Basic Scripting with Blueprints

Get a general overview of the variables and execution flow of the Blueprints visual scripting system.

Blueprints provide a visual approach to a scripting language. As such, the system shares many of the nuances of a standard written scripting language, such as data typed variables, arrays, structs, etc. Execution flow also works as it does in a typical scripting language, although Blueprints require explicit linear execution for each node. Each of the pages below go into more detail about different variable types, working with those variables, and execution of nodes within the graph.

Variables

Variables can be created in a variety of different types, including data types such as Boolean, integer, and float. They are color-coded for easy identification within your Blueprint. Blueprint variables can also be reference types for holding things like Objects, Actors, and Classes.

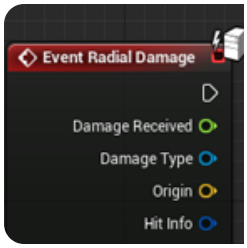
Execution Flow

In Blueprints, the first node to execute is an event, and then execution flows through the white execution wire from left to right. You can visualize the execution flow while your game is running in the editor, which can help with debugging. Data also flows through wires colored to match the variable types. Input pins are evaluated when the node executes, tracing the data wires back from right to left until the final result is calculated and supplied to the node.

Nodes with execution pins (impure nodes) store the values of their output pins when they execute, while nodes without execution pins (pure nodes) reevaluate their outputs every time a node connected to their outputs executes.

Connecting Nodes

Examples of the ways to connect nodes together in Blueprints.



Events

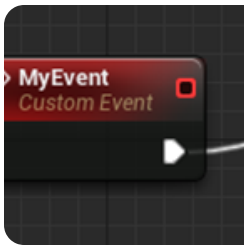
Nodes that are called from gameplay code to begin execution of an individual network within the EventGraph.

Flow Control

Nodes that allow for controlling the flow of execution based on conditions.

Nodes

Node graph that uses events and function calls to perform actions in response to gameplay events associated with the Blueprint.



Custom Events

Custom user-created events that can be fired off from within a Graph.