

[RealityKit](#) / Entity animations

API Collection

# Entity animations

Dynamically move, rotate, and scale entities at runtime.

## Topics

### Animation playback

`class AnimationResource`

An animation for the properties of scenes or entities.

`struct AnimationLibraryComponent`

A component that represents a collection of animations that an entity can play.

`struct AnimationCollection`

A collection of animations an entity can play.

`enum AnimationEvents`

Notable milestones that the framework signals during animation playback.

`class AnimationPlaybackController`

A controller that manages animation playback.

`enum AnimationRepeatMode`

Options that determine whether an animation replays after completion.

### Animation definitions

`struct SampledAnimation`

An animation that cycles through a series of frames at a constant interval.

`enum TweenMode`

Options that determine whether an animation switches between frames gradually or abruptly.

`struct FromToByAnimation`

An animation that starts, stops, or increments by a specific value.

`struct AnimationTimingFunction`

The pacing of an animation transition.

`struct AnimationView`

An animation that represents a variation of another animation.

`struct OrbitAnimation`

An animation that revolves an entity around its origin.

`protocol AnimationDefinition`

The configuration, including target object, timeframe, and visual semantics, of an animation.

`struct AnimationFillMode`

Options that determine which animation frames display outside of the normal duration.

`struct AnimationGroup`

A collection of animations that play simultaneously.

`struct AnimationHandoffType`

The type of handoff the play animation method performs between a current animation and a new animation.

## Bindable animation targets

`struct BindPath`

The components of a target's path that refer to the animation properties of a nested scene or entity.

`enum BindTarget`

A reference to a particular scene, entity, or property that animates.

`struct BindableValue`

The value of a bindable target.

`struct BindableValuesReference`

A reference to a bindable value of an animation.

`struct ParameterSet`

A reference to general-purpose entity parameters for animations.

`struct InternalBindPath`

A bind target for framework-provided properties.

## Compliance-related protocols

`protocol AnimatableData`

A functionality specification that animatable data types adopt.

`protocol BindableData`

An opaque base protocol for bindable data objects.

## Blend trees

`struct BlendTreeAnimation`

A collection of animations on the same property that the framework blends to a single animation.

`protocol BlendTreeNode`

An interface for a node that's a member of a blend tree.

`struct BlendTreeBlendNode`

A source node for an animation that mixes several animations to form a single animation.

`struct BlendTreeSourceNode`

A blend node that contains an animation.

`struct BlendTreeInvalidNode`

A blend tree node that's internal only or sources from an invalid definition.

`enum BlendWeight`

A numerical representation of the impact an animation has on a scene or entity.

## See Also

## Game development

### ☰ Gaming sample code projects

Explore a collection of projects relating to game development.

### ☰ Character control, skeletons, and inverse kinematics

Direct the movements and animation of models.