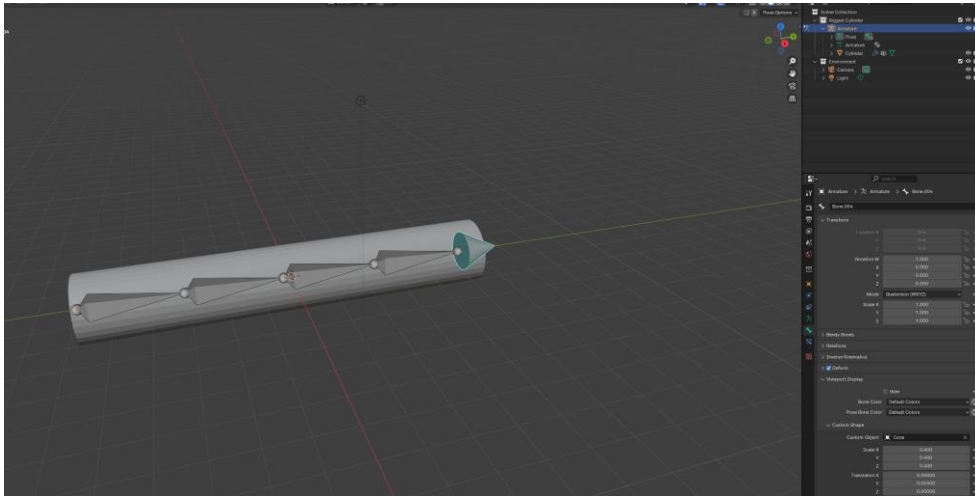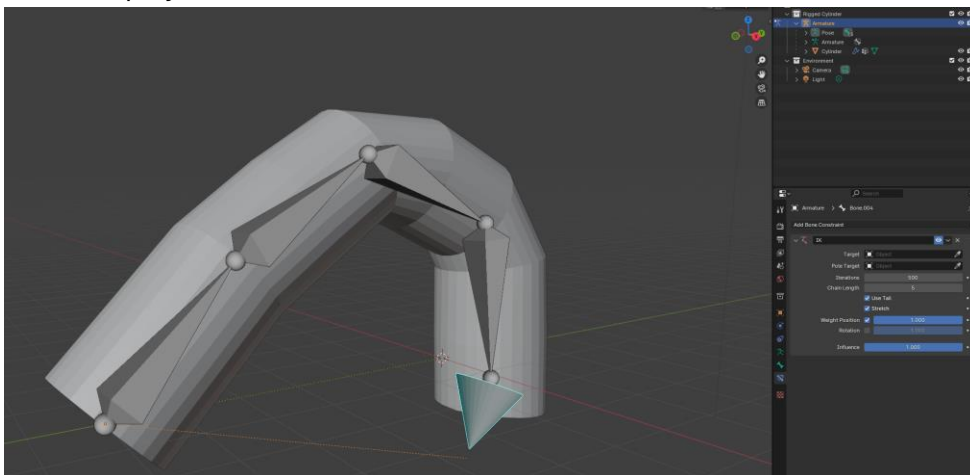# Jevgenij Ivanov 20748055
CS426 Computer Graphics

Completed set up of the rigged cylinder, with tidy structure of collections. I've chosen the cone at the front to be the controller to find it easier. Skeleton is visible due to viewport display setting set do display in front.


Bending the rigged cylinder. Using IK (Inverse Kinematics) here helps me to bend the cylinder efficiently by letting me manipulate a control at one end and have the rest of the bones follow smoothly.
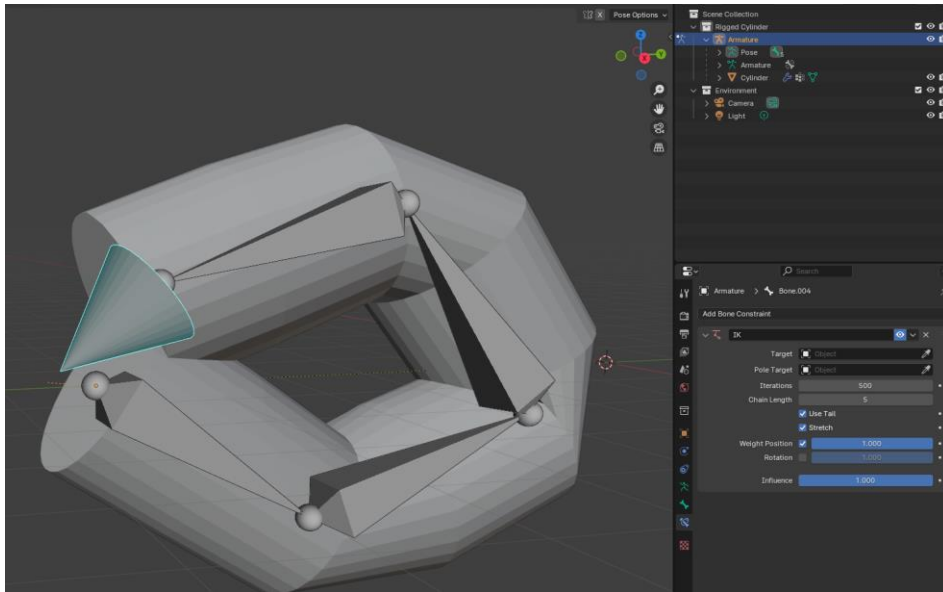
Same as the previous screenshot, except I tried to bend the cylinder in half and got a bad doughnut.
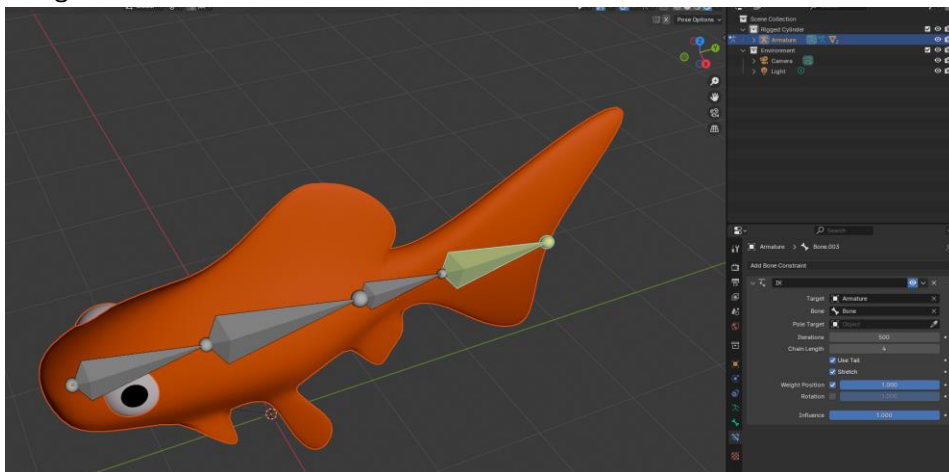

Fish asset with a skeleton that has a chain length of 4. Again, the skeleton is visible in the front.
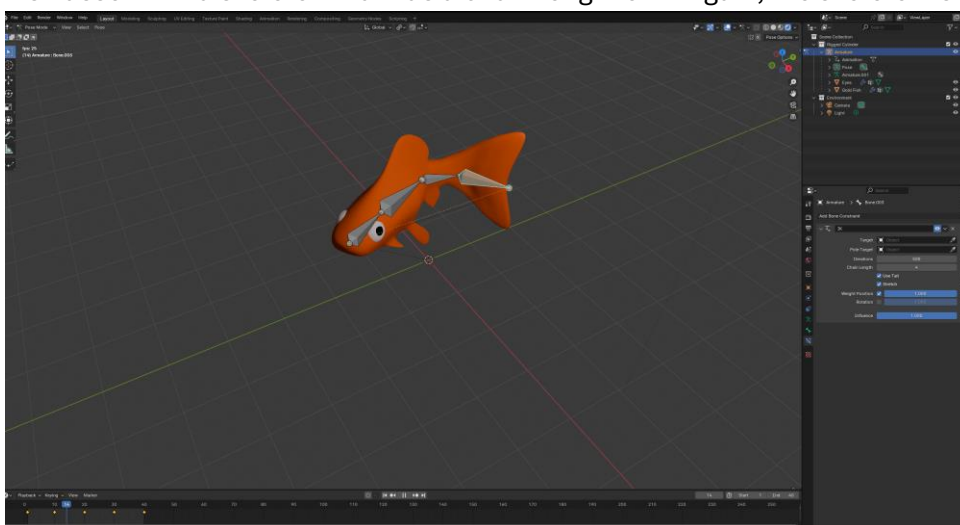
Created 40 frames of animation for the fish. The animation creates an visual effect of the fish swimming by wiggling tail and middle of the body to the left and to the right. This was achieved by selecting "Whole Character" option in the "Insert Keyframe Menu" for each keyframe.
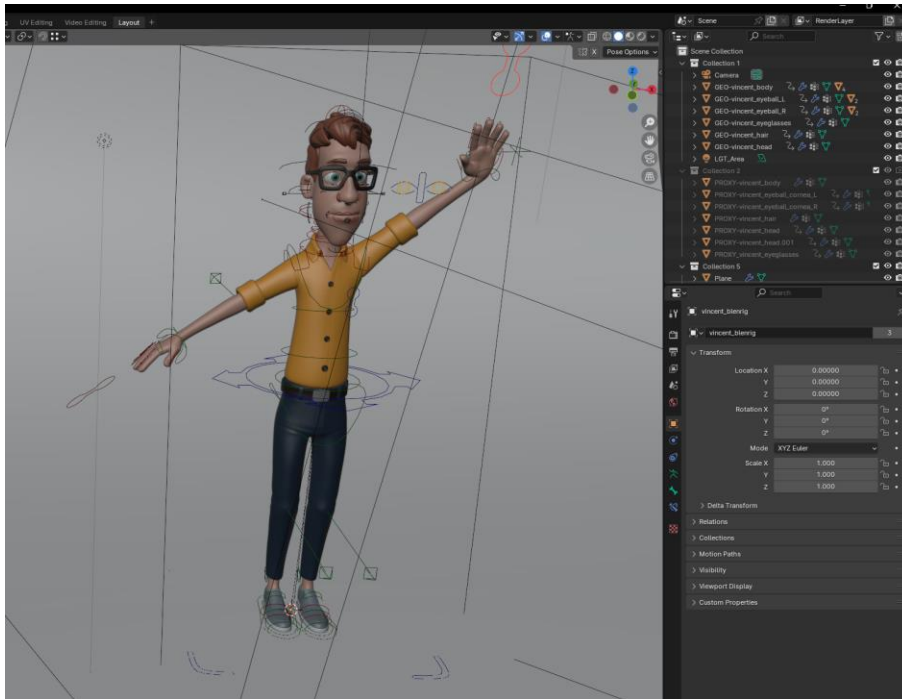
To start off, I have made Vincent to raise his hand and wave to you. This was done by using 'g' to grab and move the arm up, and then 'r' to rotate the hand from side to side to create a waving animation.
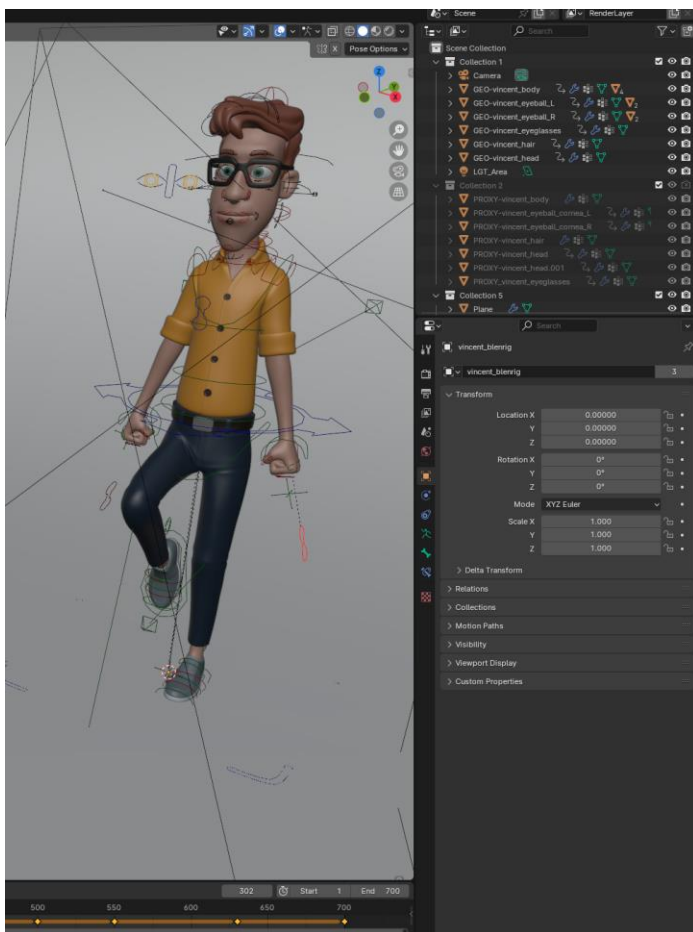

After some more playing around and testing each parts of the rigs, I discovered that Vincent is quite flexible, and I was able to animate smaller details of his body. For example, I made Vincent to clench his fists, move his foot, and twist his toes in many directions.
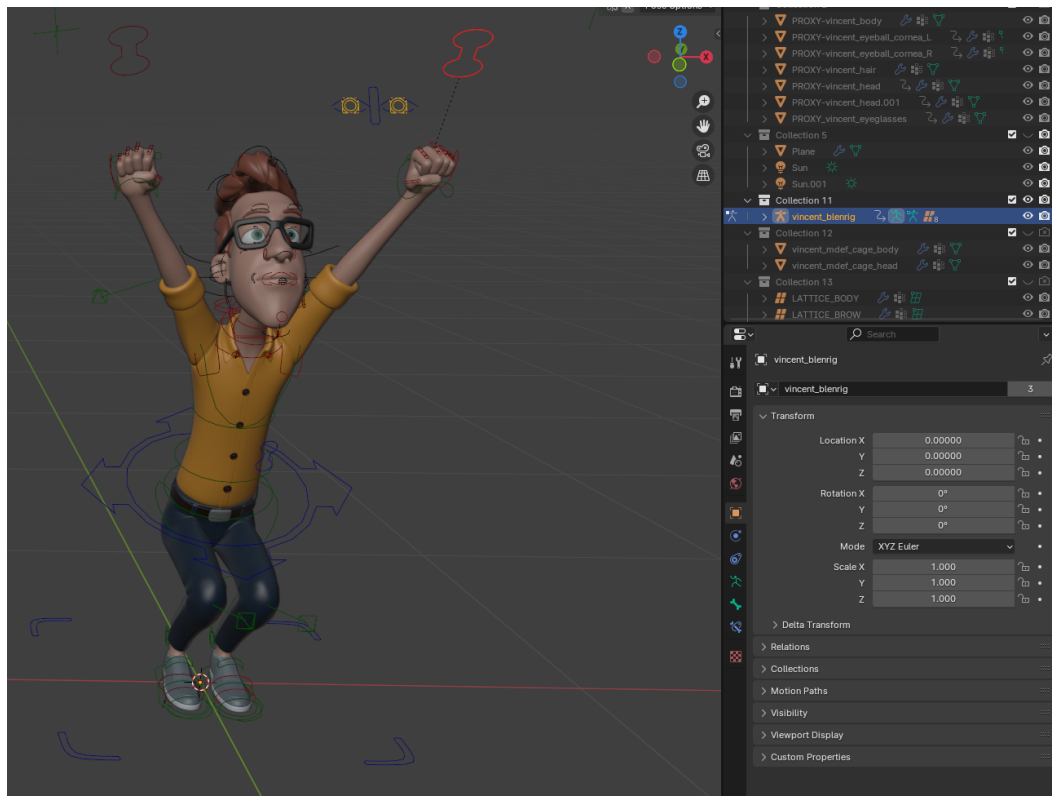
Finally, when putting all the previous animations together, I created a scene from Superman. I made Vincent put his fists up, tilt his head back a bit, bend his knees and create an effect where Vincent pushes off the ground and flies off into the sky like real Superman.
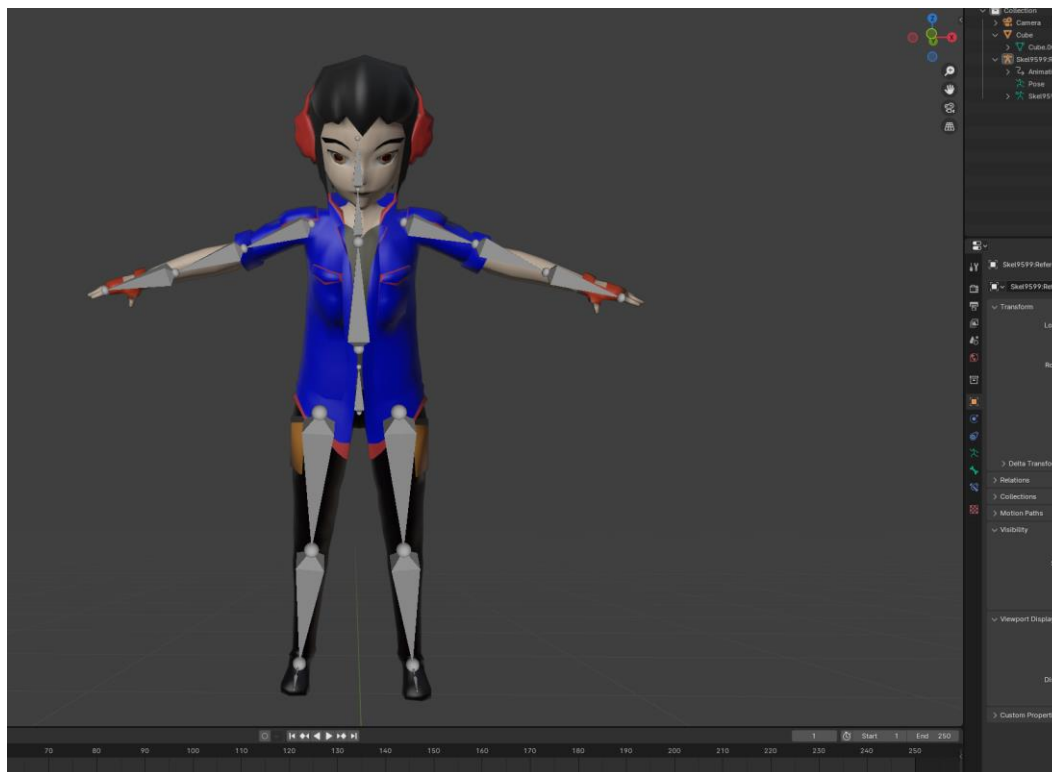
I have imported the boy model and the mocap_original skeleton. I've spent quite a bit of time scaling, rotating, moving the skeleton to allign with the boy's model. However, when I pressed "With Automatic Weights" option, it misalligned the skeleton again, as shown on screenshot below.
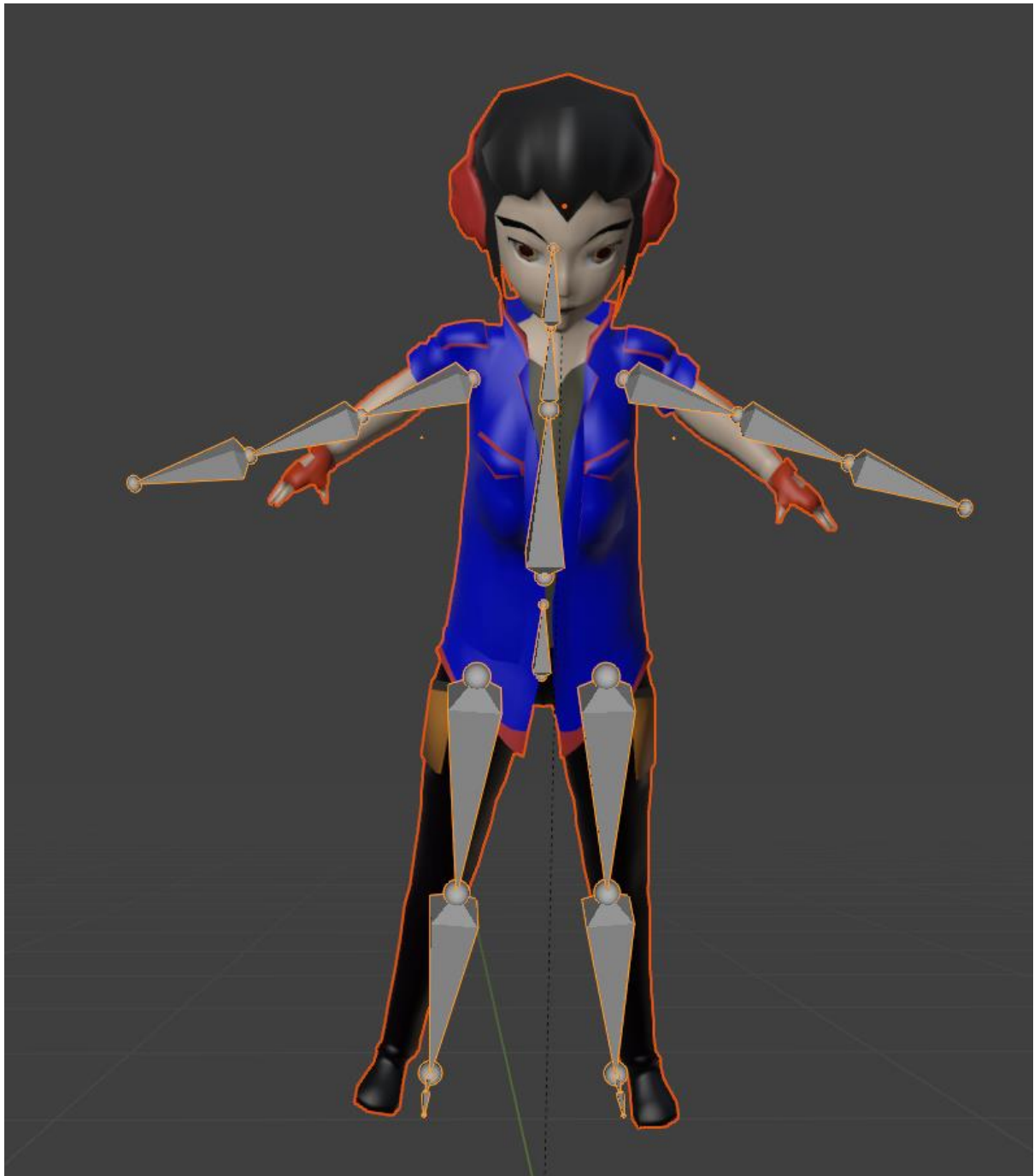
So, I have lined up the skeleton again, this time in edit mode, and tried to position it as accurately as possible, ensuring that parts such as knees and elbows bend smoothly. The result wasn't as good as I wanted it to be, but it was good enough to see the character being animated.
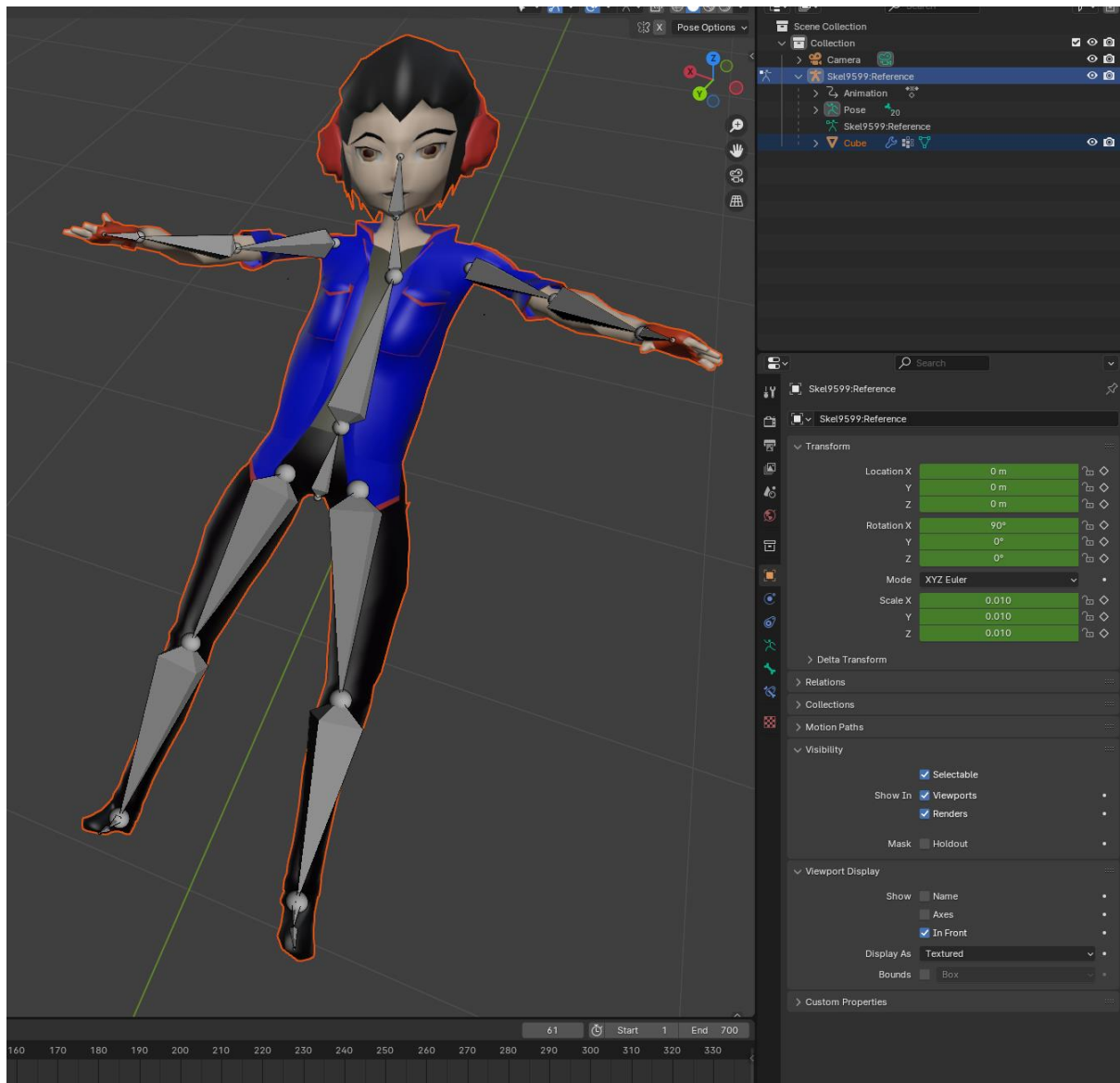
The screenshot above is the character being animated after I carefully alligned the skeleton with each part of the body, and tried to place the ball parts of the skeleton to match with the character body parts where limbs should bend (elbows, knees, neck).
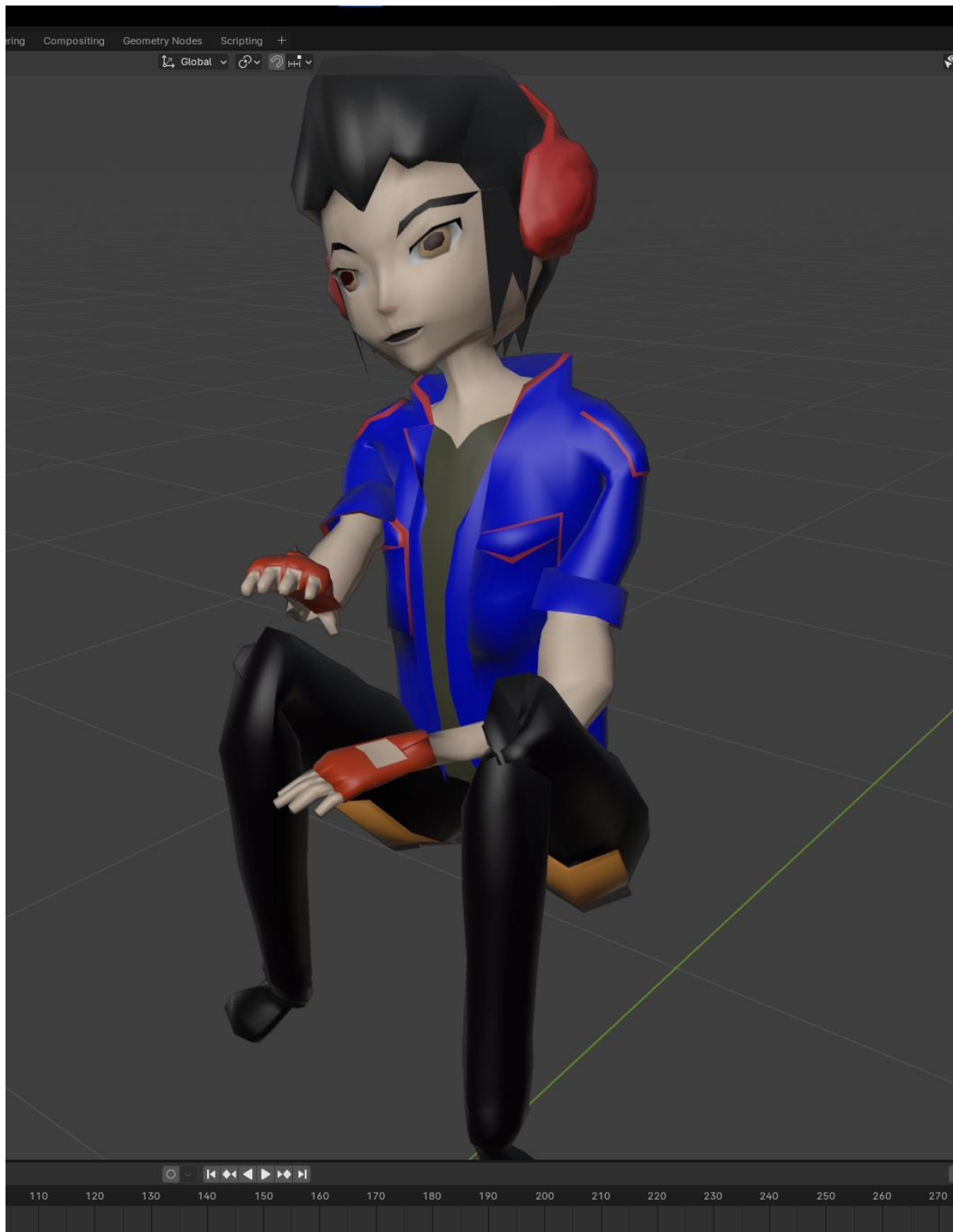
The final result turned out to be pretty good, but not perfect. Some parts of the limbs would twist in unexpected way, for example the feet or forearms, but overall you could identify what the character is doing. More work could be done to polish this animation, but I think it is good enough for the submission.