How to create new gun.

This tutorial will show you how to adding new gun into the game by using animated hands and gun for **UnitZ 2.2**. this tutorial are includes with a following parts please follow carefully.

1. **FPS view**
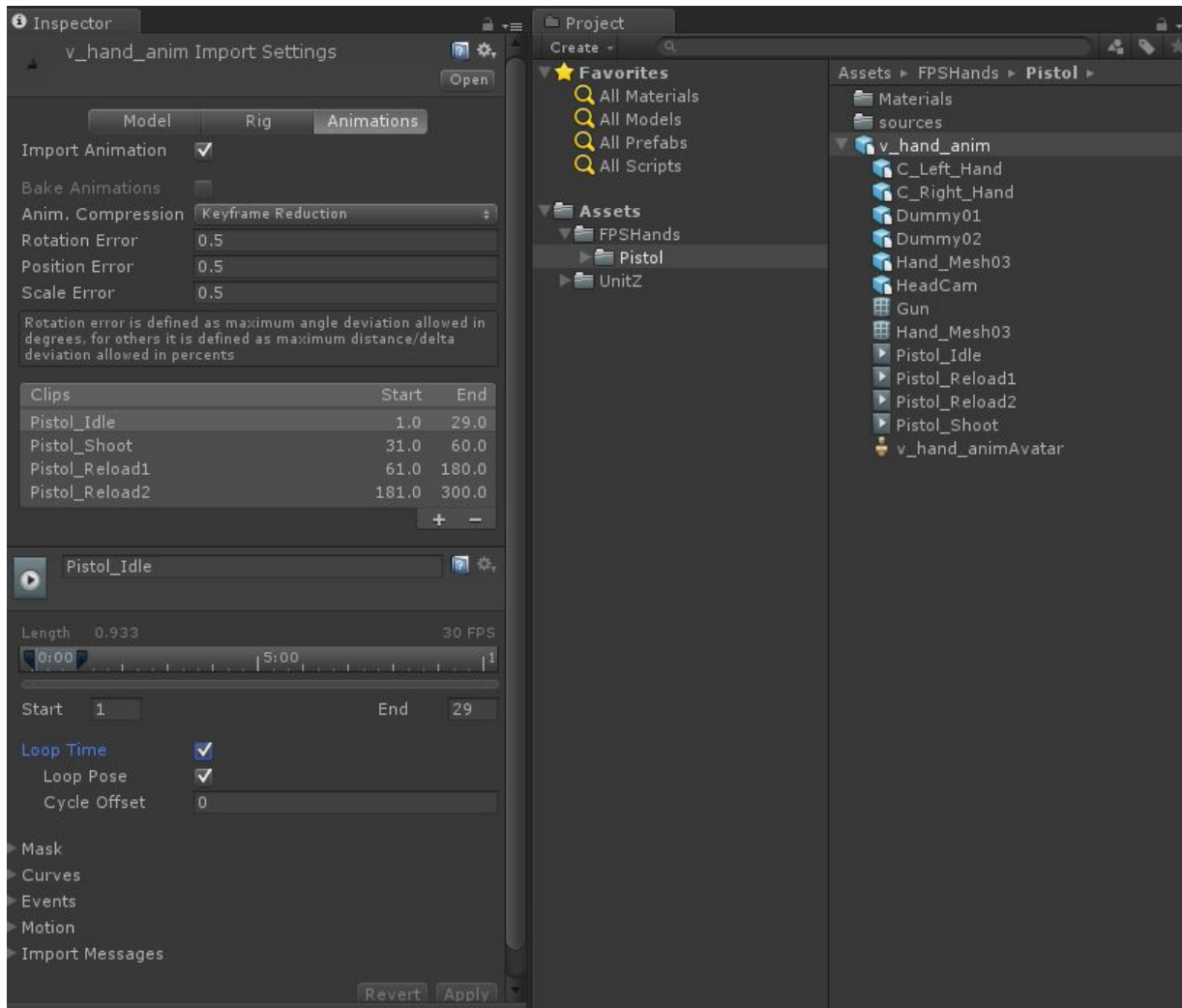2. **Third view**
3. **Drop view**

How to create a gun in (FPS View)

This steps are show you how to use animated hands and gun to create a gun in FPS view.

Requirement : This sample is require an animated **gun + hands** with animations **(Reload , Shoot , Idle)**
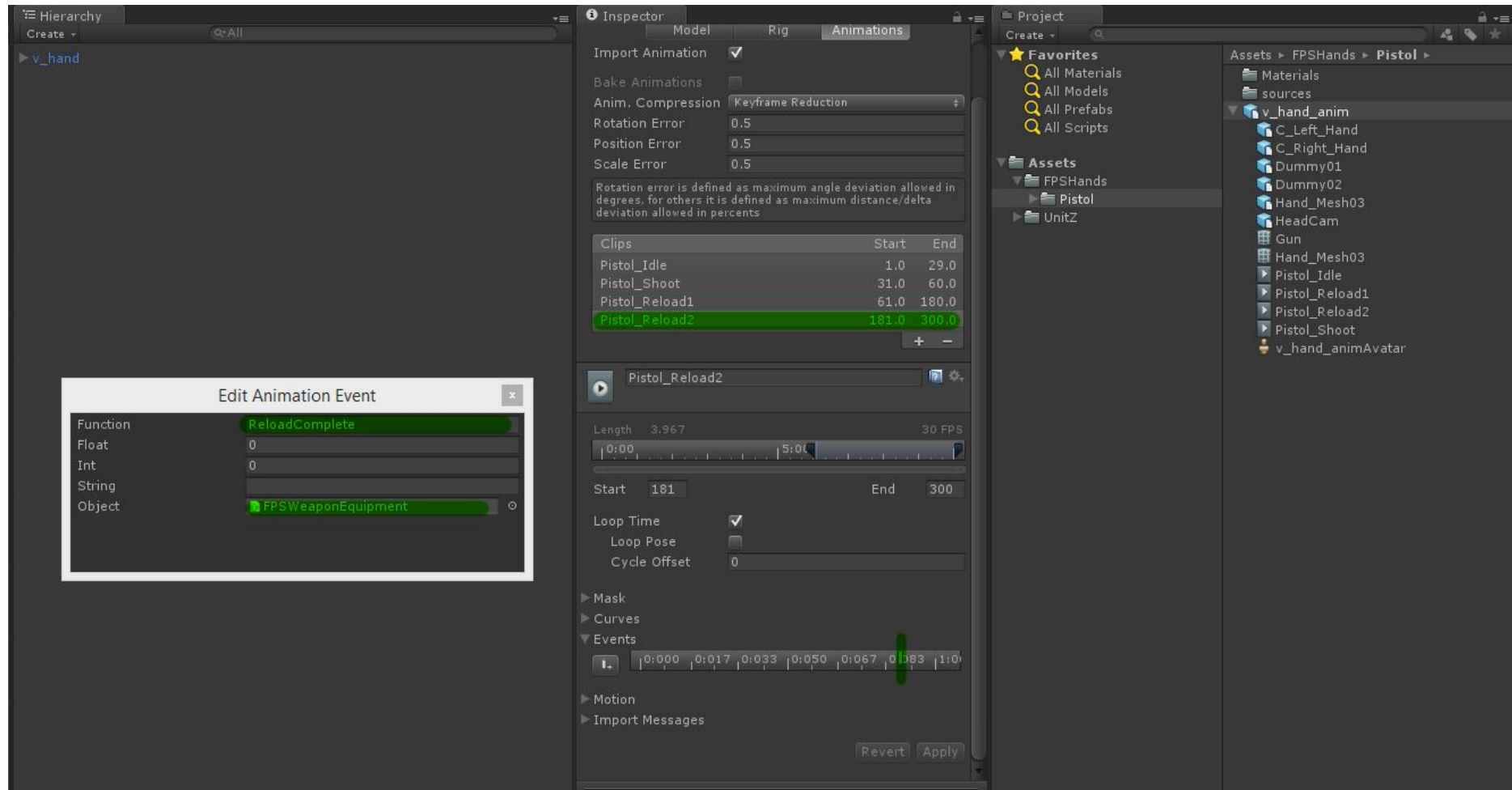
Step 1. Import model into the project.

Please check all the animations, this sample is require **(Idle , Shoot , Reload)** animations.

Step 2. **Add Event.** We need a callback event on **reloading** animation when the gun is finished reloading, please select reload animation and add Event at the ending frame, by click **[]+** button and drag it to the position.
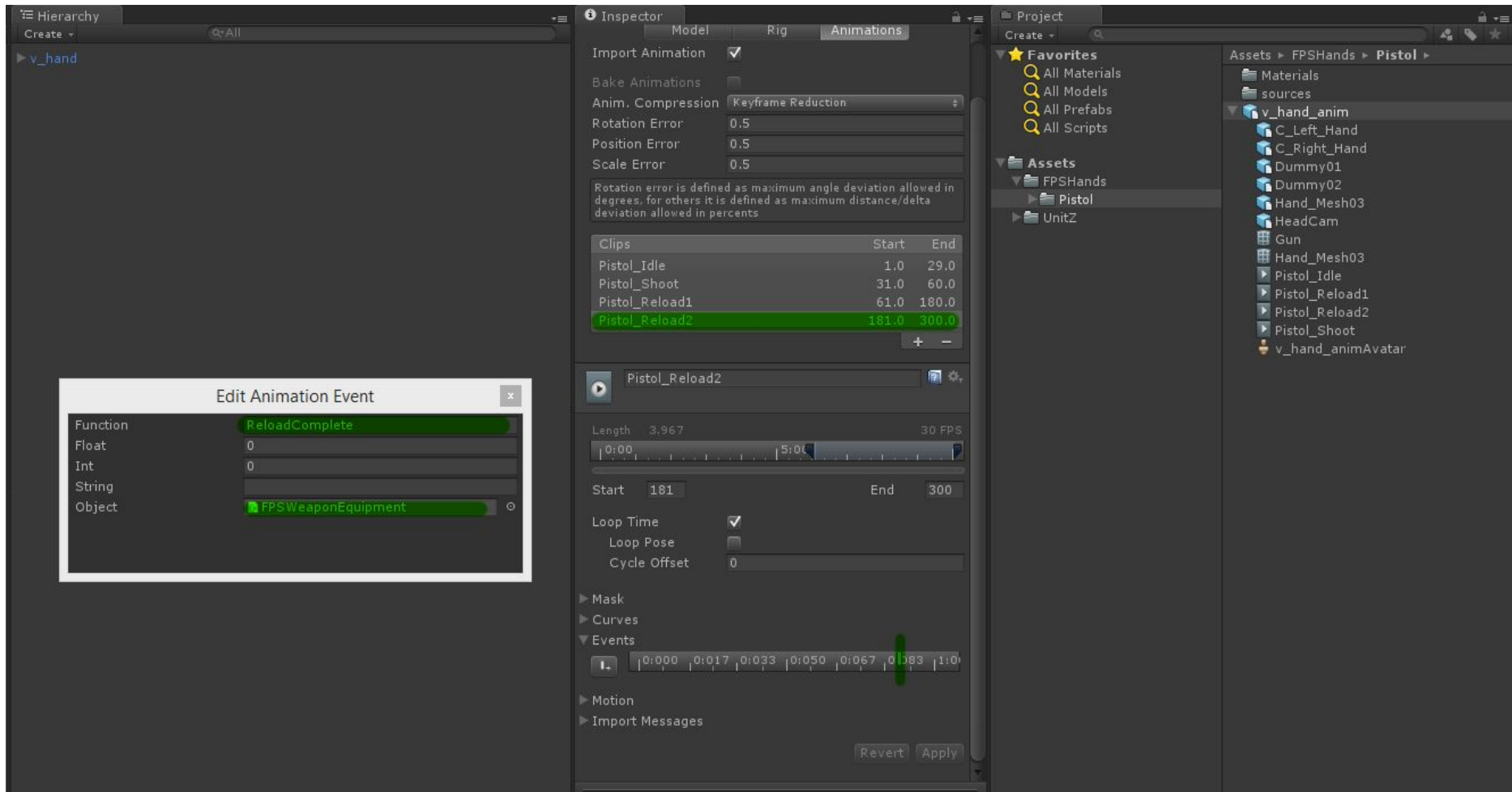
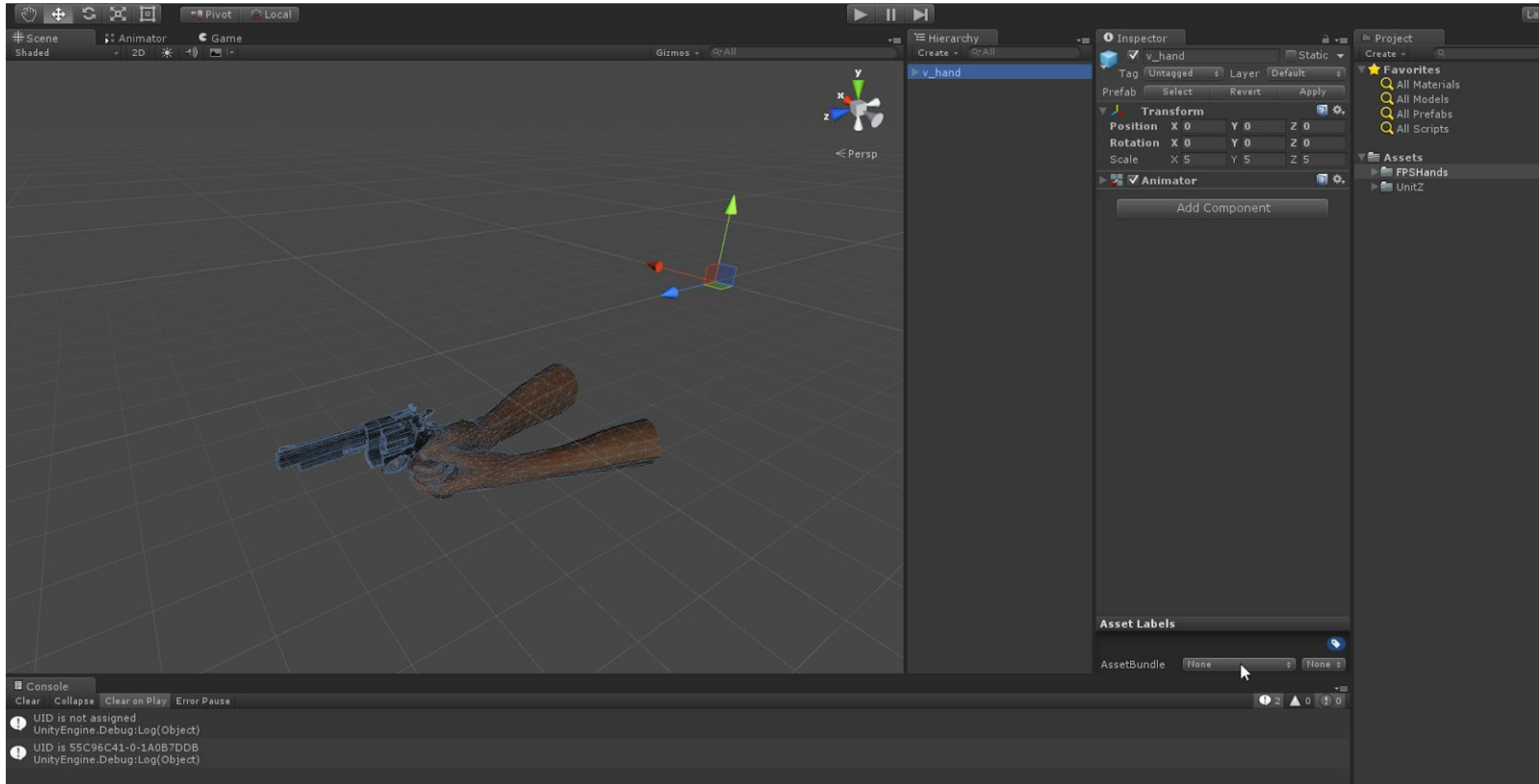Setup parameters. **Function** : ReloadComplete , **Object** : FPSWeaponEquipment and then Click **Apply**.

Pivot The model **pivot** point should place at about the head position like in this picture.
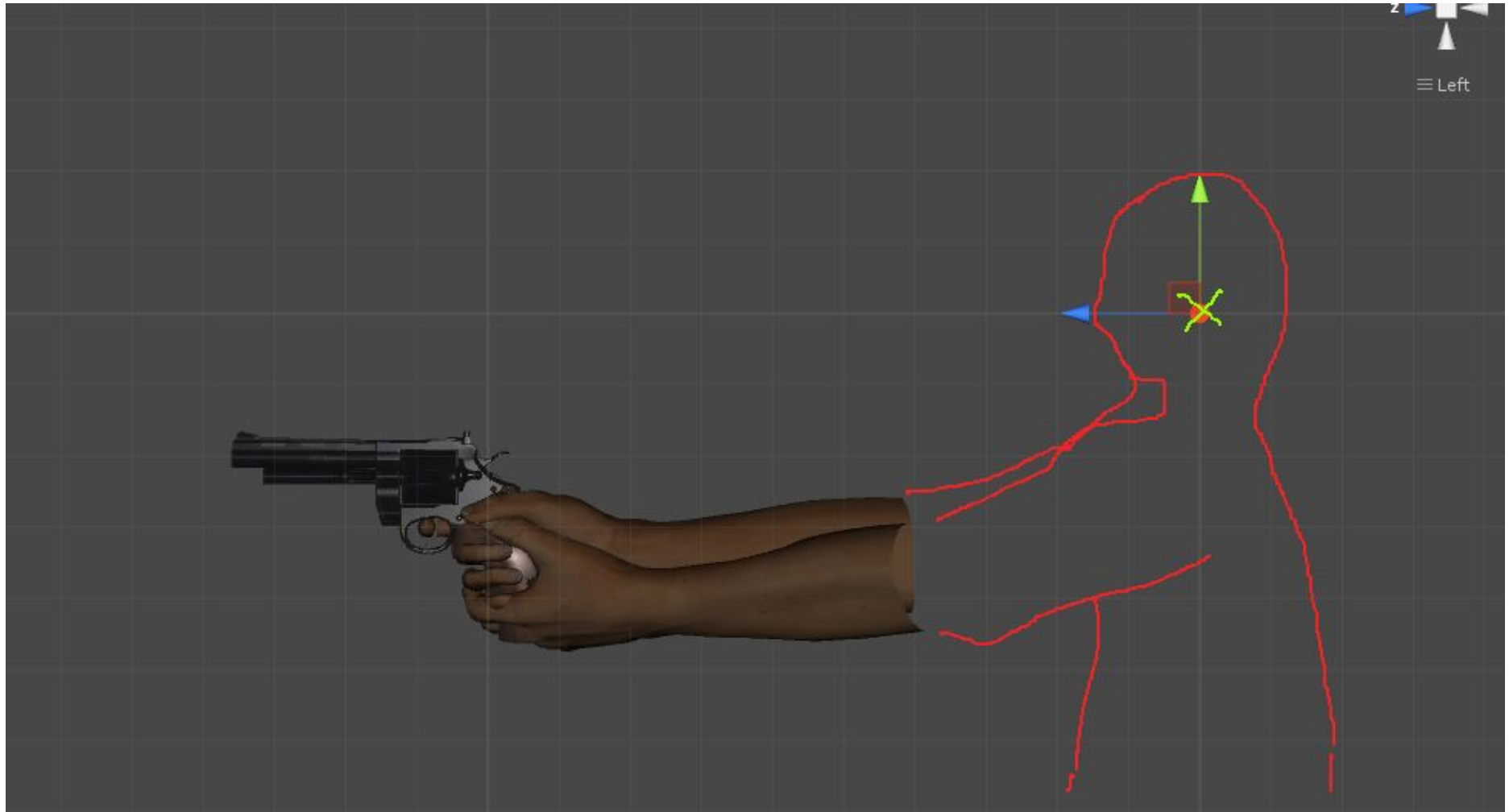
Step 2. New **scene.**

After import model to the project, please go to File > new scene to create new and cleaned work space.


Place an animated hands + gun into the scene, set position to 0,0,0 and **Animator** component must included on the model. and save scene named "**pistol_setup**" so we will working on this scene until the gun is ready to use.

Step 3. Create **Animation Controller** by right click on the folder and select **Create > Animation Controller**
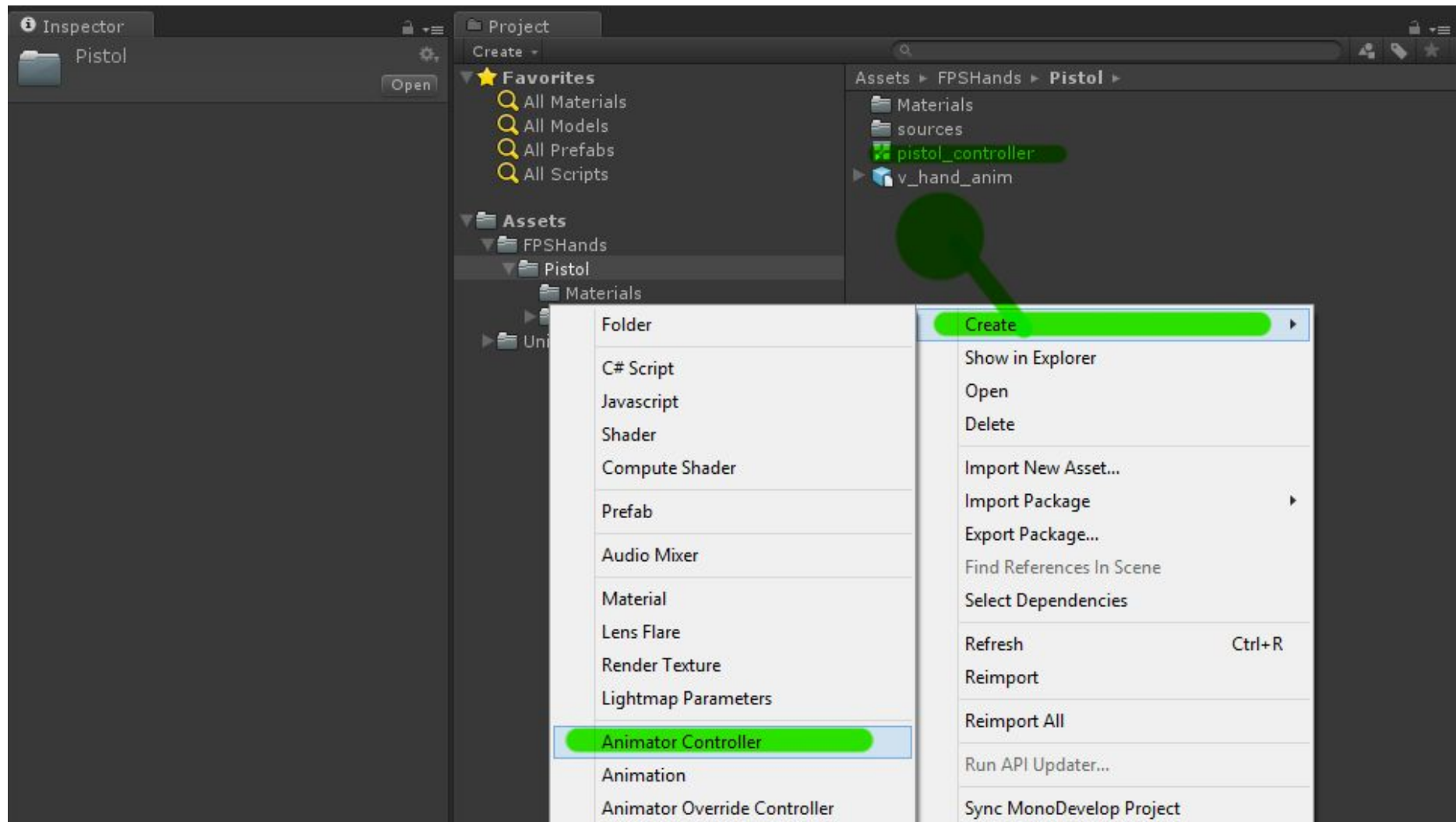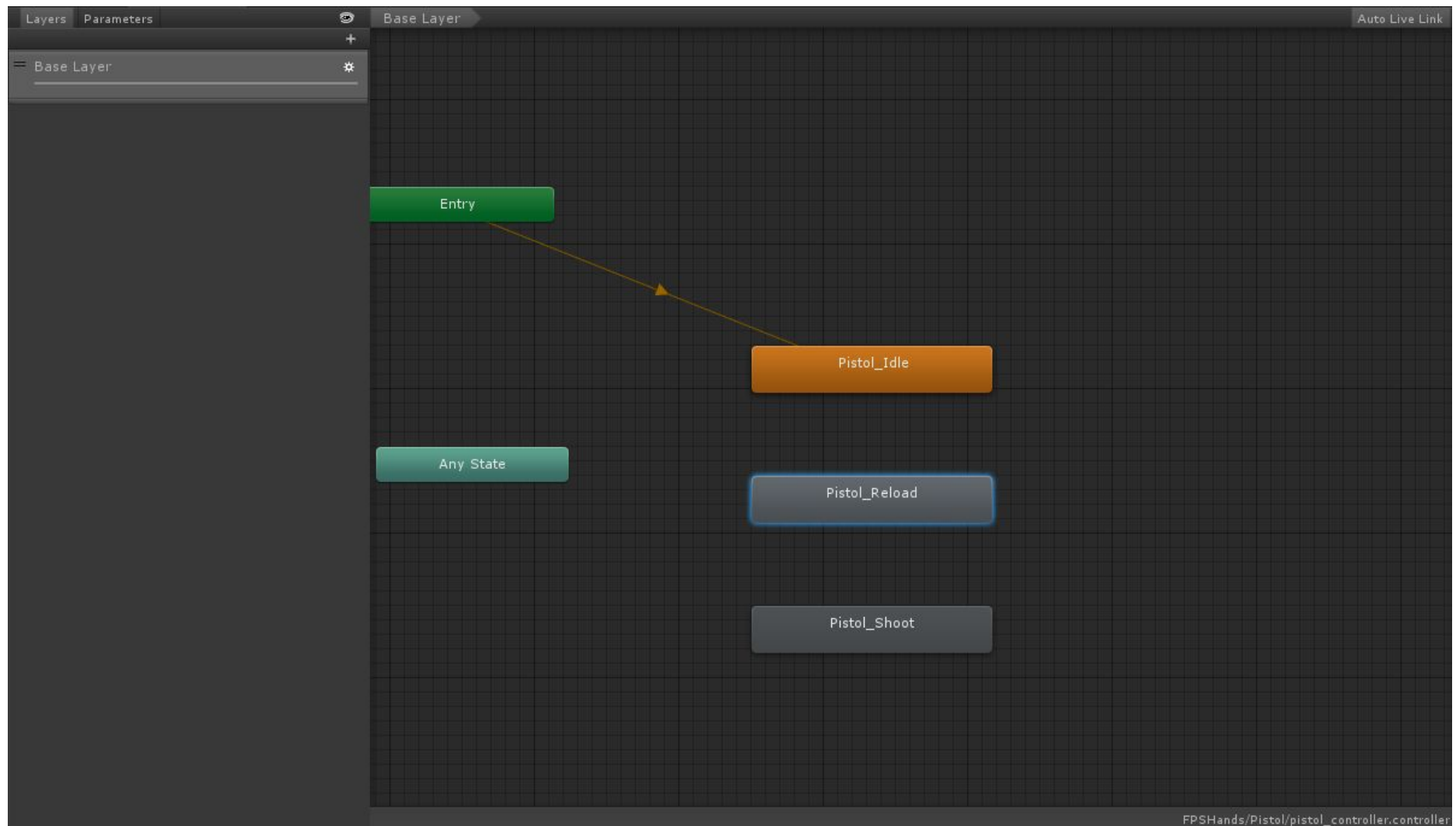

please named as **"pistol_controller"**

Step 4. Please open **pistol_controller** on animator tab and add a following parameters.
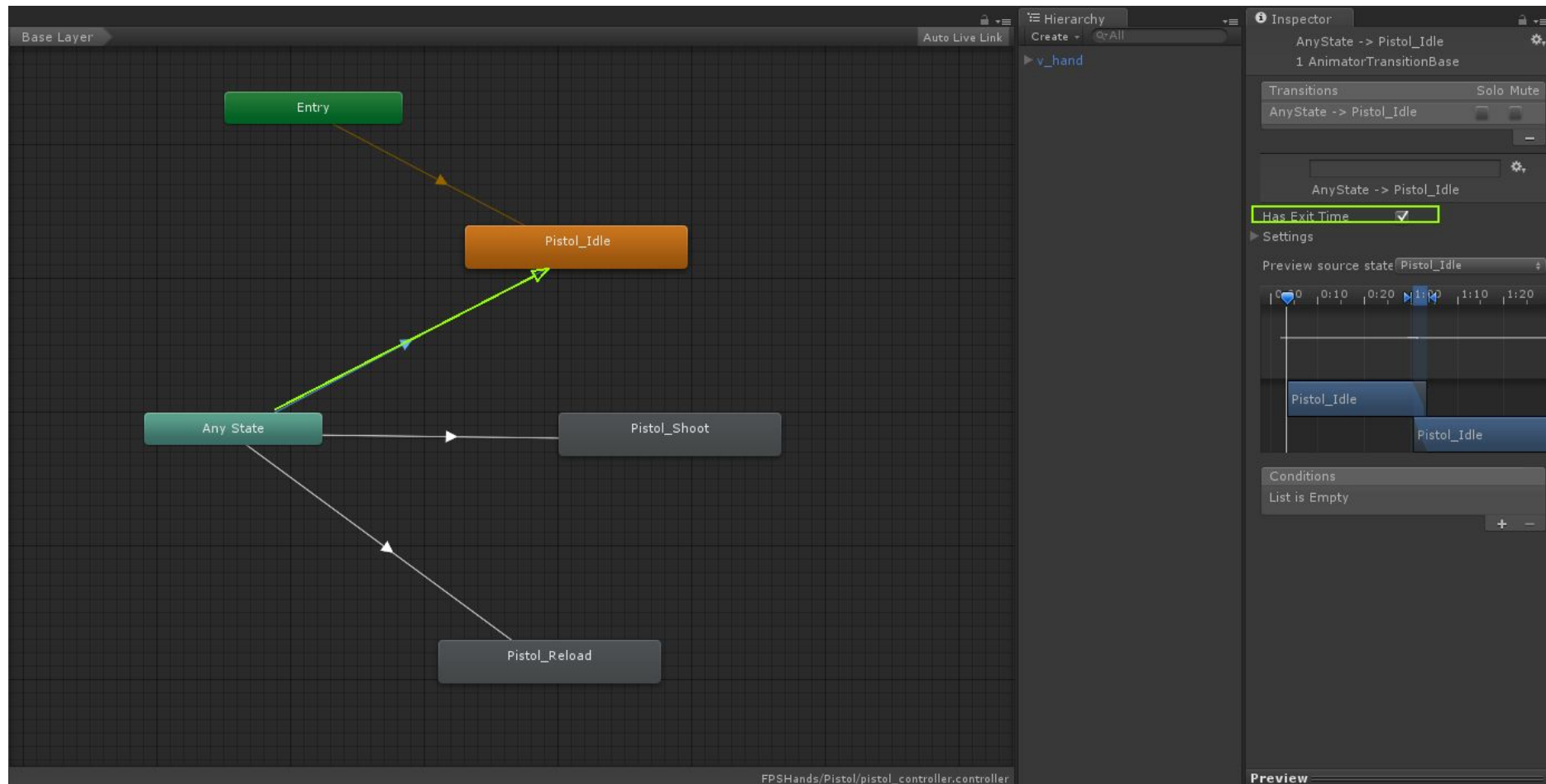**"shoot"** type Trigger , **"reloading"** type Trigger
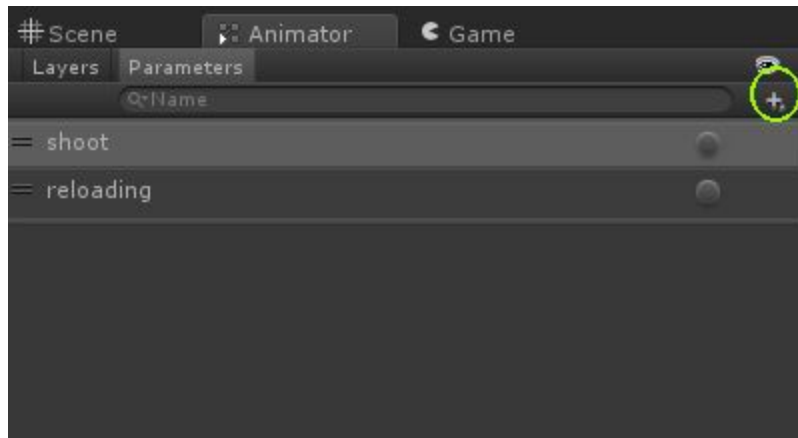
Parameter name	Type
shoot	Trigger
reloading	Trigger

Step 5. Create 3 State with **Idle** *Motion* **, Reload** *Motion* **, Shoot** *Motion* from the model

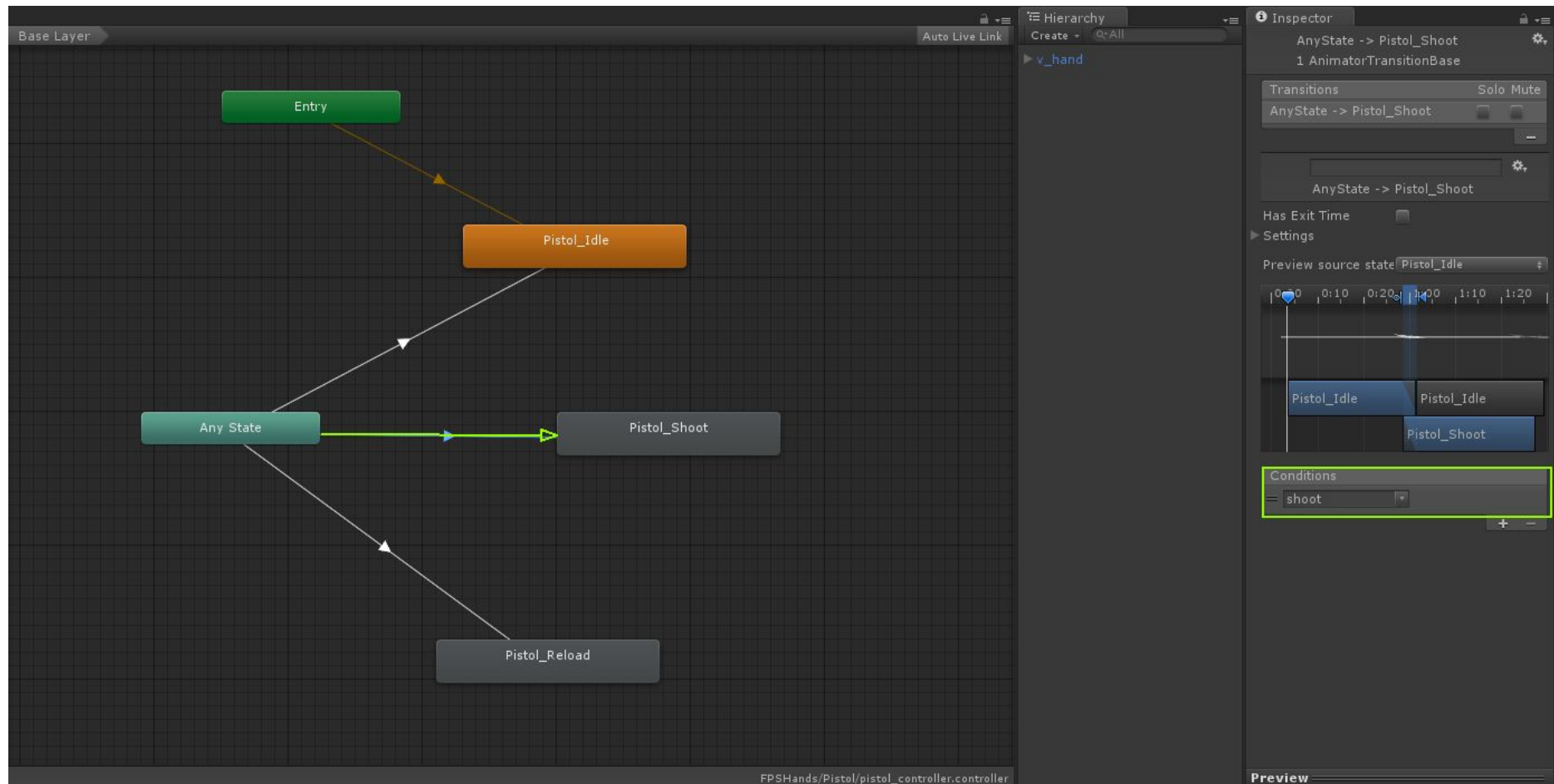you can drag the motions from model directly to the animator.

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

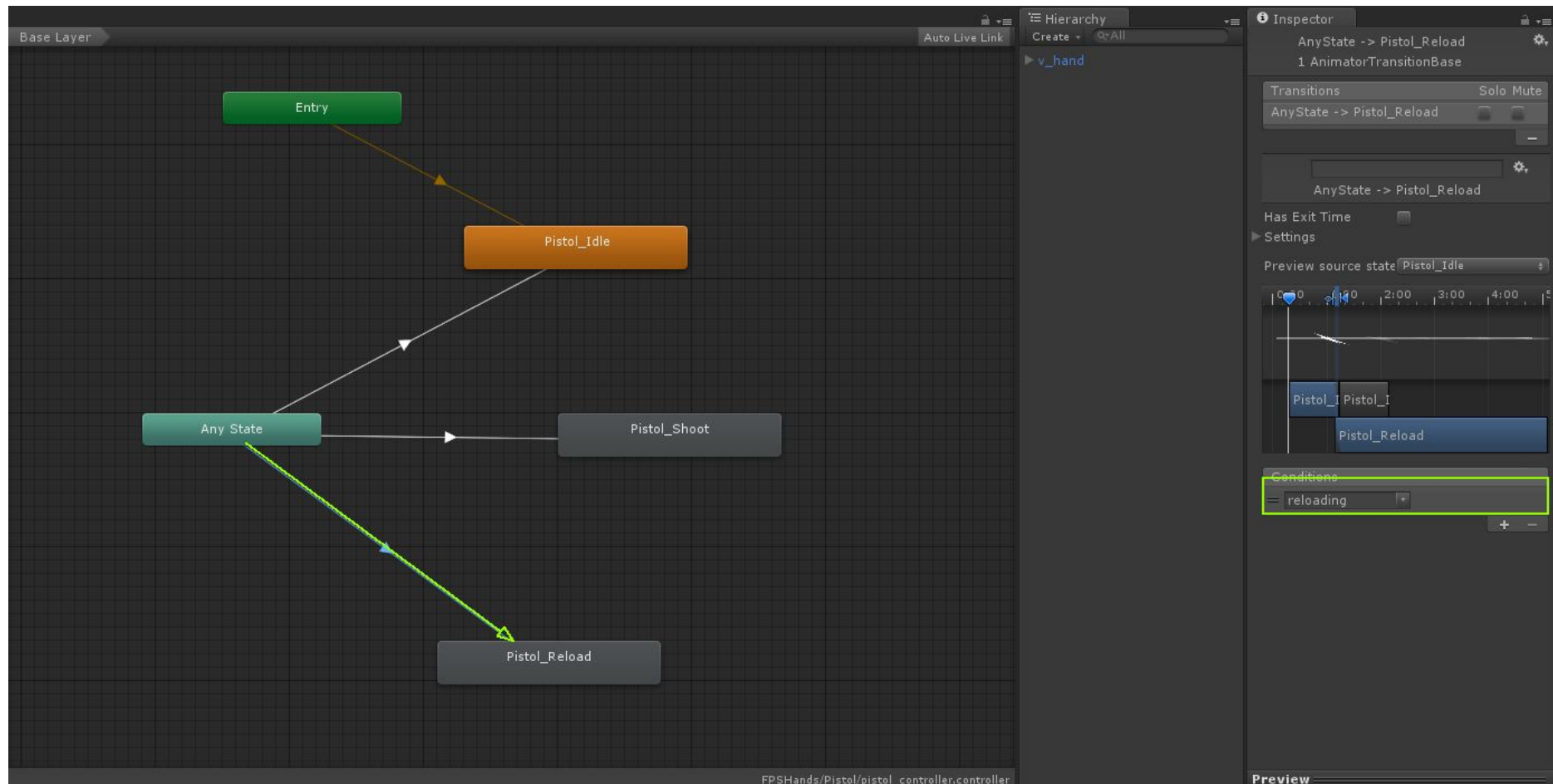Checked **Has Exit Time** parameter.

➡ **Condition** : N/A.

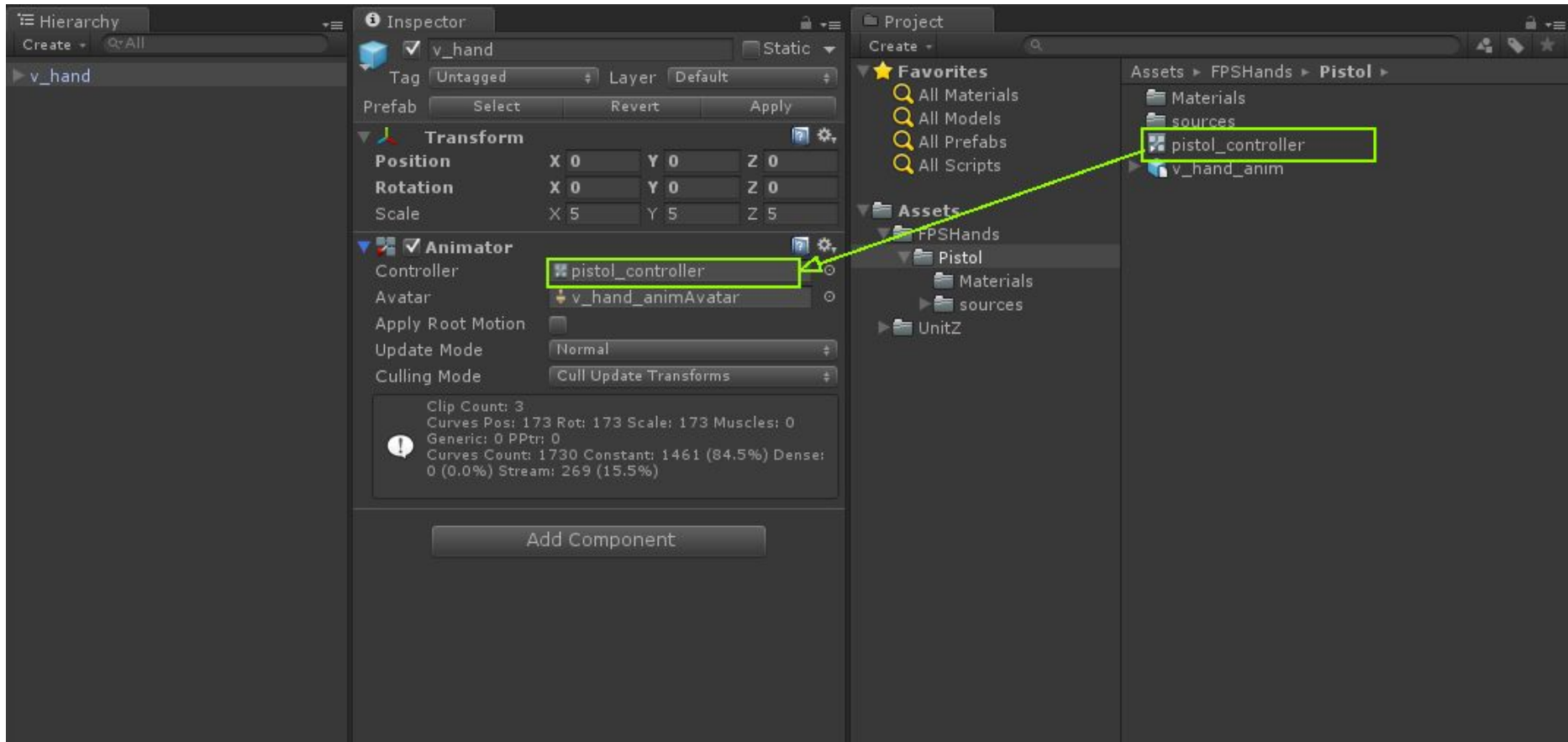# Step 7. Connect **Any State** to **Shoot State**

➡ **Condition** : **shoot** Trigger on.

Step 8. Connect **Any State** to **Reload State**

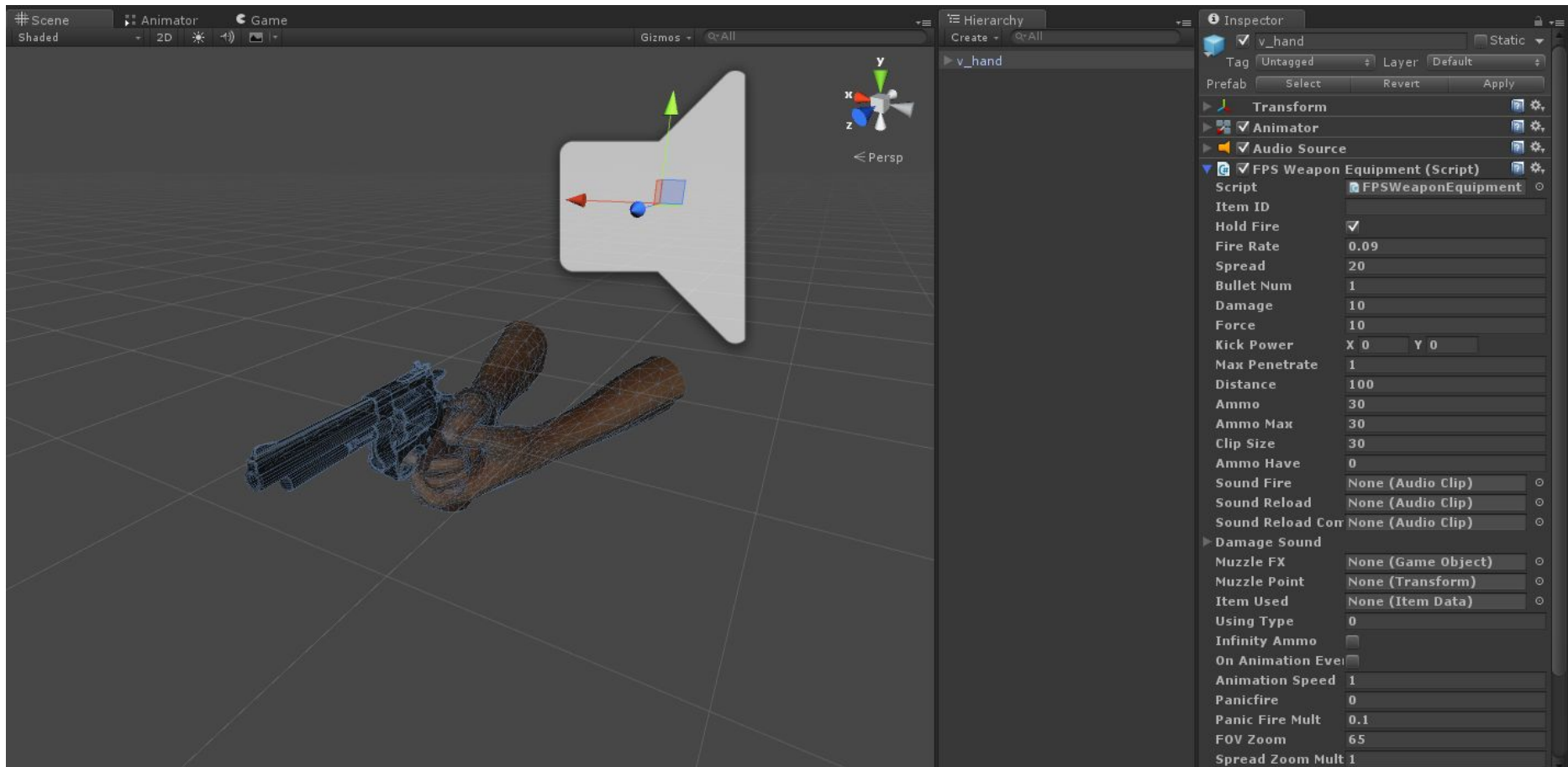➡ **Condition** : **reloading** Trigger on.

Step 9. Save scene and back to the gun model at the scene (at Step 2)

Add **pistol_controller** into **Controller** parameter on **Animator** component on gun model.

Step 10. Add **FPSWeaponEquipment** component to the gun model.
you can found a component here Assets\UnitZ\Scripts\Item\ItemFPSView\FPSWeaponEquipment.cs

Step 11. Setting parameters, please look at **FPSWeaponEquipment** component, you can found many parameters here but,we will guide you to set a necessary parameters.

Parameter	use for
Hold Fire	Disable when need a semi fire
Fire Rate	Rapid fire < 0.5 > Slow fire
Spread	Accurate < 0 > Spread
Bullet Num	bullet per shot
Kick power	X , Y kick camera axis when fire
Ammo , Ammo Max , Clip Size	a maximum ammo
Item Used	Consume an item when fire you can found here Assets\UnitZ\Prefabs\Items\Ammo
On Animation Event	Fire with animation at the specific frame with Event point

You have to add Crosshair component by Assets\UnitZ\Scripts\Item\ItemFPSView\Crosshair.cs

Step 12. Named as "**NewPistol**" and save it as prefab. by drag it to the folder.
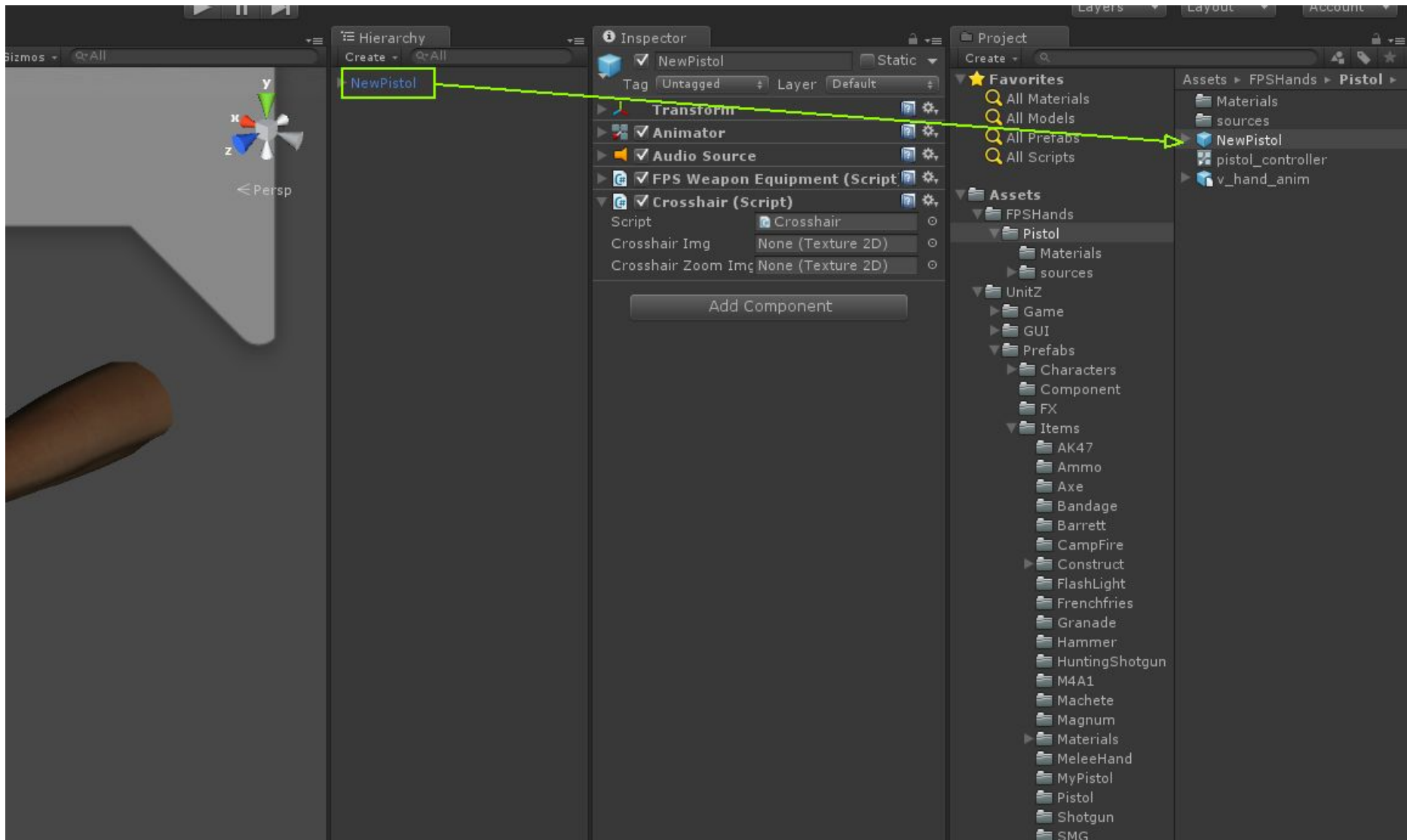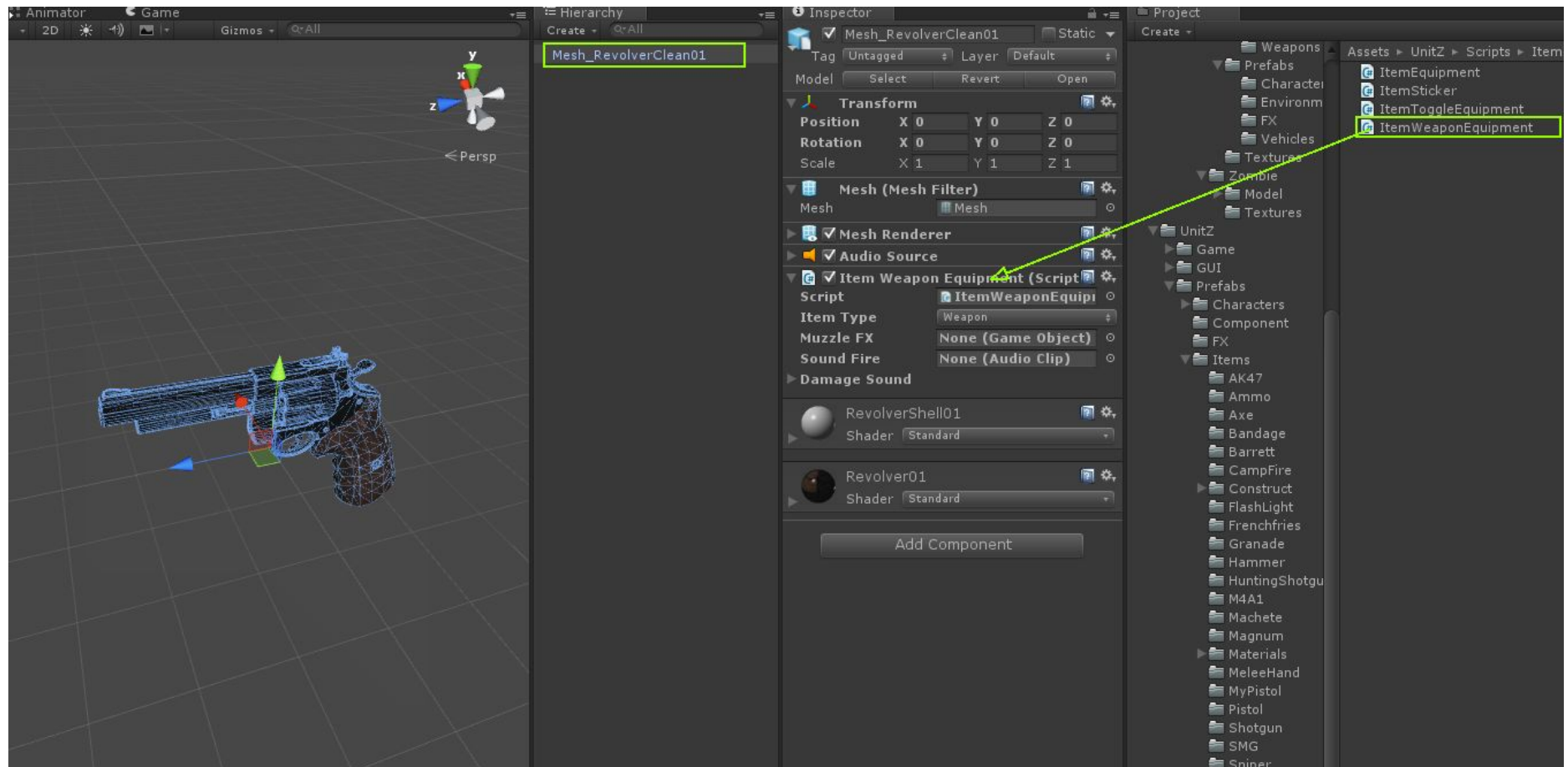
How to create a gun in (Third View)

In this steps are show you how to create gun in third view, so this view can see only by other players.

Requirement : a gun model without animation and the pivot point should at the grip position like image.

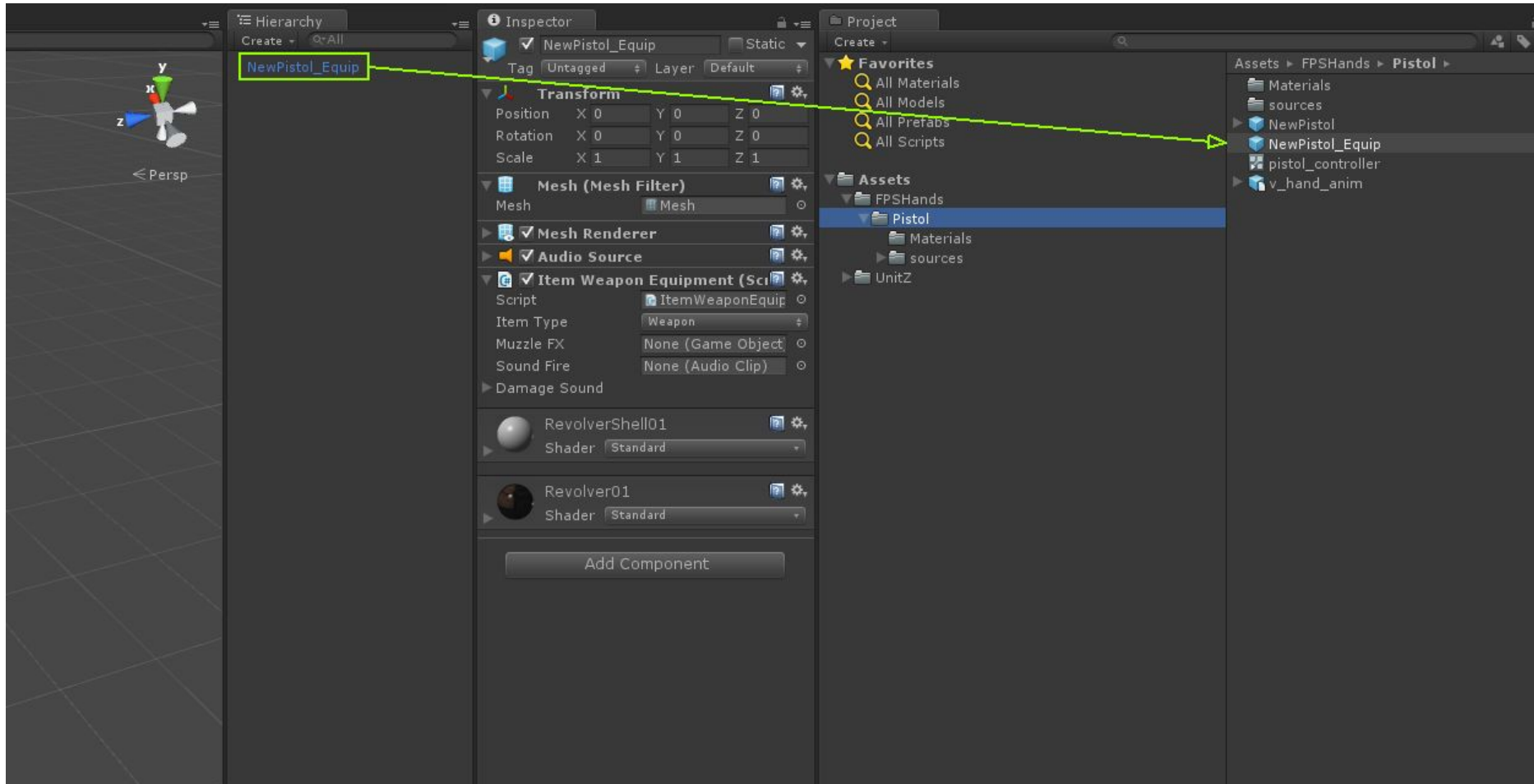**Step 1**. New scene and place a gun model into the scene set position to 0,0,0.

Step 2. Add **ItemWeaponEquipment** component to the model
you can found a component here Assets\UnitZ\Scripts\Item\ItemView\ItemWeaponEquipment.cs
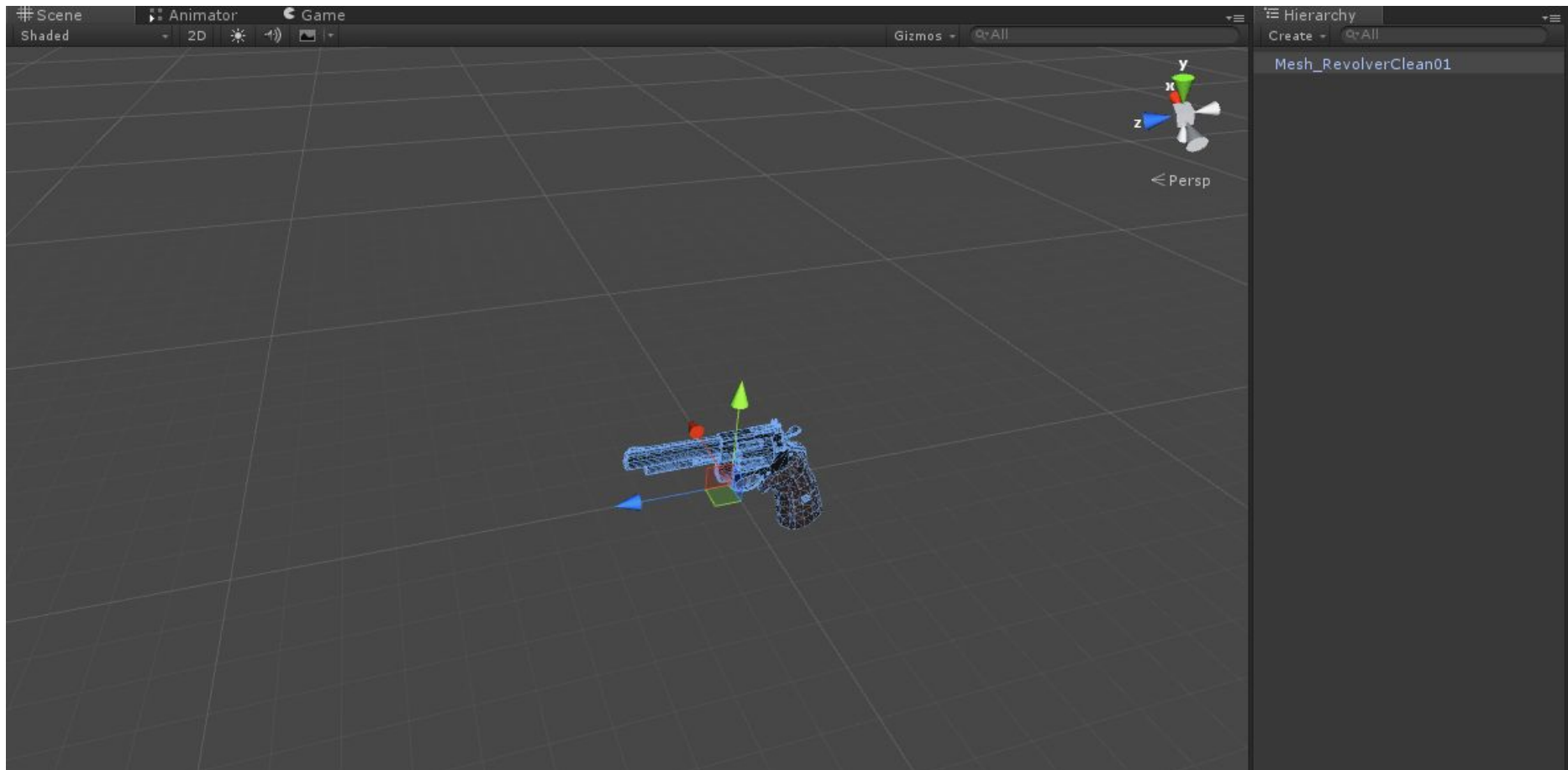
Step 3. Setting parameters

Parameter	Setting
Item Type	Weapon
Muzzle FX	Muzzle particle object
Sound Fire	Sound gun
Damage Sound	Sound on hit a target

Step 4. Rename to "**NewPistol_Equip**" and save as prefab. by drag it to the folder.
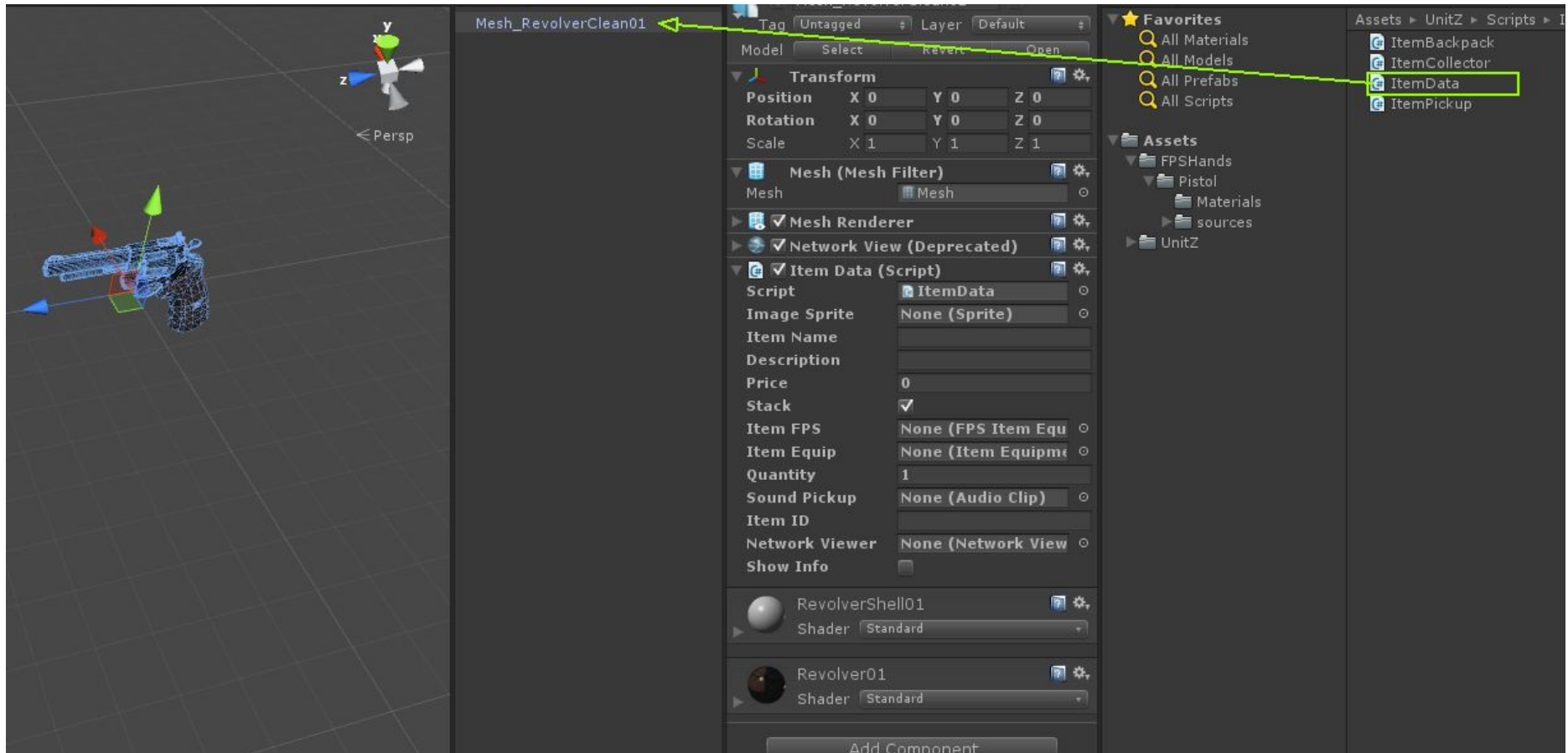
How to create a gun in (Drop View)

In this steps are show you how to create an **ItemData**, using for pick up and placed on the scene, this item must registered into the game item database by adding on **ItemManager** component under **GameManager** Object.
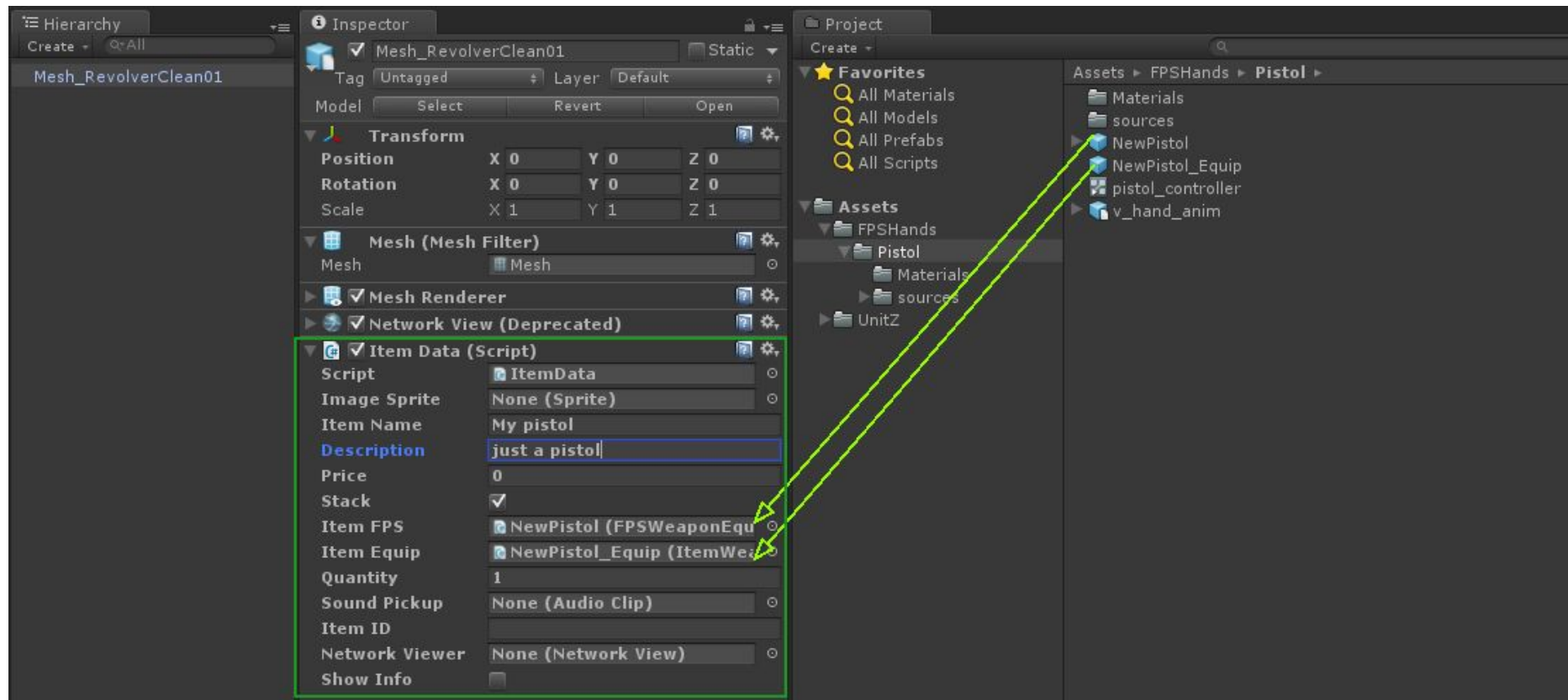

Requirement : a gun model without animation.

Step 1. New scene and place a gun model into the scene set position to 0,0,0.

Step 2. Add **ItemData** component to the model
you can found a component here Assets\UnitZ\Scripts\Item\ItemData\ItemData.cs

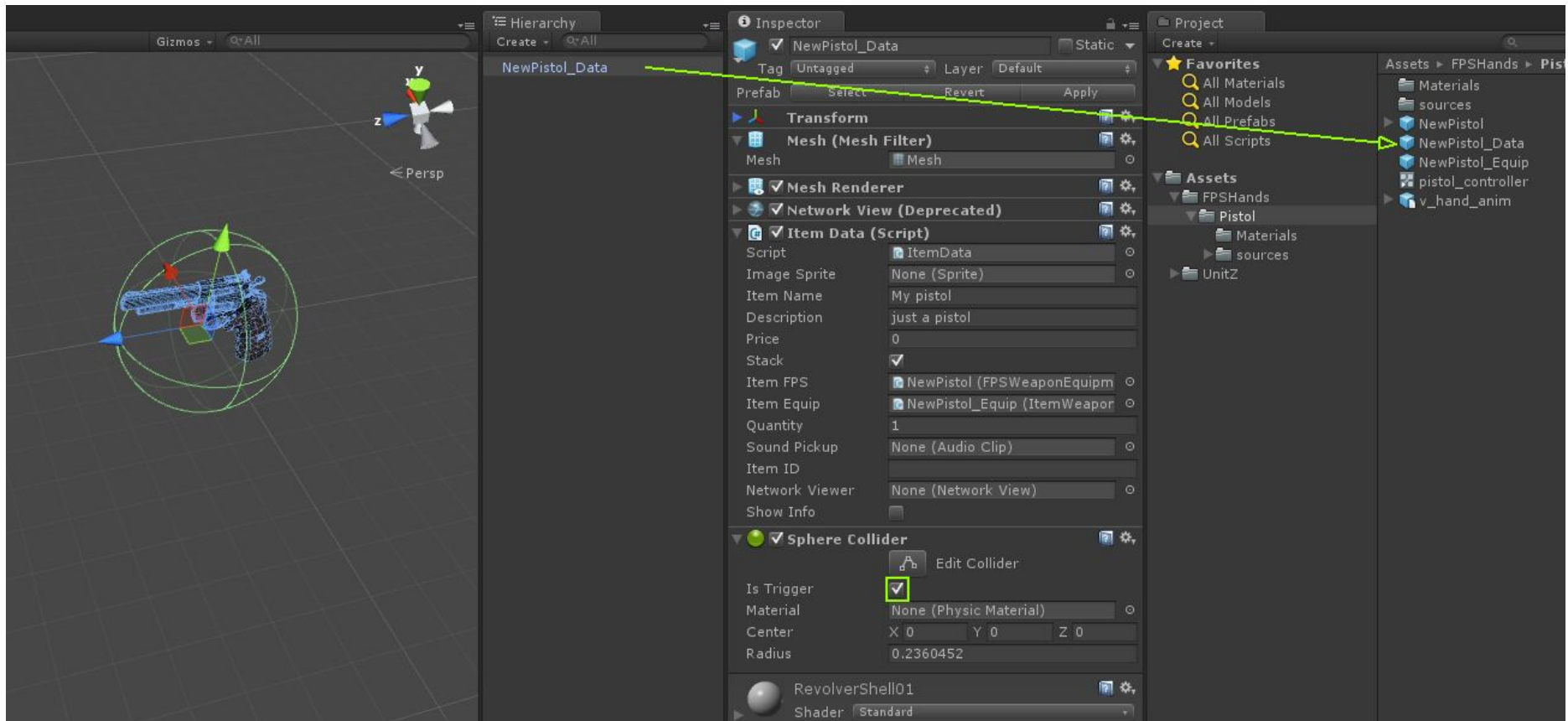**Step 3**. Parameters settings, please look at parameter on **ItemData** component.

Add **NewPistol** (**FPS**) Prefab to **Item FPS** parameter

Add **NewPistol_Equip** (**Equip**) Prefab to **Item Equip** parameter

Add image (Sprite) to Image Sprite as a item icon

Set Name and Description.

Step 4. Add collision sphere or collision box, and set it as **Trigger**.

**Step 5**. Rename it to "**NewPistol_Data**" and save as prefab by drag it to the folder.

Step 6. Item Registeration, Please save and open **mainmenu** scene Asset/UnitZ/mainmenu ,and look at **GameManager** object, so Add **NewPistol_Data** **prefab** to the **Items Lists** array on **Item Manager** component
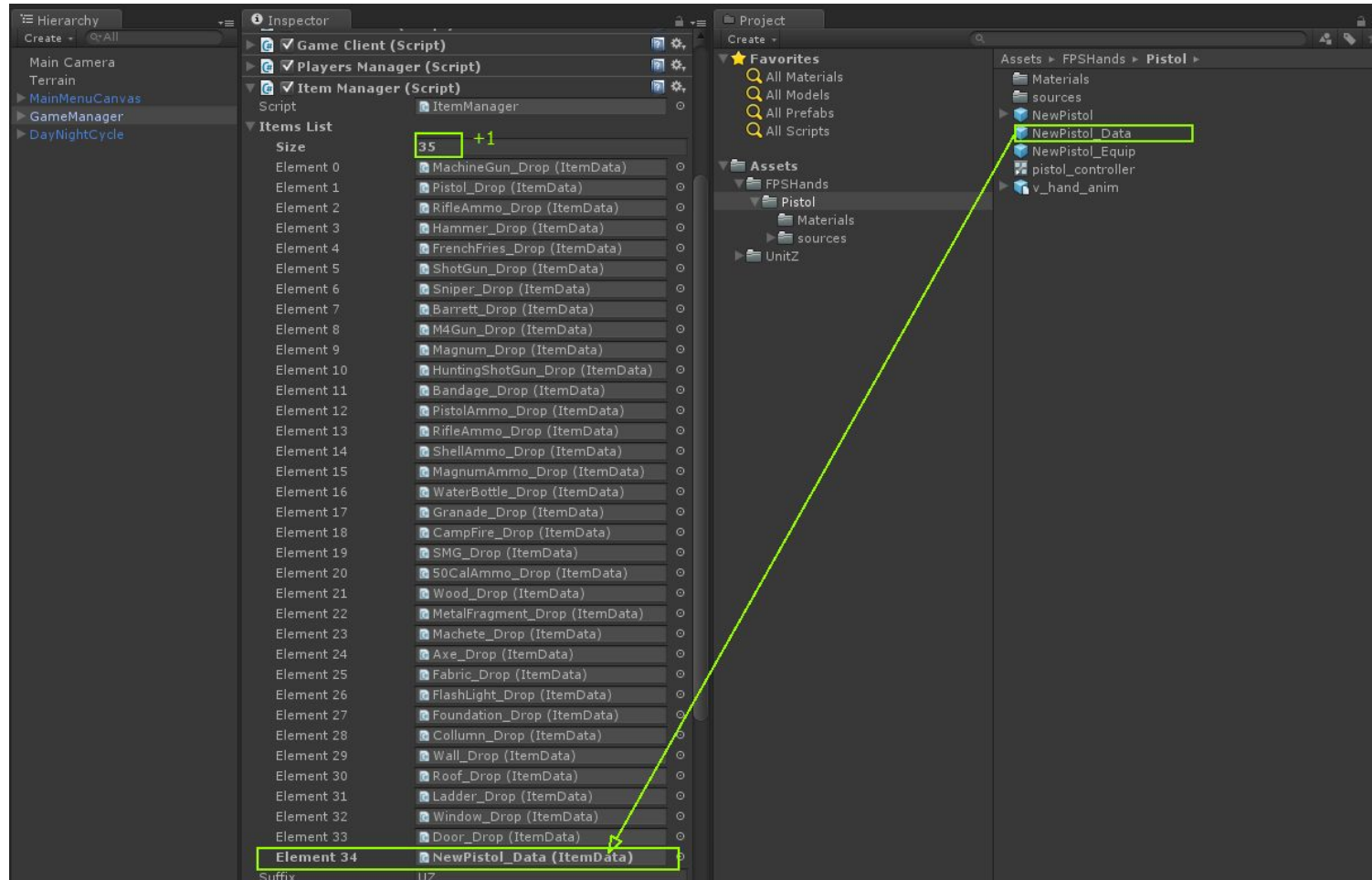
Click **Apply** button and save scene.

Test new item

Please open "**sandbox**" scene and place **NewPistol_Data** to the scene   Asset/UnitZ/Scene/sandbox
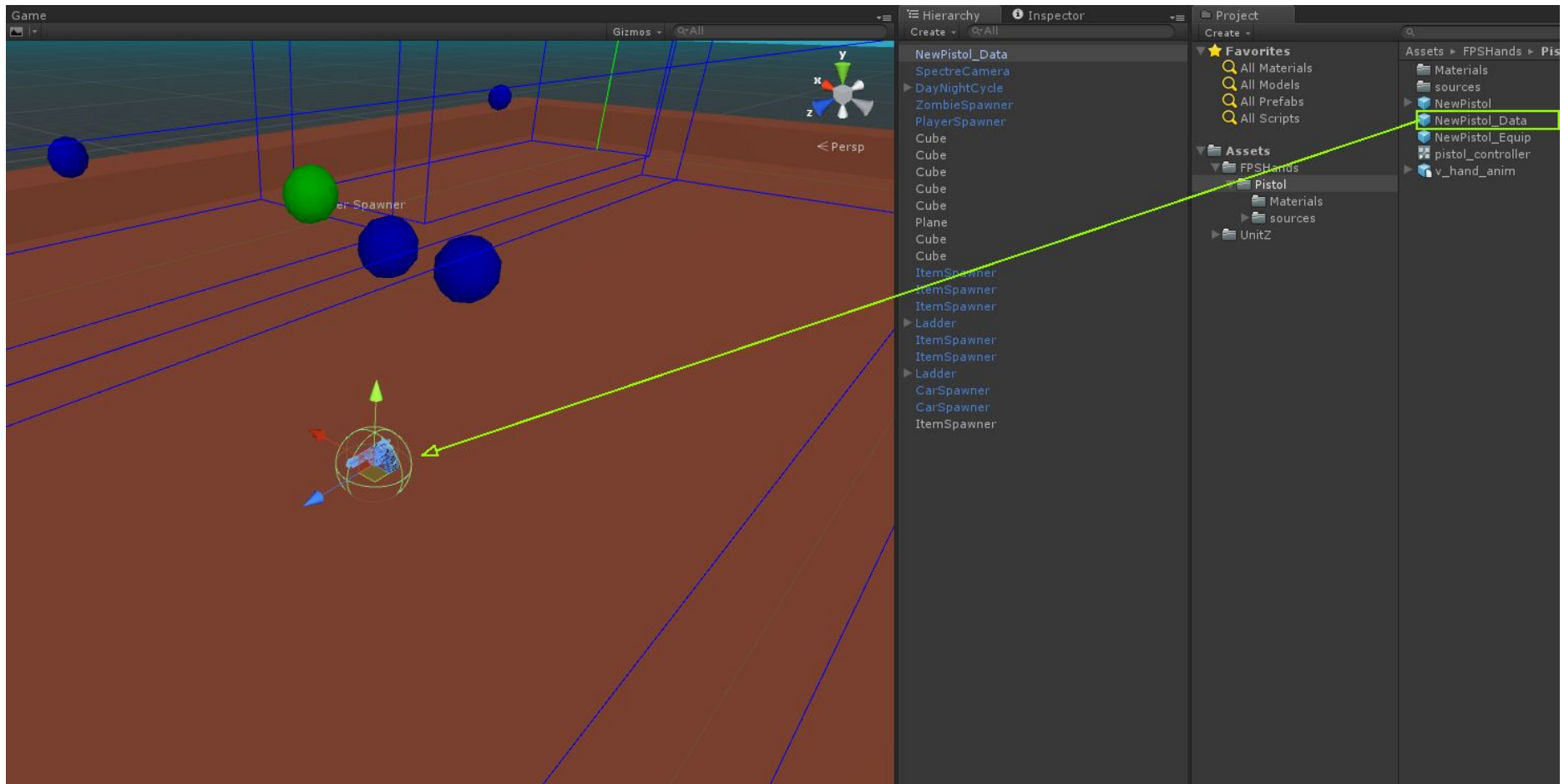
Please **Save** and back to "**mainmenu**" scene to play test.

Start game, Don't forget to select level to "sandbox" and let's see the result.

Thank you

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