

# 3D character creation process

## Introduction

I have been inspired by multiple types of media such as, Video games, Movies, anime and more, to make and create characters myself. Video games especially make characters fascinating as we get to play and act as them as well as interact with others, in addition to looking however we like. Features in character customization are always a joy to use and have always been a part of an enjoyable experience in video games.

The work samples consist of 2 3d modelled characters. One is a stylised low poly character with emphasis on armour and clothing, while the other is a medium-poly anime styled character. All models are made with the software Maya and Photoshop / Clip Studio Paint for texturing.

## Workflow

The method used for these characters is hard surface modelling, which generally works for a model with less emphasis on precise or organic form. Poly-modelling is used over sculpting to quickly and easily capture the overall shape of the characters while not needing to do retopology and spend time fine tuning form. Topology is considered throughout the entire modelling process making sure it is all in quads for better texturing and rigging results.

In addition the characters are made through poly-modelling and using smooth surface functions and sculpting for fine tuning shapes. Focus lies in clean topology and flow in addition to overall form of character.

Rigging the characters has been made using bones and skin feature in Maya in addition to weight painting for correct transfiguration.

Sculpting tools have been used to add detail to some clothing as well as fine tuning meshes using the grab tool.

The characters are textured using the traditional method of UV-mapping and using drawing software for texturing. Through this I have become familiar with making UV-maps of different parts of the body instead of relying on auto-uv, which in my experience has not functioned well.

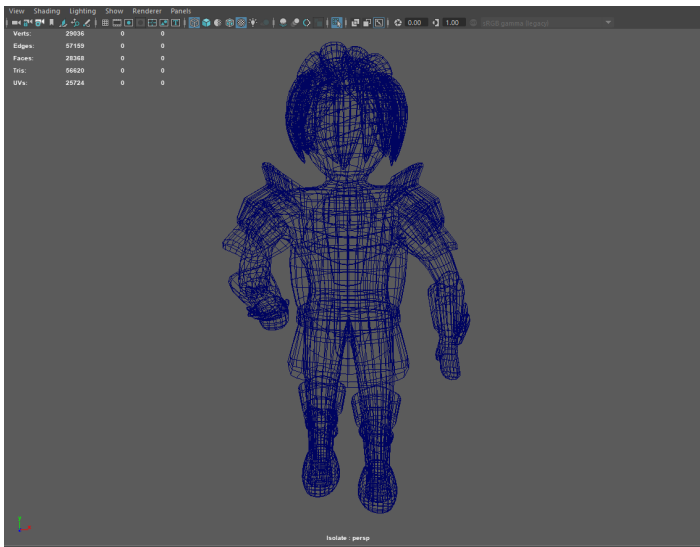
**Samples:**

Elira Pendora turntable - <https://youtu.be/yznKykA2NE4>

Screenshots:



Warrior Low-poly (game ready):



### **Stylised low poly character**

Idea - Low poly, chibi, Game / DnD character.

The stylised character has a different anatomy than usual, its head is roughly one-third of the character's size. This stylization gives the character a personality and is more suitable in a low poly game environment where silhouette and form is key. The body is made with a chibi-model as reference, therefore simplistic in form creating a base for the armour and clothing. Its colour code and overall feel is referenced using the character Gilgamesh from the series Fate/Zero.

I chose this as a reference because it represents what I wanted this character to become. A noble warrior from some fantasy world. The golden armour with crimson red outlining gives a strong sense of nobility and a sense of wealth, in addition it functions to emphasise the golden colour. It is then complimented with dark blue and silver patterns to contrast the rich colour of gold.

The armour is composed of multiple layers for each aspect. This creates a sense of depth and a more natural look. The armour is symmetrical, giving the character a sense of balance and stability in addition to confidence.

Overall the aim of this character was for it to look like a strong and noble fantasy warrior. In a video game sense this could be a noble and strong npc character or a look achieved at the late game. However the armour could easily be swapped out since it is not part of the base character which makes the model flexible in a game environment.

### **Medium poly girl character.**

Idea - Anime style, medium poly, figurine.

This character is based on a VTuber known as Elira Pendora from Nijisanji EN who's a solar dragon in human form. The VTuber model was referenced for this character as a base, its then complimented by clothing which aims to fit the casual summer theme. The clothing is taken heavily referenced from the original character to achieve a similar feel and stronger resemblance. Like the original model, the character also consists of asymmetrical aspects, such as the eyes, the shirt and the legs. This makes the design richer and less monotone.

The anatomy of this character is closer to normal but emphasising body shape with thin limbs. The womanly body is expressed and emphasised with form making a larger presence.

In terms of clothing the oversized sweatshirt, also part of the original, has the function to give arms less of a presence and instead be viewed as the upper body as a whole. In addition it gives a softer and cuter look as it is more loose and airy.

For the theme of summer, the sweatshirt was modified a bit making it shorter overall to expose the belly. This was made to more closely present the feel of hot summer as well as making the character more attractive and outgoing. The original is more packed and composed making the character look less outgoing, but more mature.

As for the shorts I decided to go for a dark blue and purple to contrast and emphasize the light colour of the shirt and the legs. The shorts are tighter and less airy to give it more bodily form as well as leading the focus to the legs.

Overall some folds with the use of sculpting tools have been added to clothing for a more natural look. The aim of this was to create a character based on the original model in a different outfit functioning as a still model. This model is not suitable for animation because of the airyness of the clothing in addition to not having a complete body base mesh.

### References:

3D modelling thesis: [Thesis - 3D modelling](#)

Elira Pendora model reference sheet:



Warrior model reference link: <https://www.youtube.com/watch?v=ZwufDmFp1vU&t=2s>

