MeleeWarriorLeftHandIK - Retargeting left hand in custom 3D models

This script will enable IK of the left hand of your custom humanoid character when needed in the animations that hold weapons with both hands in order to make them look good and not misplaced (caused by different arms length than the dummy default character).

Requirements:

- A custom 3D humanoid model.
- Melee Warrior 2H animation.
- MeleeWarriorLeftHandIK.cs script.
- Empty gameobject called '**Retargeters**' as a child of your character gameobject.
- Empty gameobject called '**LeftHandIK**' as a child of '**Retargeters**'.
- Animator Controller component with **IK Pass** enabled.
- Empty gameobject as child of the right hand to use as IK effector.

Step 1

Create 2 empty gameobjects, rename them as '**Retargeters**' and '**LeftHandIK**'.
Make 'LeftHandIK ' a child of 'Retargeters' and this a child of your character.
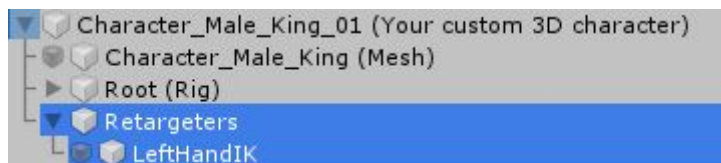
Example of how gameobjects '**Retargeters**' and '**LeftHandIK**' need to be set in the hierarchy of your 3D Character. Make sure to write them exactly the same, it is case sensitive.
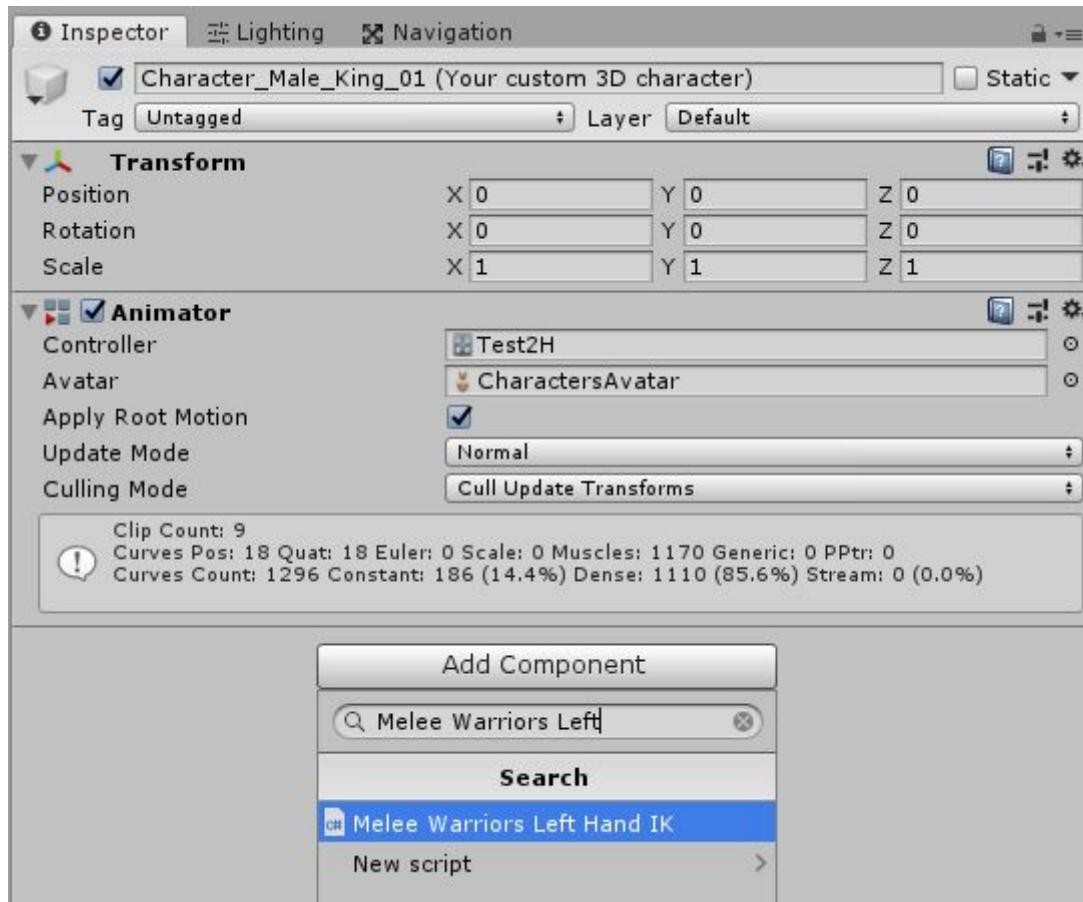
Step 2

Create 1 more empty gameobjects. Rename them as you wish. We will use this gameobject as our IK effector. Make sure the parent of this gameobject is the right hand of your character that holds the 2H weapon.
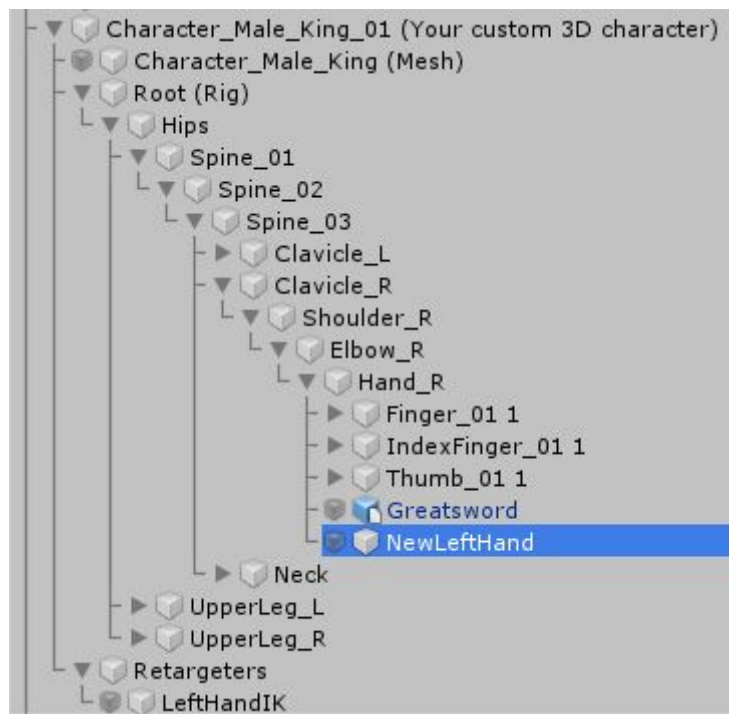
In our example, our IK effector is called 'NewLeftHand'.

Step 3

Add our script to your 3D character as a MonoBehaviour component:
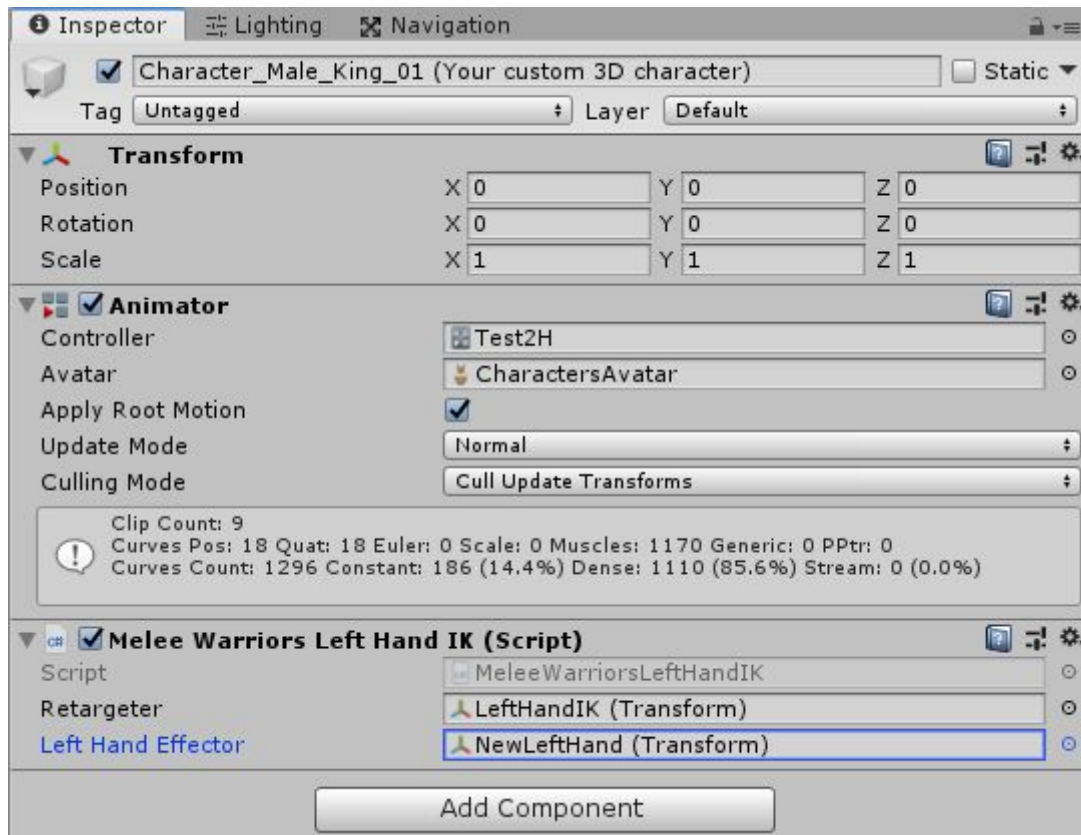

Adding the script to your custom character.

Step 4

Fill the fields of our script.

Retargeter field: Our empty called '**LeftHandIK**'.

Left Hand Effector: Our IK effector (in our example called '**NewLeftHand**').

Drag the '**LeftHandIK**' retargeter and the '**NewLeftHand'** (IK effector) to the script in their respective fields.

Step 5

Create an Animator Controller, add animation state with a 2H Melee Warrior
animation and enable '**IK Pass**' option in the settings of your Animator Layer.
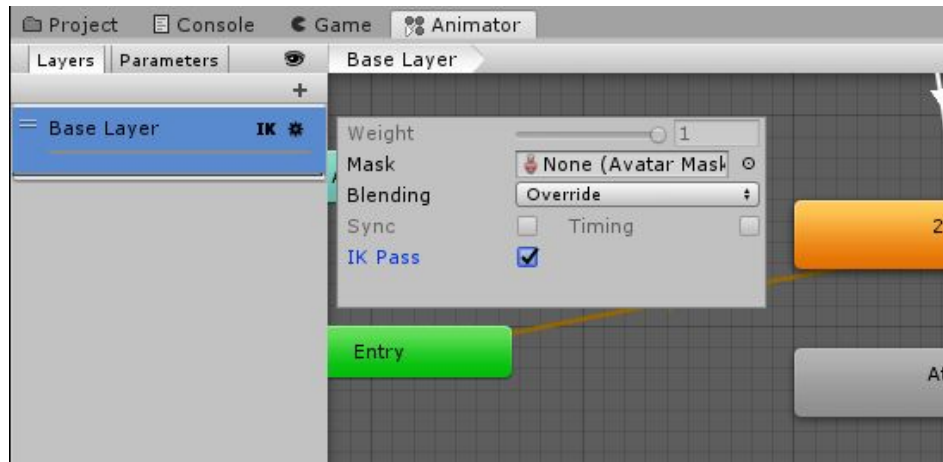
Make sure '**IK Pass**' is enabled in your Animator Controller Layer.

Step 6 - Final Step

Enter in your Unity scene Play mode. Edit the location of our IK effector to match the 2H weapon. Copy its Transform component values, exit Play mode and paste them. Now when entering in Play mode again you will see the left hand in the correct position.
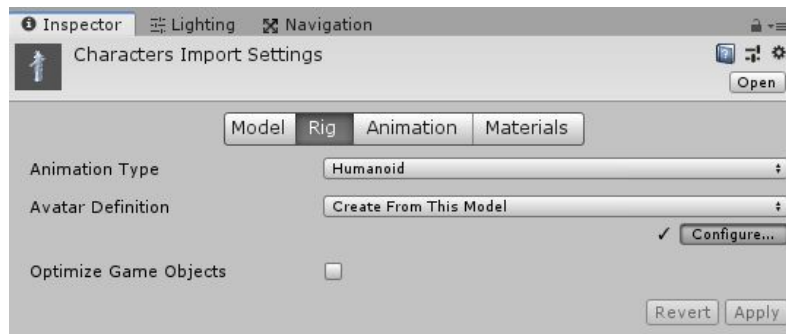
For editing the location of the IK effector is recommended to set the Speed of the Animator State to 0. Do not forget to set it back to the desired speed after done editing.

Edit the location of the '**NewLeftHand'** (IK effector).

Recommendations:

- Add arms stretch to the Avatar of your custom humanoid character:

- If you want to use this script with other animations without the retargeters keyframed you will need to manually move '**LeftHandIK**' transform as follows:

localPosition.y = 0.00 -> IK disabled

localPosition.y = 1.00 -> IK enabled

For fast transitions it is recommended to use -1.00 when no IK and 2.00 when left hand needs to be attached to the same weapon of the right hand.

Contact support:

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