# Unreal Engine Framework - For Loops

- In programming, a for loop is used to iterate over a sequence of values
- Each iteration can execute a set of statements
- For loops are part of flow control (dictates the order of execution) methods
- Unreal Engine Blueprint's For Loop is used in the same way as in other programming languages
- Blueprints have four types of for loops
  - ForLoop
  - ForLoopWithBreak
  - ForEachLoop
  - ForEachLoopWithBreak

# Unreal Engine Framework - ForLoop

- In a Blueprint, ForLoop has following input and output pins
    - Input
        - Execution pin
        - First Index
        - Last Index
    - Output
        - Loop Body - executes nodes attached to it on each iteration
        - Index - outputs current index of the loop
        - Completed - executes when for loop is completed

# Unreal Engine Framework - ForLoopWithBreak

- In a Blueprint, ForLoopWithBreak works in the same way as ForLoop but a new pin, Break is added
- Break pin enables to "break" the loop with another execution flow
- ForLoop breaks are useful in order to prevent infinite or large loops, which can cause game freezing

# Unreal Engine Framework - ForEachLoops

- ForEachLoop and ForEachLoopWith break works in the same way as their ForLoop counterparts with the difference that they can iterate over Arrays of different data types