

Trampoline Documentation

Description

This feature is available in version 1.1 of Projectile Curve

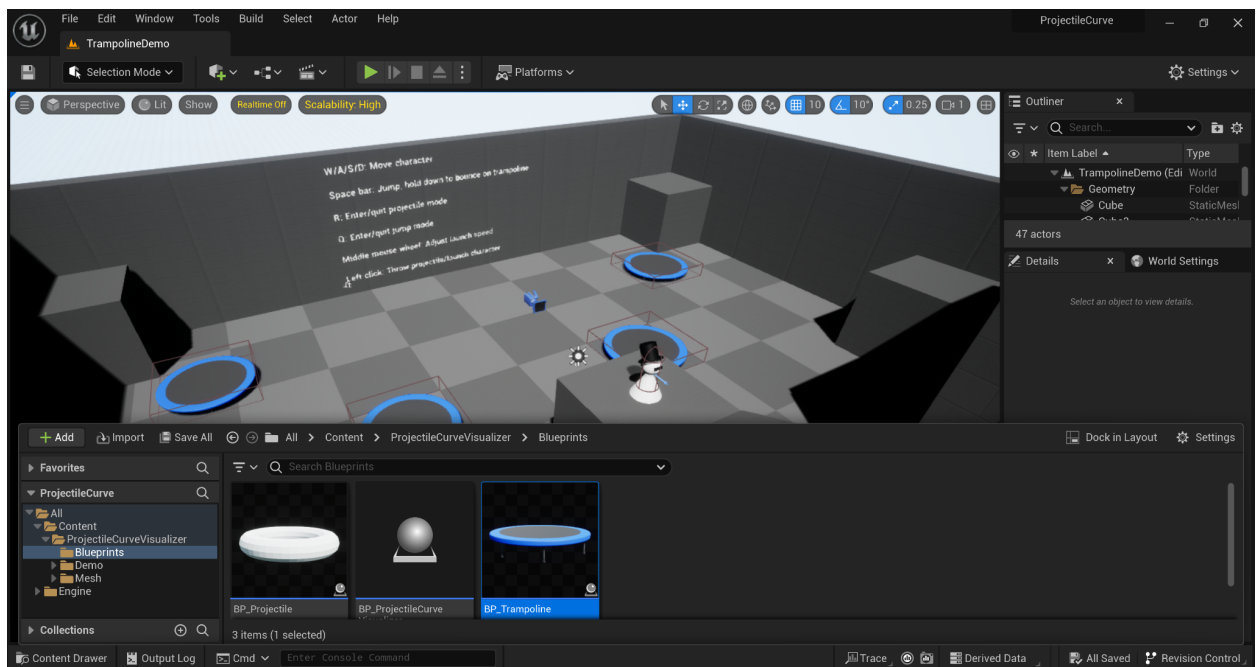
Visualizer(https://docs.google.com/document/d/1SsKAixYNEgQCIWwuFkt8w6nHjrQPHeUohhYoygwLtJg/edit?usp=share_link).

Utility: Character can jump on it and bounce, multiple trampolines can be placed in a line to allow the character to bounce on each trampoline, with the visualization of predicted curves. If the character throws a projectile to a trampoline, it will bounce as well.

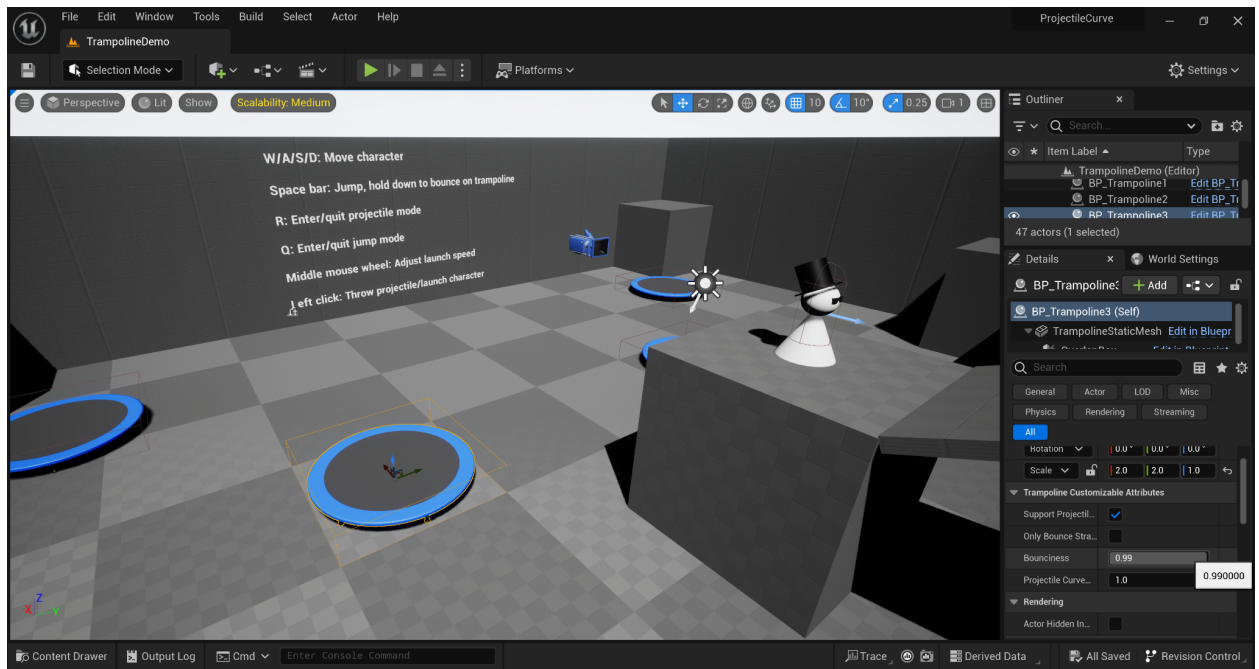
Control: Hold down spacebar to bounce on trampoline.

Setup

1. Import the plugin.
2. Navigate to [Content\ProjectileCurveVisualizer\Blueprints](#) folder, drag “BP_Trampoline” into the level.



3. Depending on the need, the attributes of trampoline can be adjusted.



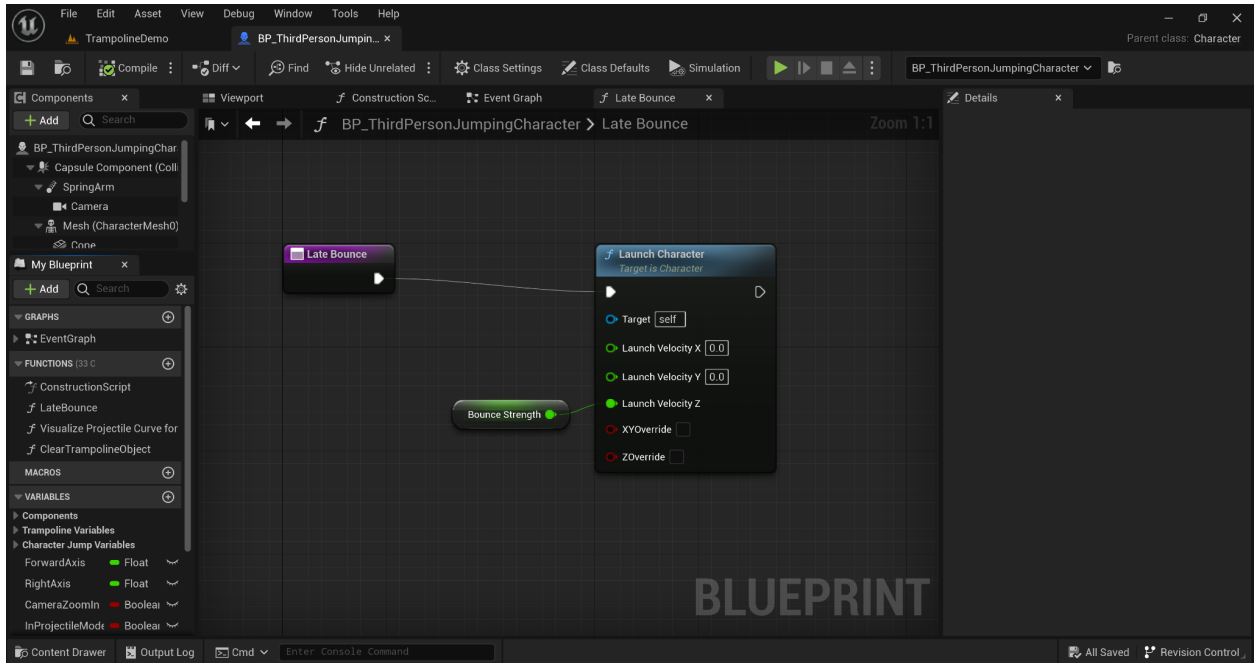
Customization

Adjustable Attributes

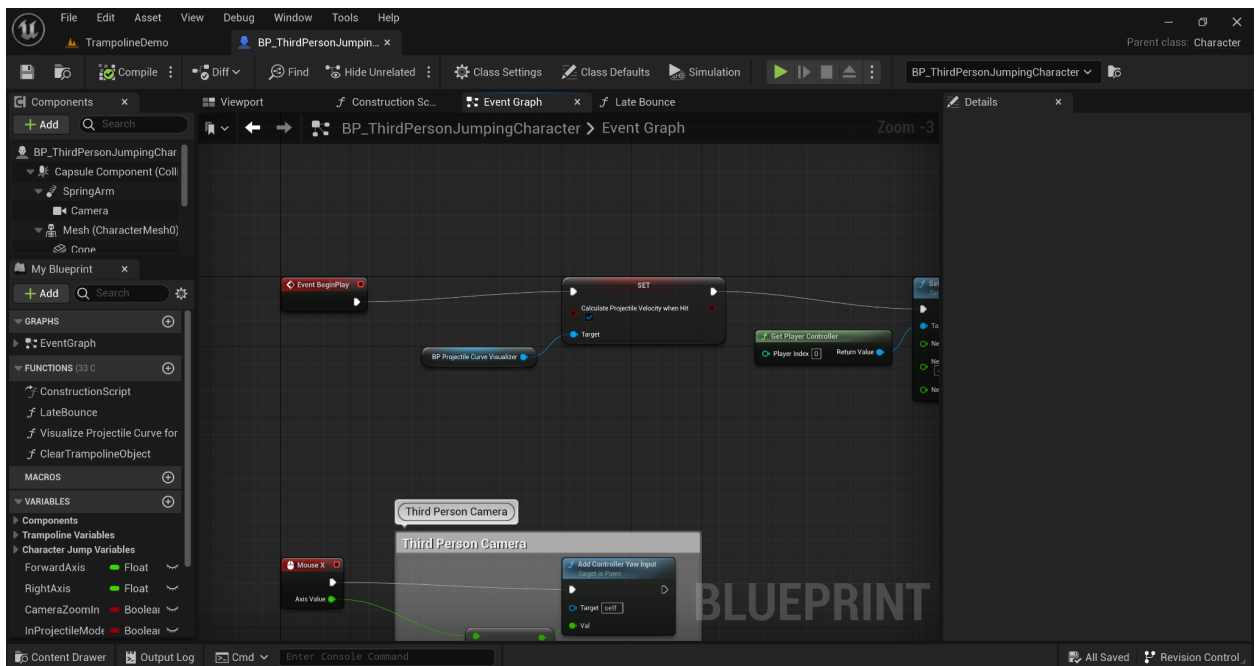
SupportProjectileCurveVisualization	Whether the trampoline can visualize an outgoing projectile curve or not.
OnlyBounceStraightUp	If true the target will bounce in a direction perpendicular to the surface of trampoline.
Bounciness	Range: 0 ~ 1. It controls how bouncy the trampoline is. If bounciness is 0.5, when a character jumps from a 10 meters high place and lands on the trampoline, it will bounce to $10 * 0.5 = 5$ meters high for the first bounce, second bounce is $0.5 * 5 = 2.5$ meters, and so on.
ProjectileCurveStartPositionZOffset	Default: 1. Adding a small offset can make

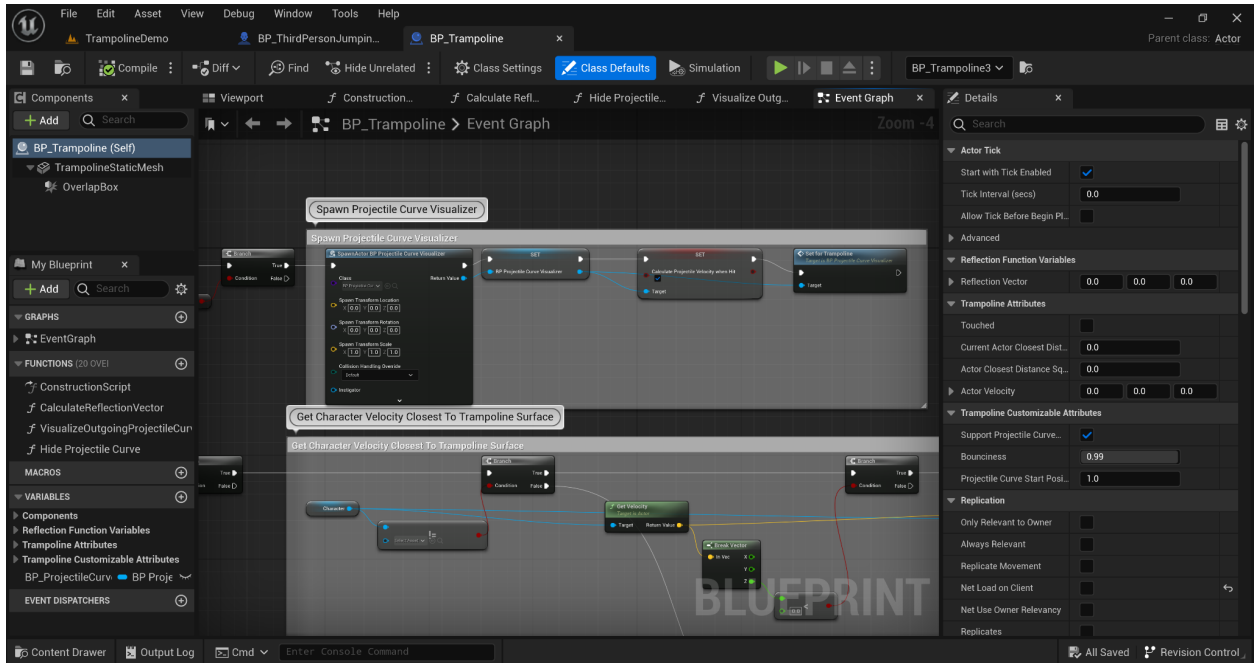
	sure the projectile is not too close to the trampoline, then collides with the trampoline.
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- File Edit Asset View Debug Window Tools Help



- To enable trampoline showing outgoing projectile curve, boolean variable CalculateProjectileVelocityWhenHit needs to be true in BP_ProjectileCurveVisualizer for character blueprint and trampoline blueprint. Execute "Set for Trampoline" function to get the best visual result for trampoline.





4. To get the velocity for an actor/character when hitting the trampoline, using “GetVelocity” in OnComponentHit event will return zero. To solve this problem, overlap box is added, when actor/character enters the overlap box, it will get the velocity per frame to obtain the accurate result. Ideally the overlap box should cover some space above the trampoline surface.

