

Non-Player Characters (NPCs) and Voice Bubbles



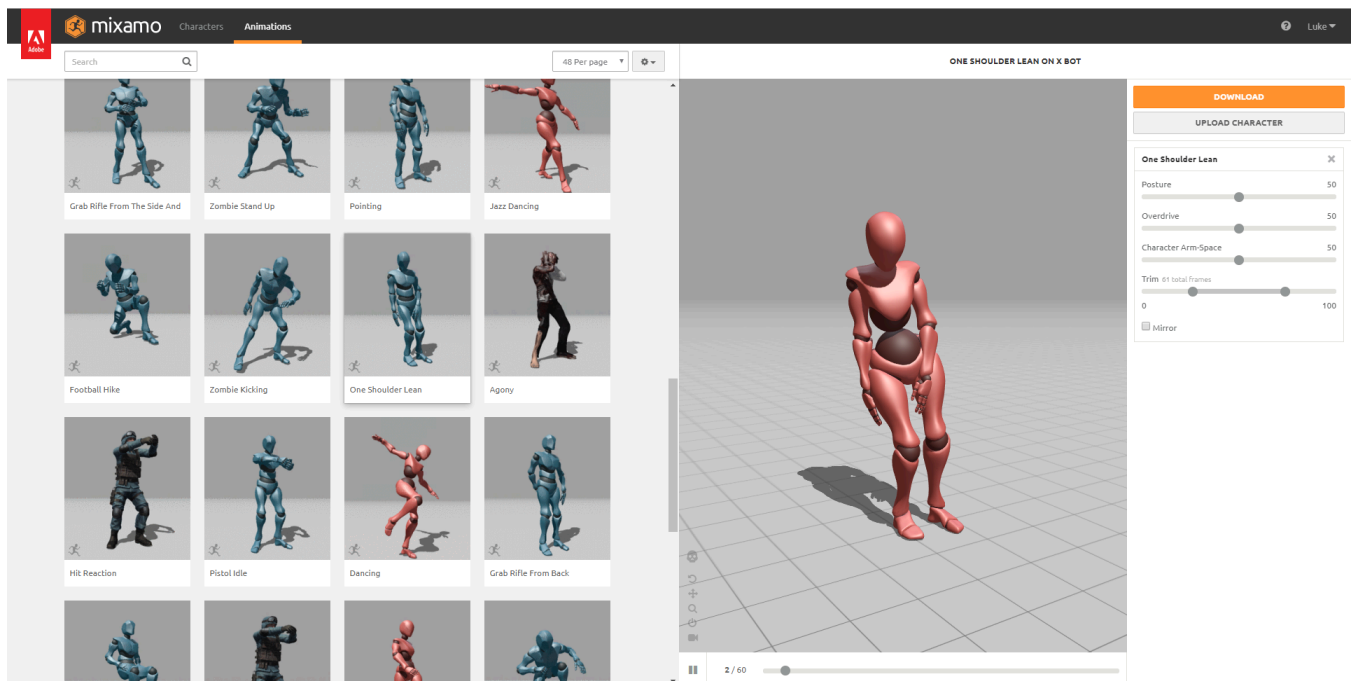
Some game worlds can be pretty empty, which is fine if you want to focus on the world and scenery. But sometimes it's nice to have some other characters to interact with. We've included a **prefab** (a pre-made asset that already has code, models, and other elements already packed together) in the class demo project that lets you easily add a text bubble to any object in your world.

The most common thing to add text bubbles to is characters, so we'll go over how to add an NPC to your scene first, with a looping animation, and then we'll show how to add the text bubble.

Adding an NPC to Your World

Adding a simple character to the world is pretty easy, and starts with a familiar tool. We'll be using Mixamo, again.

To start, you should have your .ZIP file with the .OBJ model .MTL material, and (usually) .PNG texture inside, similar to the one we made to animate your player character in Mixamo. [This process is covered in this tutorial from earlier in the unit.](#)

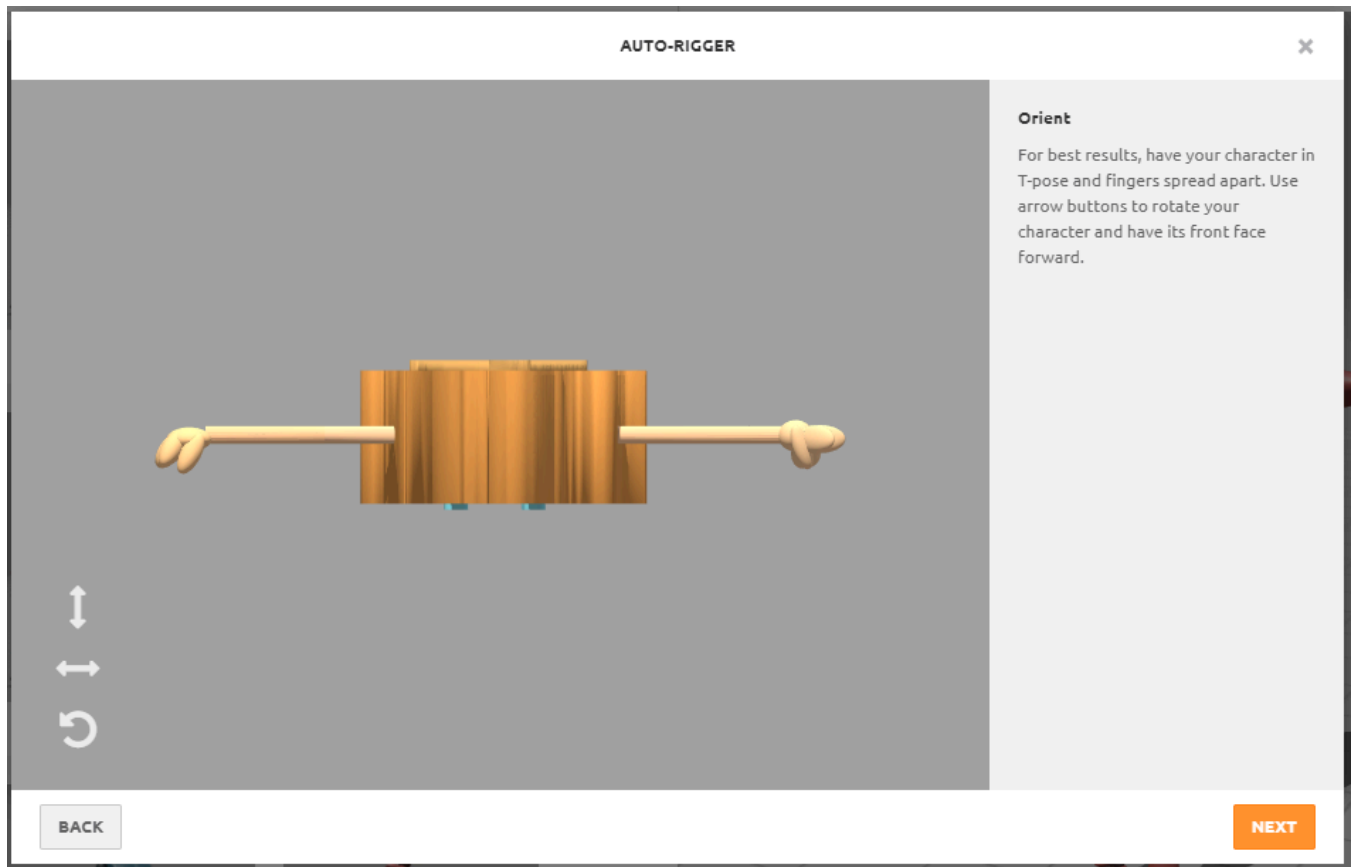




1. We're going to use **Mixamo** to **rig** our models. Rigging is the process of giving your model a "skeleton" with digital joints and bones that allow it to be animated. Animators often build custom rigs for their characters, but Mixamo has a nice basic rig that can work for any model with two legs and two arms.

(Unity calls this a 'humanoid' rig - but not all humans have two arms and two legs, and not all things with two arm and two legs are human, so it's not the best term, really...)

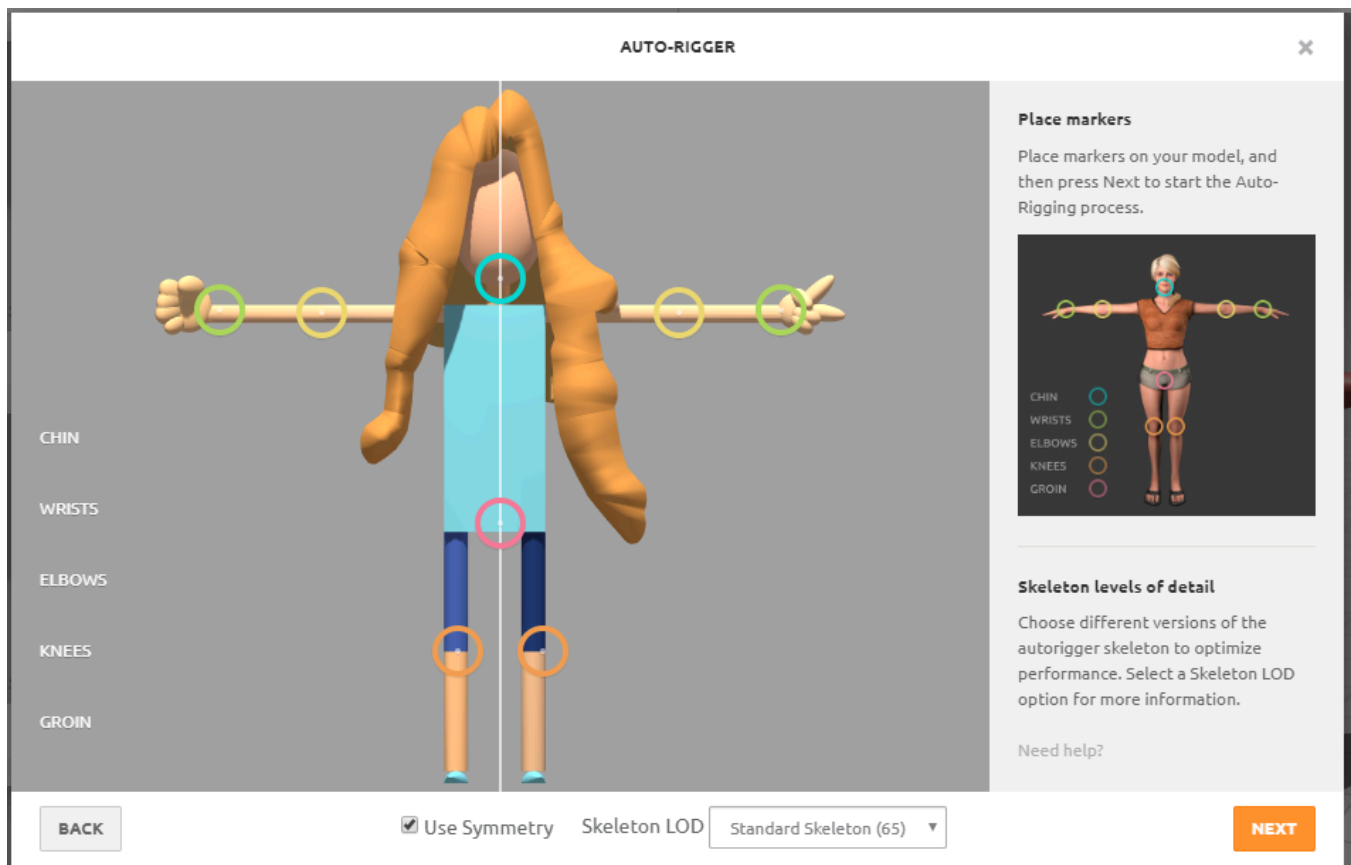
Click on the "Upload Character" () button, and either

select or drop your .ZIP file in. It will process your model, and you'll see a window like this:




2. If your model is not facing you, use the rotation buttons in the lower left to make your character stand **upright, facing toward you**. Then click “next” ().
3. Drag the joints onto the appropriate parts of your model. Then click “next” ().

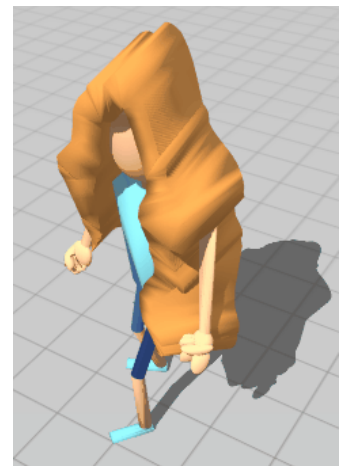


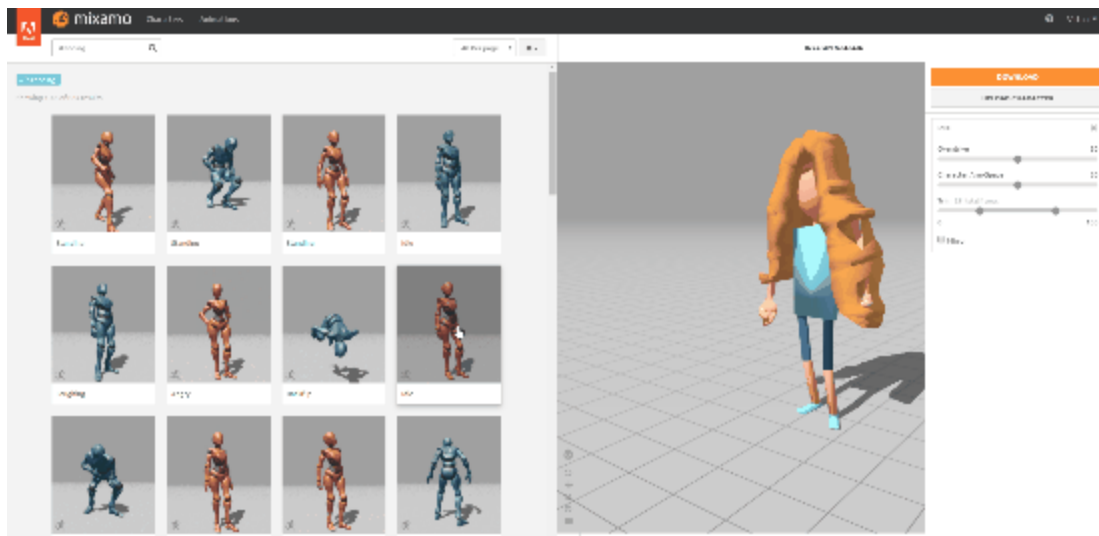


It will work for a few moments applying the rig to your character. Be patient!

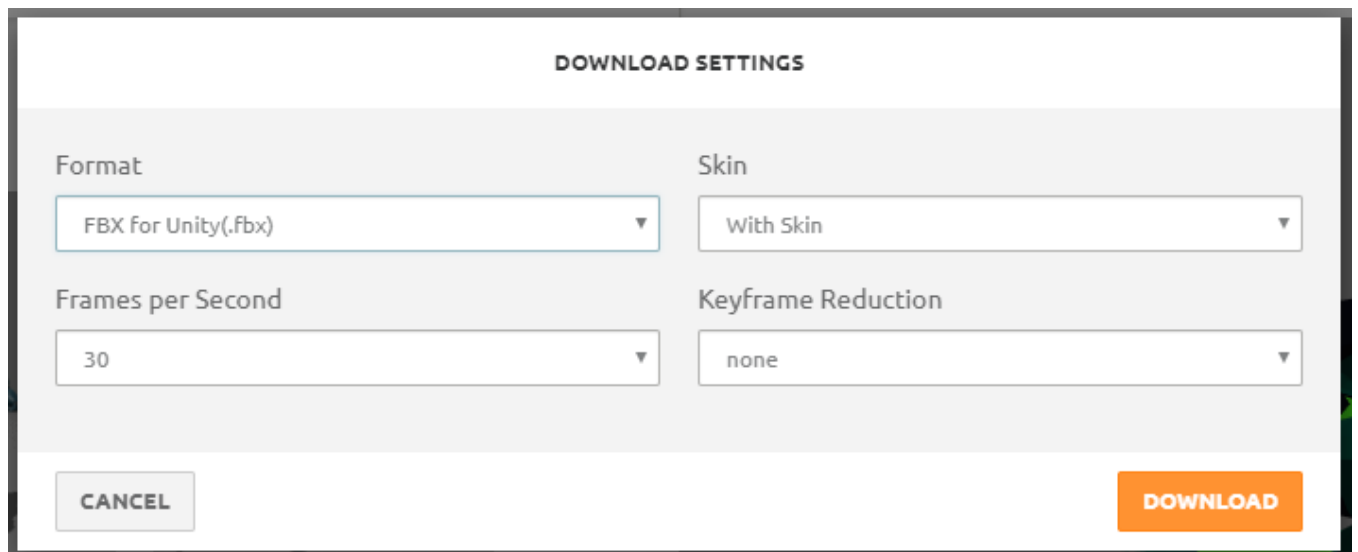
When it's done, you'll see your character looking around. Click "next" ().

- Now, you can search through the available animations for the looping animation your NPC will use. Depending on the character, this could be a simple idle standing animation, or it could be twerking, backflips, and cartwheels. Choose the animation you want for your character.

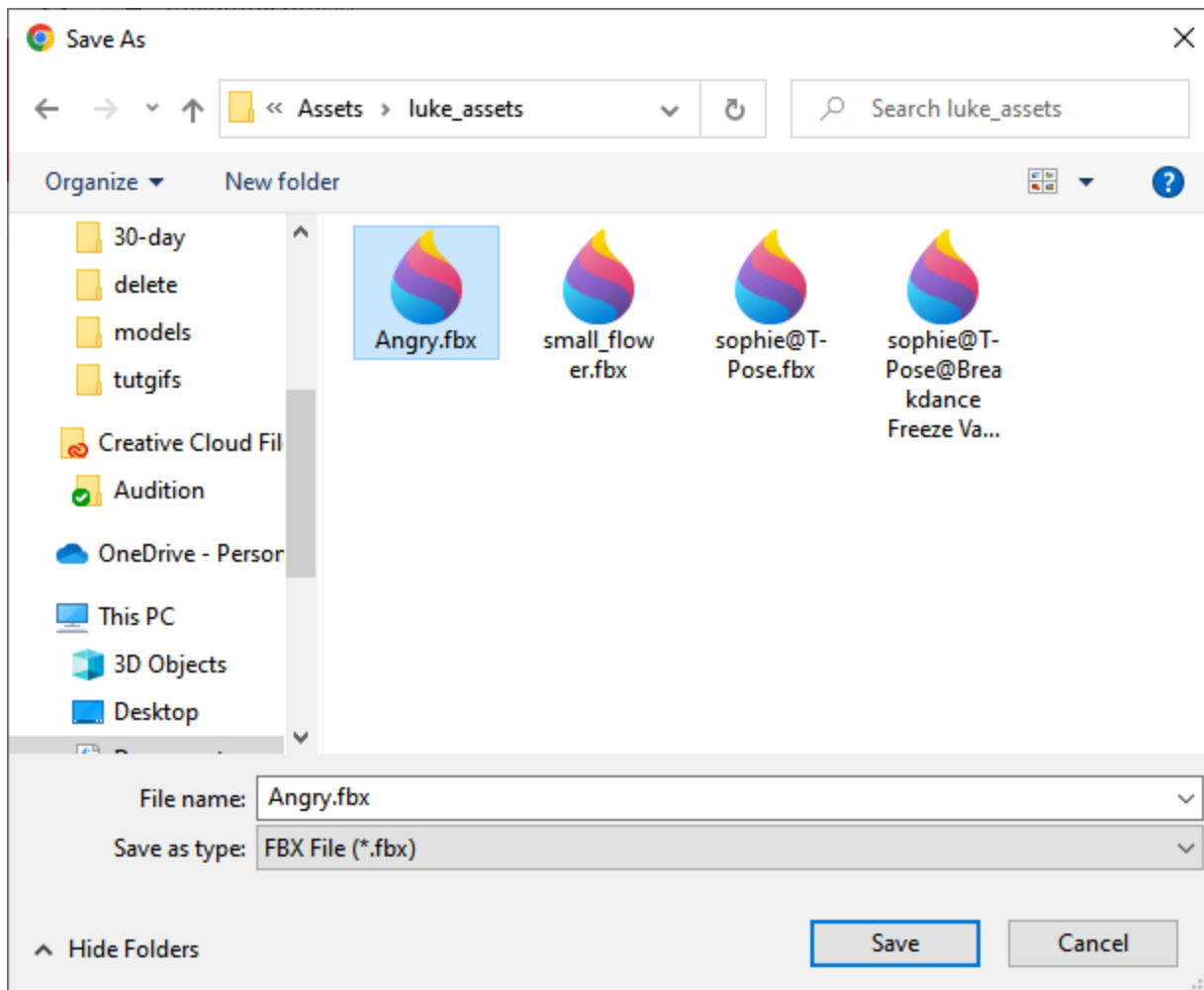




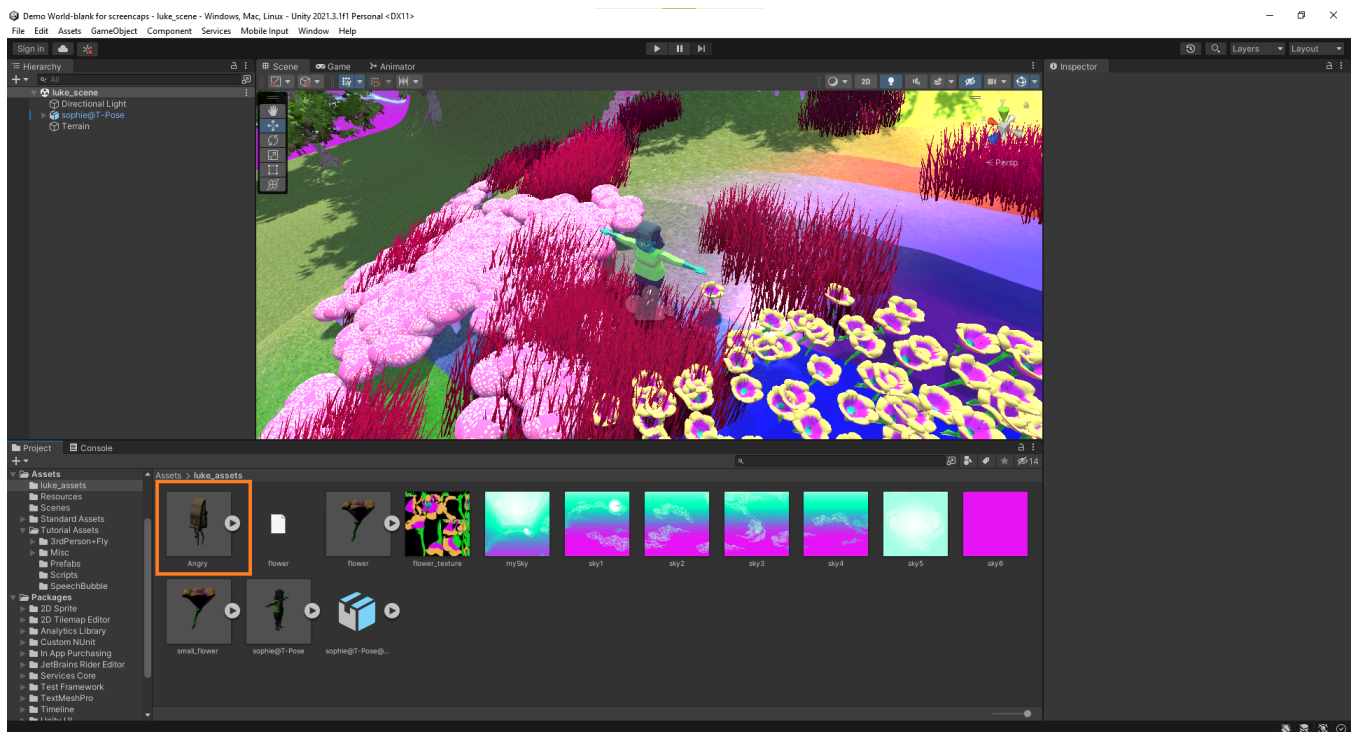
5. Now, click the “download” button (). You’ll see this window:




6. **Make sure the “Format” box says “FBX for Unity(.fbx)” and the “Skin” box says “With Skin,”** and then click “Download.” Save your .FBX file right into your Assets folder of your unity project (I like to make my own folder called “luke_assets” to separate the things I made from the tutorial models and assets).

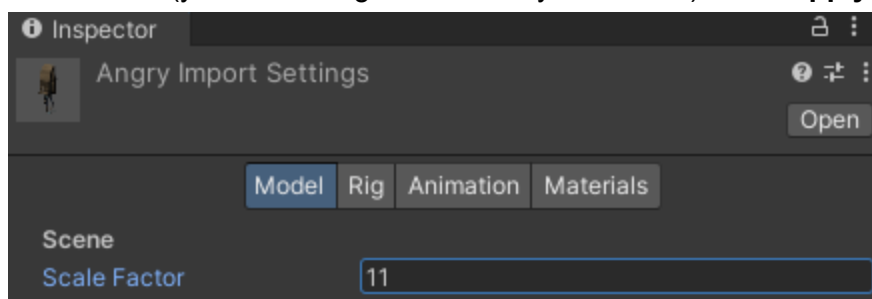


7. Now, open up your project in Unity, and go to the scene that has our demo character standing in it. In the Assets pane, go to the folder where you just saved your new rigged model.

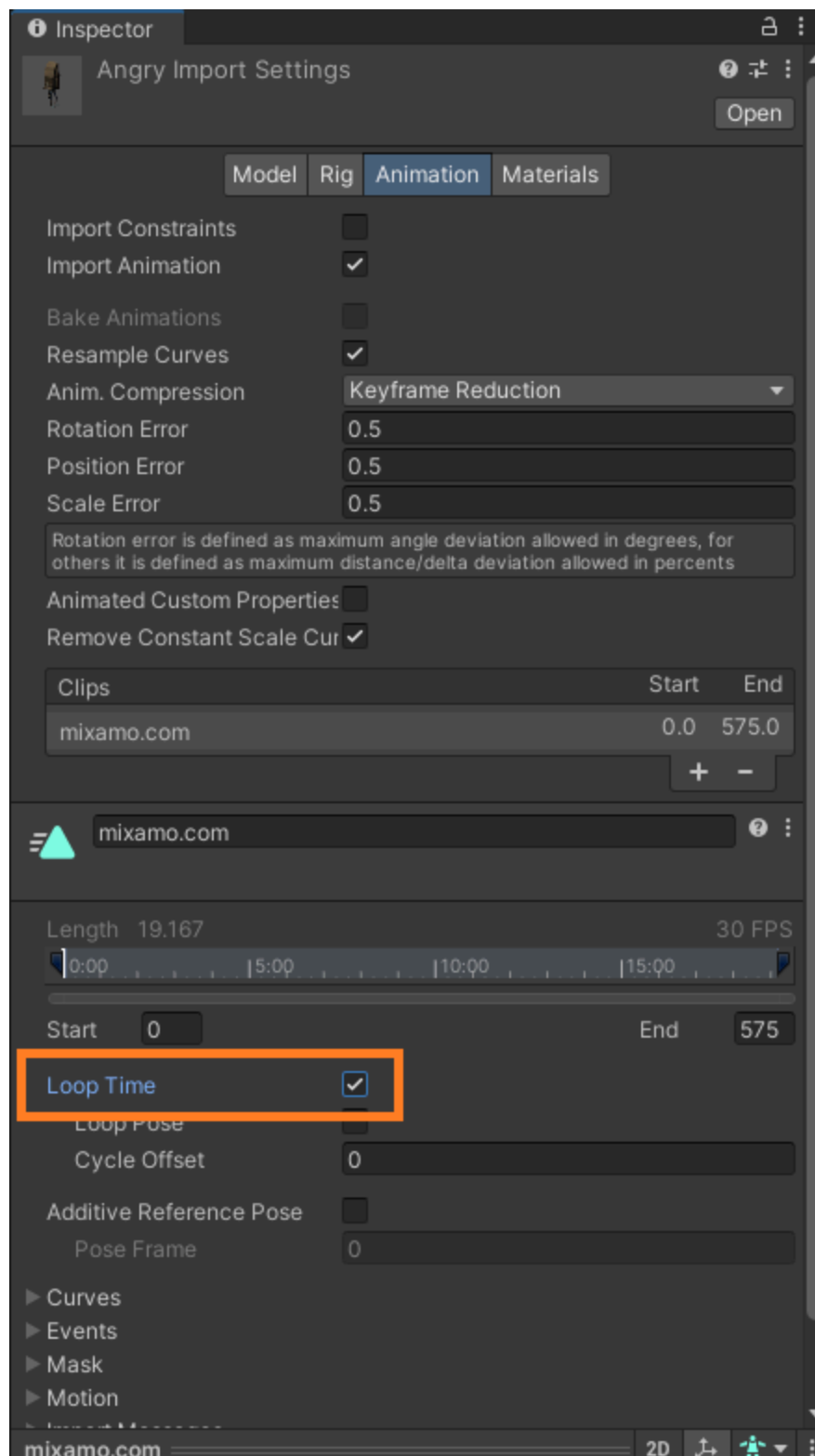


8. Click on the model to select it (), and the Inspector pane on the right will change to be about your model. There are a few things we need to tweak here.

Click on the **'Model'** button. Set the **scale factor** to **11**. Otherwise, our model will probably be too small (you can change this later if you need to). Click **Apply**.




Now, click on the **'Animation'** button. Then check the box for **'Loop Time.'** This will make our NPC loop their idle animation. Click **'Apply.'**

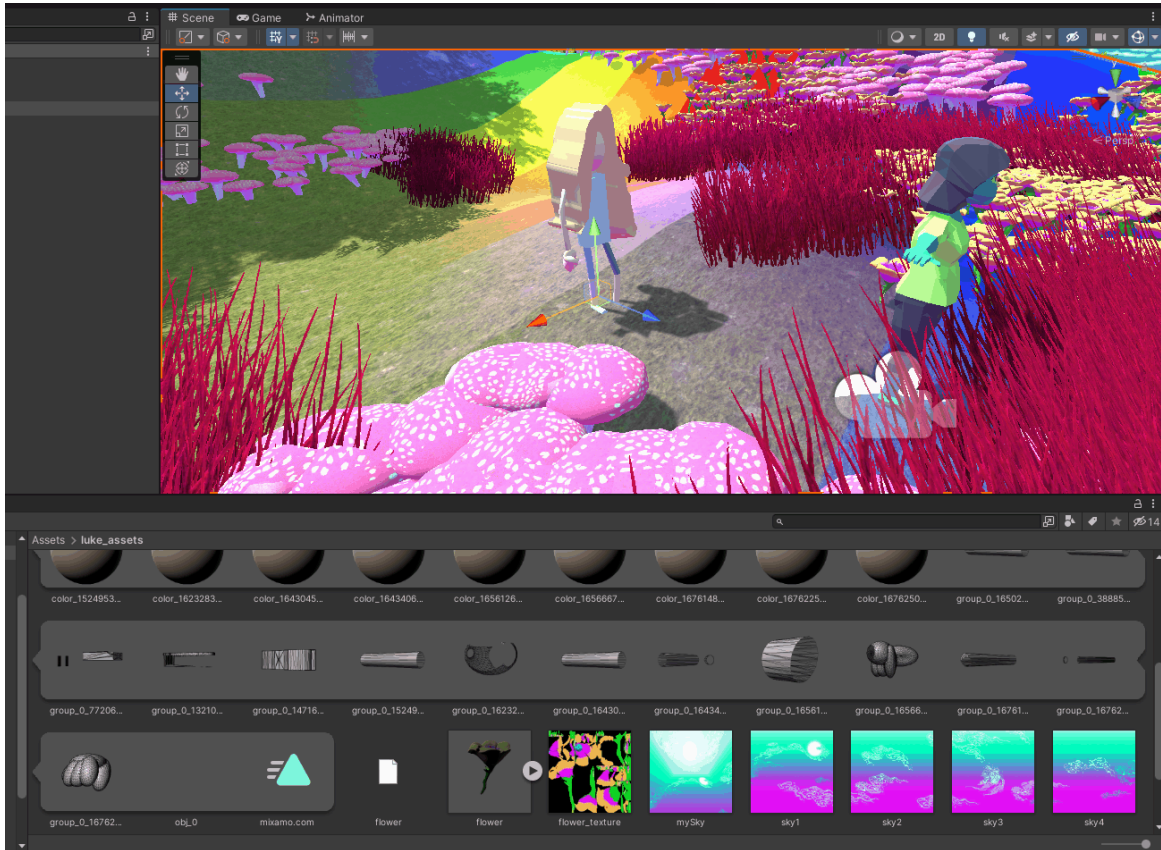


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- The screenshot displays the Unity 2020.3.10f1 development environment. The top toolbar includes tabs for Hierarchy, Scene, Game, and Animator. The main viewport shows a 3D scene with a character in a green shirt and dark pants standing in a field of tall red grass. The ground is covered with various flowers, including purple and yellow ones. In the background, there are rolling hills with a rainbow-like color gradient. The bottom panel shows the 'Assets' window with a search bar and a list of assets under the 'luke_assets' folder. The assets include 'Angry', 'flower', 'flower_texture', 'mySky', 'sky1', 'sky2', 'sky3', 'sky4', 'sky5', 'sky6', 'small_flower', 'sophie@T-Pose', and 'sophie@T-Pose@...'.

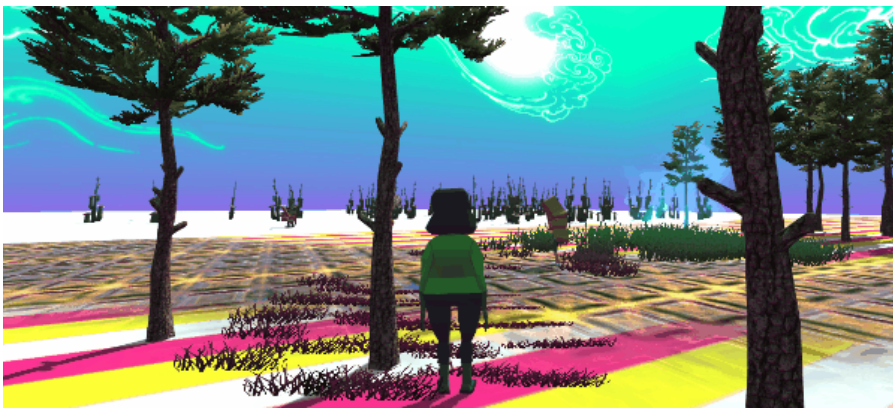
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11. Now, drag the icon for the animation () onto your model (or onto its name in the Hierarchy, if that's easier). This will attach the animation to your NPC. (Note: Make sure your NPC is not selected in the scene - click on something else if they are highlighted.)



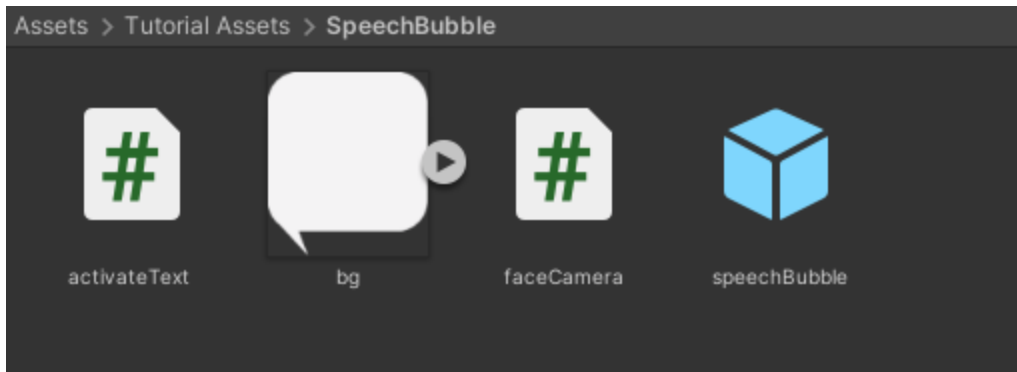
12. Now, if you **play your game**, and walk up to your NPC, you should see them doing their idle animation!




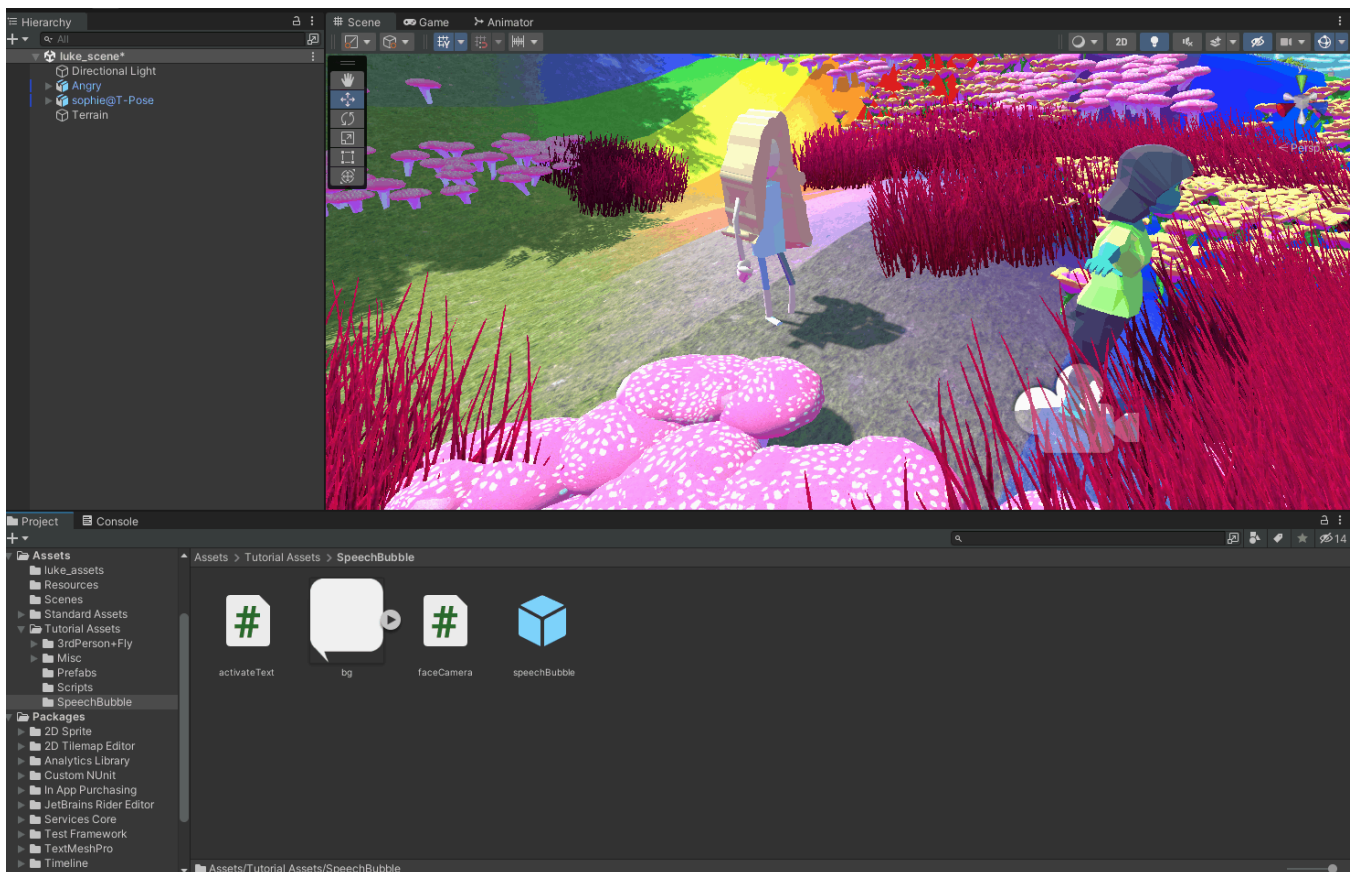
Now to add our voice bubble to our NPC (check the next page).


Adding a Voice Bubble to Your NPC (or anything else!)

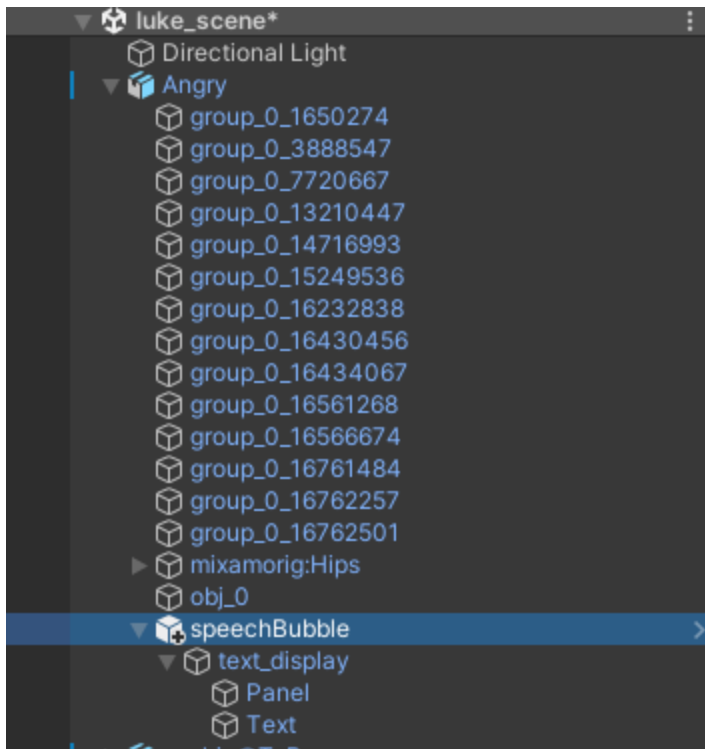
1. In the Assets window, go to **Assets > Tutorial Assets > SpeechBubble**



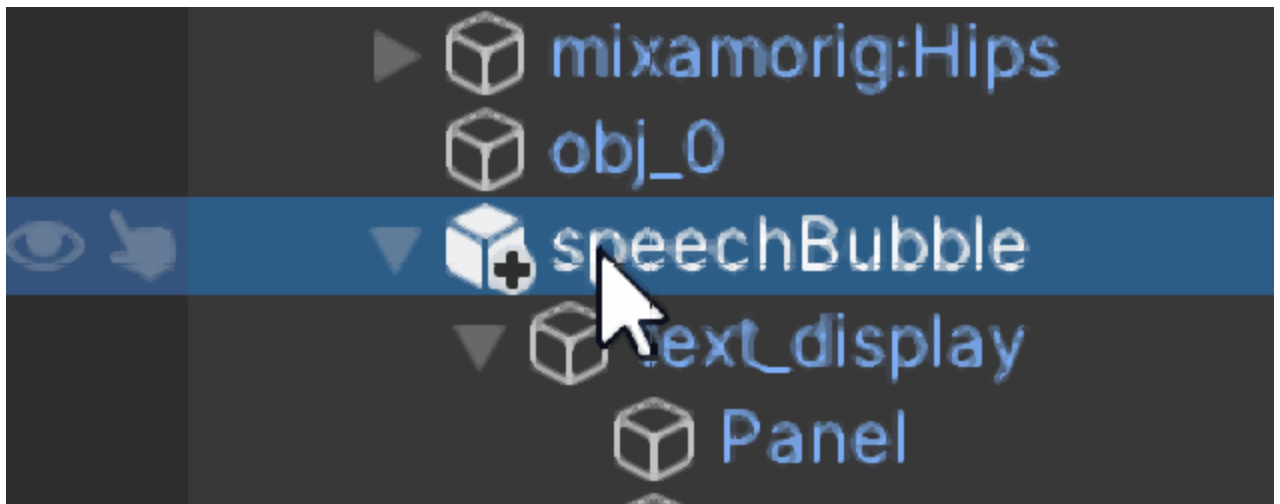
2. Drag the **speechBubble prefab** () onto your NPC's name in the Hierarchy:

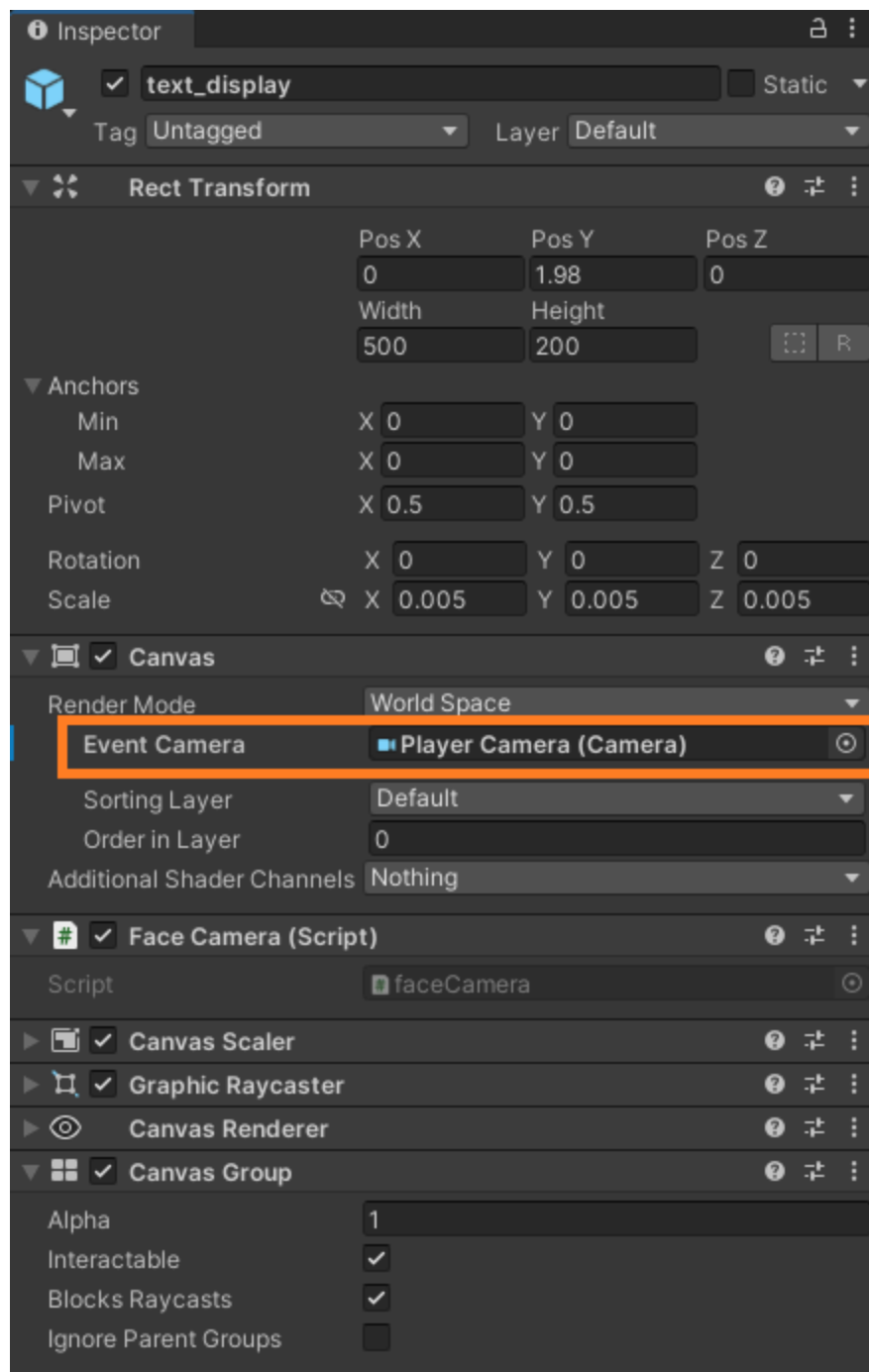


3. Now we're going to customize our text box. In the Hierarchy window, click on the little triangle () next to your NPC and the speechBubble to unfold them, so you can see this:

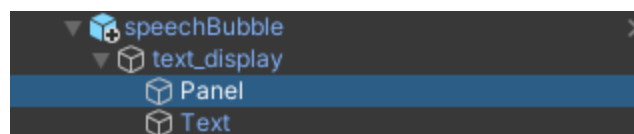


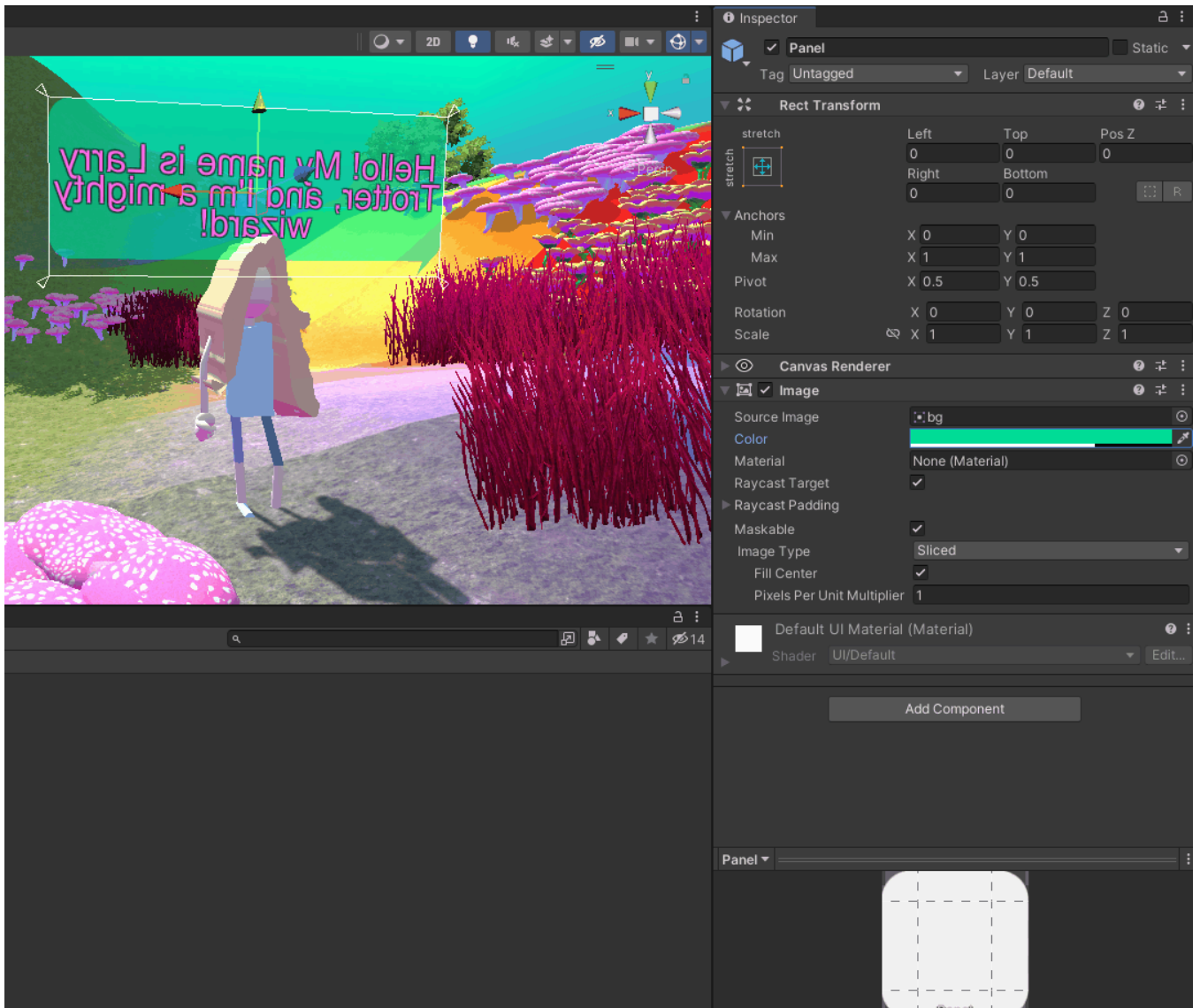
4. Now, click on '**text_display**.' Since the speech bubble will always turn to face the camera, we need to tell it what camera to interact with. Drag our player's **Player Camera** into the '**Event Camera**' box in the Inspector on the right.



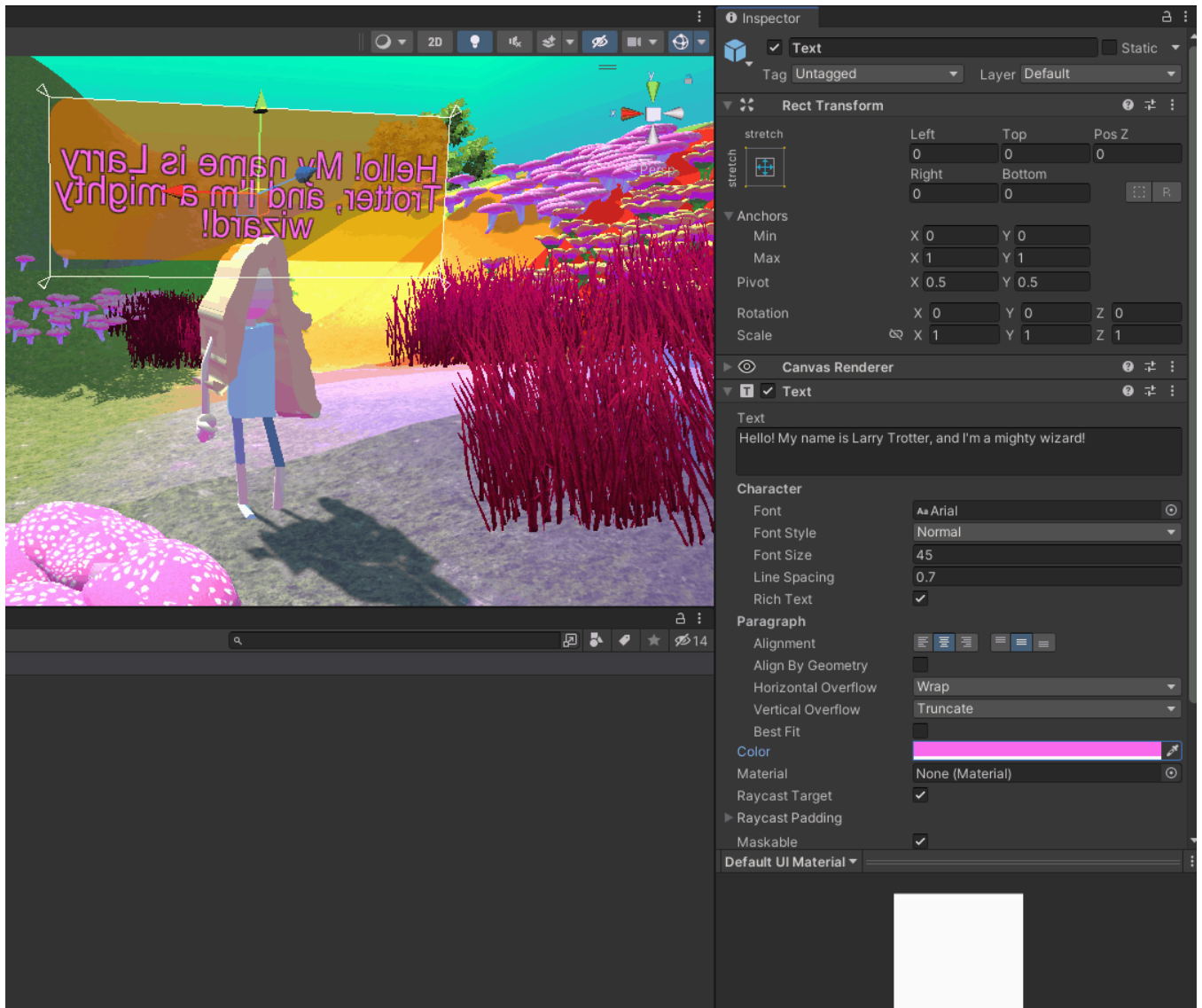


- Now, if you click on '**Panel**' in the Hierarchy, you can pick the color for your bubble in the inspector.





- Now, click on **Text** in the Hierarchy, and customize the color and content of the text. You can also adjust the font size, if you need to.



- Now, press play, and test out your new talking NPC!