



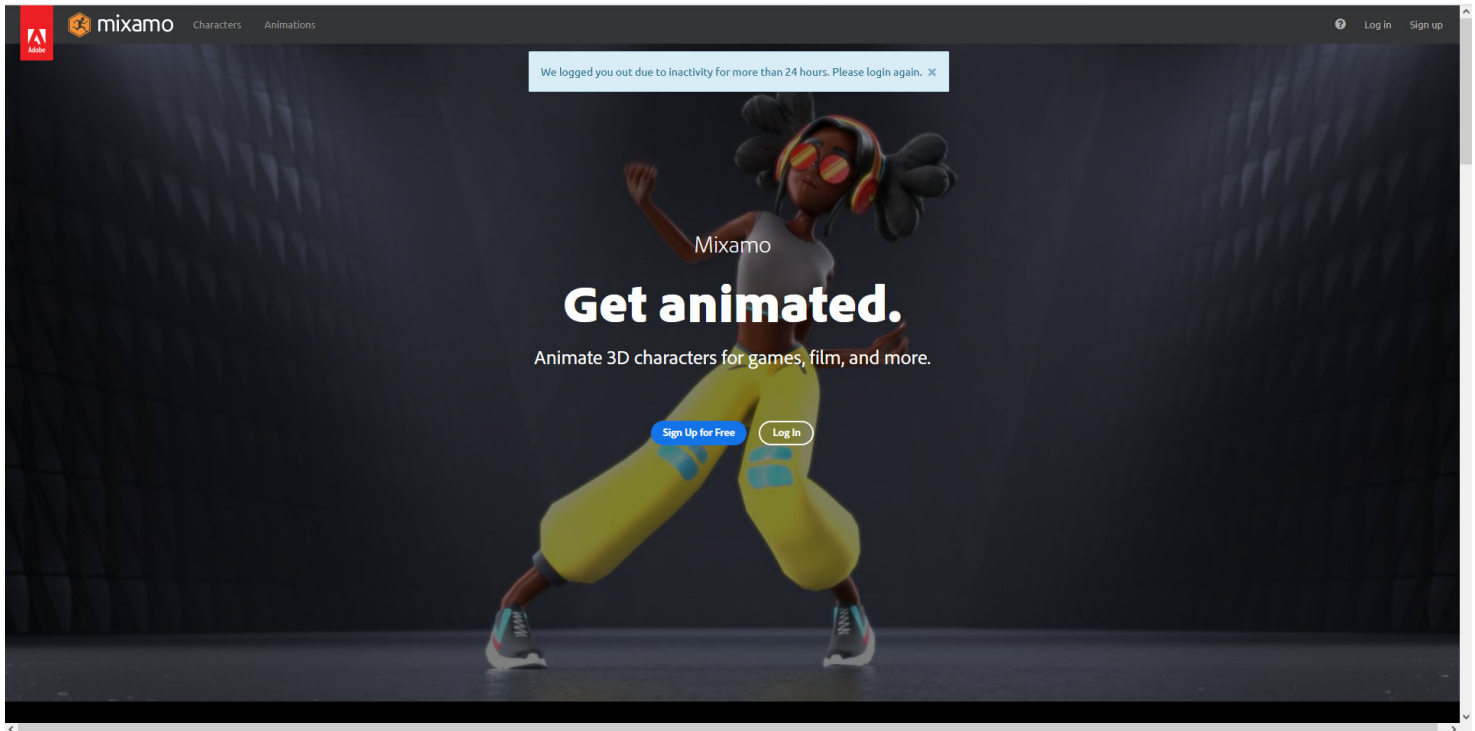
FBX2SPINE

3D MOCAP to 2D ANIMATION CONVERTER

QUICK START

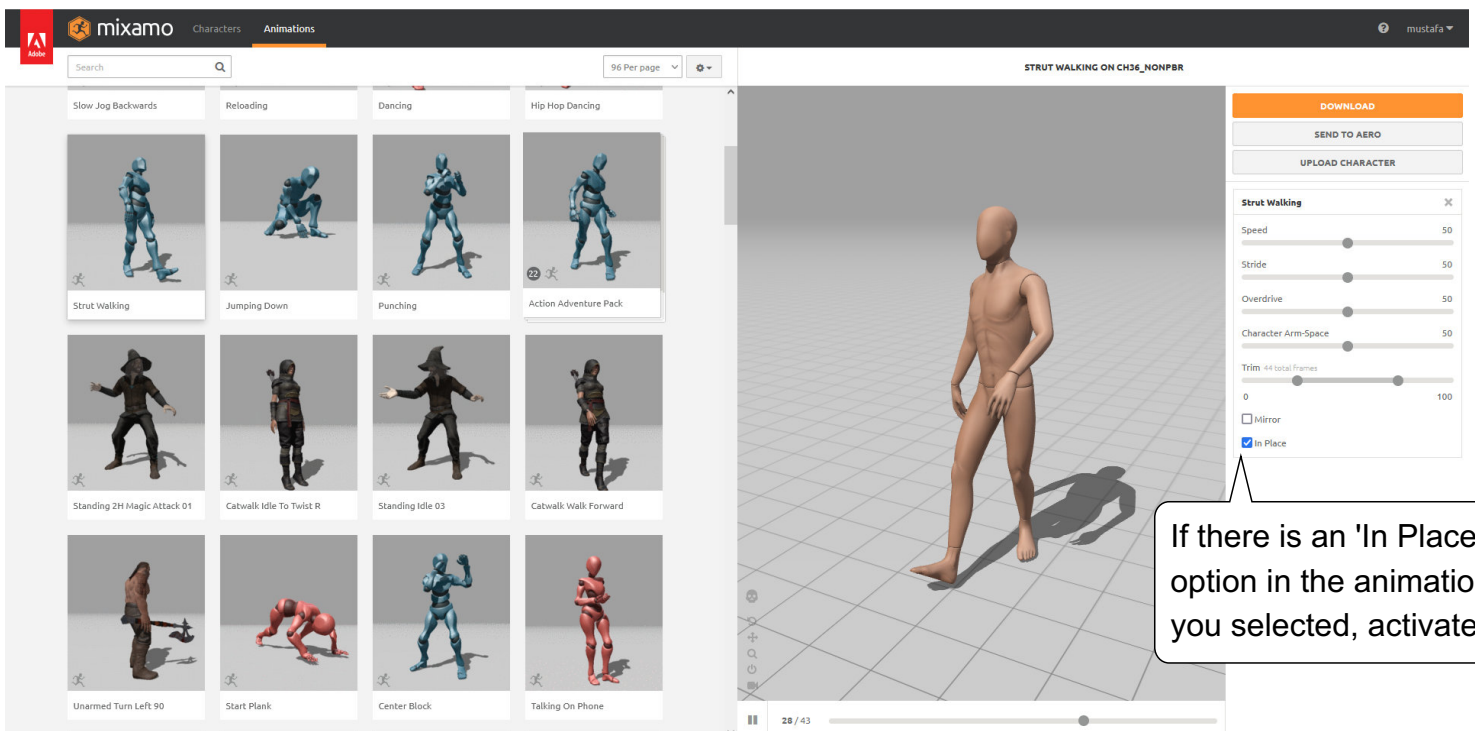
3d mocap (FBX) for animations

You can obtain 3d mocap files in different ways. One of the best resources is mixamo.com which is absolutely free. To use mixamo.com, you only need an Adobe ID.



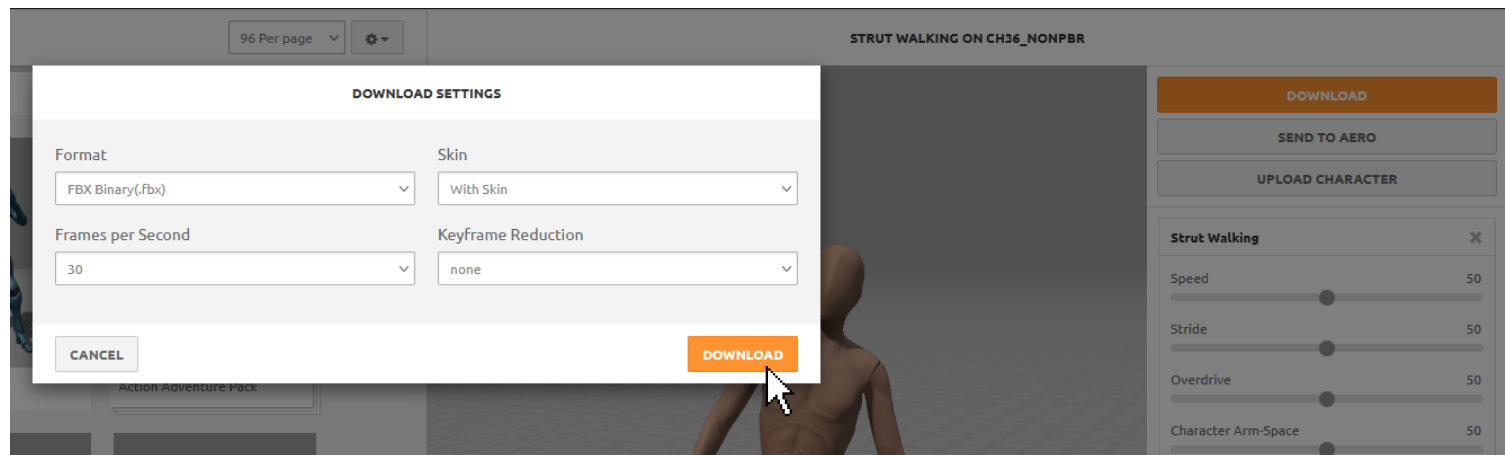
Select an animation you want to transfer.

Suggestion: when transferring animations, be careful to choose the same character each time. Thus, when you transfer the FBX file to FBX2SPINE, the bone ids will always be the same.

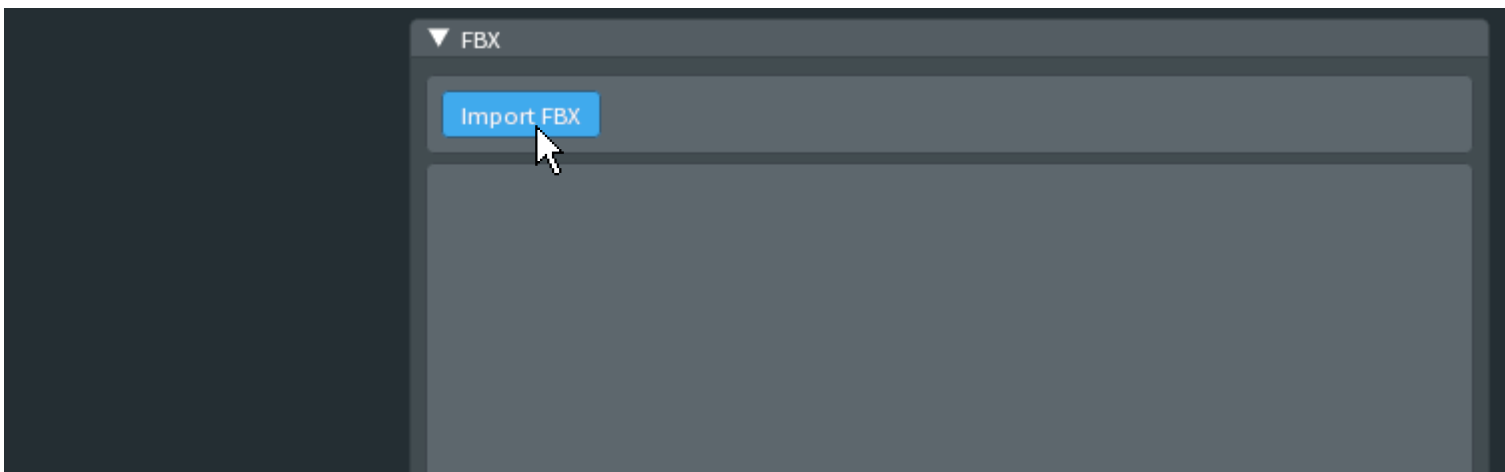


Click the 'DOWNLOAD' button. You do not need to make any settings in the window that appears. Click the 'DOWNLOAD' button again and save the animation.

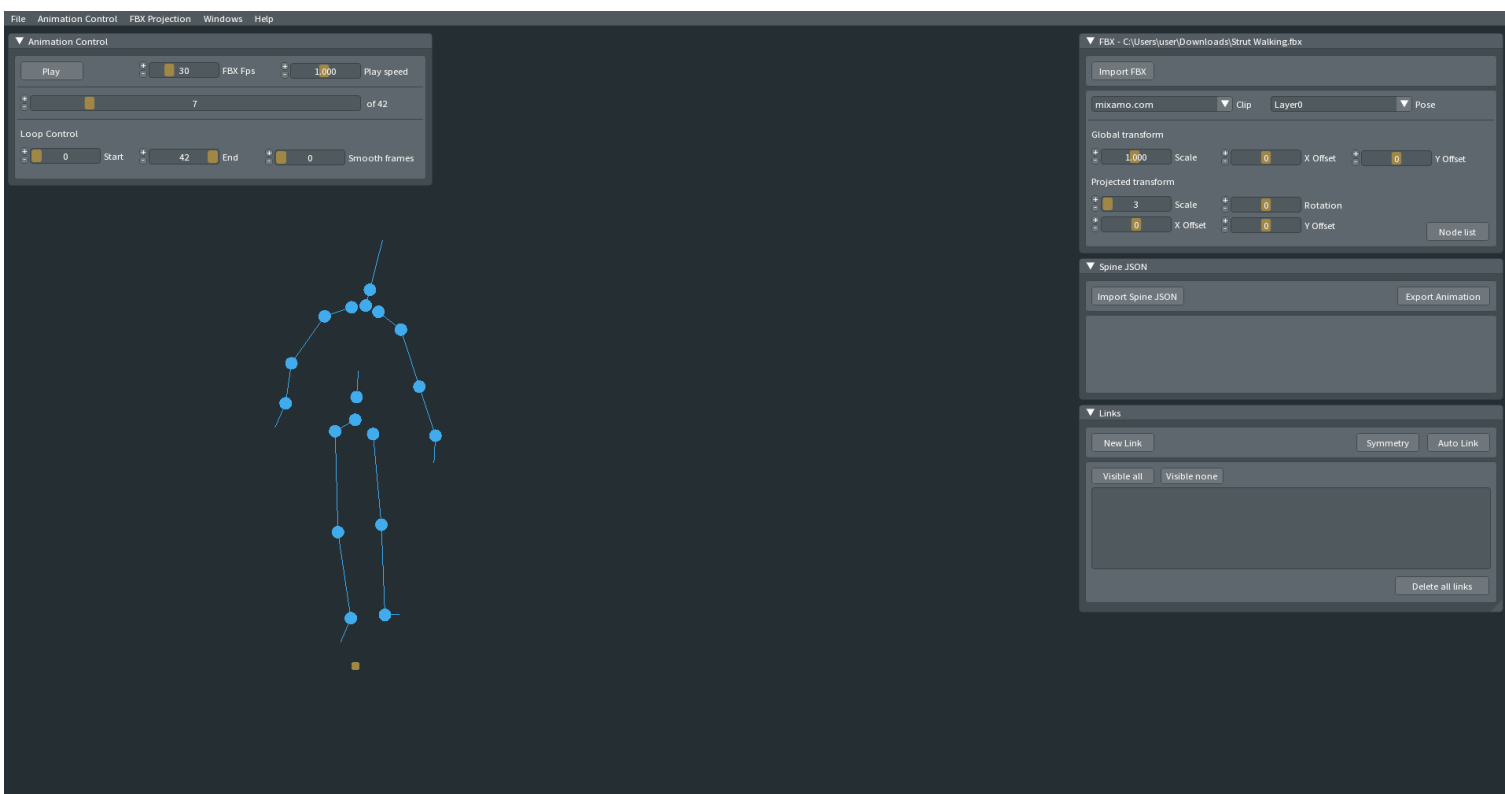
Suggestion: *Actually we don't need 'Skin data' (Meshes/Polygons/Geometry) when importing animations from FBX files. So you can choose 'Without skin' instead of 'With skin' to reduce FBX file size.*



Click 'Import FBX' button In the FBX2SPINE.

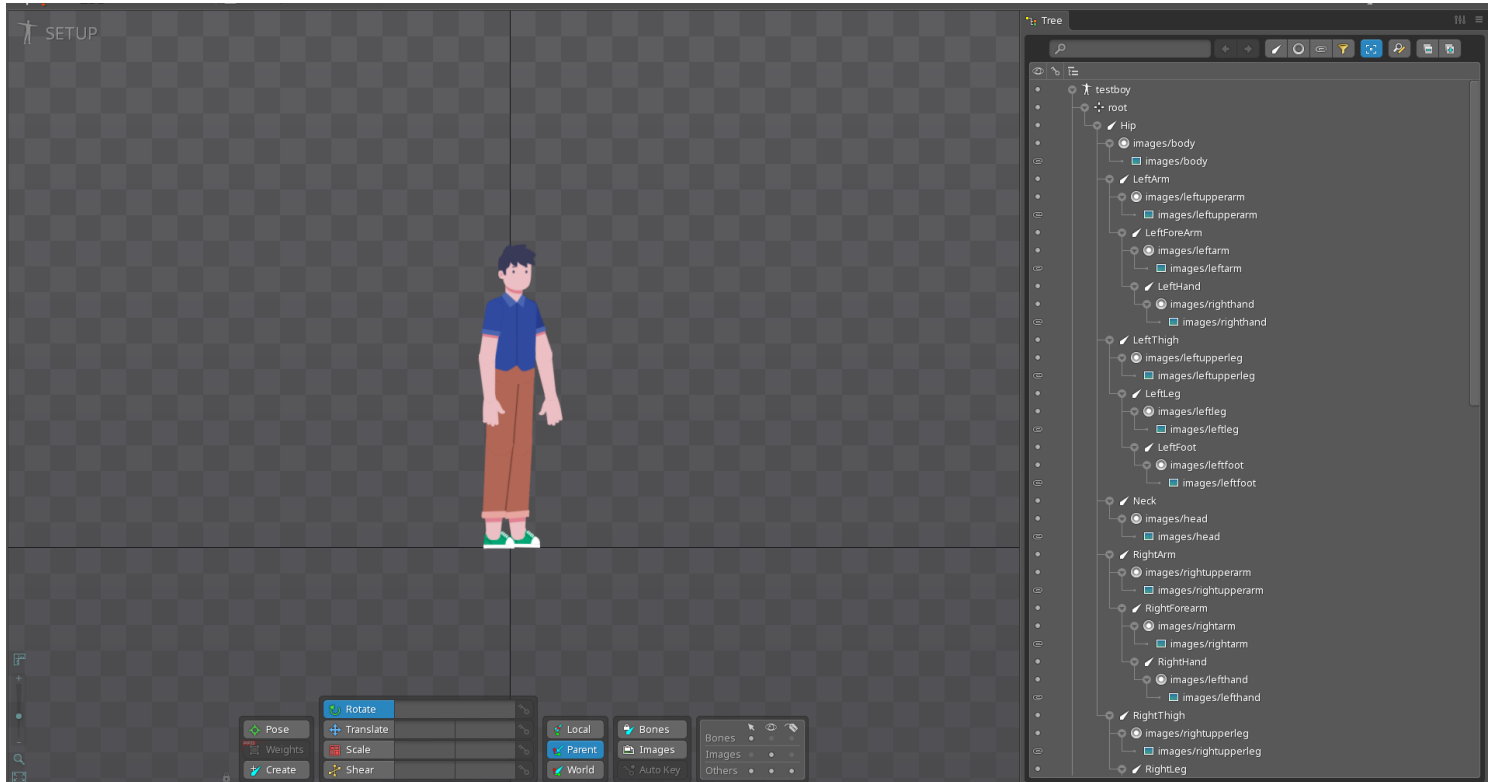


In FBX2SPINE, the skeleton system of the FBX file will be seen as follows;

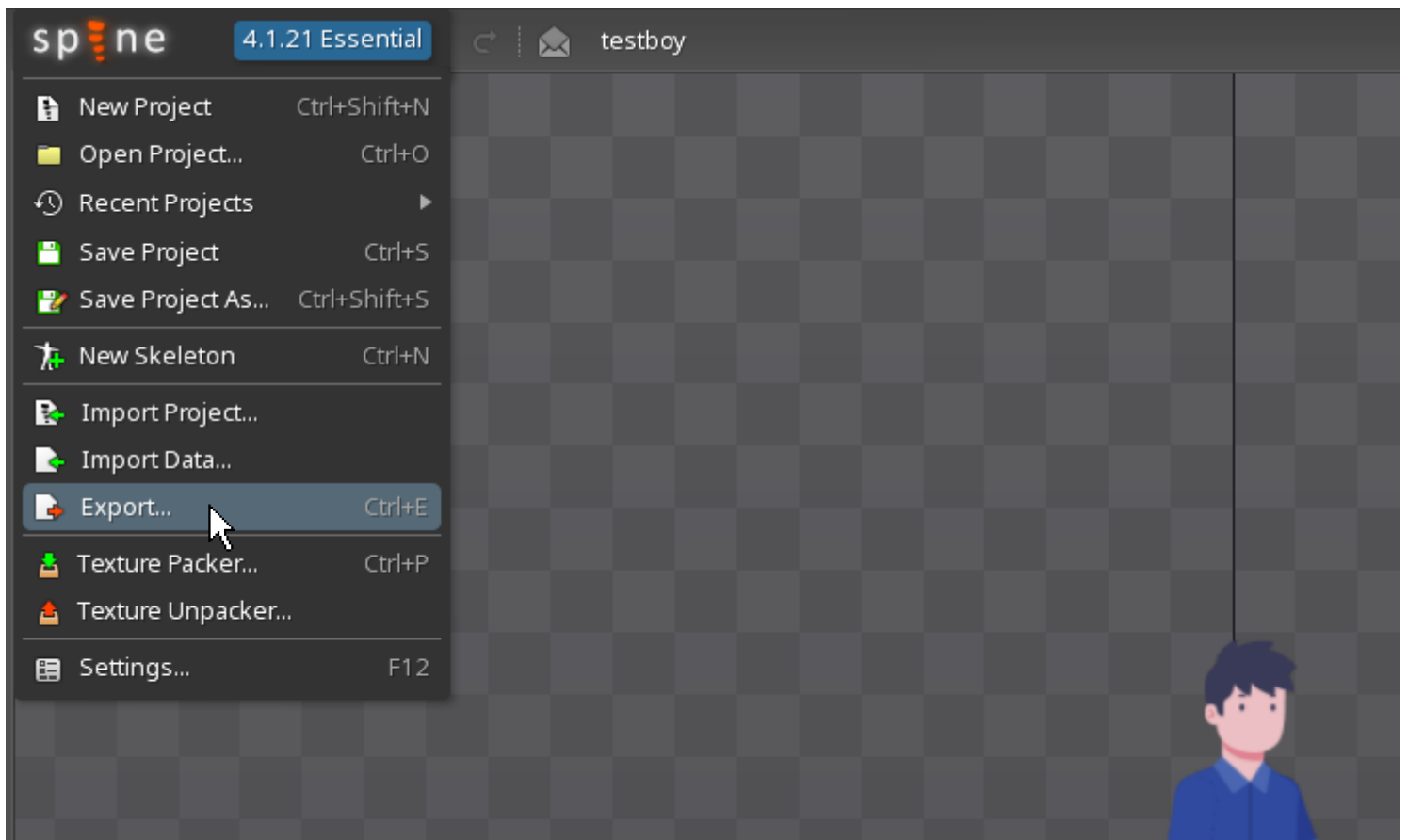


Importing your SPINE File to FBX2SPINE

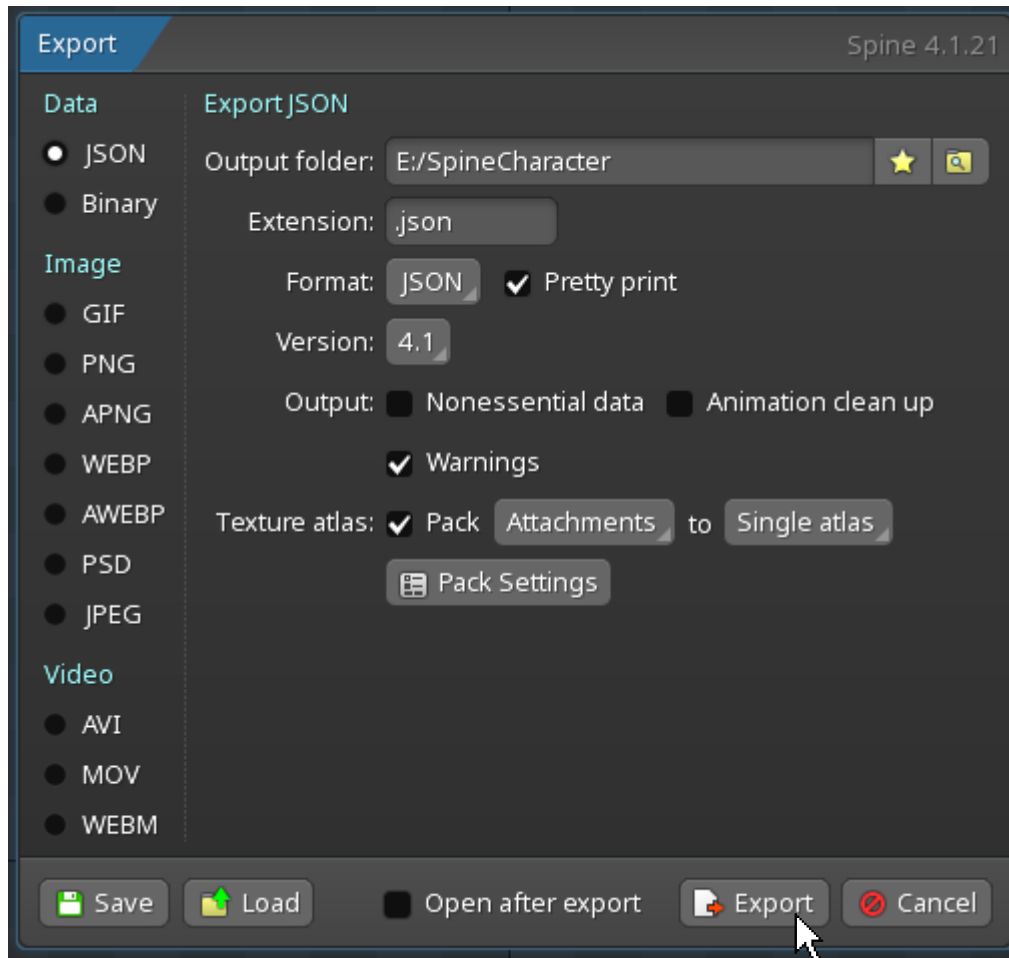
Open your project in SPINE



Select 'Export'



Export with this settings ;

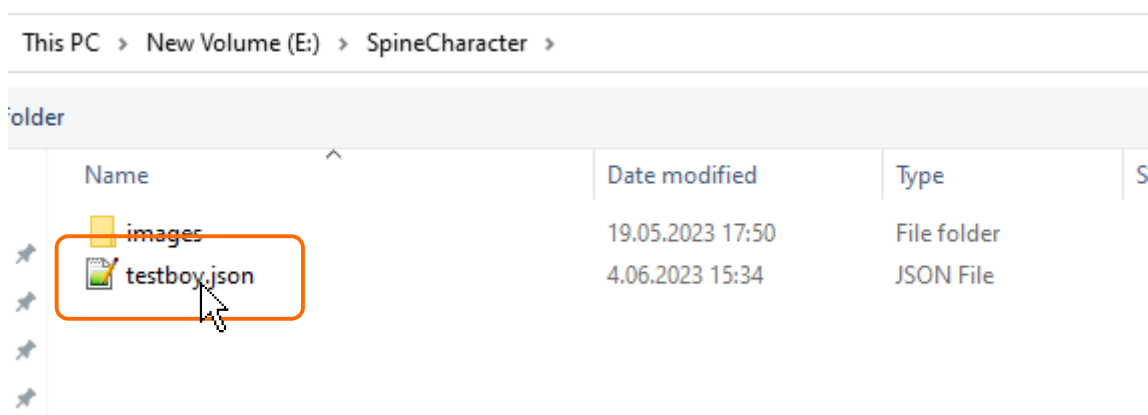
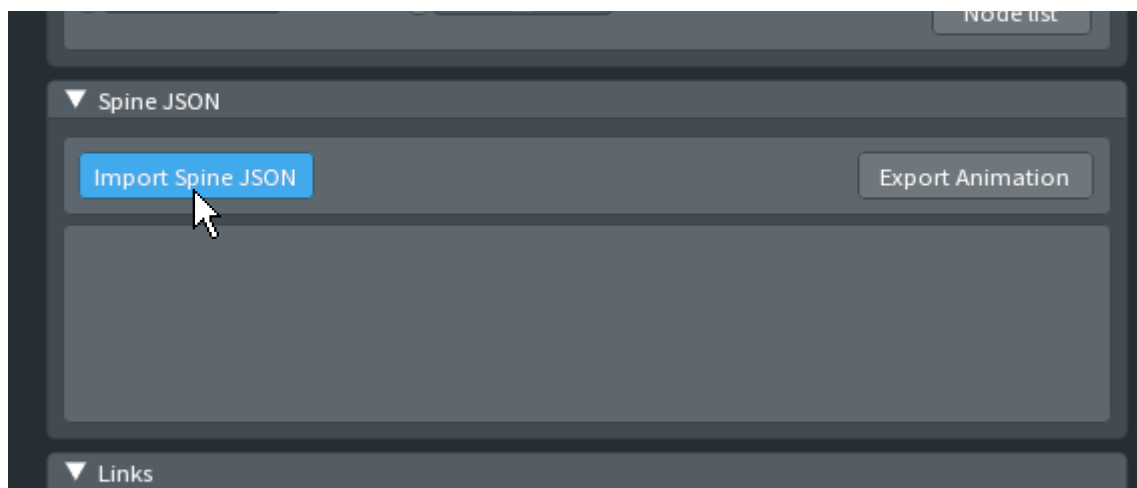


Make sure that your export folder is the same as your Spine file's folder and that the export folder contains exactly the following files. (Of course, your project name will be displayed instead of 'testboy'.)

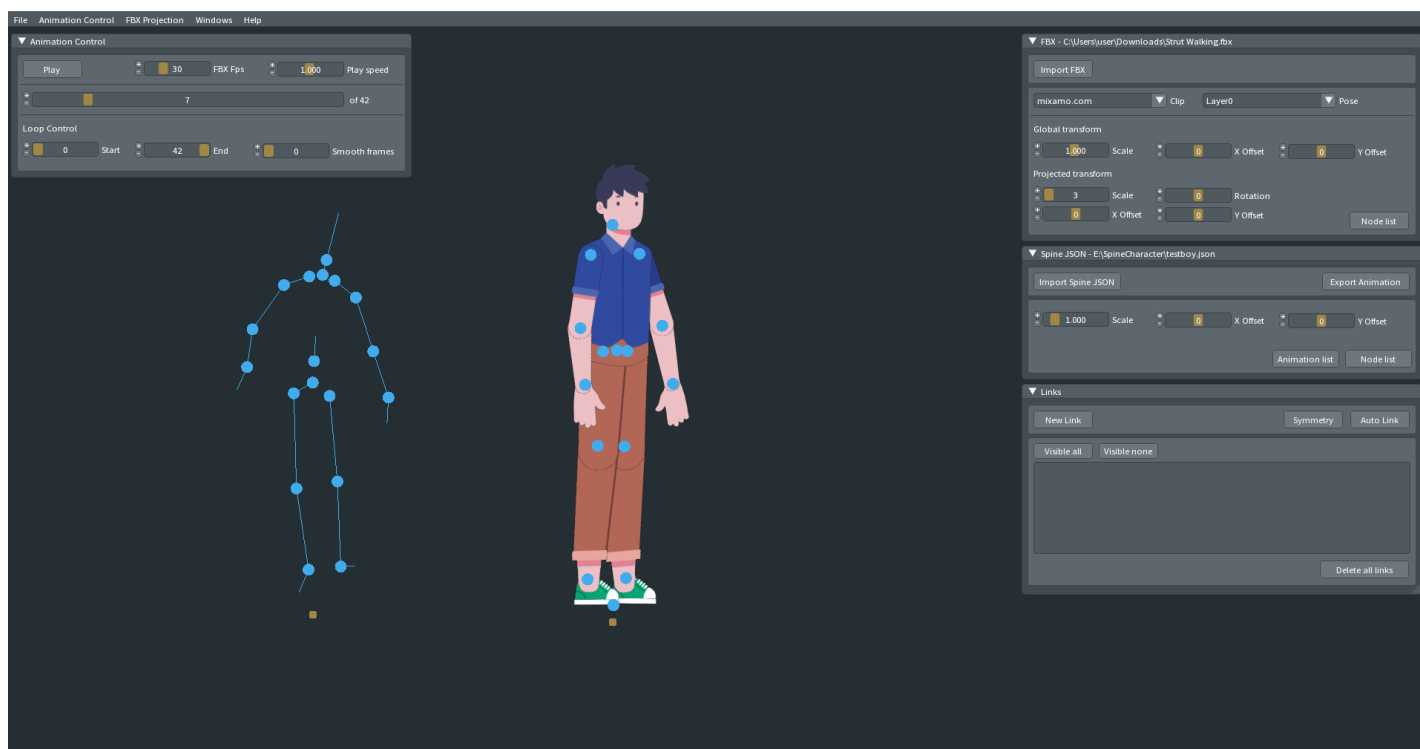
New Volume (E:) > SpineCharacter >

Name	Date modified	Type	Size
images	19.05.2023 17:50	File folder	
testboy.atlas	4.06.2023 15:34	ATLAS File	1 KB
testboy.json	4.06.2023 15:34	JSON File	5 KB
testboy.png	4.06.2023 15:34	PNG File	28 KB
testboy.spine	30.05.2023 14:31	Spine project	2 KB

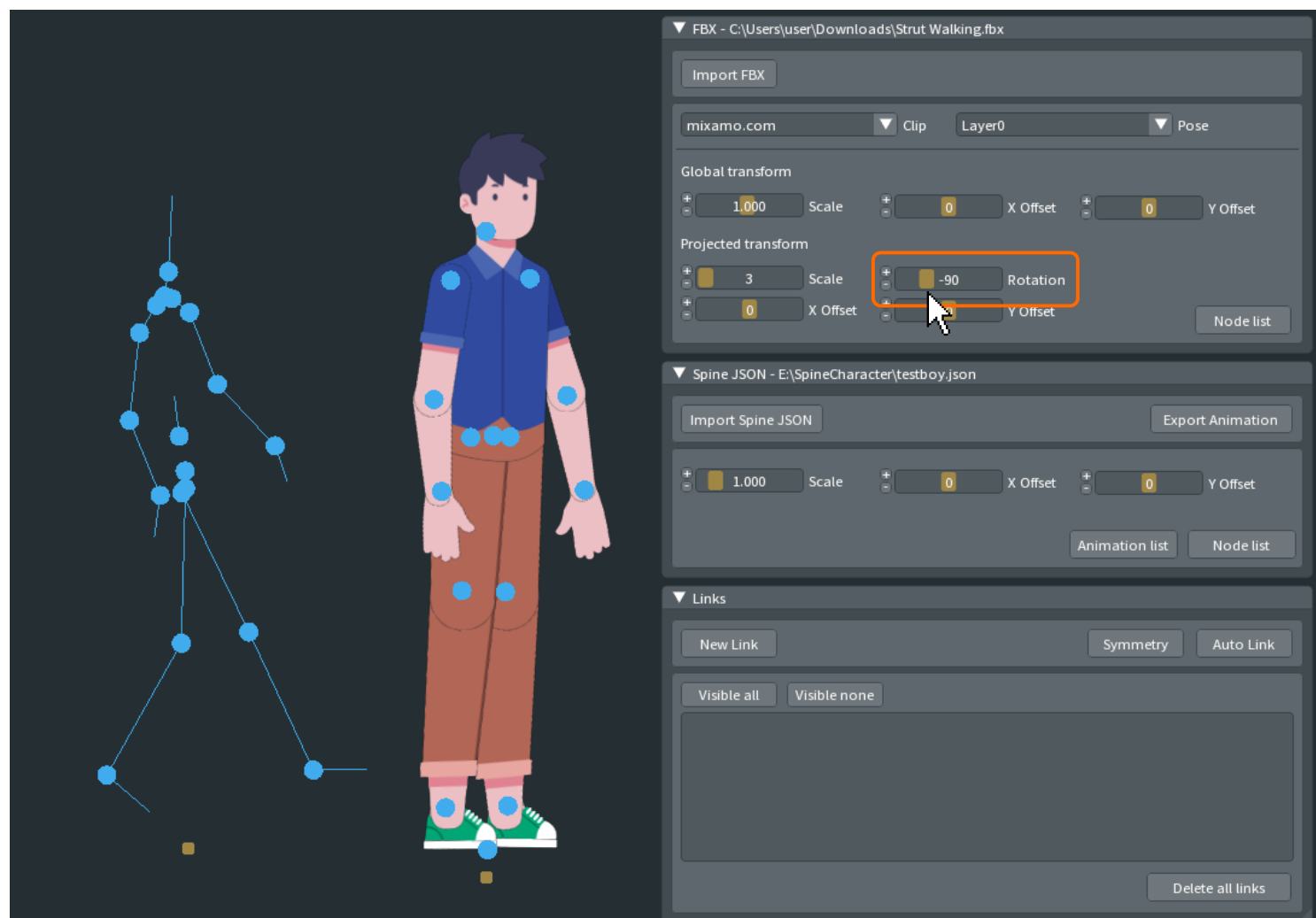
Click the 'Import Spine JSON' button in FBX2SPINE.



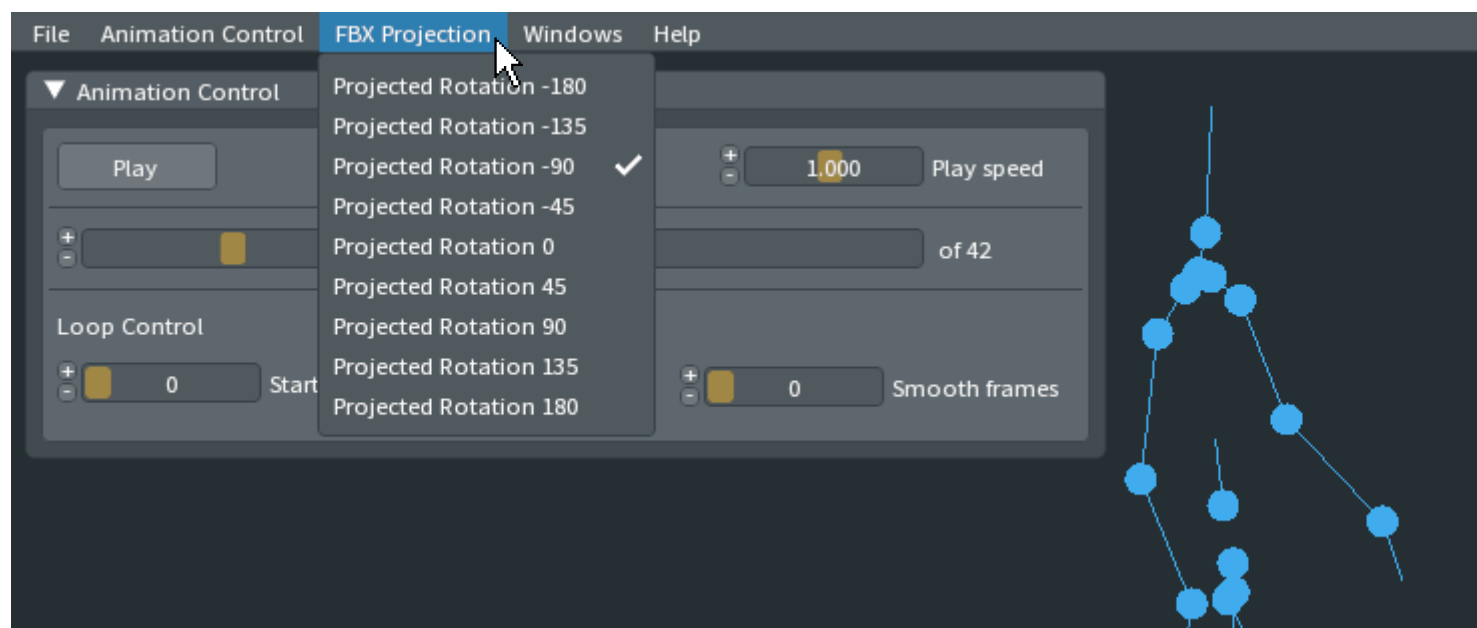
It will look like the image below;



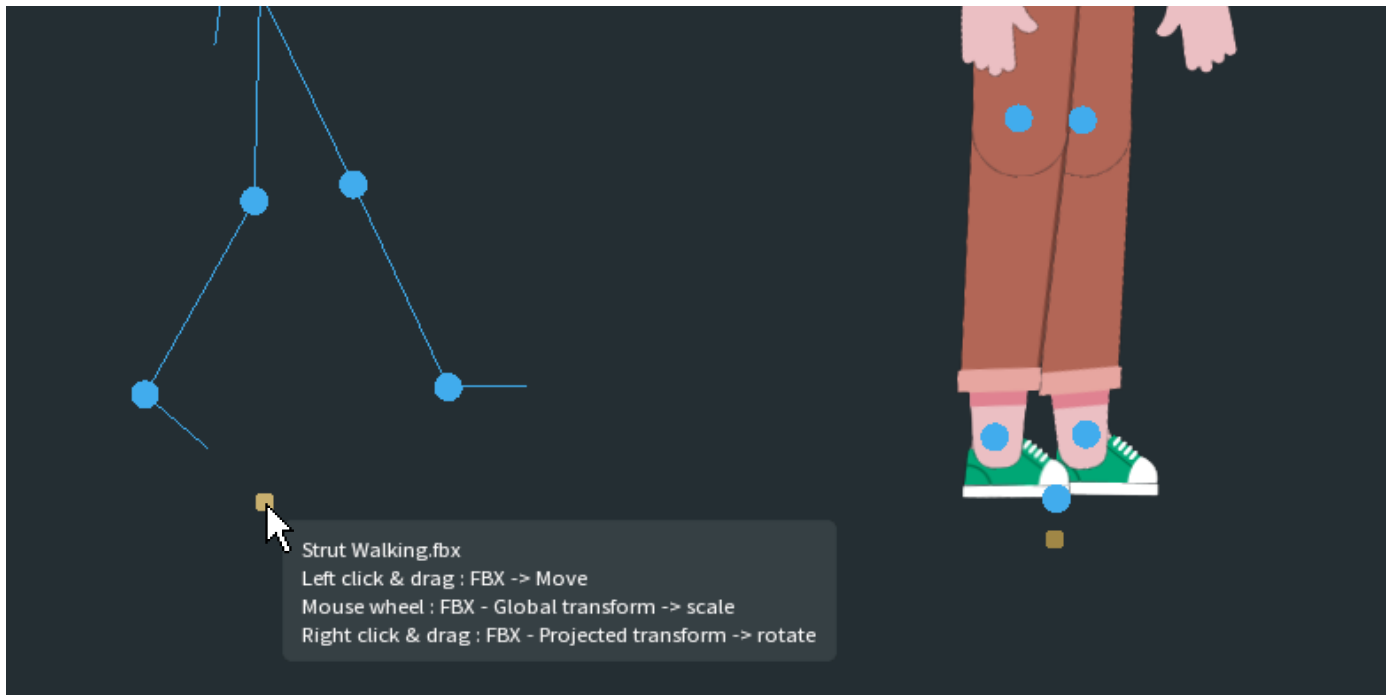
Rotate the FBX skeleton in the same direction as the SPINE character (in this example it's in side view and facing right). If you do not do this, the 'Projected angle' values will not be calculated correctly when creating a link later.



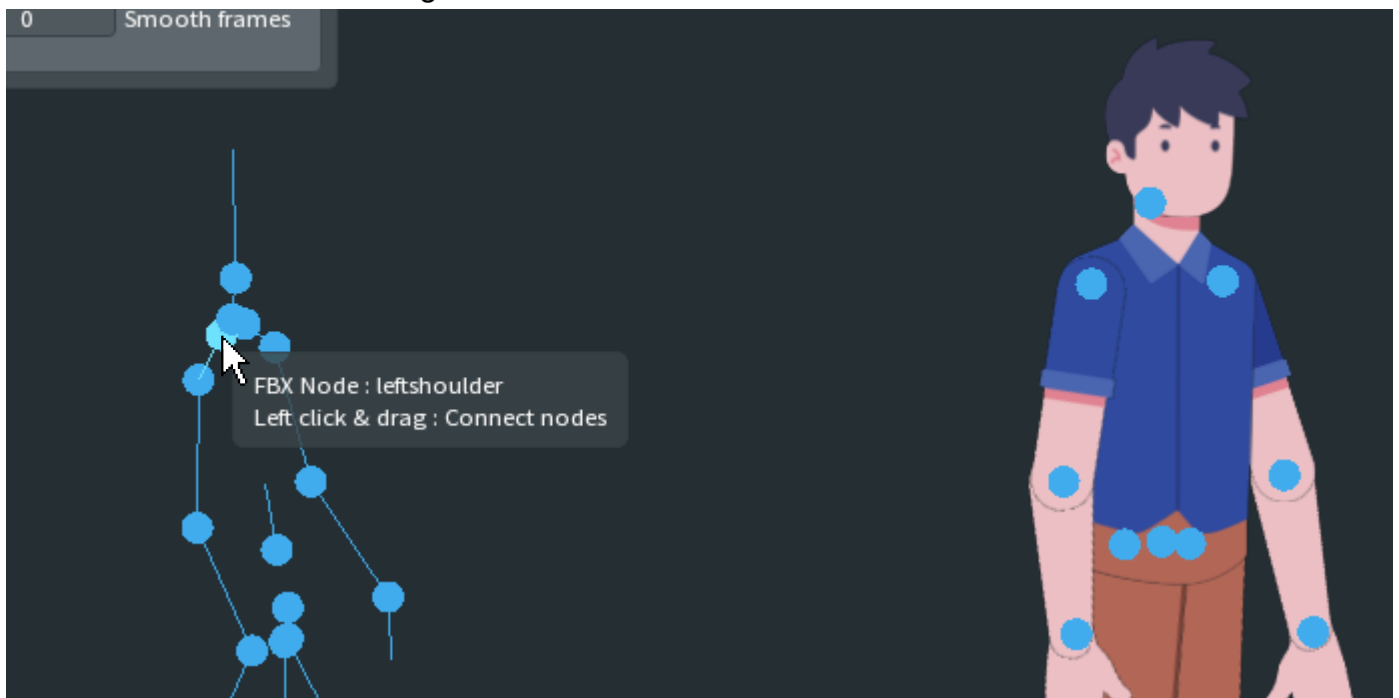
Another way to do this is to choose the right angle from the menu.

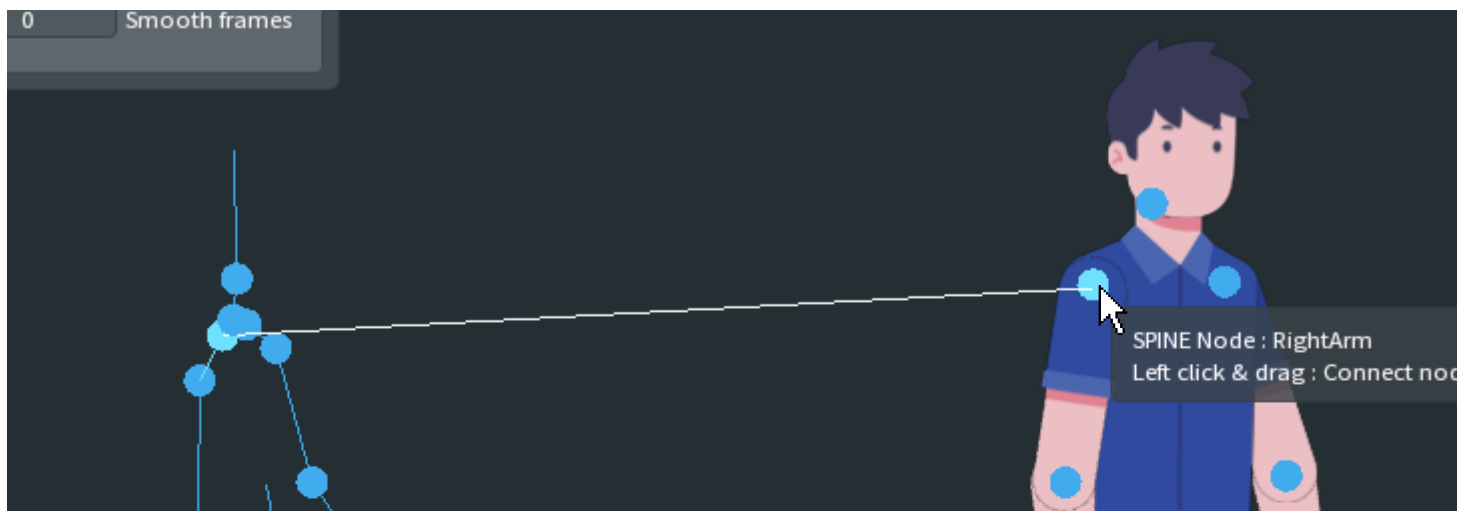
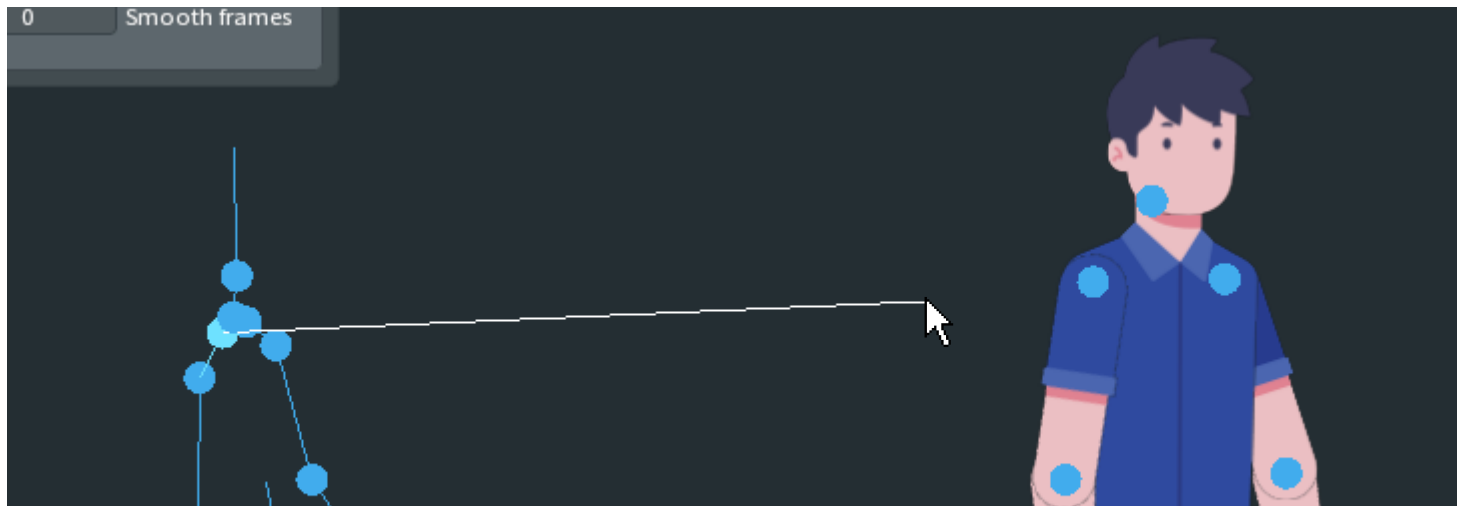


Another way is; while the mouse is on the handle at the bottom of the 'FBX skeleton', dragging it left and right while holding down the right mouse button.

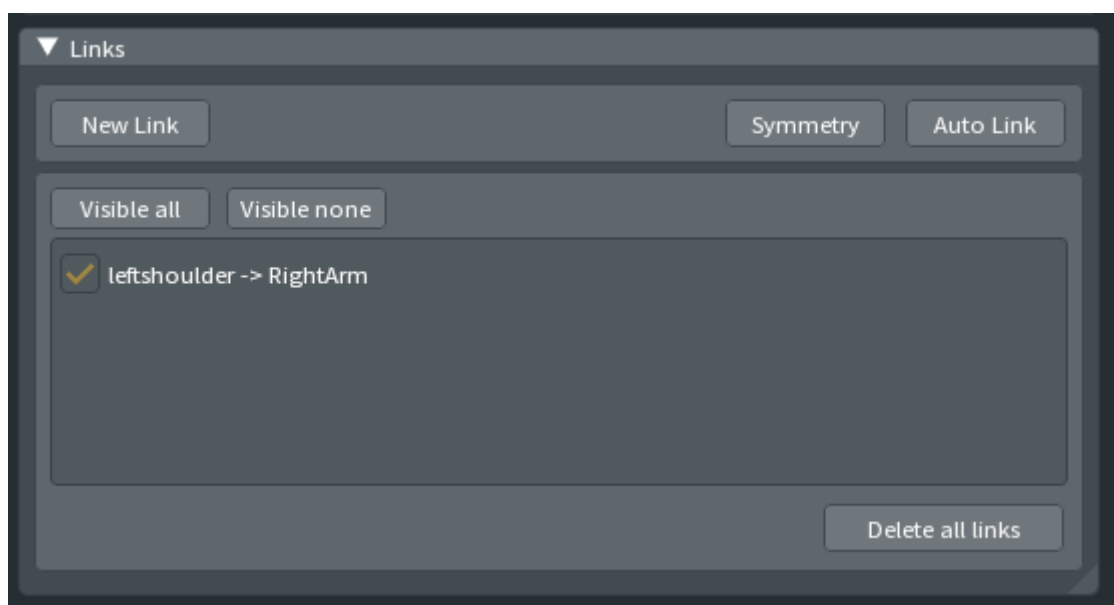


Now hover the mouse over the skeleton node you want to link and drag and drop it to a node in SPINE character while holding down the left mouse button.

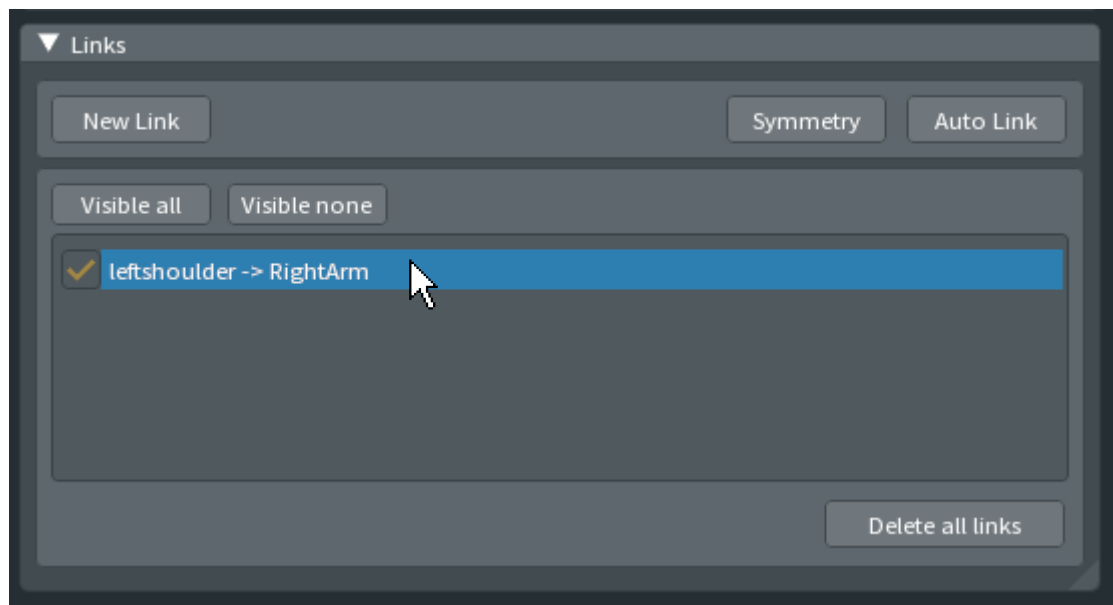




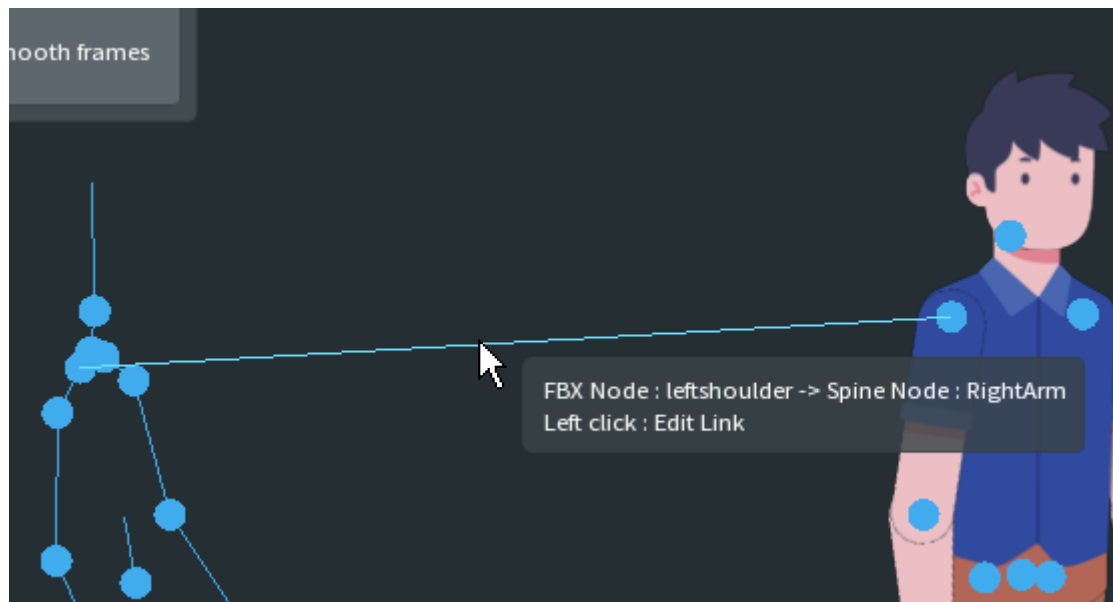
As you can see, the newly added link appears in the Links window.



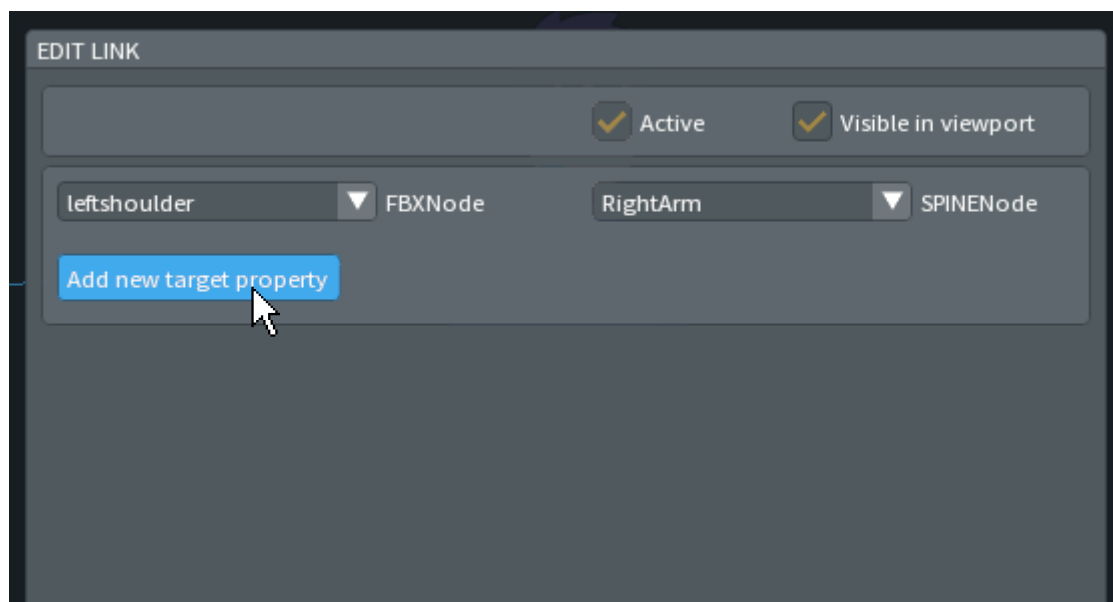
Hover over the link and open the editing screen with the left mouse button.



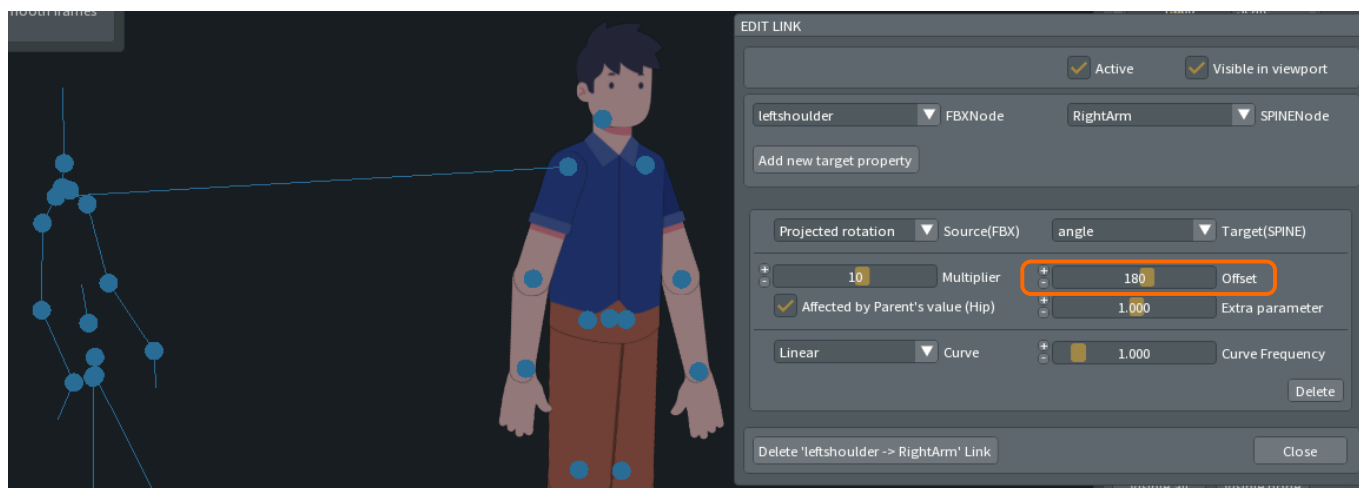
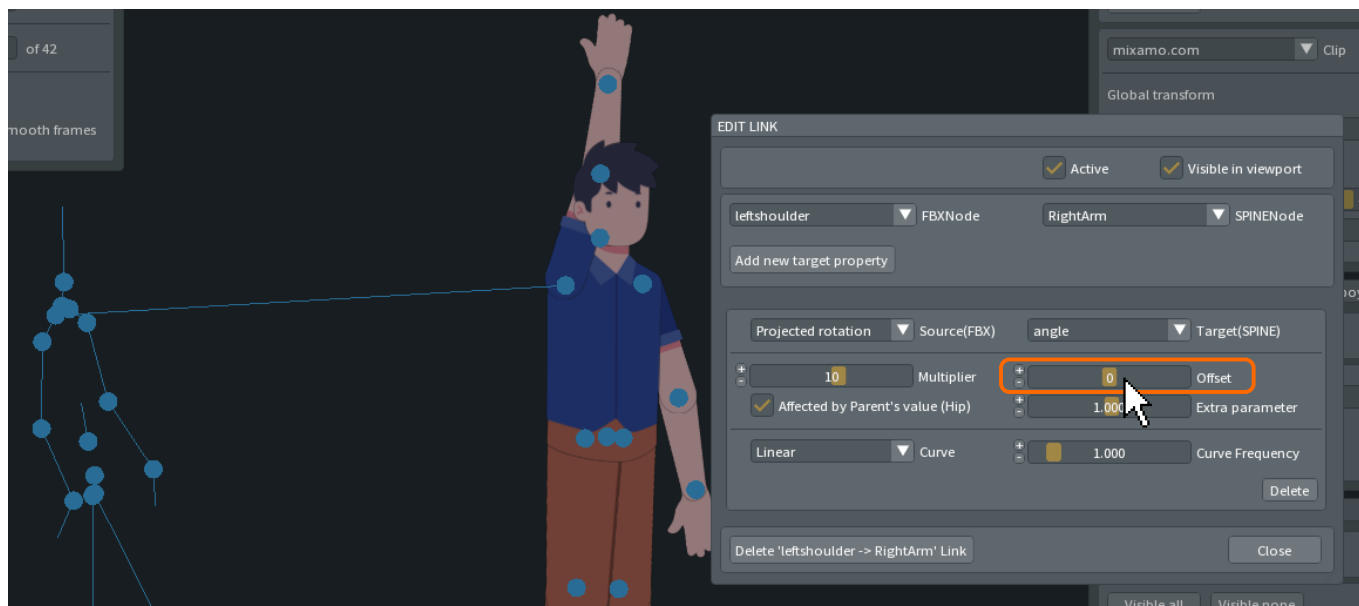
You can do the same thing by clicking the link line.



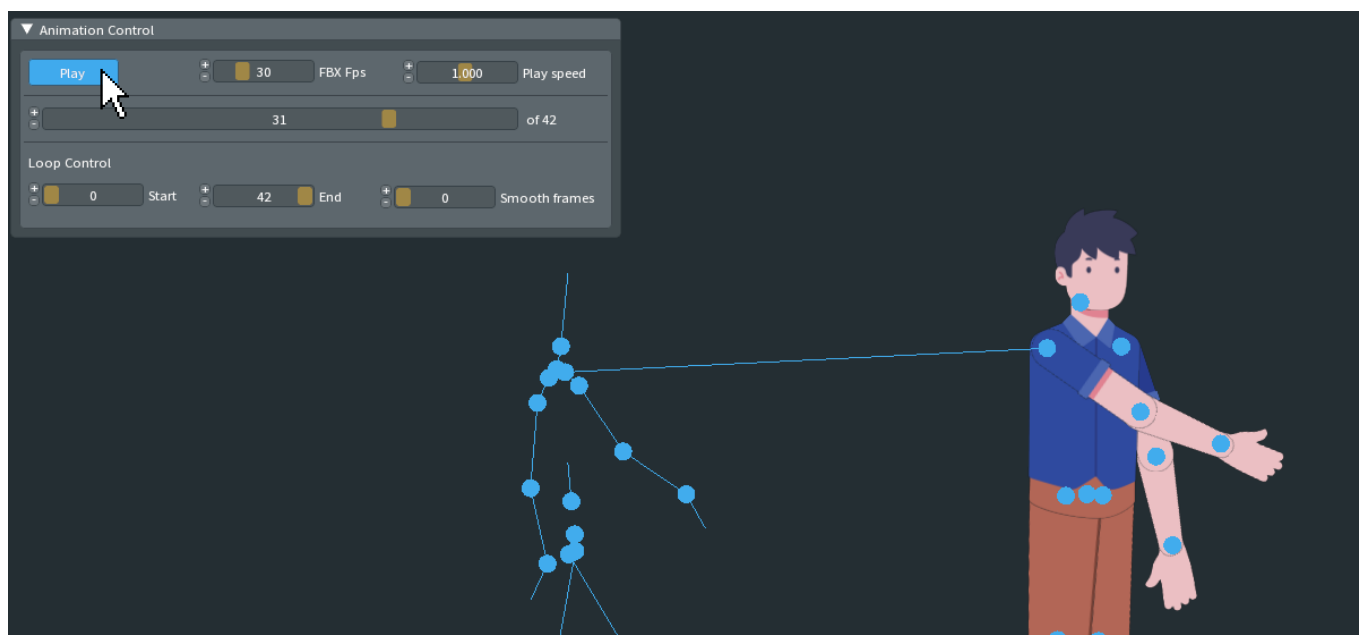
Add a new link property.



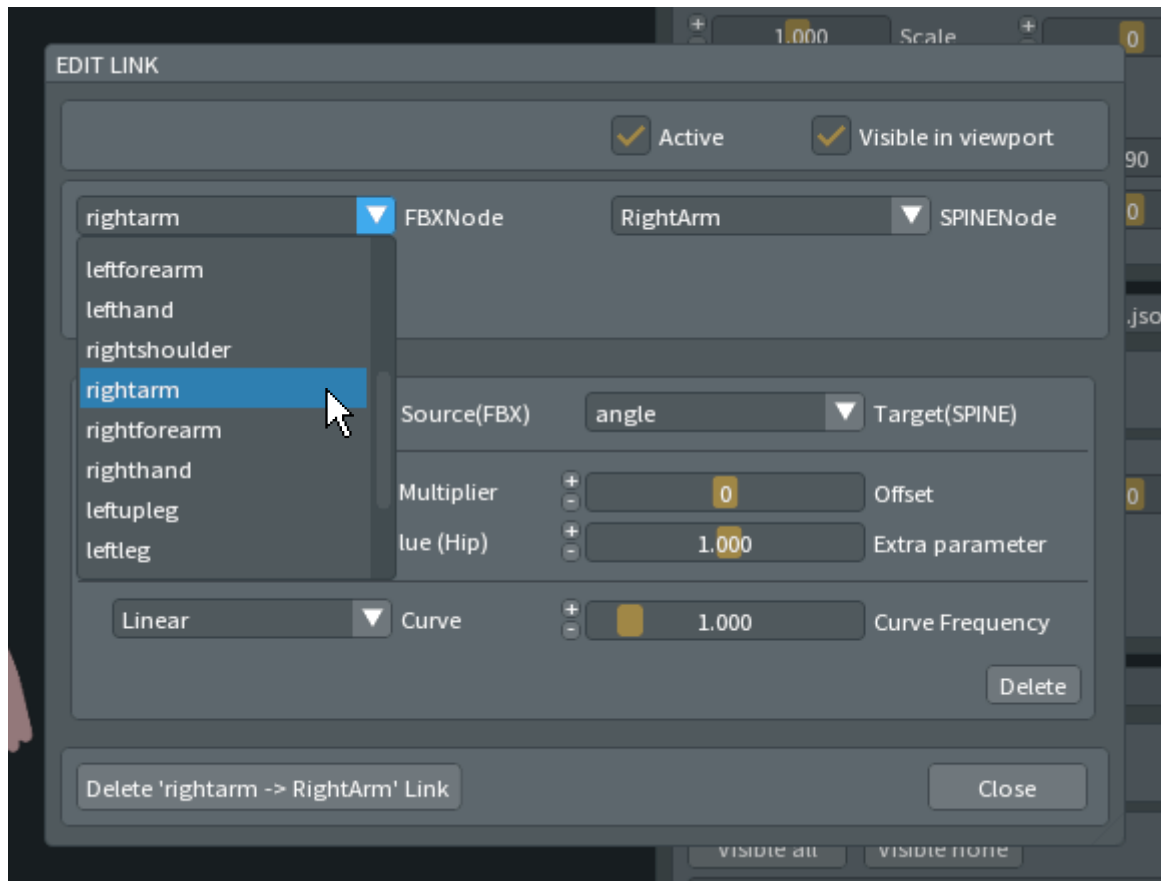
Fix the angle difference by changing the 'Offset' value.



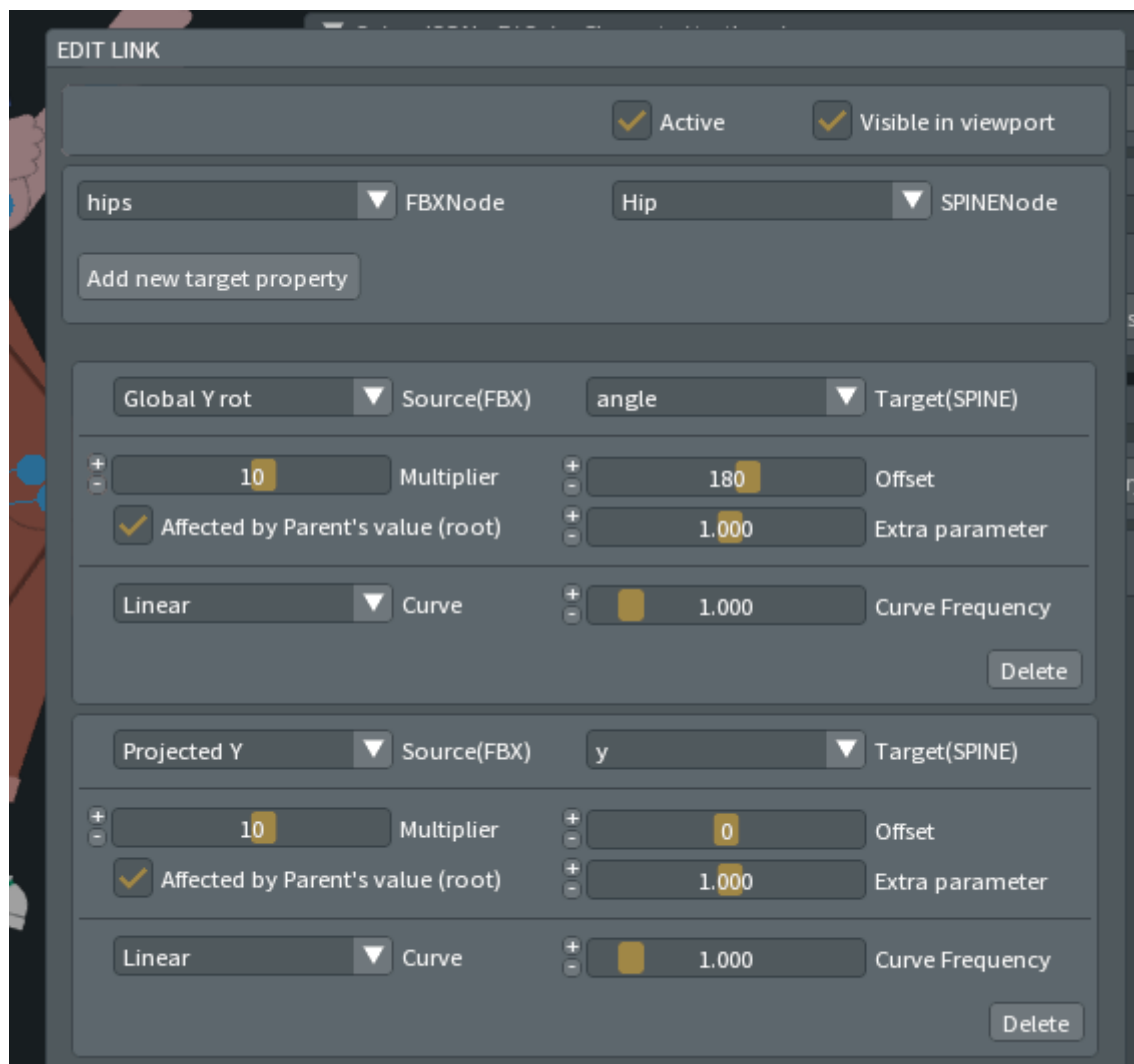
Run the animation by pressing 'Ctrl+Space' or Play button and make sure your link is working correctly.



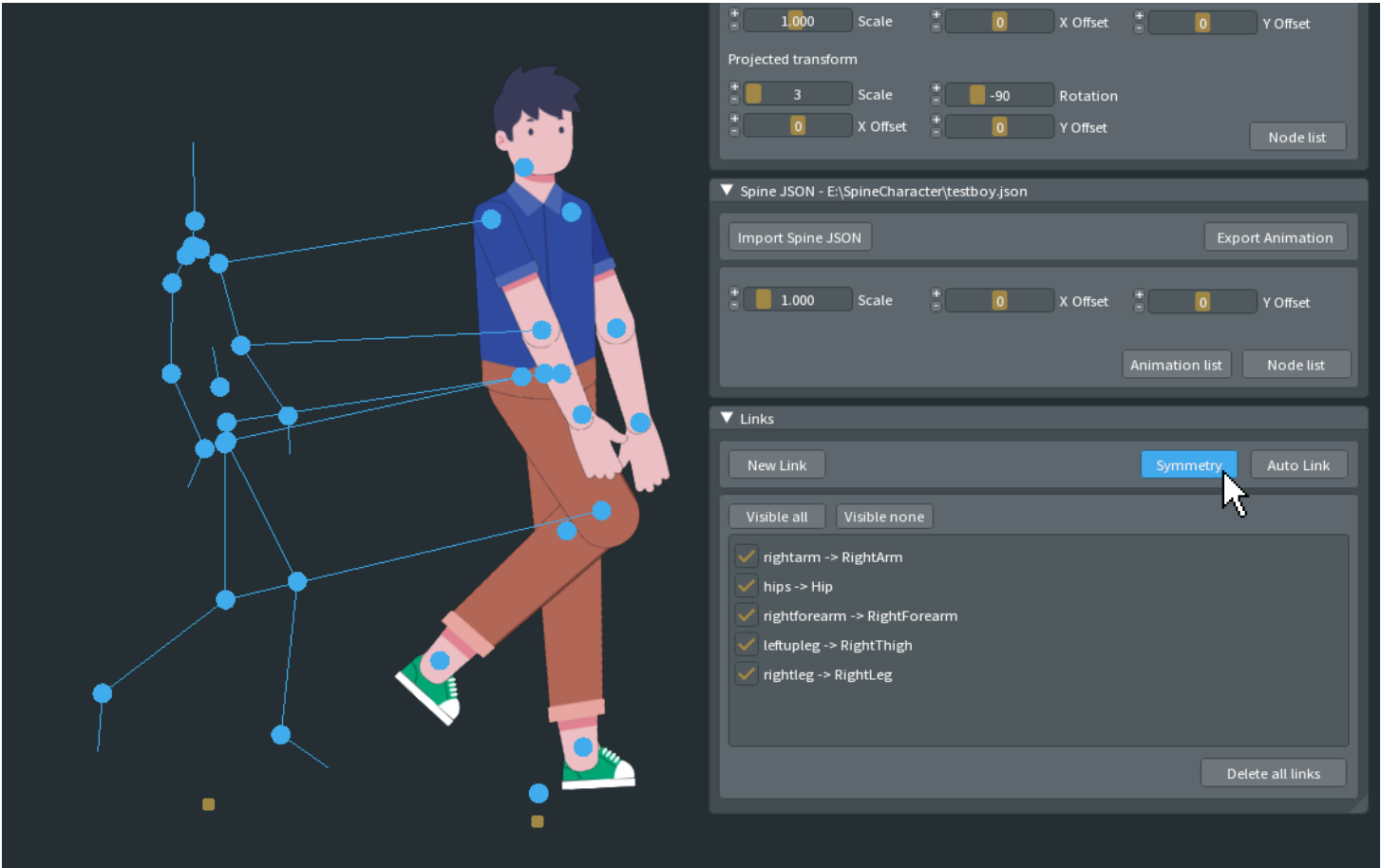
You can change the nodes as follows;



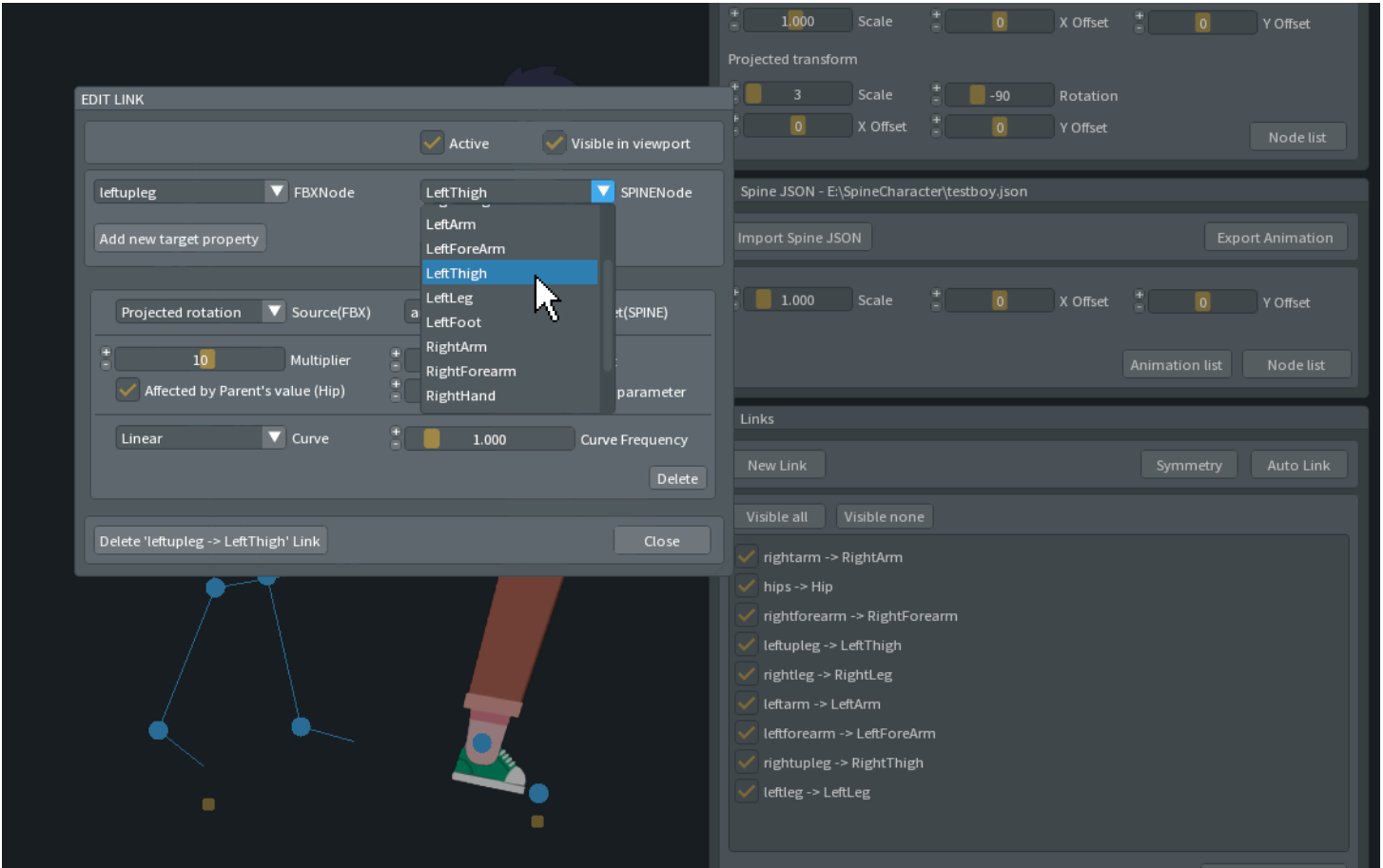
Add another target property for hips. Set this to source = Project Y and Target = y as well.



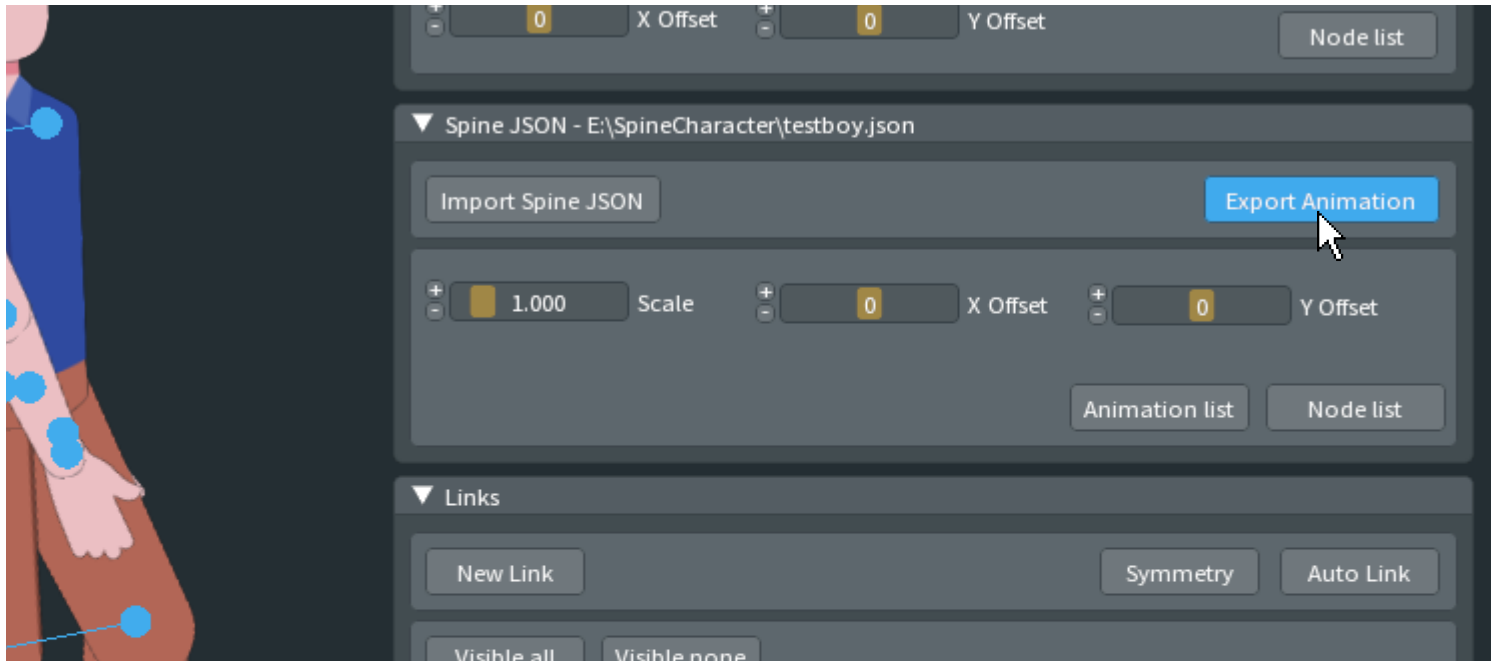
Click the 'Symmetry' button after creating all the links for the right side.



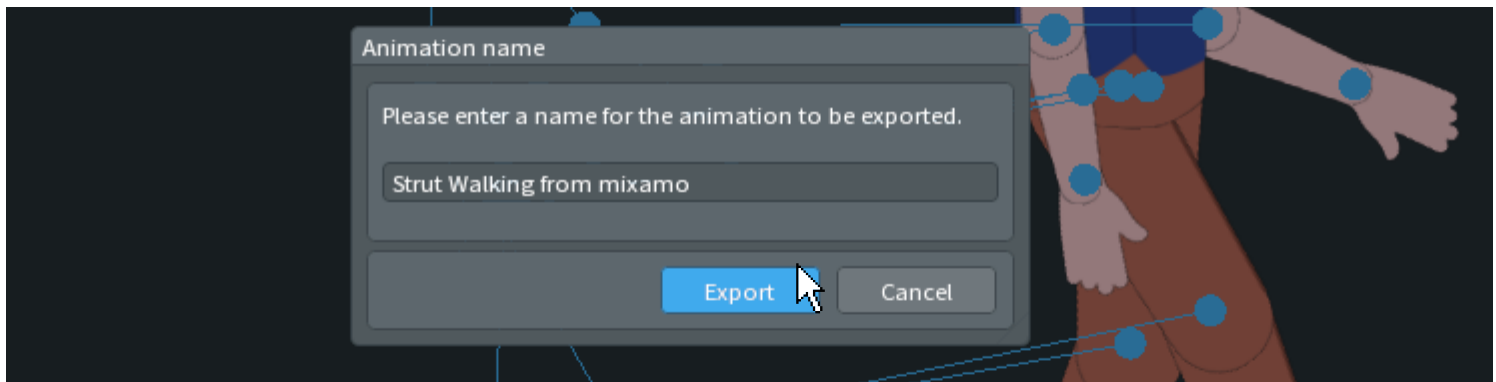
Fix target nodes in newly created links.



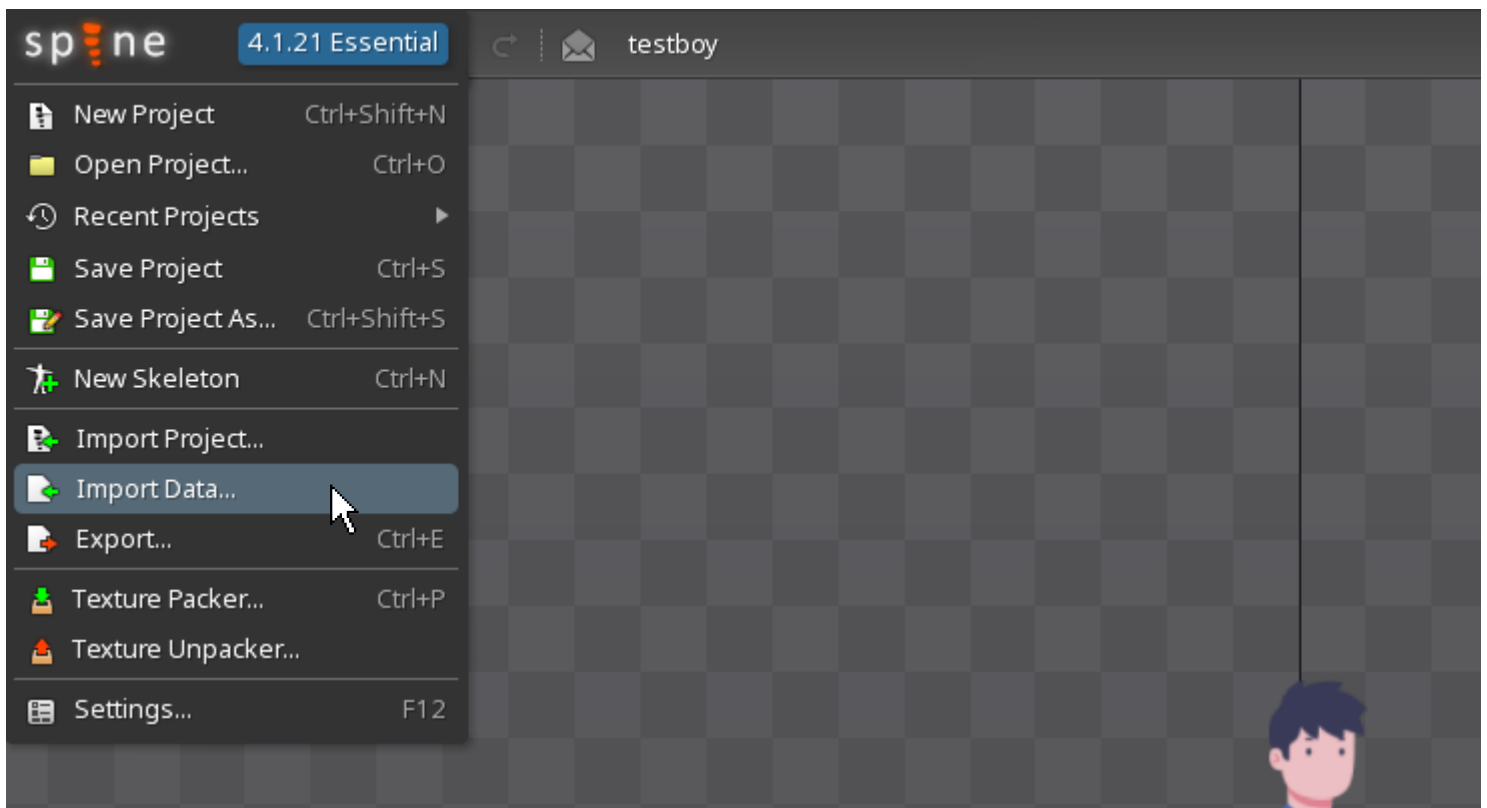
Click 'Export Animation' button



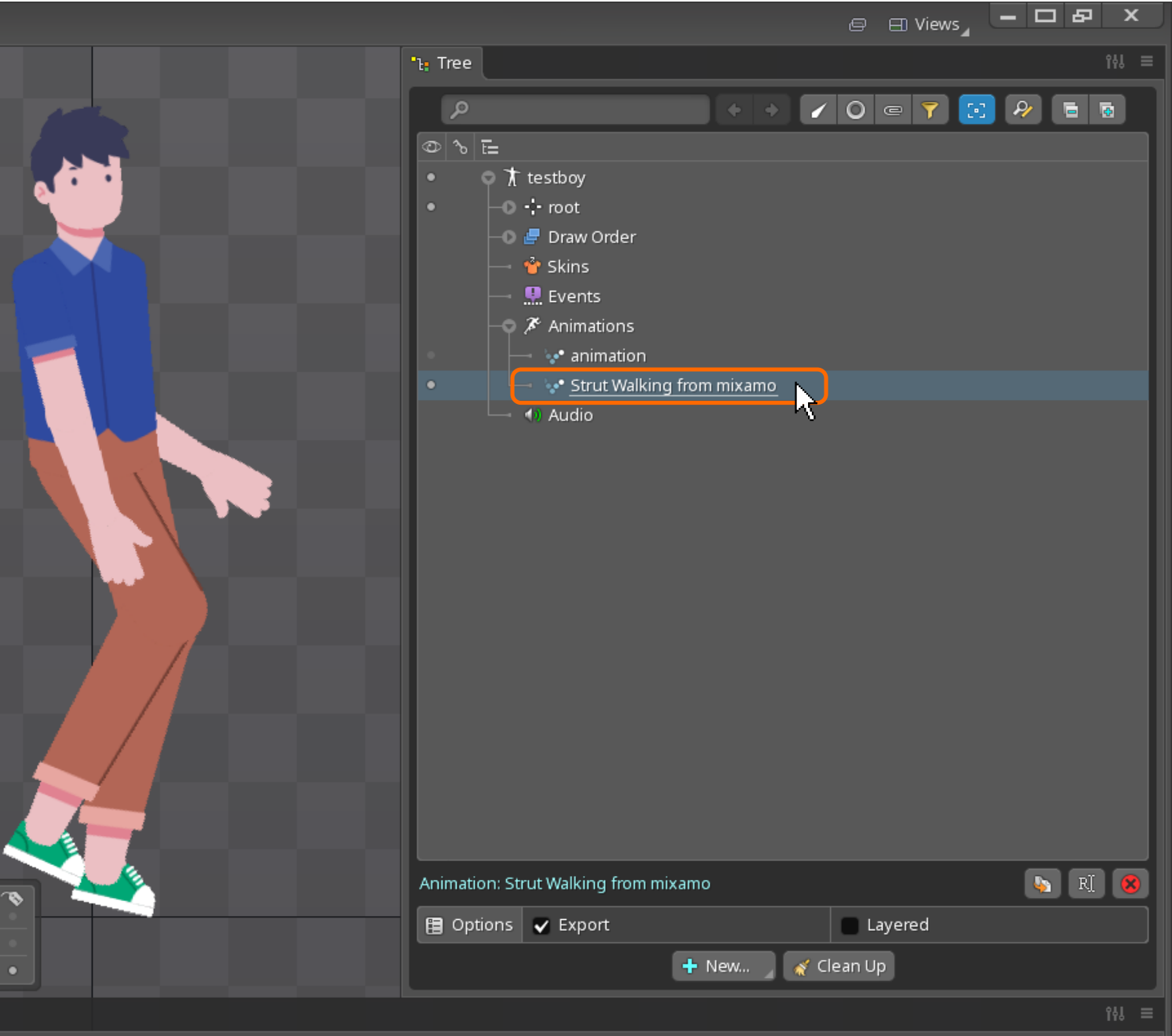
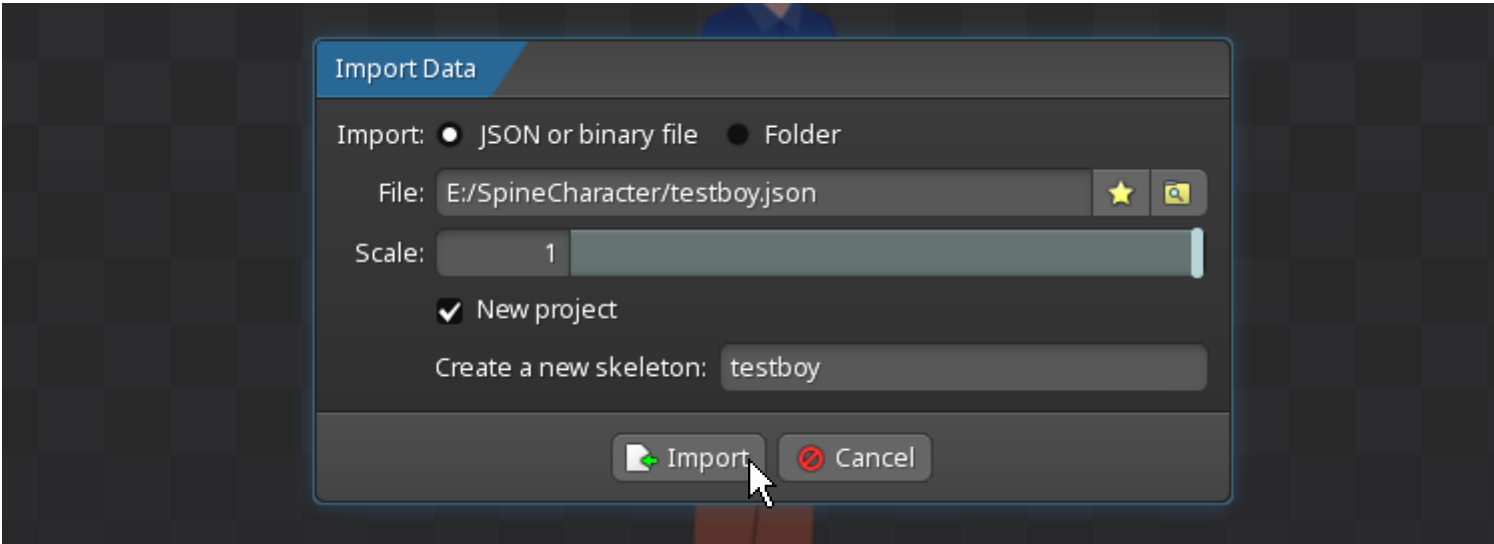
Give a name for animation and click 'Export'. FBX2SPINE will inject this animation into the json file you exported from SPINE.



Now you can import the json file including this animation into Spine.



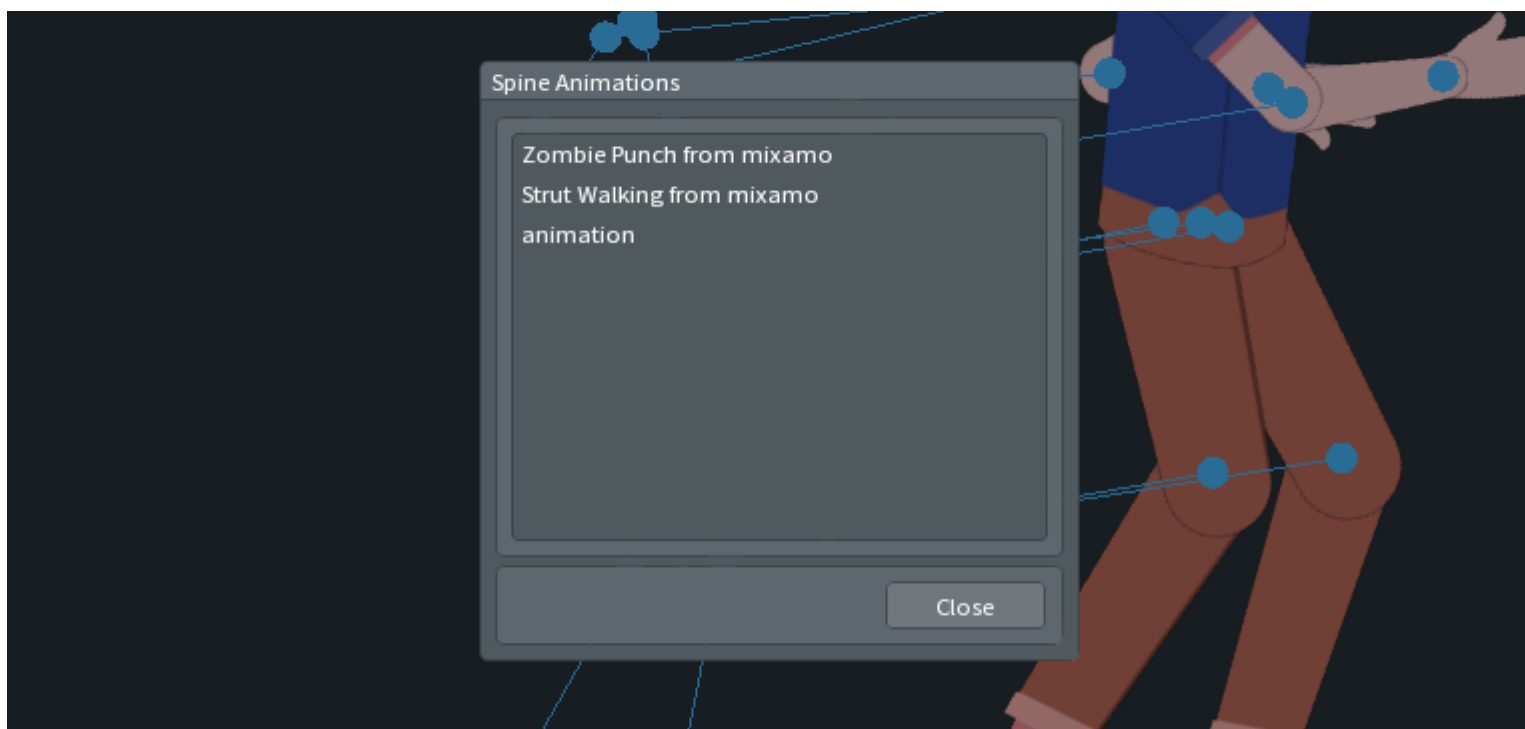
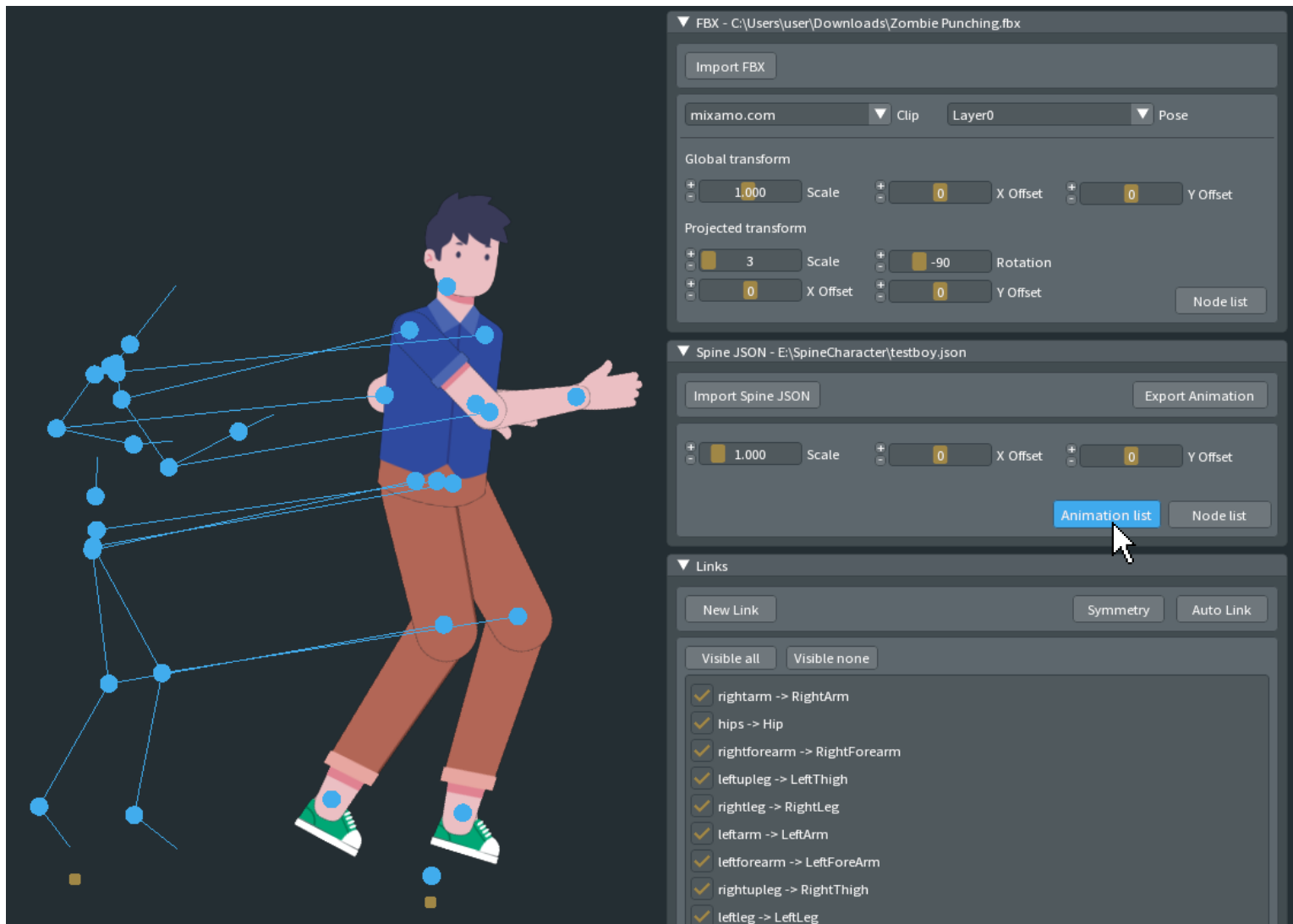
SPINE Import settings;



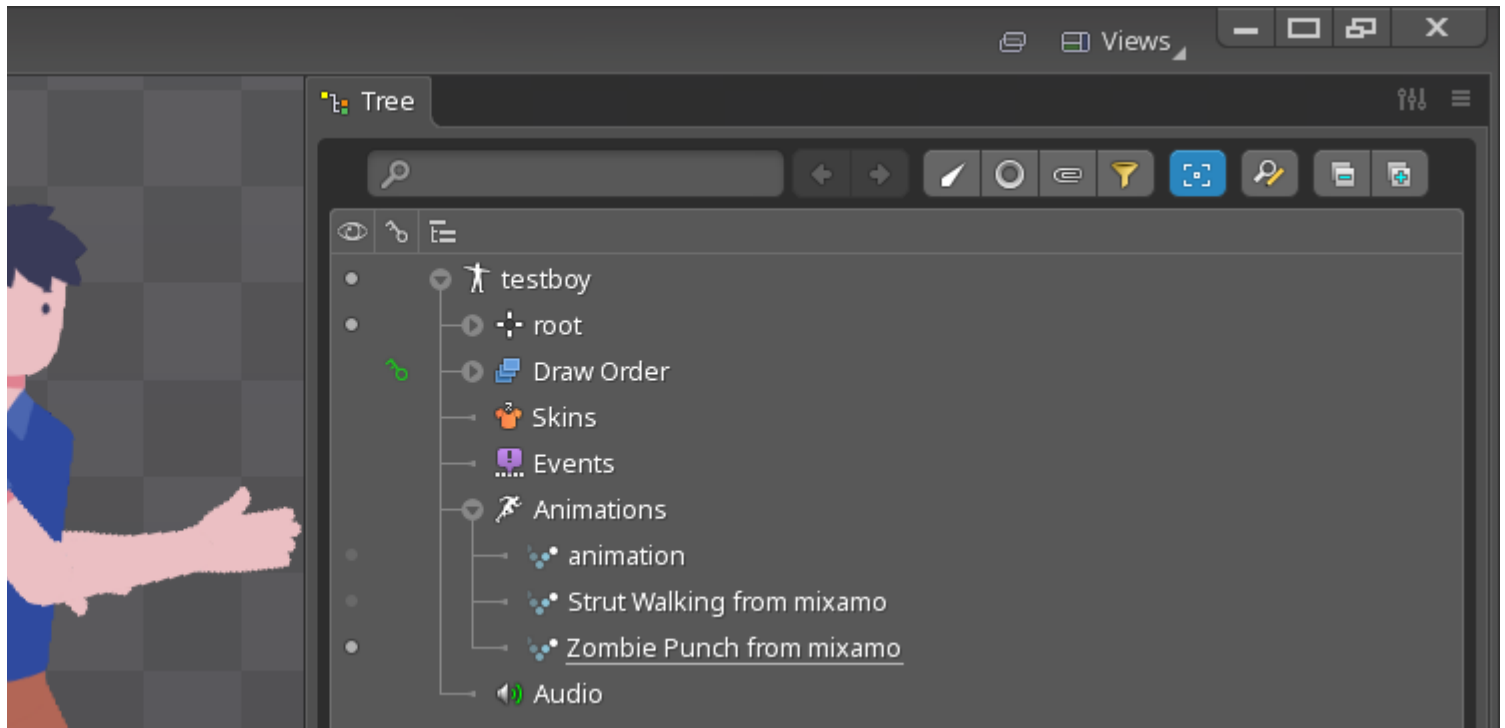
Adding more mocap animations to FBX2SPINE project

When you import a new FBX into your project, if the FBX skeleton node ids are the same as the previous one, it will automatically be applied to your SPINE character.

For example, after importing the animation named 'Zombie Punch' from mixamo.com and clicking the 'Export Animation' button for Spine; Let's take a look at the current animations of the Spine character.



After adding the animations you want, you can import them all into Spine at once.

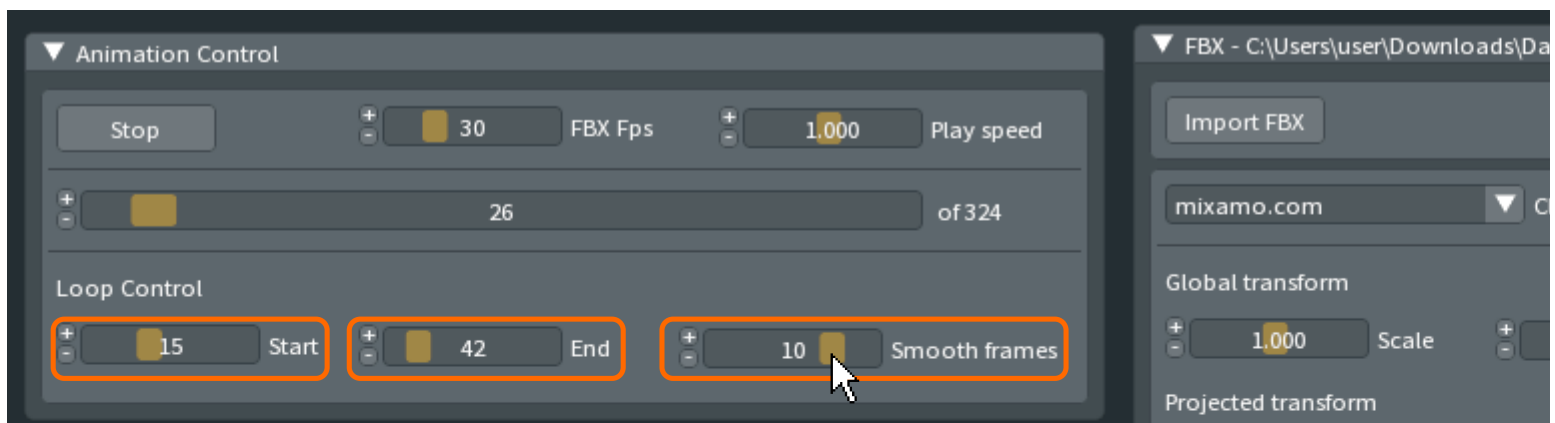


Creating Perfect Loop Animations

You can create loops for non-looped animations or you can create shorter animations with perfect loops from very long animations.



For example, the 'Dancing Running Man' animation from mixamo.com is quite long.

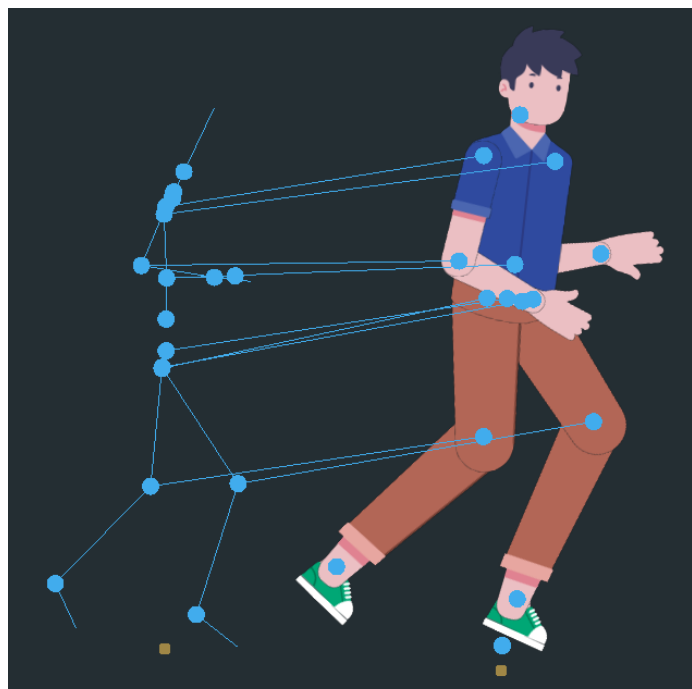
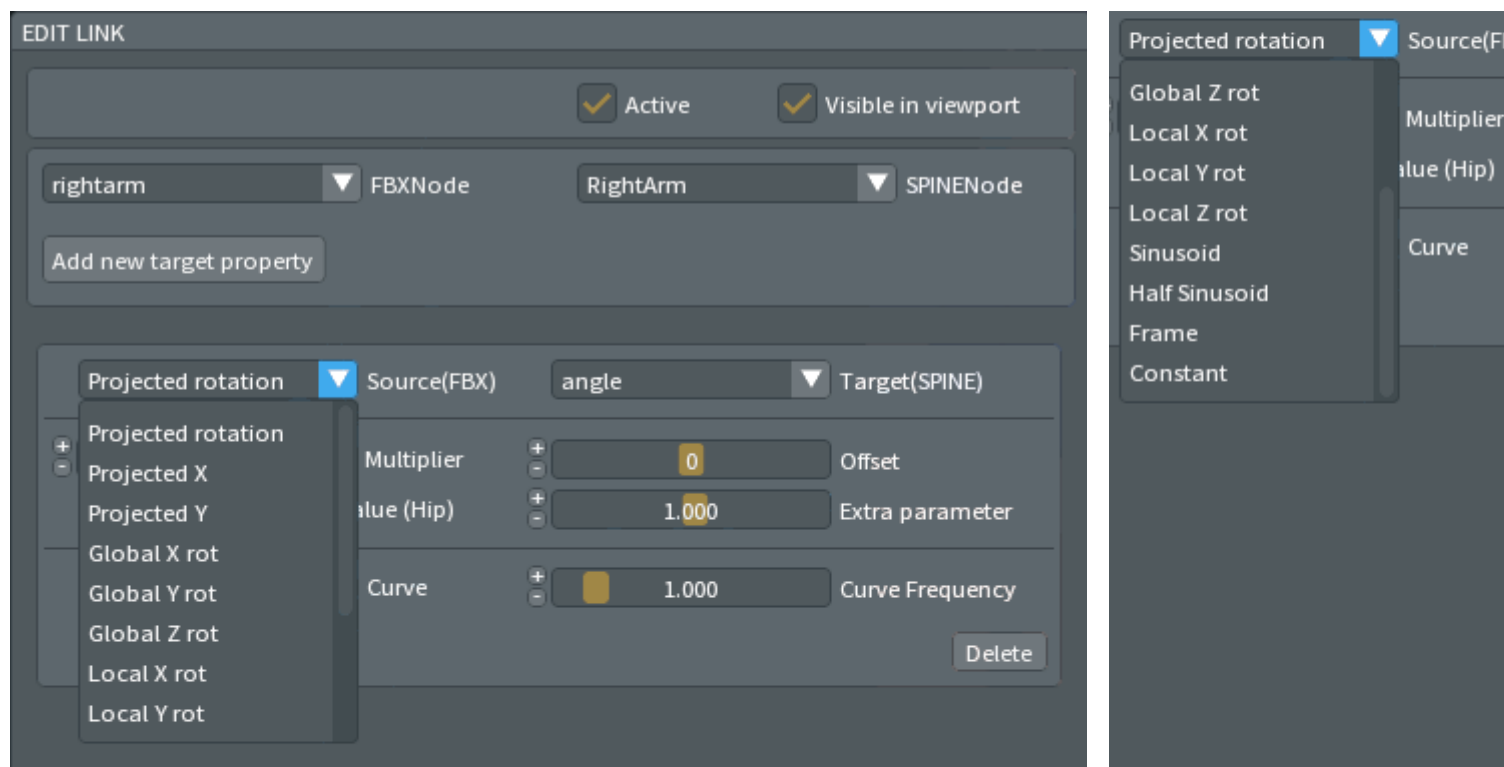


If you increase the 'Smooth Frames' value, the loop will be smoother. In this example, the frame count of the new animation will be $42 - (15 + 10) = 17$. But a very fluid animation will be created.

Total frame formula is ; End Frame - (Start Frame+Smooth frames)

Advanced Link settings

What are the functions of Source(FBX) properties?



Projected values are calculated as the FBX skeleton appears on the screen. So the direction and size of the skeleton are important. Projected values are recommended for the most reliable data transfer. Therefore, match the size and orientation of the FBX skeleton to the Spine character before transferring.

Local and global values are the rotations of the FBX skeleton in 3D space. Projected values should generally be preferred, but Global or Local rotation values can be tried for nodes that are close to other nodes such as HIPS and that serve as the main node.

Sinusoid, Half sinusiod, Frame and Constant values :

These features work independently of the FBX skeleton. They're mostly meant to provide extra support for complex animations. (Like a smooth up and down motion by connecting the half sinusoid to the Spine character node with the y value)

Curves

they are mostly used to soften the values of independent features such as Sinusoid, half sinusoid or to give different effects. But they can also be used when retrieving data from FBX skeleton nodes. There is no restriction for this.