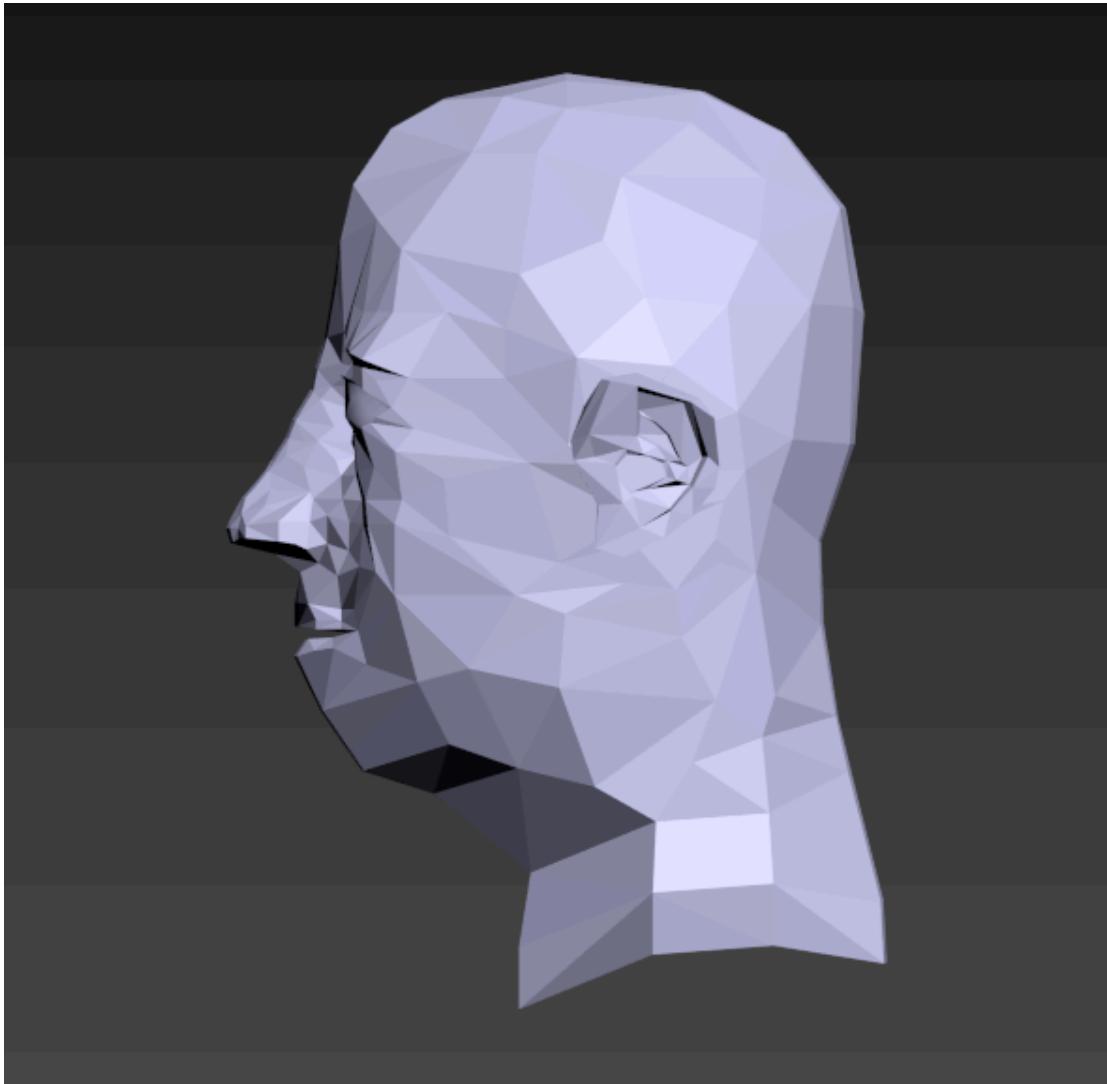
I used the tutorial on moodle to make the head and positioned the reference images the same way I did for the body.



I made a plane converted to an editable poly and shaped it around the eye by moving vertices. I copied vertices and positioned them appropriately to create polygons that extend the editable poly in the shape of the head and in reference to the images. Vertices were further adjusted. I did all this for only the left side of the head.

I created the ear by making a new editable poly. I positioned the existing vertices by pushing them inwards of the ear so it creates the ear canal and then I copied edge vertices to make new polygons that shape the edge of the ear. I then shaped the back of the ear with clean edges so it could be easier attached. I made a hole in the head for the ear to join, lined it up, attached it and created polygons to fill the gap. Then I mirrored the side of the head I made, attached both sides and connected them with a line of polygons.





To attach the head to the body I lined it up over the old head and made the clothing invisible. I deleted the old head and neck and some of the chest polygons. I attached the head and made new vertices and polygons to fill gaps.

I had attempted to attach a previous version of the head (face only) however it didn't look good so I continued to manipulate the vertices of the head to make it look more natural.

### **Face details**

I used cut to shape polygons for eyebrows.

In the material editor I selected multi/sub object and chose appropriate colours for face.

Then I changed the set id's of the polygons I wanted to be affected.

Then I applied mesh smooth and used cut multiple times to make 3 layer circles in the eyes.

Then I applied appropriate set id's to the eyes.

Eyebrows: brown

Lips: pink

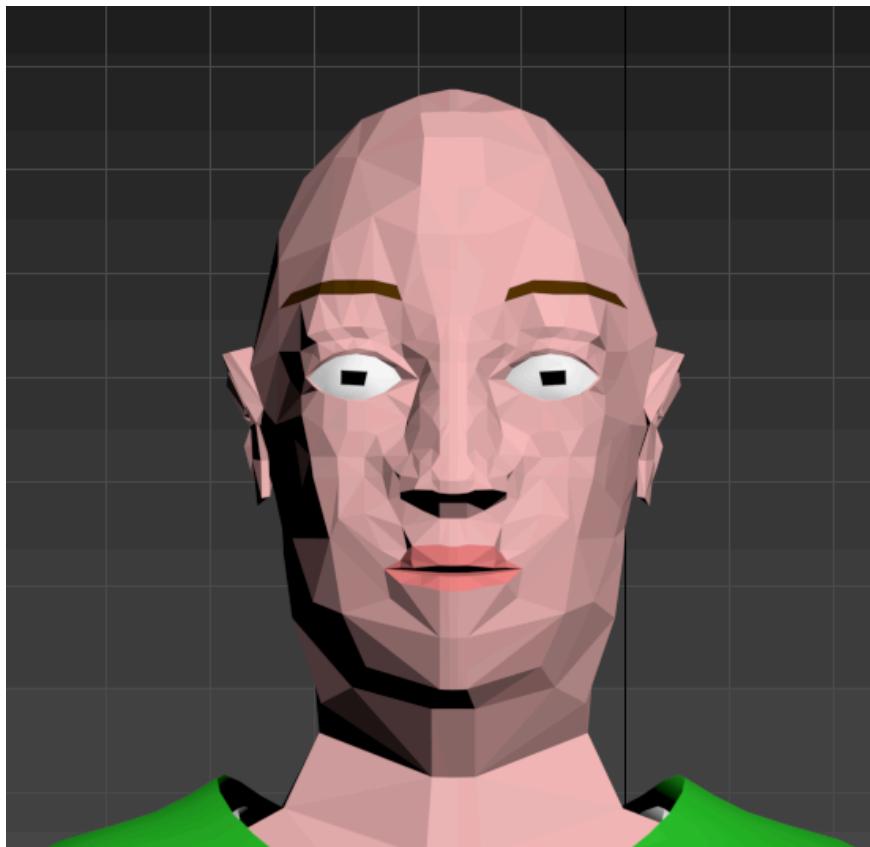
Skin: lighter pink

Inner eye: black

Middle eye: dark green

Outer eye: light green

Background eye: white

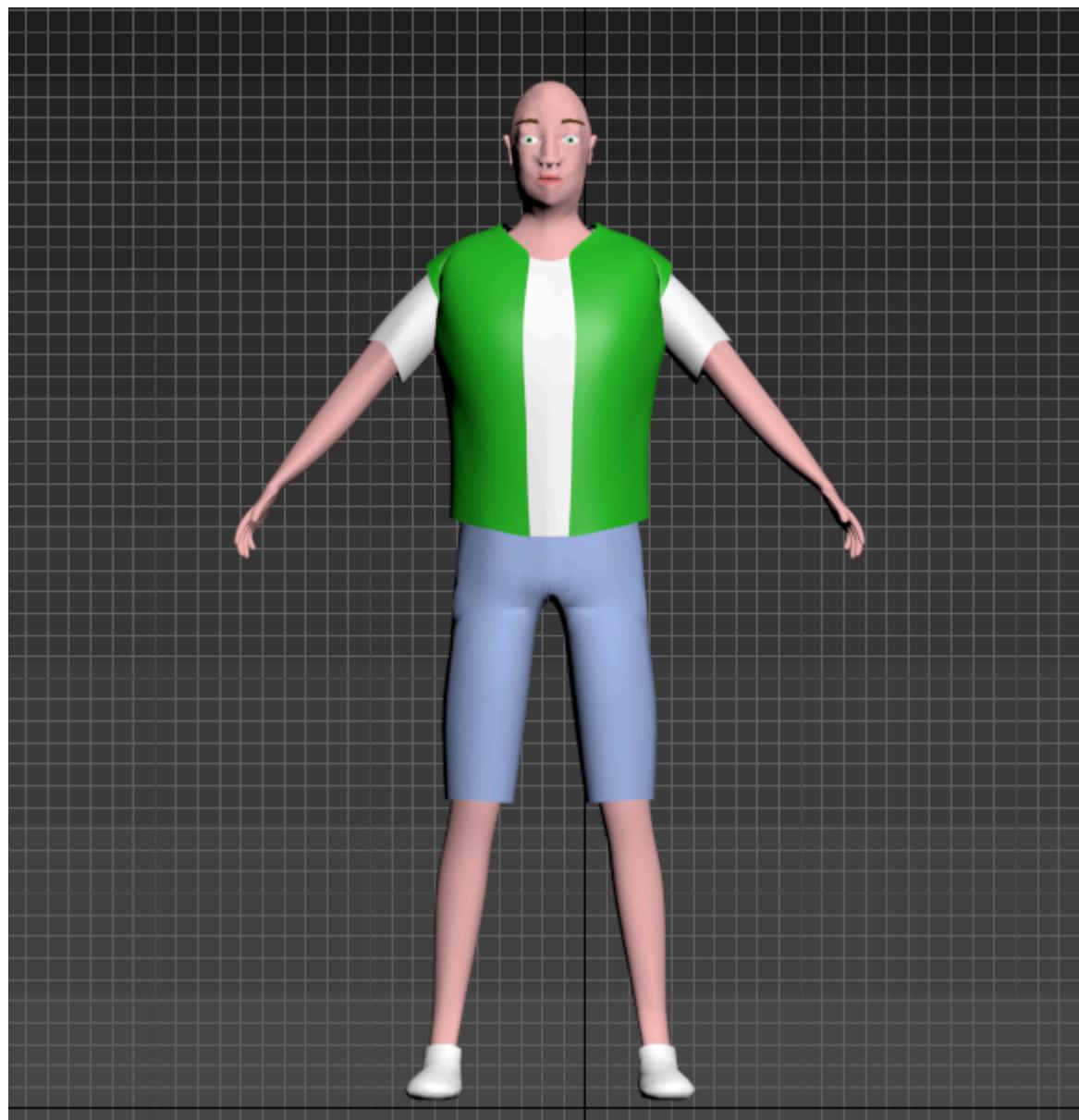


## Attaching clothes

I used attach to combine the person with the clothes.

I selected match material id's to material.

Some set ids had to be updated manually.



## **Scene**

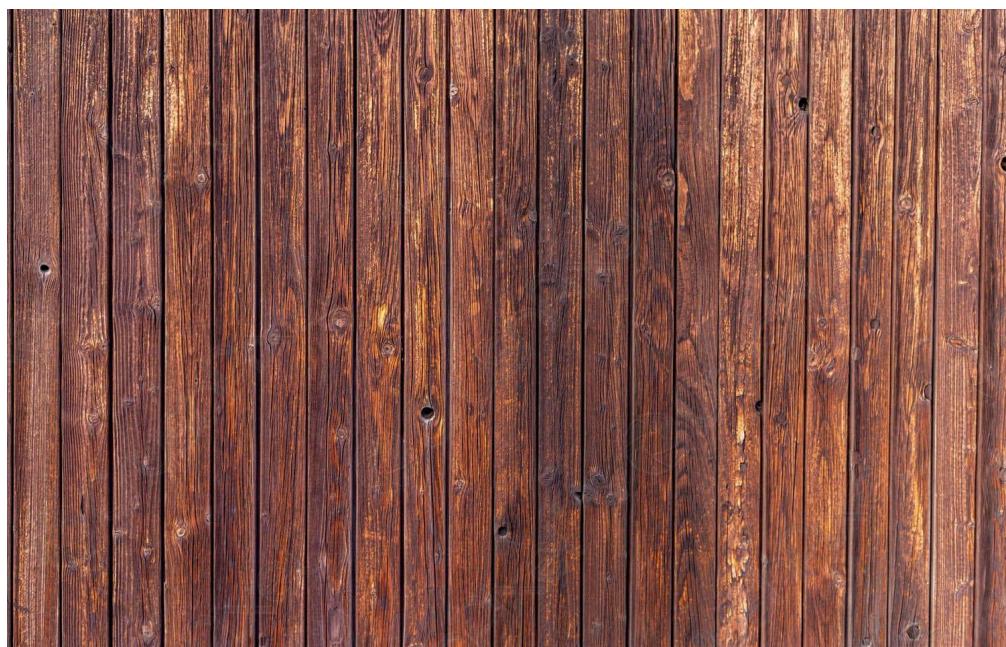
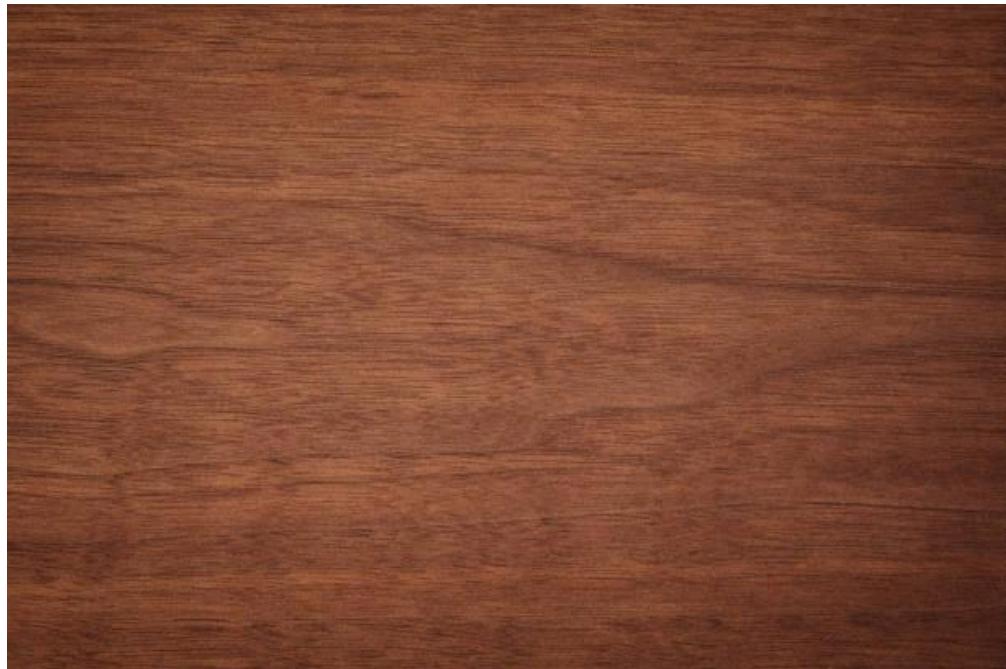
5x5 Plane editable poly shaped into mountain and coloured white with some vertices and polygons added around edges.

Lots of boxes with different dimensions positioned, rotated and scaled to look like a log cabin.

Grey standard material applied to windows.

Some boxes converted to editable polys to manipulate vertices (roof, edge of steps) or to be attached to move as one object (windows).

Bitmap textures applied to cabin elements:





## **Background**

Select bitmap environment map and apply mountain image:



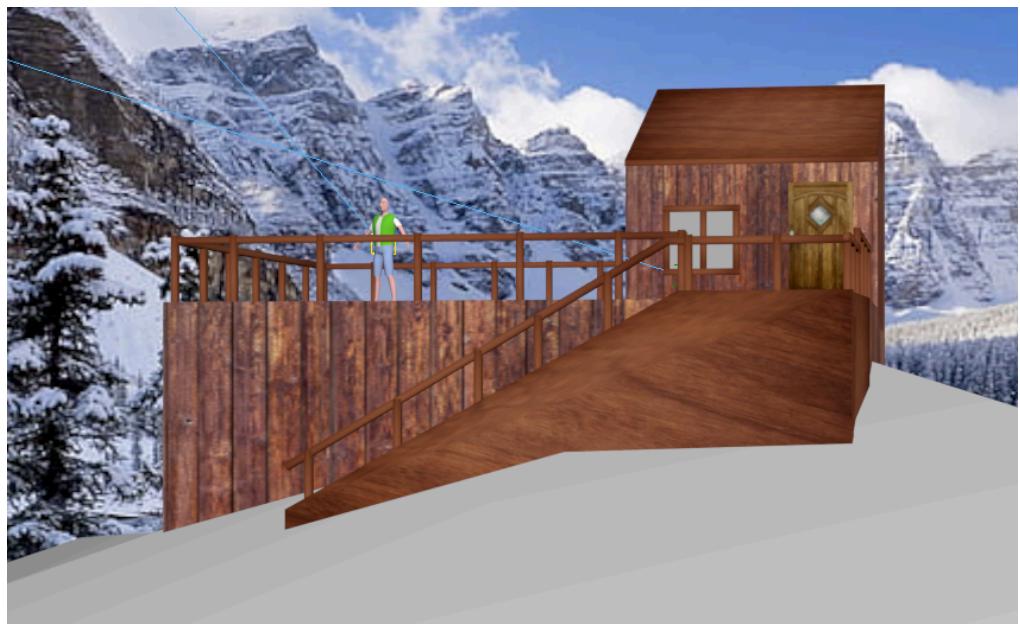
Didn't work until I dragged and dropped it from environment to material editor.

## **Lighting + cameras**

Person positioned in scene.

Target camera positioned for each render.

Directional light coming from the natural direction estimated from the background however moved for hand render for better lighting.



## Rendering specs

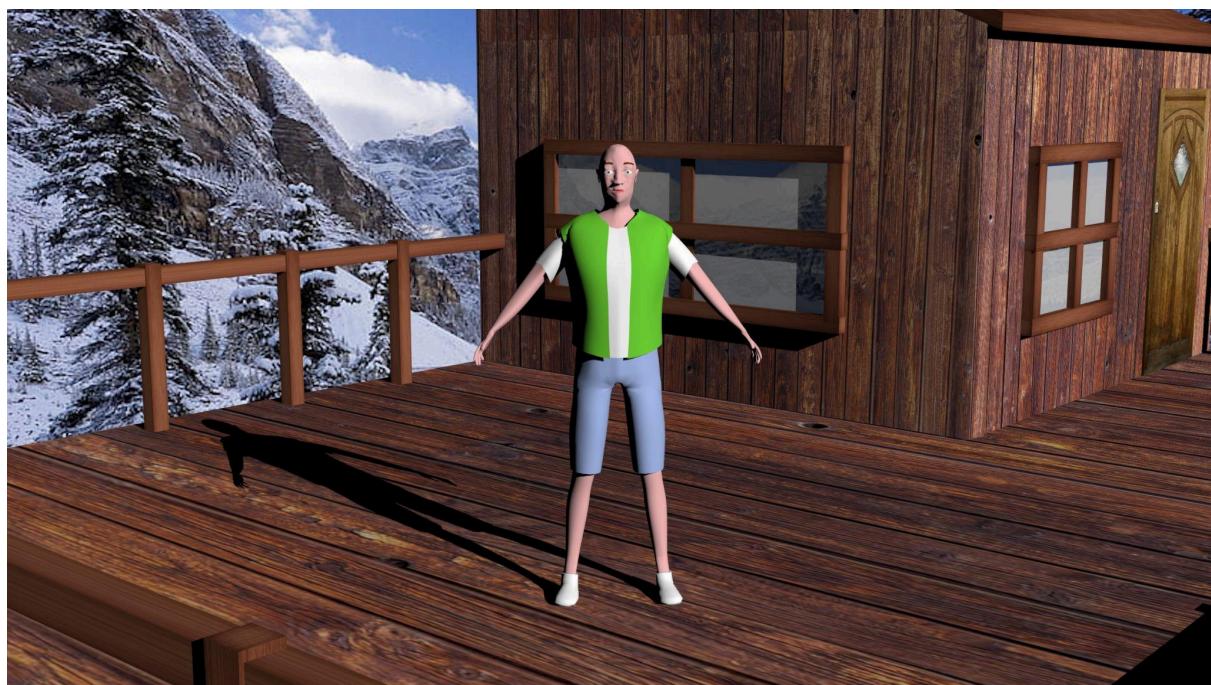
Render quality: 2560x1440

Apart from render main: 3840x2160

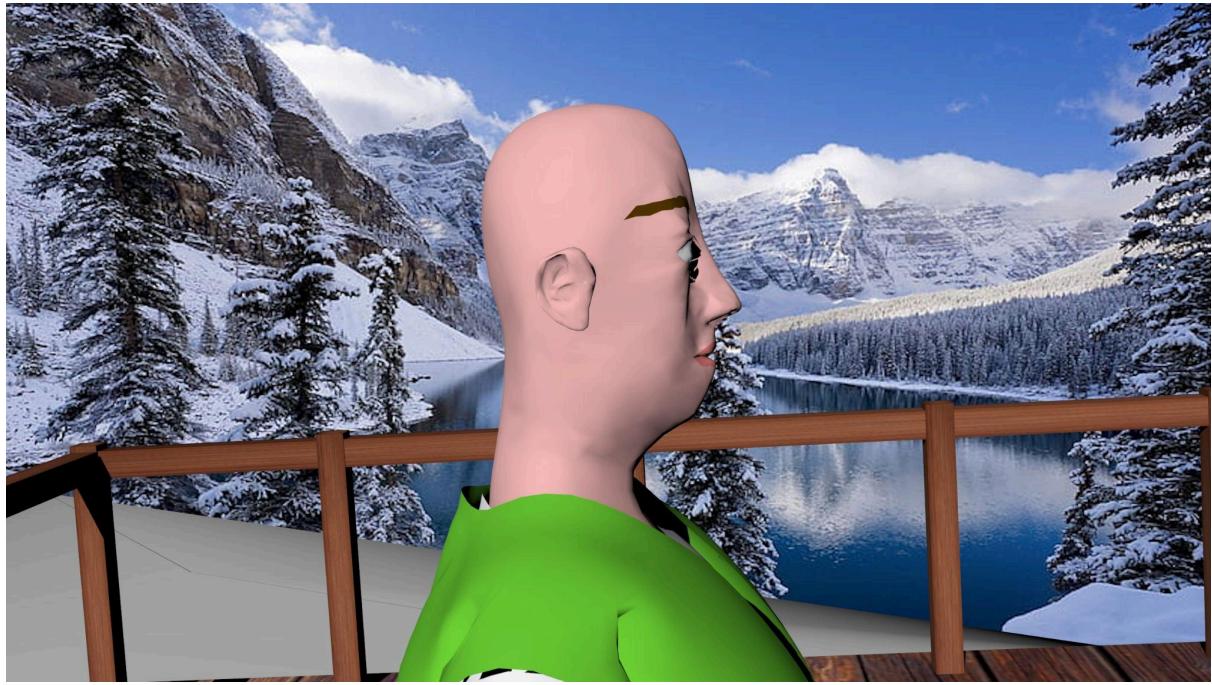
File type: jpg

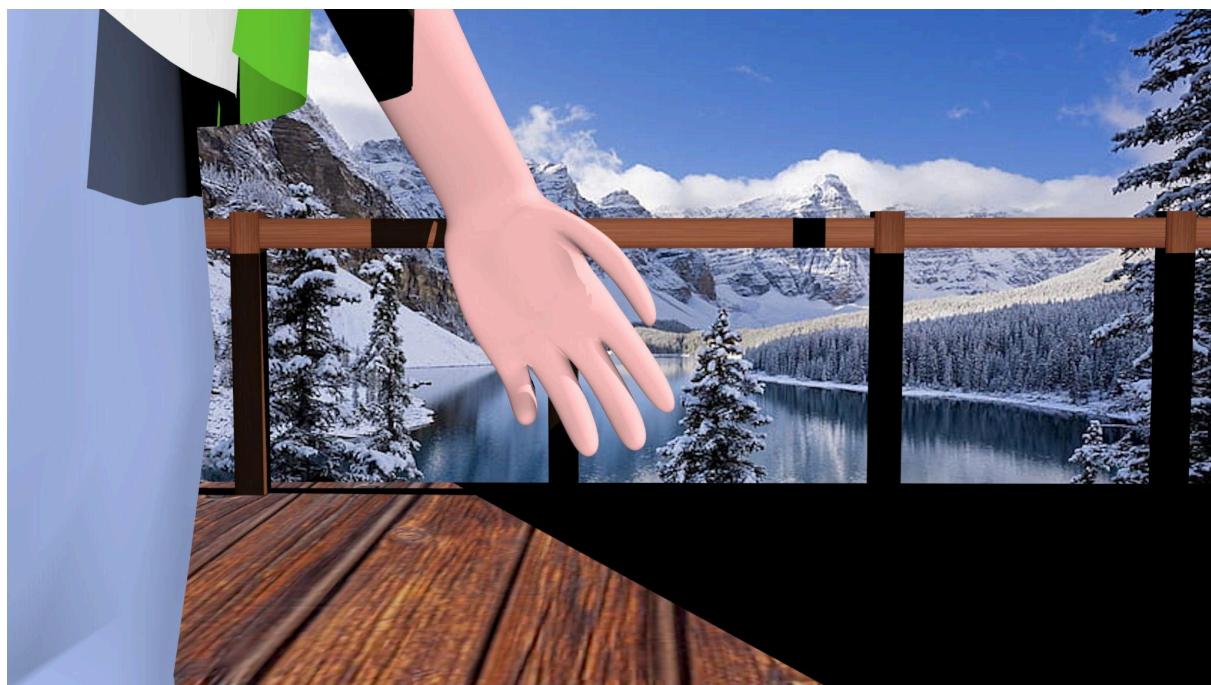
Render type: Scanline render

Other settings weren't changed









## Citations for resources used in this part of the coursework

@kenzorman. (2019, october 11). 3dsMax basics: Make a LowPoly Character. Youtube.  
[https://www.youtube.com/watch?v=mlwVxDuhpUM&list=PLVbLKk9jIFuhEb7oKhNNj2-SjDKKRCL\\_g](https://www.youtube.com/watch?v=mlwVxDuhpUM&list=PLVbLKk9jIFuhEb7oKhNNj2-SjDKKRCL_g)

@kenzorman. (2019, october 18). 3dsmax basics: Lowpoly face and clothes. Youtube.  
<https://www.youtube.com/watch?v=tTxJ9ND4UeA&t=35s>

Turner, K. 3dsmax Low poly character modelling tutorial. artstation.  
<https://www.artstation.com/artwork/XnR6qL>

@pexels. Plywood Close up texture of brown plywood. freerangestock.  
<https://freerangestock.com/photos/130273/plywood-.html>

@gitusik. Old rustic wood planks background. Stock.adobe.  
[https://stock.adobe.com/images/Old-rustic-wood-planks-background./291020314?as\\_content=t=tineye\\_match&clickref=1100lyEbouLv&mv=affiliate&mv2=pz&as\\_campType=backlink&as\\_channel=affiliate&as\\_source=partnerize&as\\_campaign=tineye](https://stock.adobe.com/images/Old-rustic-wood-planks-background./291020314?as_content=t=tineye_match&clickref=1100lyEbouLv&mv=affiliate&mv2=pz&as_campType=backlink&as_channel=affiliate&as_source=partnerize&as_campaign=tineye)

WOODEN 1930S FRONT DOOR EXTERNAL EXTERIOR VINTAGE RECLAIMED SOLID OAK WOOD#169965. Greendoors.

<https://greendoors.co.uk/product/wooden-1930s-front-door-external-exterior-vintage-reclaimed-solid-oak-wood/>

@darkvamplord. Mountain Lake Snowy Background. wallpapers.  
<https://wallpapers.com/snow-mountain-background>