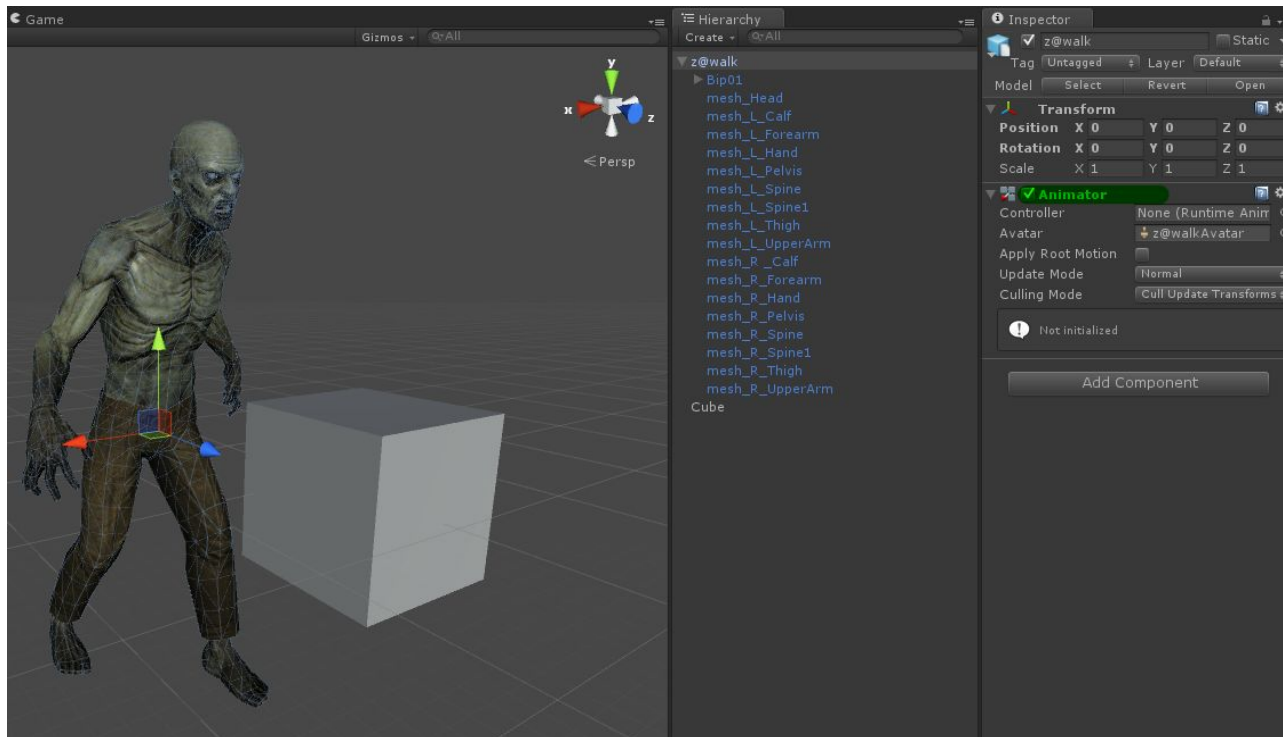


How to add new zombie

This tutorial will show you how to add animated model as new zombie character for **Unitz 2.2**.

This sample needs a character model with animations **Walk** ,**Idle** ,**Attack** (at least 3 animations)

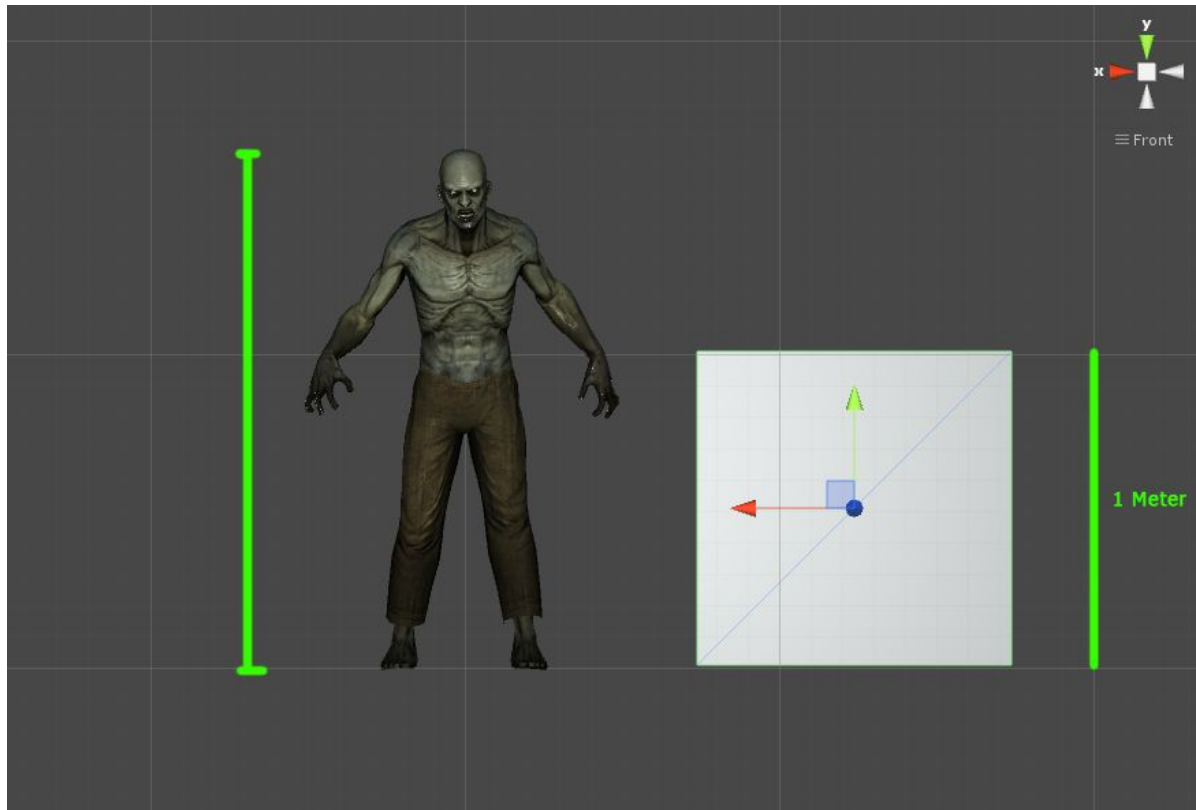
Step 1. Import a character to your project and place it into the scene.



Files > New Scene and place a character model into the scene set position to **0,0,0** make sure everything is cleared and an **Animator** component must included in the model.

Preparing 1. Character Scales

When you place a character into the scene, please check a scales, just make sure it look correctly.

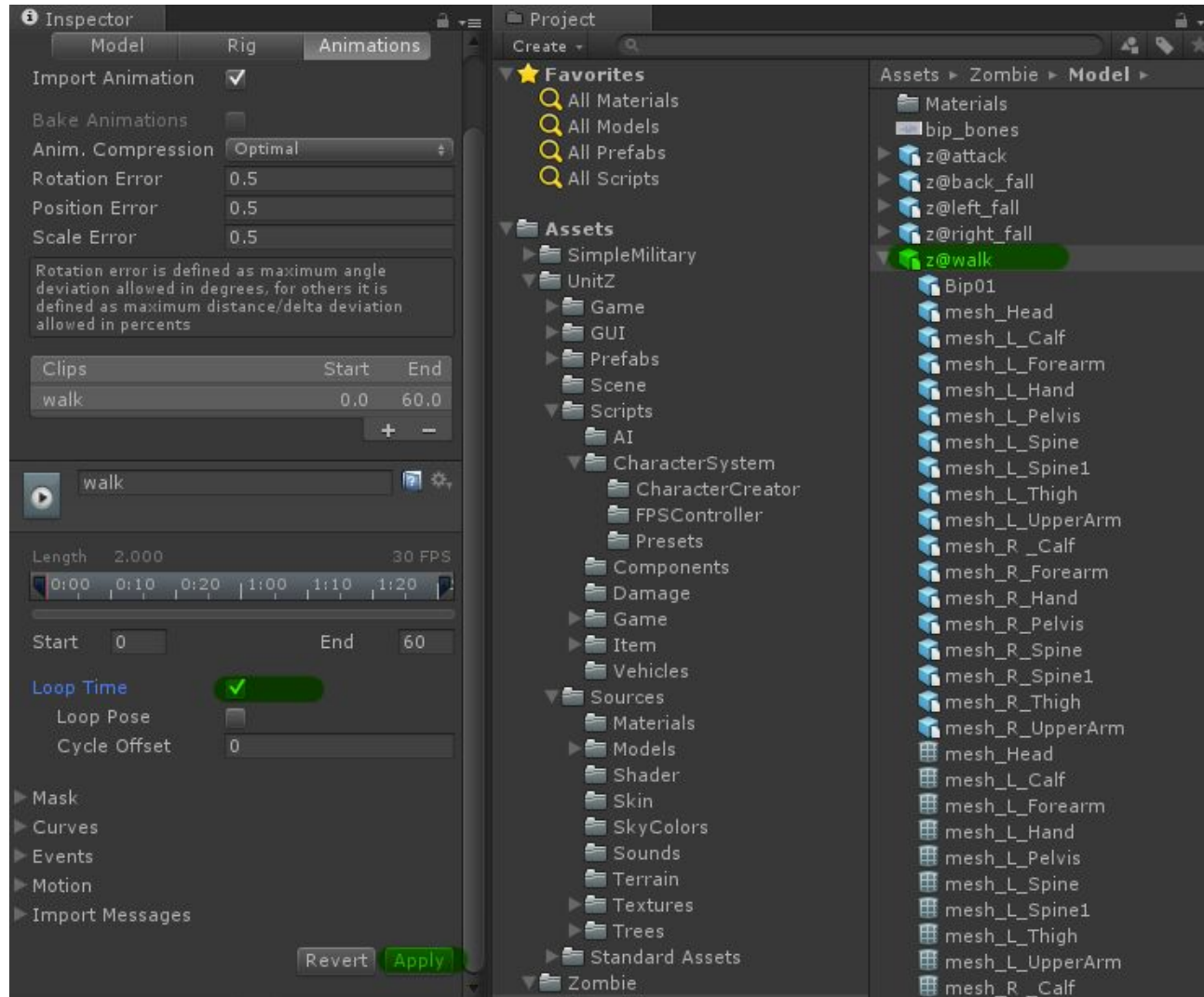


Note *

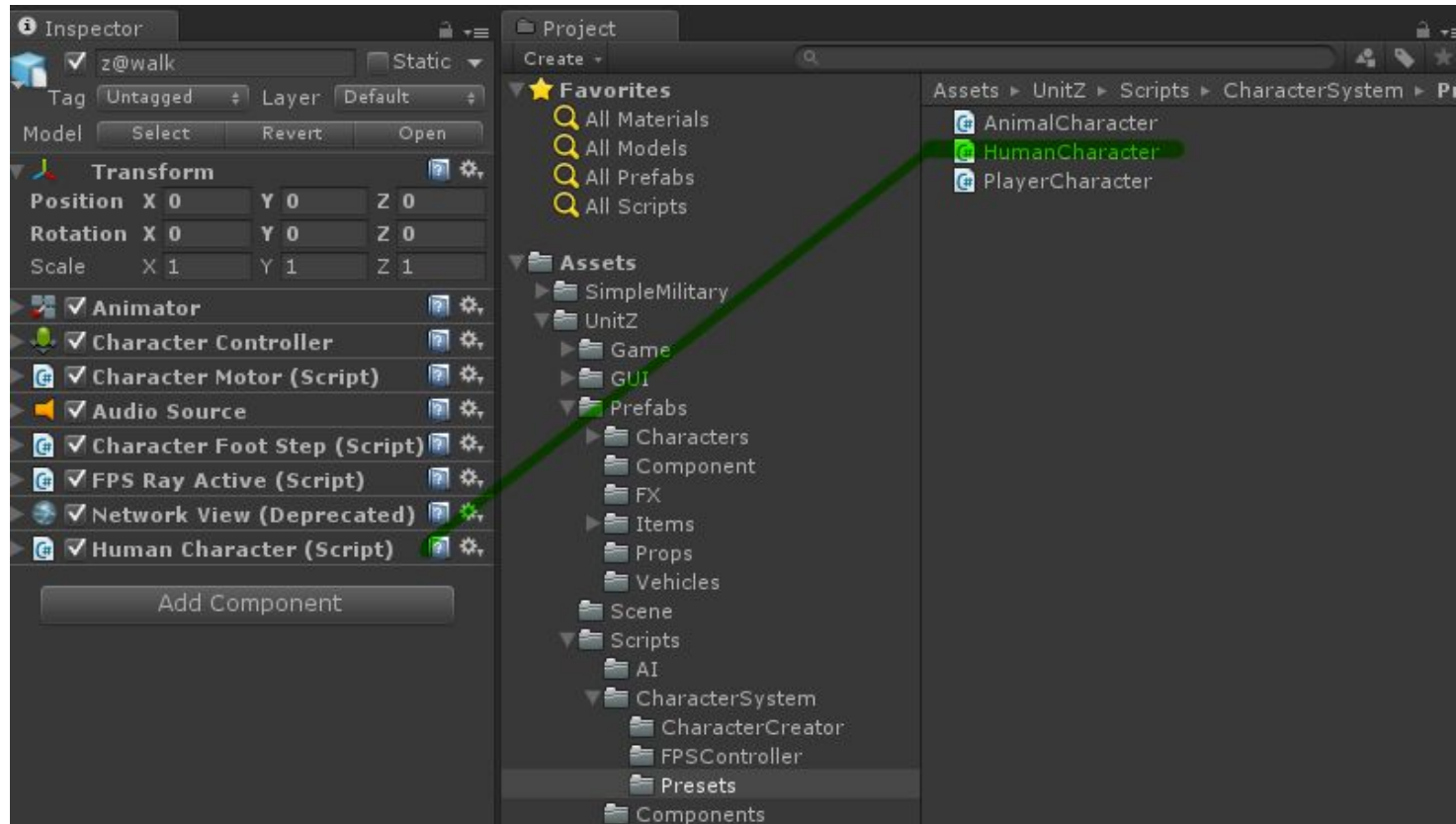
Basically a good characters or props must come with a properly scales. however you can check and compare a character model with a “**Cube**” the cube is 1x1x1 meter, please create a cube for comparing by **GameObject > 3D Object > Cube** so a character scales must look like in the picture. (it's about 180 tall as standard)

All animations like **walk** , **run** , **idle** must set as Loop

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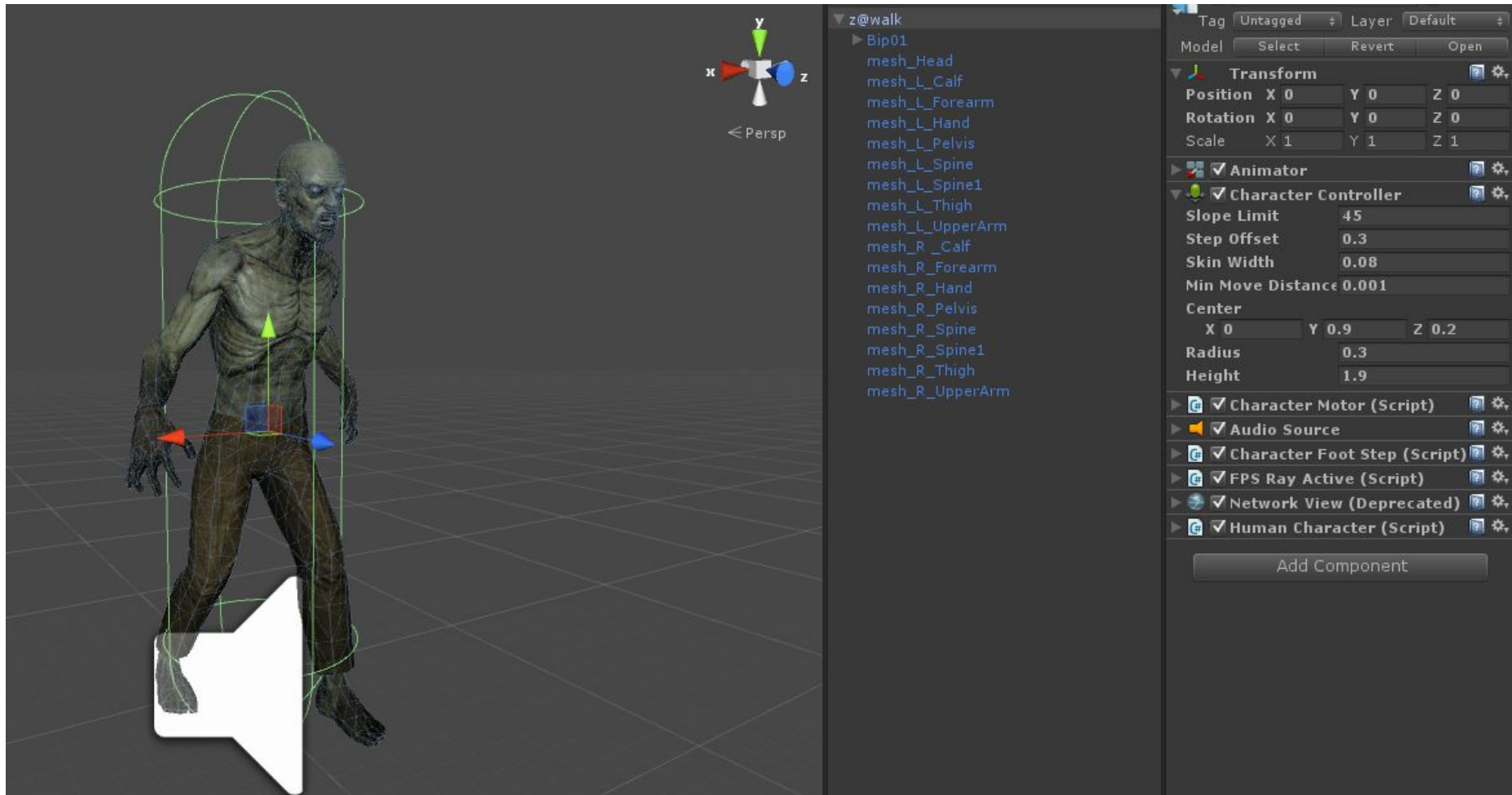


Step 2. Adding a character components into your character.

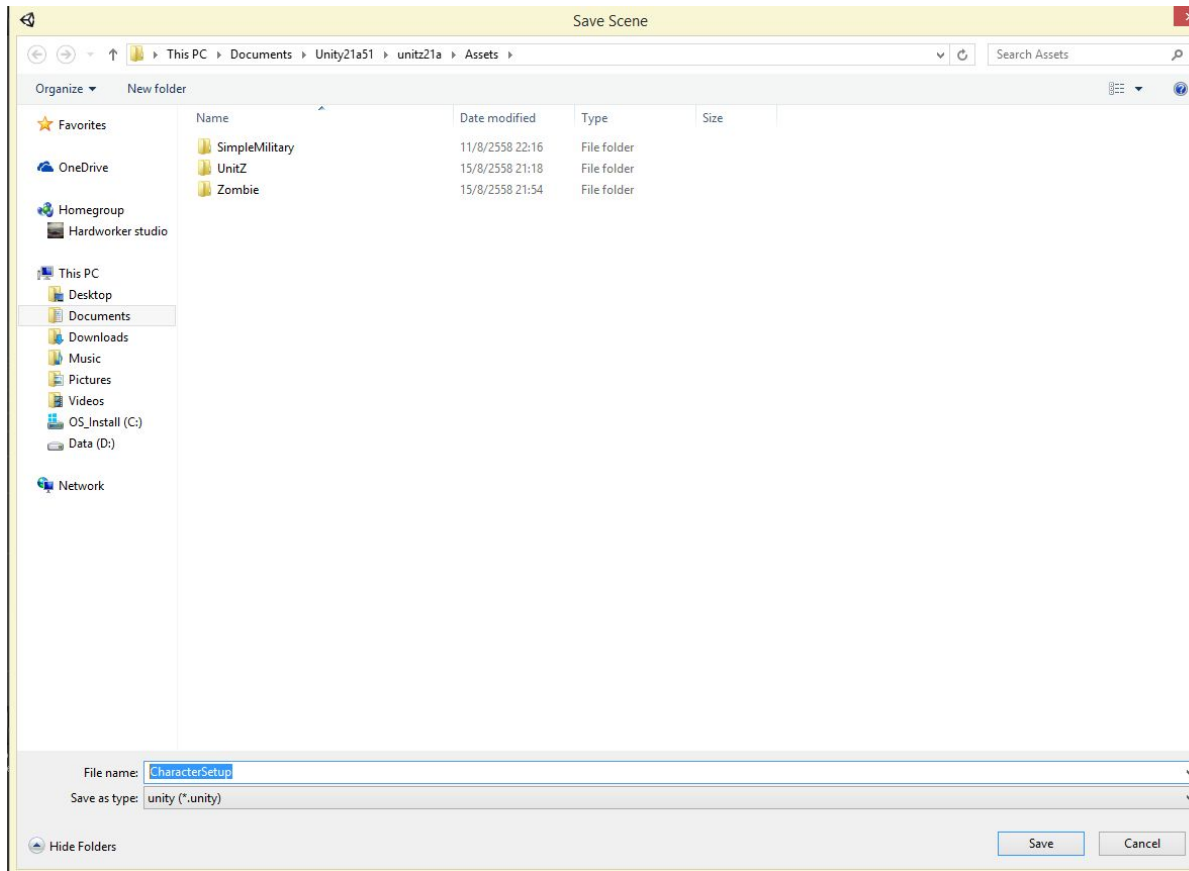


Please Add **HumanCharacter.cs** component into your character
[Assets\UnitZ\Scripts\CharacterSystem\Presets\HumanCharacter.cs](#)

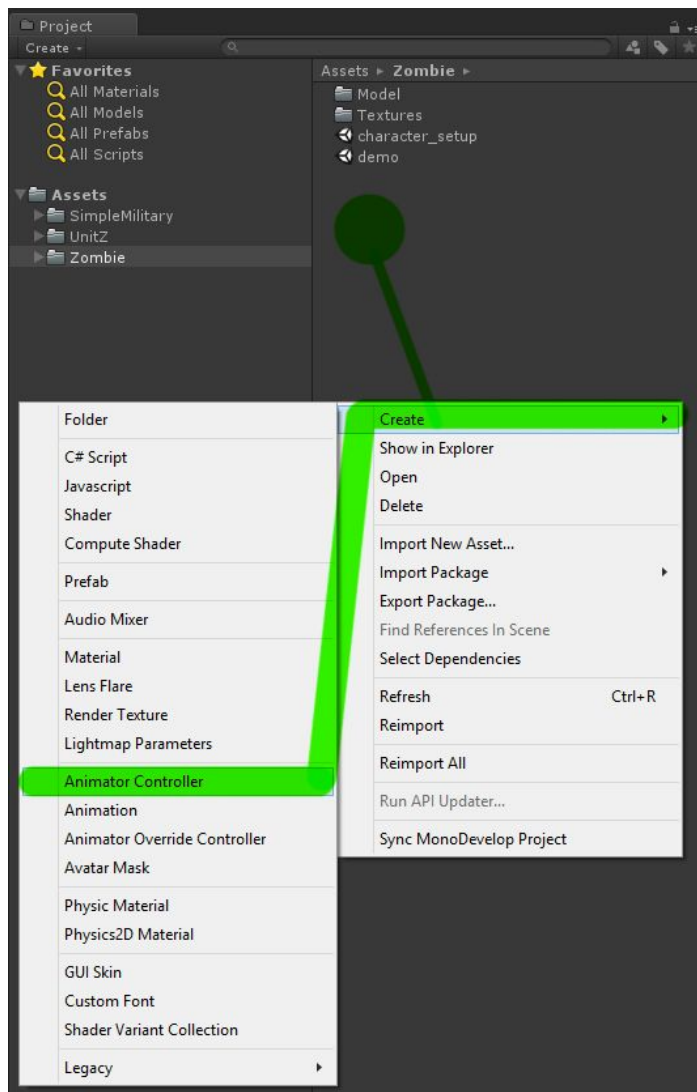
Setup a **Character Controller** size, make sure it look fit perfectly.



Step 3. Save scene named “**zombie_setup**” so we will working on this scene until this character is ready to use in game.



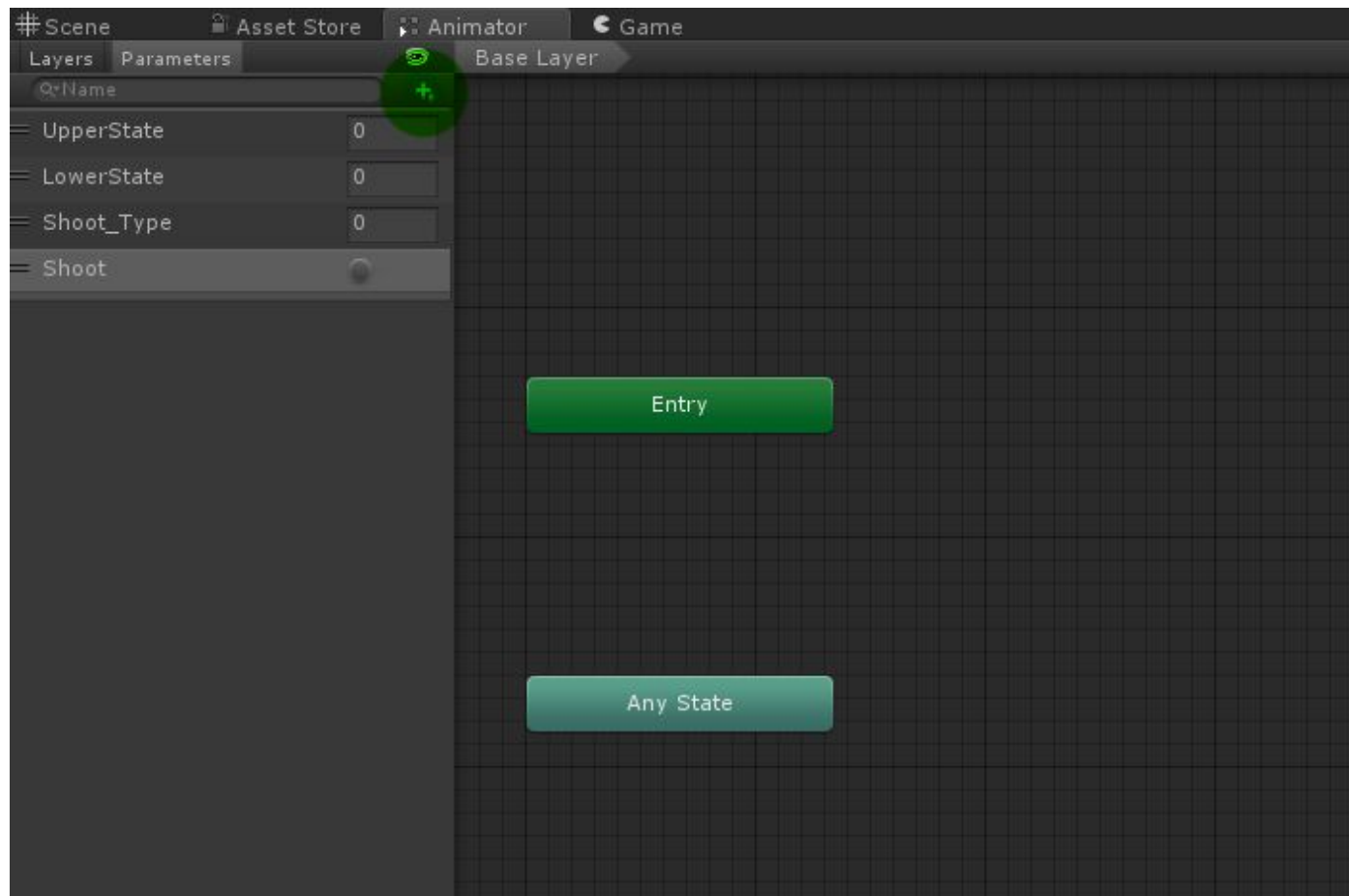
Note * You should save a “**zombie_setup**” to the same place as a character model, one scene per one character so it’s easier to config and managing.



Step 4. Create *Animation Controller*

Right click on a space in a character folder and select **Create > Animation Controller** and named “**ZombieController**”

Open "**ZombieController**" on Animator tab and adding a following parameters, by **Click plus + button** on parameters tab



UpperState : Int

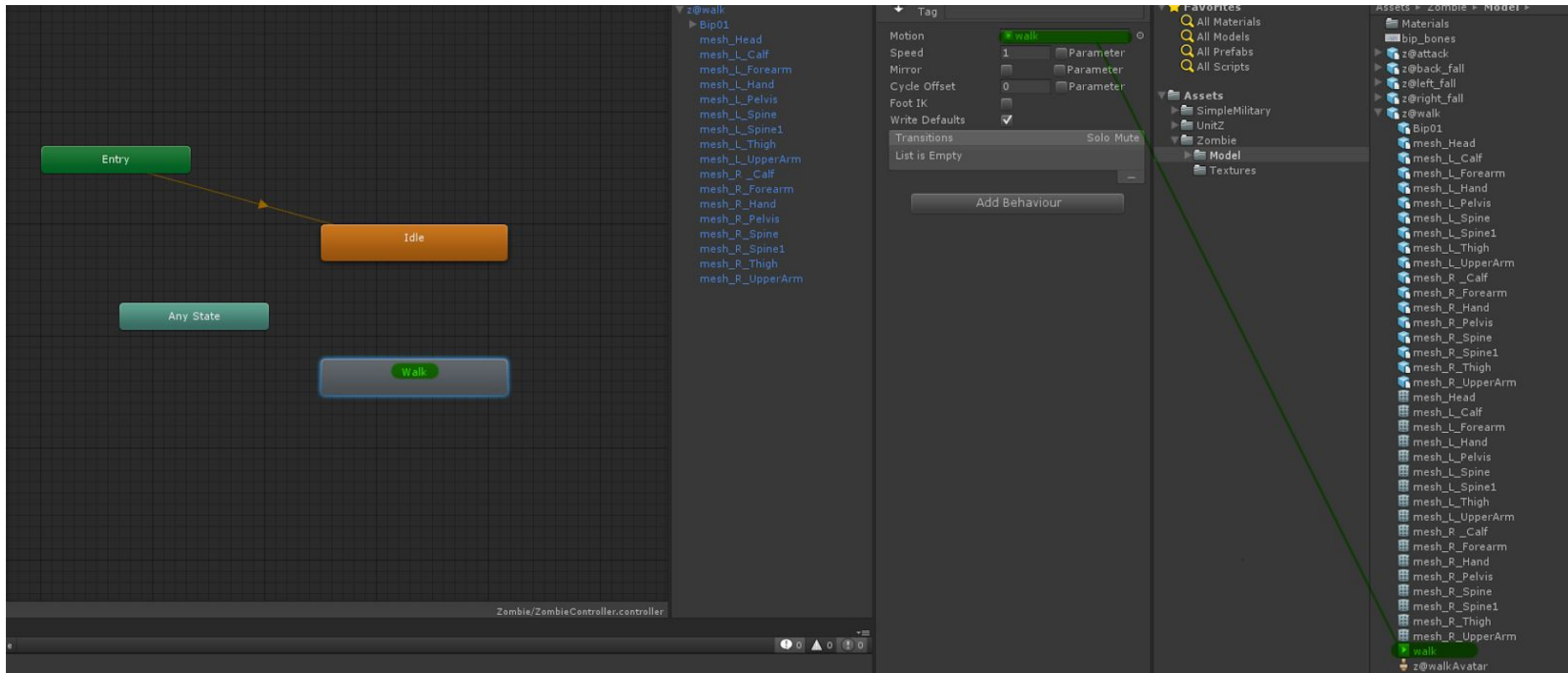
LowerState : Int

Shoot_Type : Int

Shoot : Trigger

Step 4. Adding 2 States into the animator

Idle State and Walk State, by **Right Click** on animator work space and **Create State > Empty**

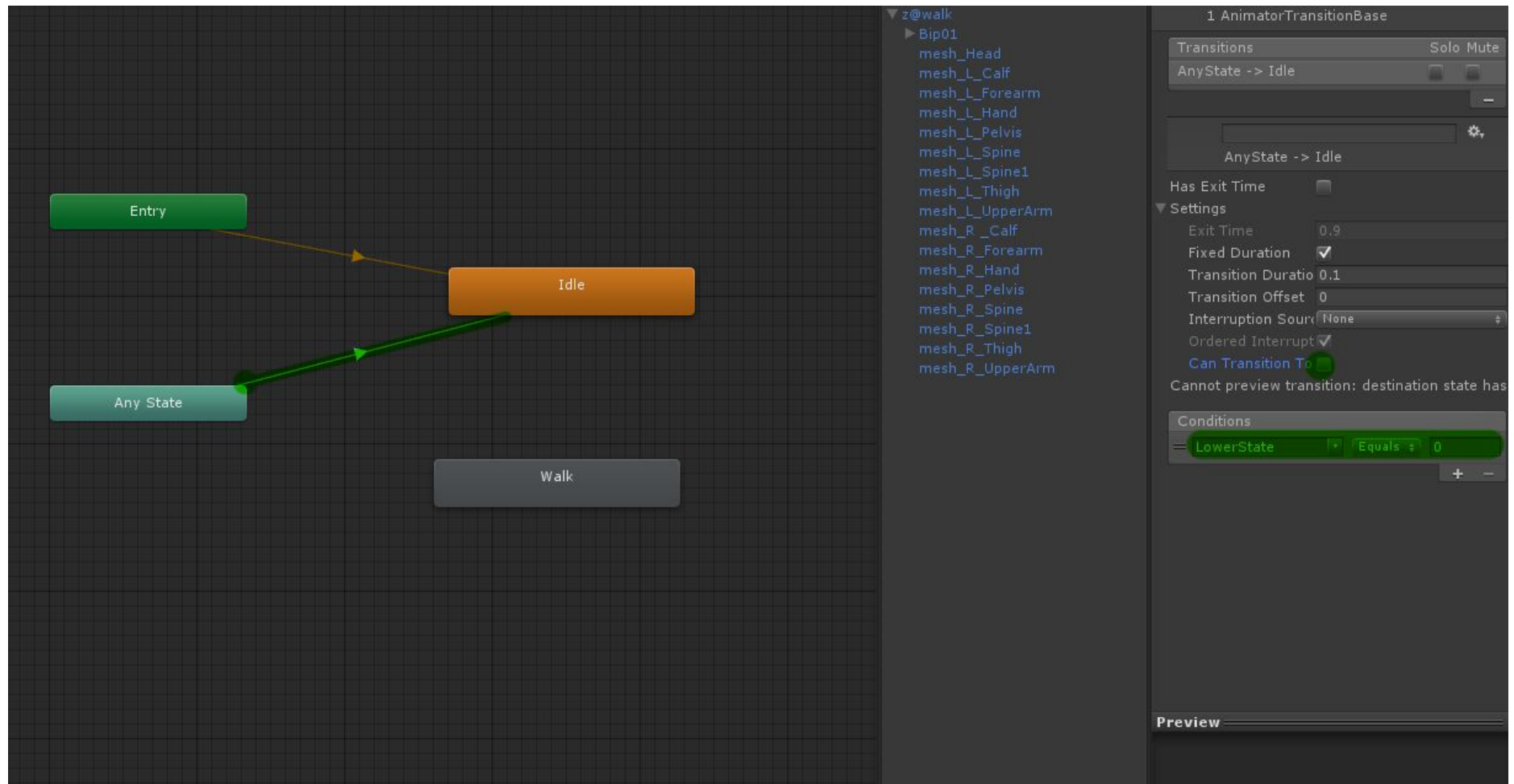


Add **Walk Motion** from a character model into **Motion** parameter on **Walk State**

Add **Idle Motion** from a character model into **Motion** parameter on **Idle State**

Note * you can drag any motion from asset into the animator directly, so it will create a state automatically.

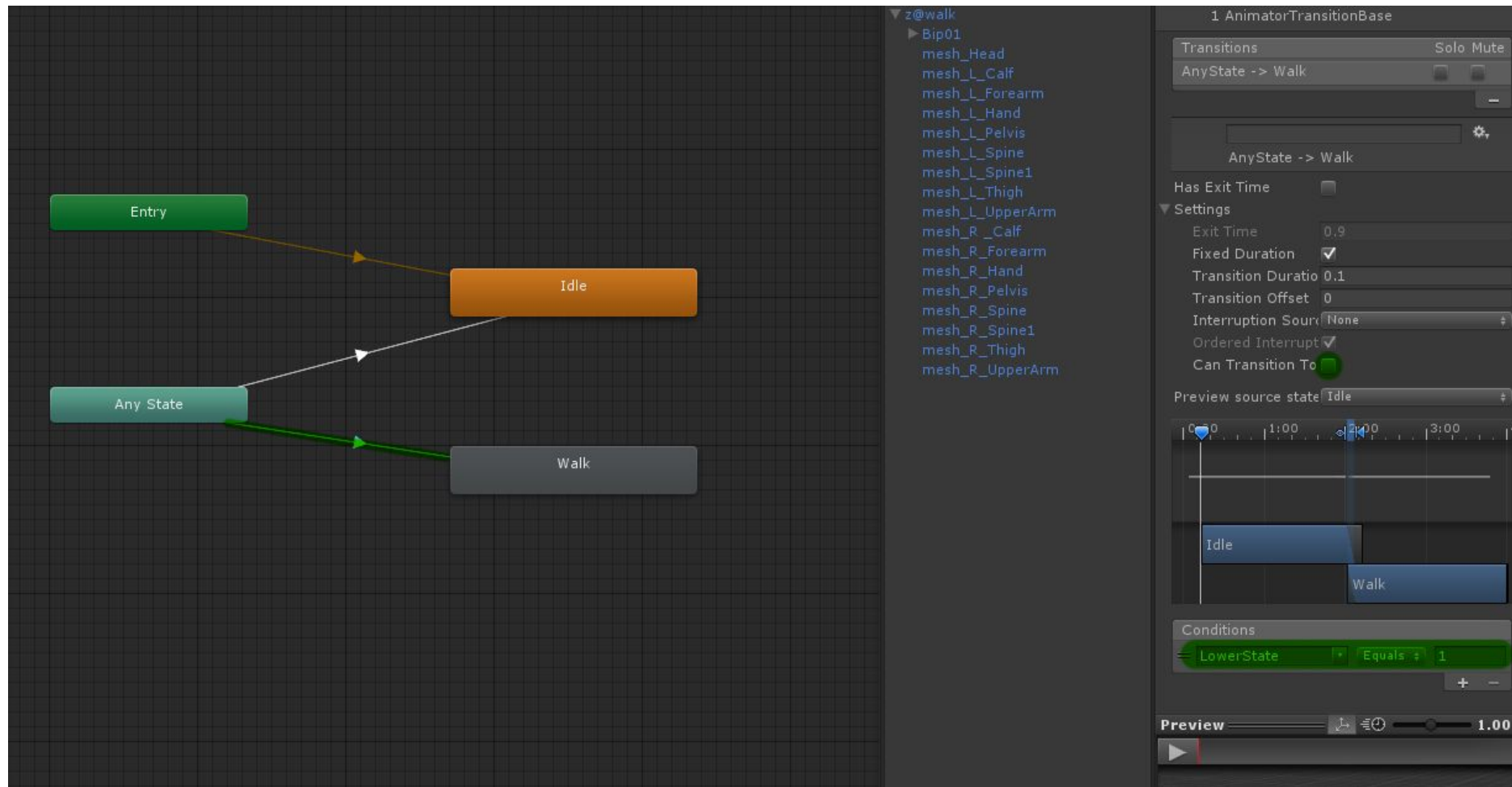
Step 5. Connect Any State to Idle State



Condition : LowerState : Equals : 0

Uncheck Can Transition To Self parameter

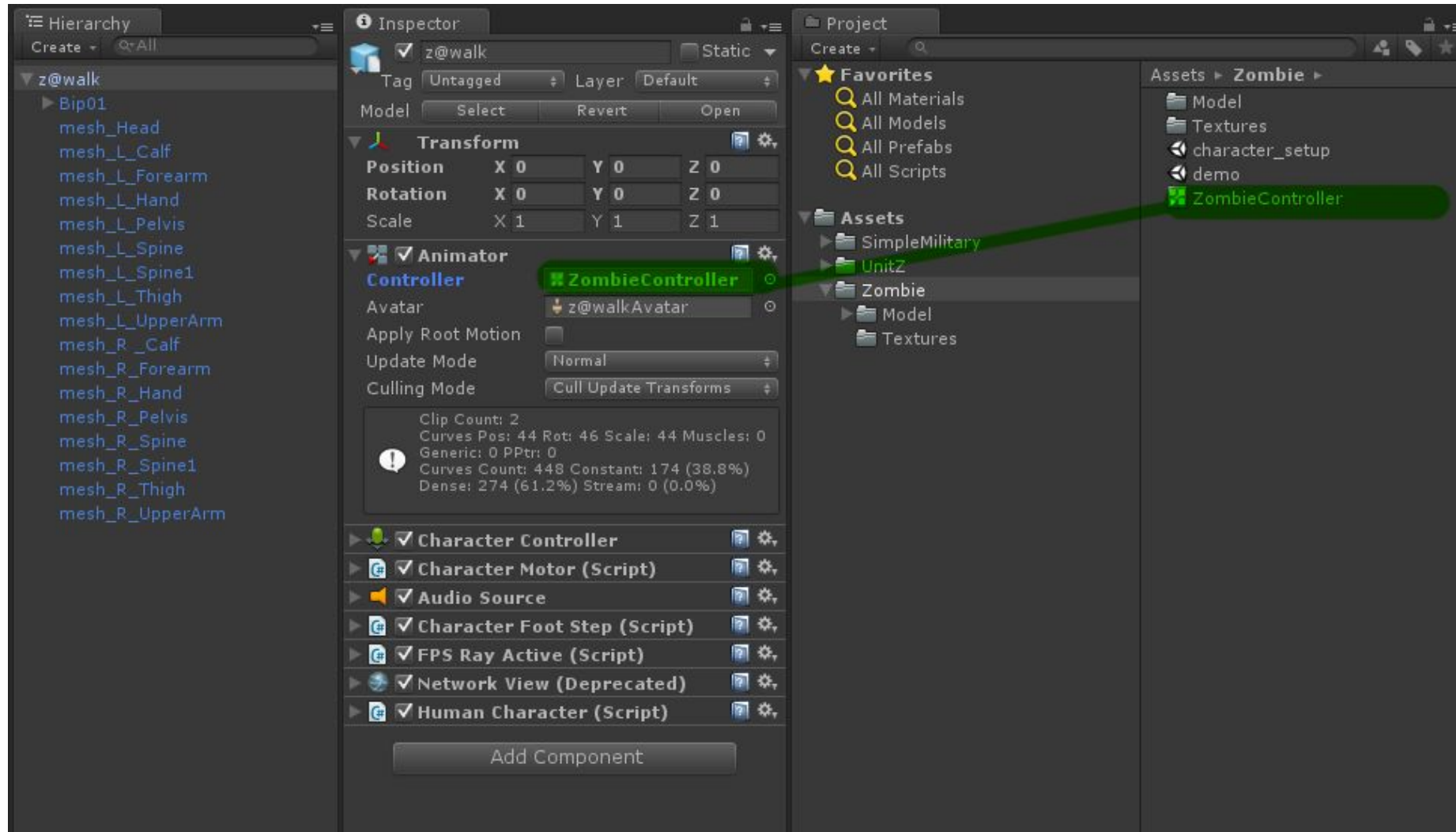
Step 6. Connect Any State to Walk State



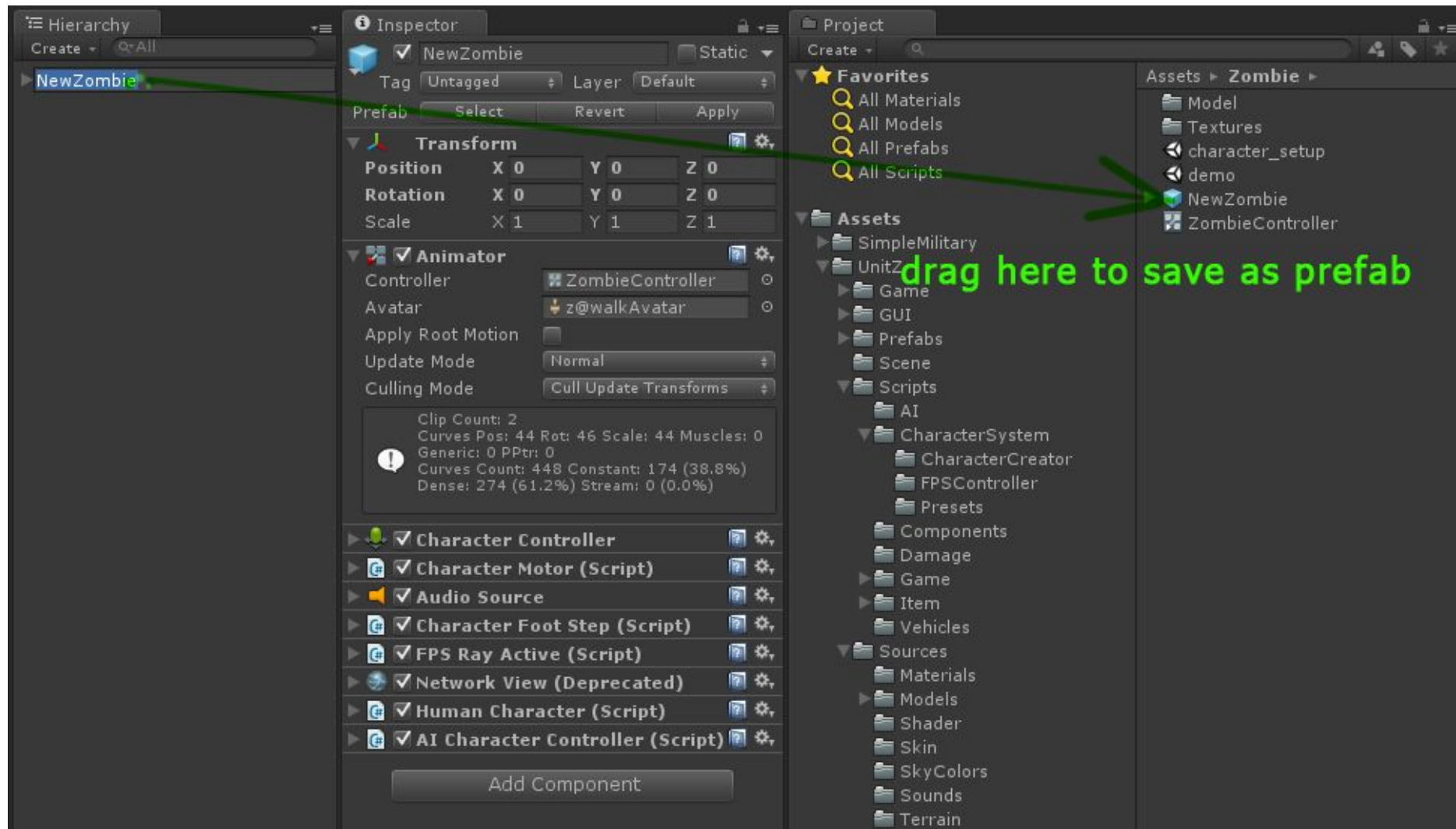
Condition : LowerState : Equals : 1

Uncheck Can Transition To Self parameter

Step 7. Back to a character on scene. add **ZombieController** that's you have done in steps 4 - 6 into **Controller** parameter on **Animator** component.



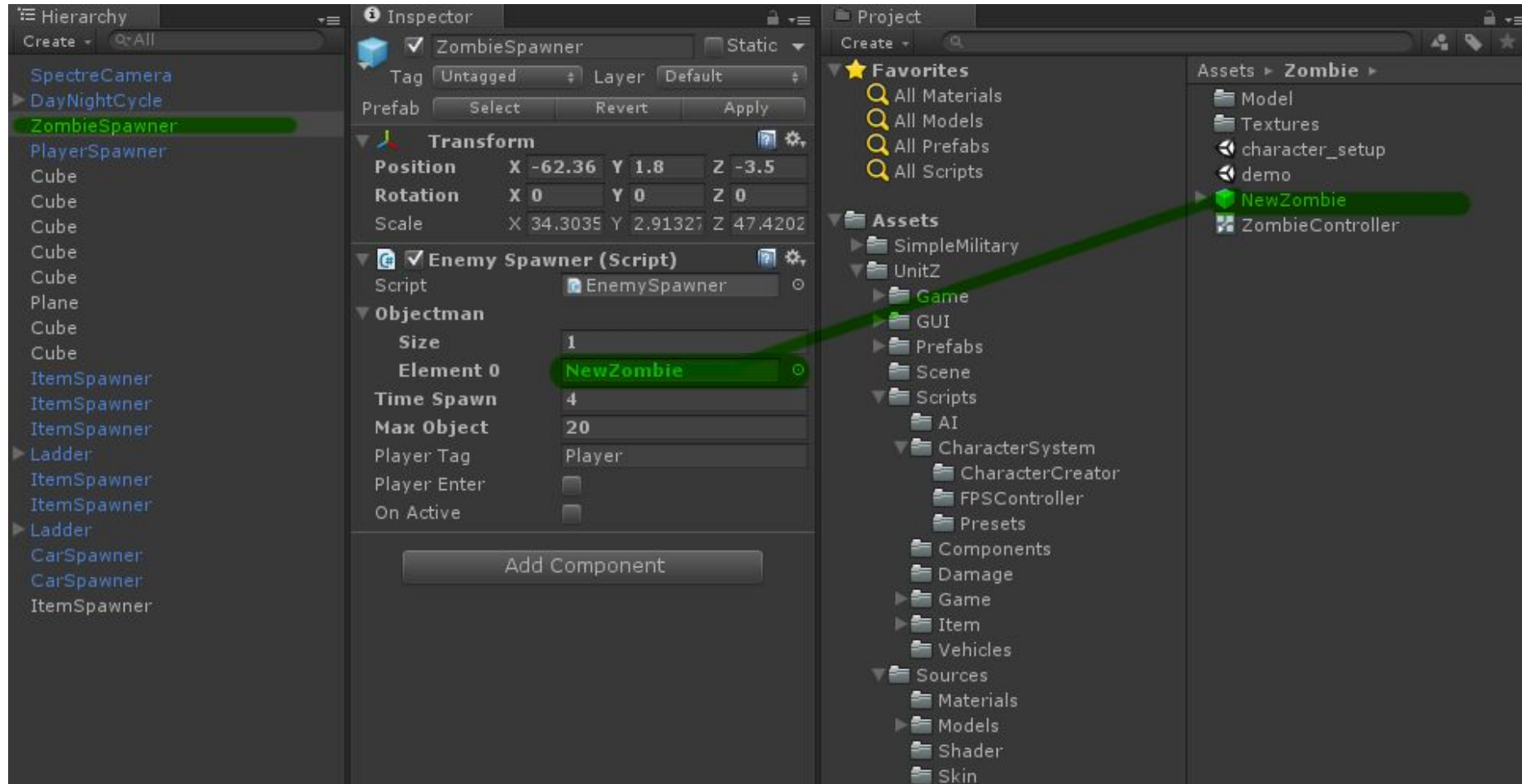
Step 8. Rename character to “**NewZombie**” and save it as a prefab.



you should drag the character (**NewZombie**) into the same folder of model to save it as prefab.

Step 9. Add the character to testing.

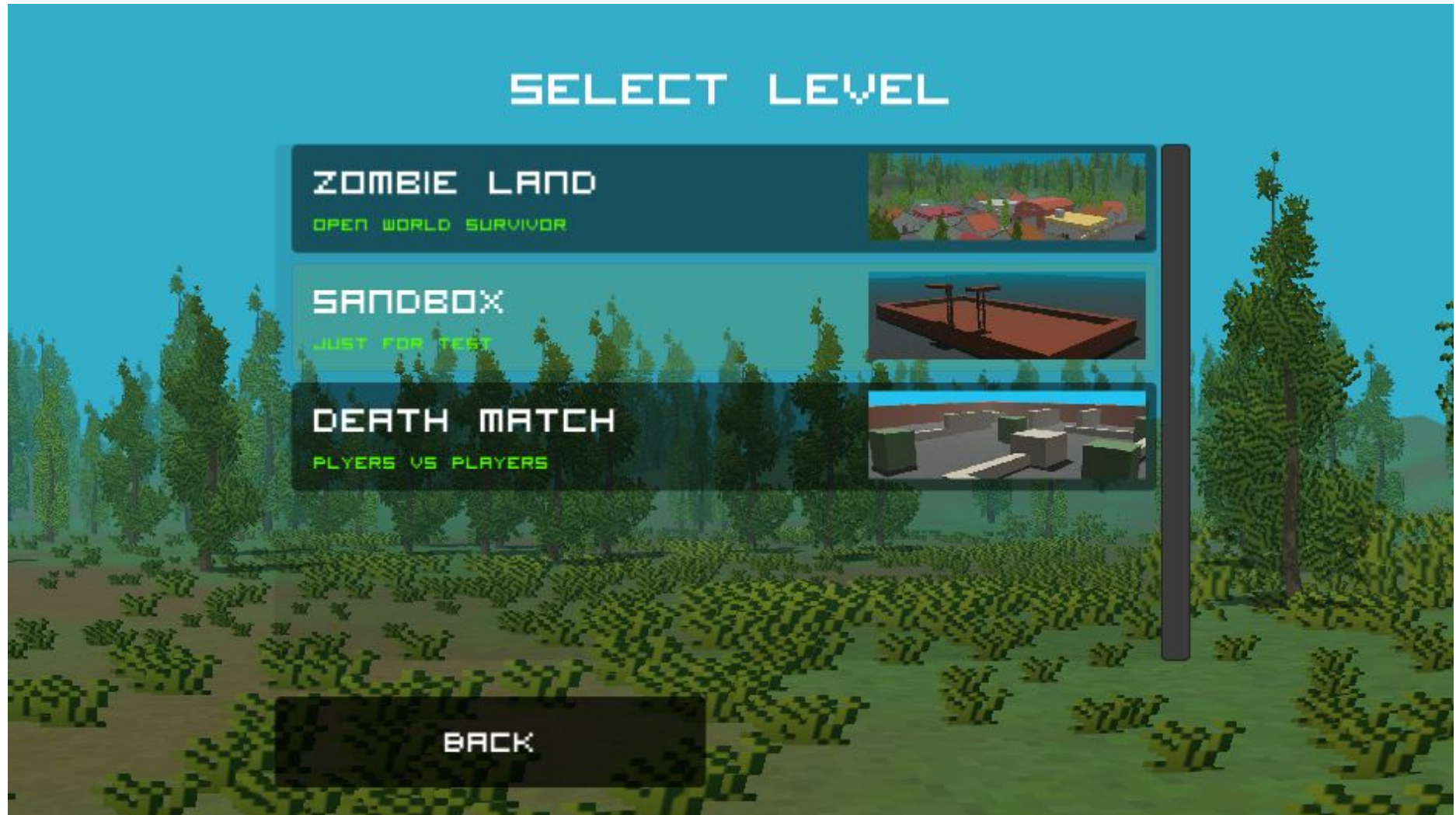
Open “**sanbox**” scene from **UnitZ/Scene** and select **ZombieSpawner** object on the scene



Add your **NewZombie** prefab into **Objectman** parameter on **EnemySpawner** component and **Save** scene

Step 10. Play test

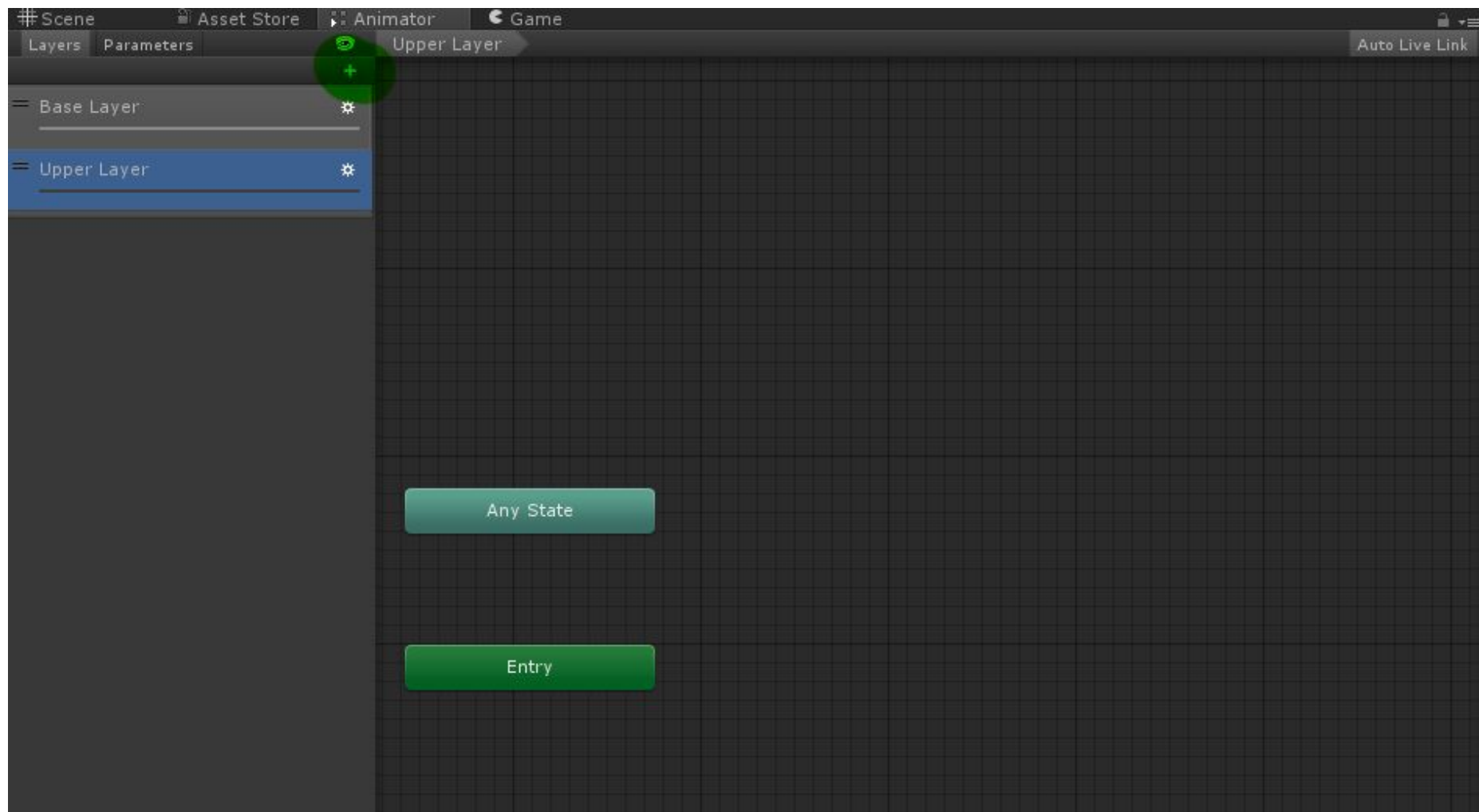
Let's start at "mainmenu" [UnitZ/mainmenu](#) scene and Don't forget to select level to **Sandbox**



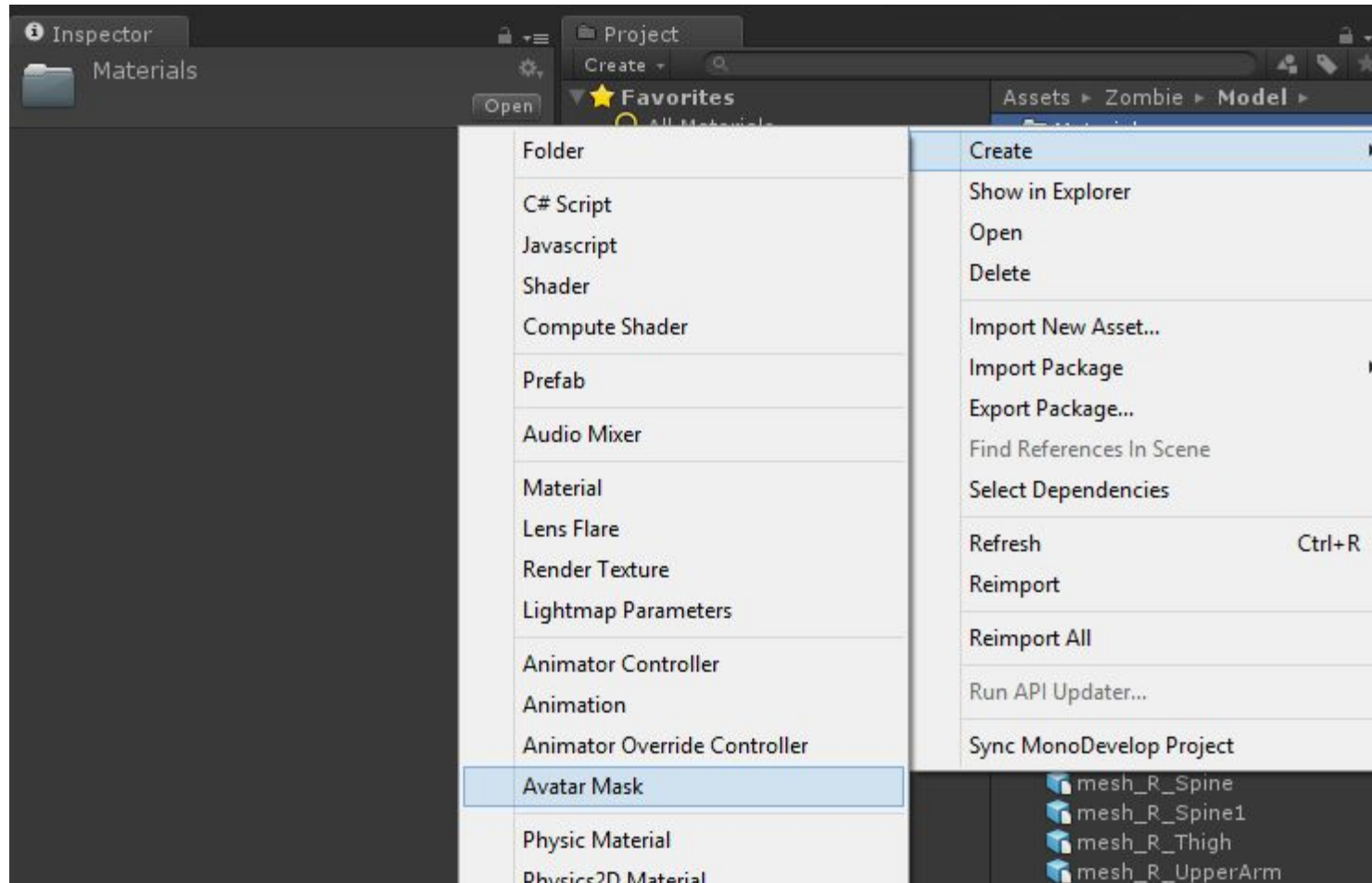
Testing.. You will see a zombie walking facing toward to you but still cannot attacking.



Step 11. Add an ***Attacking*** animation, Please back to animator and add new **Animation Layer** by Click **plus** button on **Leyers** tab. then named a layer to “**Upper Layer**”

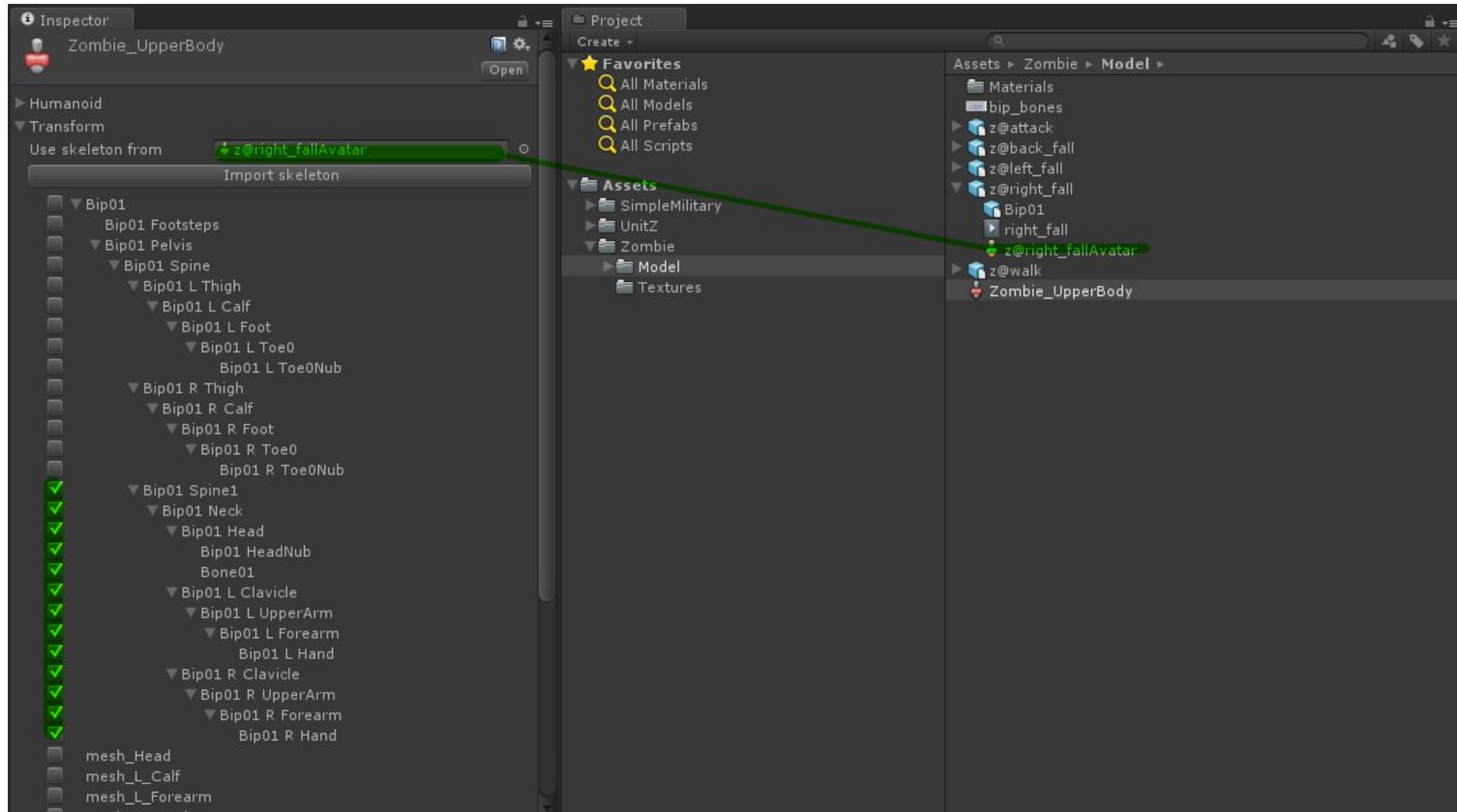


Step 12. Create **Avatar Mask**, by right click on a space in character folder and select **Create > Avatar Mask**

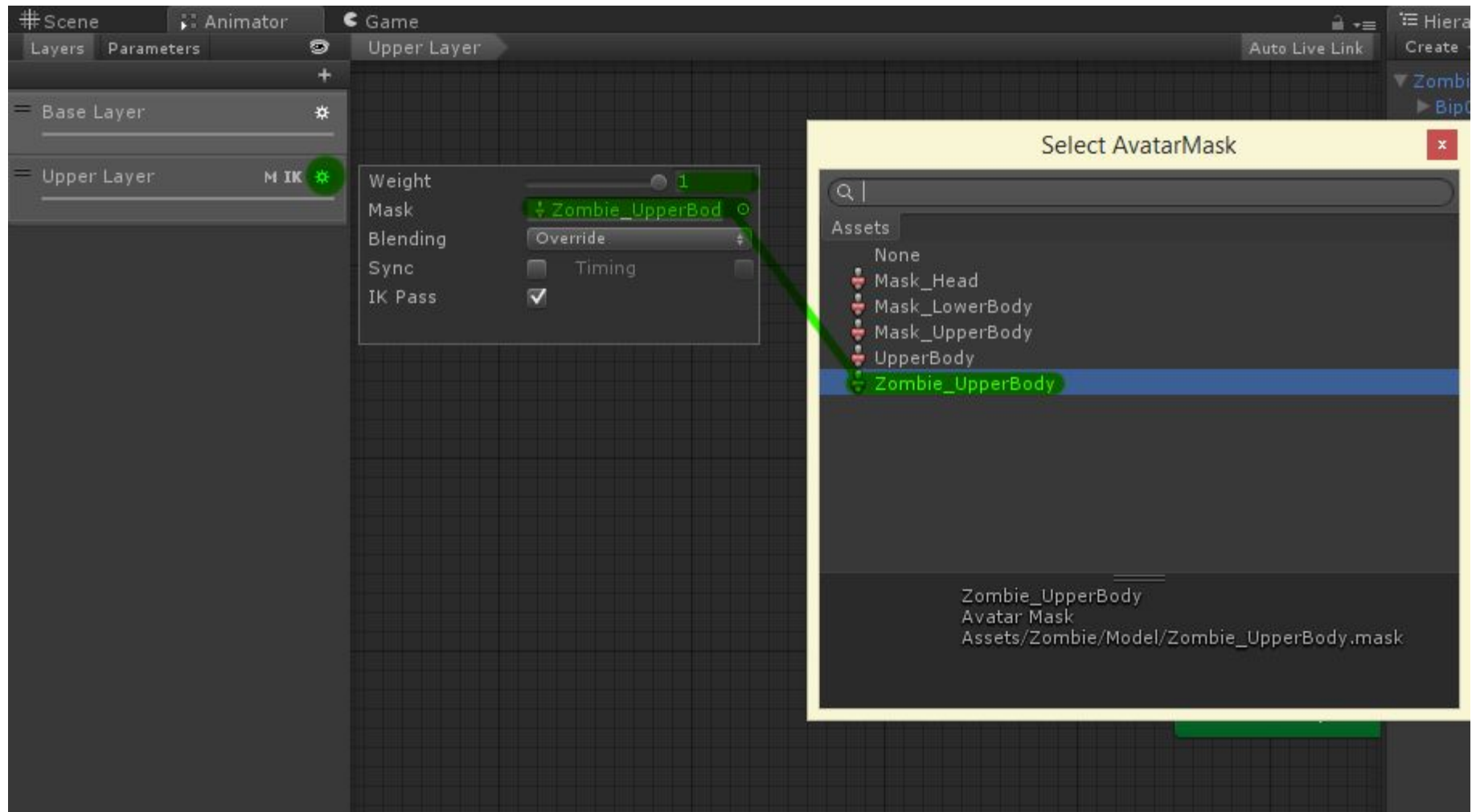


Note * Avatar Mask should in the same place as a character like an Animation controller.

Named “**Zombie_UpperBody**” and add **Avatar** from a character model into **Use skeleton from** parameter and then Click **Import Skeleton** on Transform tab, and just checked only bones on *upper part* of body.

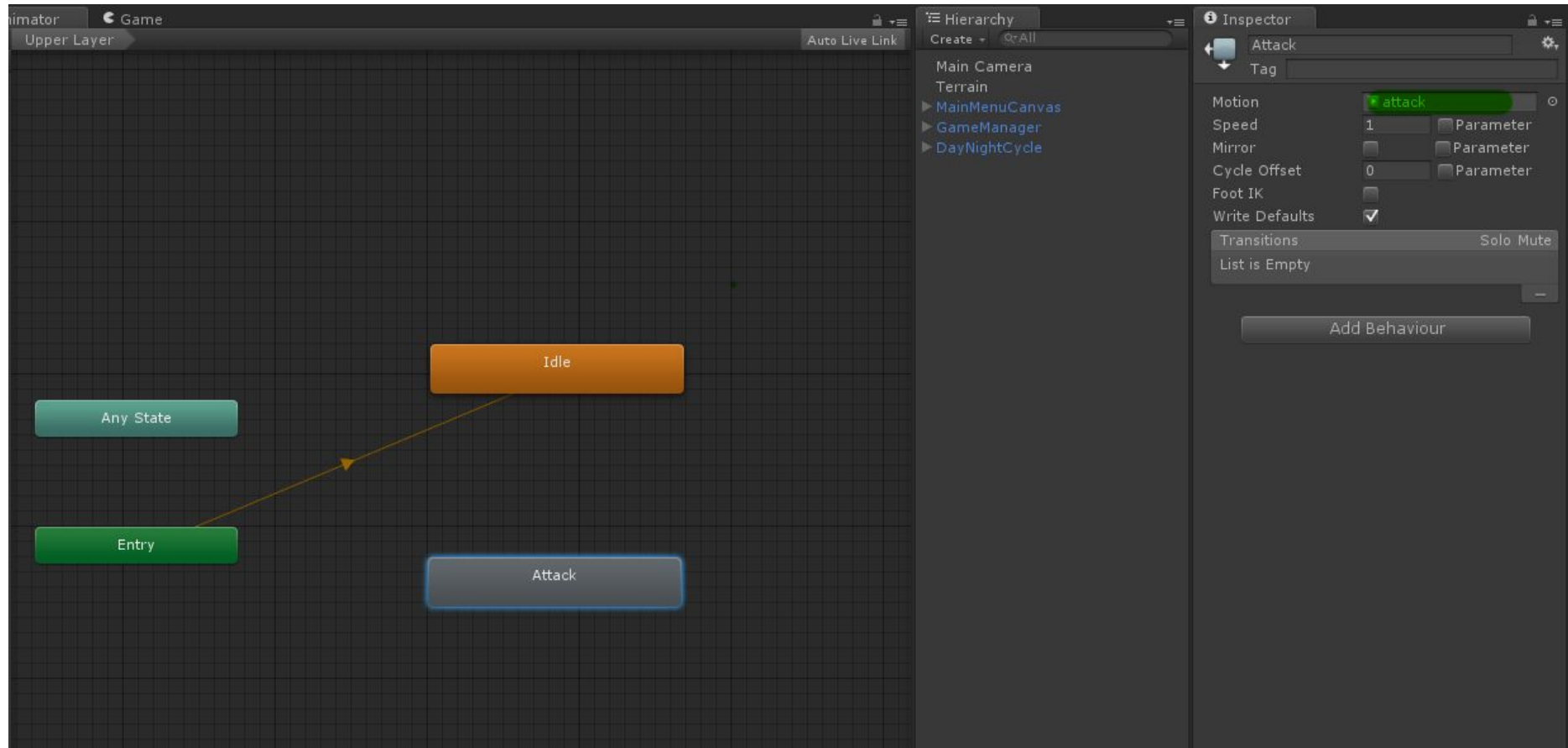


Step 13. Add Avatar Mask into an **Upper Layer**, by click on **Gear** button and set the **Mask** like this image.



Don't forget to set **Weight = 1** and **IK Pass** must Checked

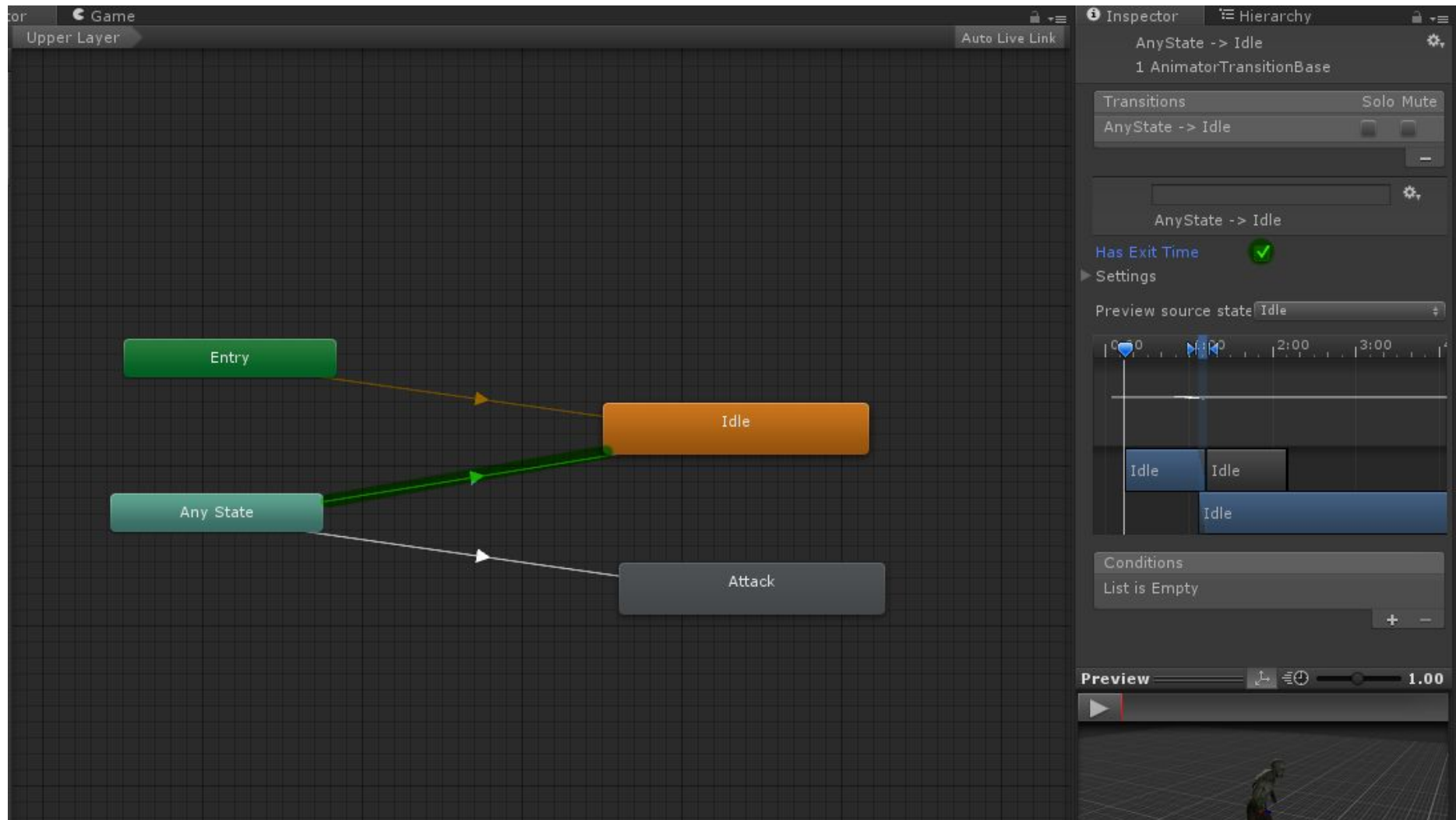
Step 14. Create 2 States on the animator, **Idle** state , **Attack** State,



Add **Attack Motion** from a character model into **Motion** parameter on **Attack** State

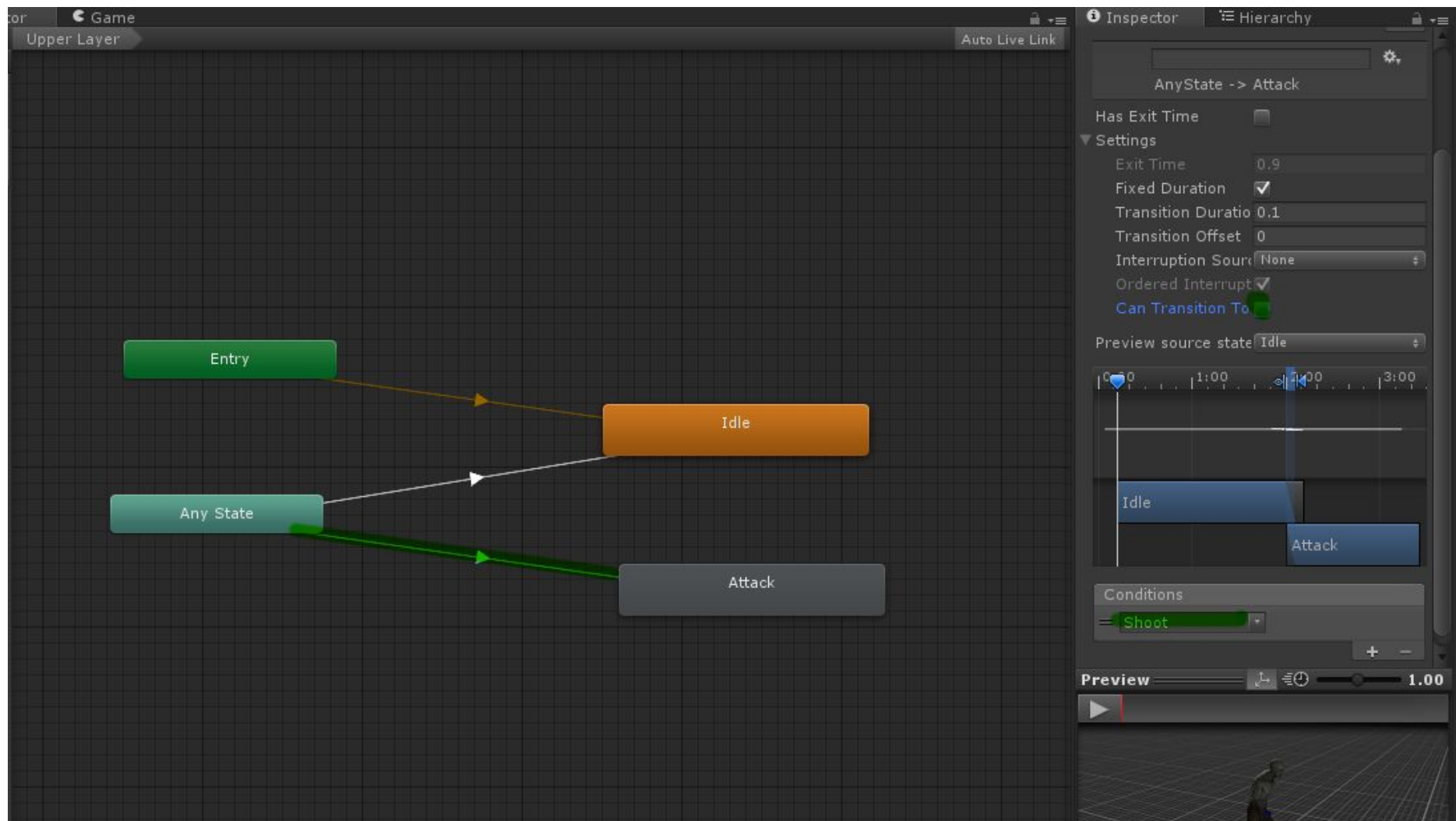
Add **Idle Motion** from a character model into **Motion** parameter on **Idle** State

Step 15. Connect Any State to Idle State



Condition : None, **Checked** Has Exit Time parameter and **Uncheck** Can Transition To Self parameter.

Step 15. Connect Any State to Attack State



Condition : Shoot triggered, and **Uncheck** Can Transition To Self parameter.

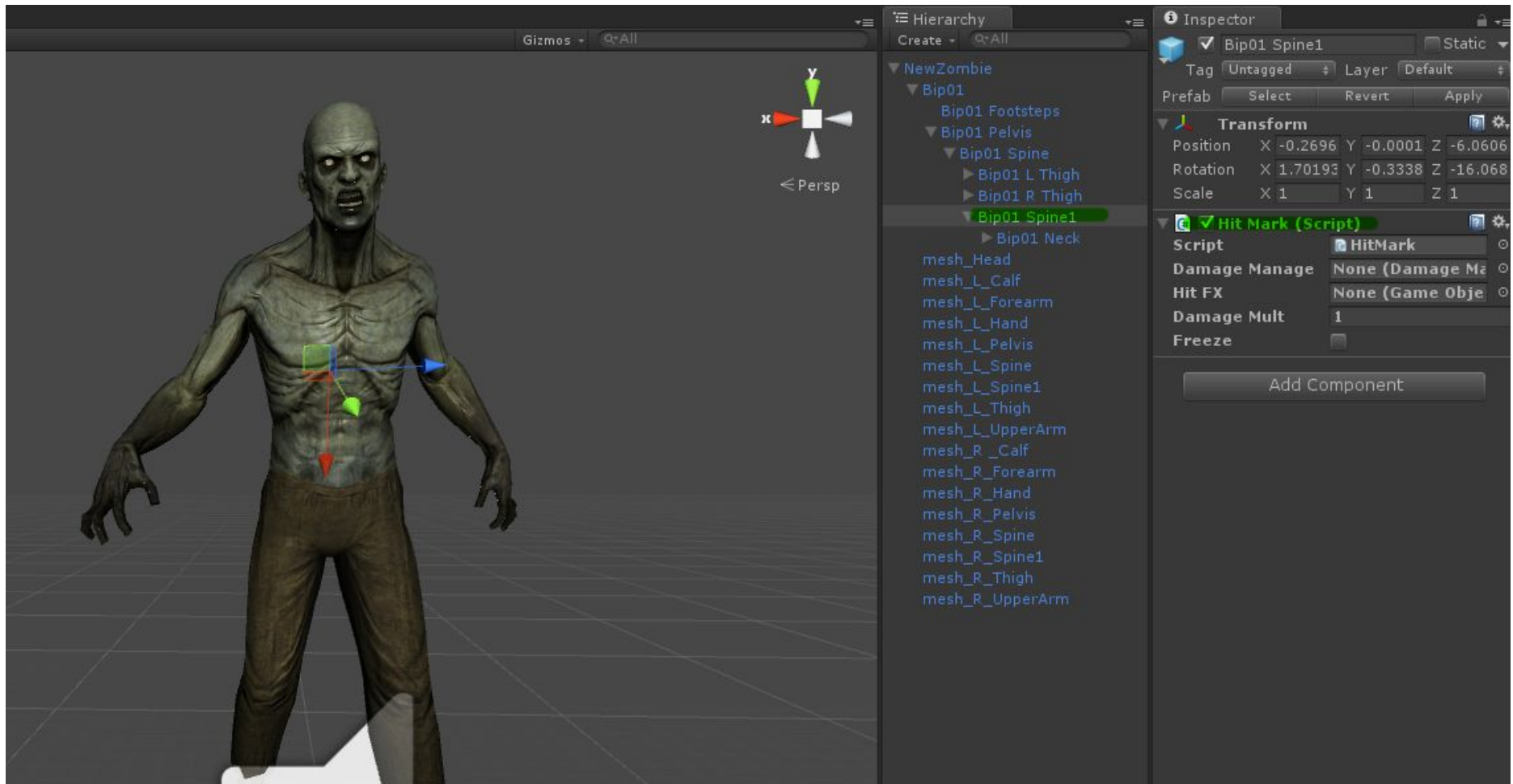
Step 16. Save Scene and Play test again.



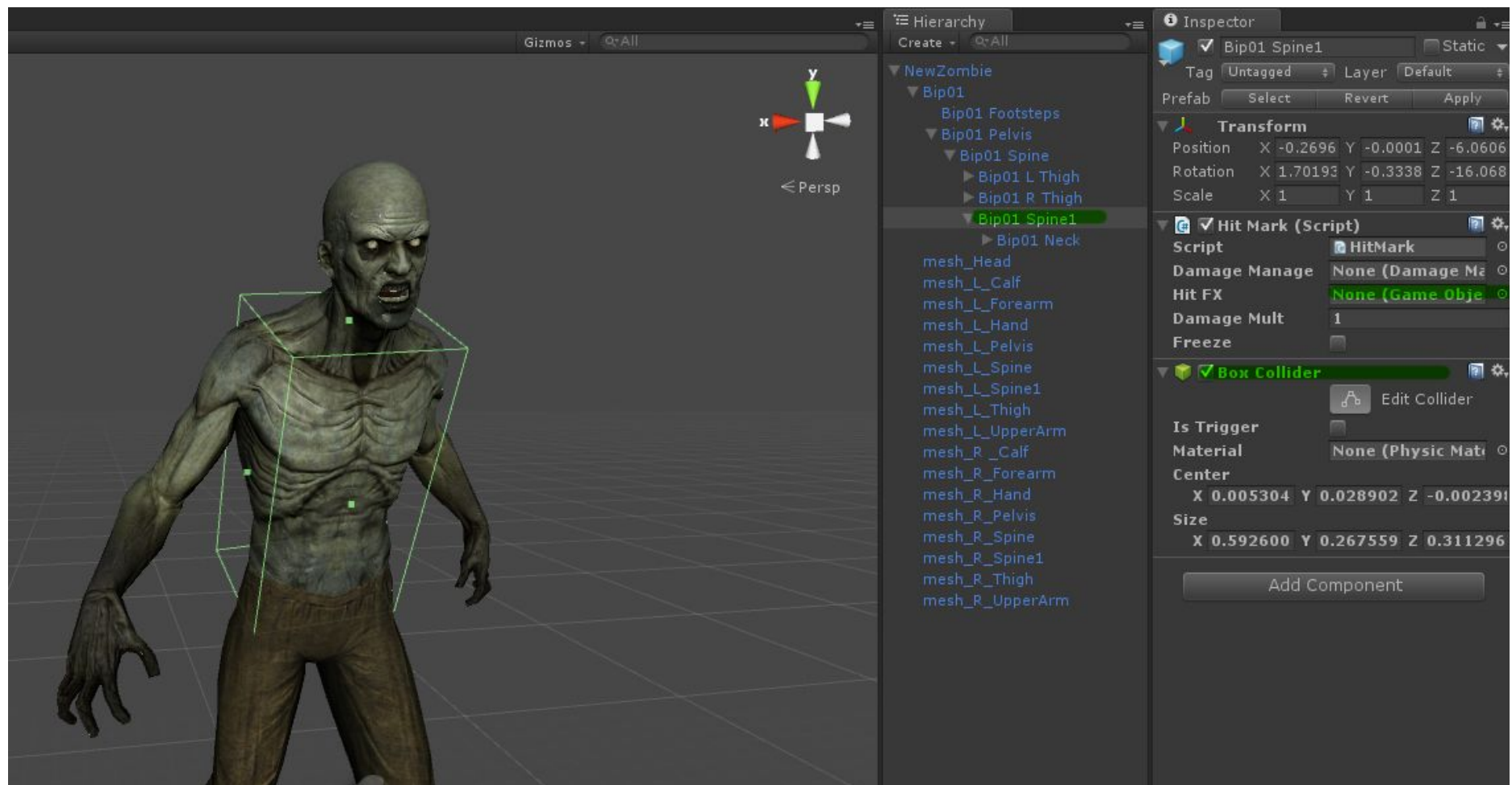
Now you can see the zombies are moving facing toward to you and play attack animation when it close to you.

Step 17. Adding Hitboxes

Please back to “**zombie_setup**” scene, open **NewZombie** character **hierarchy** and add **Hit Mark** component into the **bone** on **middle** of skeleton **UnitZ\Scripts\Damage\HitMark.cs**



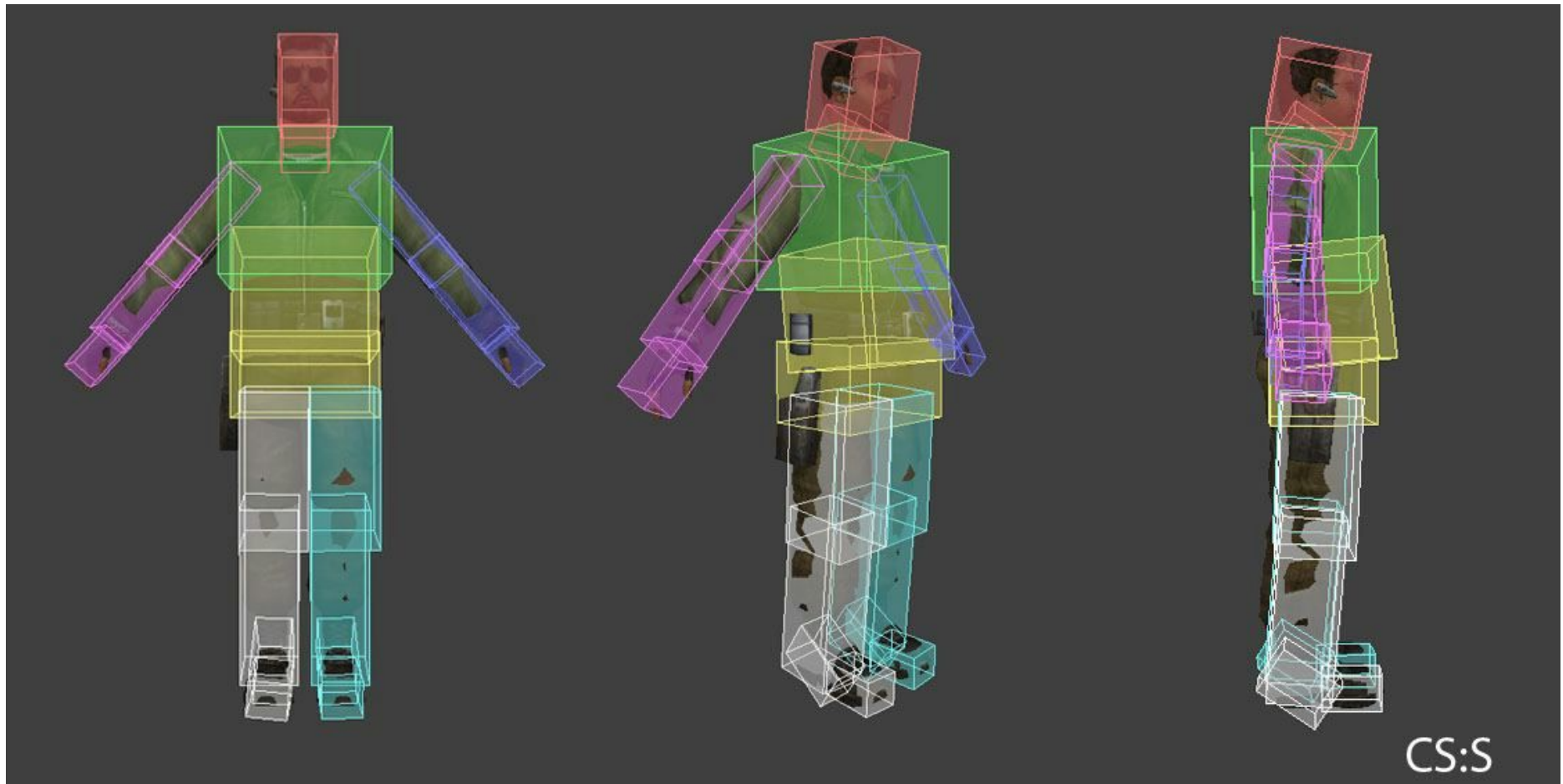
Don't forget to adding **Box collider** component into the **bone**, by go to **Component > Physics > Boxcollider**.



Custom the size make sure it look fit perfectly and **Damage Mult** should be a double in head.

you can also add any **Blood fx** particle into **Hit FX** parameter on **Hitmark** component to make this zombie look more completely. **Note * You can add more hitboxes into your character to cover the body as possible.**

This is a Hitboxes structure from Counter Striker : Source



In this image is showing how to setup all the hitbox to cover the whole body. Separate by a colors and related to a **Damage multiplier**.

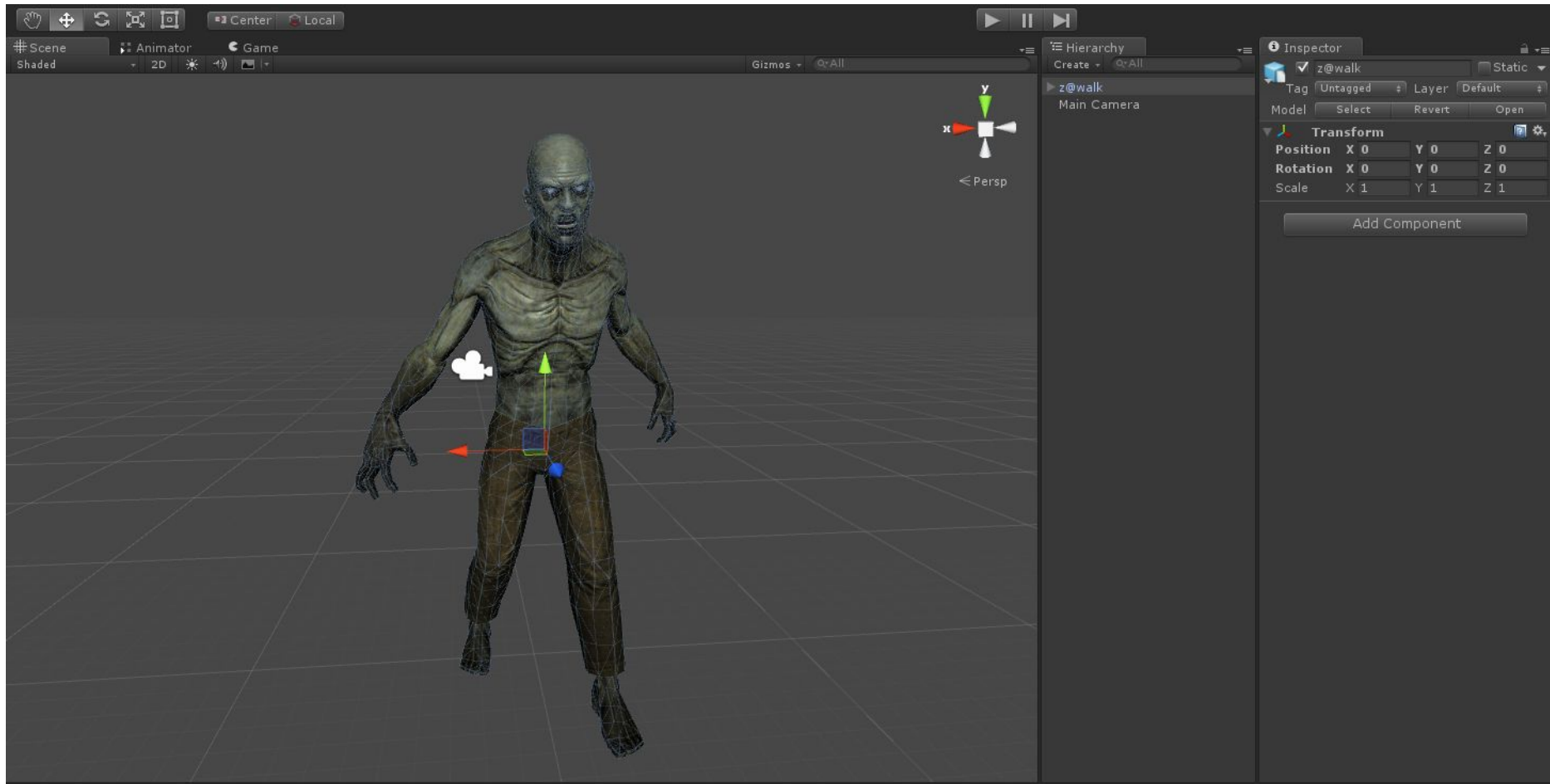
Step 18. Click **Apply** button on **NewZombie** character and **Save scene**



Step 19. Play test again, now you can shoot them and kill. *but disappear when dying so we still need a ragdoll.*

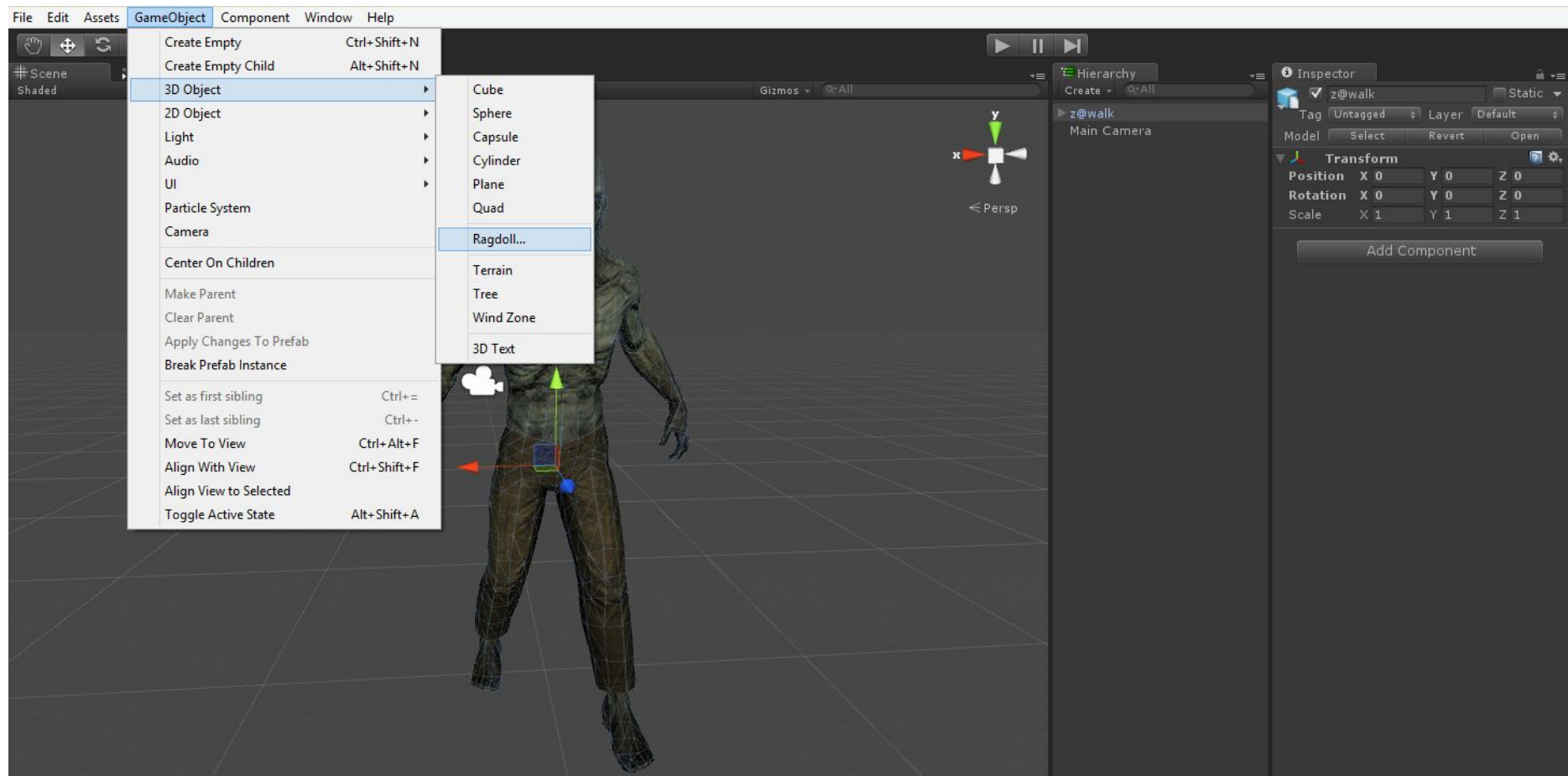


Step 20. New scene for **Ragdoll**, Please **New scene** and place a character model into the scene.



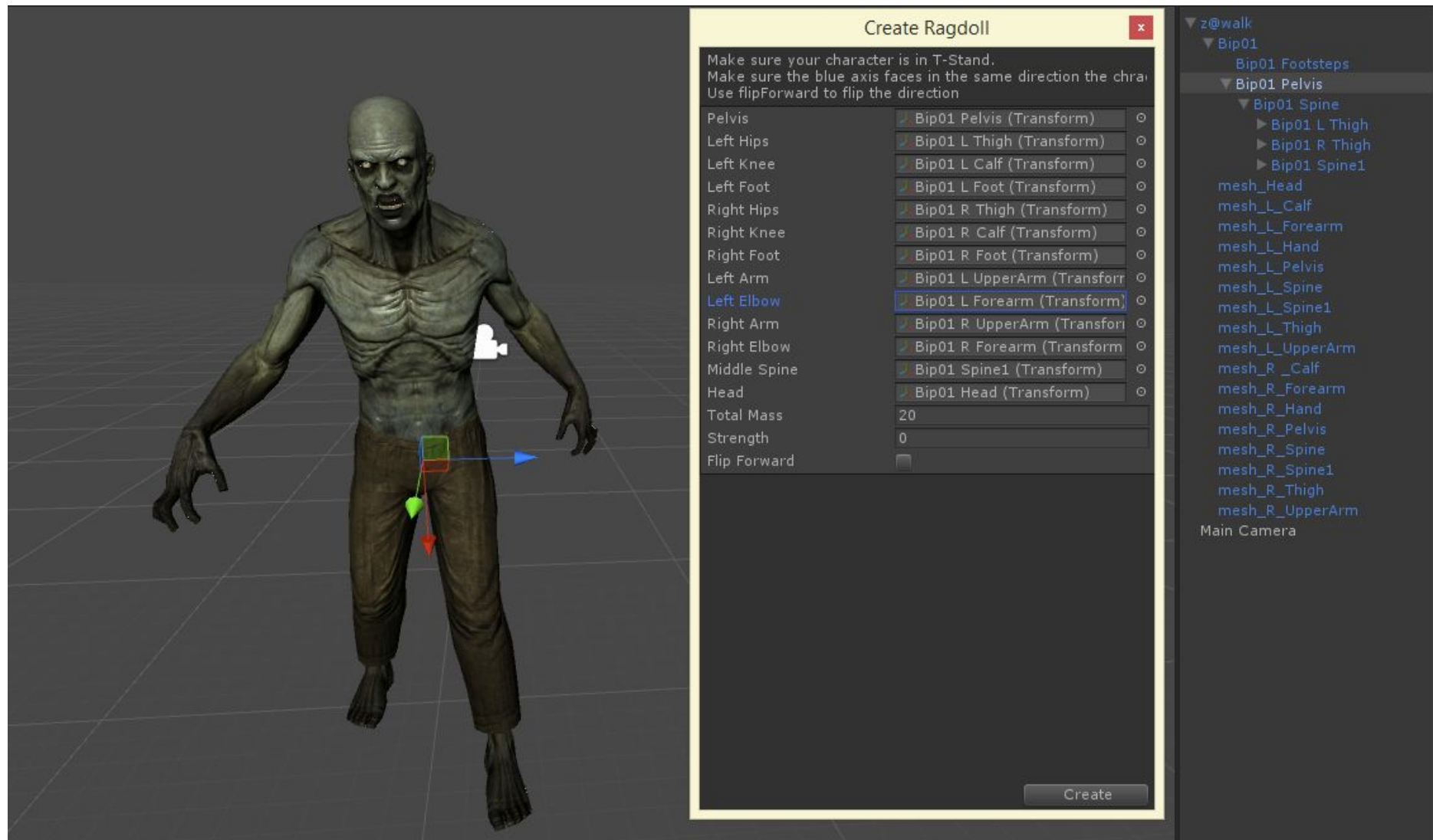
Don't forget to Remove an **animator** if included and set position to 0,0,0
Importance * Ragdoll must same scales as a character.

Step 21. Create Ragdoll

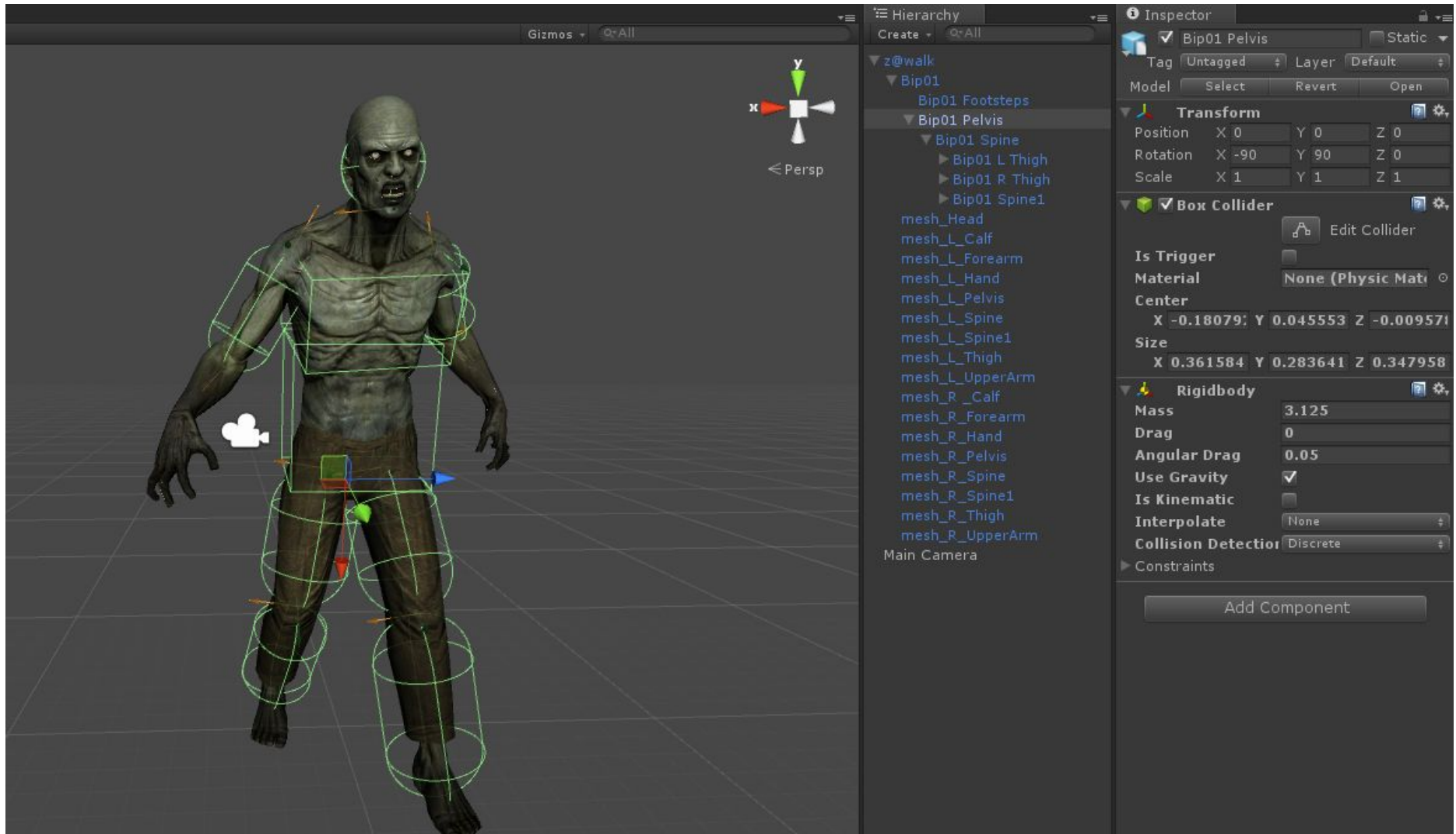


Please go to **GameObject > 3D Object > Ragdoll**

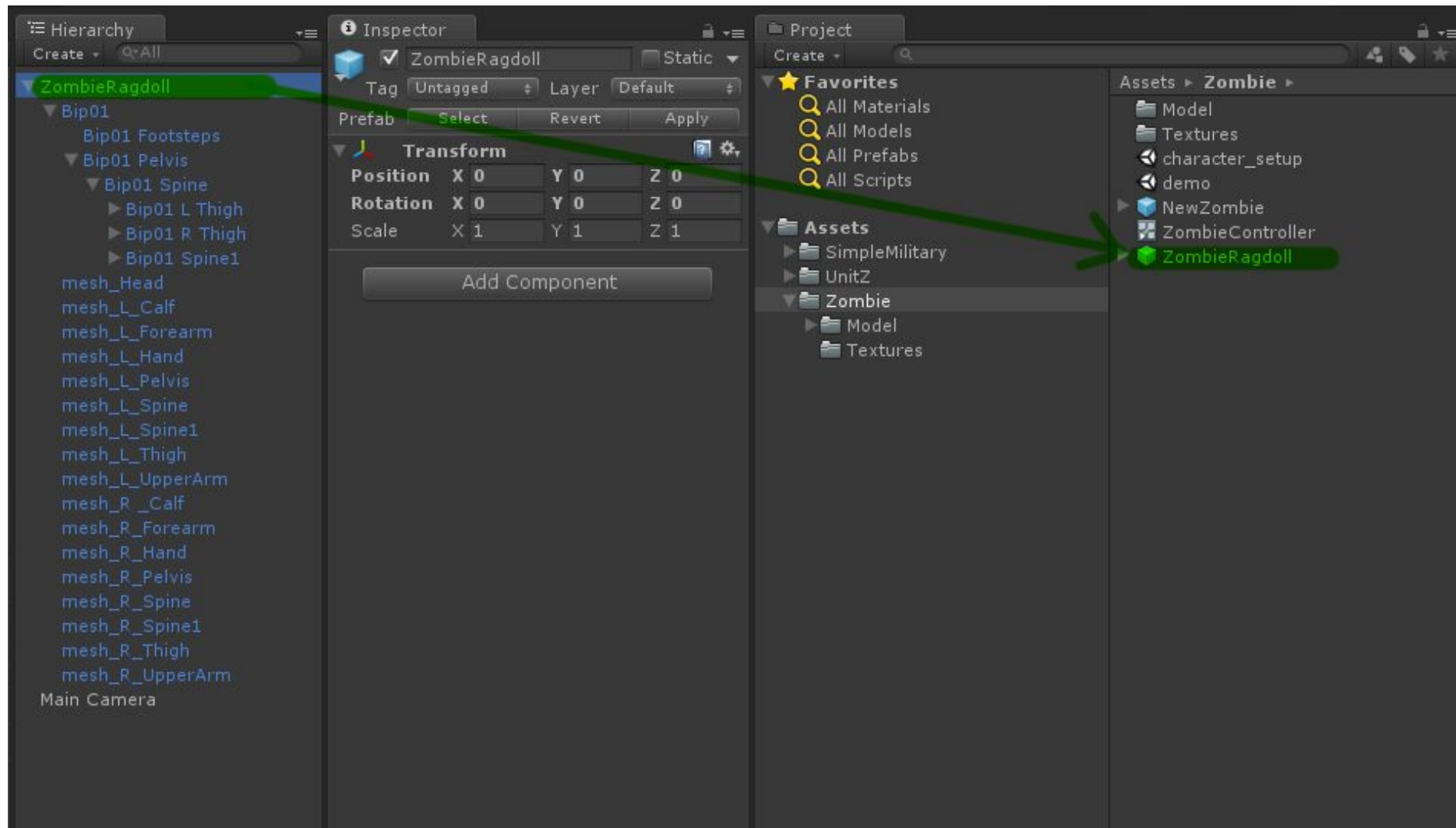
Step 22. Setup all bones into the parameters, make sure it correctly relates to the names.



Step 23. Click **Create**, you will see many colliders and rigidbodies are attached into the character.

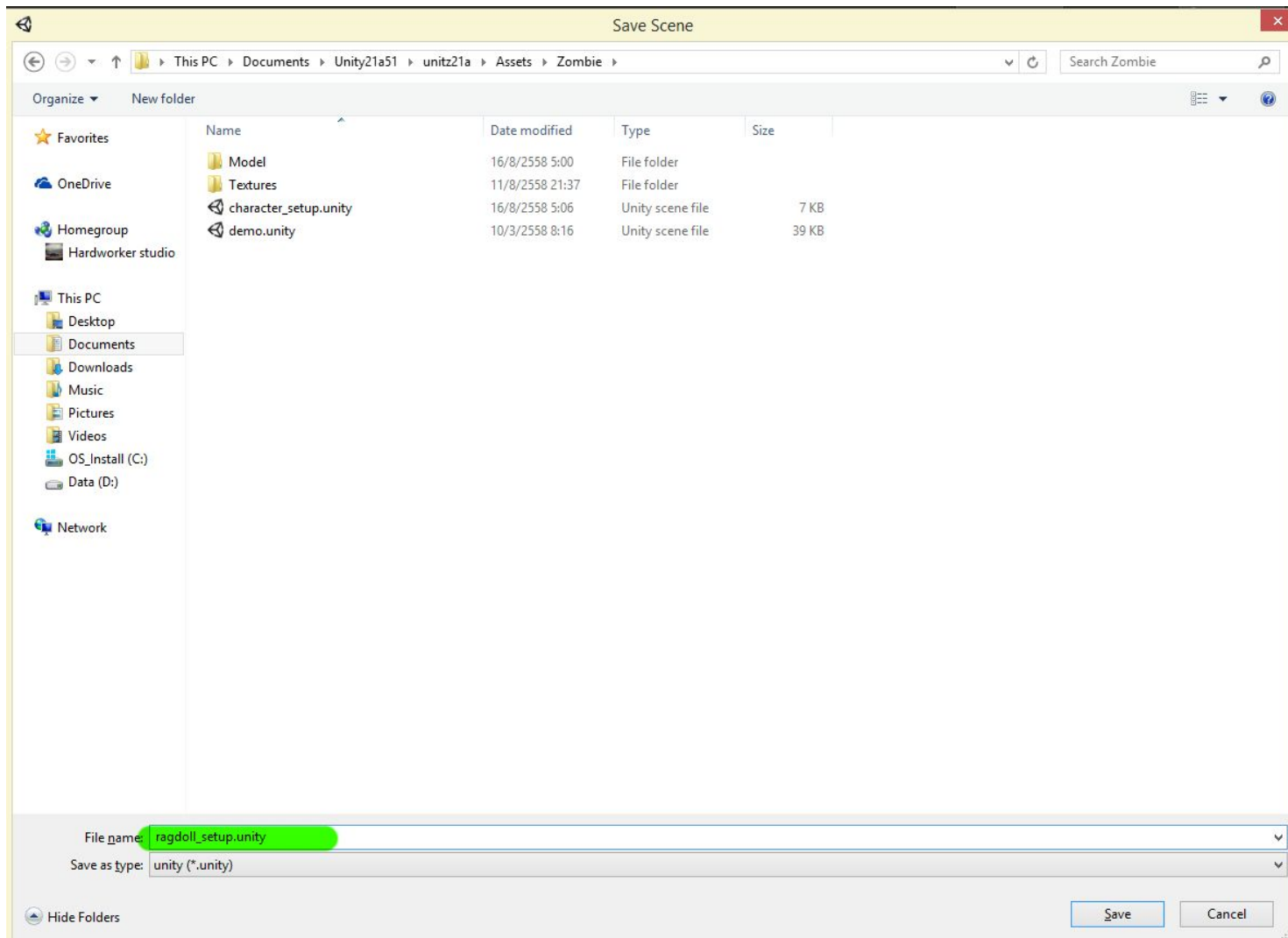


Step 24. Rename to “**ZombieRagdoll**” and save as a prefab.



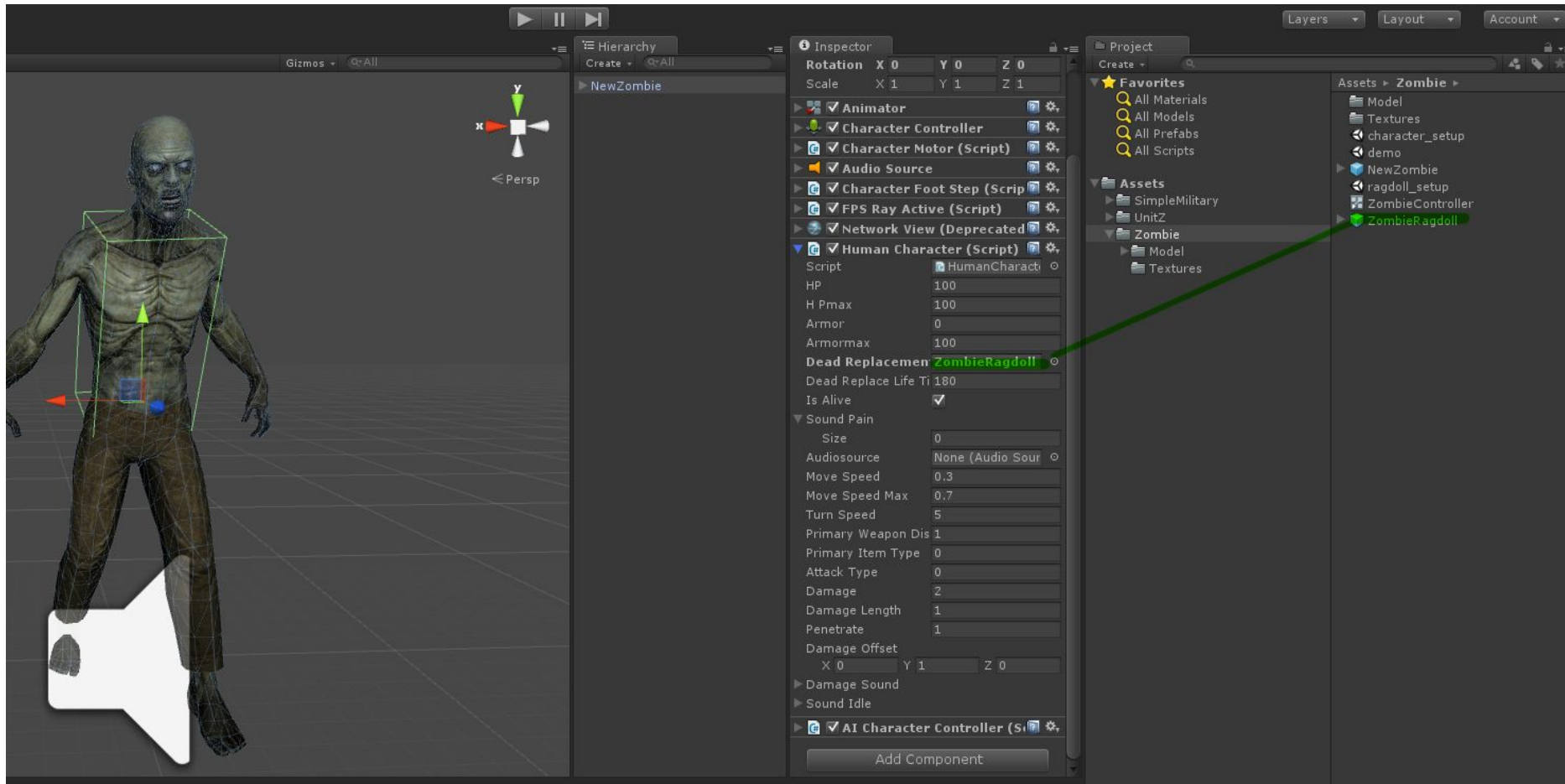
Note * a ragdoll should save at the same place as a character so it easier to custom and managing.

Step 25. Save scene as “Zombie_Ragdoll”



Note * You should save a “Zombie_ragdoll” to the same place as a character.

Step 26. Please back to “**Zombie_Setup**” scene, select **NewZombie** and add **ZombieRagdoll** into **Dead Replacement** parameter on **Human Character** component and click **Apply Button**



Note * you can settings all necessary parameters on **Human Character** Component such as **Move speed** , **Damage** and more.

Step 27. Play test and enjoy!



Thank you

Hardworker studios

<http://www.hardworkerstudio.com/unitz>

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