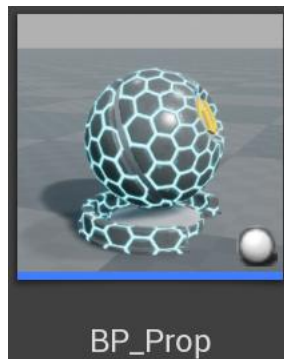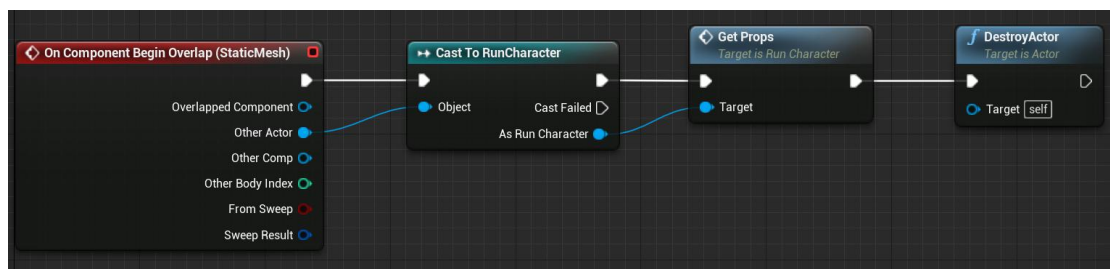# Code and Design Explaination

I will just explain the code about the feature enhancements that I added.

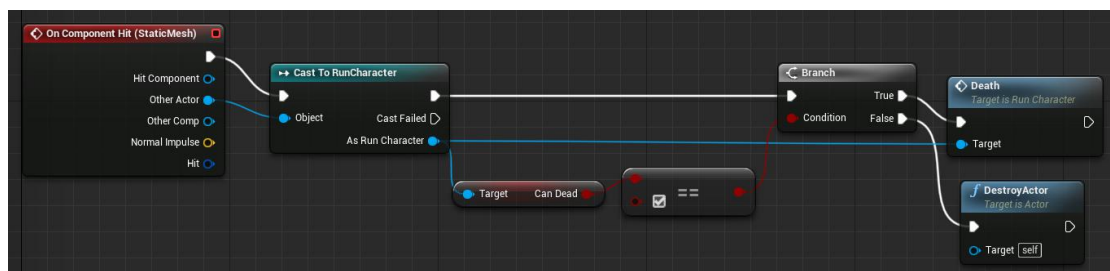## 1. Add a prop, so that the character can destroy the blockers.

First to create an Actor blueprint class for this prop.

Set event On Component Begin Overlap. And call Runcharacter's function, destroy itself.

In GetProps function, we set the variable CanDead, whose default value is true, false.

Then, when the character and obstacles overlap, there is a branch to judge who will be destroyed.

2. Add timer for props' effective time.

Add two variables in Runcharacter. CanDead and CanDeadDuration to represent If the character can destroy the obstacle and the effective time of props.
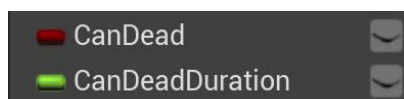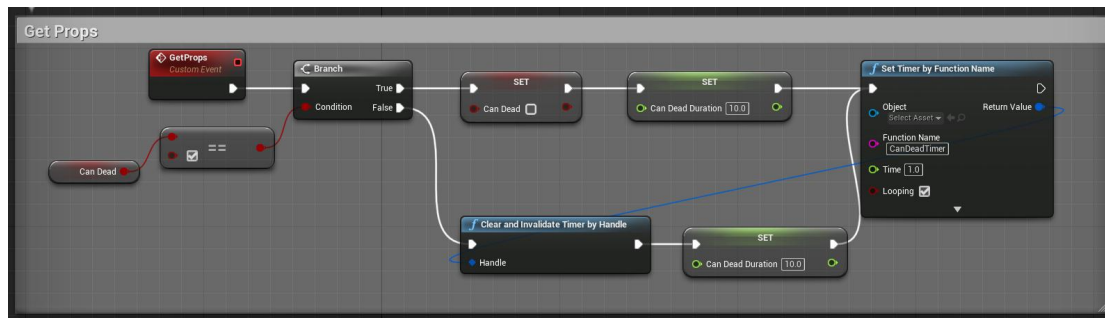
Every time the GetPorps event is triggered, to judge if the CanDead is true, and execute different commands. When it's true, set CanDead false and CanDeadDuration 10.0, set a timer to call CanDeadTimer function. When it's false, just clear the timer before, set CanDeadDuration 10.0 and reset a new timer.
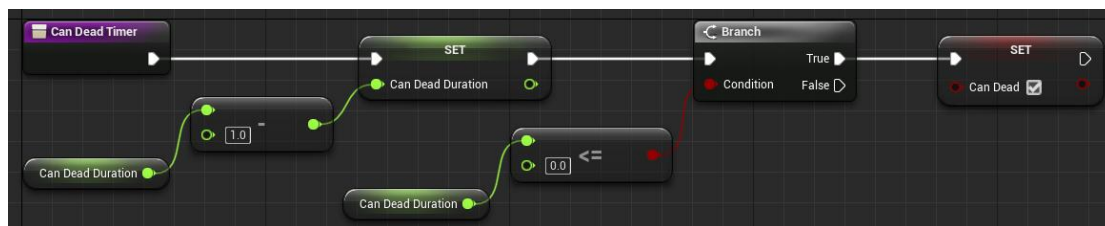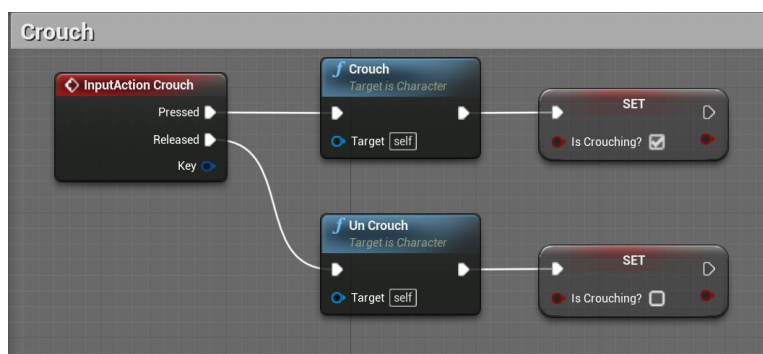

Every time in CanDeadTimer function, the CanDeadDuration will minus one. And when the duration is less than or equal to zero, set CanDead variable true so that the character can not destroy obstacle again.

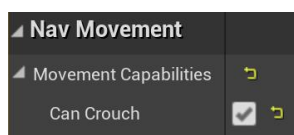3. The character can crouch to pass through specific terrain.
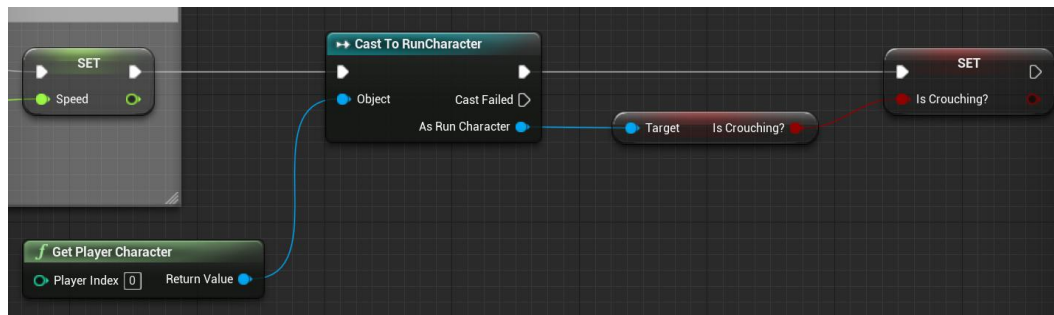
First, add new input.

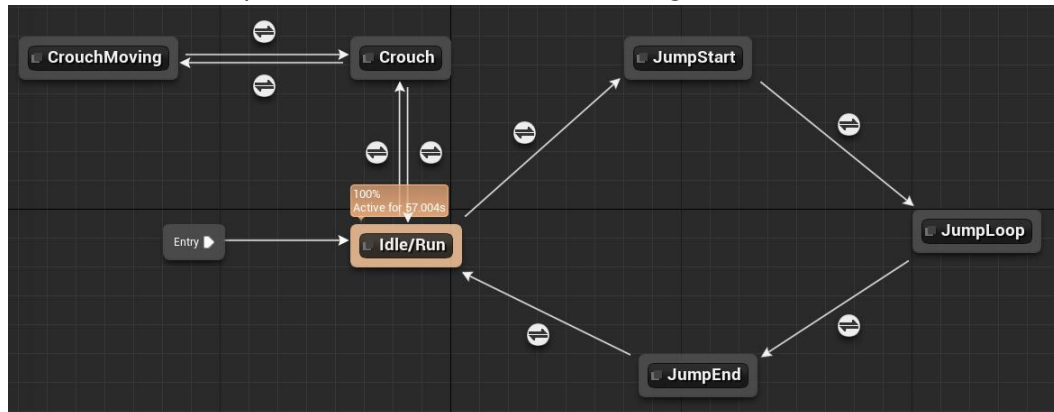Second, add new variable and new event in RunCharacter.
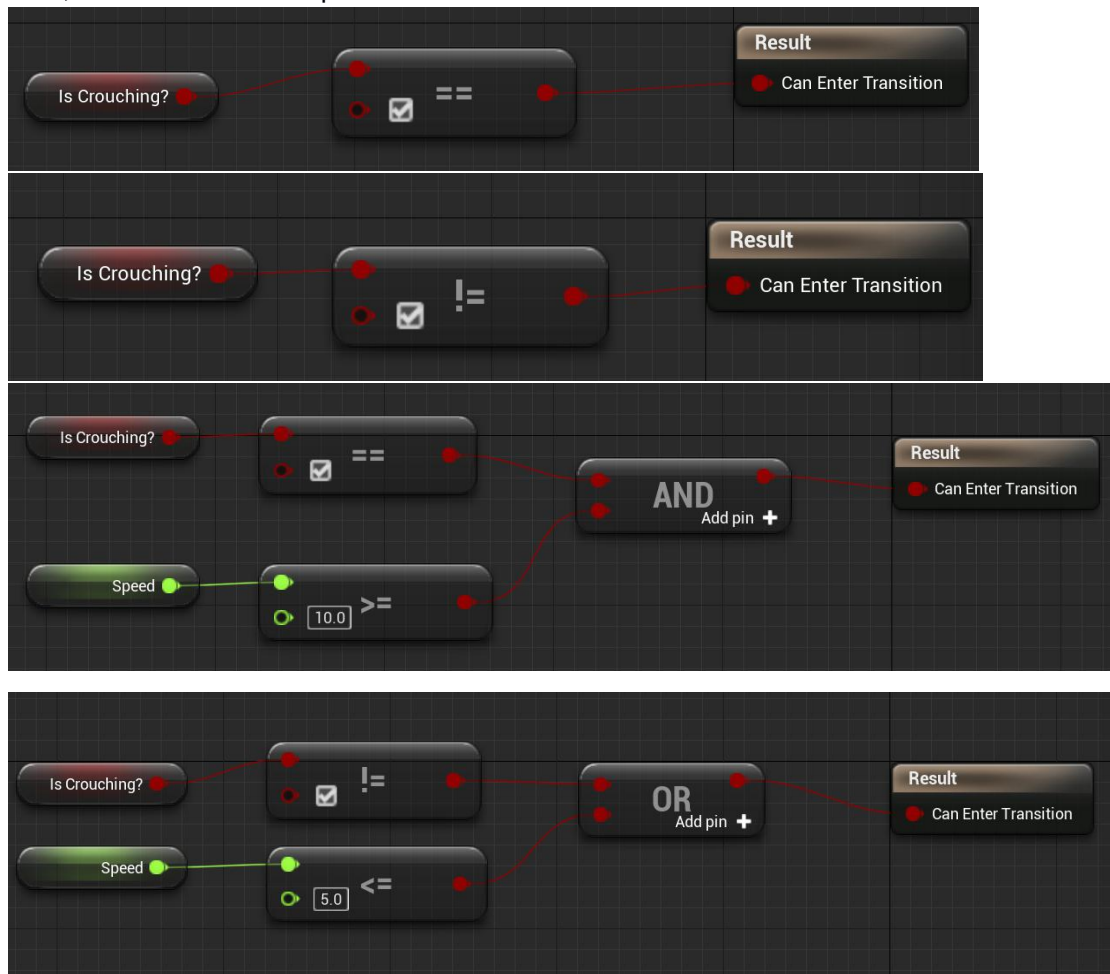

Open movement capability.

Third, in ThirdPerson_AnimBP, add new variable and get value from RunCharacter.
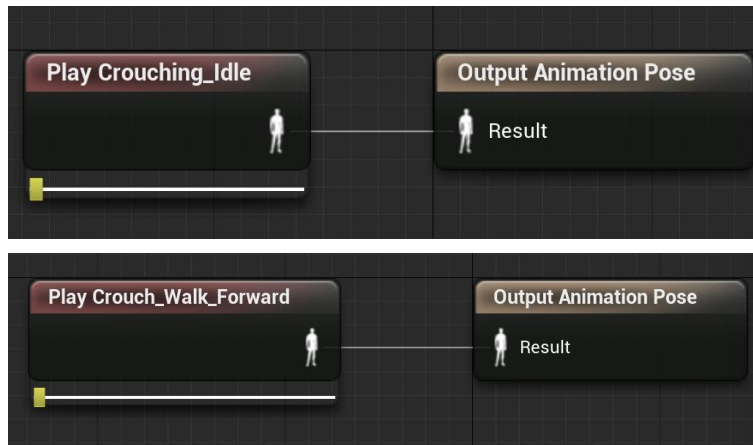

Fourth, in AnimGraph, add crouch and crouch moving.
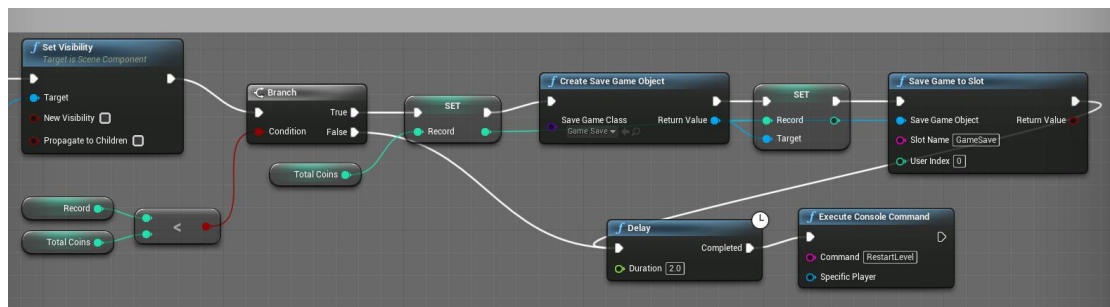

Fifth, set each relationship.
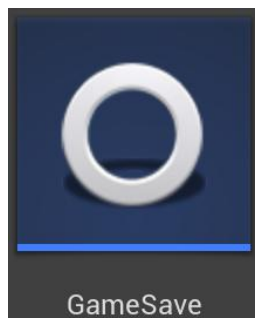
Finally, add animation for each movement.

4. Store the record of the game to improve game experience.
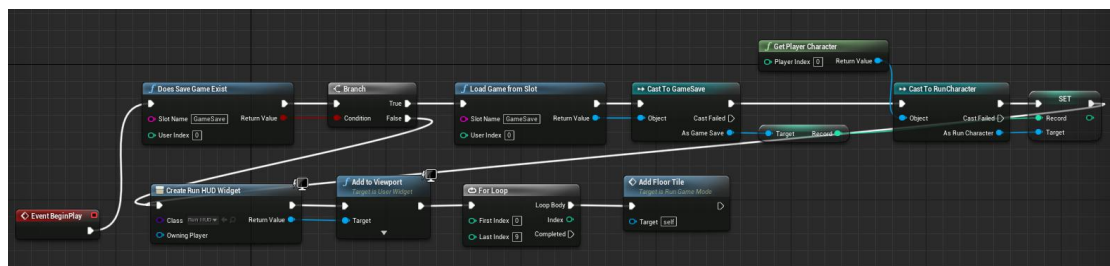
Every time character is dead. To judge if we need to store the record.

Create an object to store the data.

In RunGameMode, every time Event Begin Play to load the record.

5. With the progress of the game, change the speed of the character to increase

the difficulty.

I use the number of floor tiles as reference. Every time the floor tile is set. I will increase the speed of character.