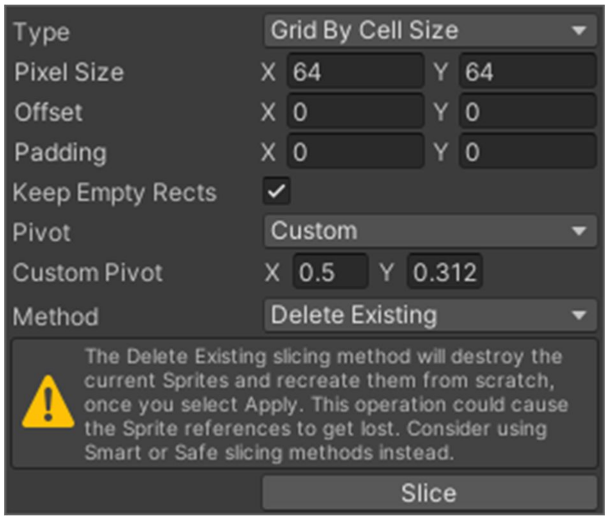
Paper Doll for Unity
by DirePixel

How to Use

Begin by importing the Paper Doll package into your Unity project. This will create a folder called Paper Doll.

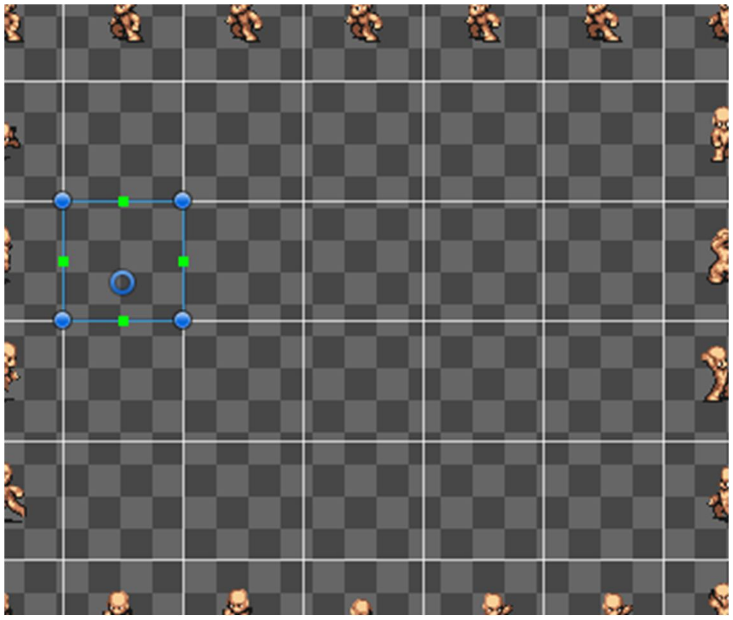
Next, you'll want to ensure that all your spritesheets are sliced to Keep Empty Rects (see below).



Type	Grid By Cell Size
Pixel Size	X 64 Y 64
Offset	X 0 Y 0
Padding	X 0 Y 0
Keep Empty Rects	✓
Pivot	Custom
Custom Pivot	X 0.5 Y 0.312
Method	Delete Existing

The Delete Existing slicing method will destroy the current Sprites and recreate them from scratch, once you select Apply. This operation could cause the Sprite references to get lost. Consider using Smart or Safe slicing methods instead.

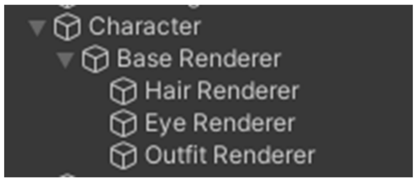
The reason for this is that all the spritesheets in your Paper Doll must be the same size and contain the same number of sprites in order for it to work. For your base (skin) layer of the paper doll, this may not be an issue. However for other layers, such as eyes for example, if your character is facing up, then there would be no eye texture to be shown. Thus that sprite area would be empty in your spritesheet (see below).



Here is an example of a set of empty rects in one of my spritesheets. Normally, unity would ignore and not slice these. But in our case, we need to keep them.

Next, you need to ensure that your spritesheets are located within a Resources folder in your project. When you assign a texture to a paper doll layer (as you'll see later), during runtime we'll load all the sprites in that texture from this resources folder.

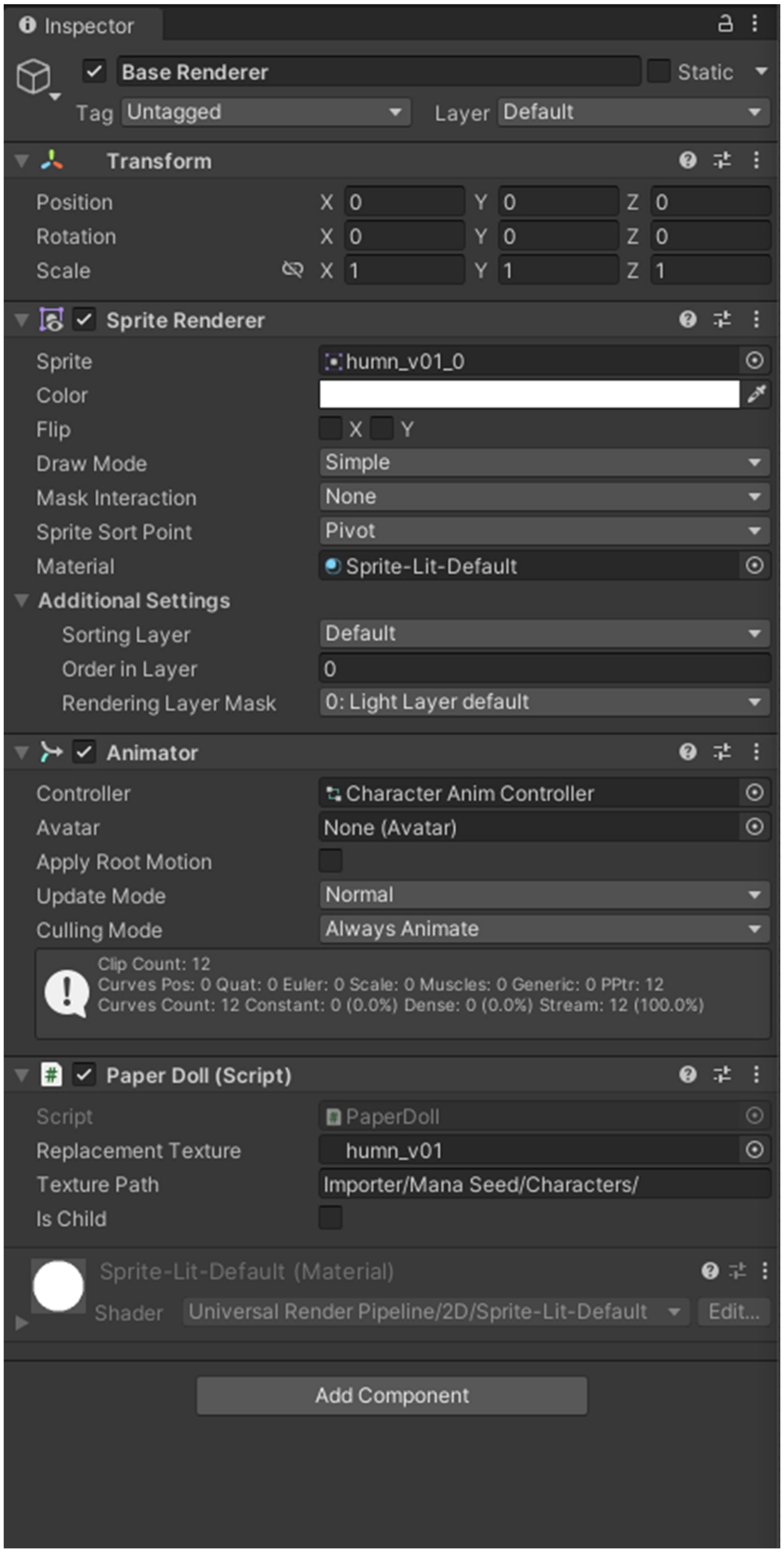
Next we'll set up our character in our scene. How you do this is up to you, but there are a few requirements here. That being, one of your paper doll layers needs to be a parent GameObject to the other layers. I typically make the skin the parent, and the eyes, hair, outfits, etc. children of the skin. (see below)



```
▼ Character
  ▼ Base Renderer
      Hair Renderer
      Eye Renderer
      Outfit Renderer
```

Next, we'll need to add a Paper Doll component to each render layer. So in the picture above, you'll be adding a Paper Doll component to Base Renderer, Hair Renderer, Eye Renderer, and Outfit Renderer.

Next, I'll need to go ahead and set the folder location of each texture in the Paper Doll component inspector. For the Hair, Eye, and Outfit renderers I'll also need to mark these as children in the inspector, likewise I'll need to ensure that the Base Renderer is NOT marked as a child in the inspector. I'll need to make sure that each renderer has a Sprite Renderer component attached to it as well, and that the Base Renderer has an animator component attached to it. The child layers will NOT need animators to be attached to them. I'll also need to ensure that each sprite renderer is using a sprite from the texture I intend to use, and that the Replacement Texture of each Paper Doll is set to use that texture. (see below)



Inspector

✓ Base Renderer ☐ Static

Tag Untagged   Layer Default

Transform

	X	Y	Z
Position	0	0	0
Rotation	0	0	0
Scale	1	1	1

✓ Sprite Renderer

Sprite	humn_v01_0
Color	
Flip	☐ X ☐ Y
Draw Mode	Simple
Mask Interaction	None
Sprite Sort Point	Pivot
Material	Sprite-Lit-Default

Additional Settings

Sorting Layer	Default
Order in Layer	0
Rendering Layer Mask	0: Light Layer default

✓ Animator

Controller	Character Anim Controller
Avatar	None (Avatar)
Apply Root Motion	☐
Update Mode	Normal
Culling Mode	Always Animate

```
Clip Count: 12
Curves Pos: 0 Quat: 0 Euler: 0 Scale: 0 Muscles: 0 Generic: 0 PPtr: 12
Curves Count: 12 Constant: 0 (0.0%) Dense: 0 (0.0%) Stream: 12 (100.0%)
```

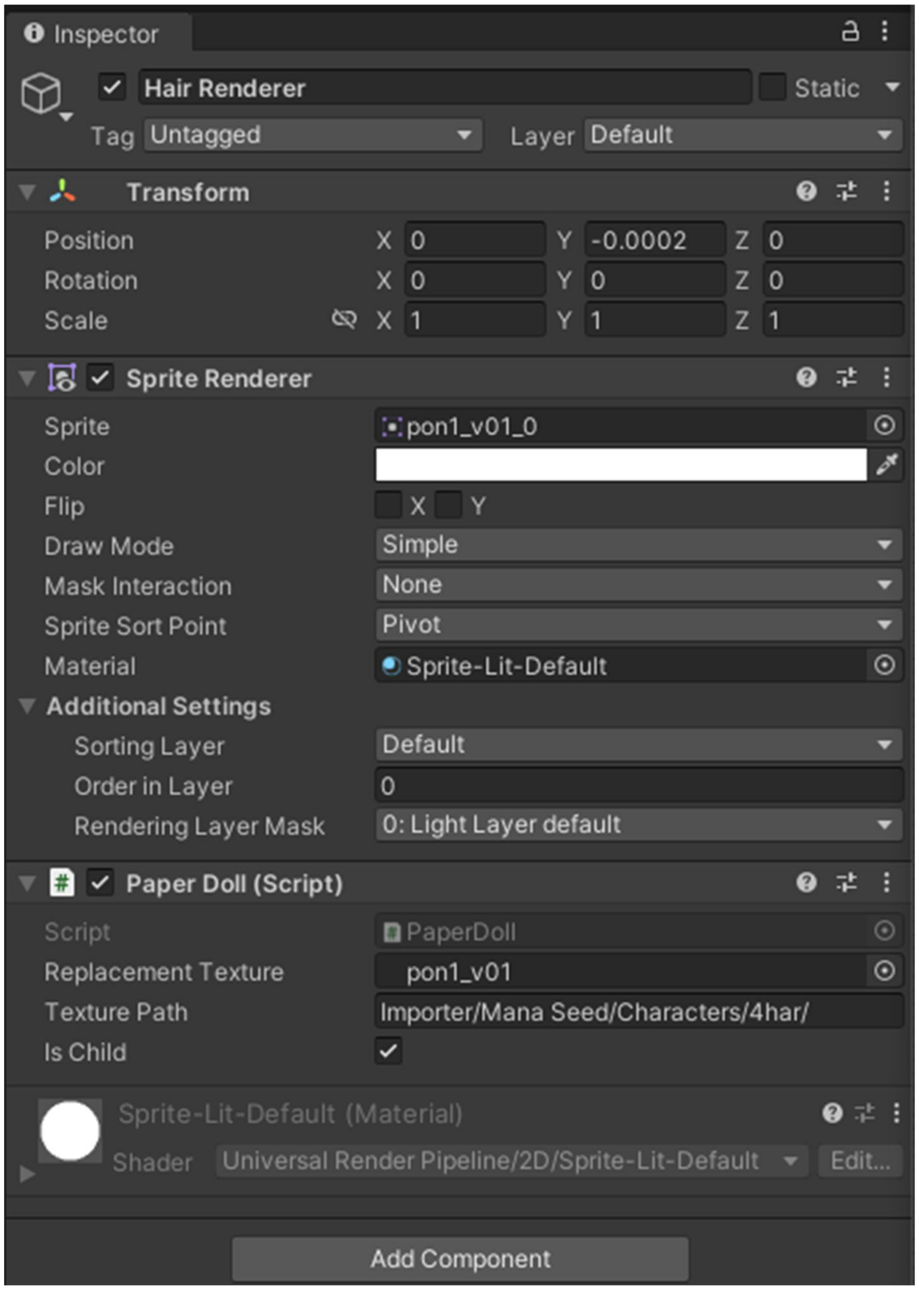
✓ Paper Doll (Script)

Script	PaperDoll
Replacement Texture	humn_v01
Texture Path	Importer/Mana Seed/Characters/
Is Child	☐

Sprite-Lit-Default (Material)

Shader Universal Render Pipeline/2D/Sprite-Lit-Default   Edit...

Add Component



Inspector

Hair Renderer   Static

Tag Untagged   Layer Default

Transform

Position	X	0	Y	-0.0002	Z	0
Rotation	X	0	Y	0	Z	0
Scale	X	1	Y	1	Z	1

Sprite Renderer

Sprite	pon1_v01_0
Color	
Flip	X Y
Draw Mode	Simple
Mask Interaction	None
Sprite Sort Point	Pivot
Material	Sprite-Lit-Default

Additional Settings

Sorting Layer	Default
Order in Layer	0
Rendering Layer Mask	0: Light Layer default

Paper Doll (Script)

Script	PaperDoll
Replacement Texture	pon1_v01
Texture Path	Importer/Mana Seed/Characters/4har/
Is Child	✓

Sprite-Lit-Default (Material)

Shader Universal Render Pipeline/2D/Sprite-Lit-Default   Edit...

Add Component

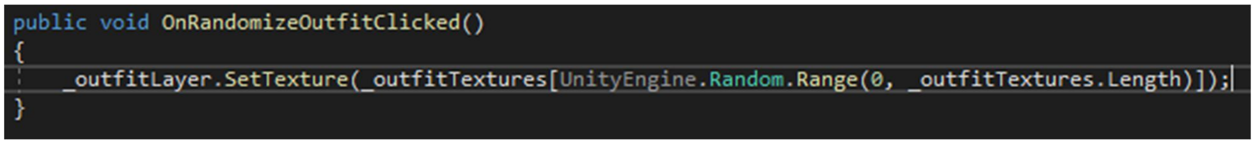
Lastly, I'll need to be sure my Animator attached to my Base Renderer has an Animator Controller set to it and is set up with animations. From there, once you play your game it should just work.

If it does not work for you, I recommend that you take a look at the How to Use video located here: https://youtu.be/SjRCLN0t0Ww

Swapping Textures at Runtime

How you build your system of swapping out textures and communicating with the Paper Doll layers is entirely up to you. But once you're ready you'll need to call the SetTexture(Texture2D texture, string texturePath) method of the Paper Doll layer you're wanting to swap the texture out on. This will cause a brief (milliseconds long) delay as the spritesheet is loaded from file.

If the texture you're swapping out is in the same folder as the current texture path, you may omit specifying a texture path when calling SetTexture.



```
public void OnRandomizeOutfitClicked()
{
    _outfitLayer.SetTexture(_outfitTextures[UnityEngine.Random.Range(0, _outfitTextures.Length)]);
}
```

If you still need further help or just have general questions, please post them as comments on the Paper Doll for Unity asset page at: https://direpixel.itch.io/paper-doll-for-unity

Thanks for purchasing!