

# Skeletal Animation

Skeletal animation is a technique used in computer animation. In skeletal animation, a character is represented in the form of a surface representation (skin or mesh), and a skeleton. This portrays how the character can move, inspired by how a physical skeleton works for vertebrates. The "bones" of the skeleton are represented by a hierarchy of joint nodes.

The normal workflow is to use an external content creation tool to define the skeleton and the skin (this is sometimes also referred to as rigging), and import them to Qt Design Studio. You can then create skeletal animations using **Skeleton** and **Joint** components available in **Components > Qt Quick 3D > Qt Quick 3D**.

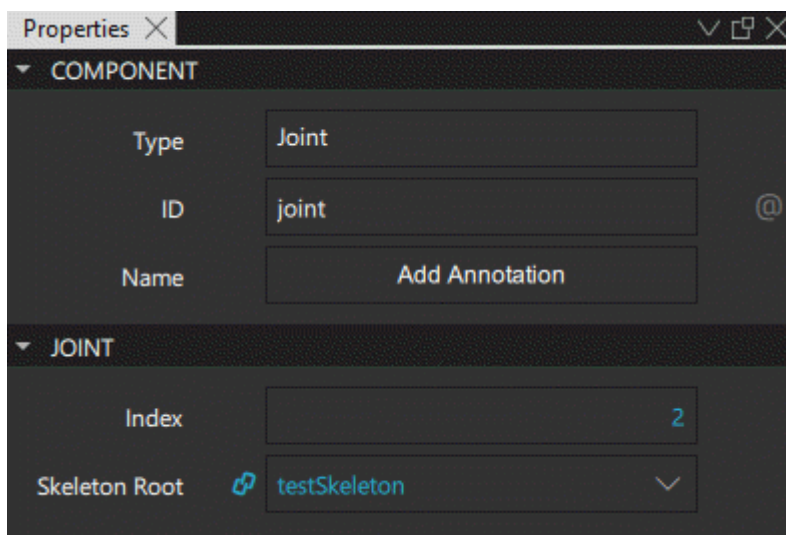
## Skeleton

A **Skeleton** component determines a skeletal animation hierarchy and defines how a model can be animated using skeletal animation. It contains a hierarchy of **Joint** nodes. Each joint can be transformed for a skinning animation.

## Joint

A **Joint** defines a node in a skeletal animation hierarchy and functions similarly to joints between bones in a human skeleton. It is a transformable node that must be contained inside a **Skeleton** component.

Define properties for **Joint** components in **Properties > Joint**.



Use the **Index** property to define the index of this joint. This index value is used in the **Joint semantic** custom geometry attribute.

Use the **Skeleton root** property to define the **Skeleton** that contains the **Joint**. Do note that all the **Joints** in the **Skeleton** must have the same **Skeleton root** for the animation to work properly.

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