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# Things to Do

# Intro

A lot of people have been asking me to create tutorials on how to implement character customization using VRoid models in Unity. If you’re one of those people, then I think you may like what I have right here

Here is our character, and on the left side of the screen, there is a slider there. So I can change the face. I can change the eye color. I can change the skin color, which in VRoid style, sometimes you have to draw your clothes on the skin. I can change the outer clothes. And I can change the hair style.

So, how does this work?

# Setup

So here’s the setup. We have the character that we want to customize here in the scene. And behind it, we have the list of all characters that we can download for free and available in VRoid Studio.

So all of the customization options that you see on the slider there in the intro, comes from these characters.

For the purpose of this tutorial, I’m going to refer to this model as a custom model and these models as premade models. Just to differentiate between them and to make it very clear.

And of course, all of the functions in this video are linked to the OnValueChanged Unity event in the slider and the OnClick event in the buttons

# 1. Face and Eyes

For the Face and Eyes, It’s just a simple material swap. Using this script, we just replace the material of the custom model with the material from the premade models, maintaining their orders in the Material list on the SkinnedMeshRenderer component.

The function for face and eyes swap are almost identical, except for some minor string manipulations so we only picked the materials with a certain name and ignore the first initial codes for the material name.

# 2. Skin and Clothes

Material swaps should also work with the skin and the clothes of your VRoid models.

But, only half of the time as you can see here. That’s because the mesh or structure of the clothes are different, like one piece dresses, hoodie and shirt, a different hoodie and shirt, and uniform sets.

You can swap the materials ONLY if the clothes use the same mesh. But it doesn’t work too well on clothes with different mesh. Sometimes it can work, but I wouldn’t count on it.

Unlike materials and textures, we can’t just swap the mesh of an object.

So when the clothes use the same mesh, you can easily swap the skin and clothes materials like we did in Face and Eyes. But once you reach a certain value in the slider, hide the current model and show a new model. Repeat for all clothing mesh types.

(The script is similar)

# 3. Hair

But by far, the most difficult part is swapping the hair, because we need to swap the entire hair mesh, which as I said earlier is impossible.

The solution I came up with is to first separate the hair of your VRoid models in Blender and then export the hair as VRM file to Unity. Here’s how

**3.1**

First, make sure you have downloaded the VRM importer plugin for Blender. This will download a ZIP file, but don’t unzip it. In Blender, click Edit > Preferences > AddOns > Install. Locate the ZIP file. If it’s successful, there will be a message on the right bottom side of the screen.

Now, import the VRM file, then delete everything except the Hair001 object. Then export this as a VRM file then import it to Unity.

**3.2**

Import the Hair VRM as usual in Unity. On your custom model, disable the Hair gameobject, then open the Root until you find the Head gameobject. Disable all HairJoint gameobject and then put the new hair inside the Head gameobject.

Adjust the hair position and scale so it looks good on the model’s head. Repeat for all hair models you have.

Using a script, we can enable and disable the hair gameobject from the slider.

The only downside is that the hair physics are removed in this process. We’ll fix this later somewhere in the future videos.

# Outro

As always, thank you to Javi for being an awesome Patron. If you’d like to support me making these tutorials for Unity and VRoid, then consider becoming a Patron to get early access to my videos early as well as testing new tools I’ve made in the future.

Like and subscribe if this video helps. And with that I think I’ll see you guys later, goodbye.