## About the system

The whole clothing system was made using ScriptableObjects to allow editing in the Unity editor, and also supports hair styles, accessories, wings, tails, etc. There's a base class BaseCharacterAttribute and every specific attribute inherits from it. The Scriptable Objects holds relevant data for the Shop UI and Character Customization system, such as name, price, icon, texture, etc.

The Character Customization uses a custom shader to add specific attributes to the character. For each customizable attribute, the shader receives a texture and a color. The shader samples the correct frame from the texture and the color is used to add more customization to the system, allowing for the player to choose a color of their choice (this was implemented only inside the editor).

## Thought process

Since I had already implemented similar features in other games, I choose to use ScriptableObjects, like I usually did. I started by creating a CharacterAttribute class that would hold the data that would allow me to implement many of the features requested by the task, like prices, icons and being able to equip the character parts.

That part was very straightforward and easily integrated in the UI, where I pass a reference to a specific CharacterAttribute to a UI script attached to a button, and when that button is pressed, it used that data to populate all the necessary UI elements.

The Customization system was a bit harder to do because I used frame to frame animation sprites, so I had to make specific shaders and scripts instead of just using a Sprite Library.

## Personal Assessment of Performance

Considering the time that was available to develop this feature, I would say that I did a good job. I did send the email 1 hour late, but that could have been prevented if I hadn't implemented some secondary things that were not requested (like scene transition), so I could have better allocated my time to meet the priorities. Ultimately, the system works as expected and I also worried about some quality-of-life aspects during development. For instance, most of the present features were made to be modular, allowing an enhanced design experience inside the editor.