

## 3D character model, sculpting and texturing

### Deciding the animation sequence

The first step of the assignment was to think of an animation sequence. Since my character is an evil scientist, I decided to go for a scene where the character injects a body with modified DNA.

### Reference video

Next step was to get a reference video ready. I took help for a friend to record a reference video for my character. I got a few key poses from my reference video.

The one on the right is the key pose where the character stabs the syringe into the body.





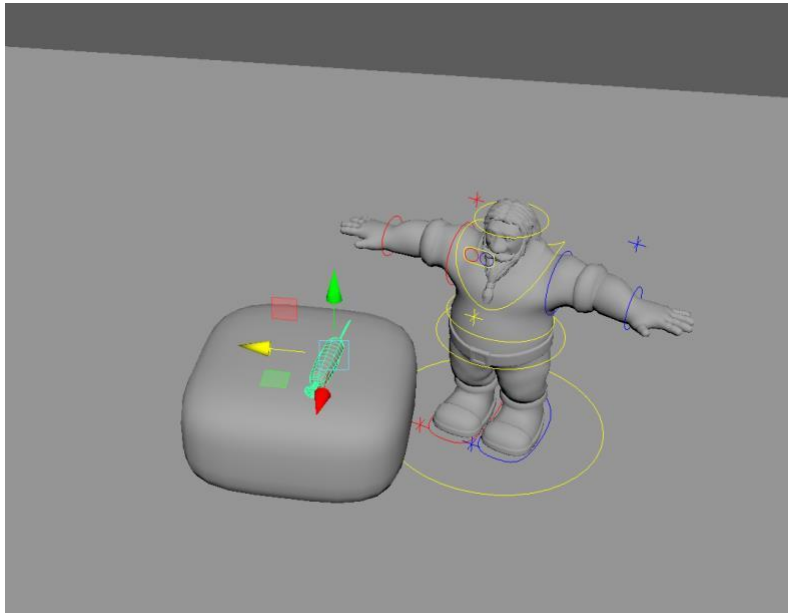
These key poses are  
the phases of the  
evil scientist  
stabbing the body.



This is the passing pose of the evil scientist character.

Once all the key poses and reference video was ready, I added textures to the character before starting the animation.

Since the rig of my actual character had slightly broken, I decided to go with the muscular dwarf character.



Since one of the objectives of the assignment was to move one object from one place to another, I placed the syringe on one part of the scene and the body (the one which will be stabbed) on the other part of the scene.

While animating the scene, I realized that the characters eye movement looked off. I wanted the character to look at the syringe as it walked closer to the syringe.



To set the eye position, I moved the maya view behind the syringe and then adjusted the characters eye contact. I utilized this technique throughout the scene, and it made the eye contact of the character with objects accurate.

To add the evil laugh to the character, I look at some evil animated character videos on youtube. I found a YouTube video which compiled the top 20 Disney laughs.

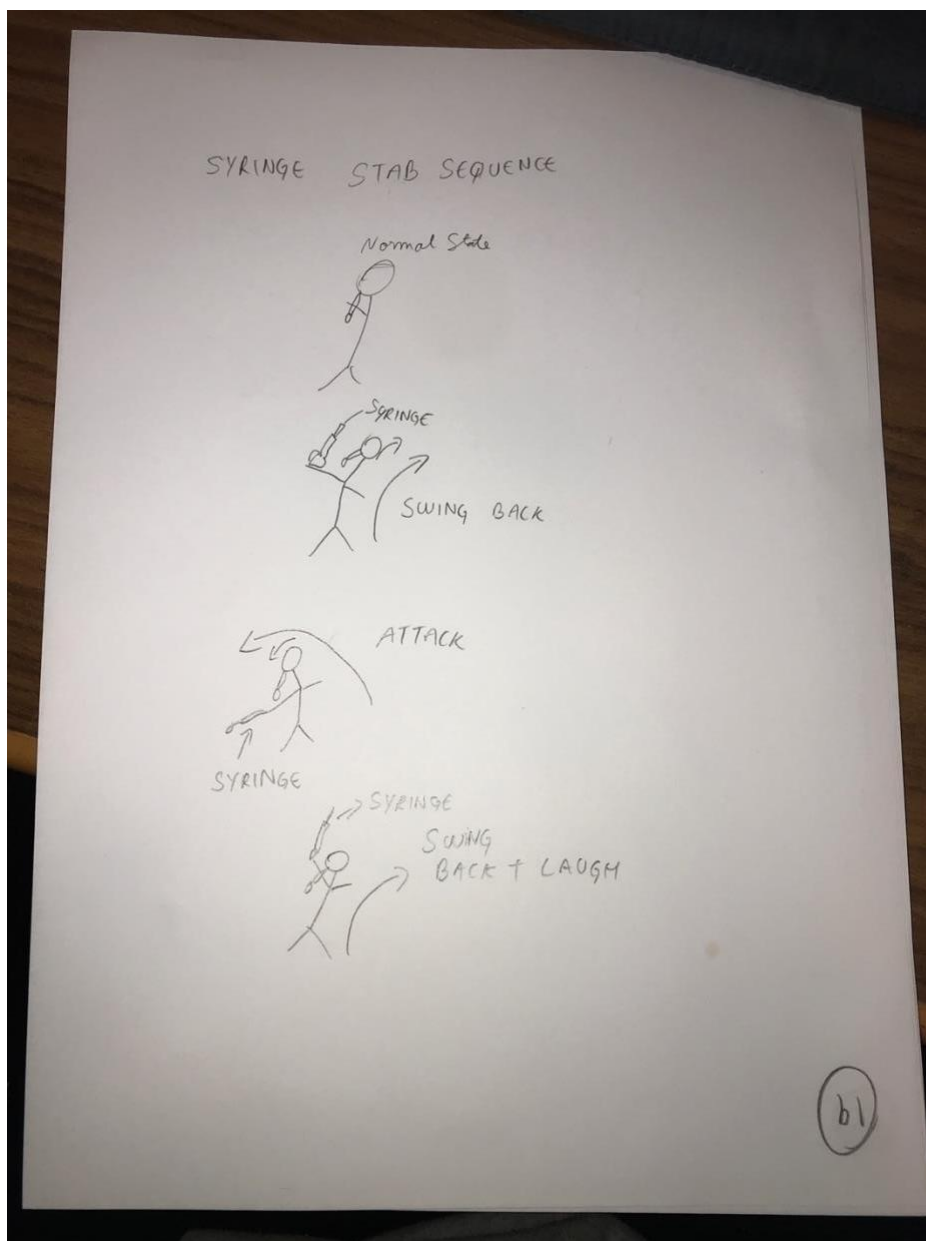
<https://www.youtube.com/watch?v=HR6wwe0Czlc>

Looking at the laughs gave me a good idea of how I wanted to incorporate an evil laugh into my character. Through my research I found out that evil characters tend to lean backwards when they start laughing and eventually move back down to the actual position. To have a longer laugh cycle, it's just repeated movements of going up and down combined.

A complex part of the animation was the scene where the character picks up the syringe. To add emotion to the scene and make It look more dramatic, I decided the sequence so that when the character picks up the syringe, it lifts the syringe up in the air, sort of like a trophy

and then laughs. The evil laugh sequence adds emotion and personality to the sequence and gives the audience an idea of the characters motives.

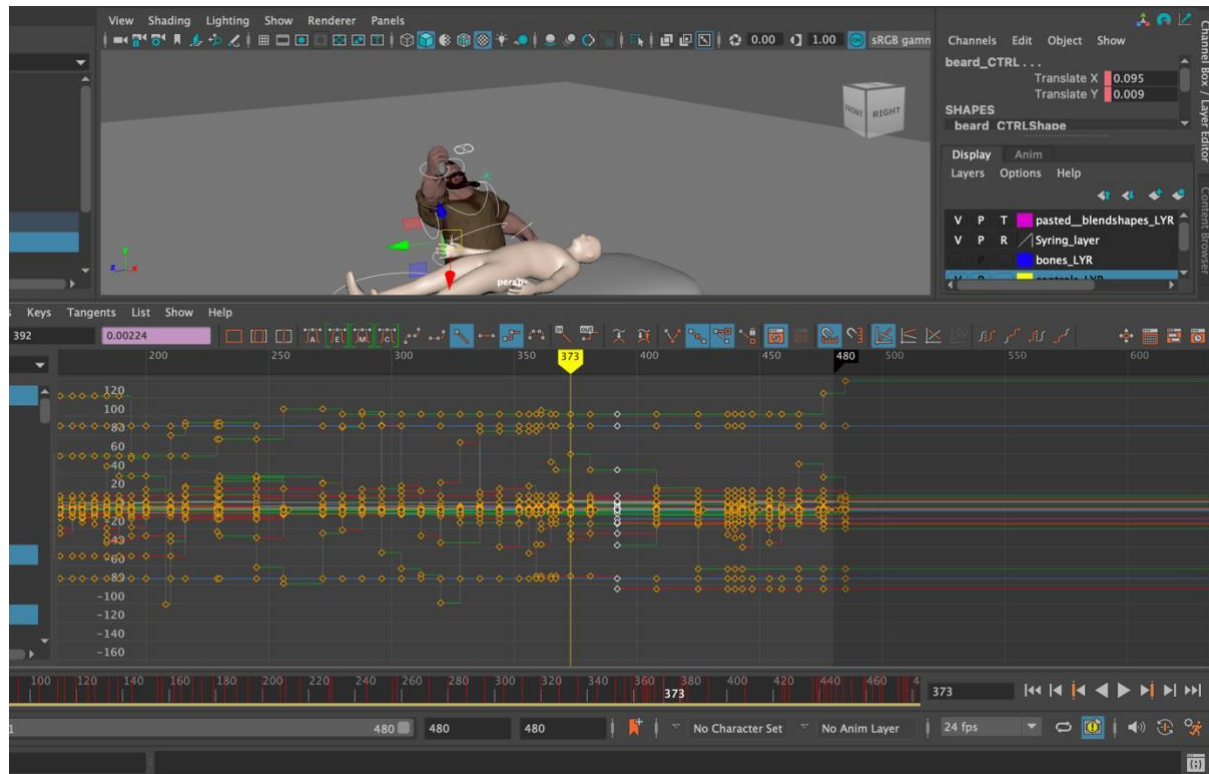
Another complex part of my animation was the stabbing sequence. Since I did not know where to start, I looked at the reference video, however, that did not really help. To understand the whole sequence, I imagined in my head better, I enacted it in front of the mirror. After enacting the sequence, I made a rough sketch of the head movements of the character at every stage of the stabbing sequence.



Rough sketch of syringe stabbing sequence



After I had added all the stabbing sequence key poses, I had to add some poses in between the main key poses.



To help me with the animation and interpolation process, I also looked at a youtube video on body mechanics: <https://www.youtube.com/watch?v=7CBcvu8HLEQ>.

During the process where the character picks up the syringe, I faced an issue. I was unable to make the syringe follow the characters body throughout the animation. To fix this issue, I searched the internet and found a solution. The solution was to add a parent constraint between the characters hand controller and the syringe object and key the values.

For adding emotions, I tried to utilize blend shapes with my characters mesh, however, for some reason that did not work. Since there was not a lot of emotion being shown on the characters face, I added some personality to the characters walk and general movement. Apart from the tutorial, I looked at some YouTube videos on interpolation since I was not very comfortable with it. <https://www.youtube.com/watch?v=CmJVIF5SyBQ>. Looking at the YouTube video made me understand the animation graph slightly better.

After the animation sequence was done, I spent some time cleaning up animations that were not smooth. Since I had a lot of keyed poses, it was a bit hard to clean up the key poses and interpolation. The whole animation sequence runs for about 22 seconds.

## **Render**

The last part of the assignment was a render of the character in a specific pose. I decided to create a render where the character is holding the syringe with the toxic dna in his hand and sort of admiring it. This scene represents the characters persona quite well and fits into the personality. I made some minor changes with the lighting in the render scene and rendered the character. Since I had applied all the substance painter textures on the character beforehand, the render process was quite simple for me. I did make some tweaks here and there and some minor editing on photoshop to make the render look more dramatic.