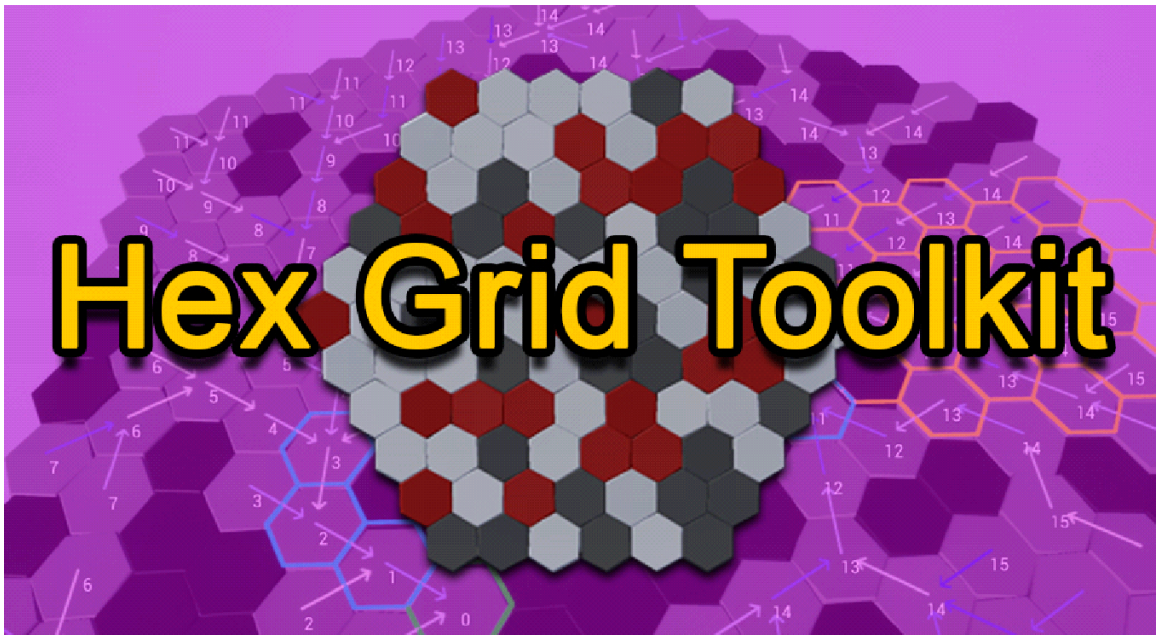
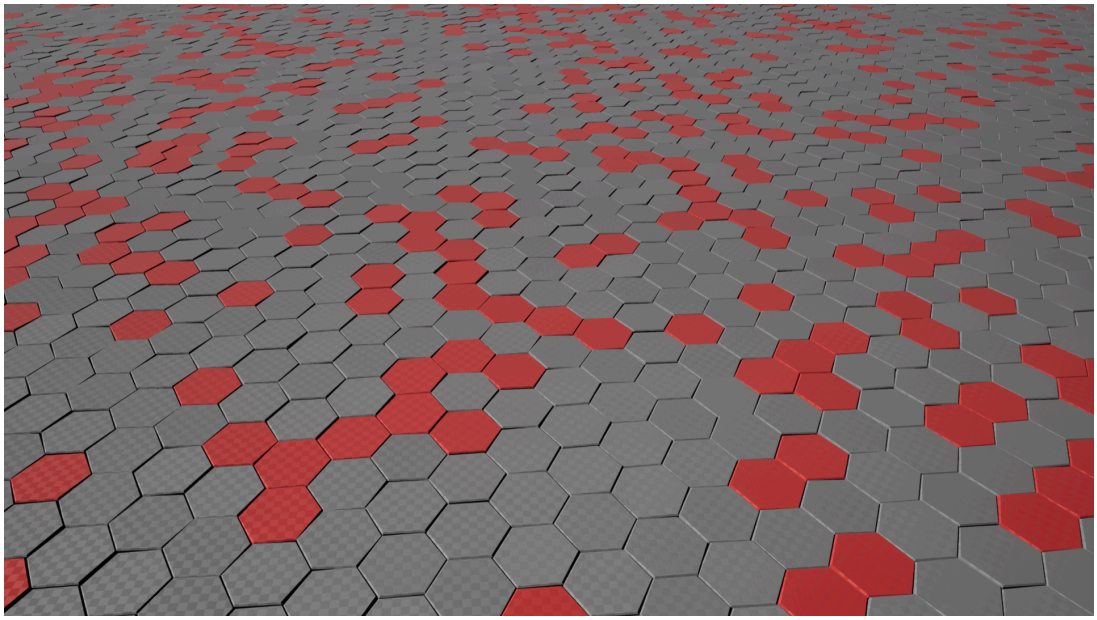


"A library of functions to implement hexagonal grids."

Overview

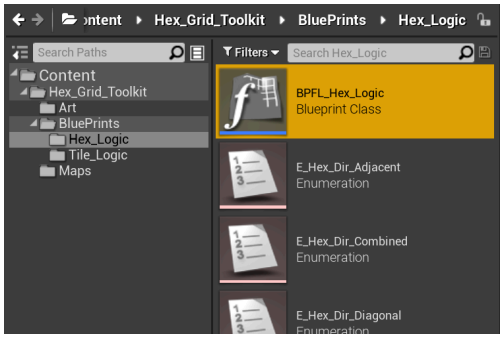
Welcome to the "Hex Grid Toolkit" documentation. Here we will explain how to get started using this toolkit.



There are 4 Blueprints that distribute the duties of the toolkit.

BPFL_Hex_Logic (Blueprint Function Library)

Blueprint function library with +80 functions arranged in Category folders.
This blueprint contains all the core logic related to hexagonal grids.
It is located on Hex_Grid_Toolkit/Blueprints/Hex_Logic/



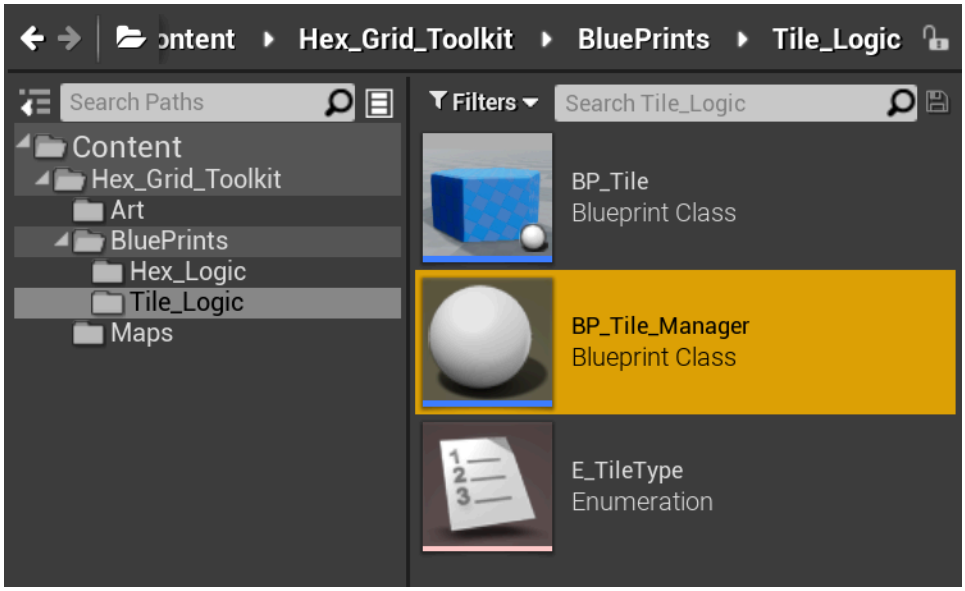
BP_Tile_Manager (Actor)

This actor is responsible for setting up and storing the tiles grid as well as showcasing some of the functionality available.

It has the Event BeginPlay, Event Tick and some Input events. From which we will handle user inputs and run the core functionality of this toolkit.

This BP Actor has to be spawned in the world, manually placing it in the Level or dynamically spawning it.

It is located on Hex_Grid_Toolkit/Blueprints/Tile_Logic/



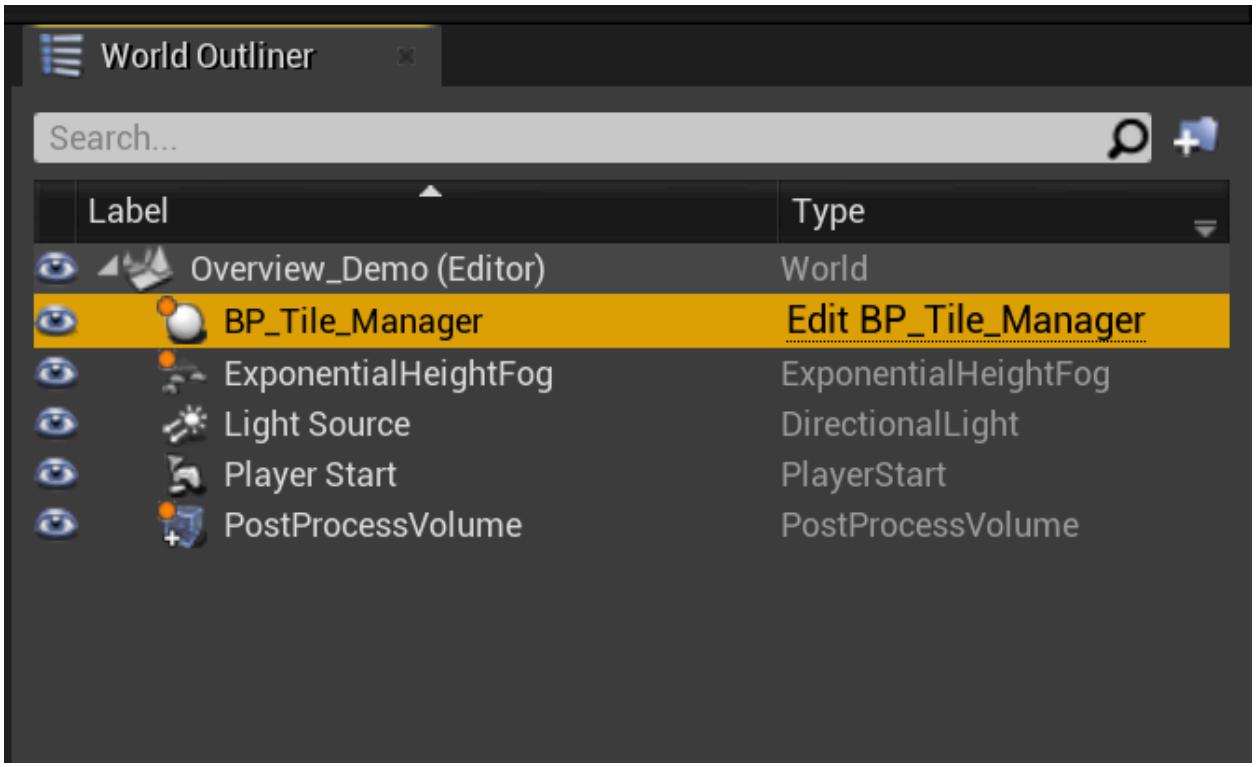
BP_Tile (Actor)

This Actor has a Static Mesh component, representing a Hexagonal Tile as well as some Events that will Transform its position and material according to Its variables. The Tile_Manager will be responsible for spawning these tiles.

It is located on Hex_Grid_Toolkit/Blueprints/Tile_Logic/

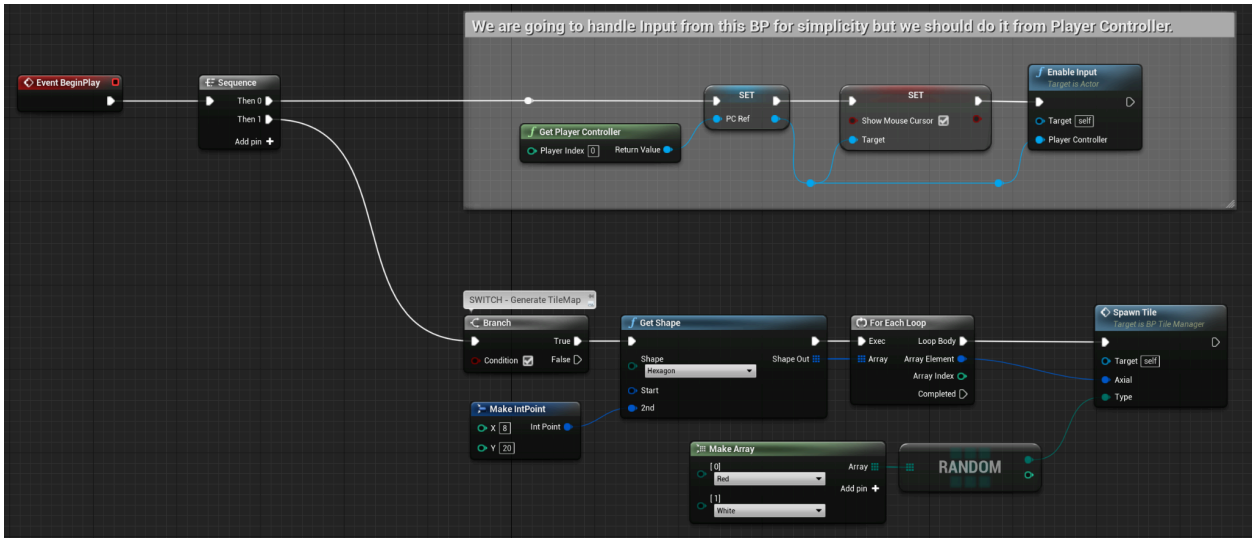
Overview_Demo (Level)

Within the "Overview_Demo" level (the one that opens by default) A "BP_Tile_Manager" is placed on the world so it spawns when we play the project.

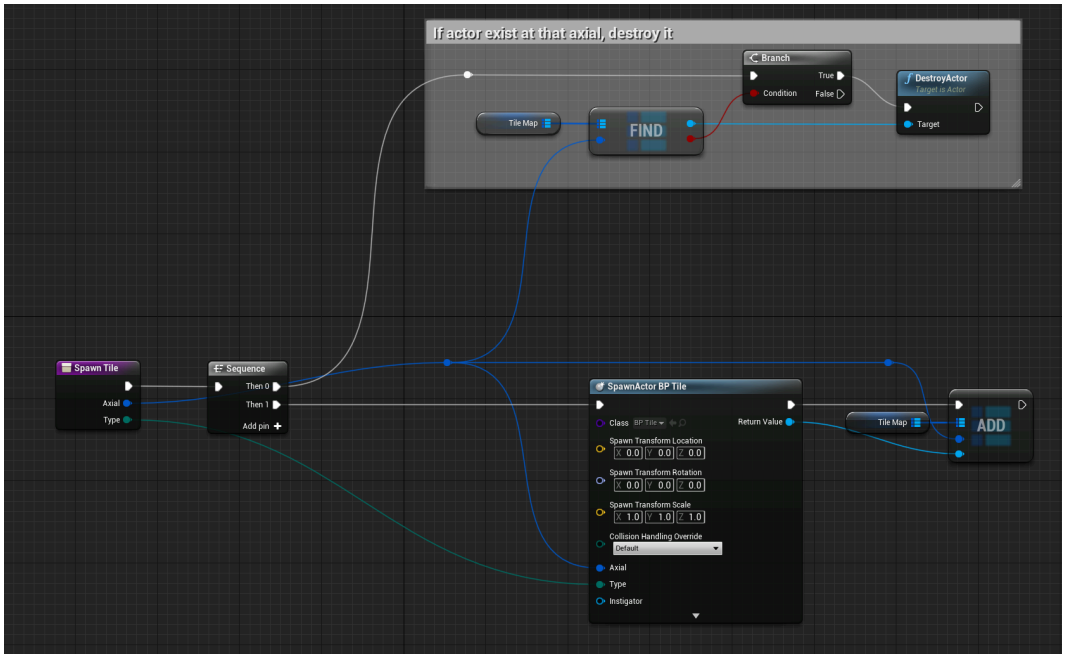


Event BeginPlay

BP_Tile_Manager



To generate the Tiles we call the function getShape. We loop through the returning coordinates and spawn the tiles with its corresponding function “Spawn Tile” passing the Axial coordinate and a random Tile Type.

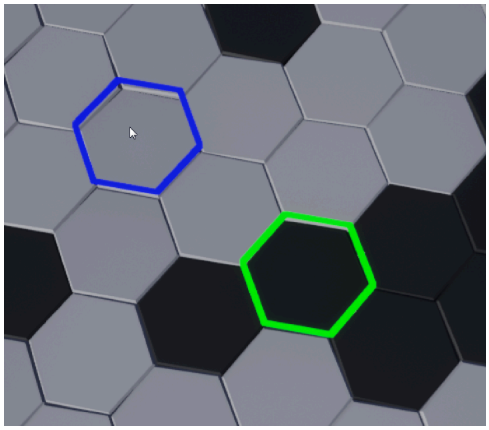


Event Tick

BP_Tile_Manager

We will go through the Event Tick execution line.

First we will read the mouse position, retrieve its Axial Coordinate and store it as "HexHover" (It represents the tile that we are hovering with the mouse)

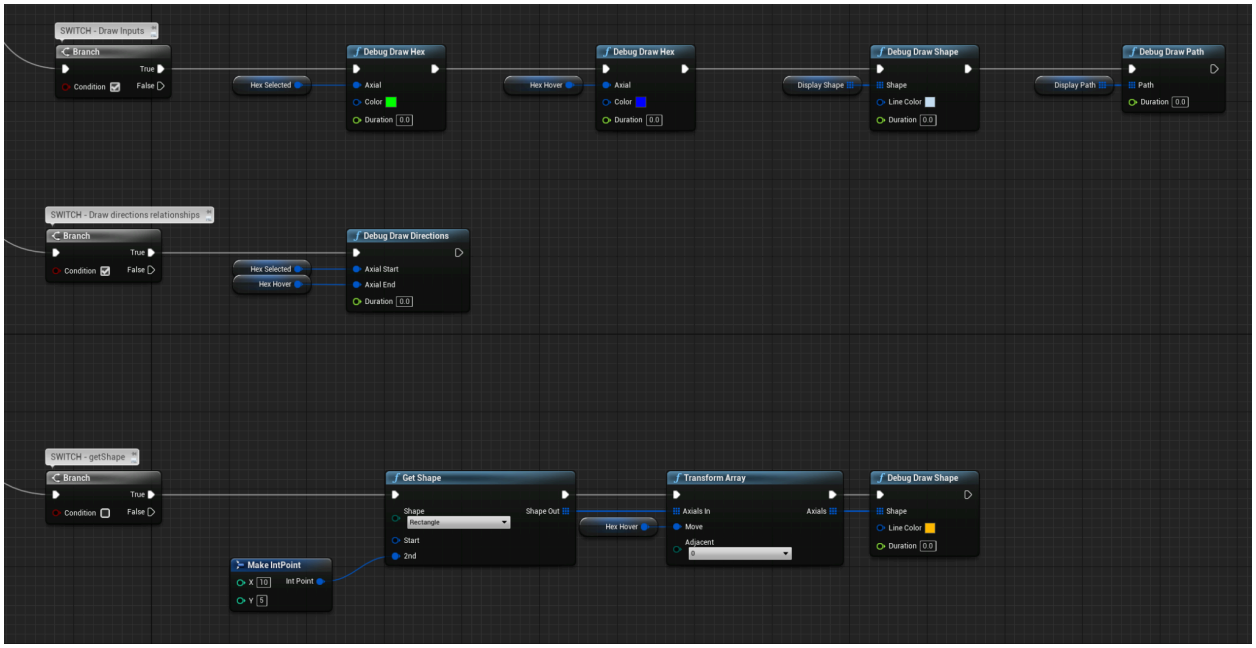


We also have a LeftMouse Button event that will get HexHover and store it as HexSelected.

This way we have a method of having 2 different hex tiles as input for the following functions. As we play the project, move the mouse cursor and left click over tiles to see the changes.

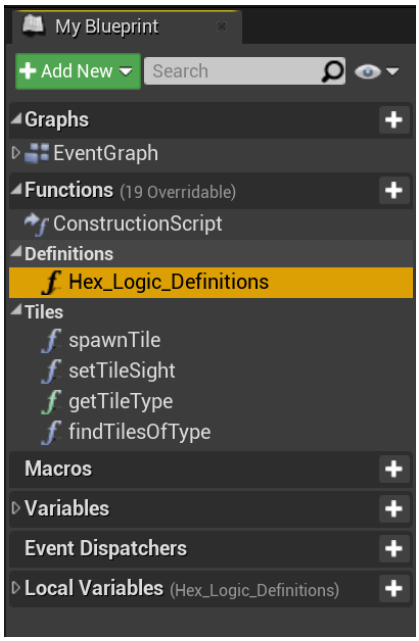
Will display HexHover as blue and HexSelected as green.

Next on the Tick execution line we have a Sequence of Branch Switches to turn on/off the display of several functionalities available from this Toolkit.

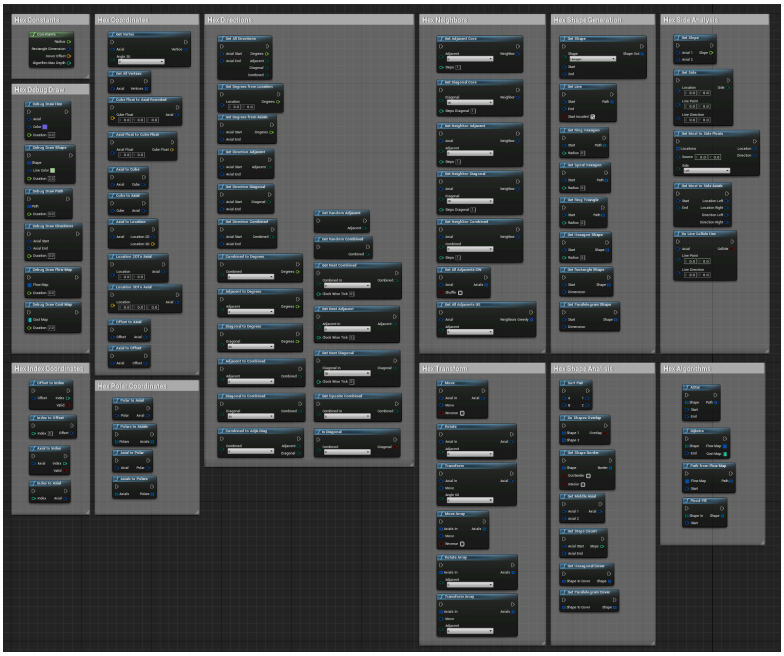


Hex_Logic_Definitions

BP_Tile_Manager



Inside this function we have a dictionary of key concepts and naming conventions to understand the toolkit.
There is also a list of all the functions available in BPFL_Hex_Logic



Support

We have made our best to do clean Blueprints with readable “code”. Meaningful variable and function naming, we hope that everything is clear and easy to understand.

If you have any doubt, please don't hesitate to ask through the support channels.

We will resolve any question with pleasure.

We are confident that this Toolkit is quite robust but there is always room for improvement.

We will gladly take any feature request or idea into consideration.

Support Discord: https://discord.gg/mzeg4KpMaz
Support Email: alfonso.martinez.erades@gmail.com

Documentation Doc: Documentation

Documentation Pdf: Documentation

Overview video: Hex Grid Toolkit Overview

Marketplace: Hex Grid Toolkit