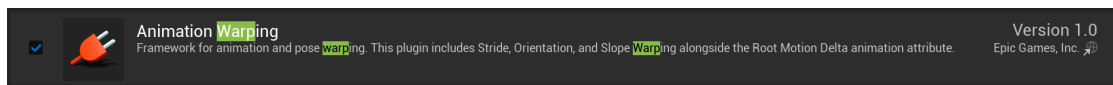


UCLSV1

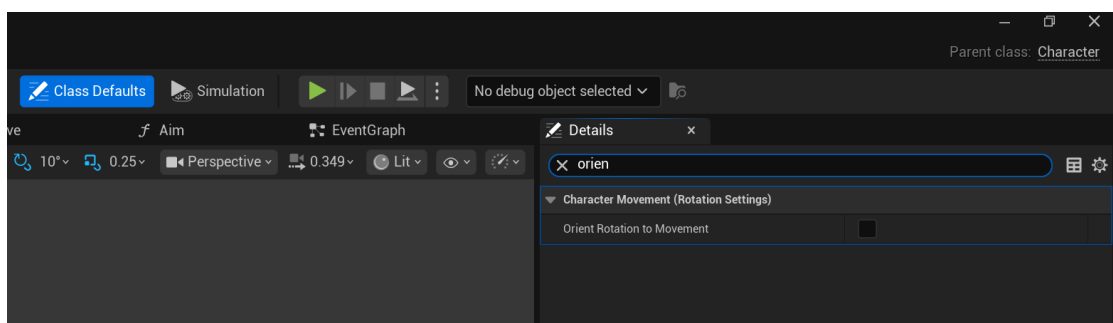
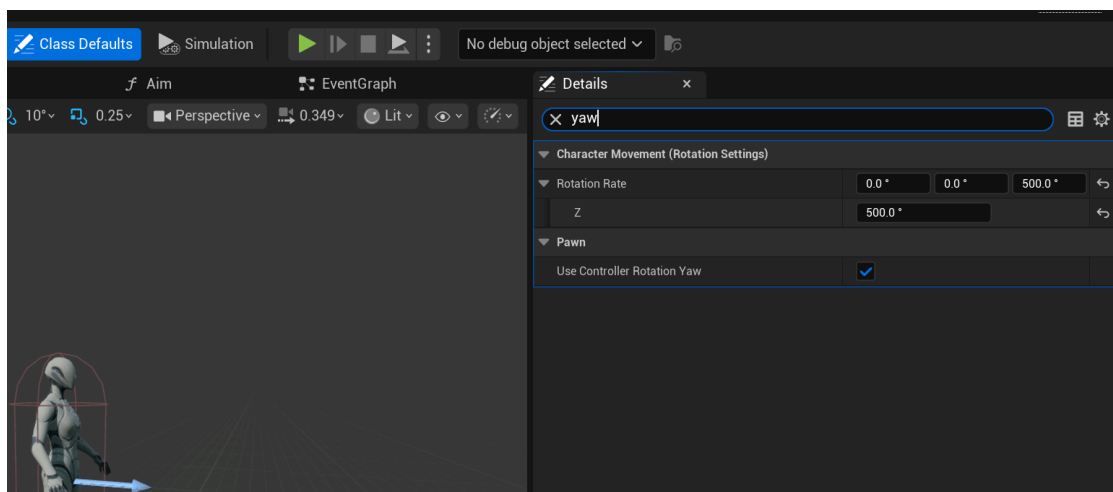
documentation

Before using the Ultimate Custom Locomotion System (UCLS), please enable the Animation Locomotion Library and Animation Warping plugins.

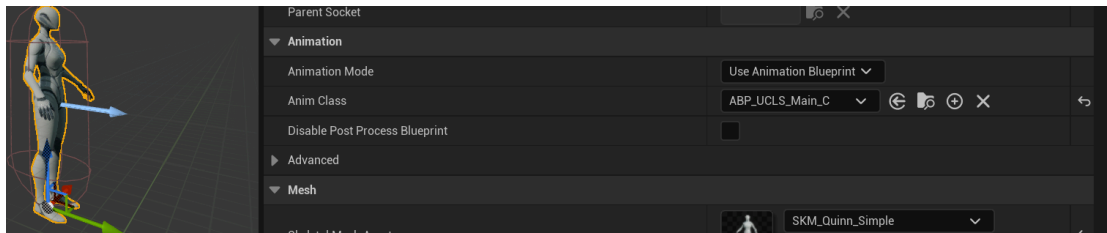


How To Use

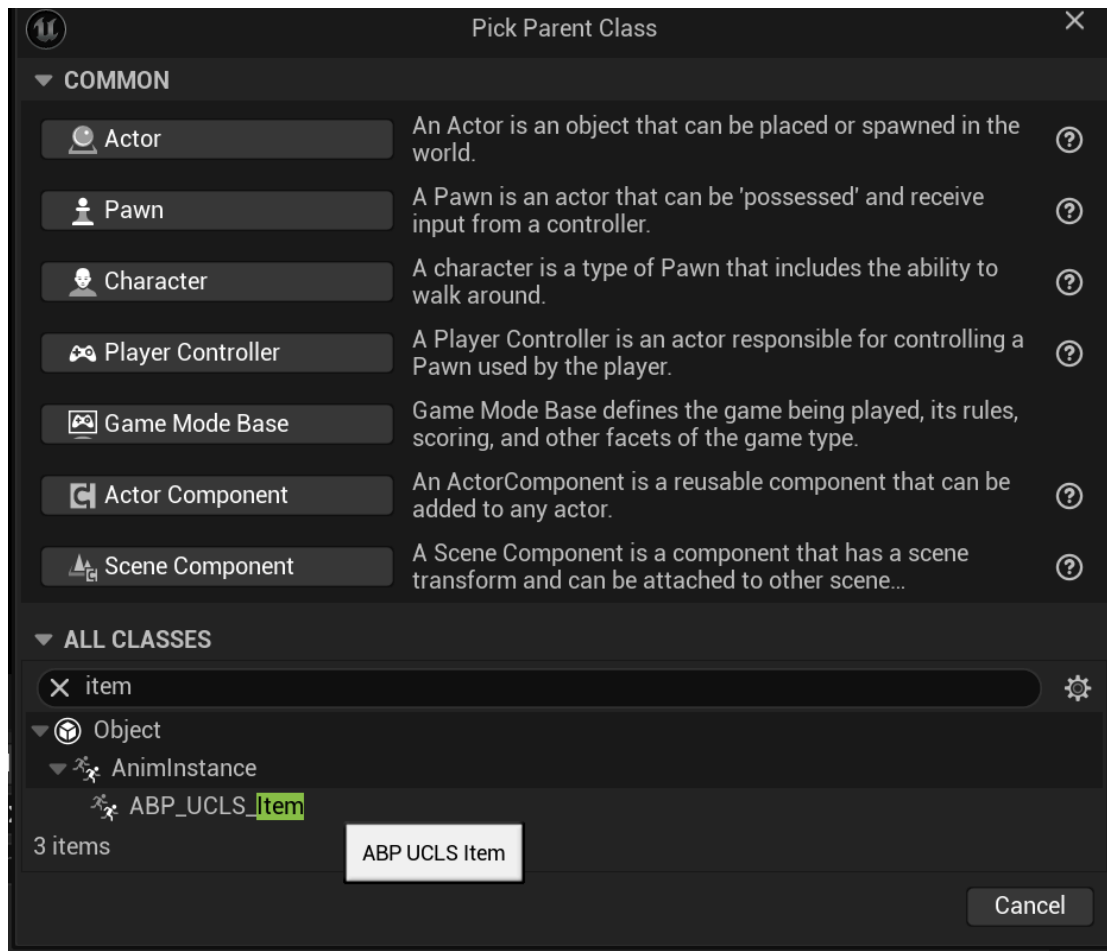
First, open your Character Blueprint, in the Details panel of Class Defaults, check the box for Use Controller Rotation Yaw, and uncheck Orient Rotation to Movement.



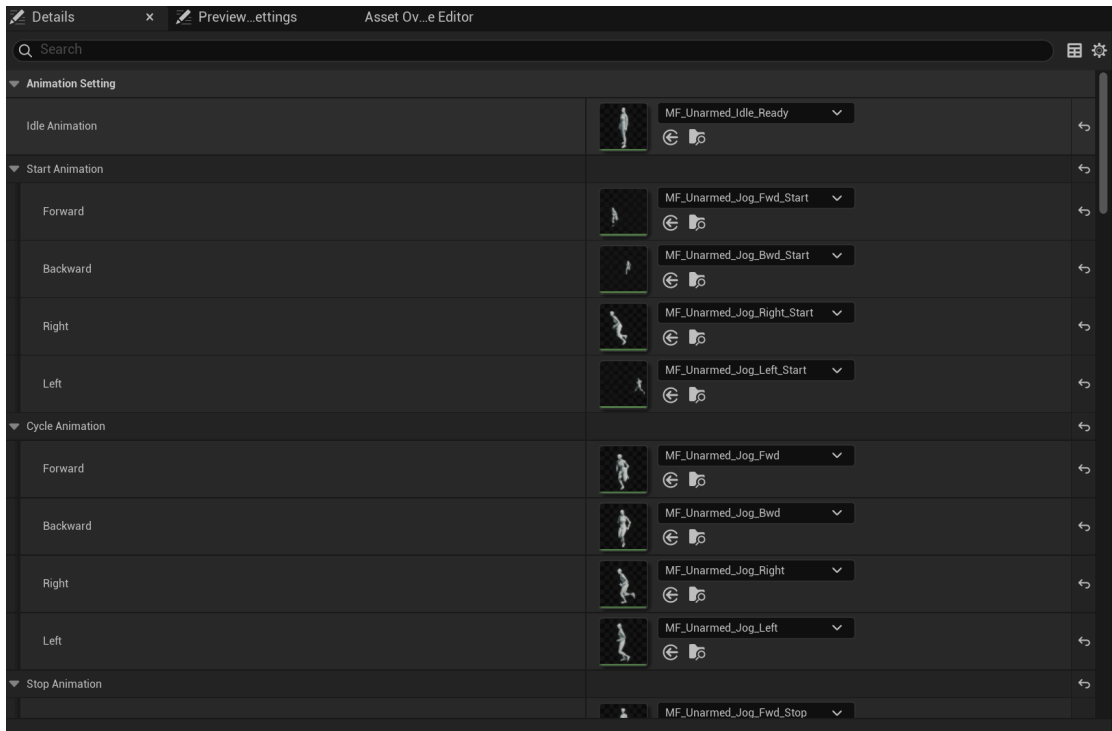
Then, select your Skeletal Mesh component, and in the Animation Class (Anim Class) field, select ABP_UCLS_Main



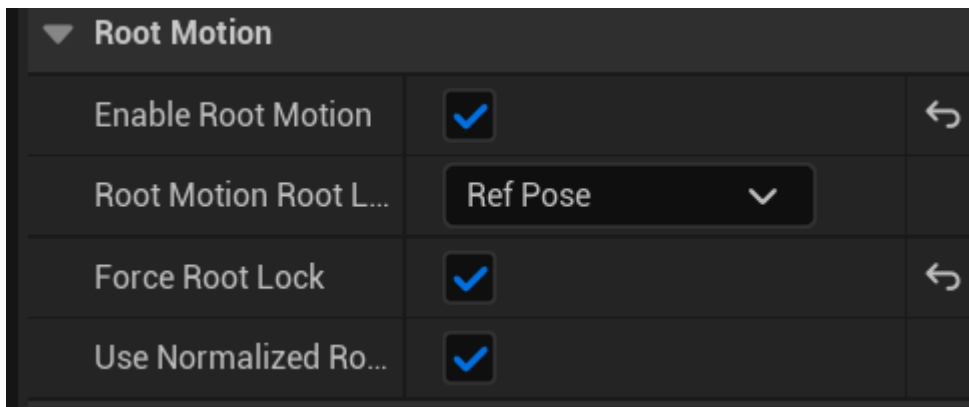
Close your Character Blueprint, open the Content Browser, and create an ABP_UCLS_Item asset within the Blueprint Class category.



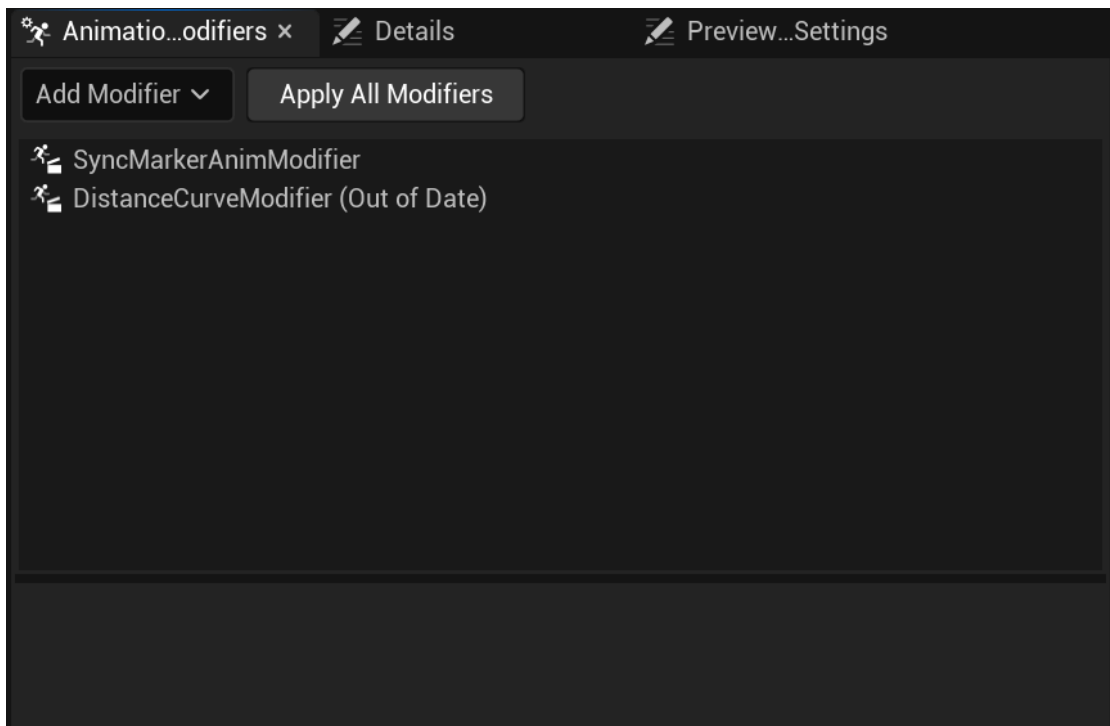
Open the newly created ABP_UCLS_Item, and assign your animation assets in the Details panel.



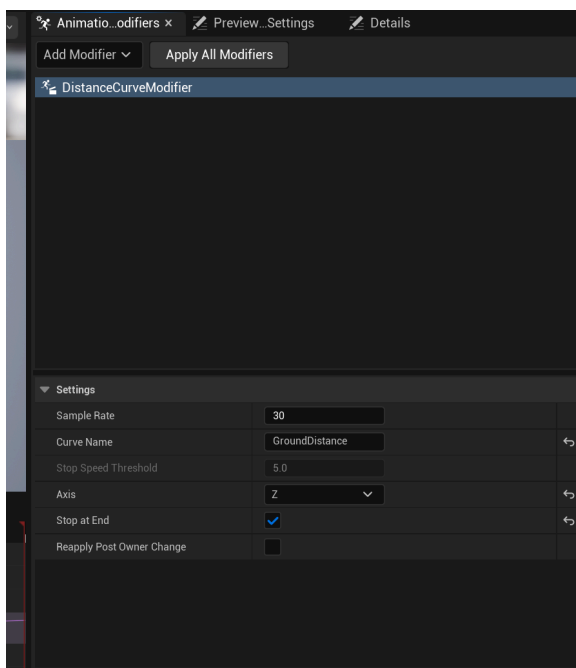
Important Note: Root Motion and Force Root Lock must be enabled for all animation assets.



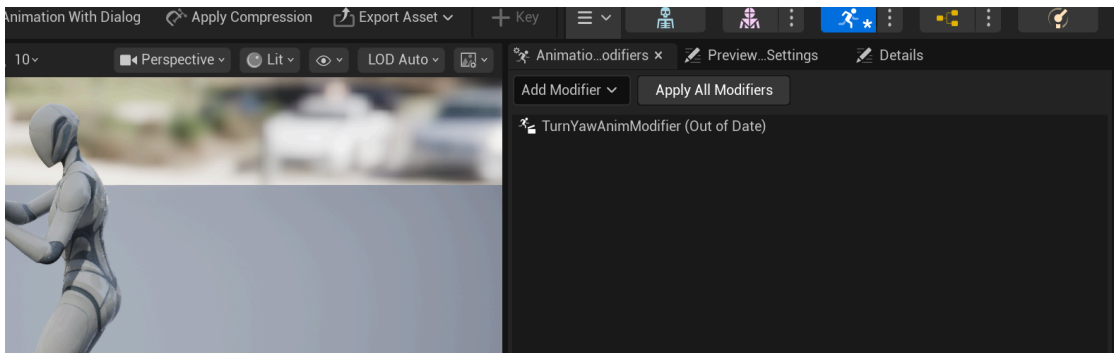
Open each animation asset with XY-axis displacement. Next, access the Animation Data Modifiers panel (to open it: click Window in the main editor menu, locate and select Animation Data Modifiers from the dropdown list to launch the panel), add the Distance Curve Modifier and Sync Marker Modifier, then click Apply.



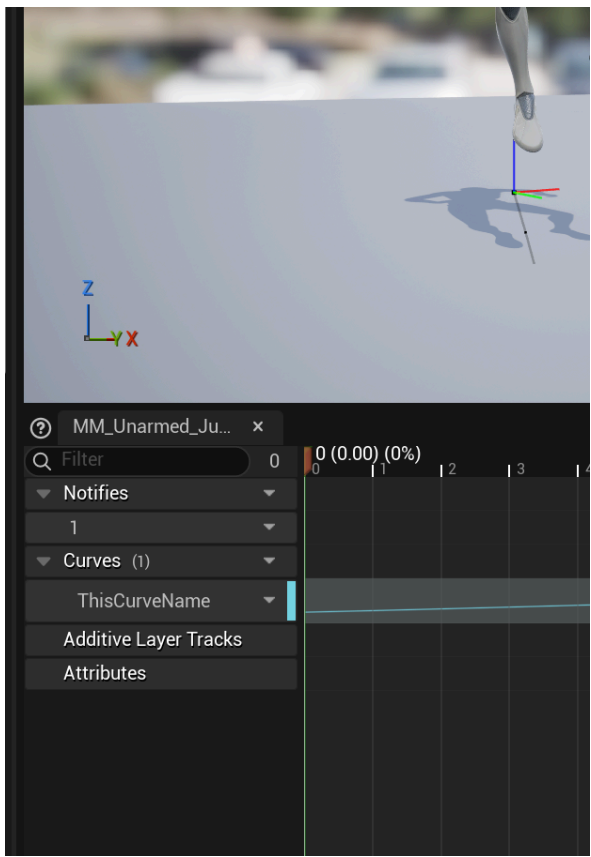
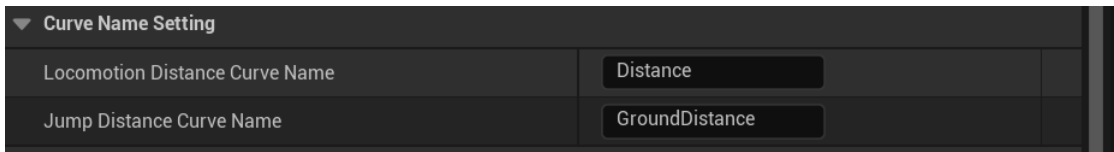
For fall land animation assets with Z-axis displacement, add the Distance Curve Modifier. Next, select the added Distance Curve Modifier, set Axis to Z in its Settings panel, check the box for Stop at End, then click Apply. (If any of the required jump and fall animation assets (Jump Start, Jump Apex, Fall Land, Fall Loop, Jump Loop) are unavailable in your project, you may substitute the missing assets with your existing Jump Loop animation. Regardless of substitution, you must complete the previously specified Z-axis displacement configuration steps on your chosen Fall Land animation asset.)



For in-place turning animation assets, you only need to add the TurnYawAnimationModifier.



In the CurveNameSetting panel, you must fill the locomotionDistanceCurveName field with the Distance Curve name from all XY-axis displacement animations used in the project, and fill the JumpDistanceCurveName field with the Distance Curve name from all Z-axis displacement fall land animations.



Curve Name Setting	
Locomotion Distance Curve Name	Distance
Jump Distance Curve Name	ThisCurveName

In the CustomSetting panel, enter the angle value of your in-place turning animation into the TurnInPlaceAngle field.

Custom Setting	
Turn in Place Angle	90.0

In the CustomSetting panel, enter the value you want to limit character rotation into the rootRotation field. This value must be greater than or equal to the TurnInPlaceAngle value.

Root Rotation Min	-120.0
Root Rotation Max	120.0

The larger the deadZone value, the wider the judgment range for forward and backward movement direction.

Dead Zone	2.0
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If your required animation assets are incomplete, you can control the enable and disable state of relevant features through these parameter values.

Enable Crouch Aim Offset	☒
Enable Stand Aim Offset	☒
Enable Stand Pivot	☒
Enable Crouch Entry Exit	☒
Enable Crouch Pivot	☒

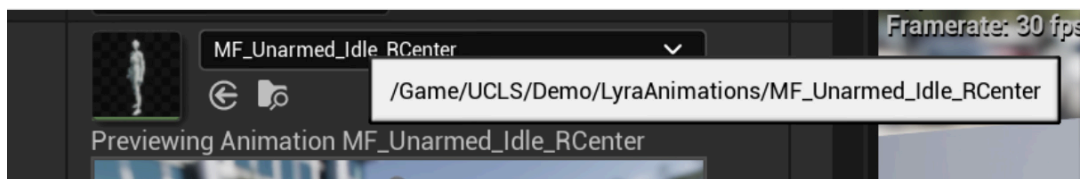
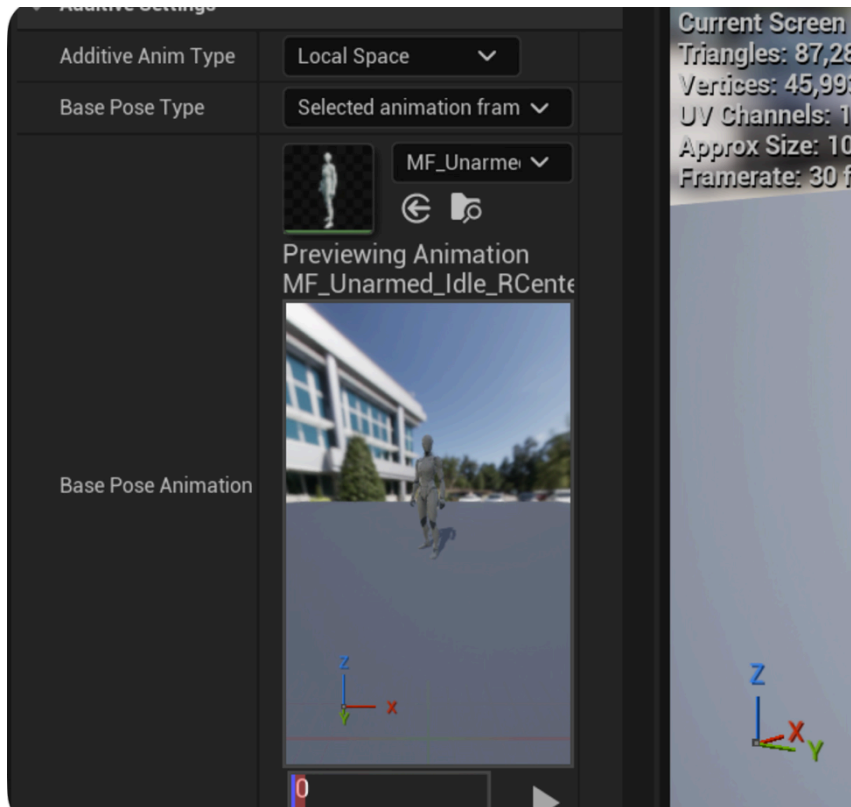
InitializeTime: A value that controls the duration of the parameter initialization process. Adjust this value appropriately based on your player count and server performance to prevent initialization failure of certain parameters.

Enable Stand Avoid / Enable Crouch Avoid: Boolean parameters that control whether the Obstacle Avoidance System is enabled in the character's standing and crouching states respectively.

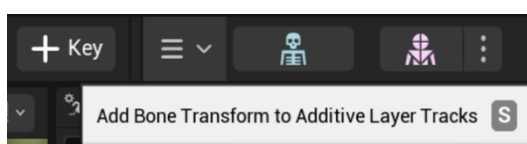
Initialize Time	2.0
Enable Crouch Avoid	☐
Enable Stand Avoid	☒

Now we will complete the configuration of the Obstacle Avoidance System (If you do not intend to use the Obstacle Avoidance System in your project, you may skip this entire section.)

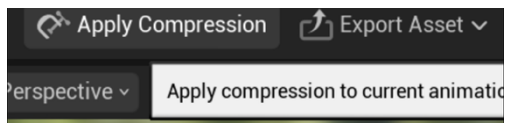
First, duplicate three idle animations: left avoidance animation, non-avoidance reference animation, and right avoidance animation. For these three animations, delete all keyframes except for one single frame. Then, in the Additive Settings panel, set Additive Anim Type to Local Space, Base Pose Type to Selected Animation Frame, and Base Pose Animation to the non-avoidance reference animation.



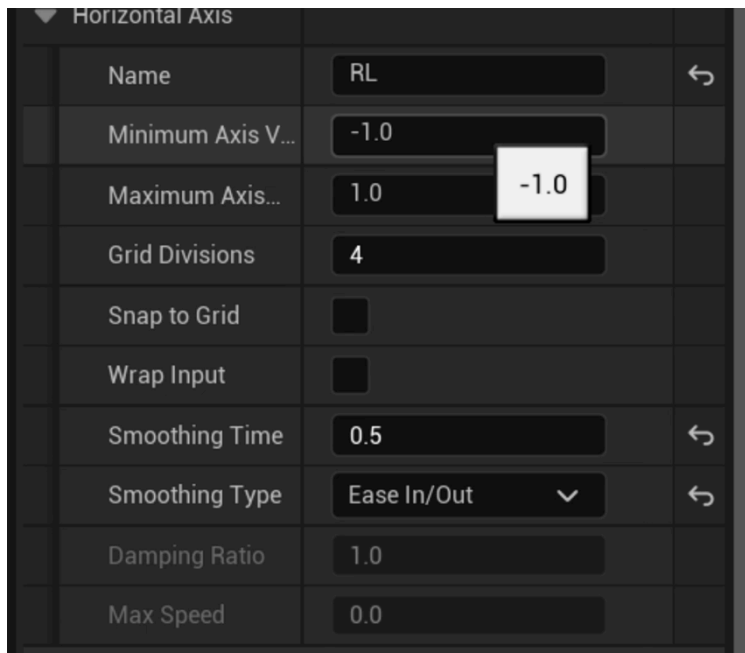
Next, adjust the bone rotation for the left avoidance animation and right avoidance animation respectively to simulate the rotation effect during obstacle avoidance, then click the Key button in the upper right corner, and click Apply Compression



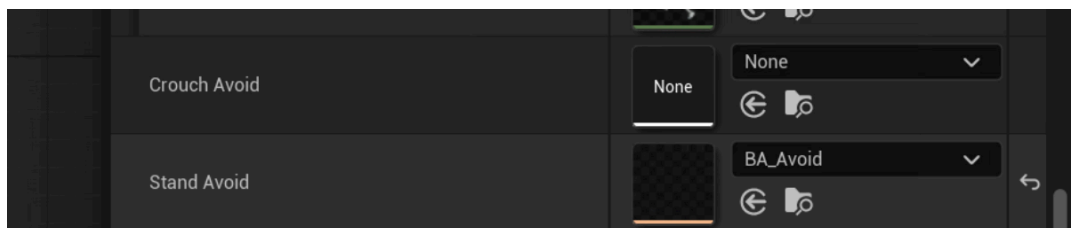
Next, create a Blend Space 1D asset. In the Horizontal Axis panel, set the Minimum Value to -1 and the Maximum Value to 1, adjust the Smoothing Time, and set the



Smoothing Type to Ease In/Out.



Assign the newly created Blend Space 1D to your ABP_UCLS_Item asset, then compile and save the blueprint. This completes the full setup process for the Obstacle Avoidance System.



Finally, add the LinkAnimClassLayer node to your Character Blueprint, and select the ABP_UCLS_Item you created for the InClass

