

*SOMETHING AMAZING*

Interactive 404

# INTRODUCTION

With the prompt of the project being “something amazing,” I was stumped on what exactly to make due the vagueness. Although after curating a list of my favorite things and using that to decide, I was able to land on a character viewer similar to the ones found in RPGs

# PROOF OF CONCEPT

It was difficult to relay how I wanted the app/interaction to work since my topic was pretty niche, but after developing a quick test site that implemented basic features I wanted, I feel like I managed to get core ideas on some sort of page and figure out what to work on next

The screenshot shows a character profile for "Matilda the Test". At the top left is a "Back" button. The main title is "Matilda the Test" with a subtitle "Flowerpot Holder". Below the title is a bio: "this is a bio written for Test Chracter in order to see what text on the screen looks like. The model is named "Matilda" (<https://skfb.ly/6zGMG>) by nicolekeane is licensed under CC Attribution-NonCommercial-ShareAlike (<http://creativecommons.org/licenses/by-nc-sa/4.0/>).". To the left of the bio is an illustration of a character with dark hair, wearing a black jacket over a pink top, holding a large green plant. Below the bio are "Stats" and "Info" buttons. At the bottom are "Previous" and "Next" buttons.

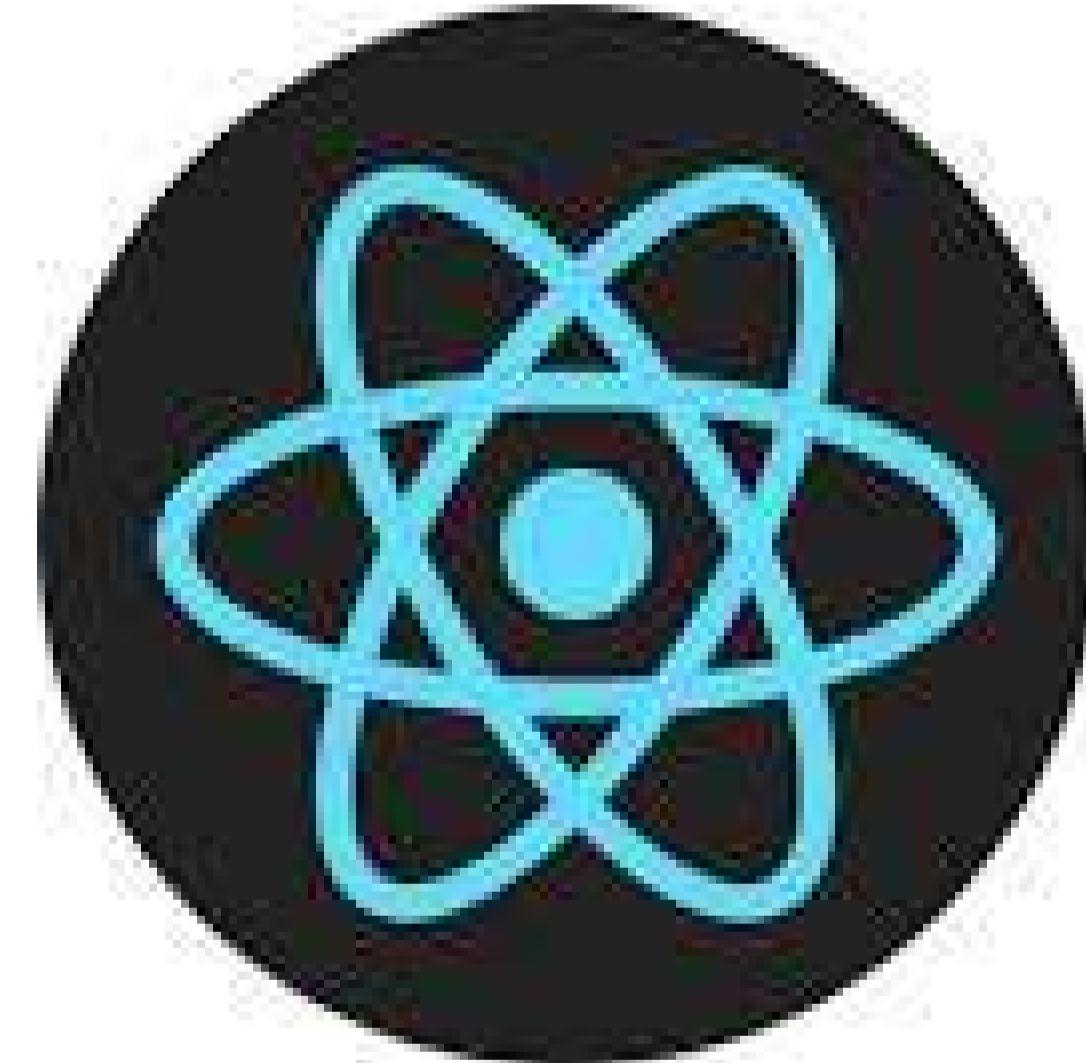
# PROTOTYPES

I decided that I wanted to develop the project from scratch since it provided more control. After deciding to work in HTML, CSS, JS to create the experience, I started making some web prototypes

example

# *PLANNING AND DEVELOPMENT I*

Building in vanilla javascript soon proved to be extremely inefficient due to the amount of reusable components i would need in the experience. Because of this, I decided to take a risk like I usually do and learn an entirely new framework mid-project: React JS, a common front-end web development framework



# PLANNING AND DEVELOPMENT II

From this point on, I decided to organize the tools I would need to create the experience as a React app:

- 3D viewer
- UI
- Loading functionality
- Stat representation

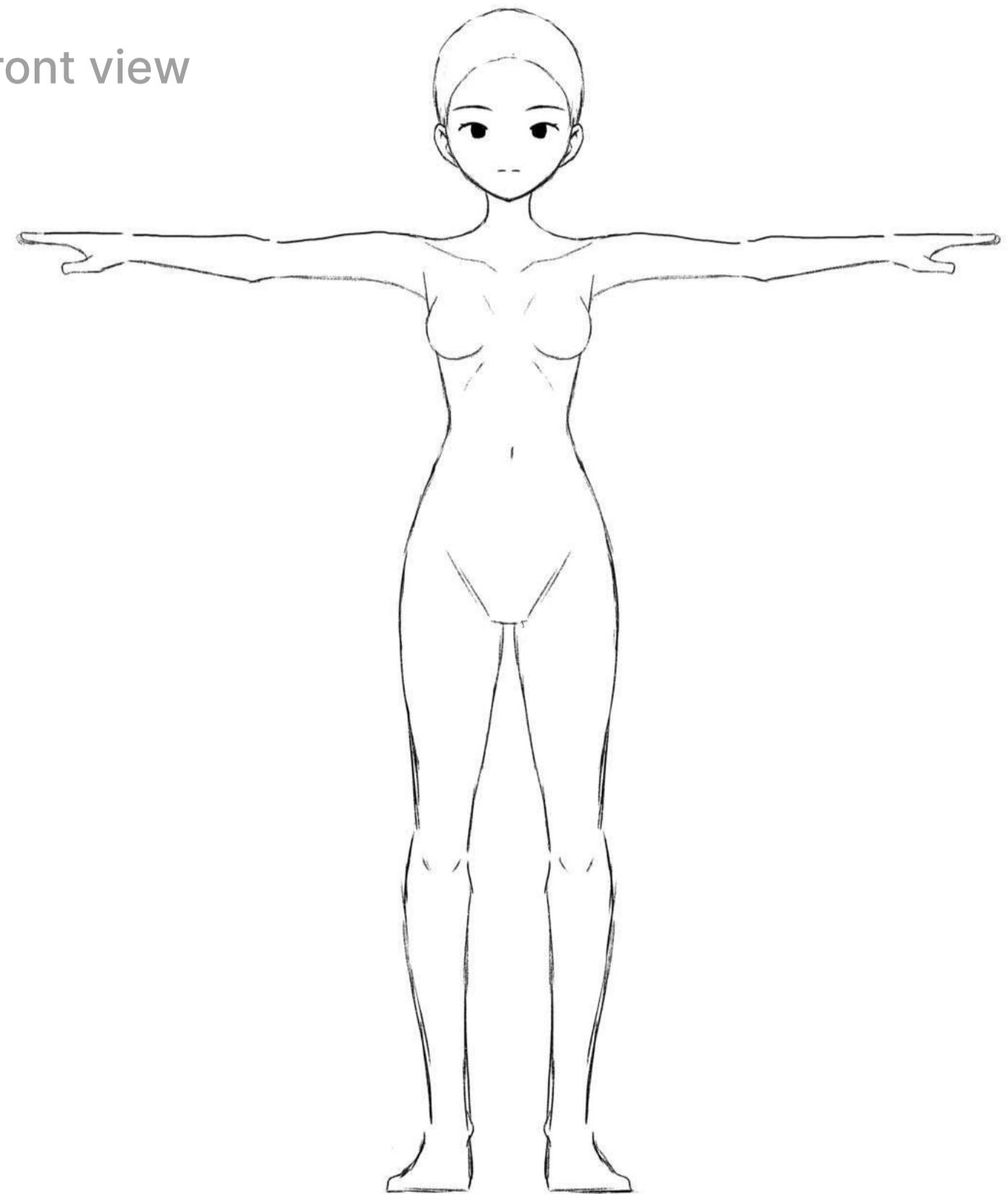
Around the halfway point of the project, lots happened that caused me to reduce the scope of the project by a lot, but for the most part, the tools I used remained the same

# CHARACTER MODELING I

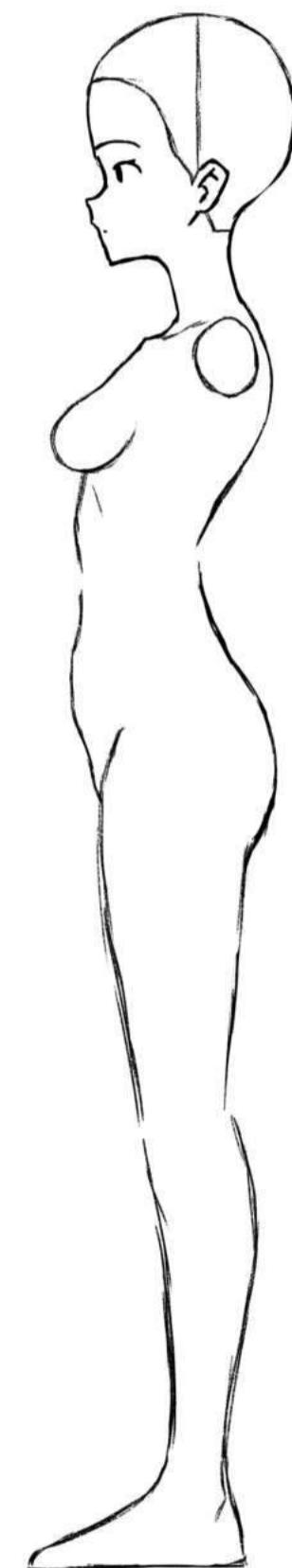
Before modeling the character that was going to be the main subject of the experience, I had to draw a basic reference sheet to get a picture of what she'd look like and in order to have a point of reference while modeling

# CHARACTER MODELING I

Base: front view

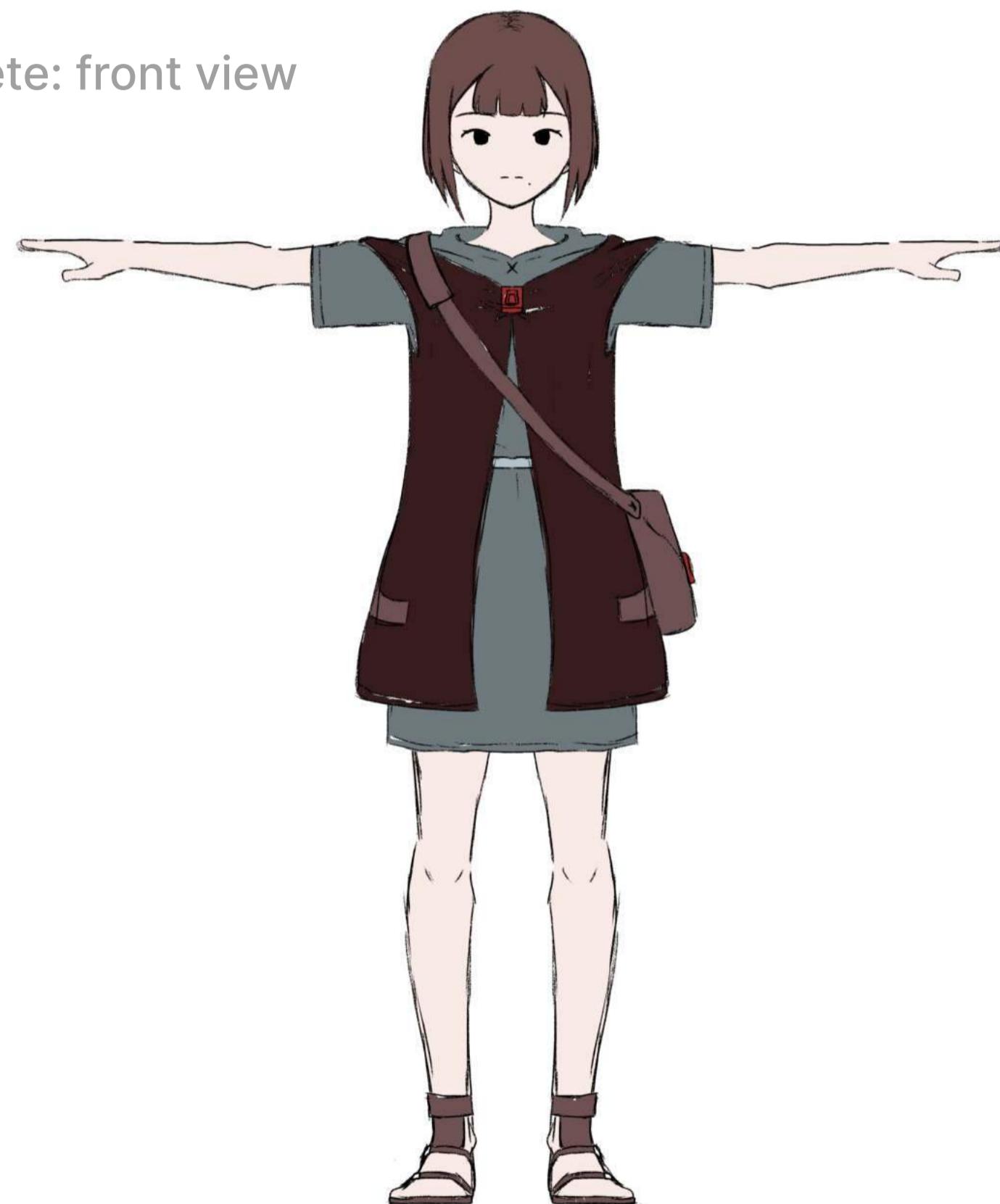


Base: side view

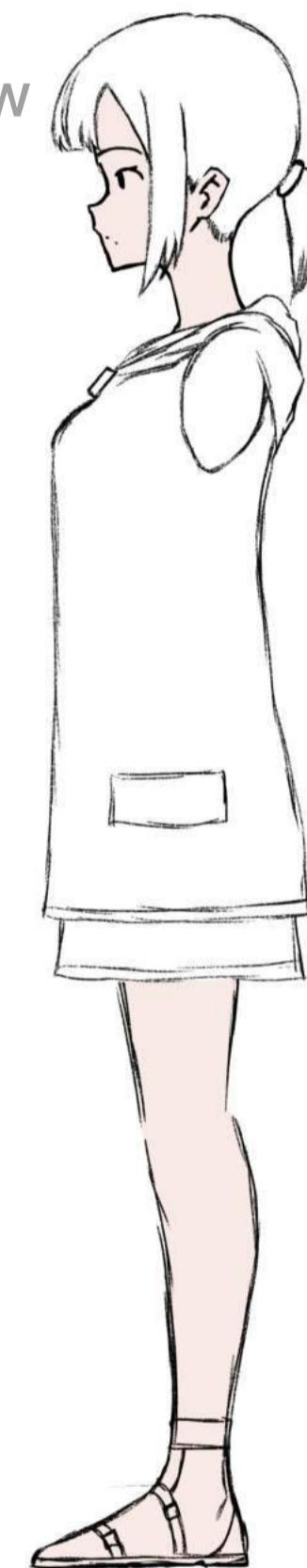


# CHARACTER MODELING I

Complete: front view



\* Complete: side view



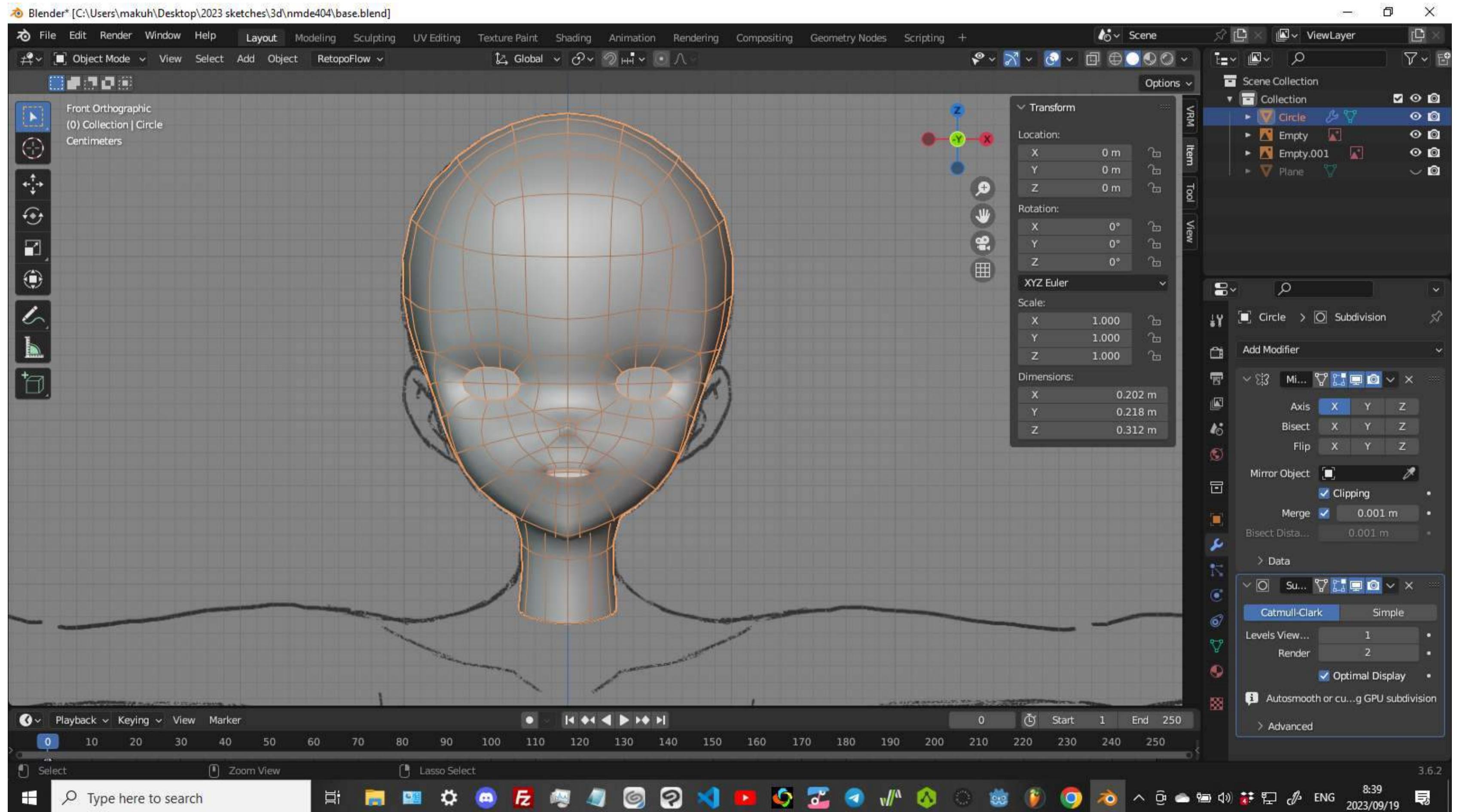
Since I can use an eye dropper tool to grab the colors I need, I didn't bother fully coloring the profile view. The front view has all the colors I need

# CHARACTER MODELING II

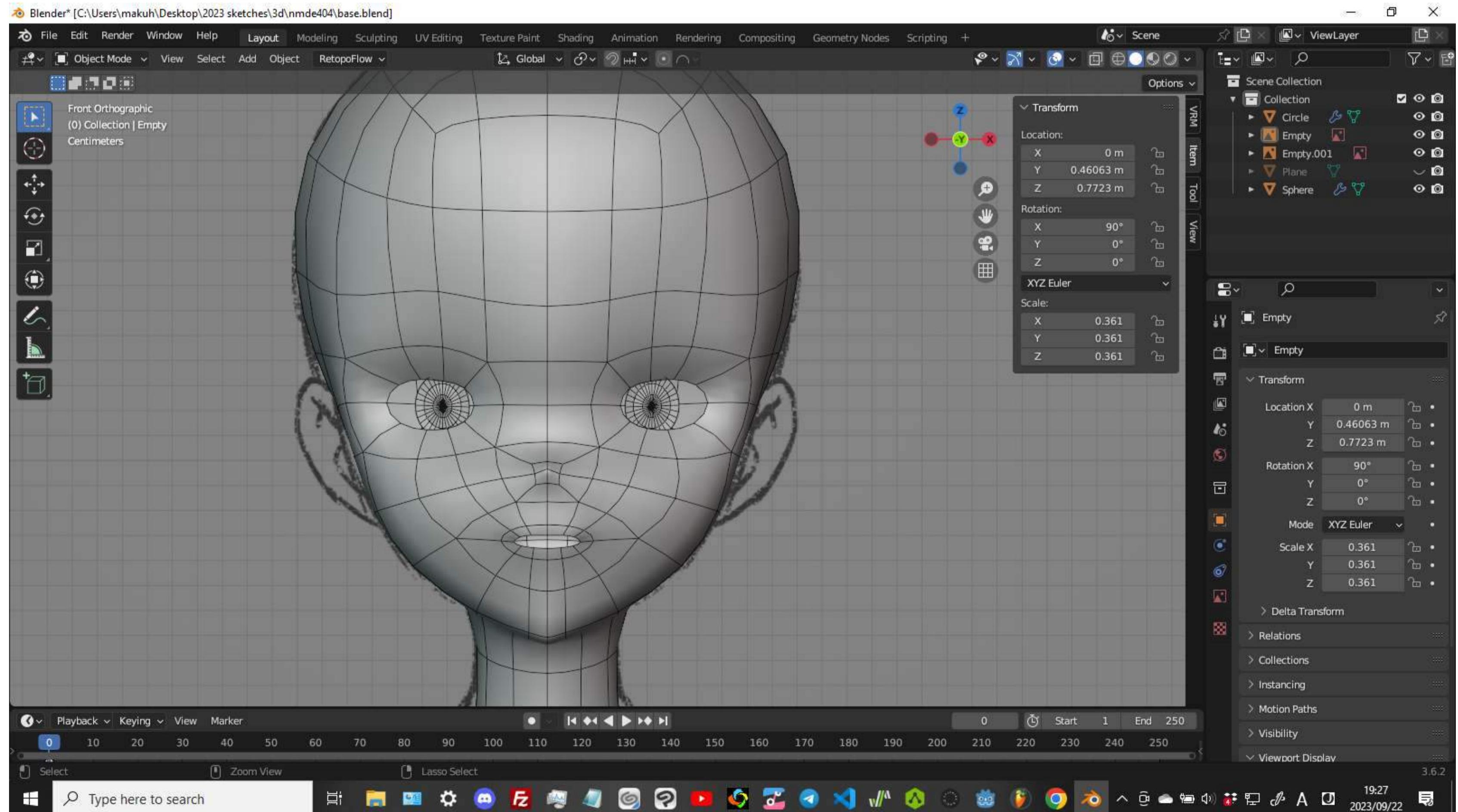
After getting the basic reference sheets down, I was ready to start up blender and begin modeling. I decided to work in this order:

- Head
- Body
- Limbs
- Appendages and weight painting
- Misc(whatever's left)

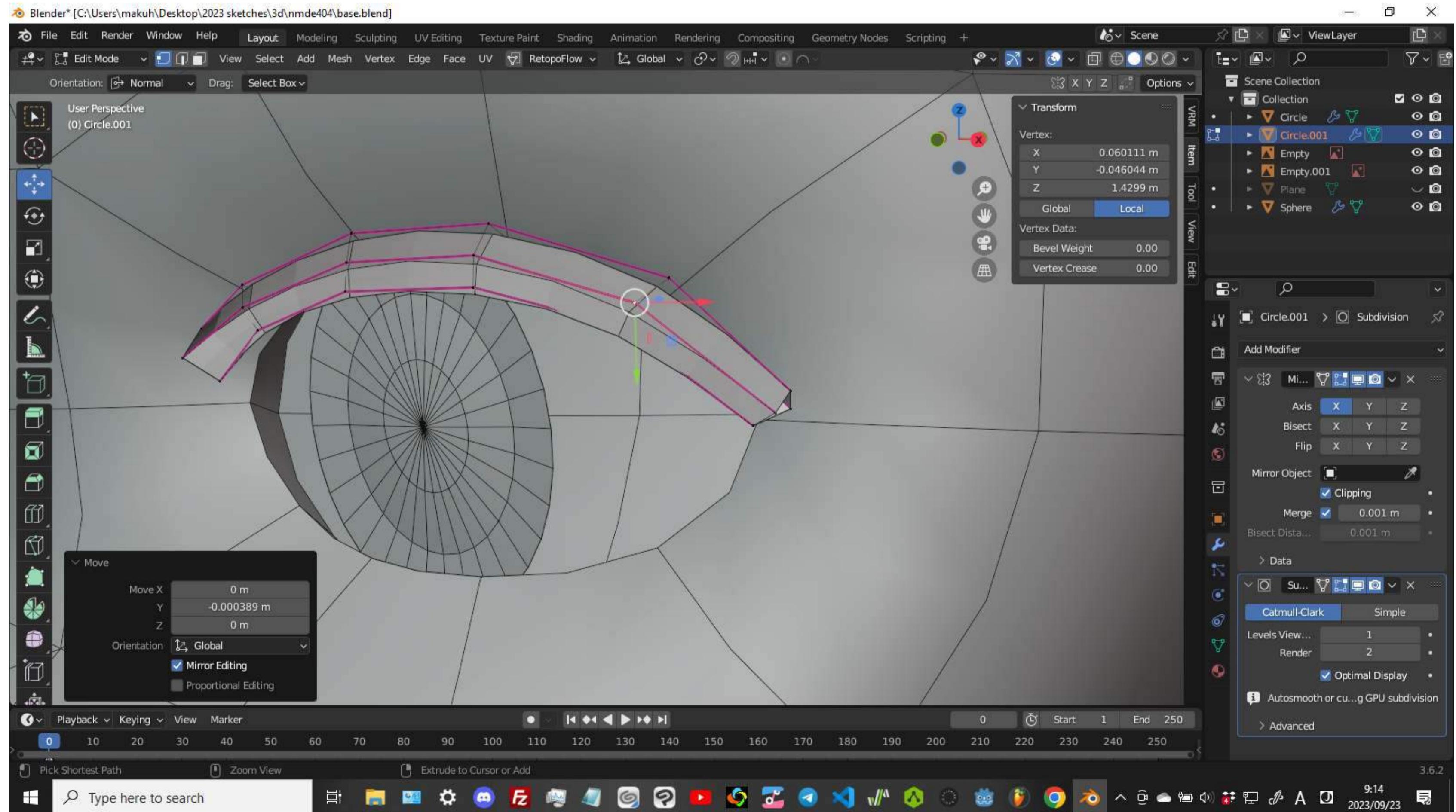
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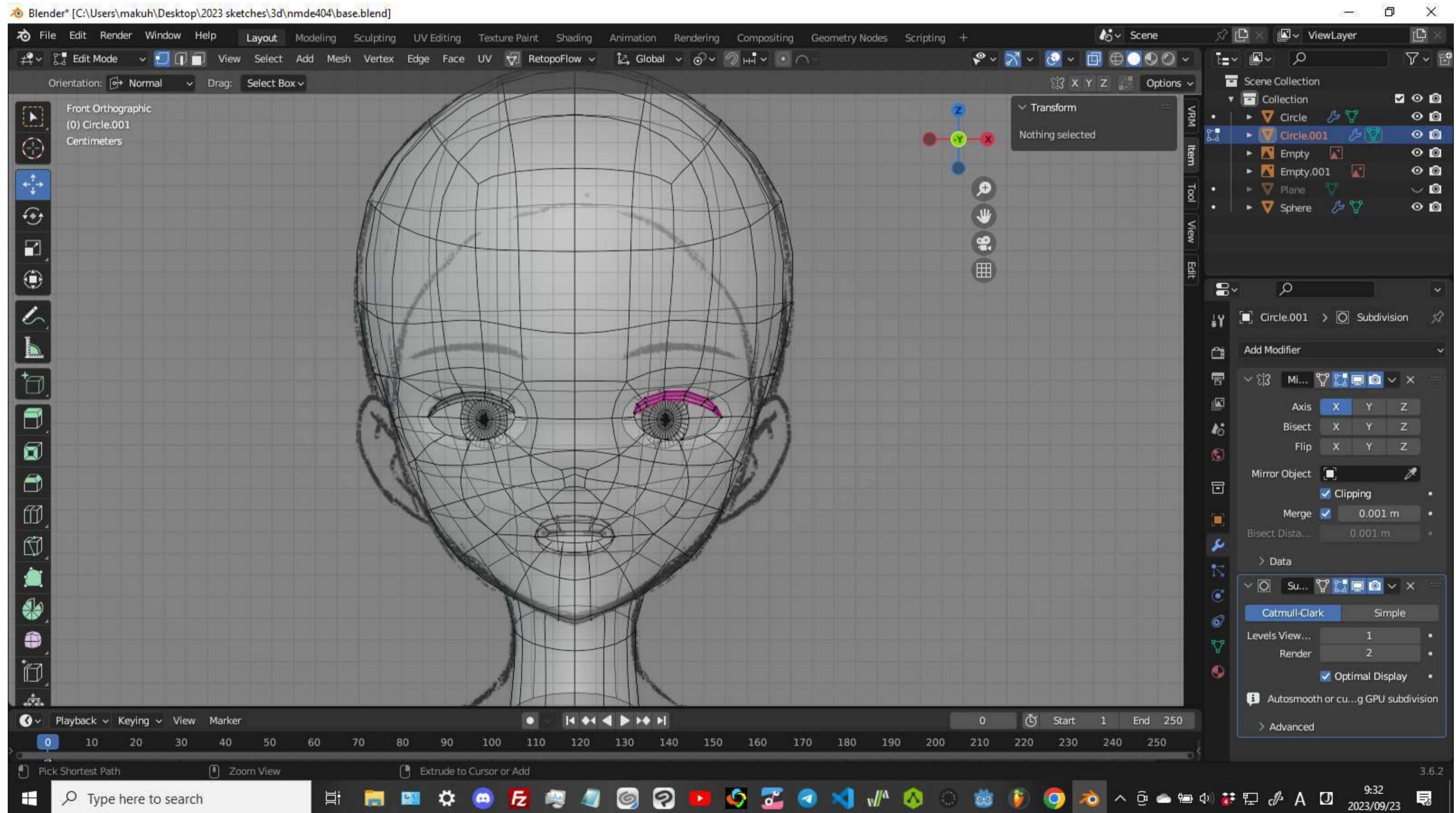
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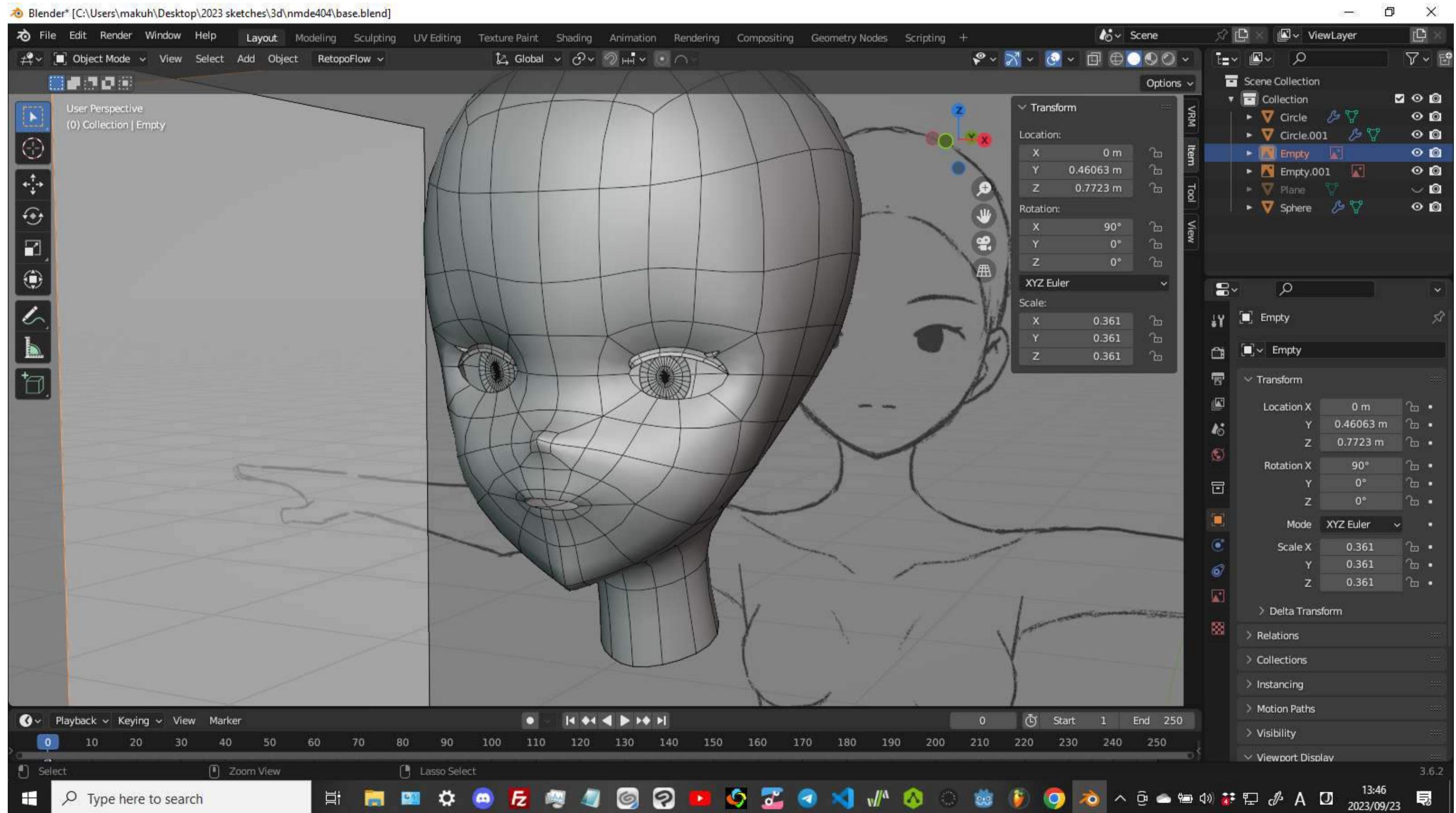
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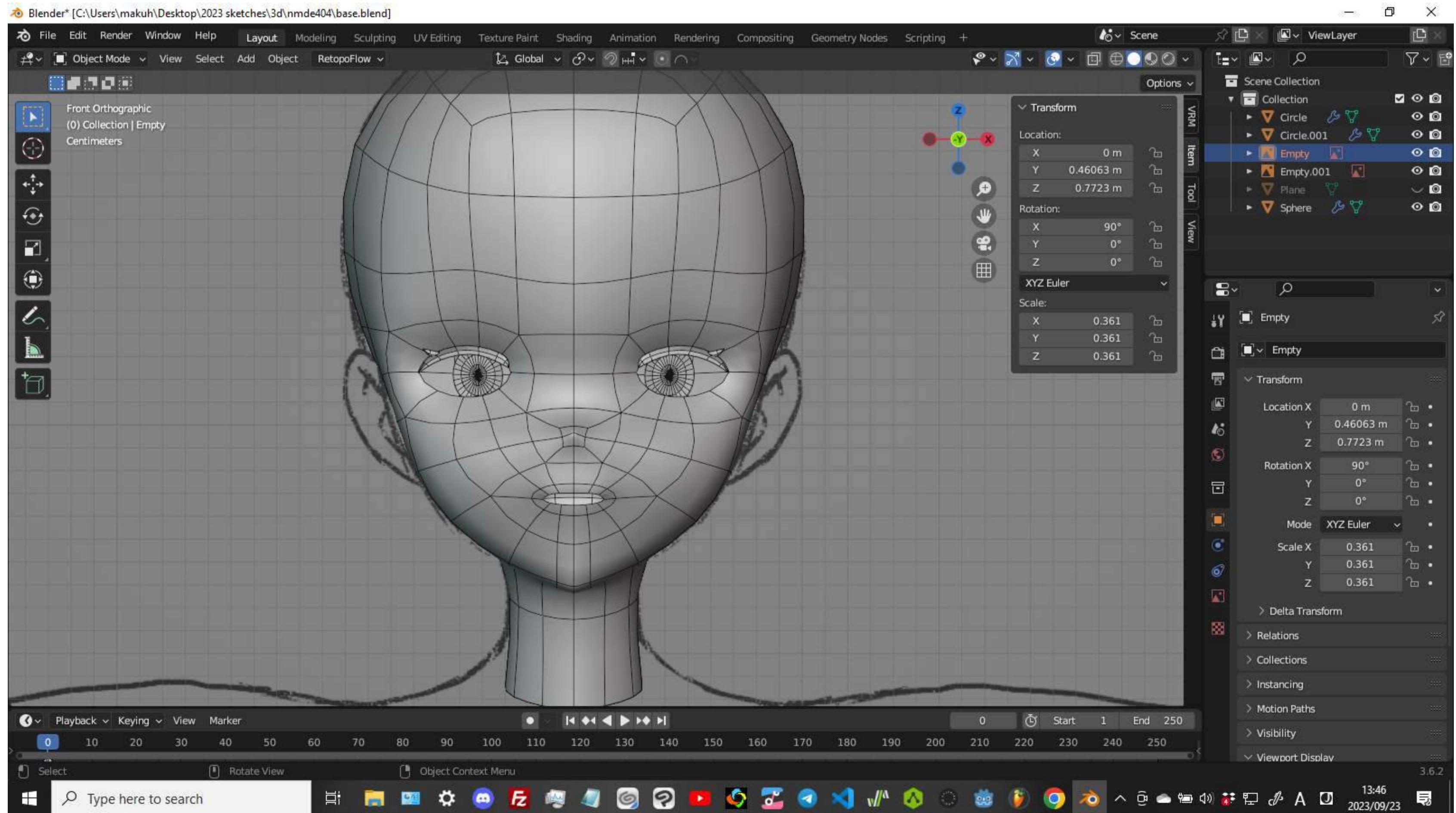
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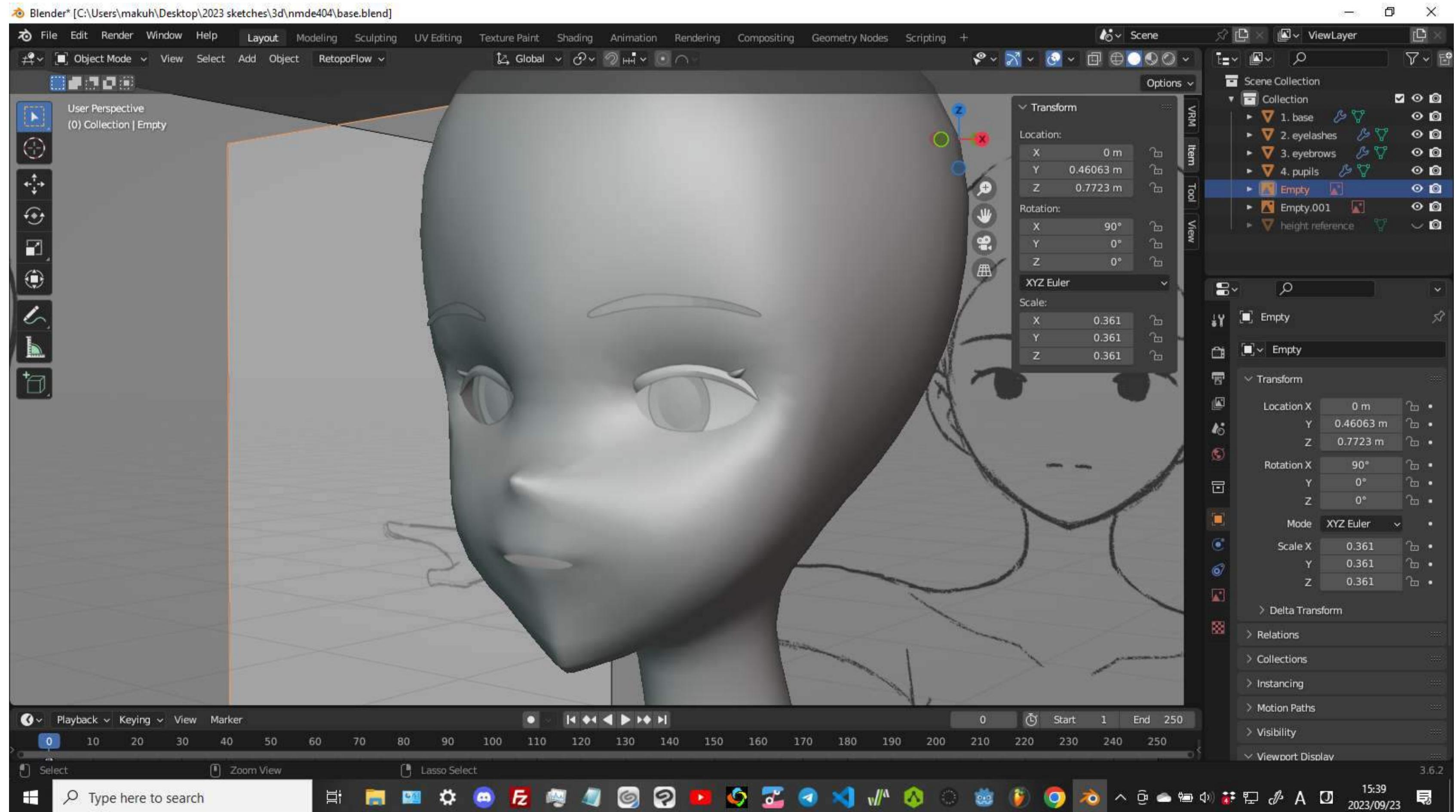
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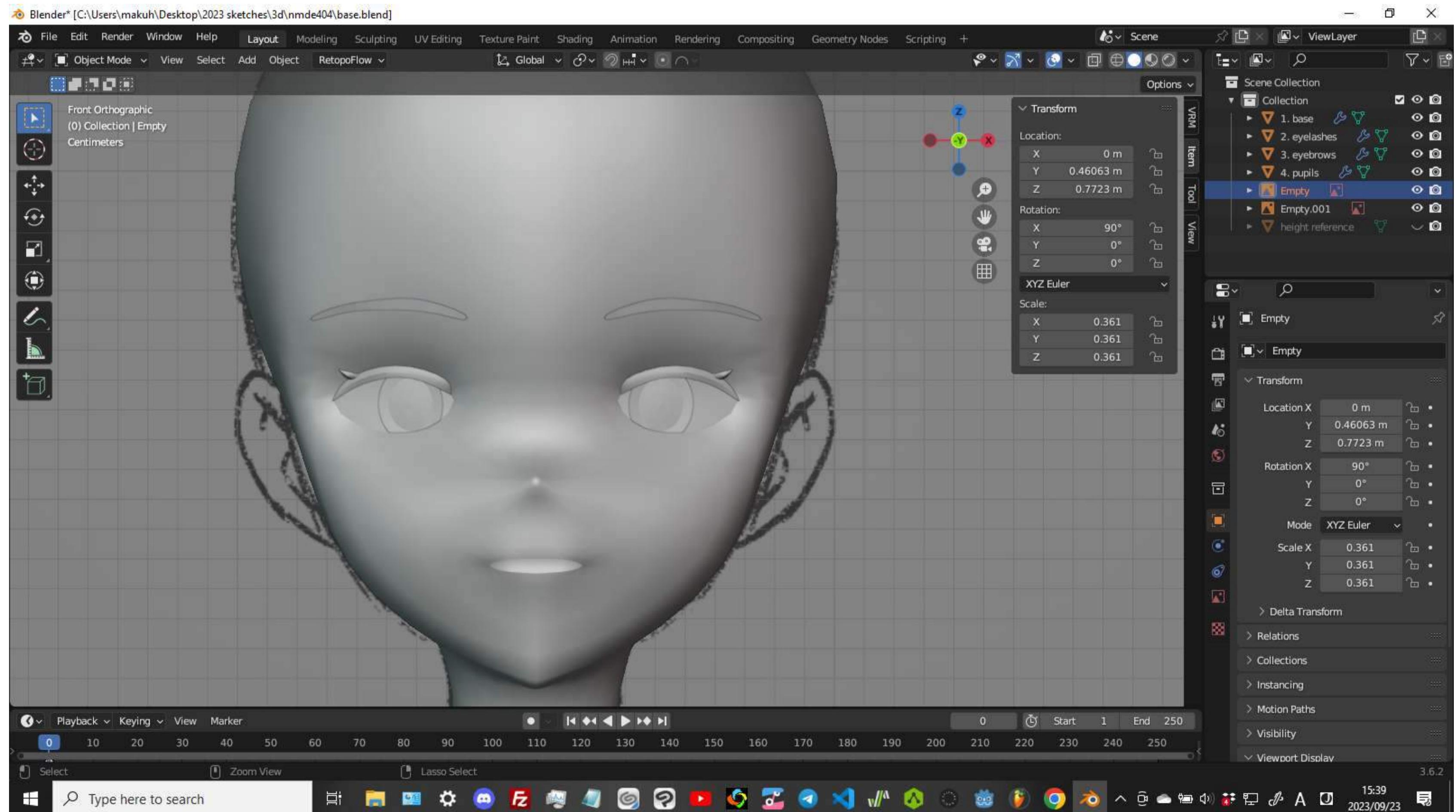
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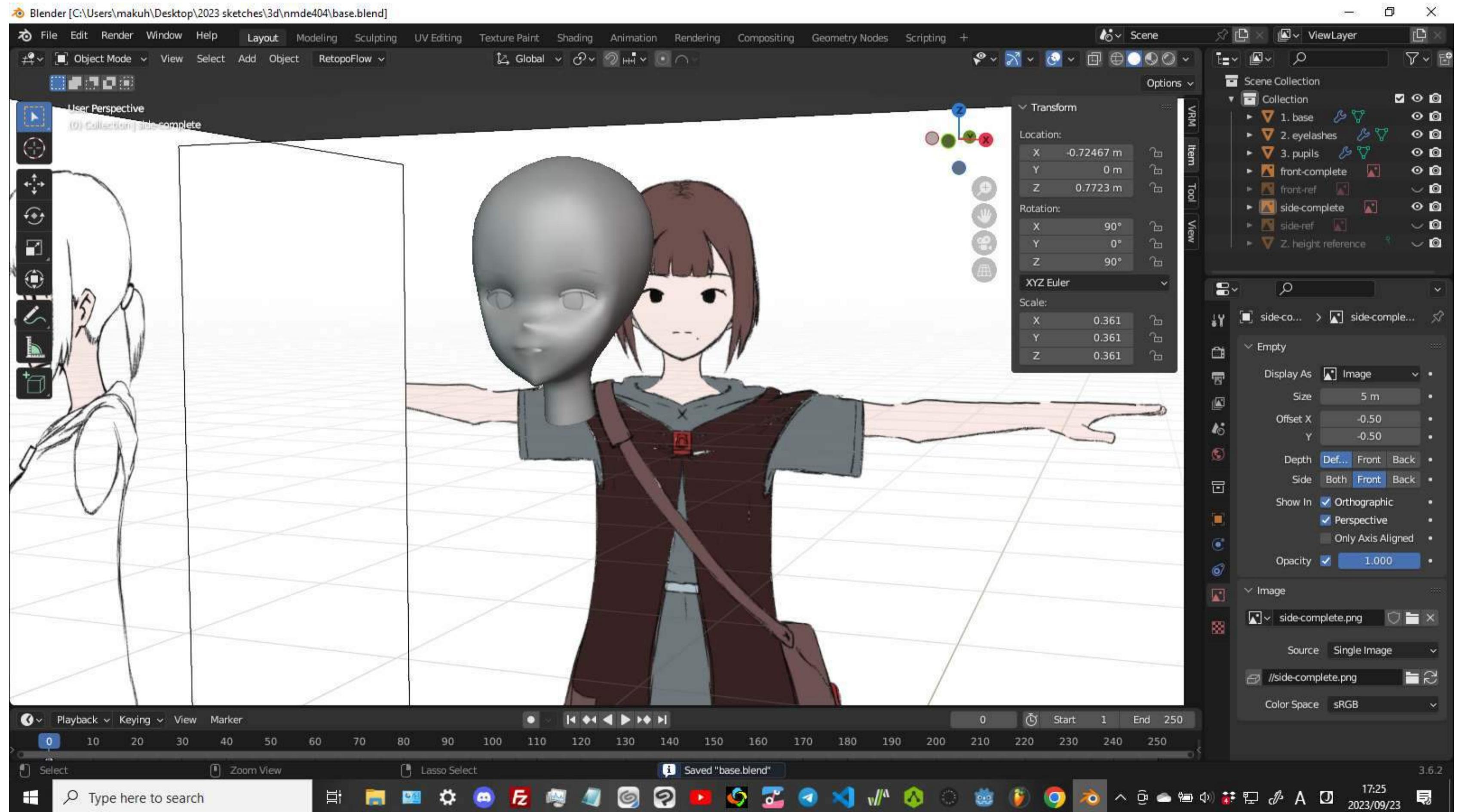
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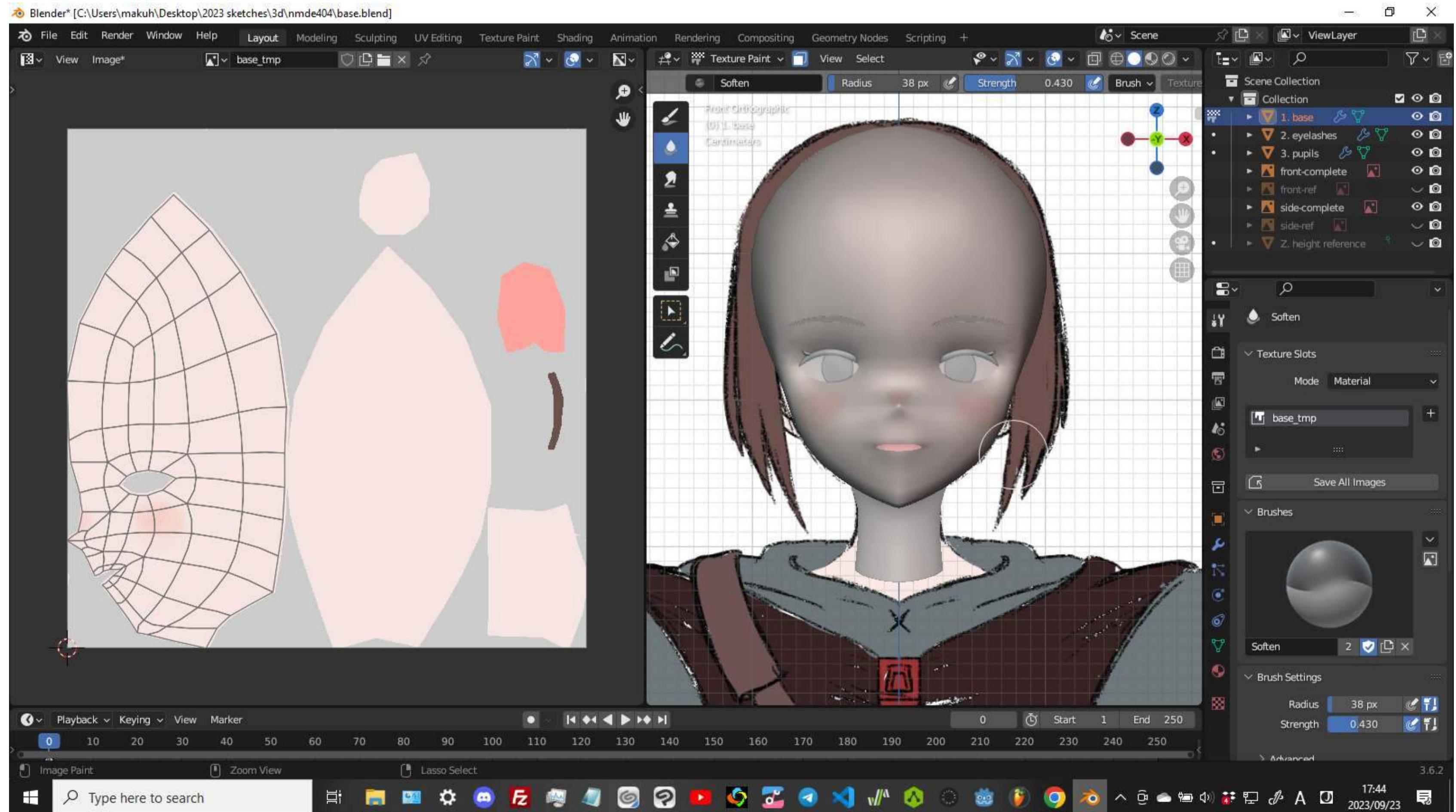
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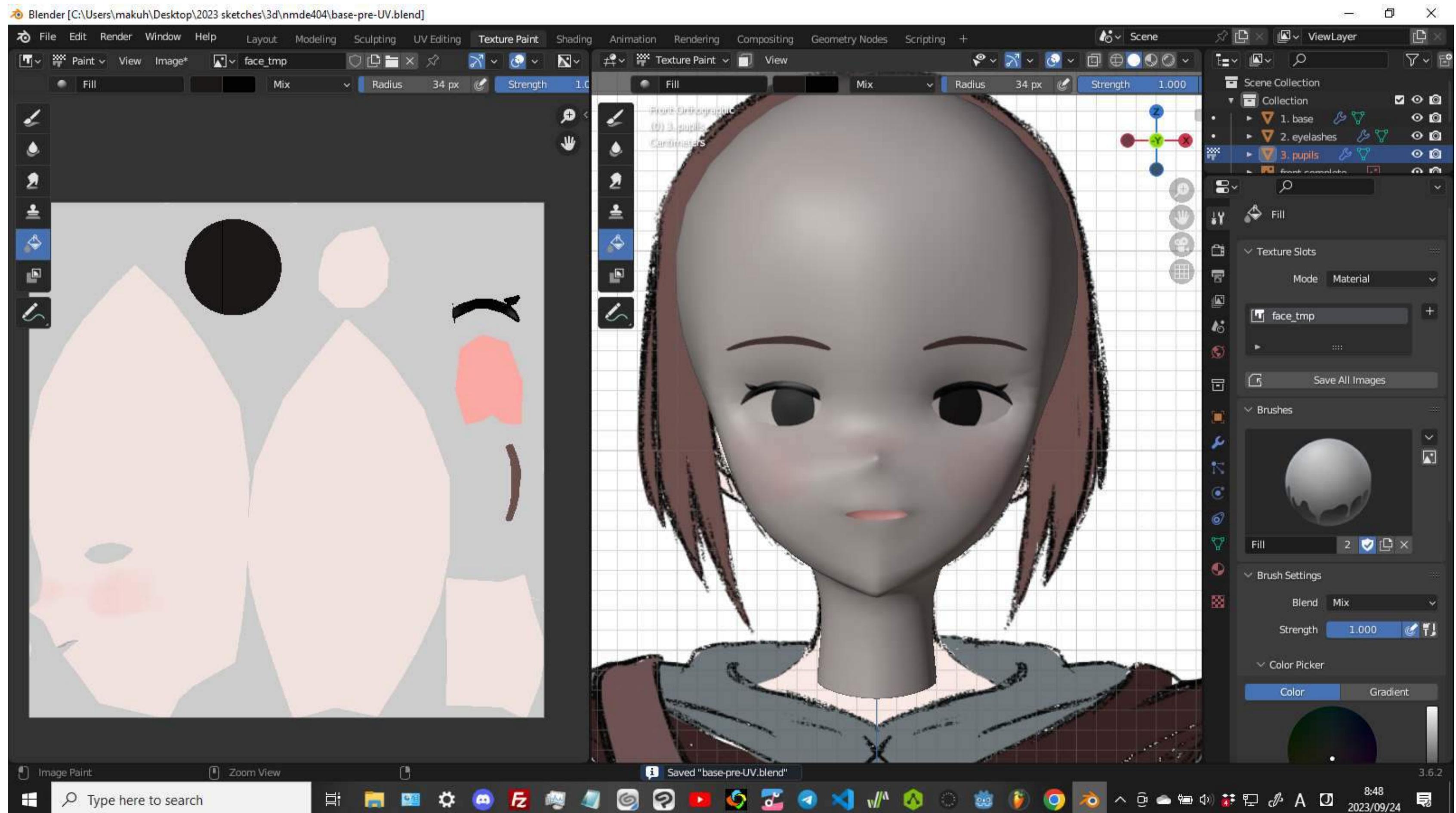
# CHARACTER MODELING III

I decided to try and get some basic textures and stuff onto the model since progress was being made at a good rate. The next few slides show the process of UV unwrapping, texture painting, and messing with display settings in blender to get a feel for how the model will look

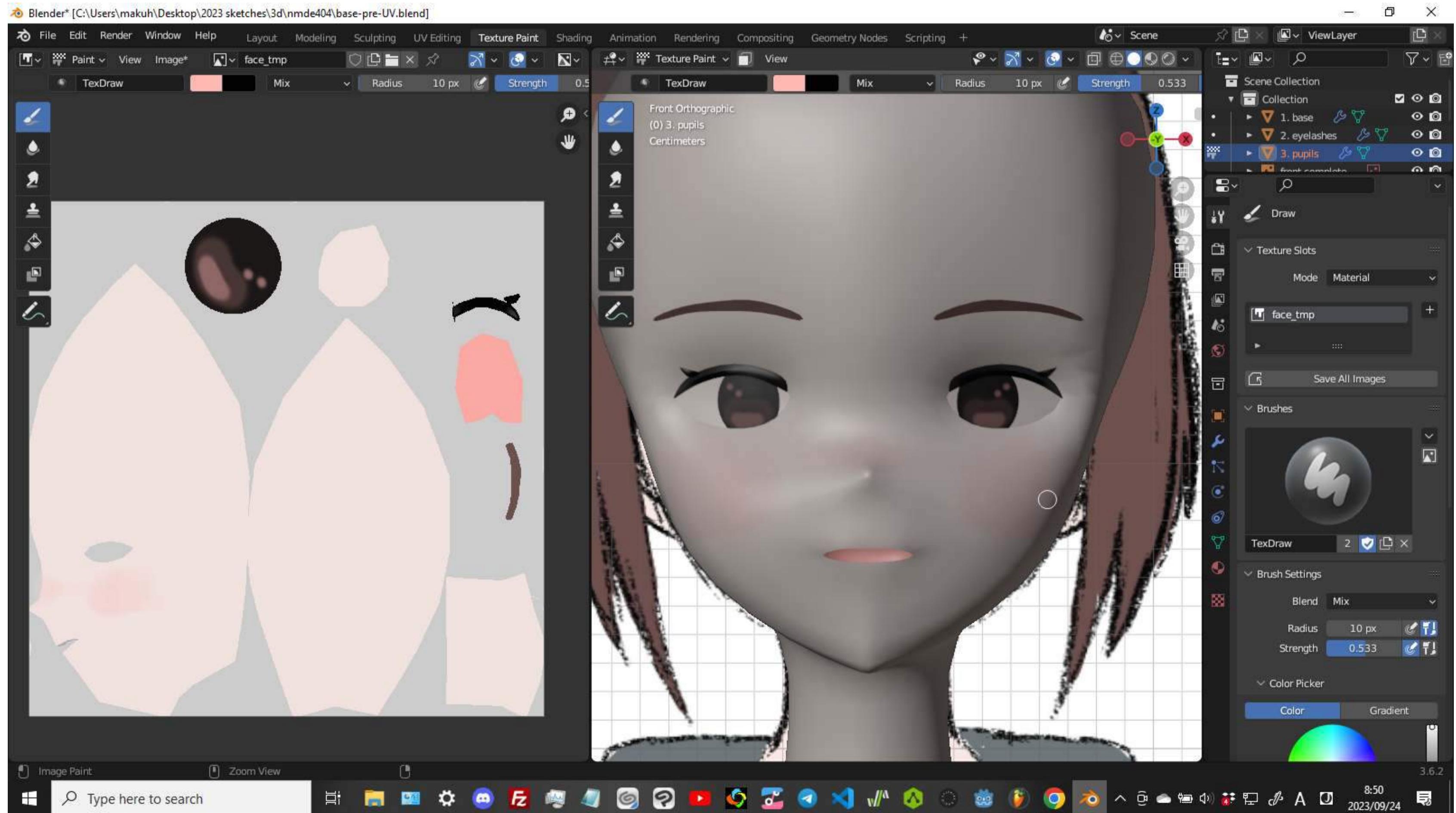
# CHARACTER MODELING III



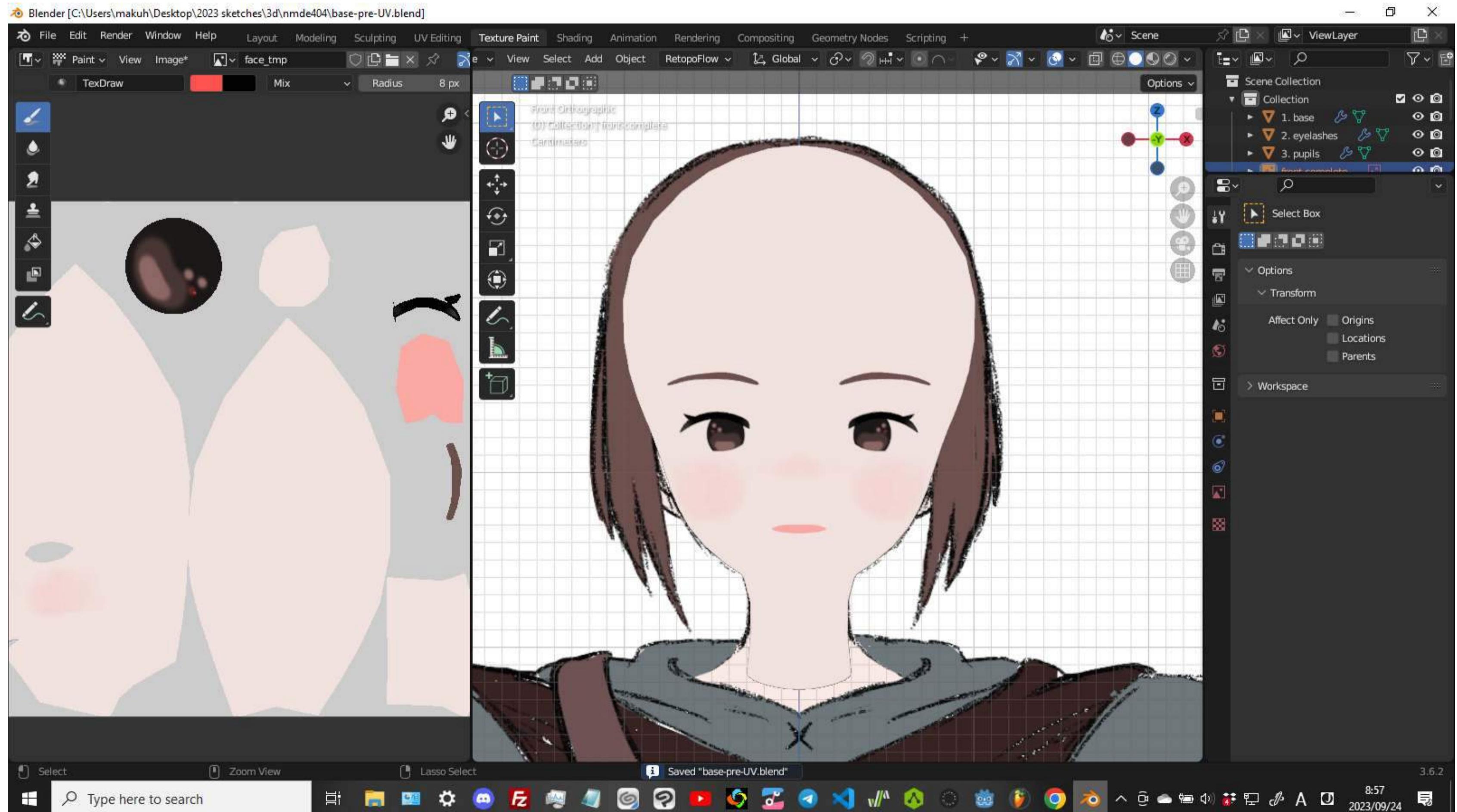
# CHARACTER MODELING III



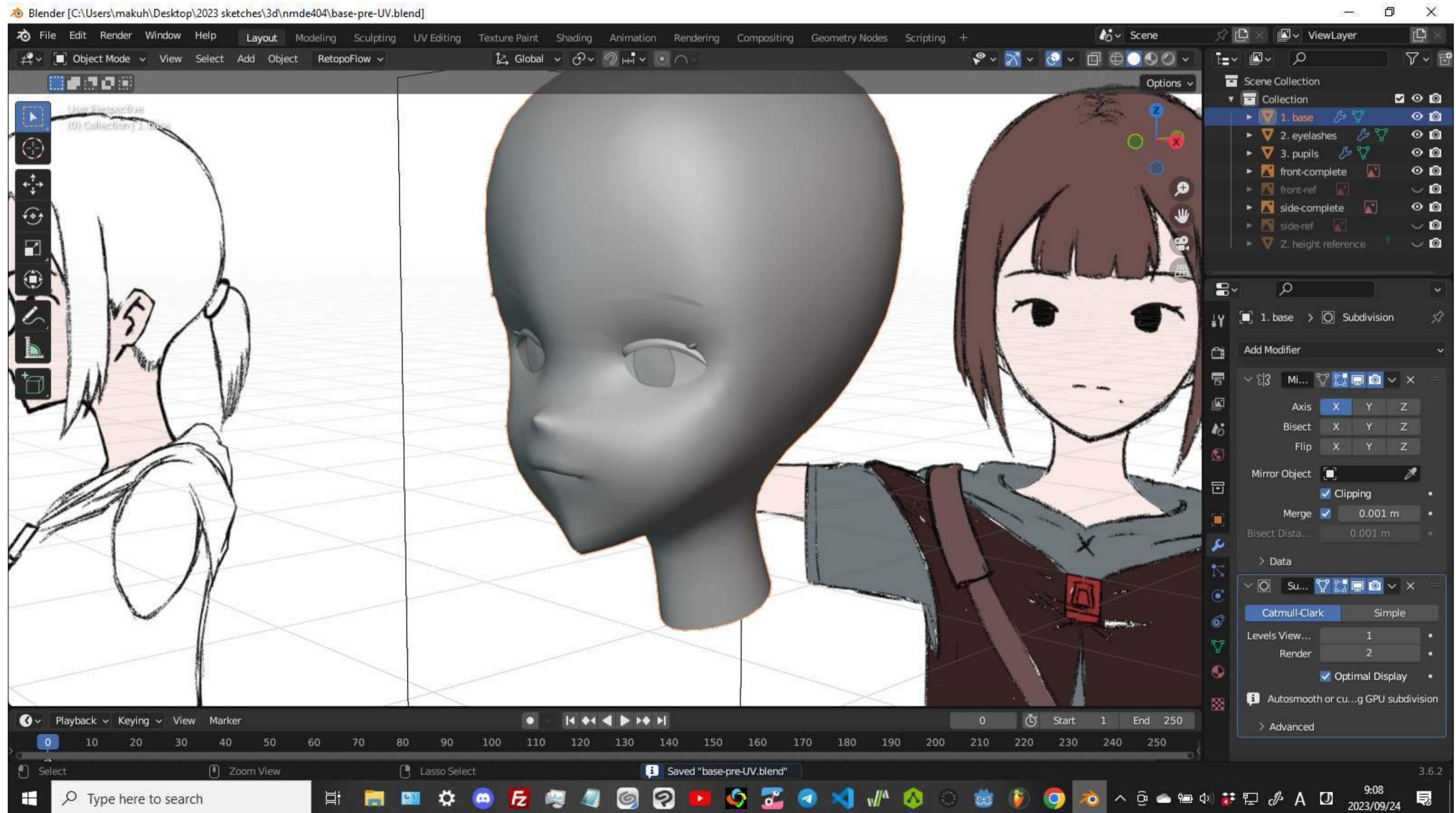
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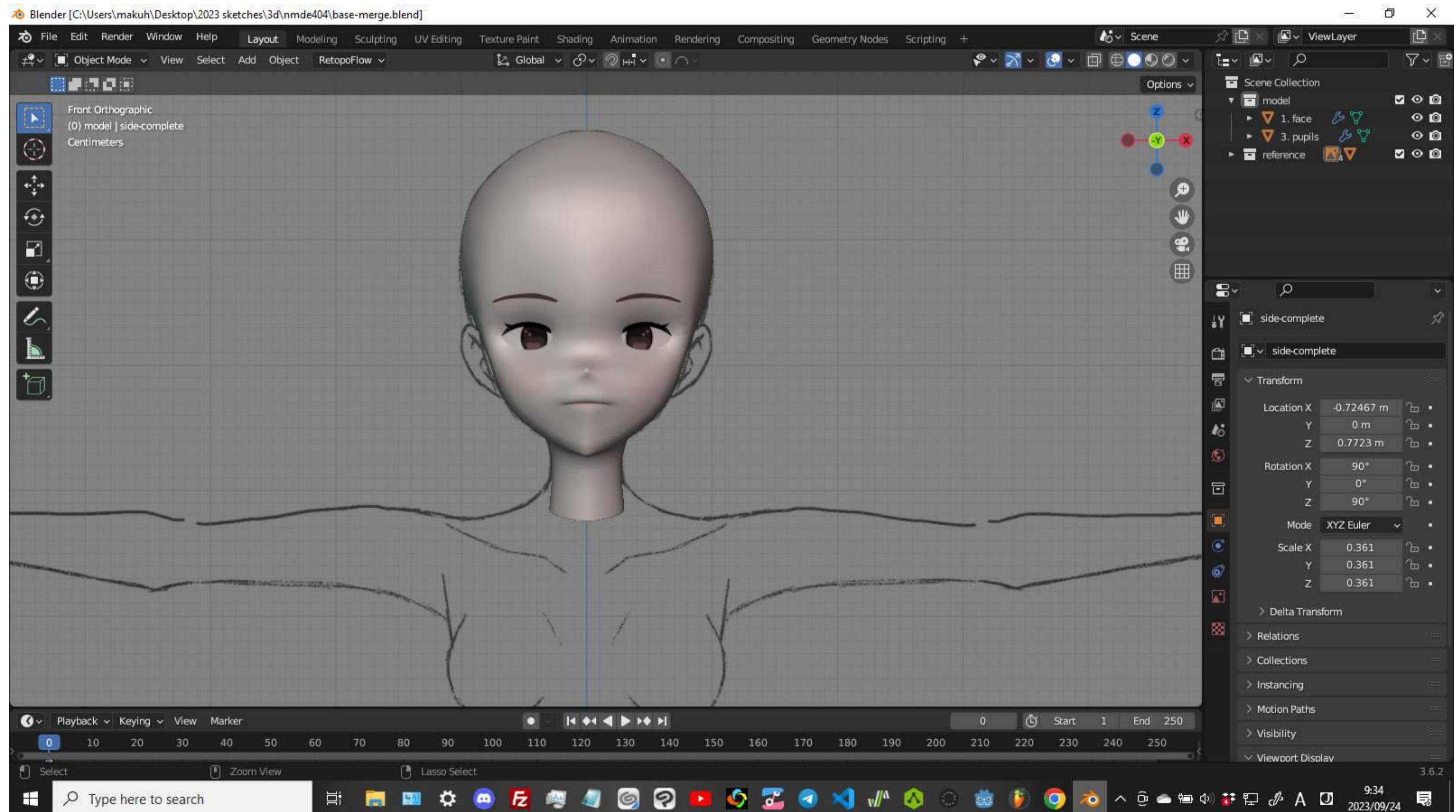
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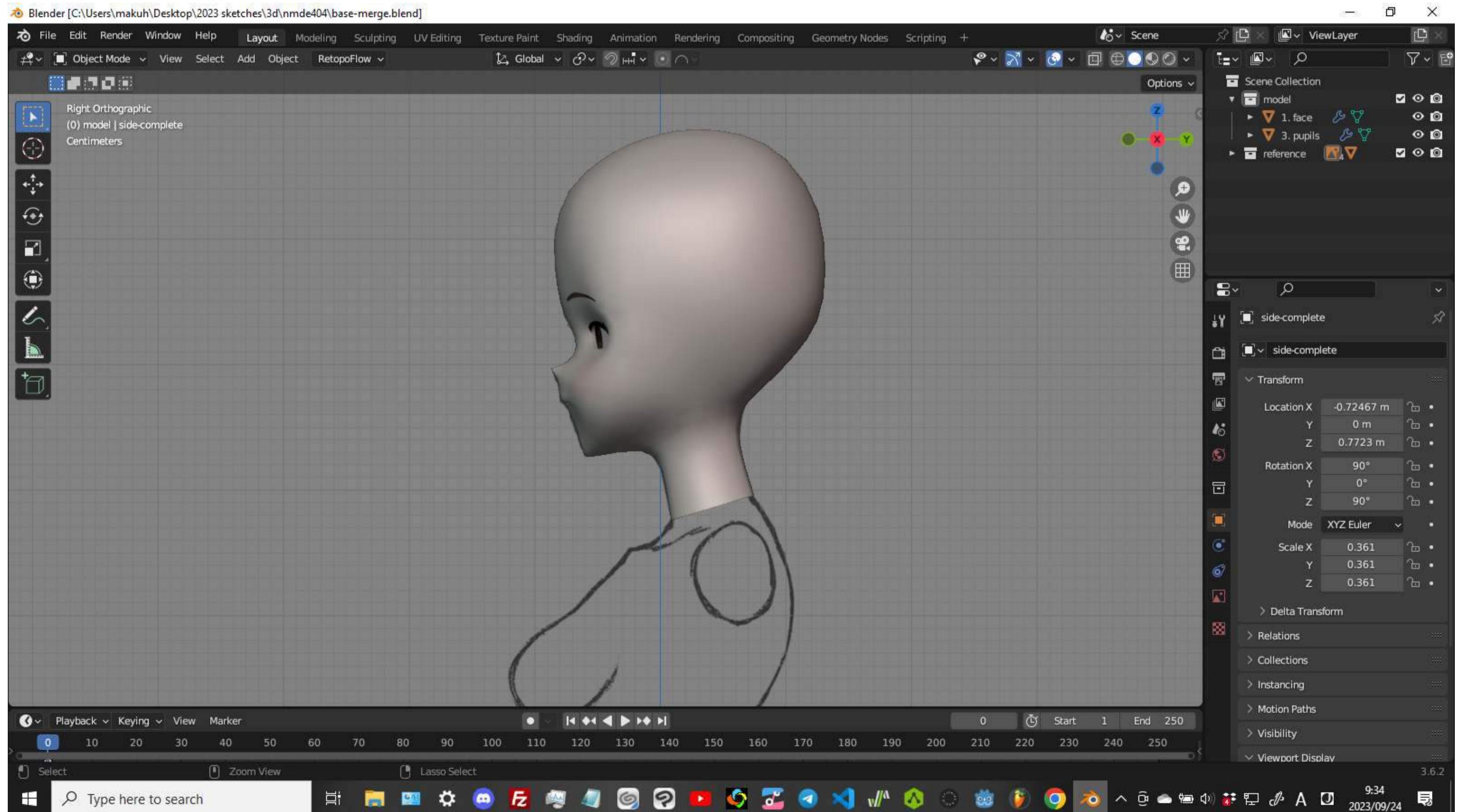
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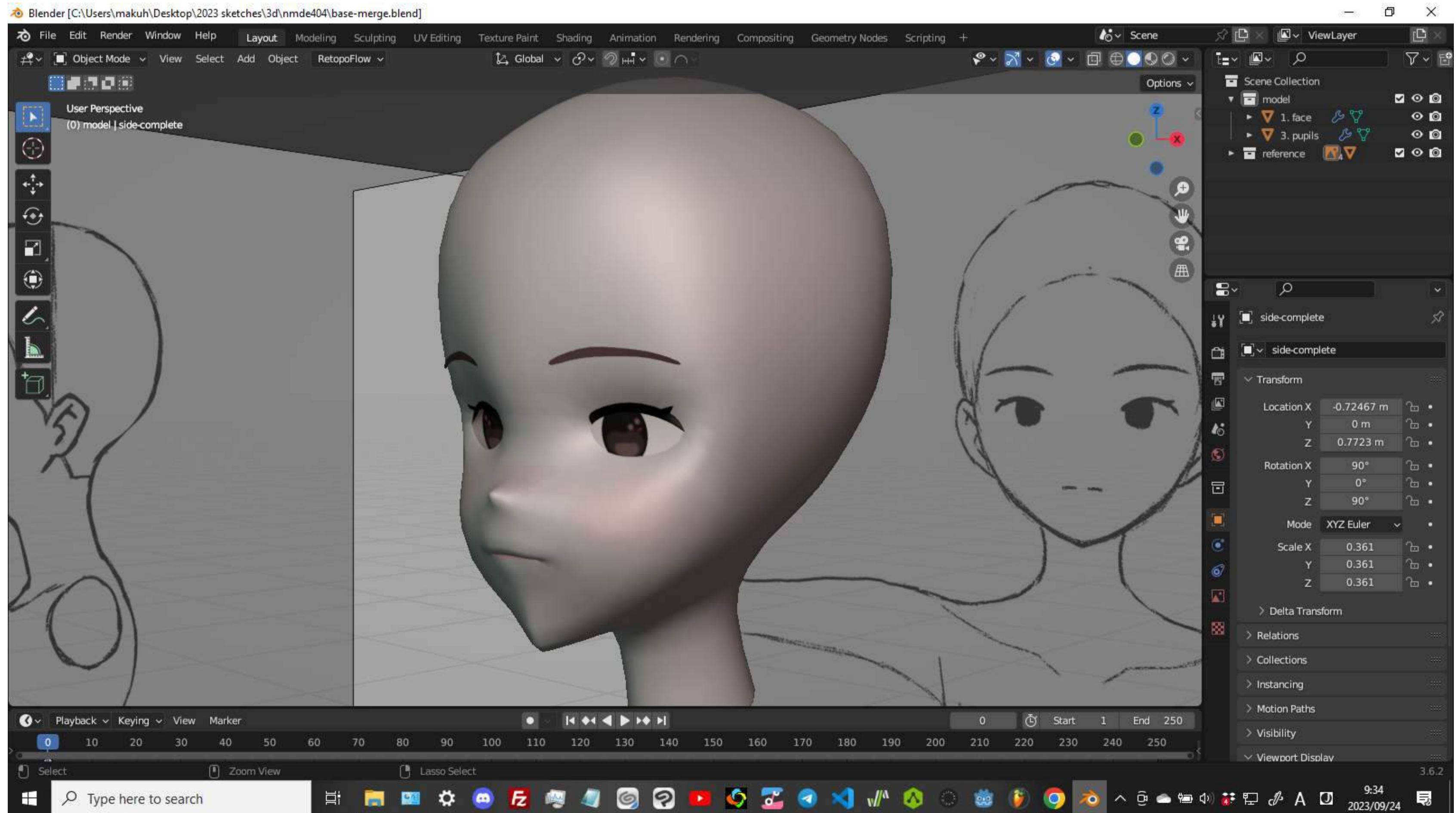
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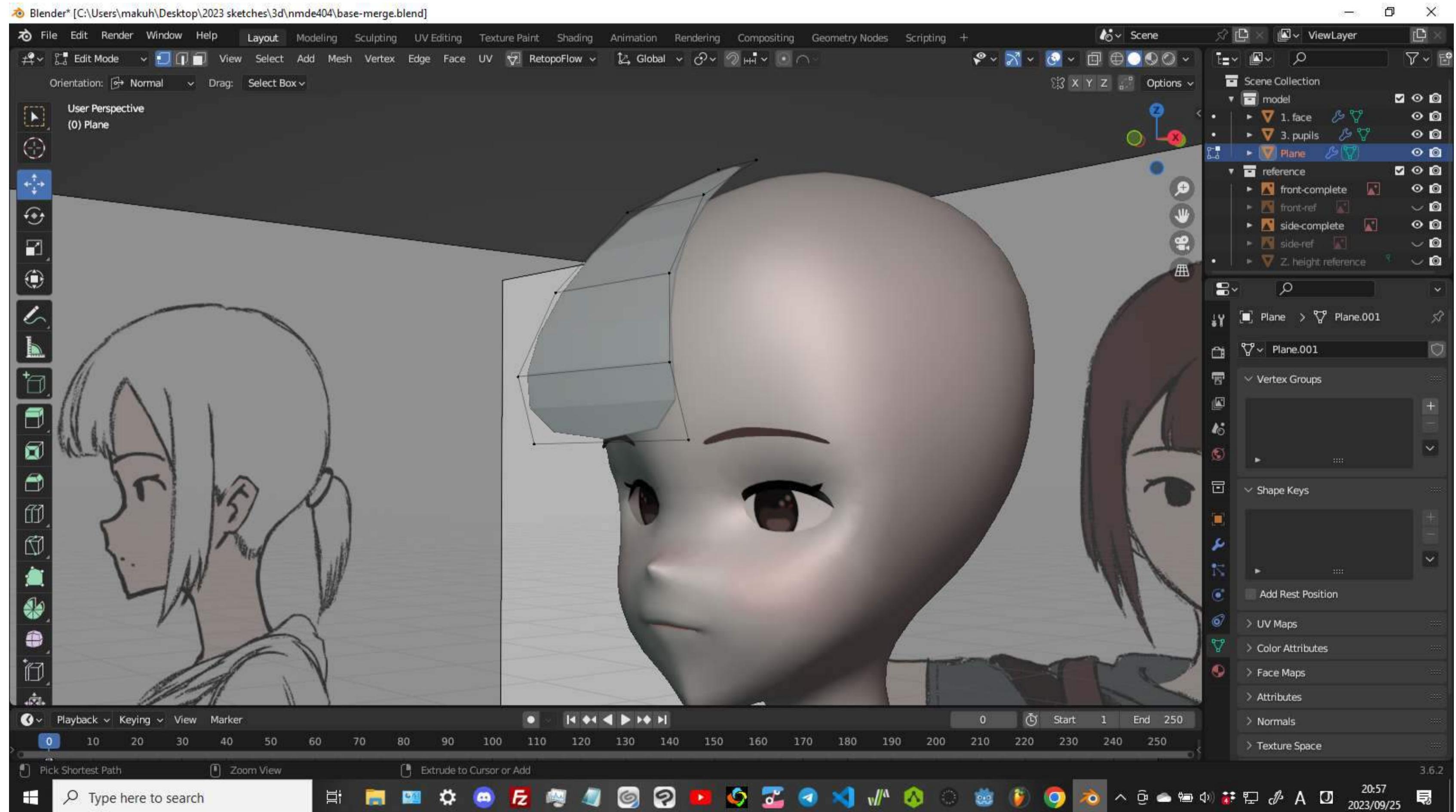
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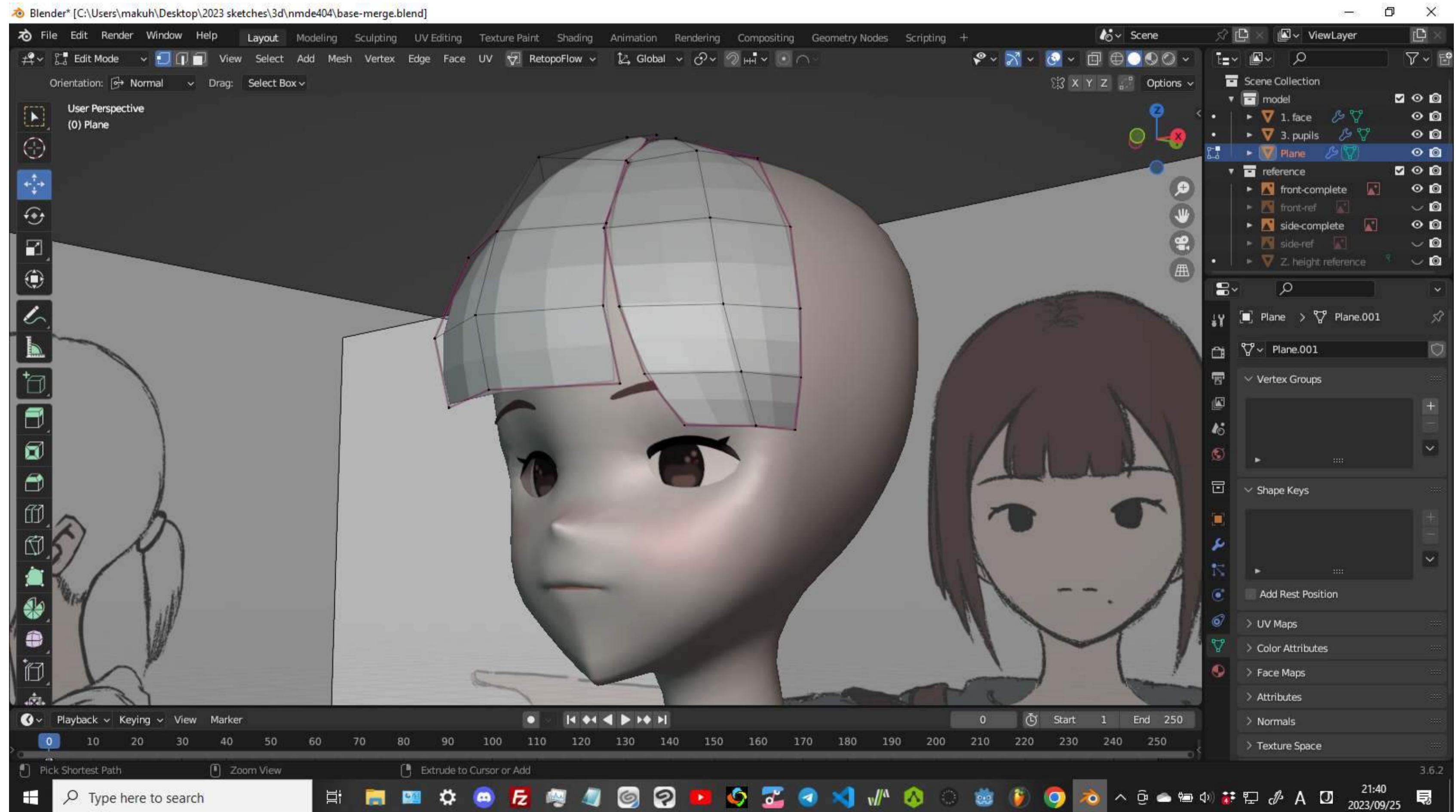
# CHARACTER MODELING IV

From here on out I decided that I'd made enough progress on the head and began to move onto other parts of the model. There're a lot of screen shots, so I'm just going go through the most important ones

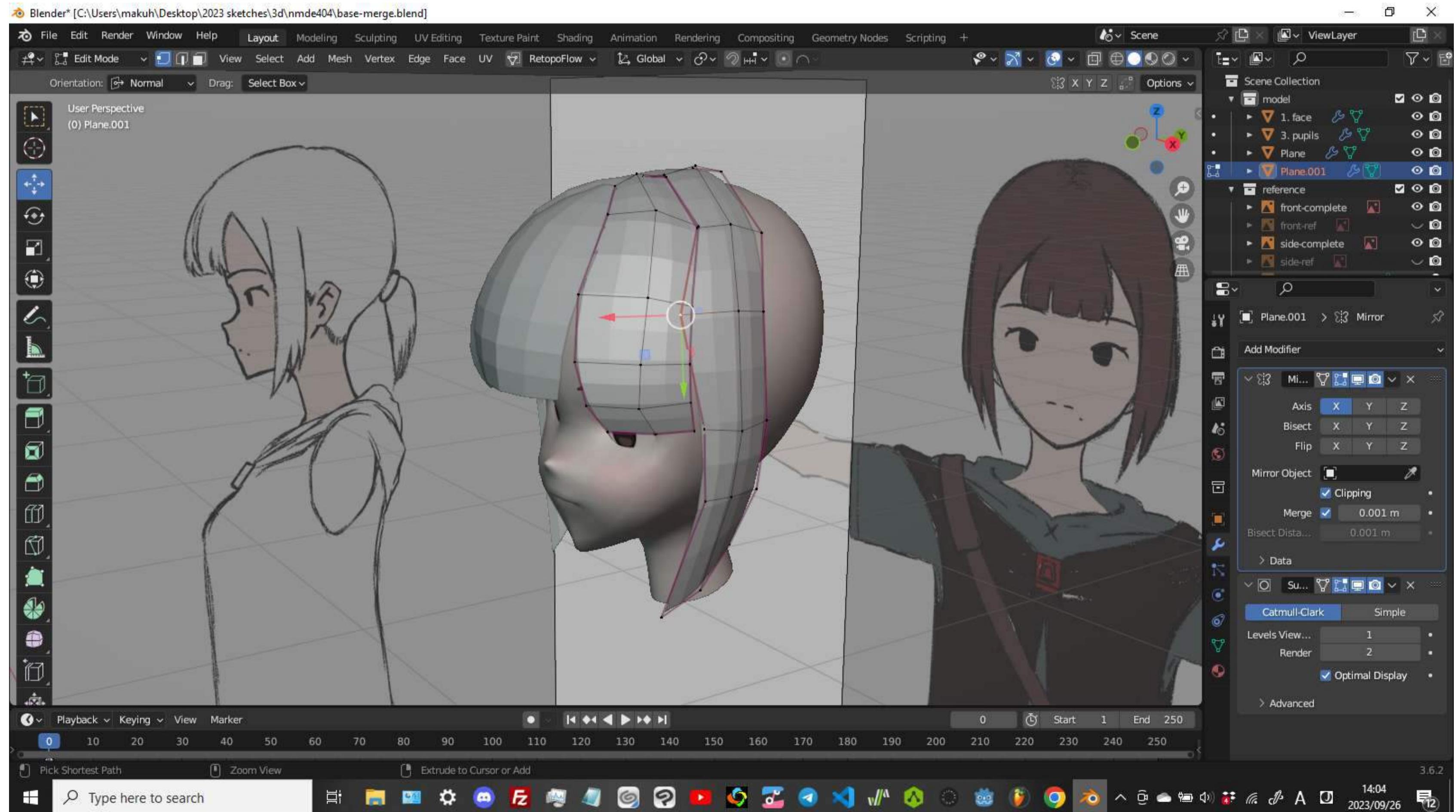
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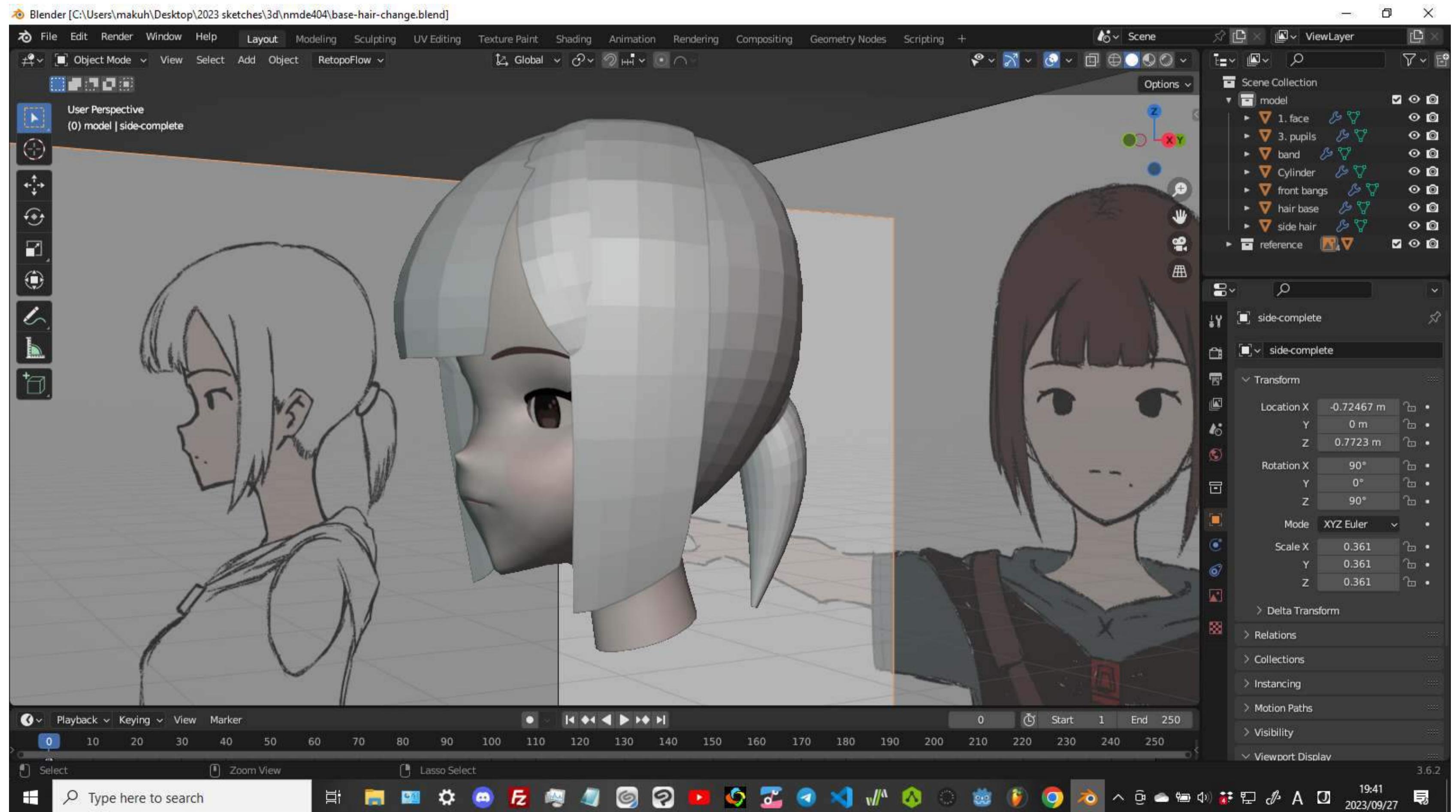
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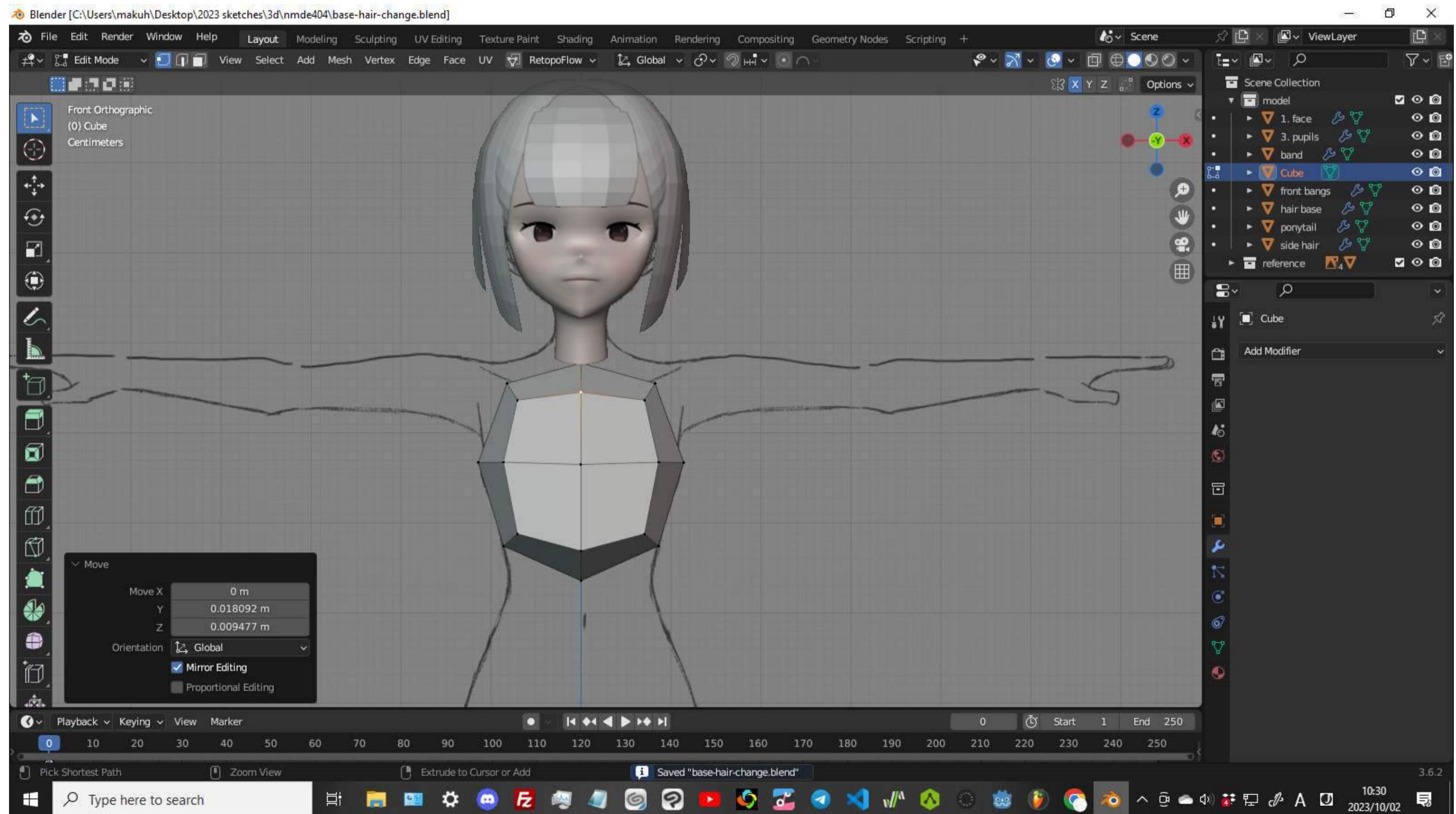
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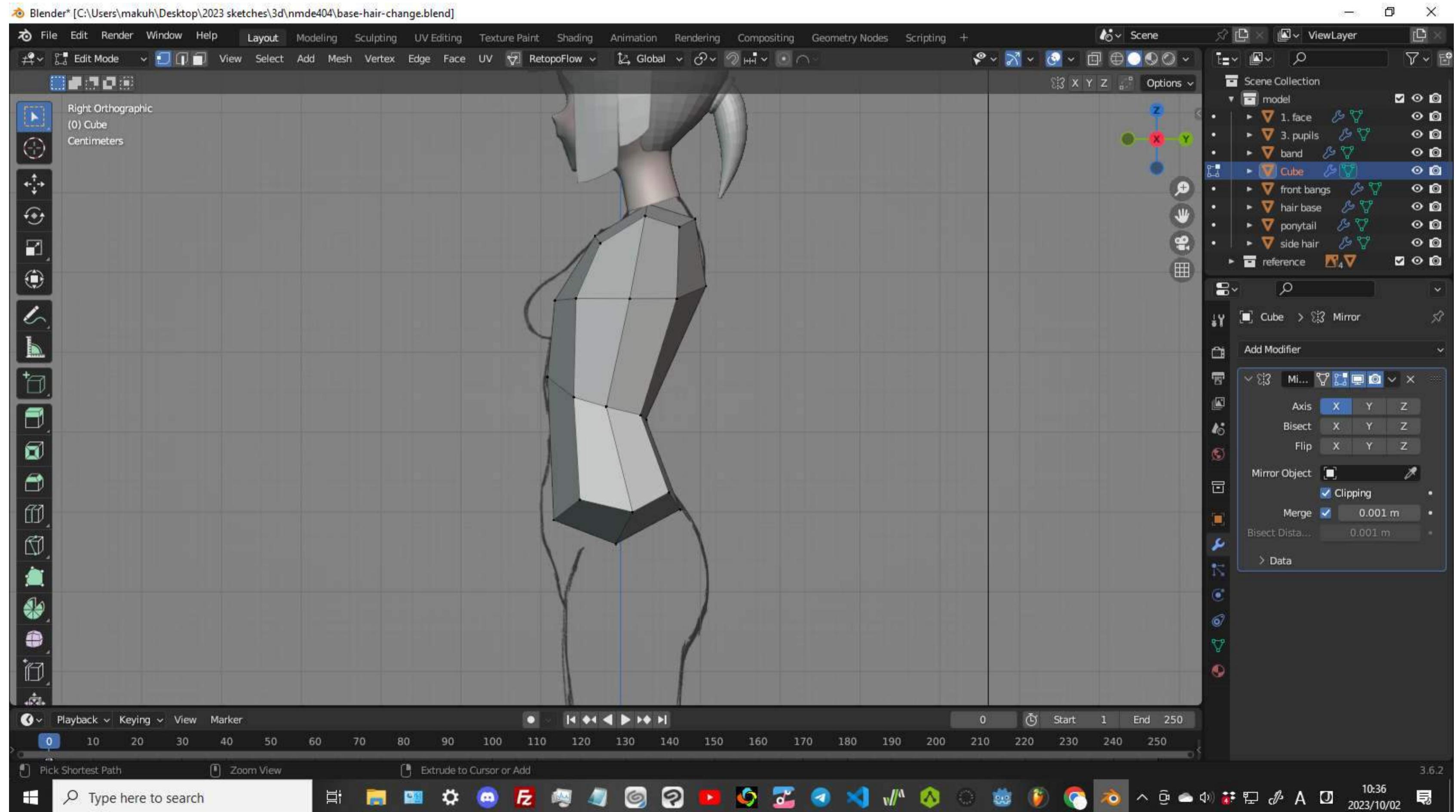
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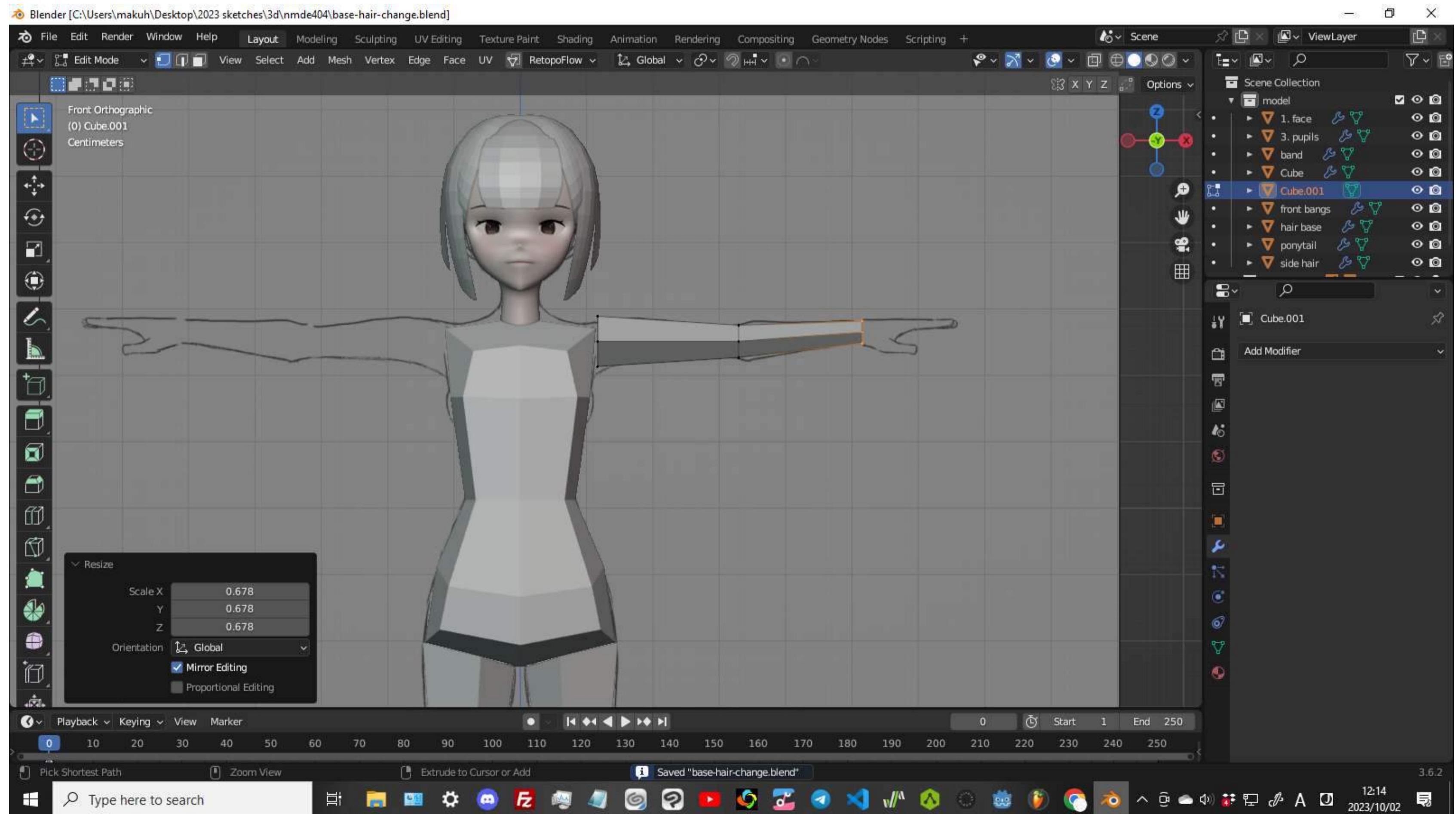
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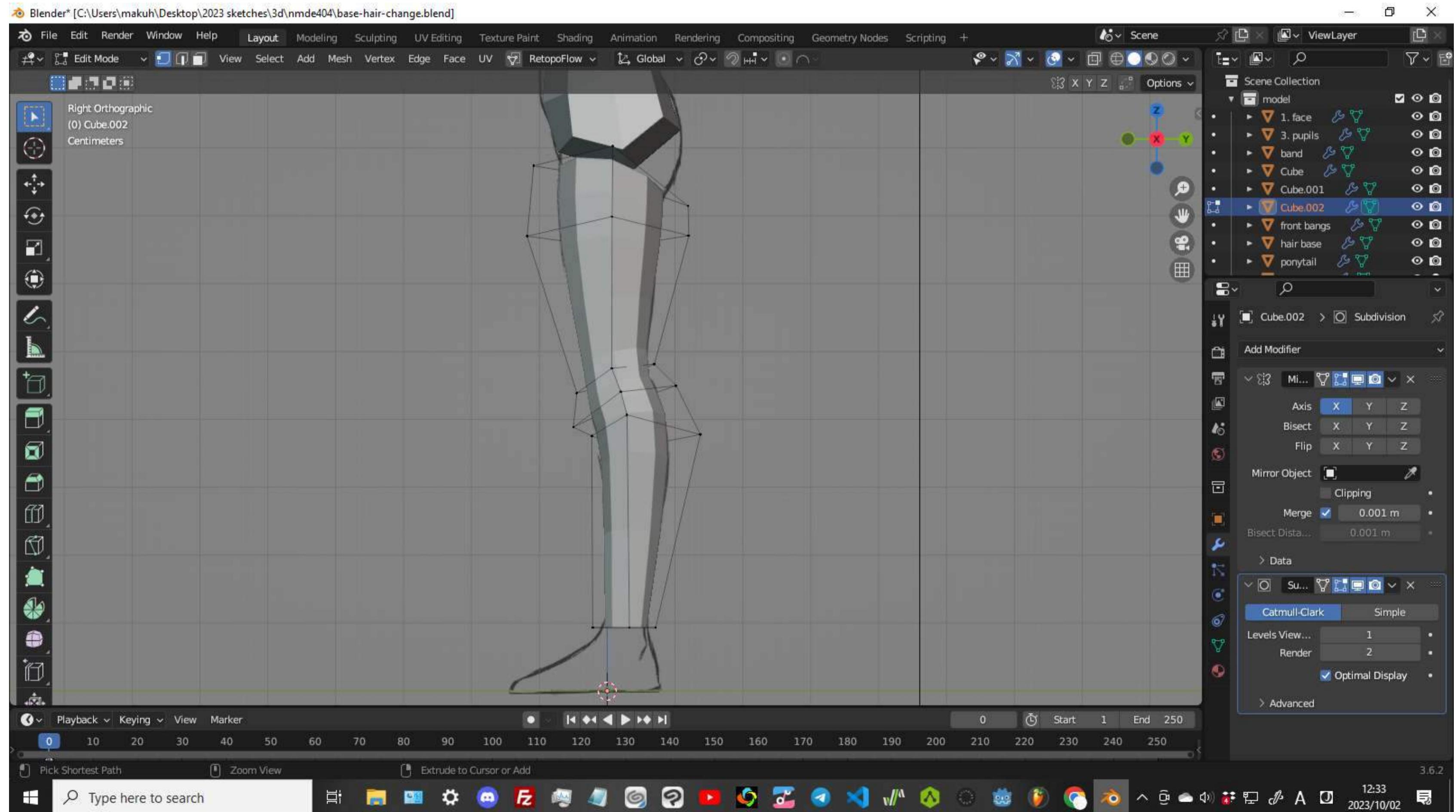
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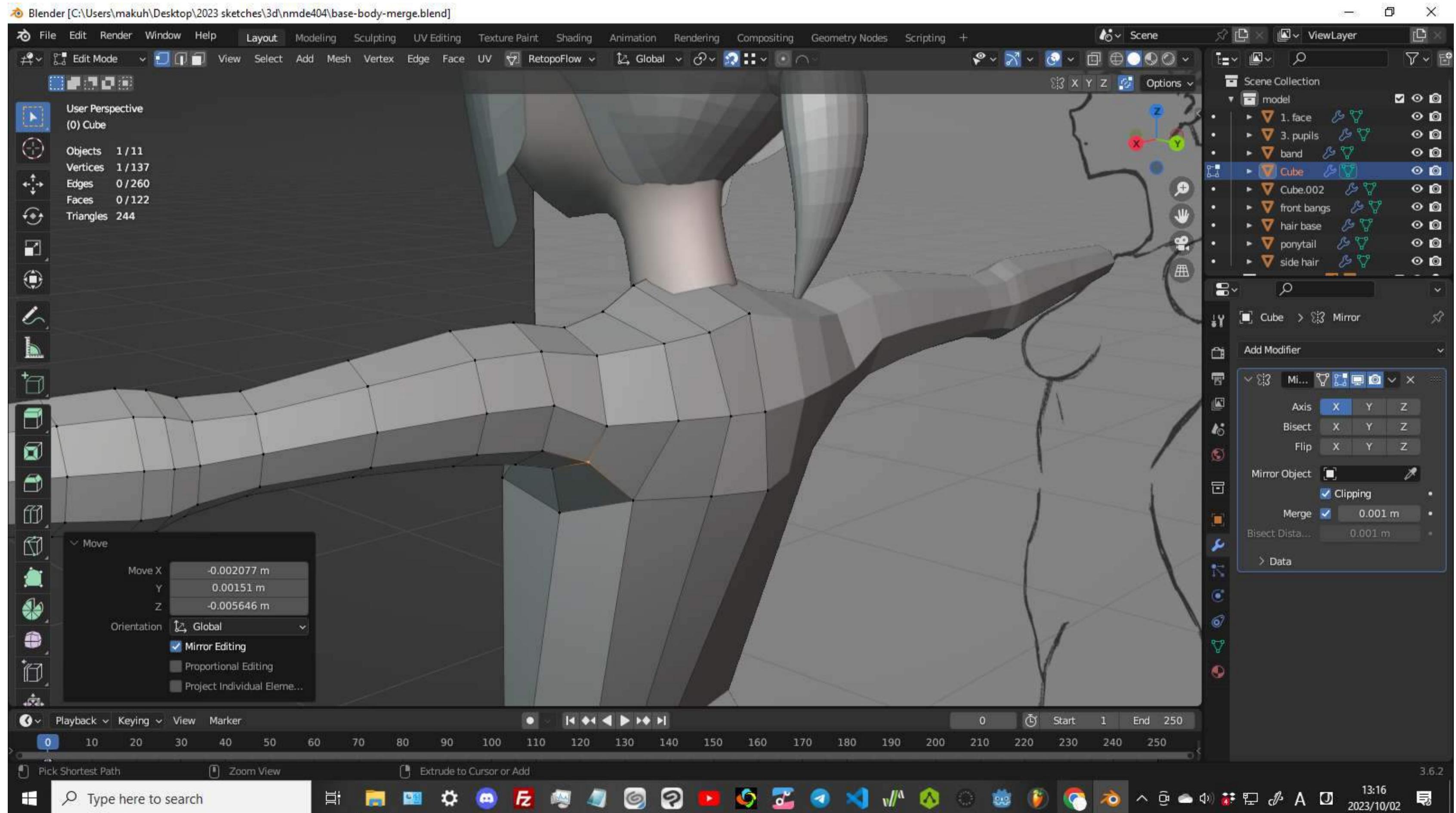
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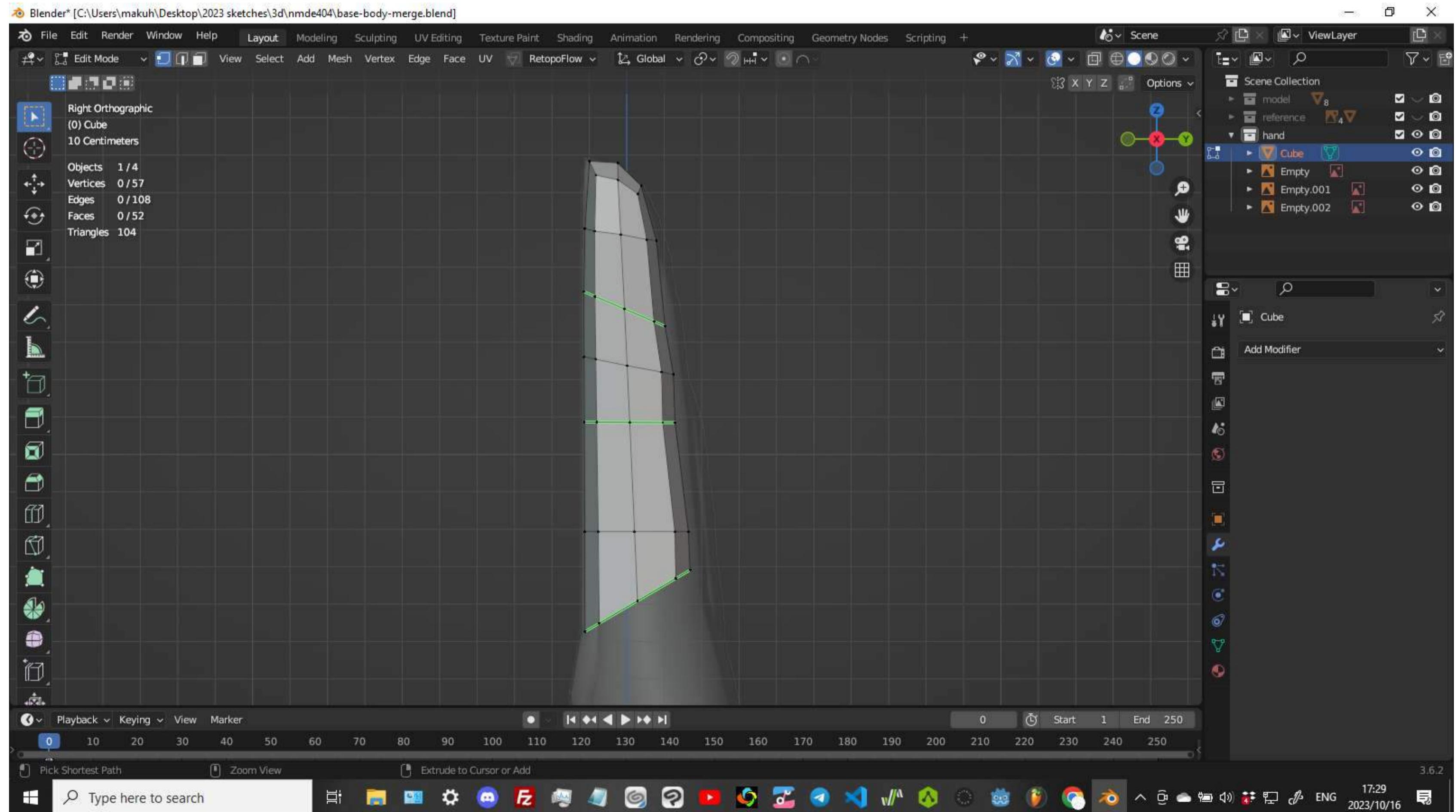
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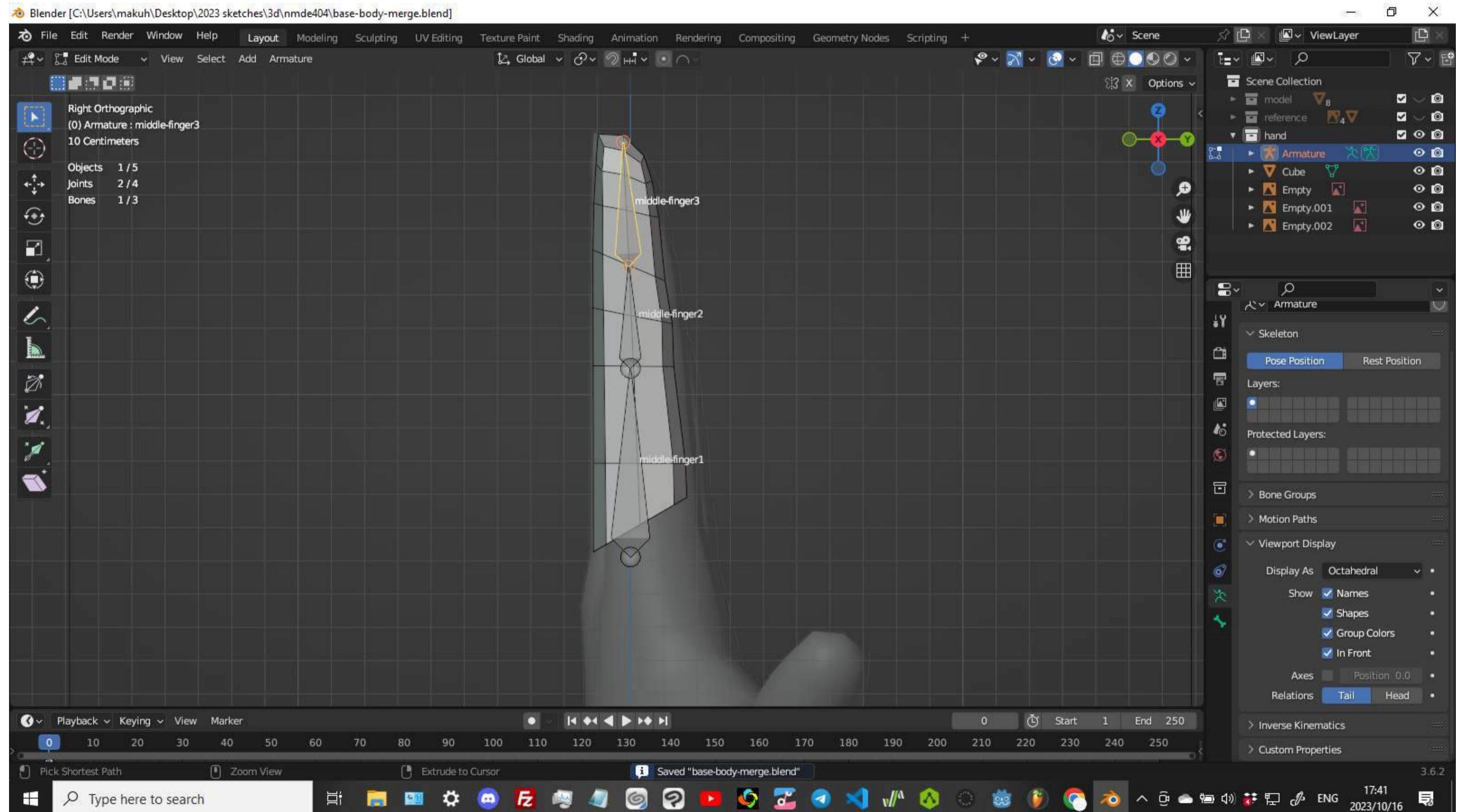
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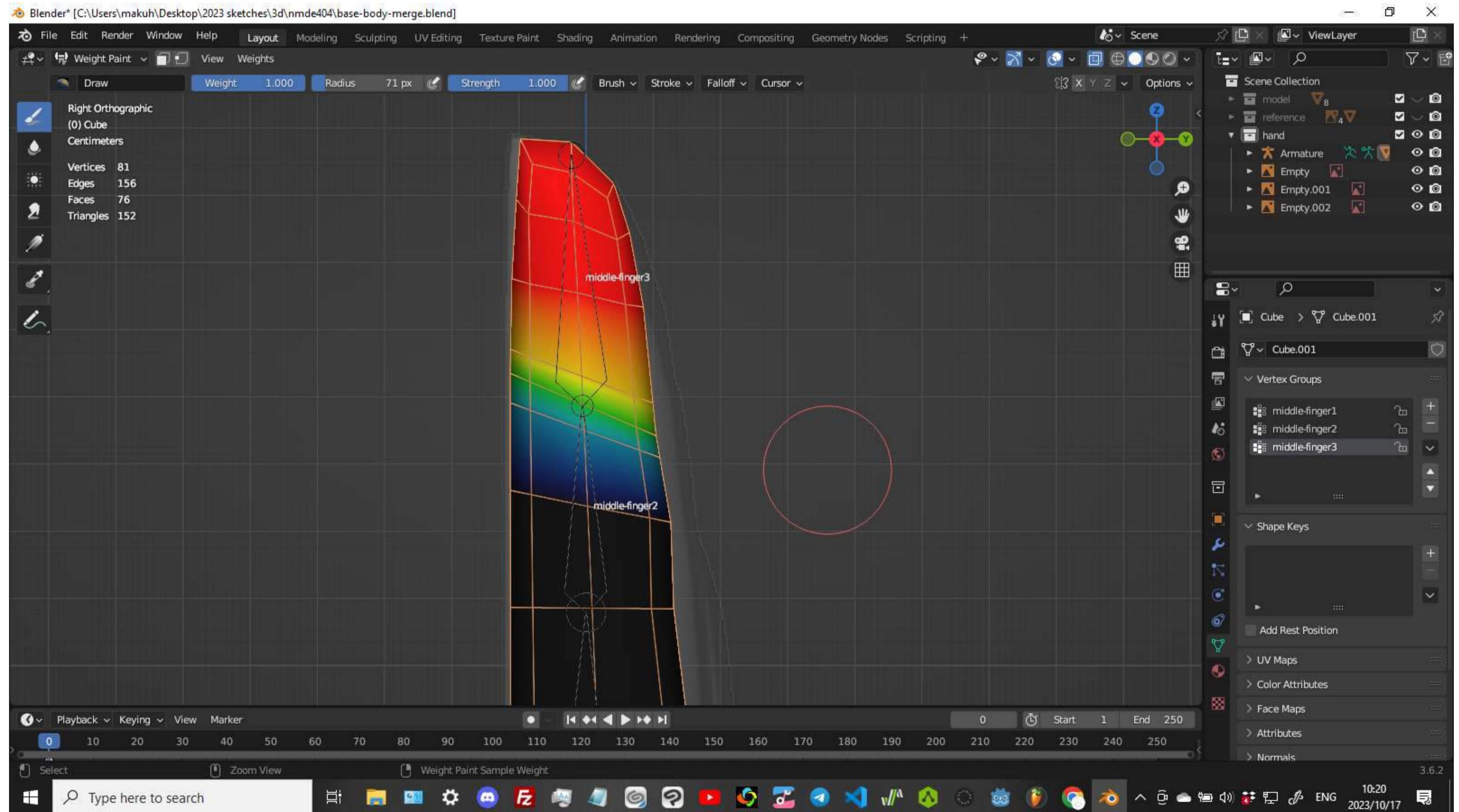
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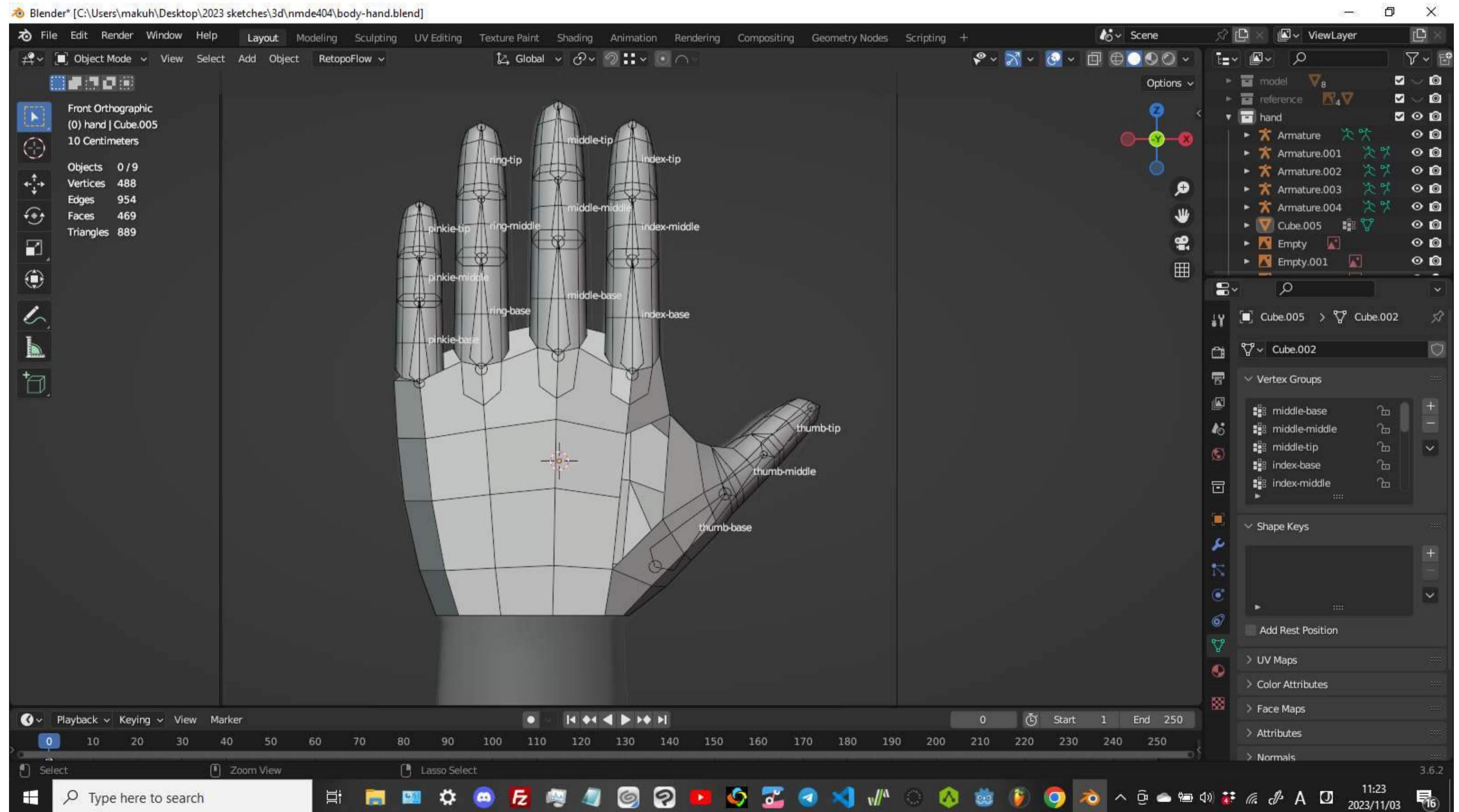
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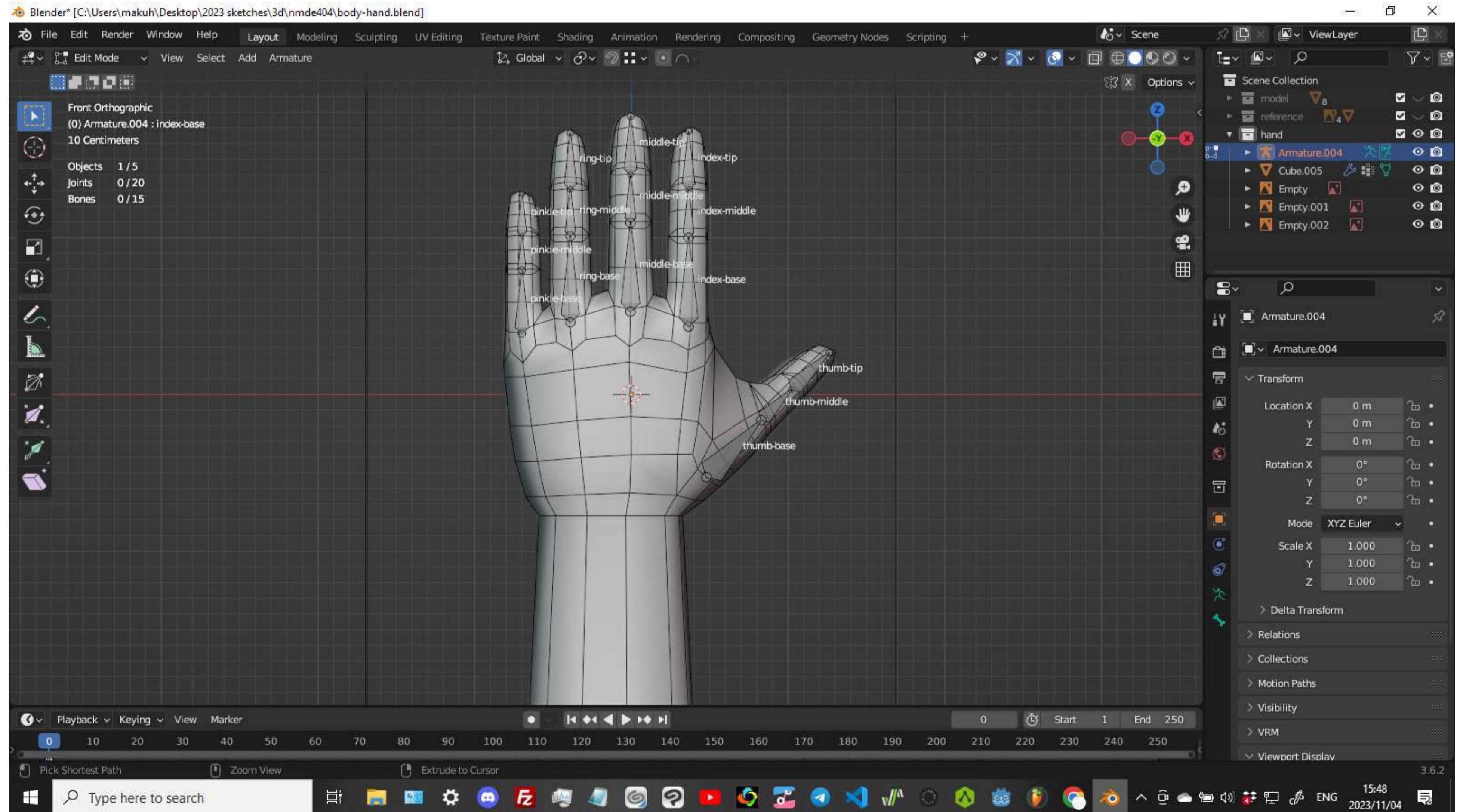
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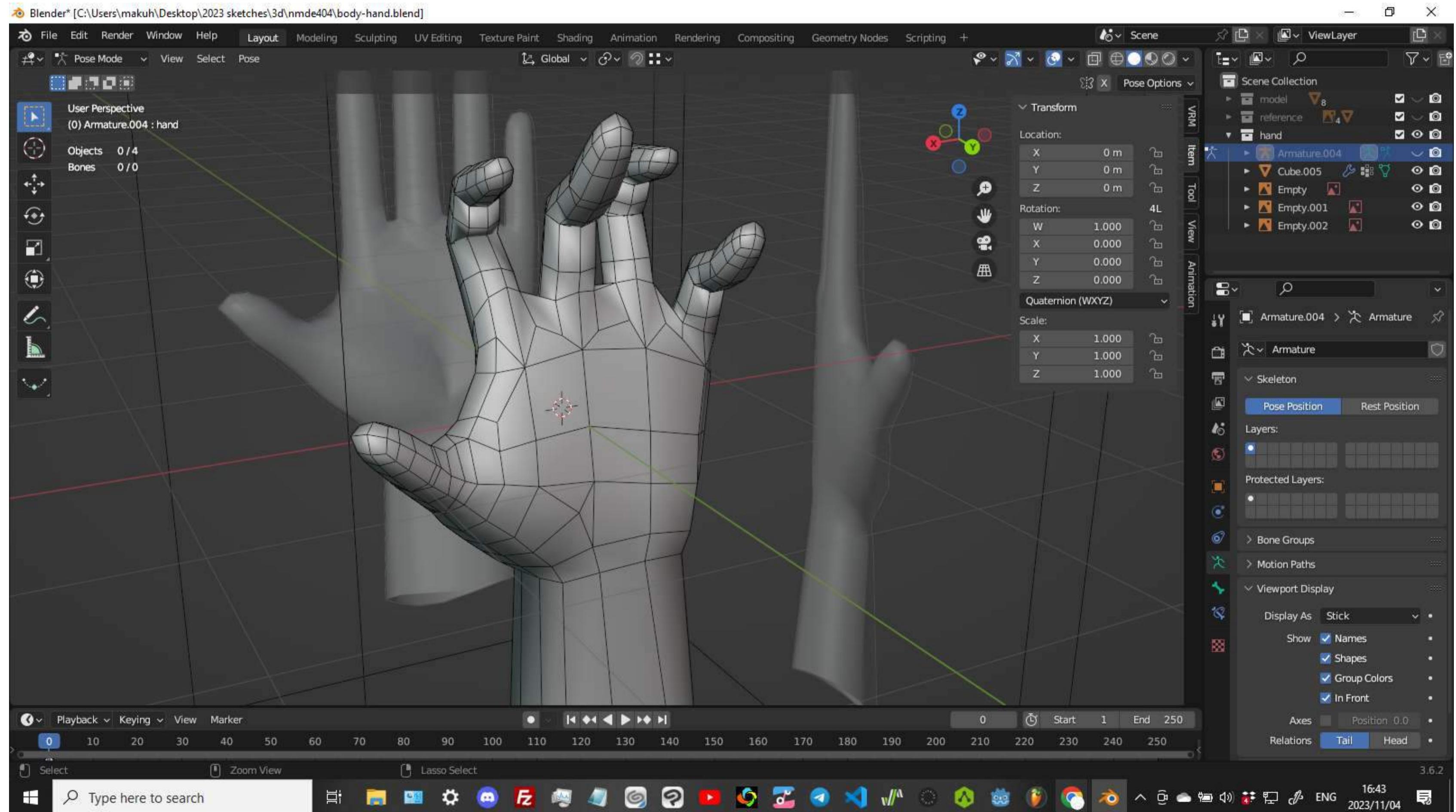
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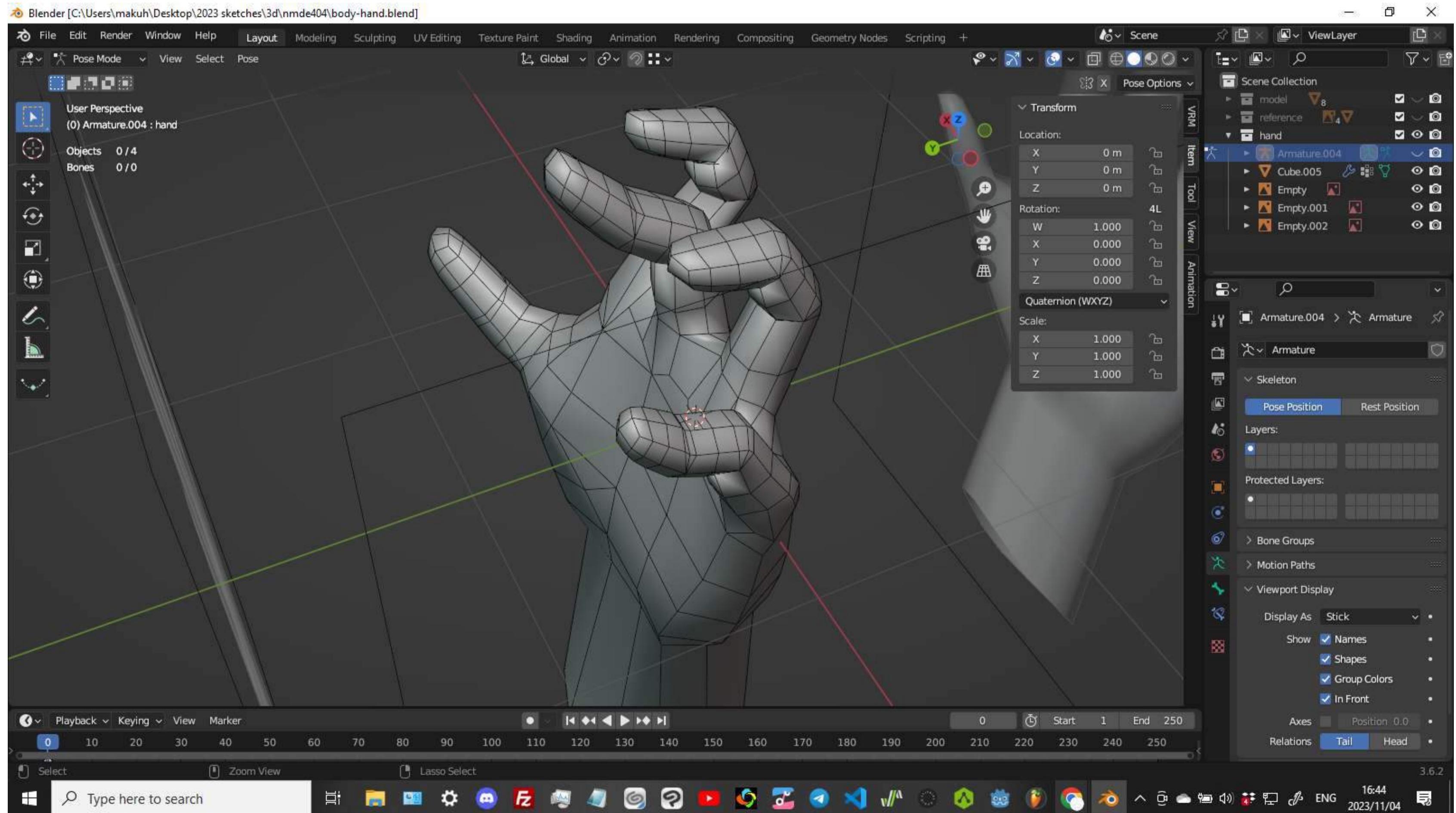
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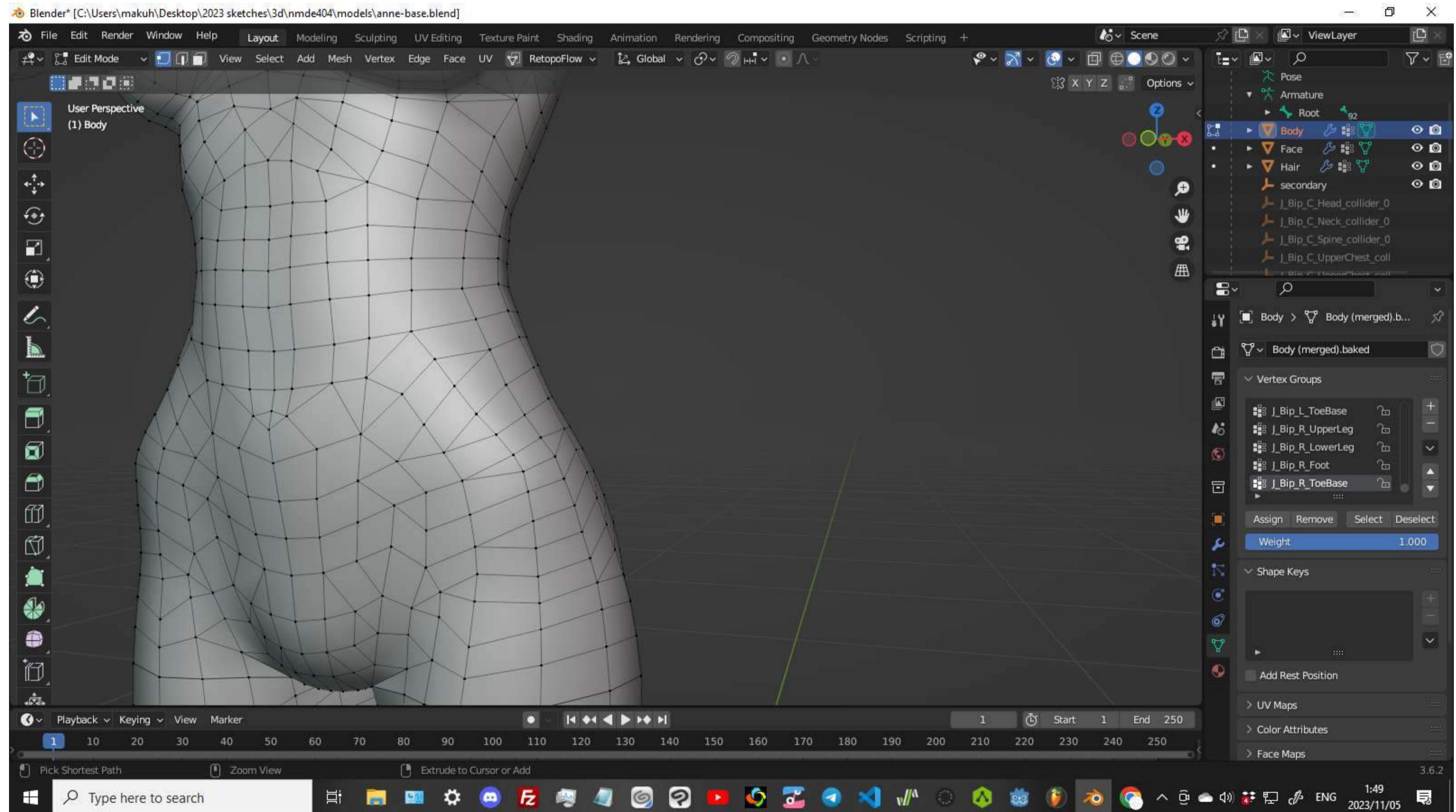
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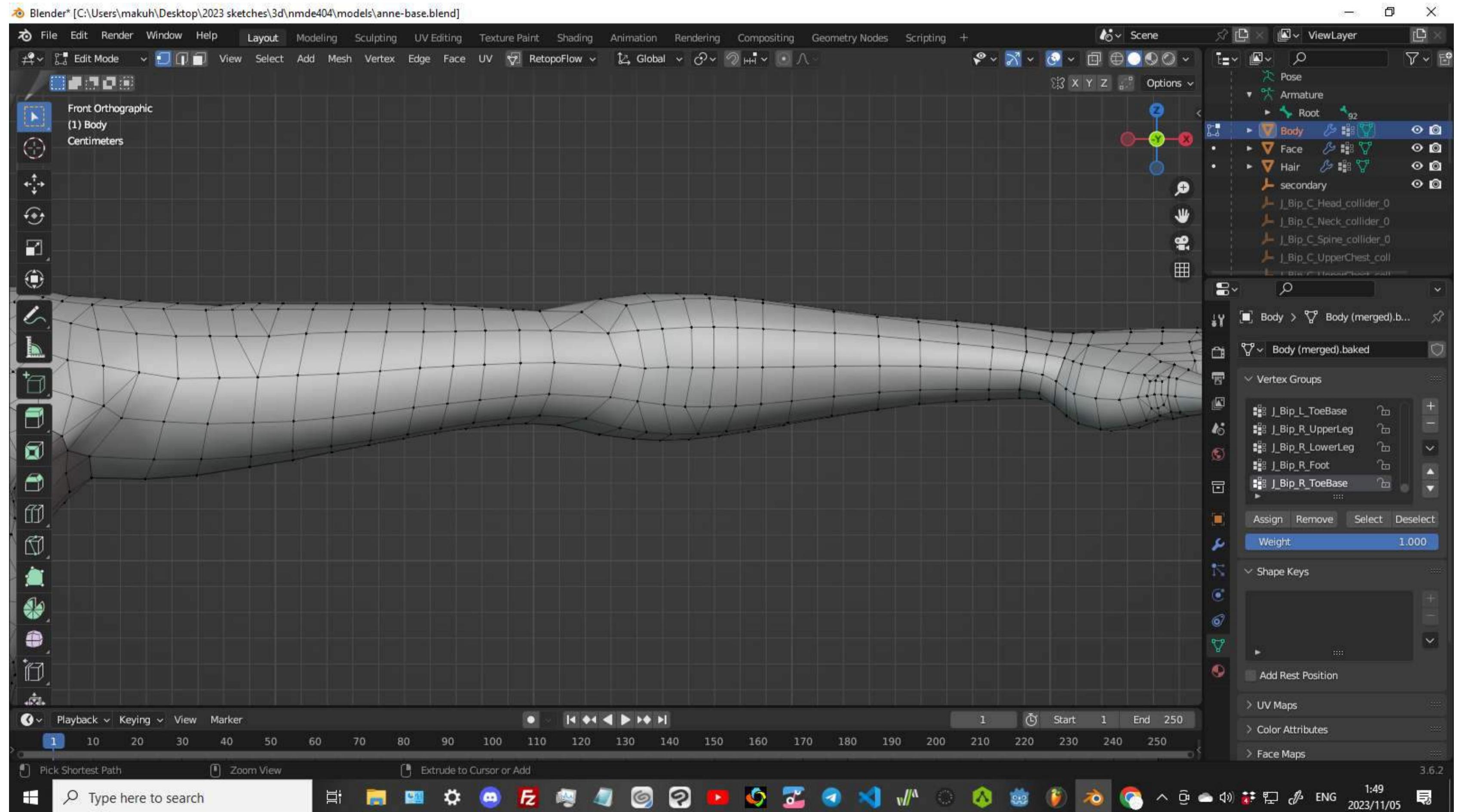
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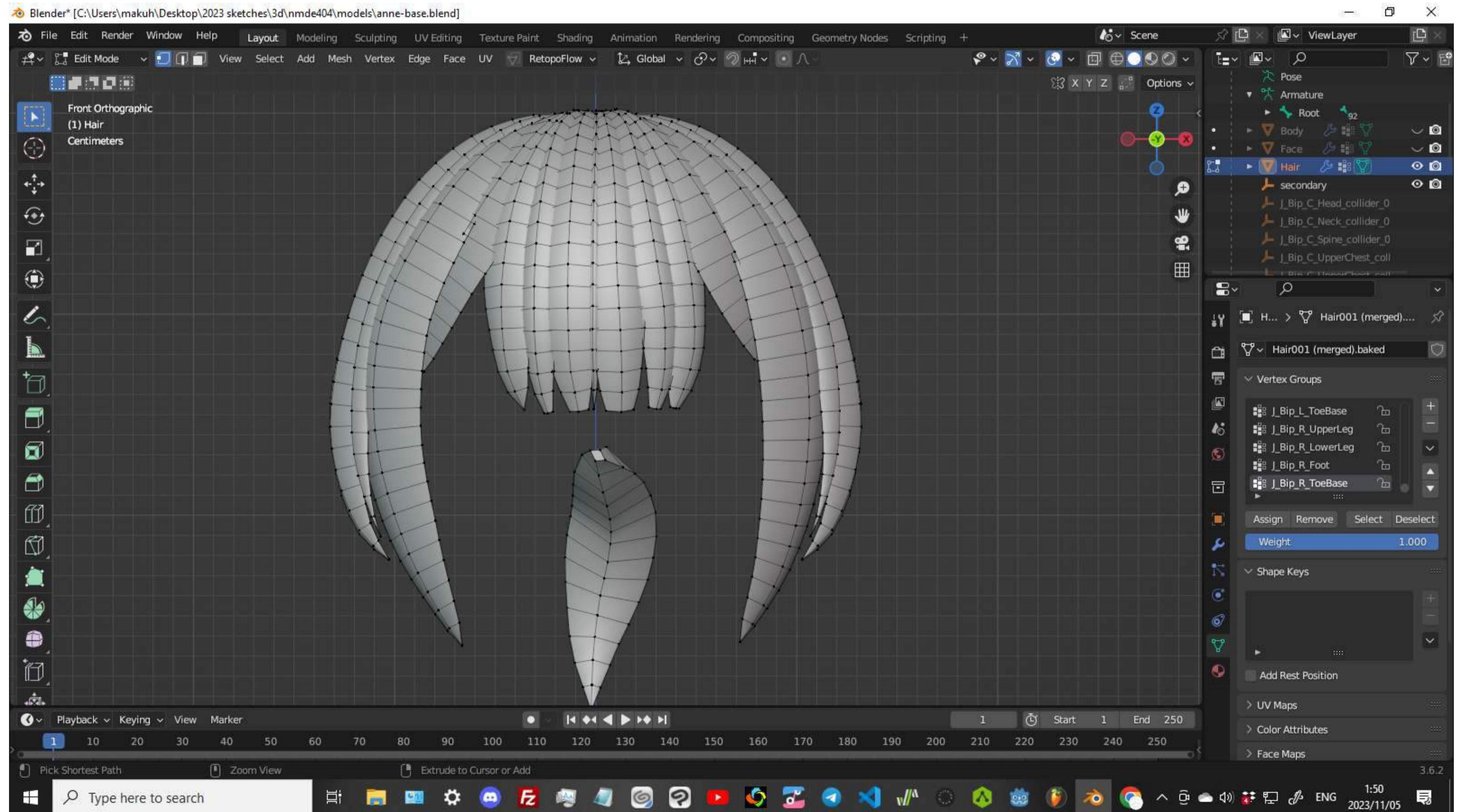
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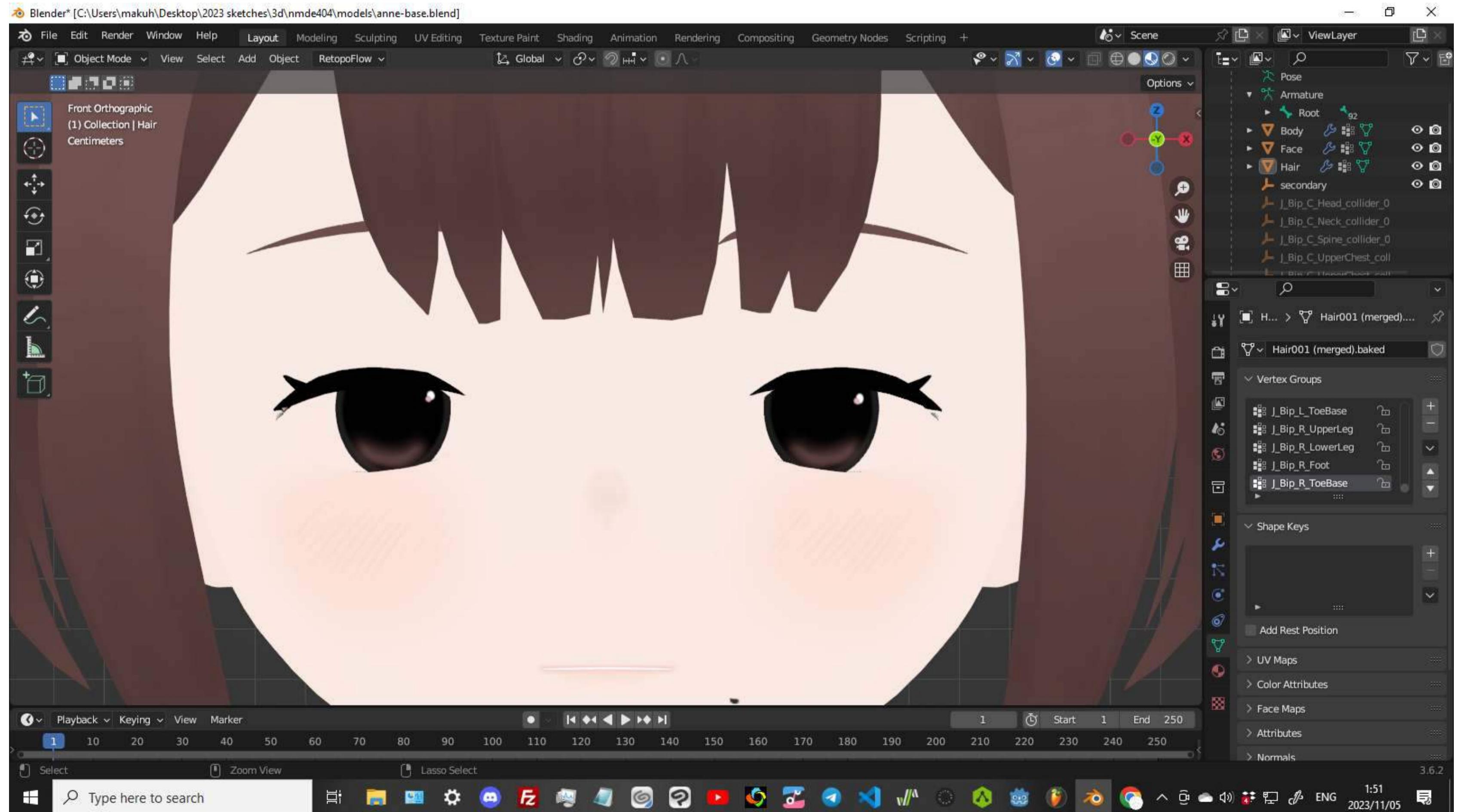
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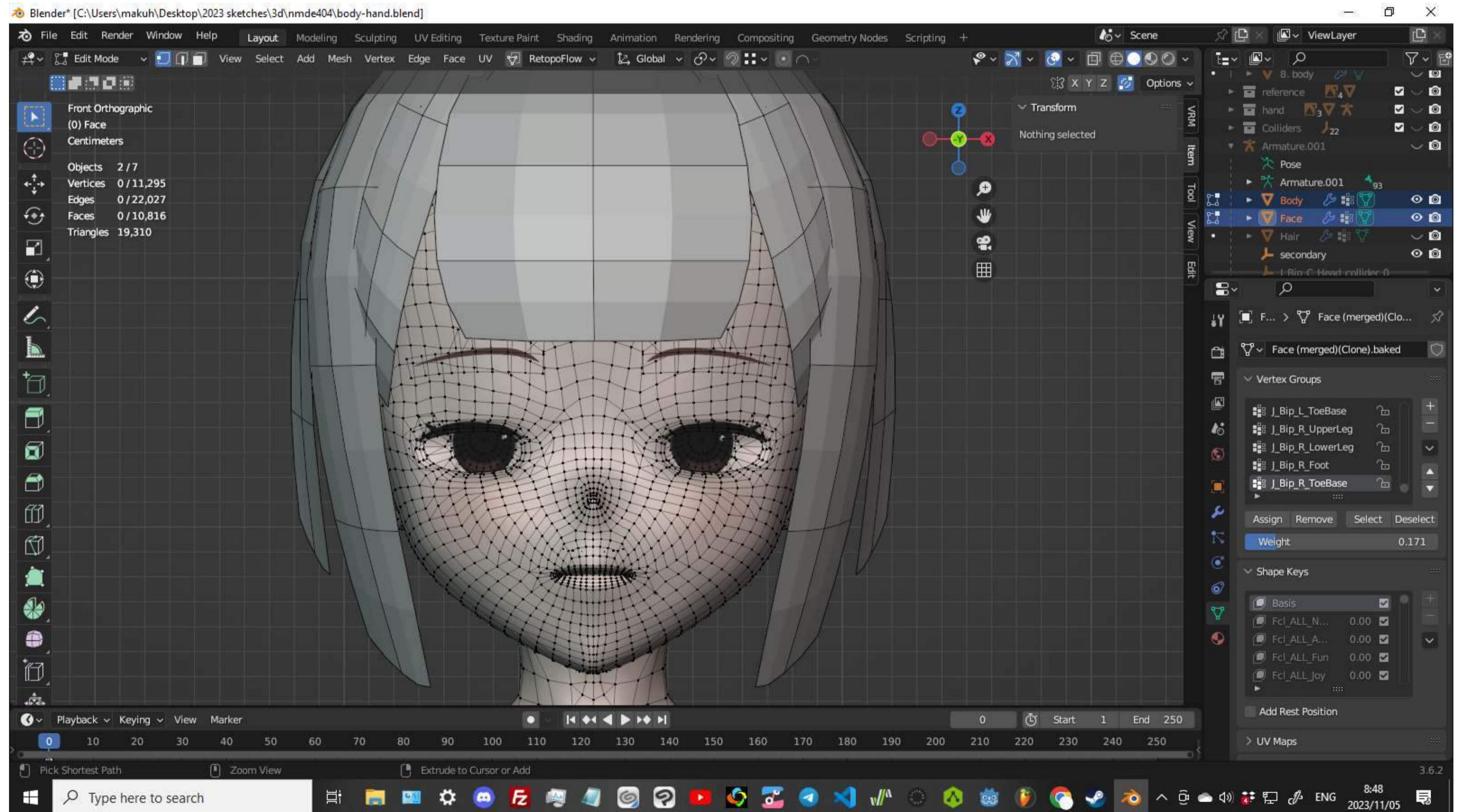
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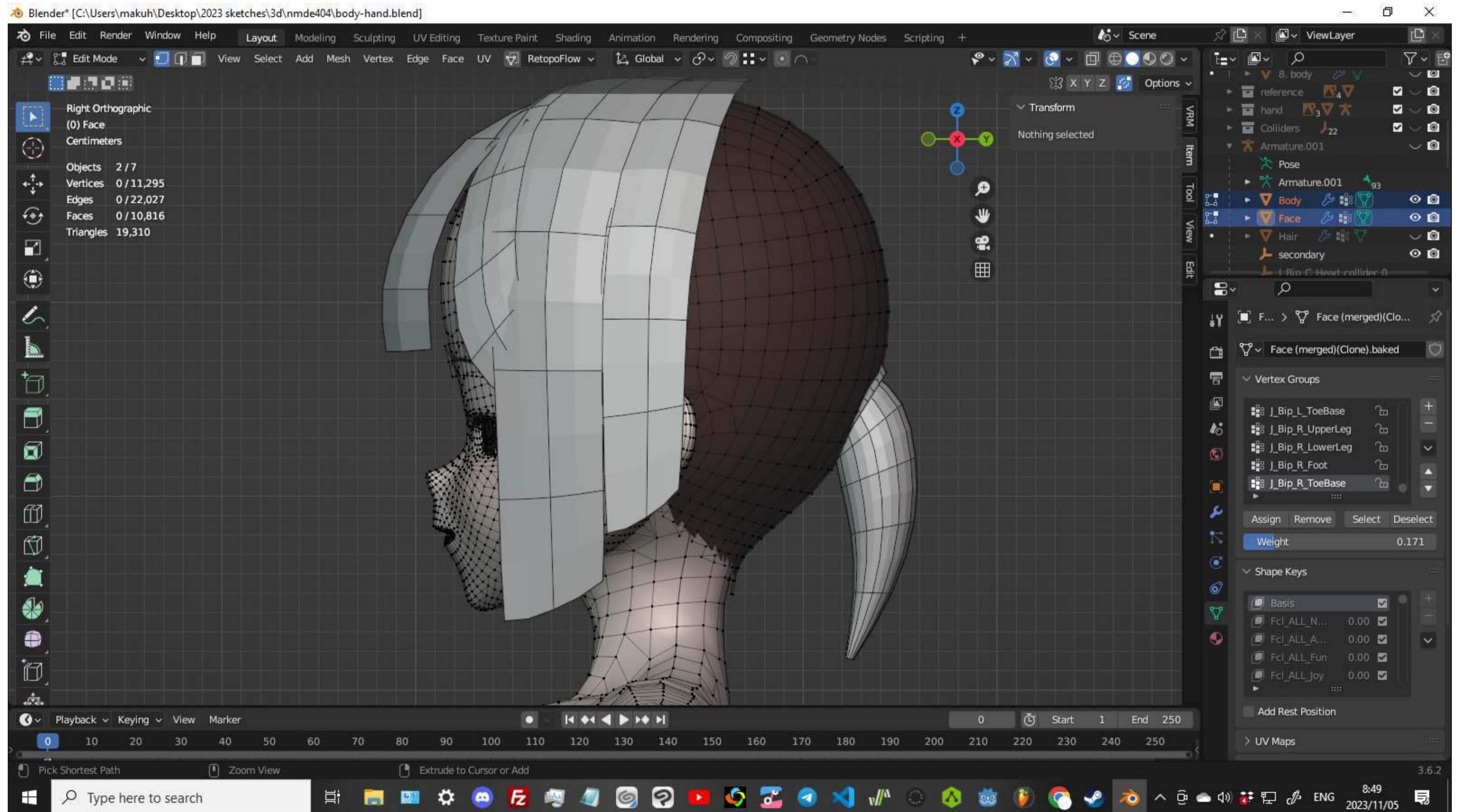
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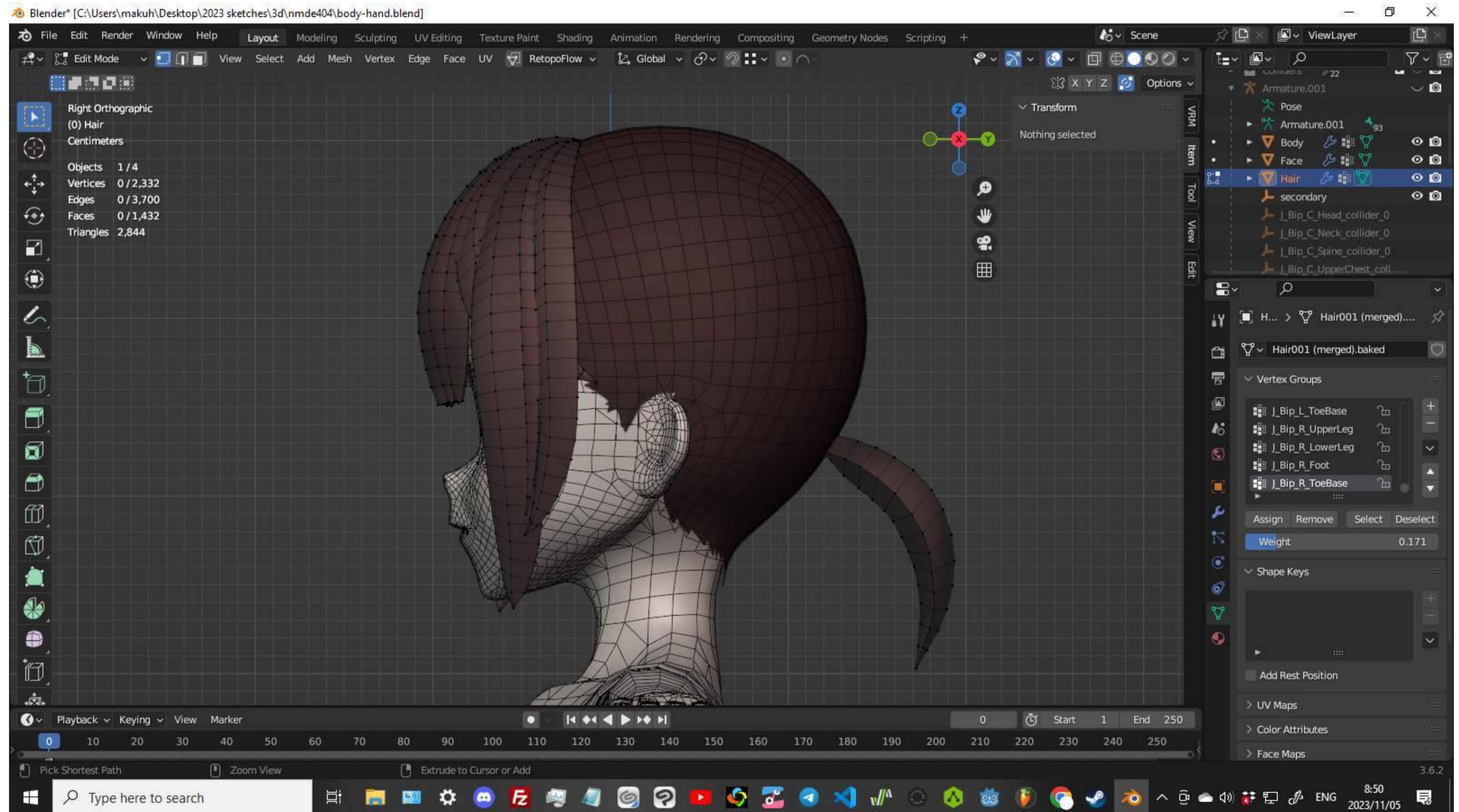
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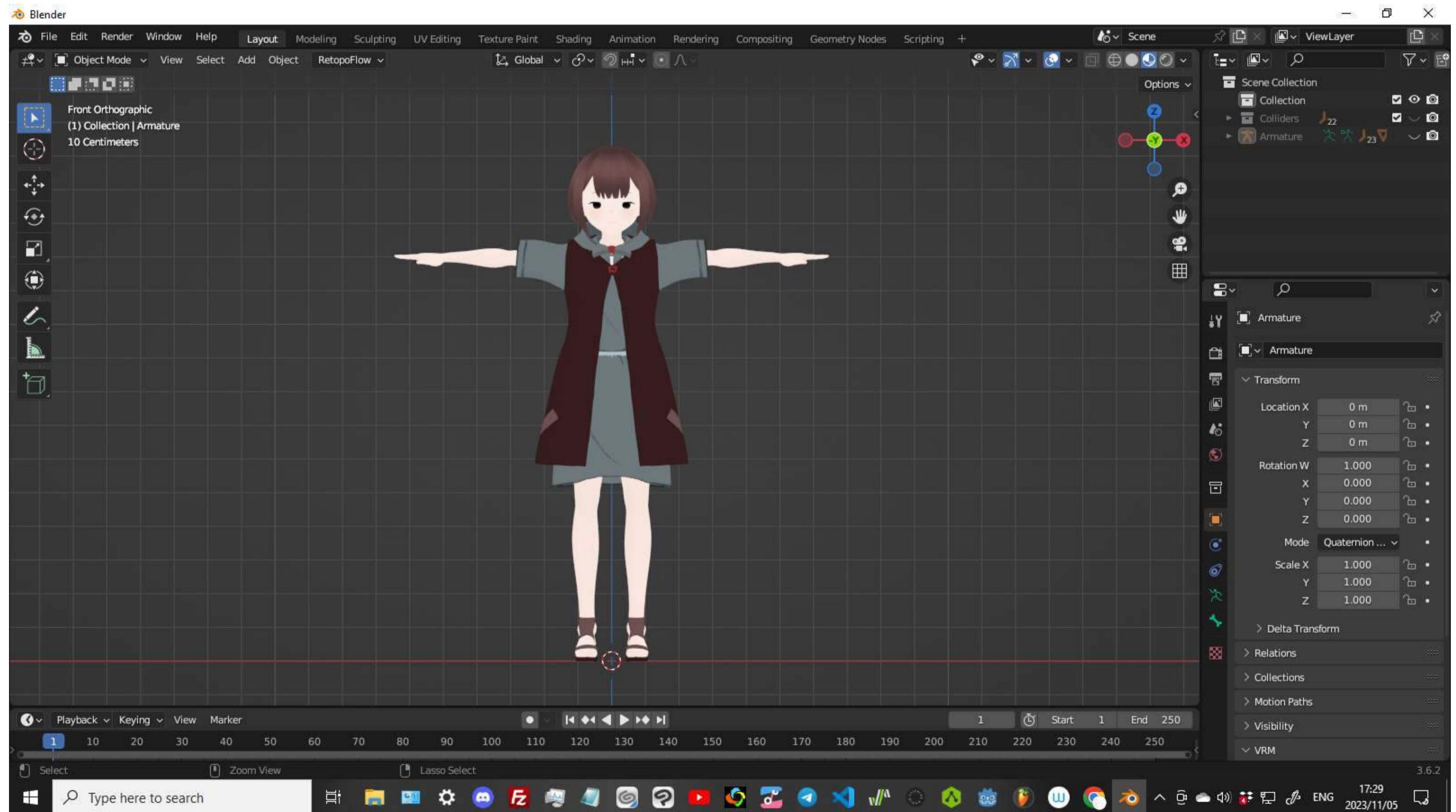
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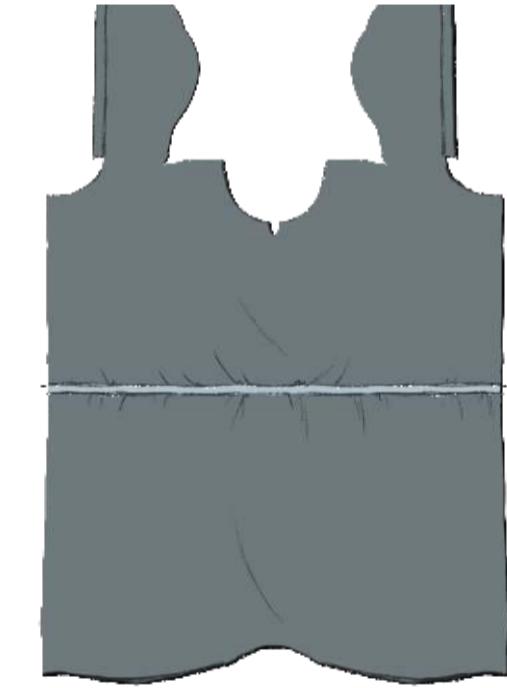
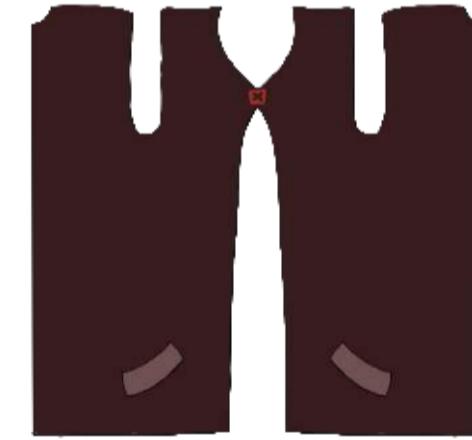
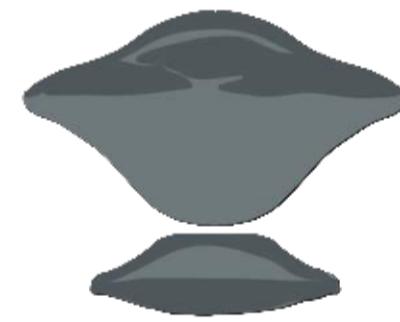
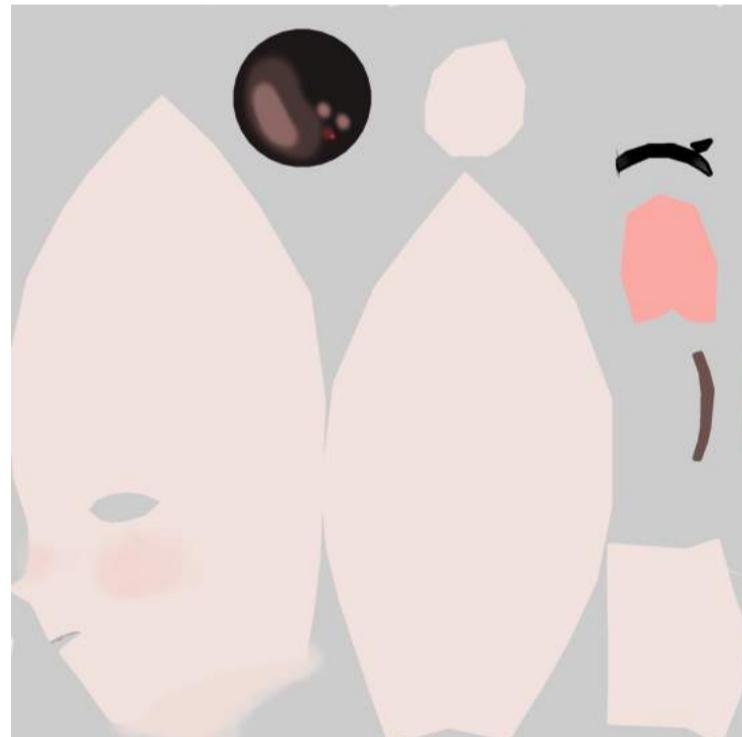


# CHARACTER MODELING IV



# CHARACTER MODELING IV

After some final model revisions and texture creation for the clothes, the model was finally finished. I tried loading animations on it from mixamo, but ran into several issues. Nonetheless, the programming part of the project could now continue at full speed



# PROGRAMMING

The code for this project is actually very complicated and dense since the scope of the project and the required functionality have been changed a bit since the start and require lots of complex logic to work. The source code for the entire project is public on my github, which can be accessed below:

[SOURCE CODE](#)

# EXECUTION

The final result is a web app that uses React JS, Three JS, Chart JS and tailwindcss to display a 3D character and its respective stats in the web browser. I hosted the project on Netlify for time convenience and free hosting.

[project](#)

# REFLECTION

Definitely a project that I want to revise and remake soon. I had a lot on my plate this semester (especially approaching the break) that really interfered with progress, but I also decided to use this project to teach myself a very useful front-end development tool. Even though the end result was pretty underwhelming, I can confidently say that I can program in React JS now, which is a huge plus when it comes to career stuff, so I'm not too disappointed.

With better preparation and time management, I'd make the project much more interactive and focus only on the character screen instead of splitting time and resources to other screens