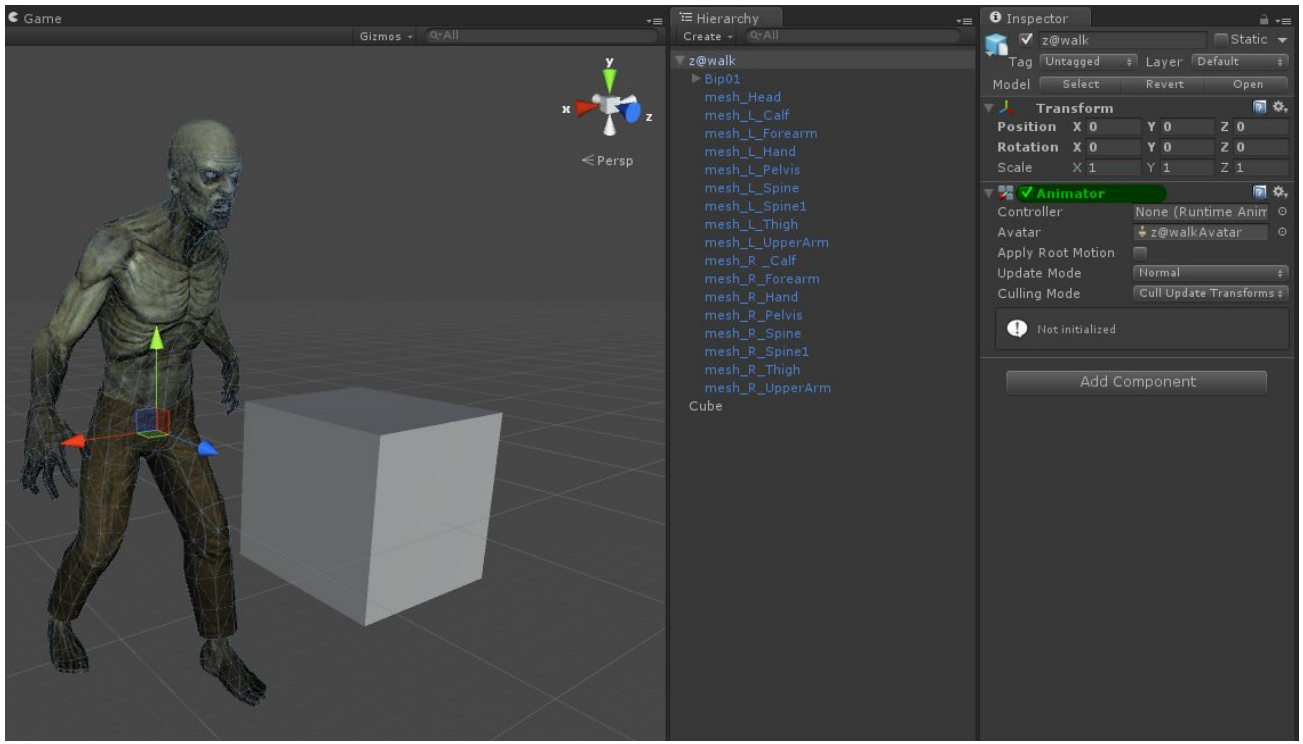
How to add new zombie

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

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

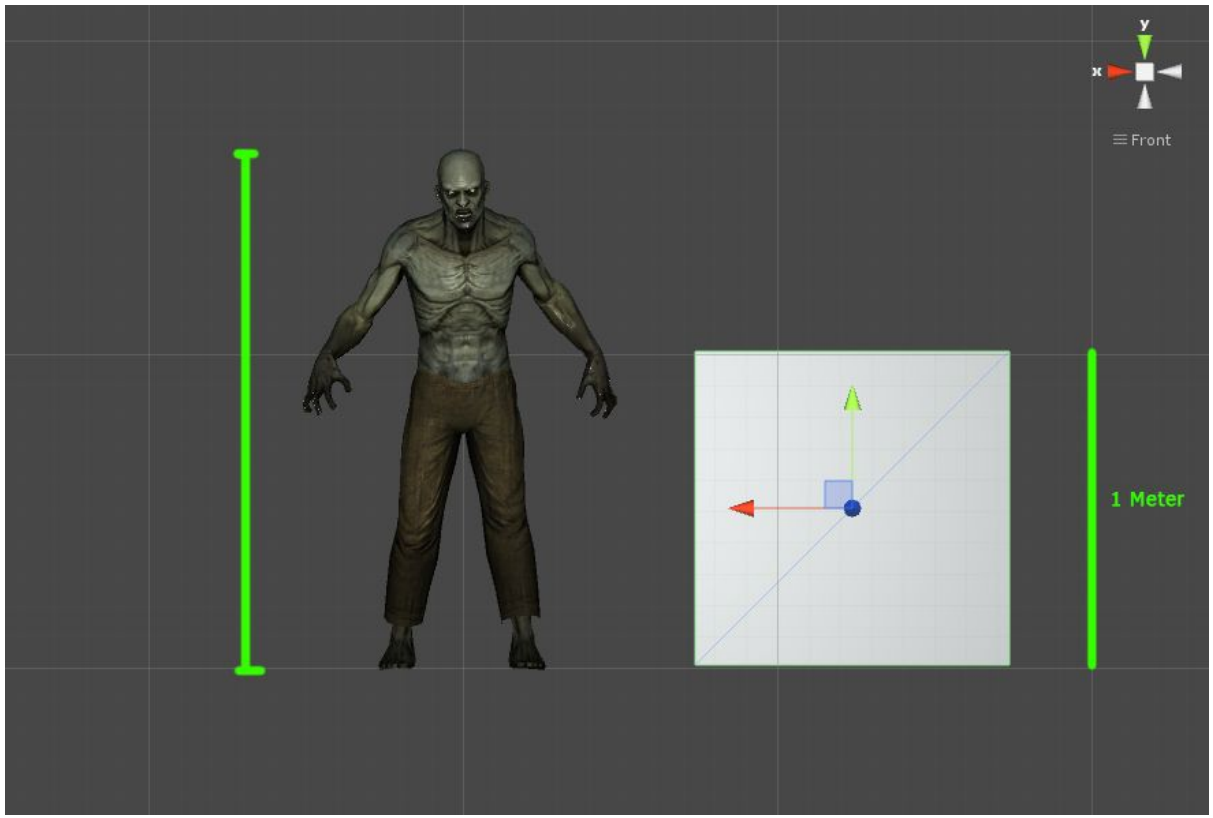
Step 1. Import a character to your project and place it into the scene.



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

Importance 1 : Character Scales

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

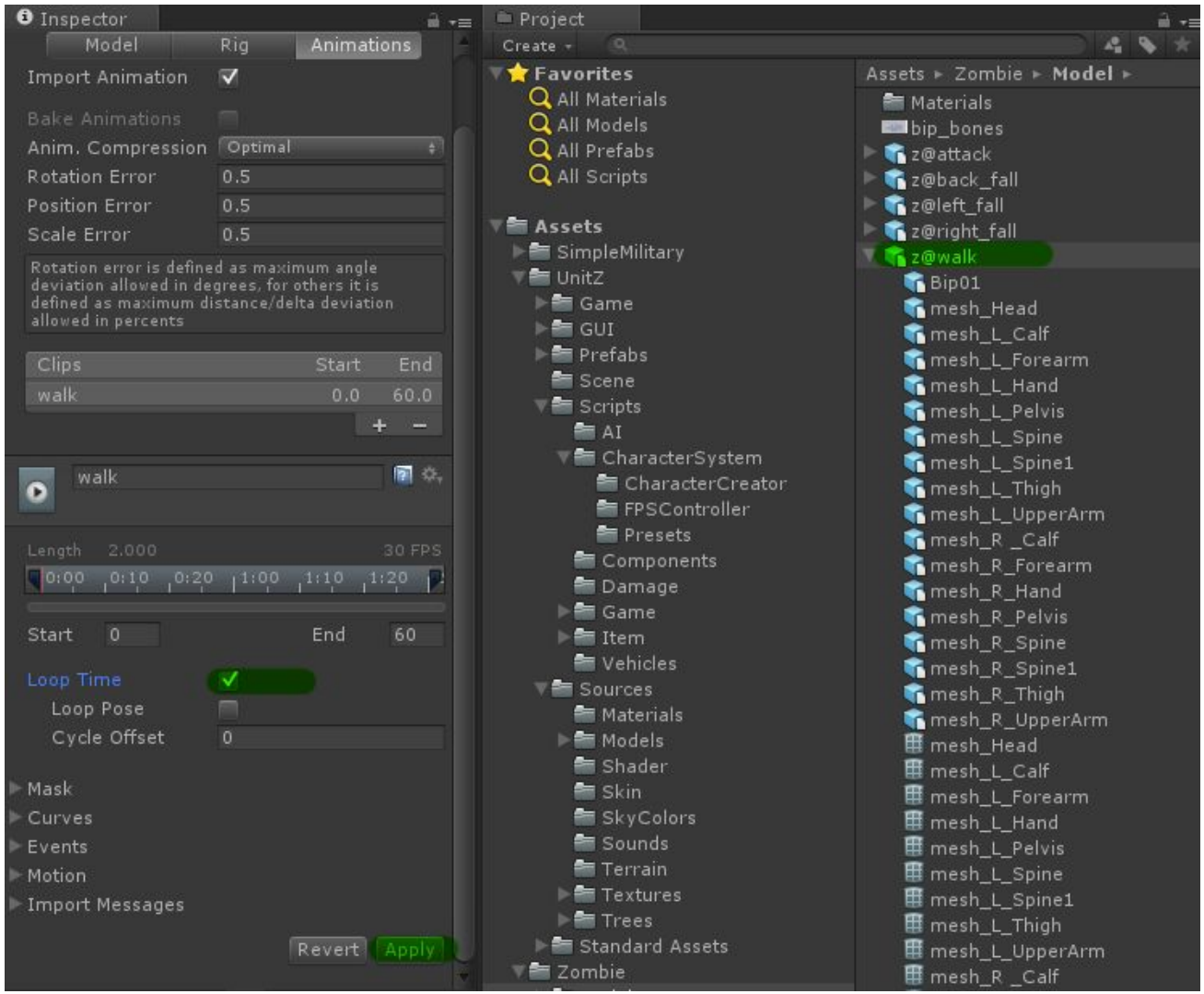


Note *

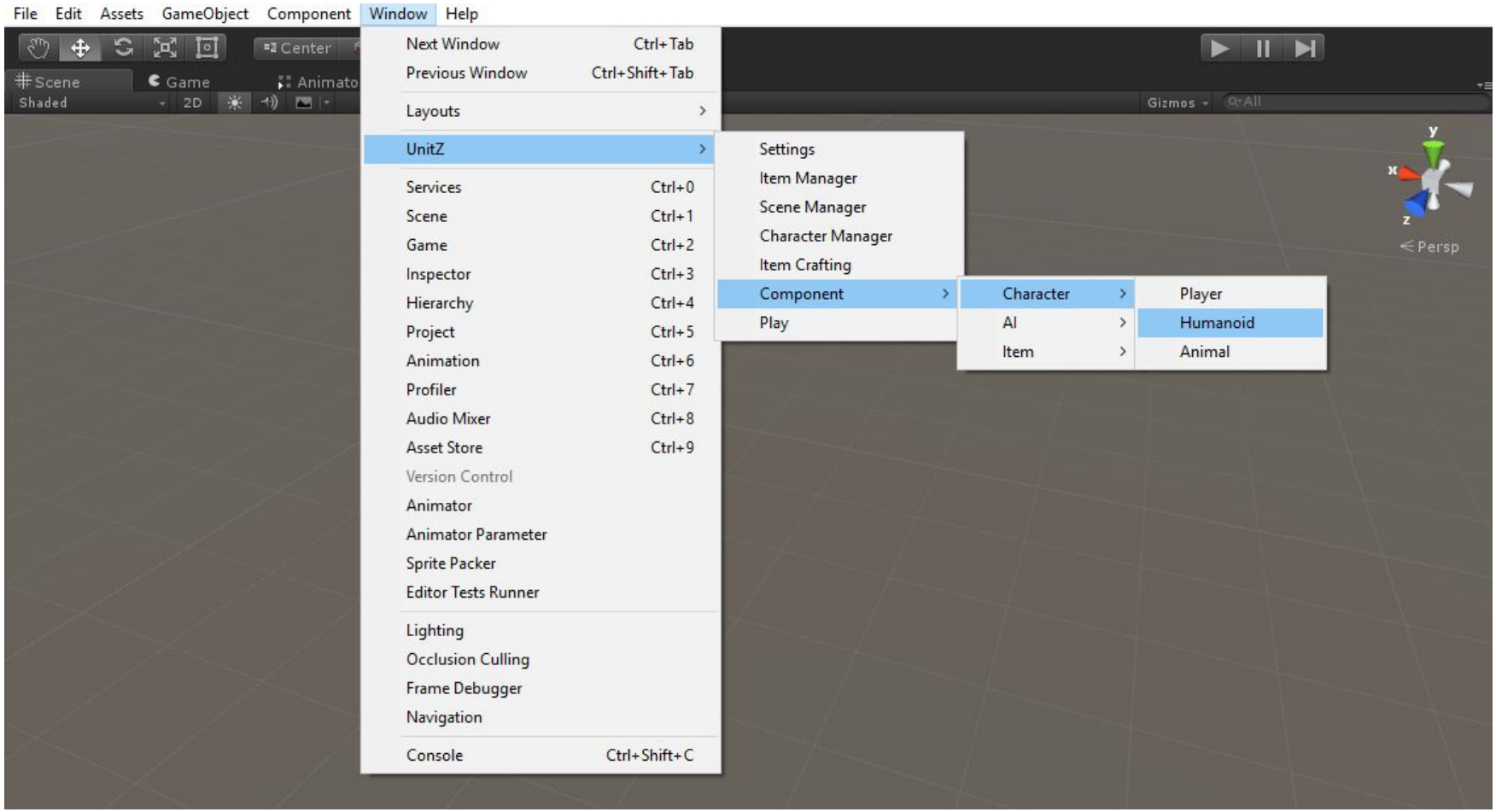
Basically a good characters or props must come with a properly scales. however you can check and compare a character model with a “**Cube**” the cube is 1x1x1 mater, please create a cube for comparing by **GameObject > 3D Object > Cube** so a character scales must look like in the picture. (it’s about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

Importance 2 : Animations

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

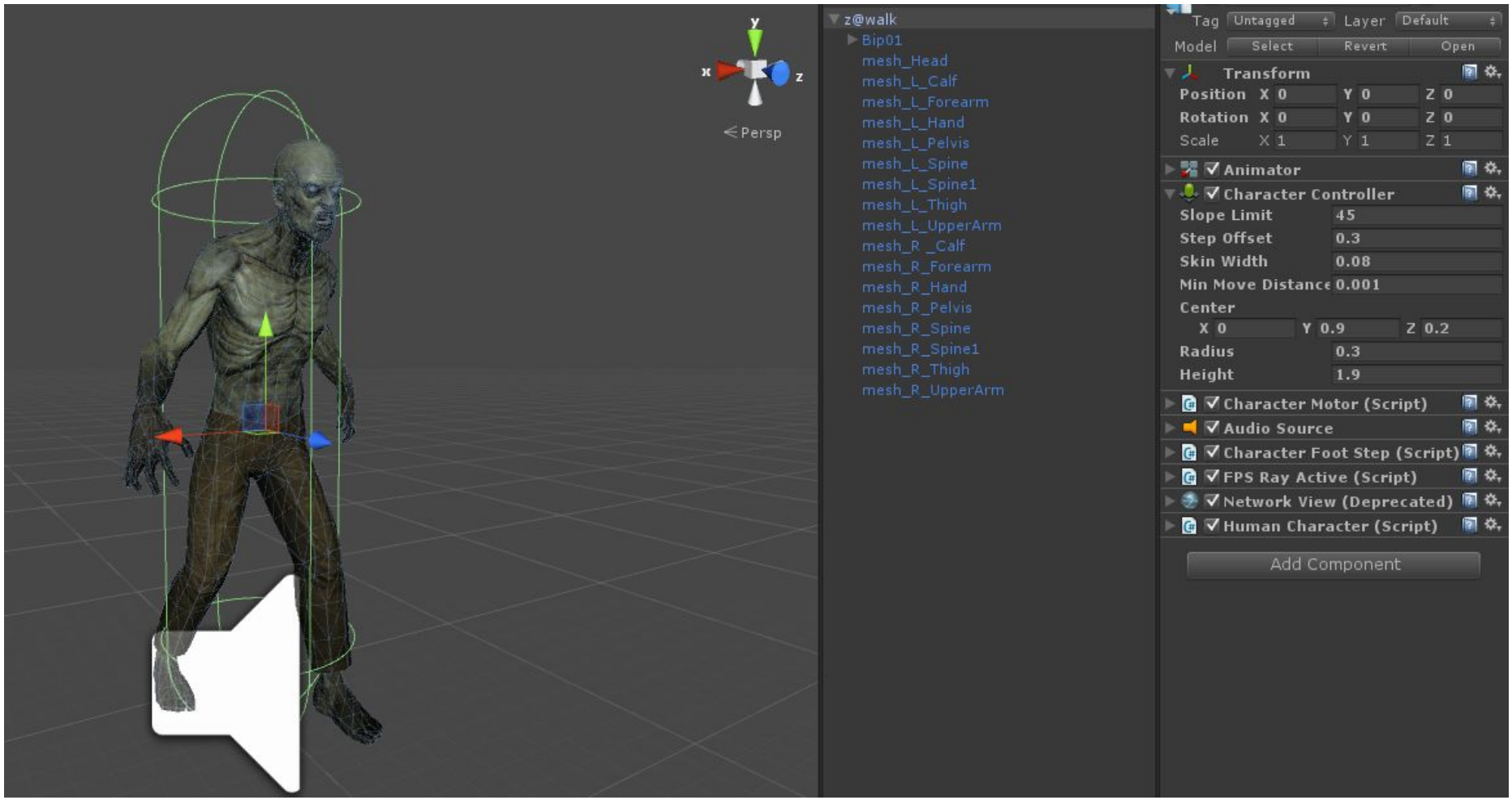


Step 2. Adding a character components into your model.

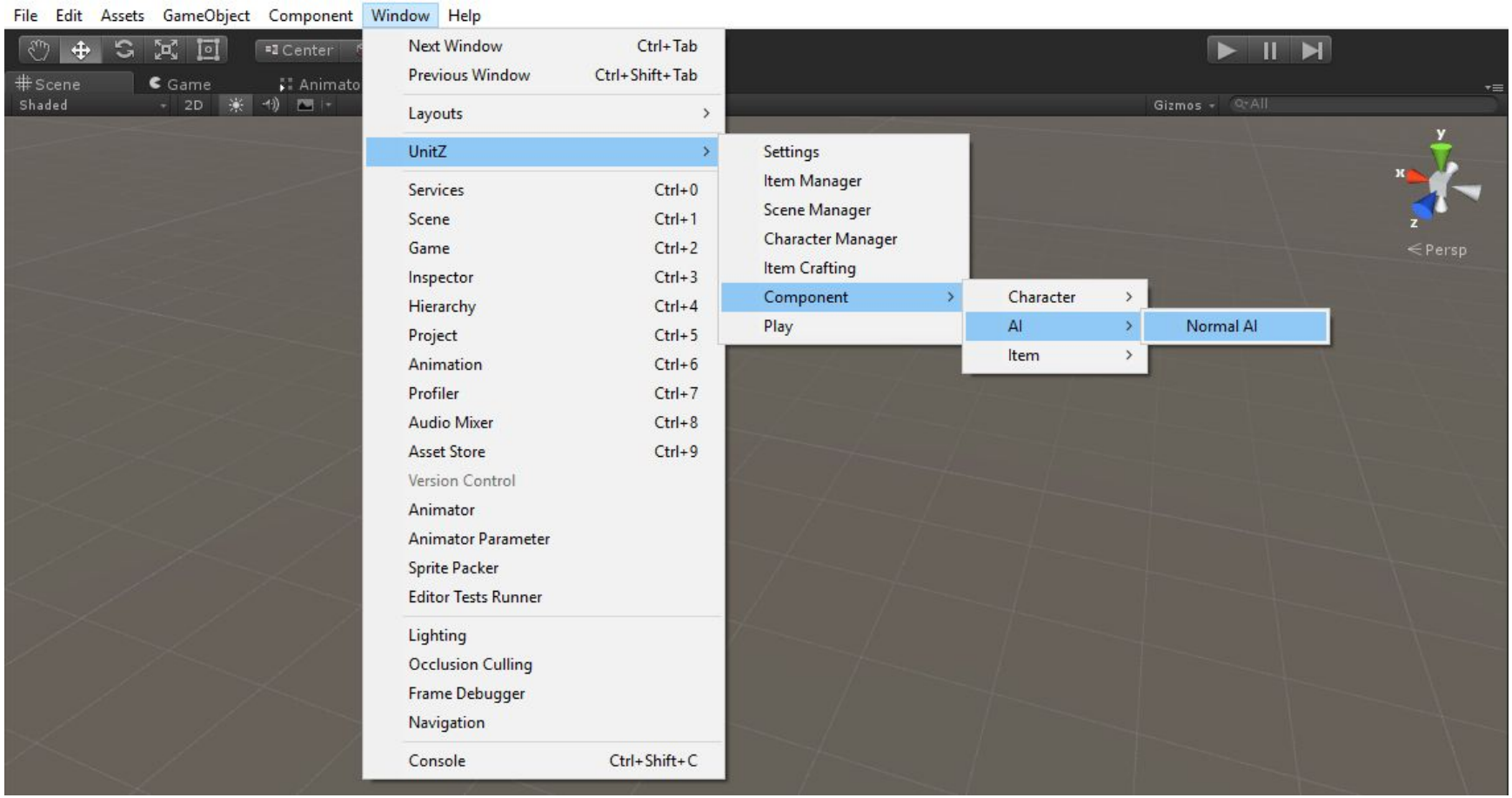


after place model to the scene then select it and go to Window > UnitZ > Component > Character > Humanoid. all component automatically added to your model.

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

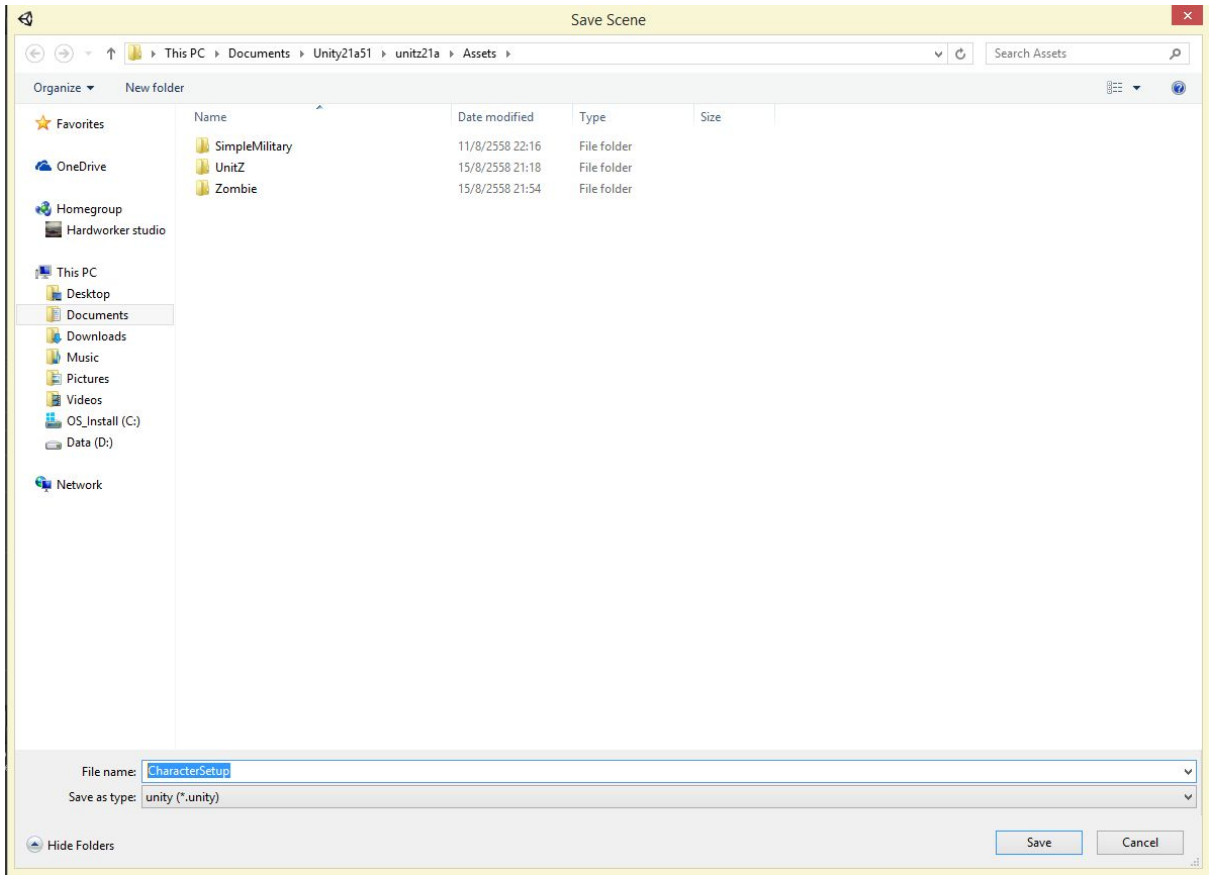


Add a **Character AI** to your character model.

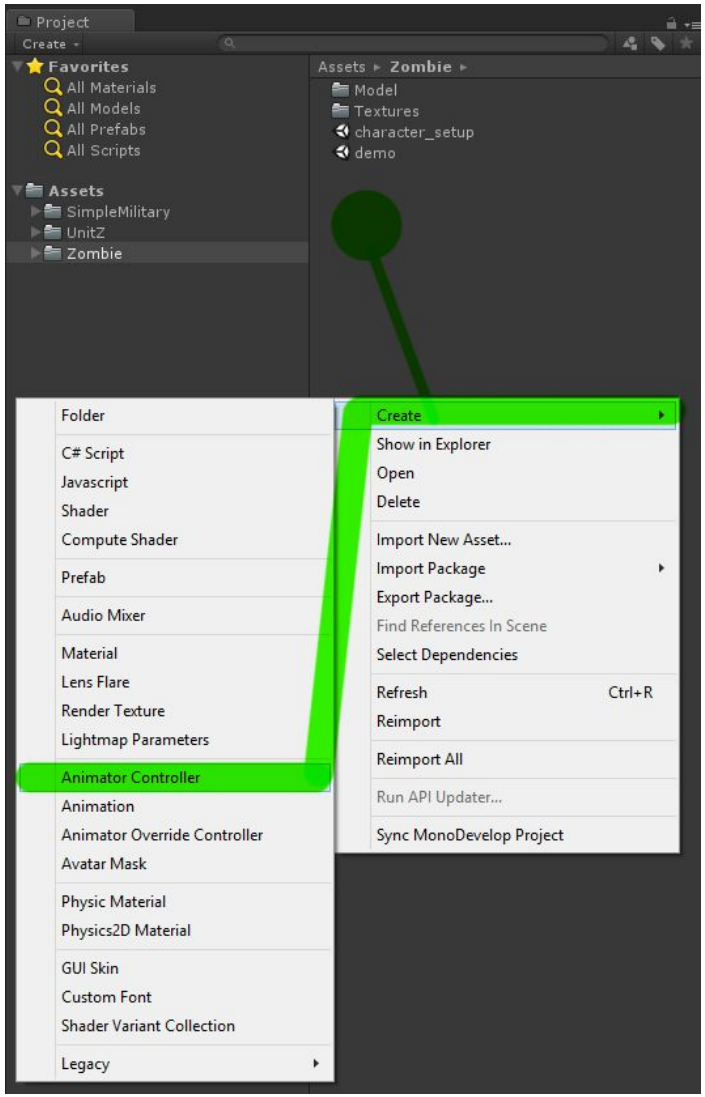


Select your character model and go to Window > UnitZ > Component > AI > Normal AI.

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



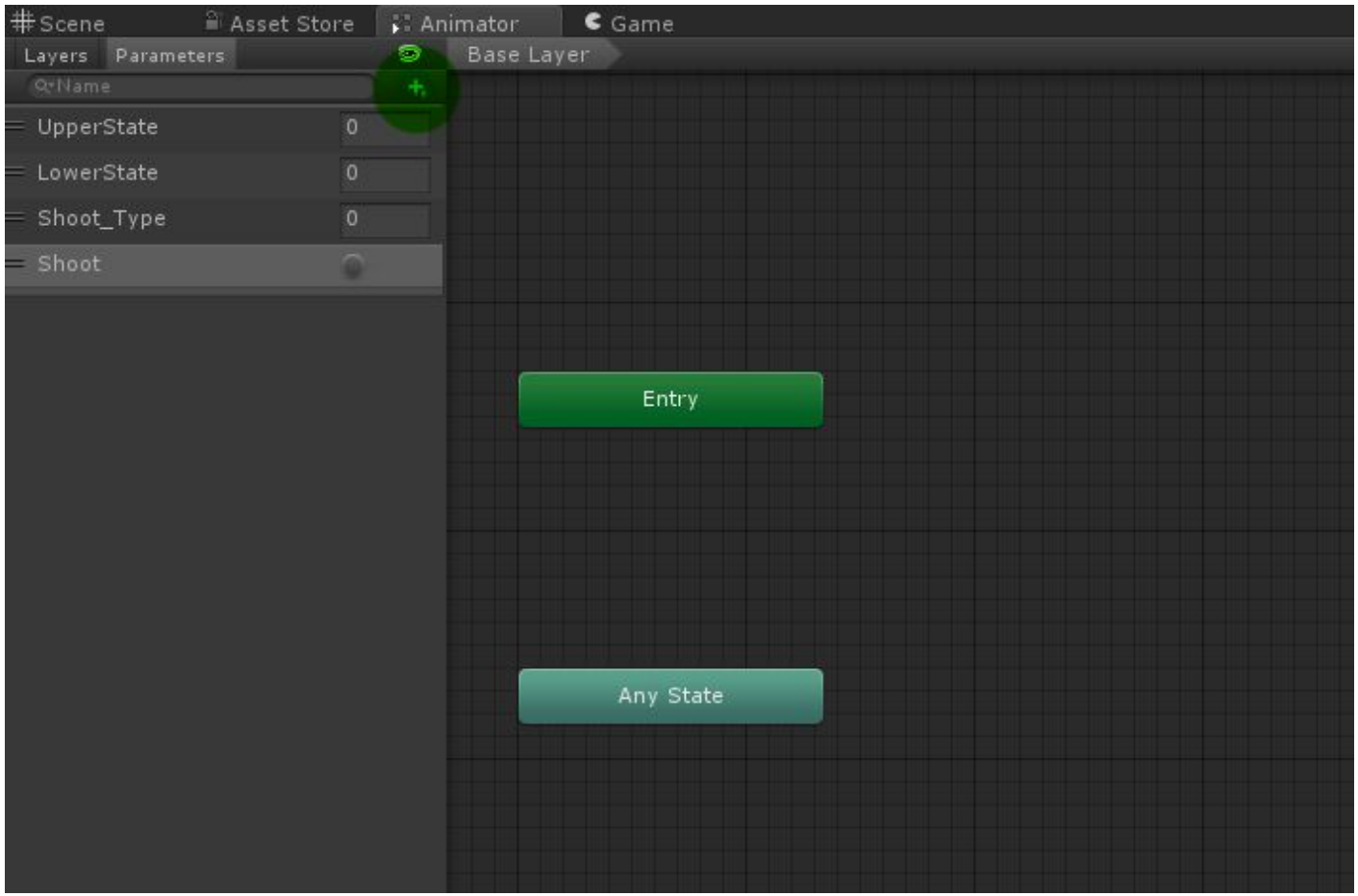
Note * You should save a “**zombie_setup**” to the same place as a character source model, one scene per one character so it’s easier to config and managing.



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

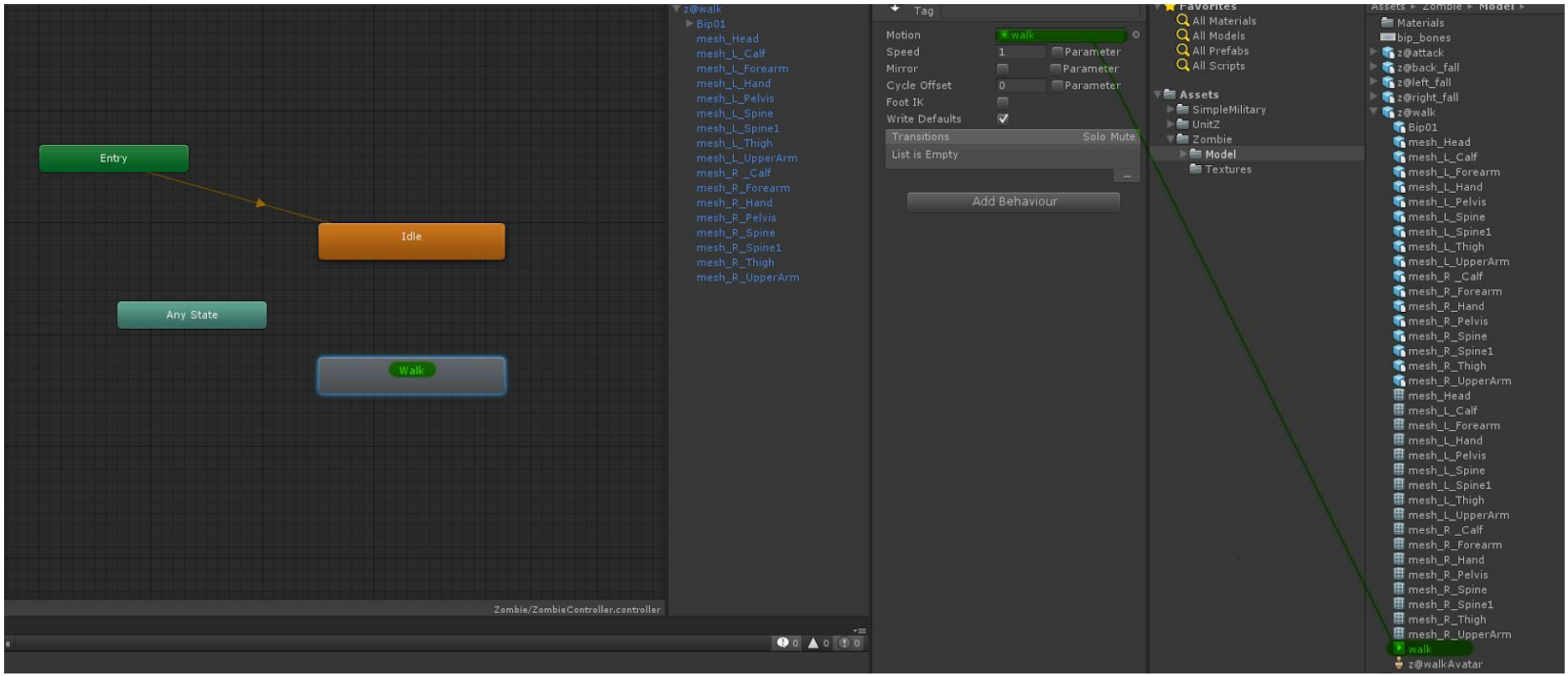
LowerState : Int

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**

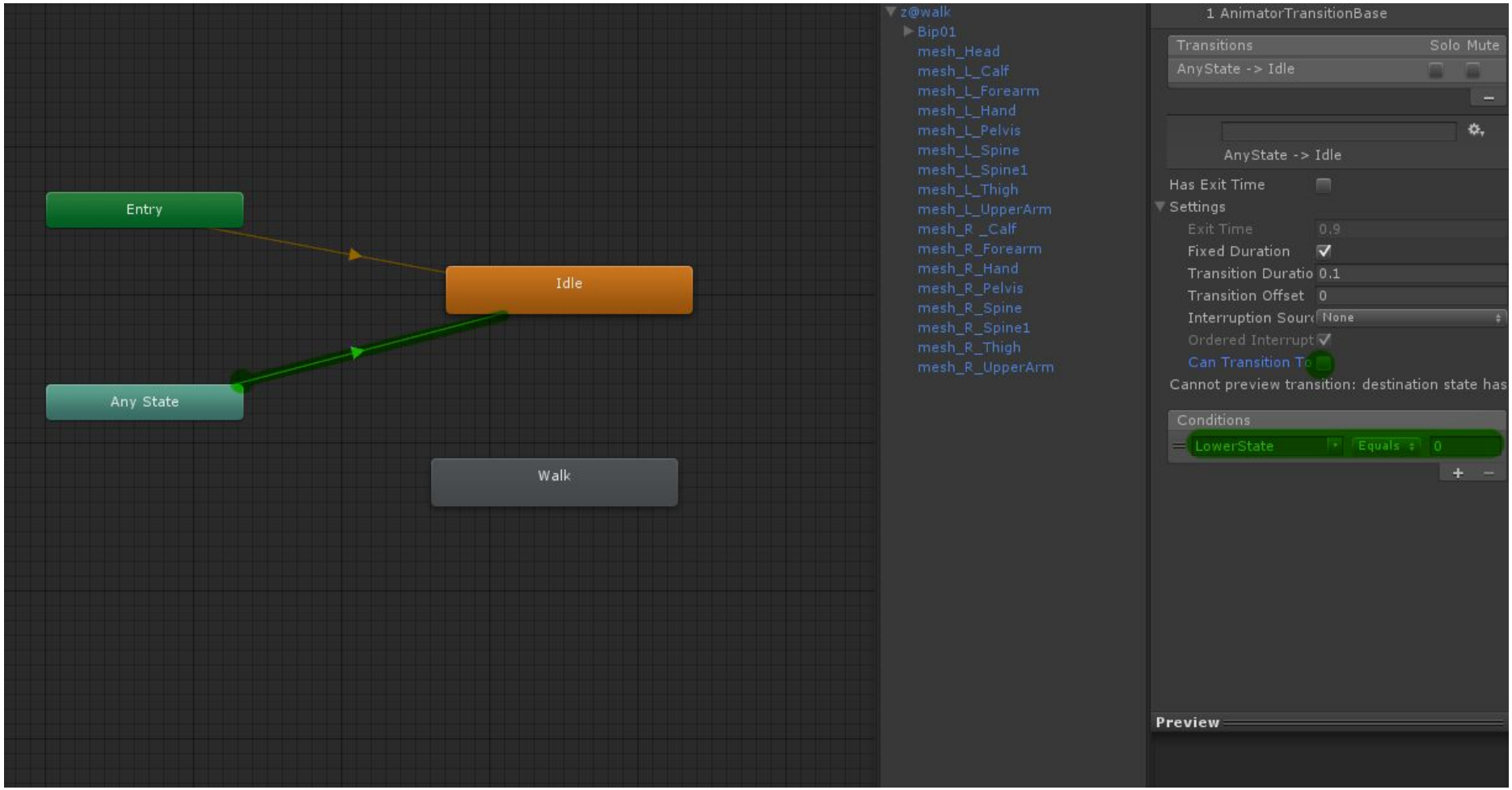


Add **Walk Motion** from a character model into **Motion** parameter on **Walk** State

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.

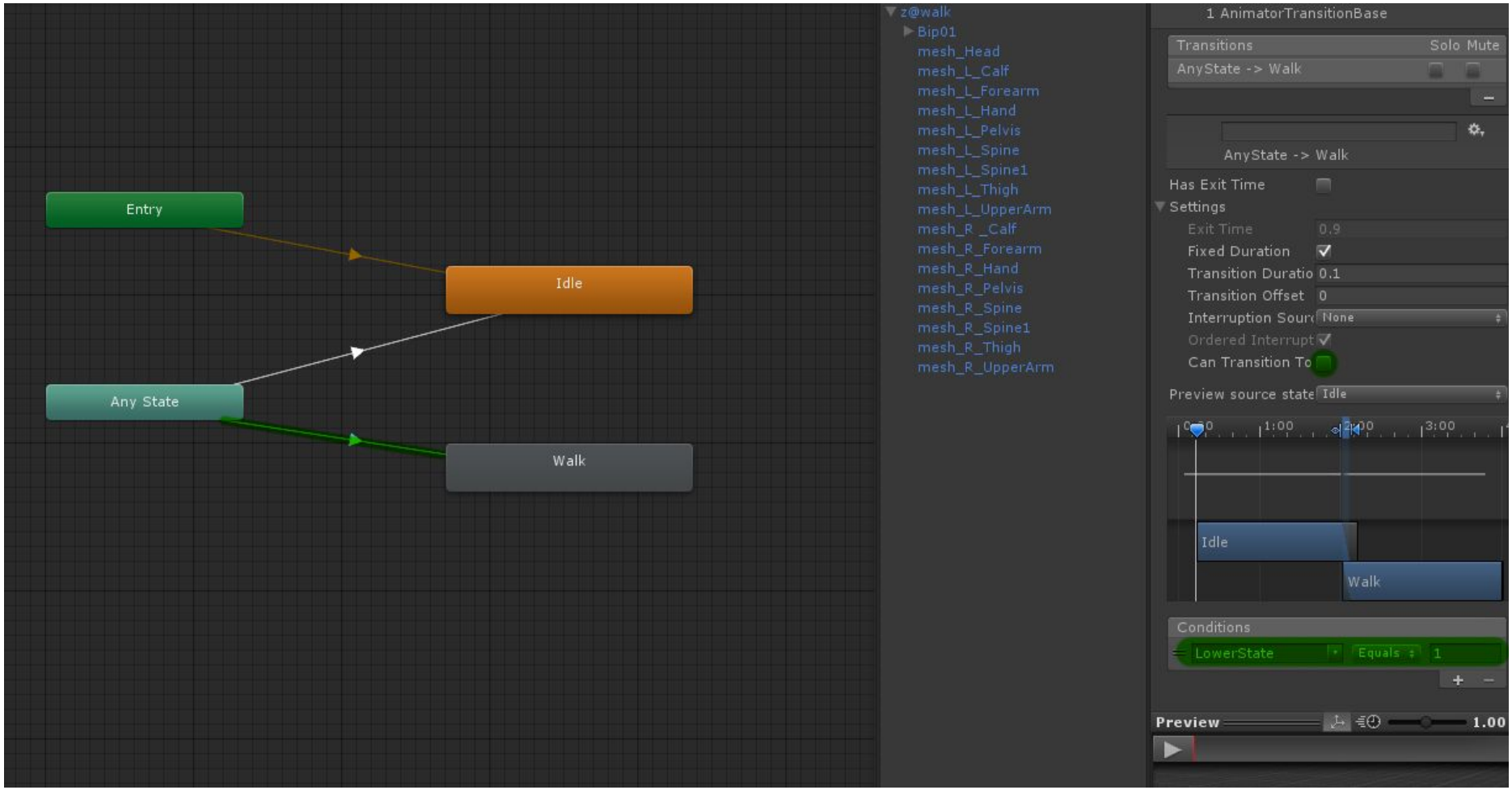
Step 5. Connect **Any State** to **Idle State**



Condition : LowerState : Equals : 0

Uncheck Can Transition To Self parameter

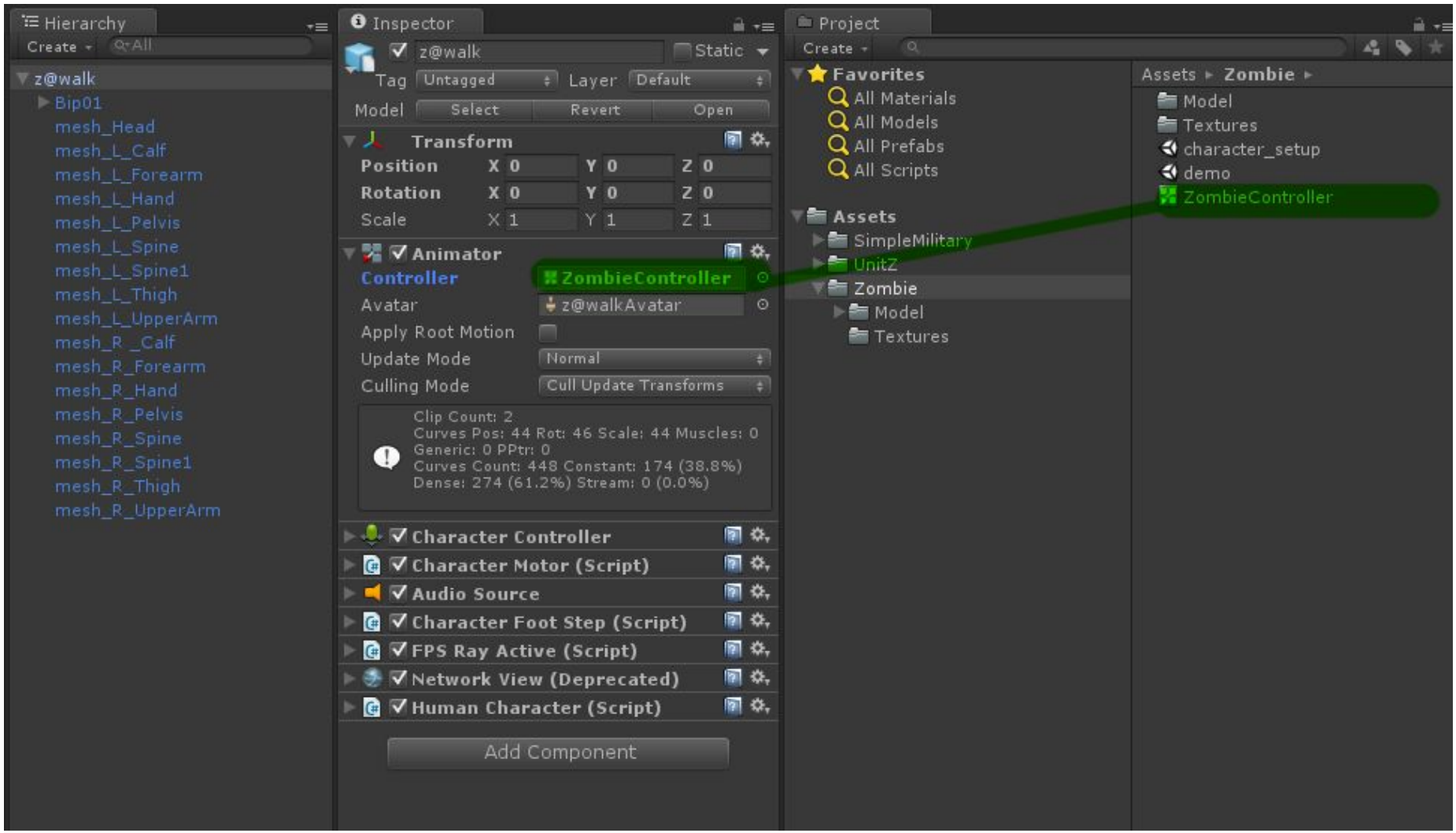
Step 6. Connect **Any State** to **Walk State**



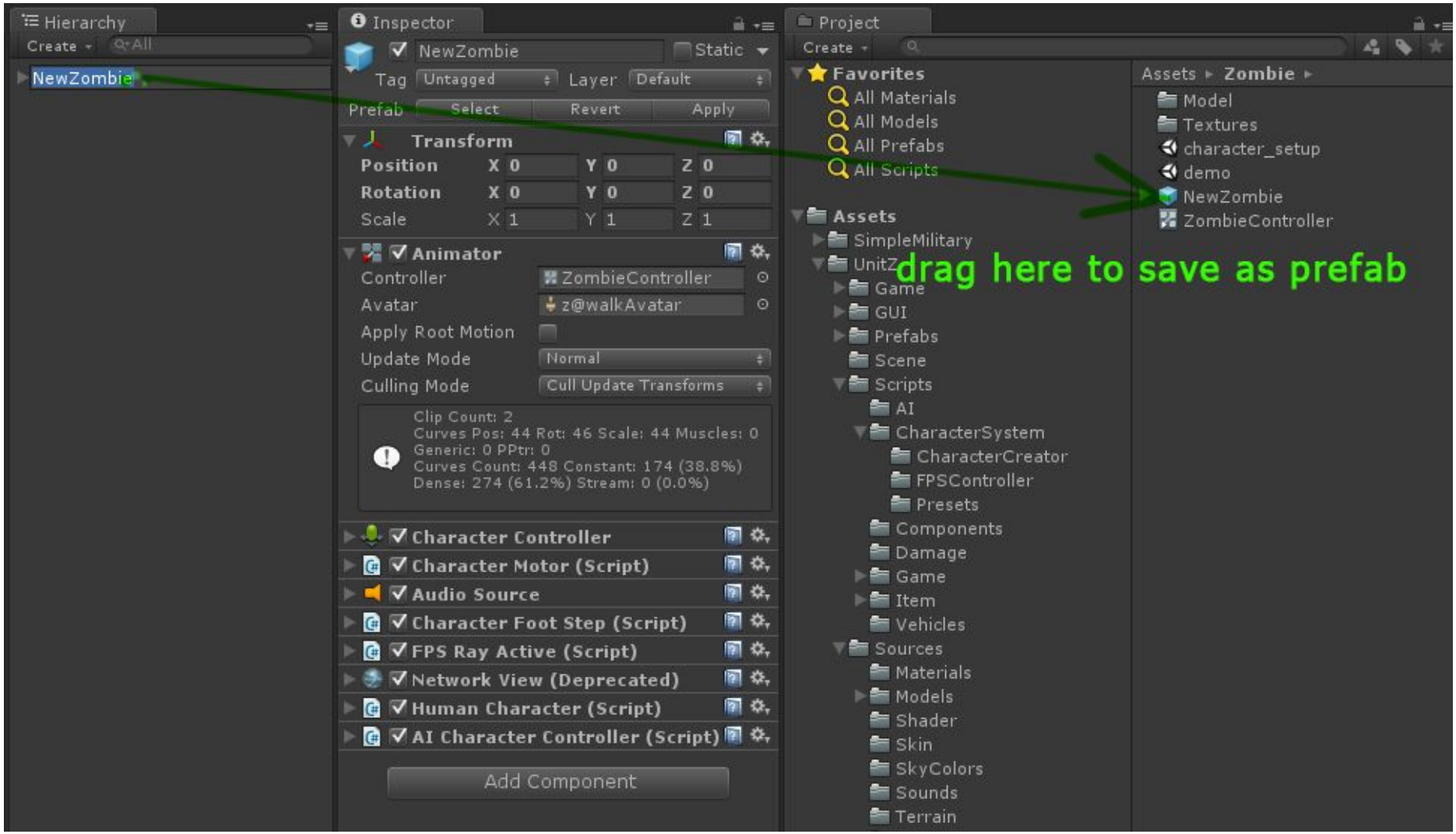
Condition : LowerState : Equals : 1

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.



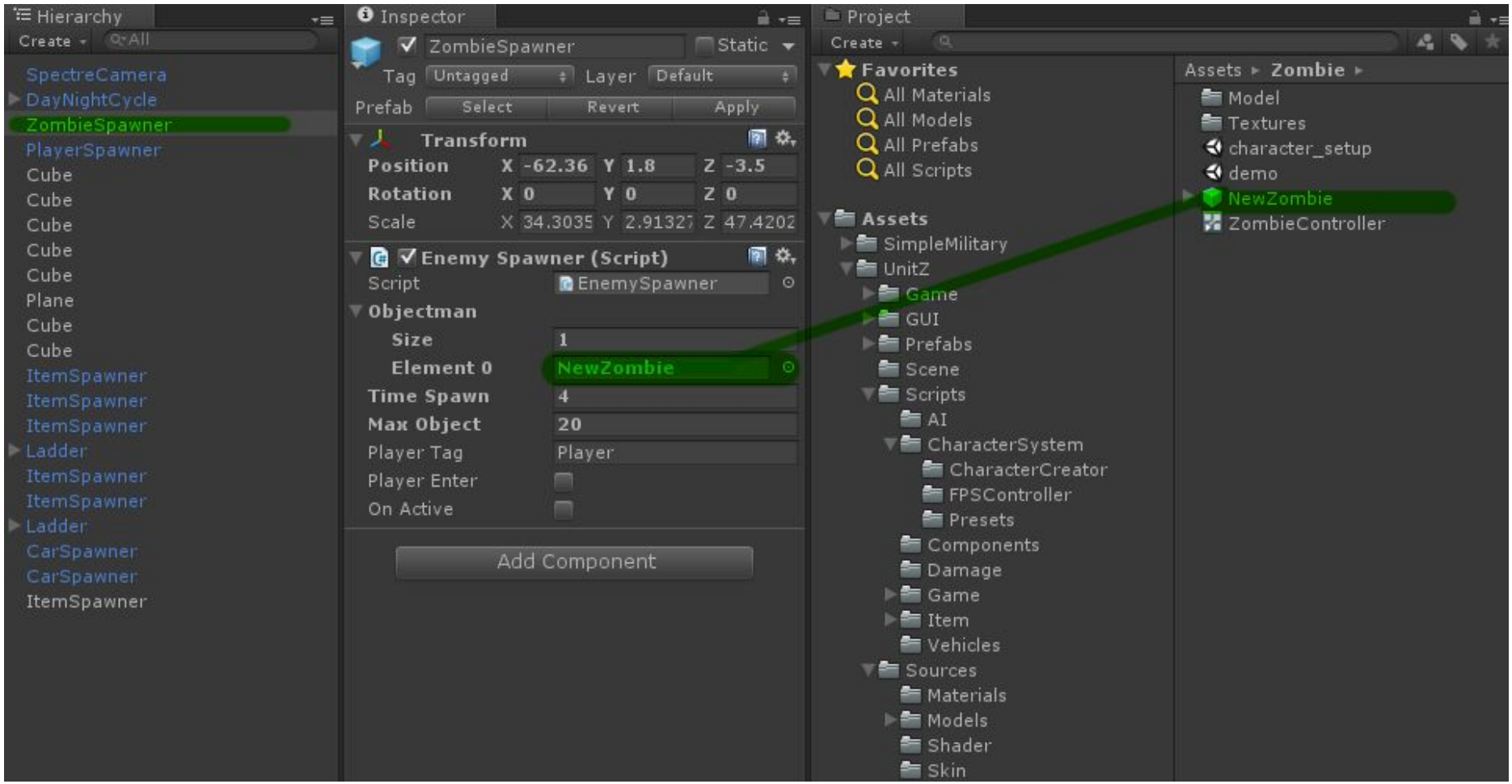
Step 8. Rename character to “**NewZombie**" and save it as a prefab.



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



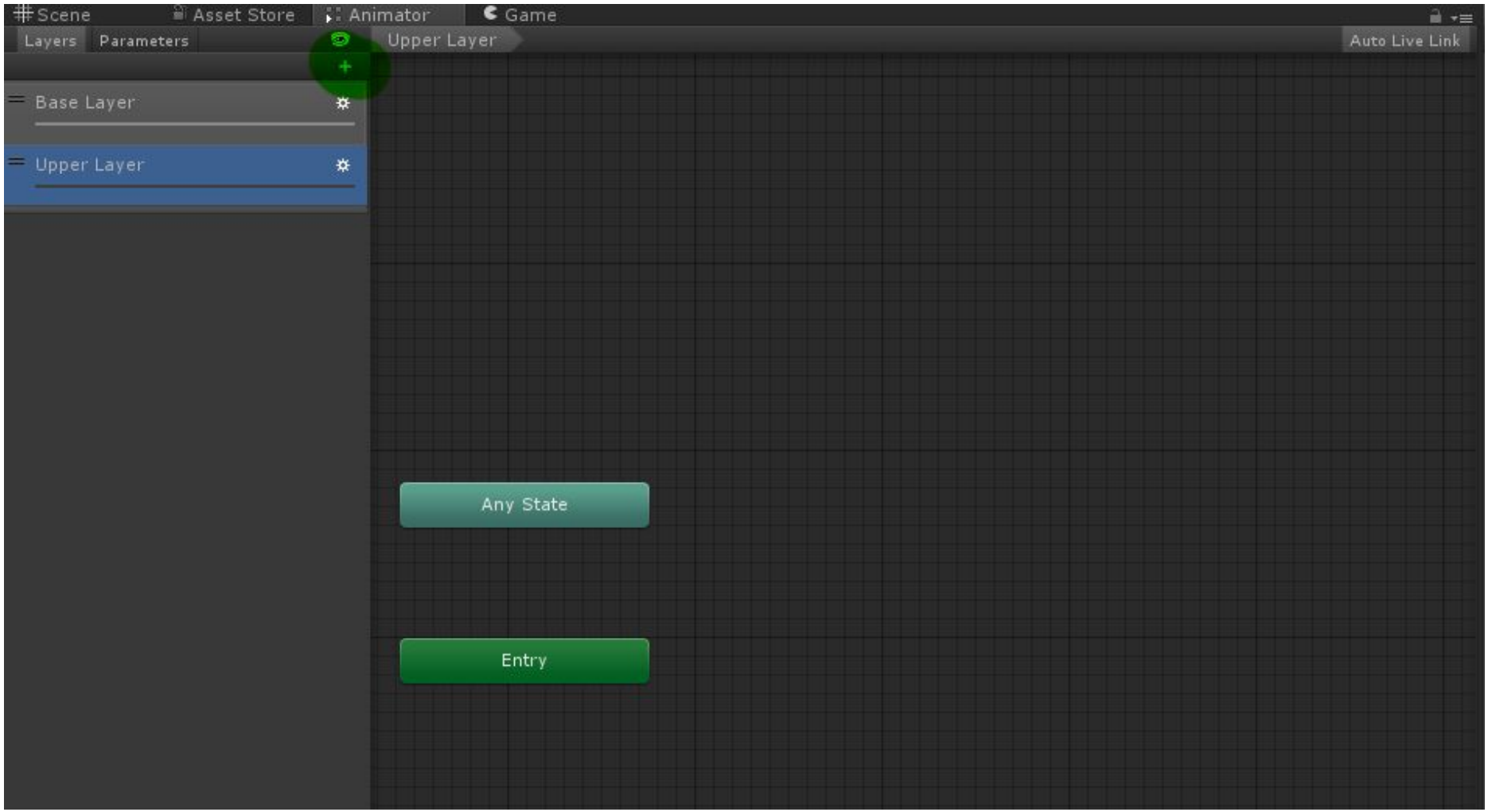
Add your **NewZombie** prefab into **Objectman** parameter on **EnemySpawner** component and **Save** scene

Step 10. Play test

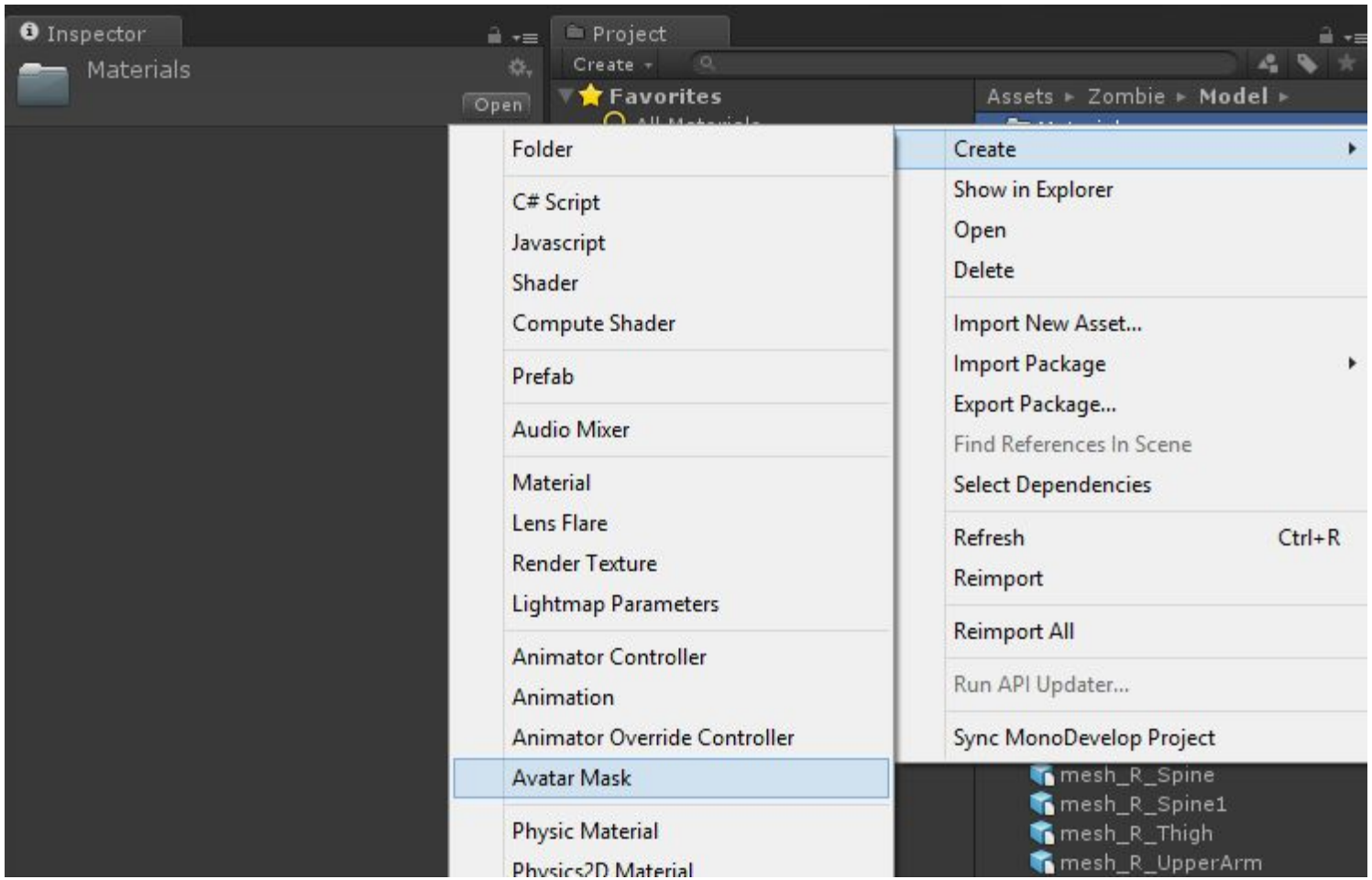
Let's start at "**mainmenu**" UnitZ/mainmenu scene and Don't forget to select level to **Sandbox**

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”**

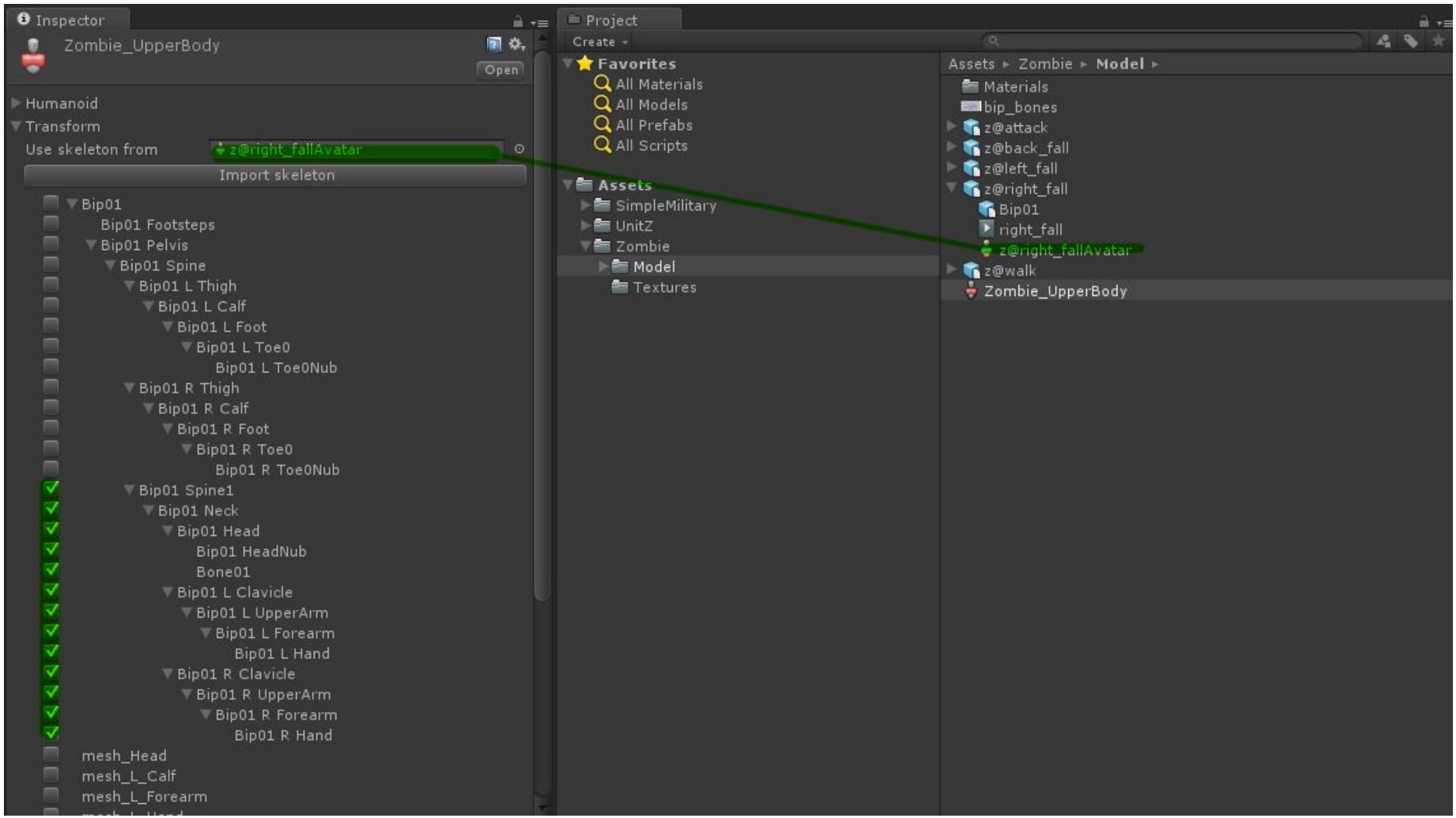


Step 12. Create **Avatar Mask**, by right click on a space in character folder and select **Create > Avatar Mask**

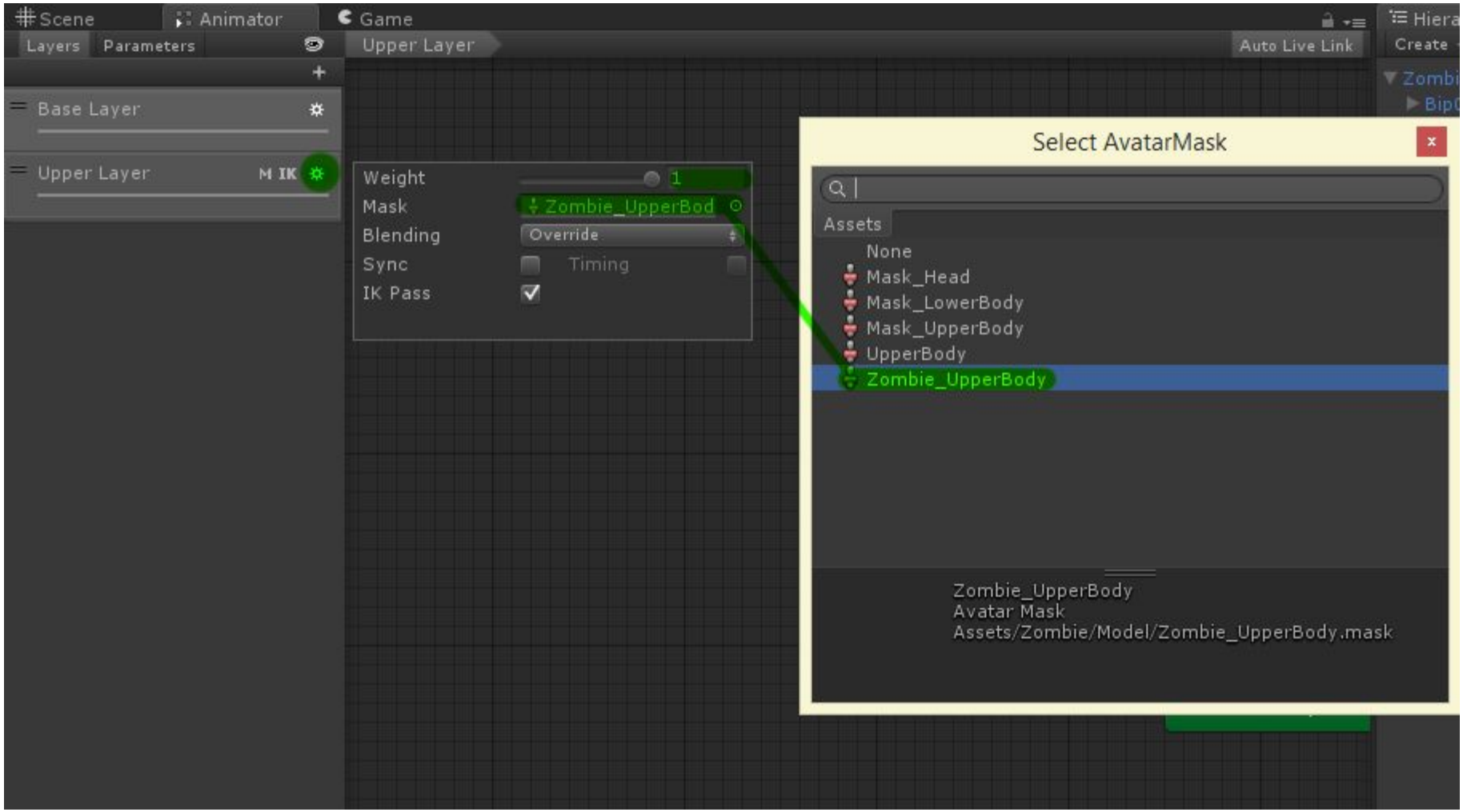


Note * Avatar Mask should in the same place as a character like an Animation controller.

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.

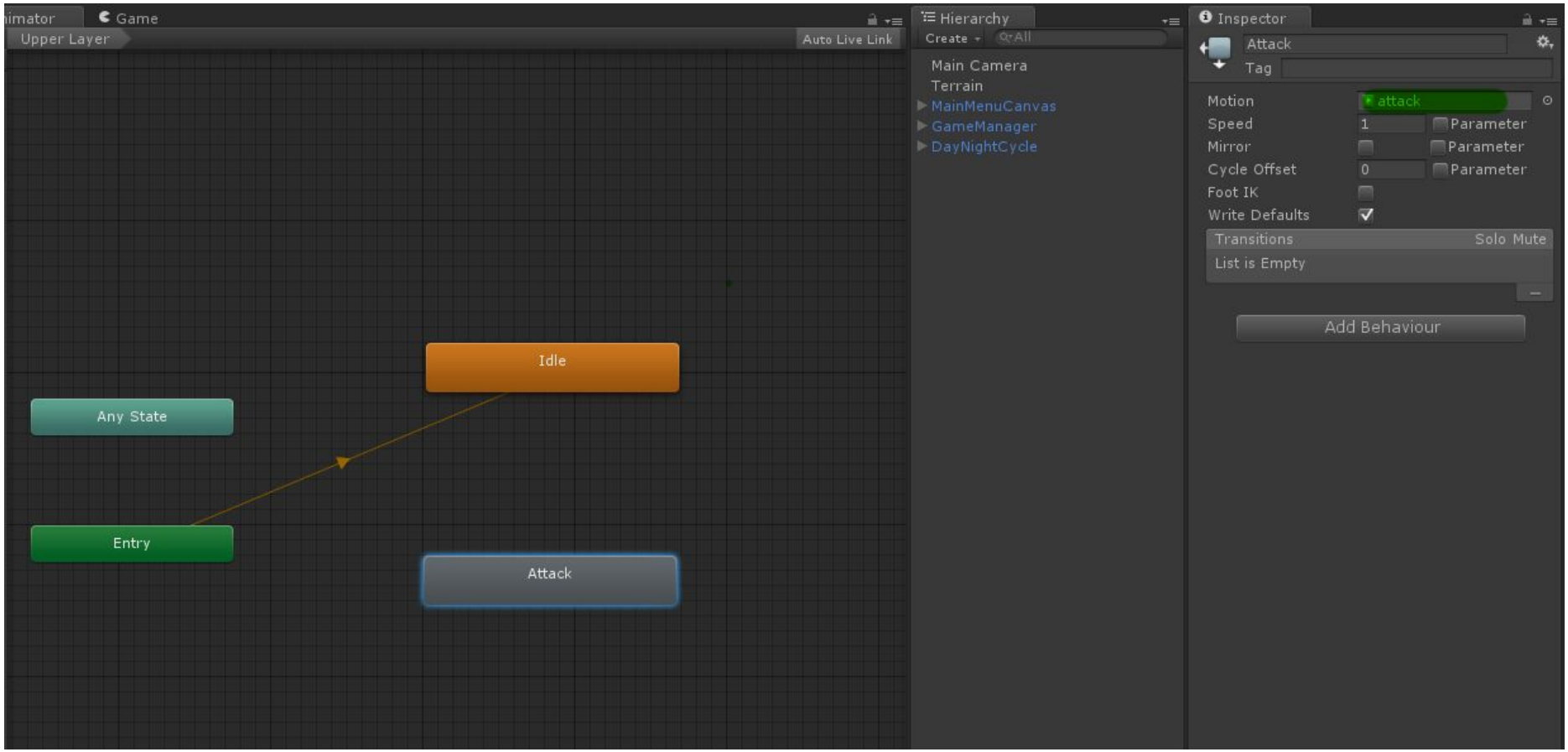


Step 13. Add Avatar Mask into an **Upper Layer**, by click on **Gear** buton and set the **Mask** like this image.



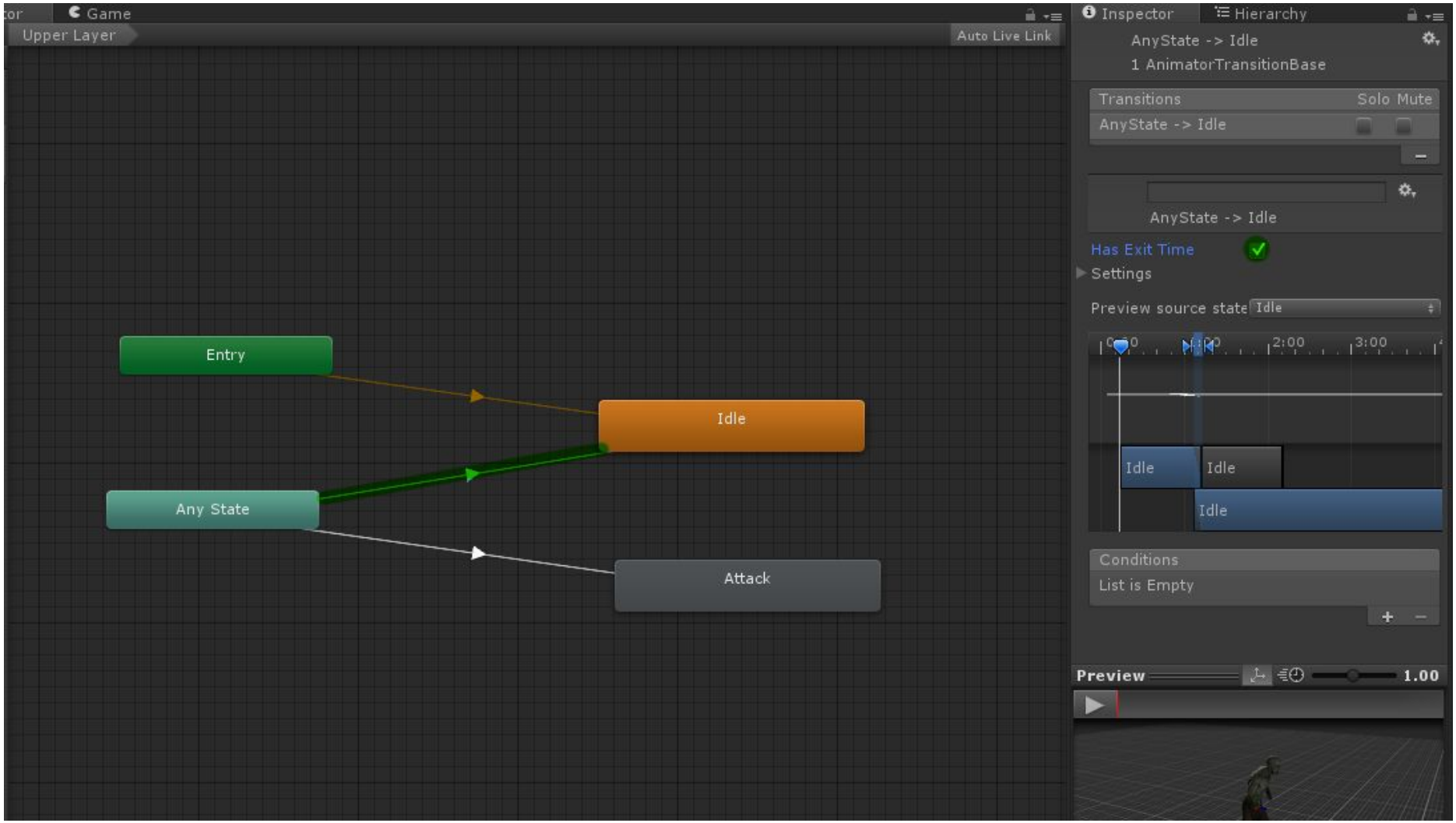
Don’t forget to set **Weight = 1** and **IK Pass** must Checked

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



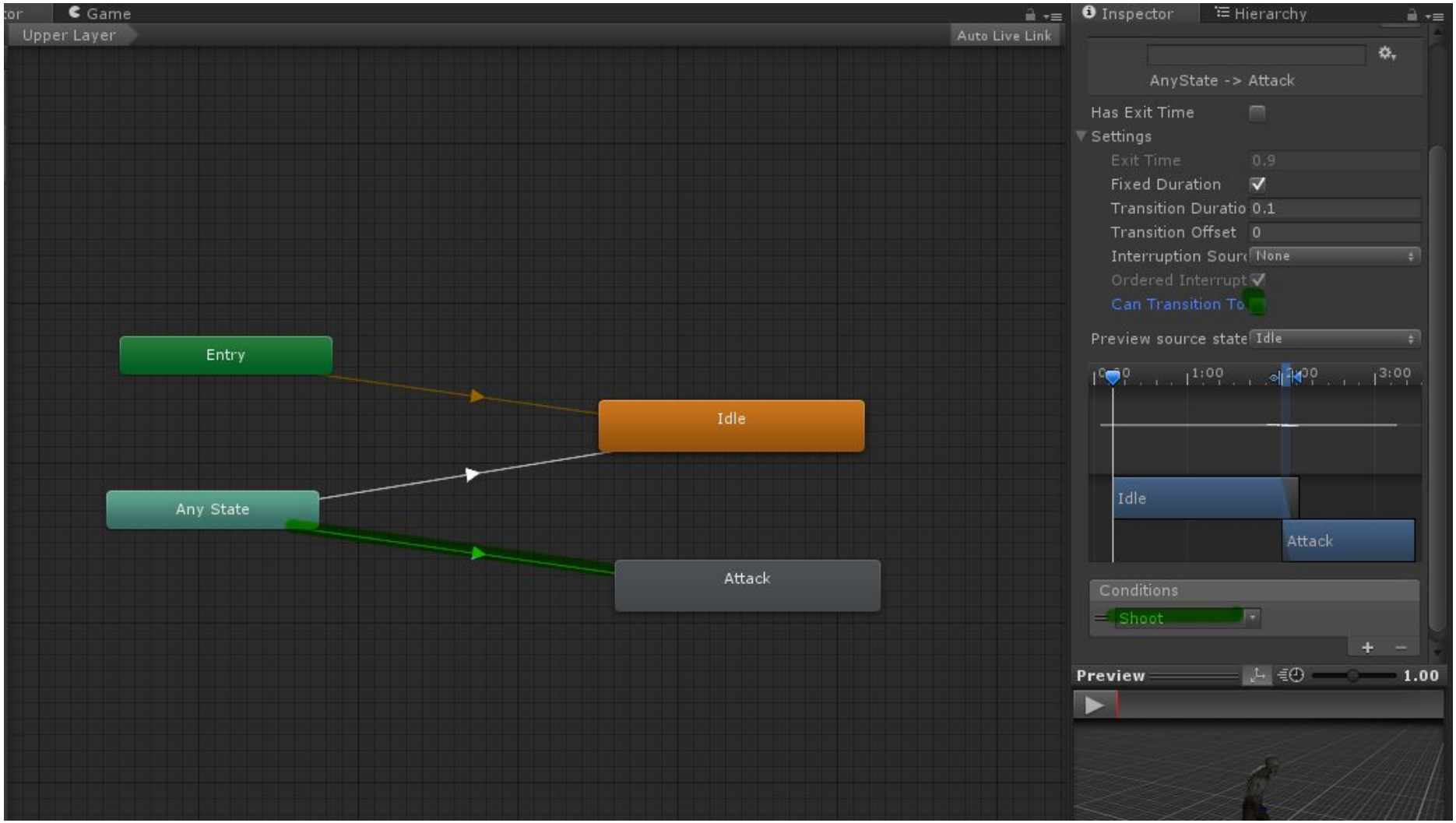
Add **Attack Motion** from a character model into **Motion** parameter on **Attack** State
Add **Idle Motion** from a character model into **Motion** parameter on **Idle** State

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**



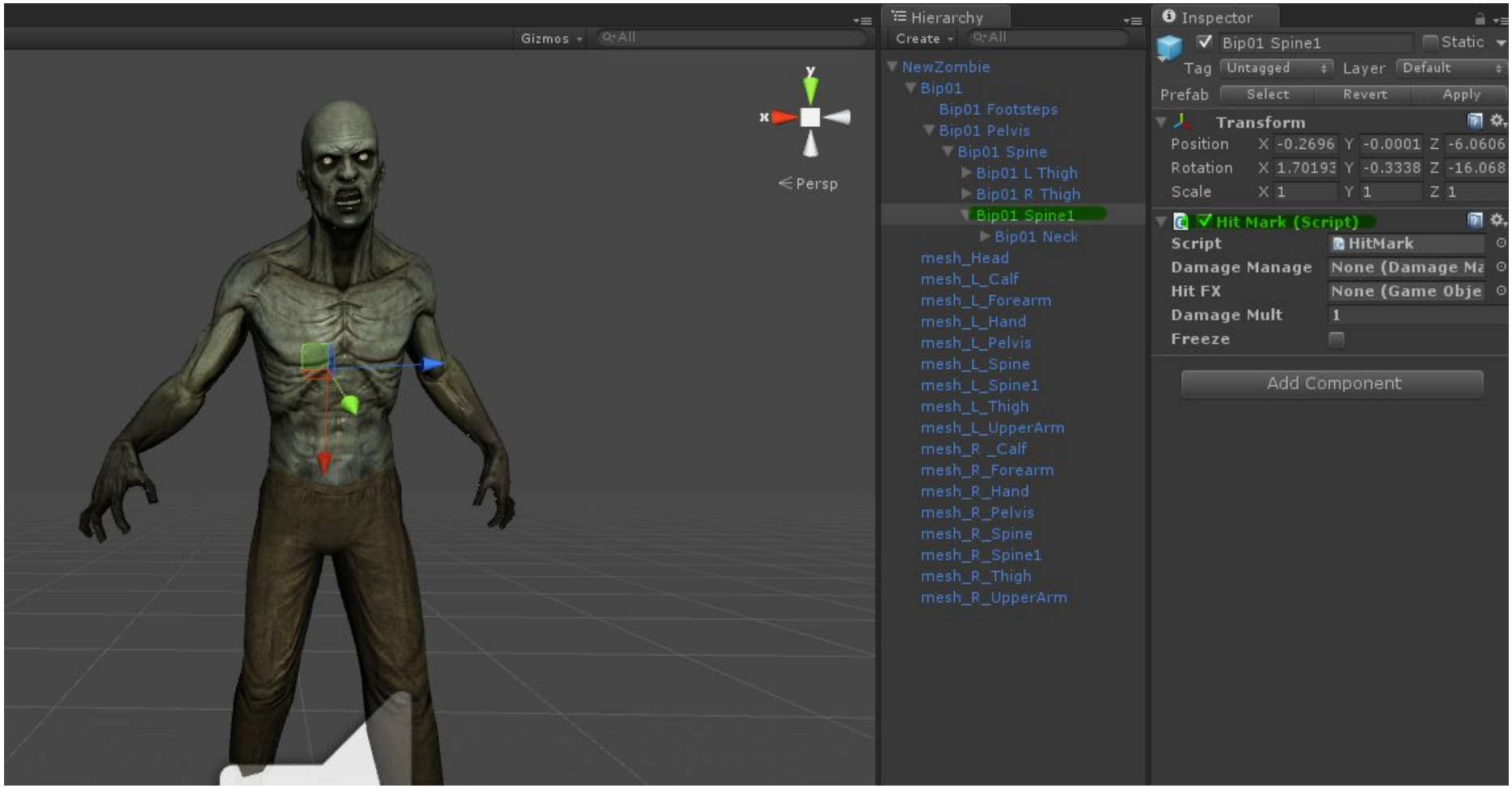
Condition : Shoot triggered, and **Uncheck Can Transition To Self** parameter.

Step 16. Save Scene and Play test again.

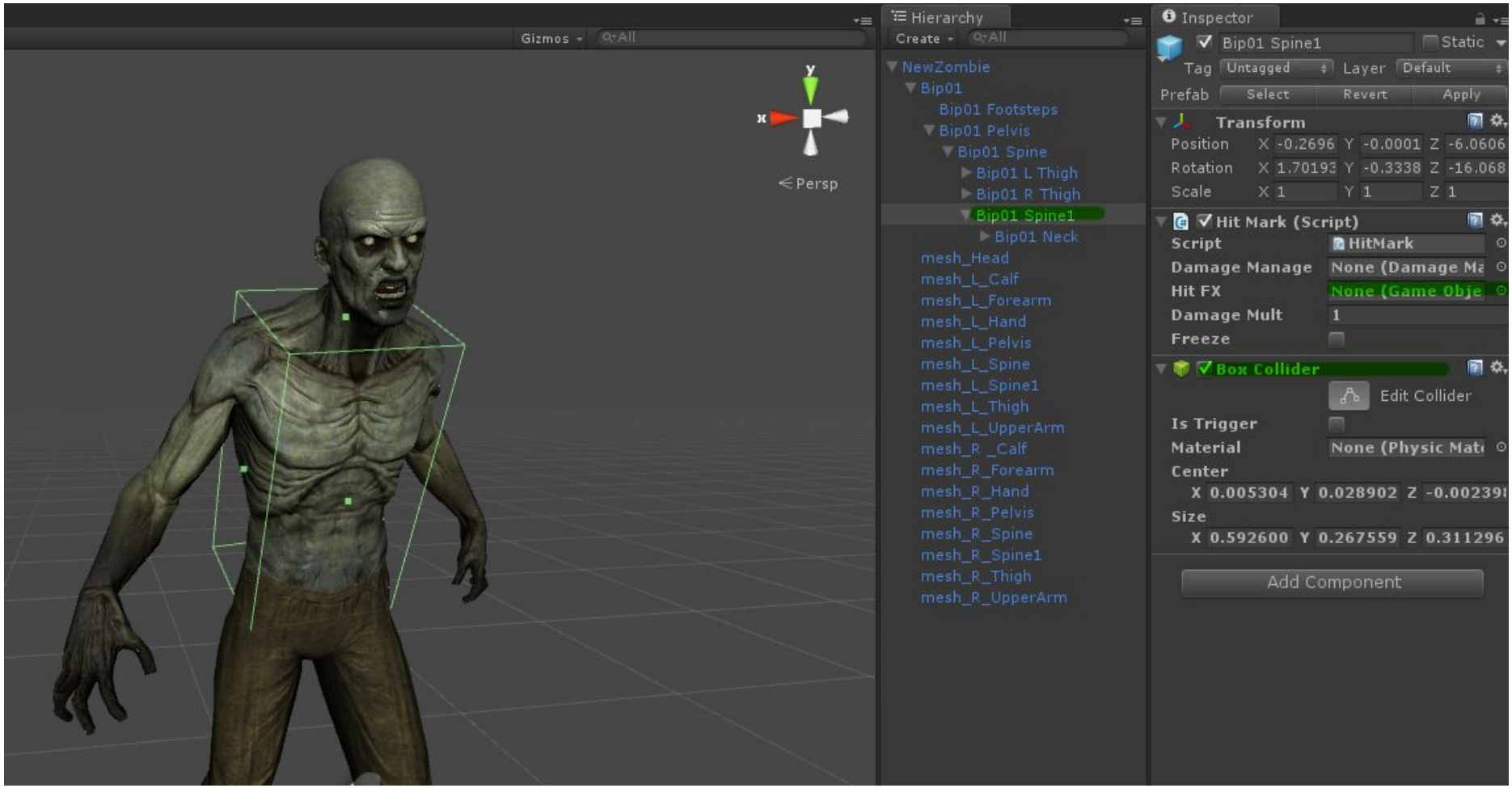
Now you can see the zombies are moving facing toward to you and play attack animation when it close to you.

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

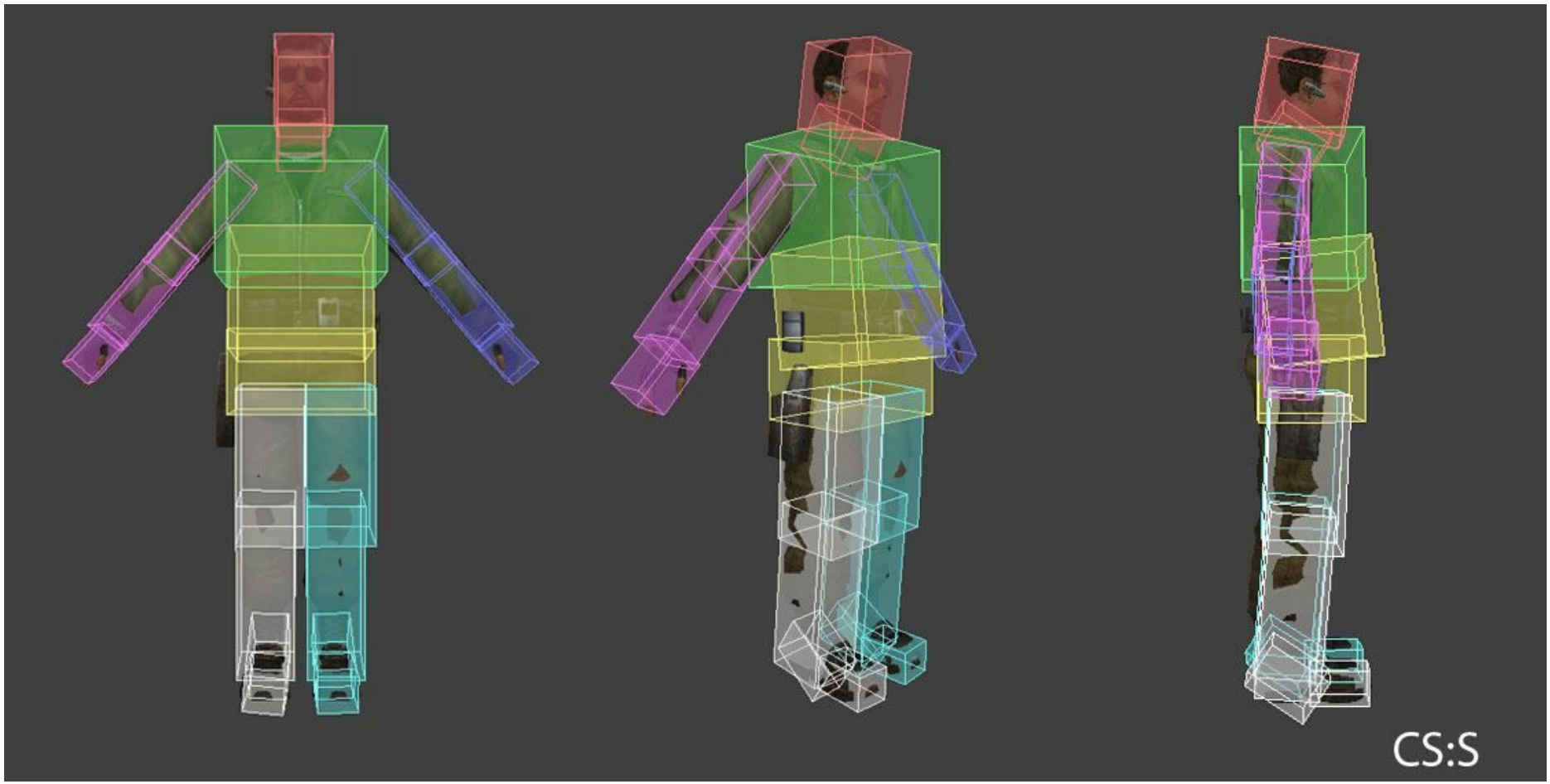


Don’t forget to adding **Box collider** into the **bone**, by go to **Component > Physics > Boxcollider.**



Set as **Trigger** and 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

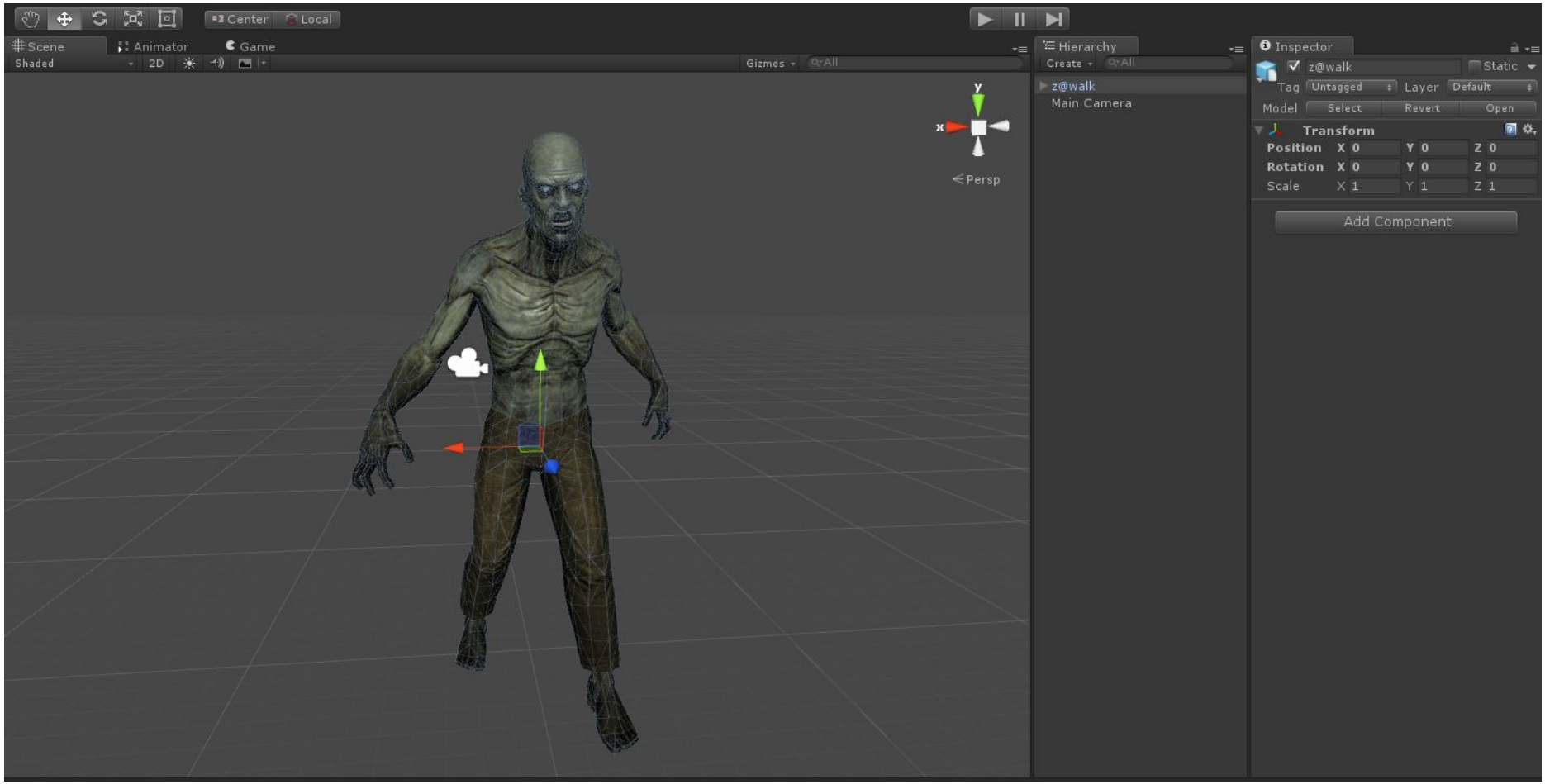


In this image is showing how to setup all the hitbox to cover the whole body. Separate by a colors and related to a **Damage multiplier.**

Step 18. Click **Apply buton** 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.***

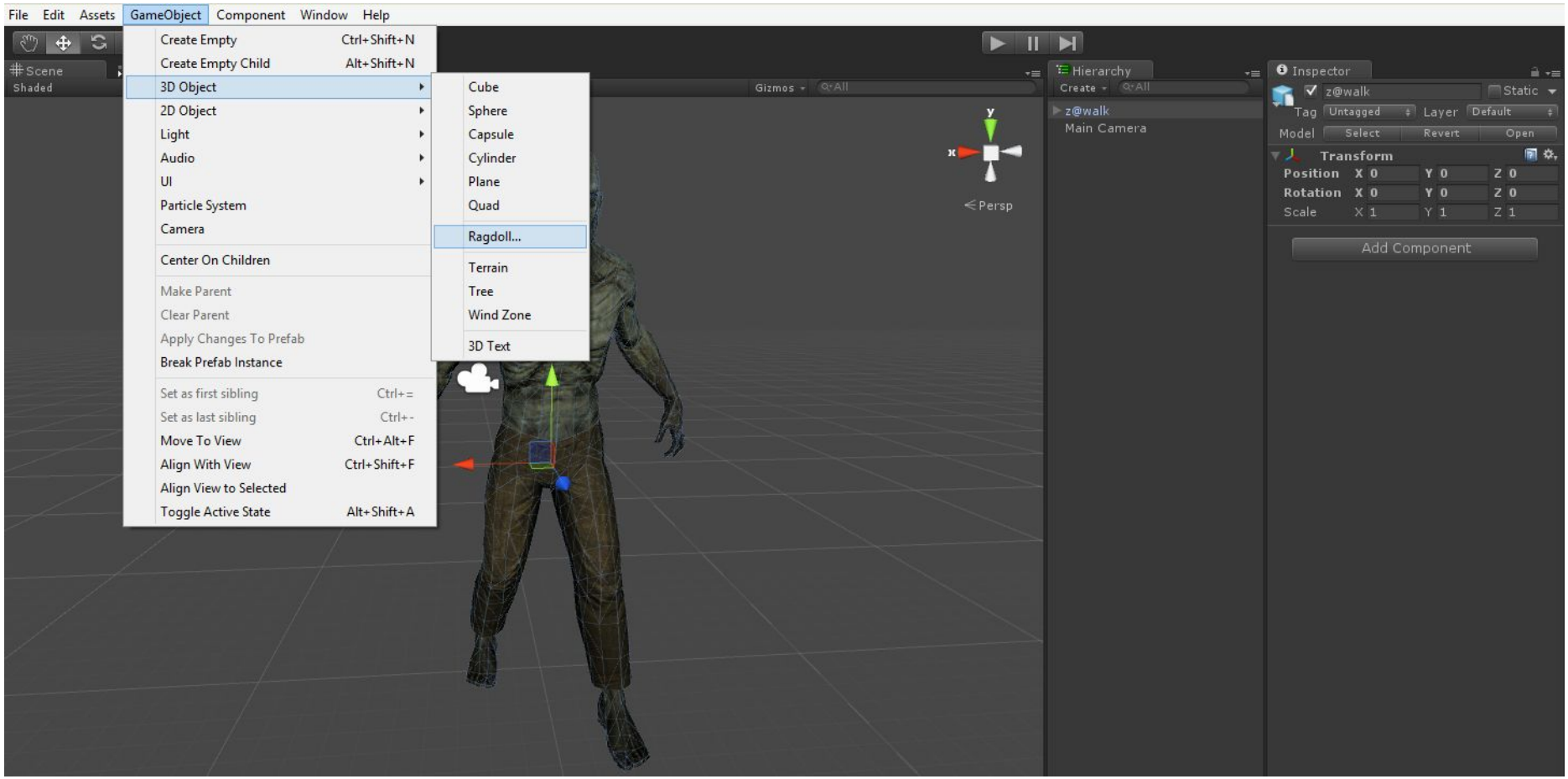
Step 20. New scene for **Ragdoll**, Please **New scene** and place a character model into the scene.



Don’t forget to Remove an **animator** if included and set position to 0,0,0

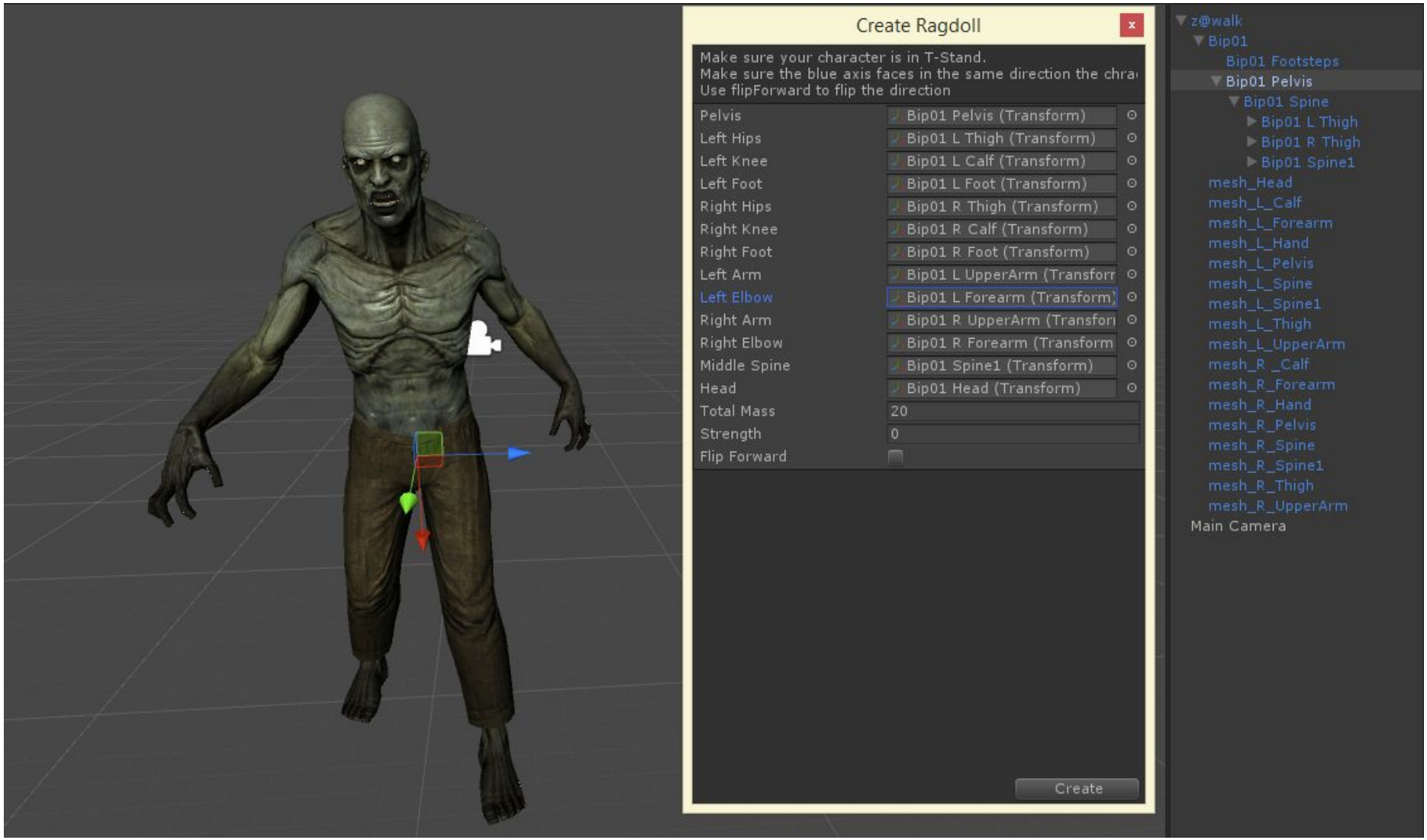
Importance * Ragdoll must same scales as a character.

Step 21. Create **Ragdoll**

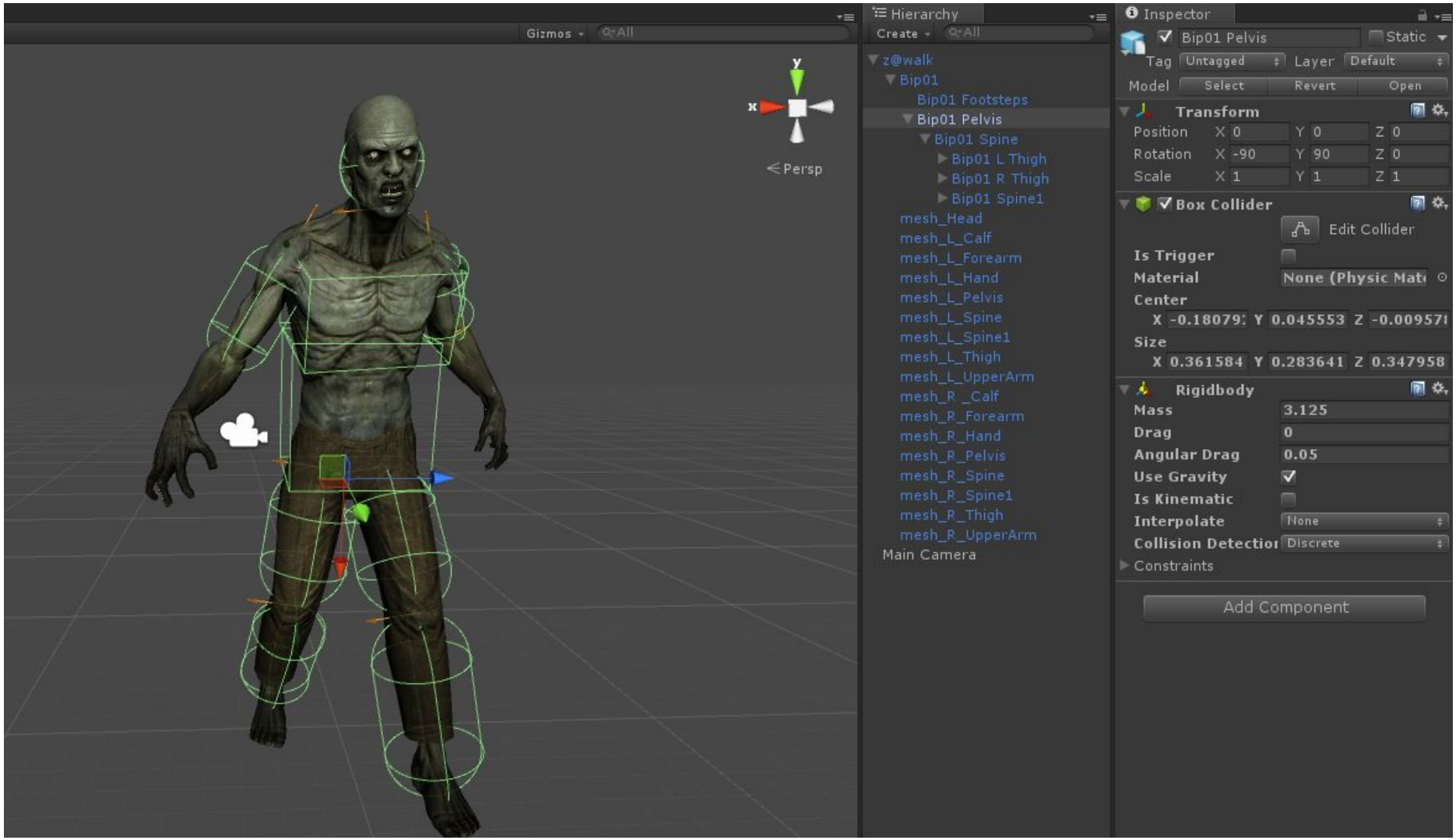


Please go to **GameObject > 3D Object > Ragdoll**

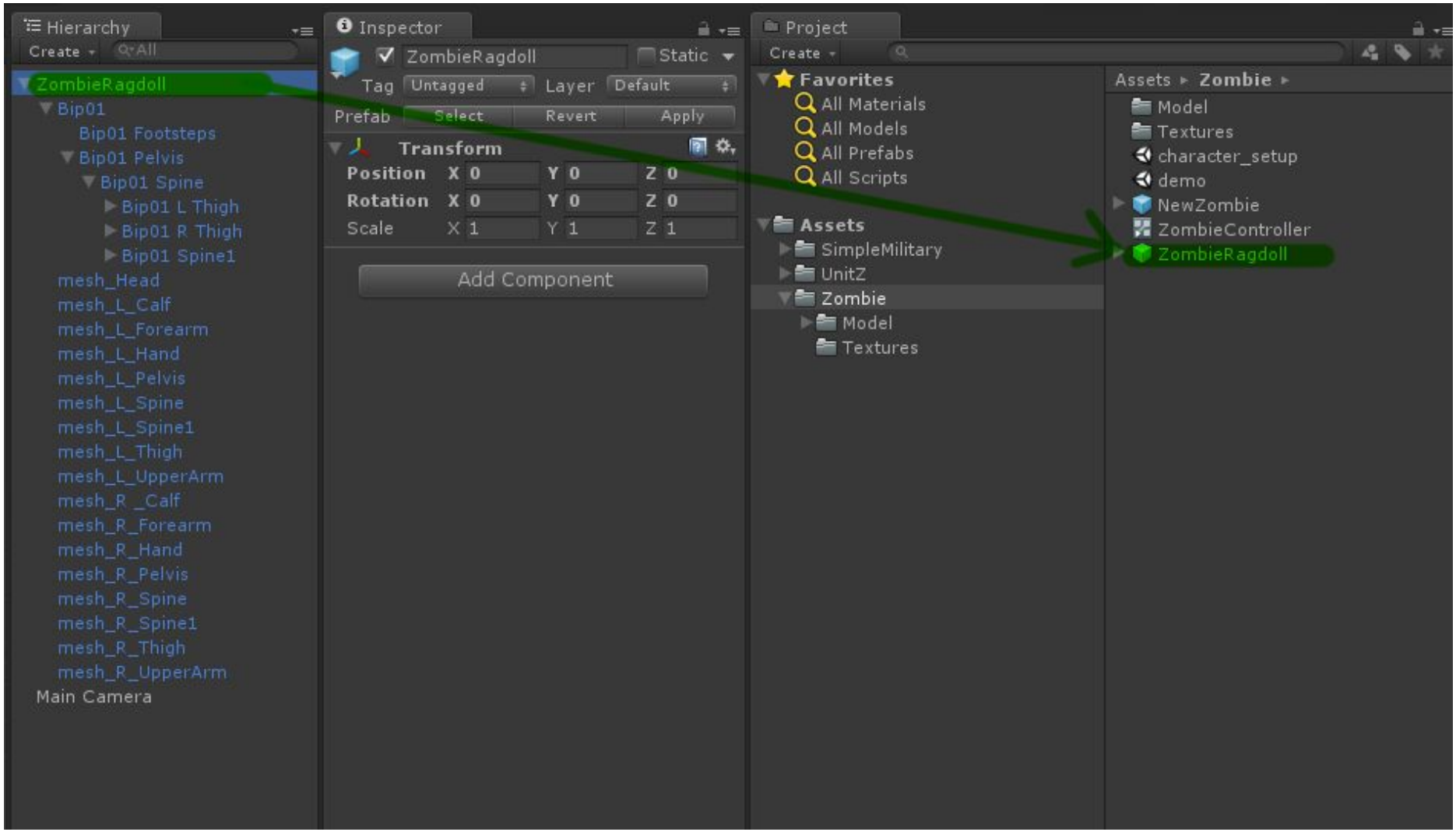
Step 22. Setup all bones into the parameters, make sure it correctly relates to the names.



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

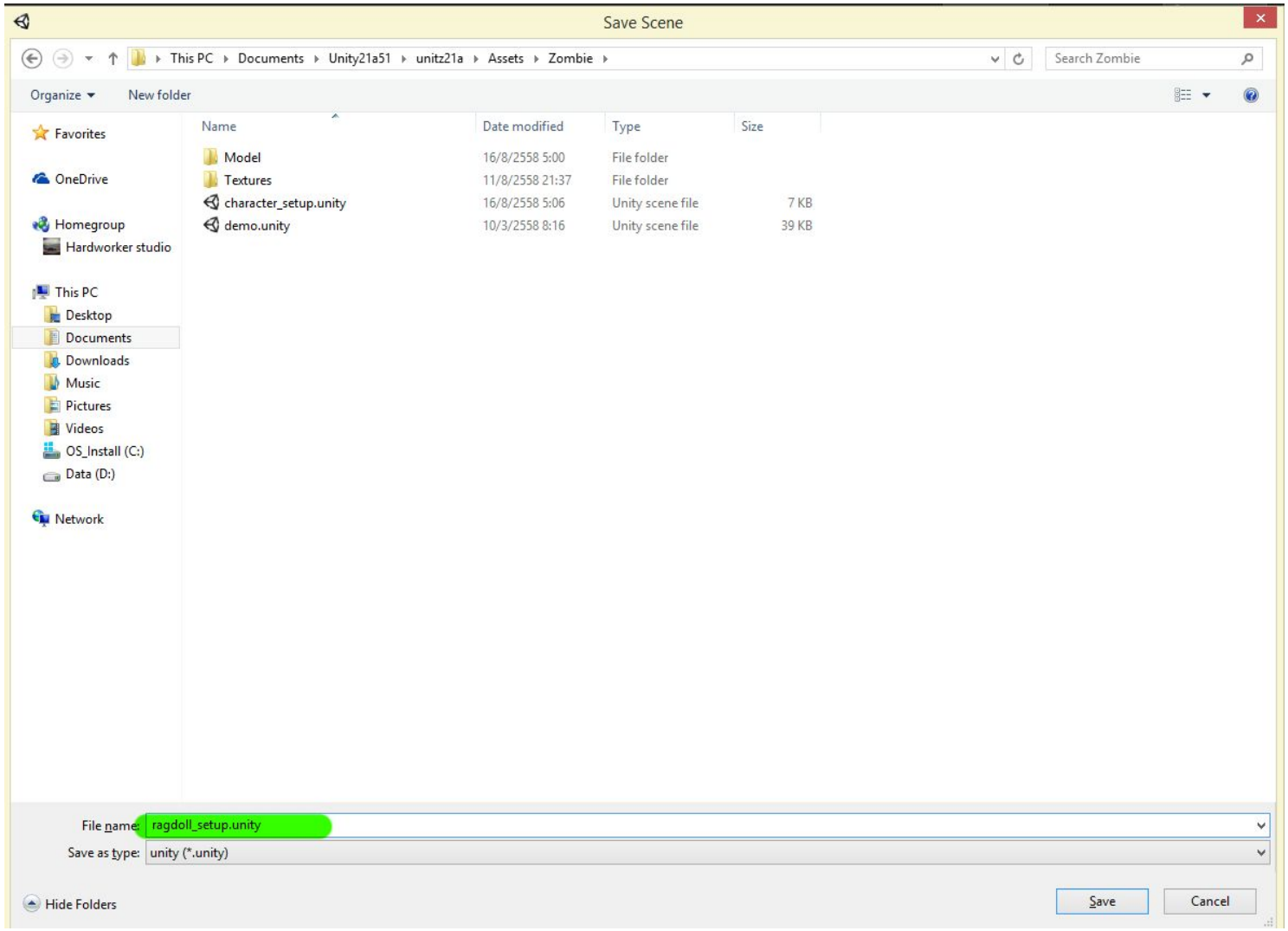


Step 24. Rename to “**ZombieRagdoll**” and save as a prefab.



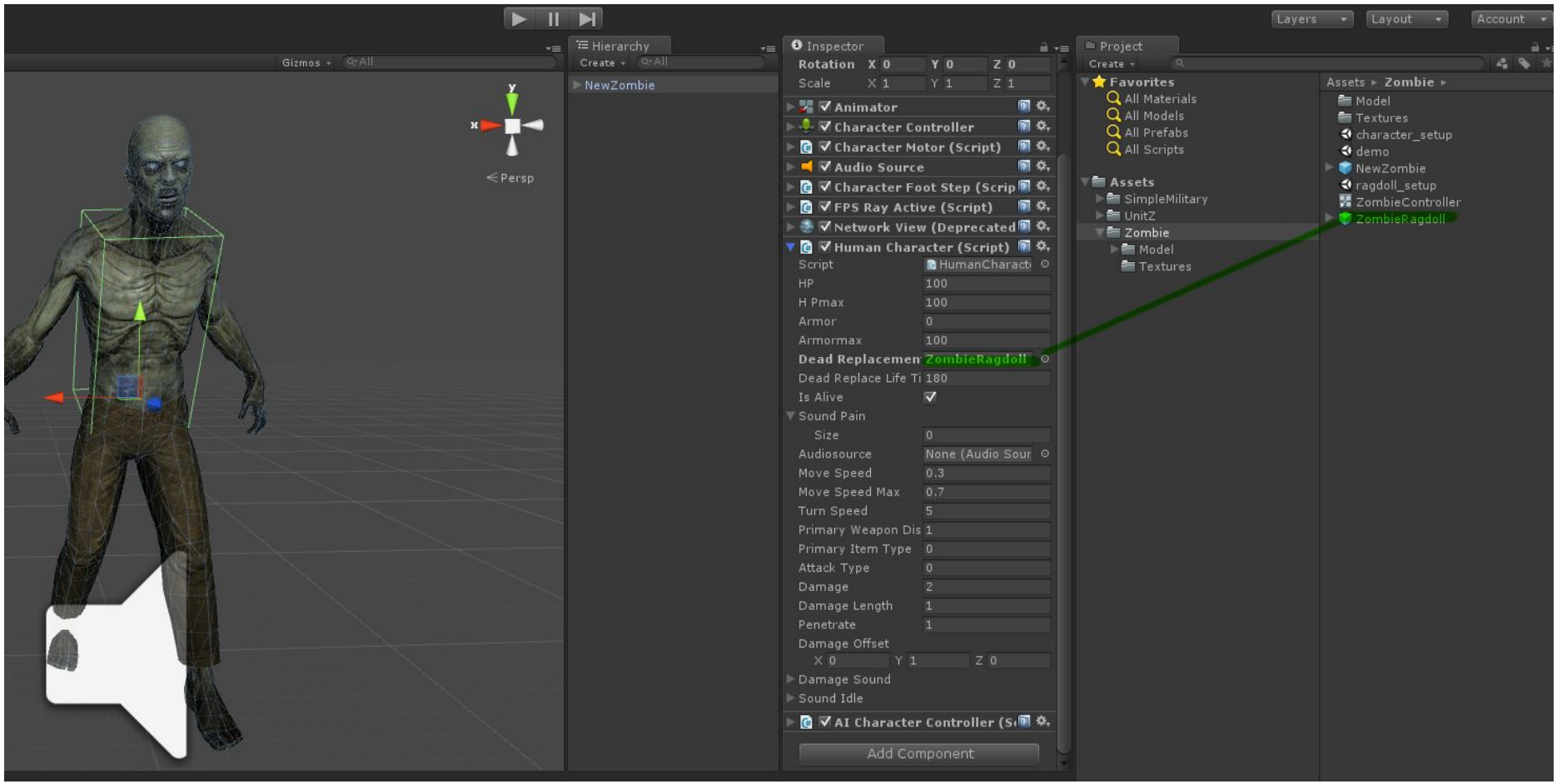
Note * a ragdoll should save at the same place as a character so it easier to custom and managing.

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
Rachan Neamprasert
Email : hwrstudio@gmail.com