

Game Design & Development

Samart Moodleah, PhD. IT@KMITL, 2020

Actor Classes

Week-08

Topics and Objectives

Actor Classes

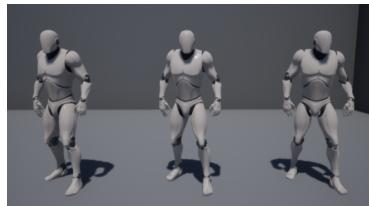
- Refreshing OOP Concept
- Managing Actors
- Construction Script
- Gameplay Framework Classes
- Events

- Blueprints Concept

- Object-Oriented Programming (OOP) concepts

- Classes - คลาส ก็ต้อง object ที่มี คุณสมบัติ ทำงานอย่างไร, มีตัวแปร ฟังก์ชัน อะไรที่ก่อเรื่องภายใน method
 - Create a new Blueprint means create a new class. → สร้าง Blueprint ใหม่ หมายความ สร้างโครงสร้างใหม่
 - Instances, ต้อง object ที่สร้างจาก class
 - 例: ต้องสร้าง object มาก คลาส 1 ต้อง object in instance
 - Object created from a class is known as an instance of that class.

class Robot →



→ n̄n̄f̄j Robot

បានឈរទៅក្នុង

រចនាសម្រាប់ ដៃអង្គភេទ នរោត្តកវិទ្យាអូរិយ្យា method

- Create a new Blueprint means create a new class. → សម្រេច Blueprint ឱ្យ មានអត្ថបន្ទូរ ក្រសួងគ្មានឱ្យ

ເລືອກທີ່ ດະນຸຍາ object ມາດວັດ ດາວວັດ ແລະ ດຳລົງ object ດຳລົງ

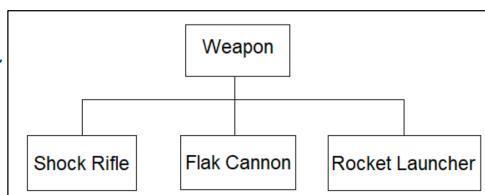
instance of that class.

▪ Inheritance

ເກລົ້າງ Robot ຊົກສອນ ກັບຮູບຮັງ instance ຂອງ instance
ໃນ class Robot

ນີ້ແມ່ນ Robot ສະແດງ instance ວາງ ມີຢູ່ນີ້
* concept

కస్టు subclass మా 3 ||| 21



ທັງ 3 ໂບນໍ້າມະນຸຍົກເວັກນ ໂລ ທັງ 3 ສົມບັນນິມບັນ

GAME DESIGN & DEVELOPMENT
ສົດທະນາຄານ ຖະລາວ ໄມ

Actor នៅក្នុងការបរិមាណទូទៅ ឬ Actor នឹង Base class ឬ object នឹងបានការពារ unreal

Actor Classes

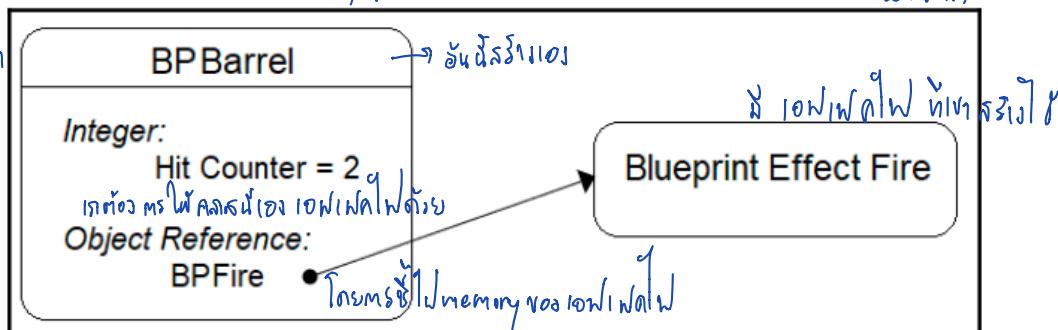


▪ Referencing Actors → ក្នុងការបរិមាណទូទៅ ឬ class ឬ 2 ឬបន្ថែម

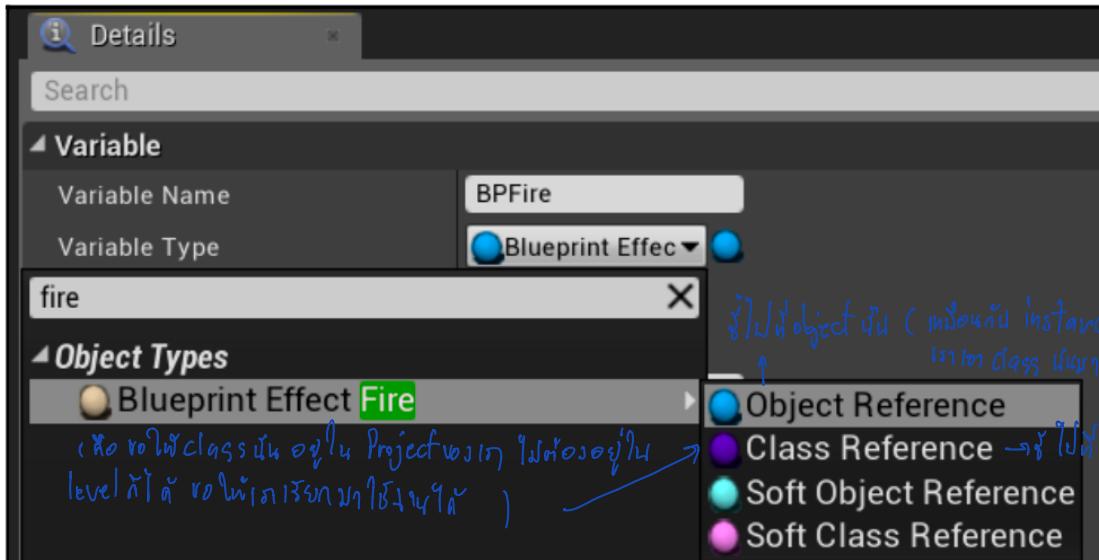
- Primitive types: integer, float, Boolean, etc. → នៅក្នុងការបរិមាណទូទៅ ឬ class ឬ 2 ឬបន្ថែម នឹង រាយការការពារ
នៅក្នុងការបរិមាណទូទៅ ឬ class ឬ 2 ឬបន្ថែម នឹង រាយការការពារ
- Store simple values ត្រូវបានដោឡូលីន
- Complex types: Actor, Spawn, etc. → នៅក្នុងការបរិមាណទូទៅ ឬ class ឬ 2 ឬបន្ថែម នឹង រាយការការពារ
នឹង រាយការការពារ នឹង រាយការការពារ memory នៅក្នុង BP មានចំណាំបានជាការពារ
នឹង រាយការការពារ concept items / References
- Instead of copy, you can point to the memory address of the class ត្រូវបានដោឡូលីន

នៅក្នុងការបរិមាណទូទៅ ឬ class ឬ 2 ឬបន្ថែម នឹង Actor, Spawn ឬ class ឬ 2 ឬបន្ថែម នឹង data structure រាយការការពារ

នៅក្នុង BPBarrel នឹងបានការពារ
នៅក្នុង copy នឹងបាន ឬ ចាប់ផ្តើម
memory row class នឹង
នៅក្នុង ឬ ផ្ទា



គឺជាពេលវេលាដែលបានបញ្ជាក់



▪ Spawning and Destroying Actors

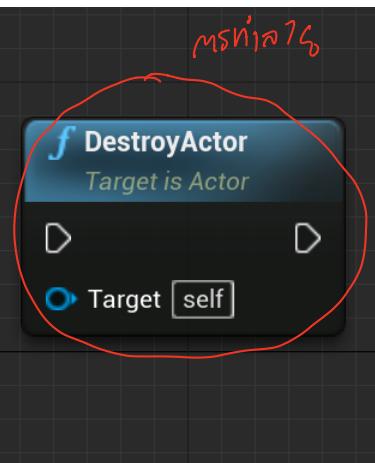
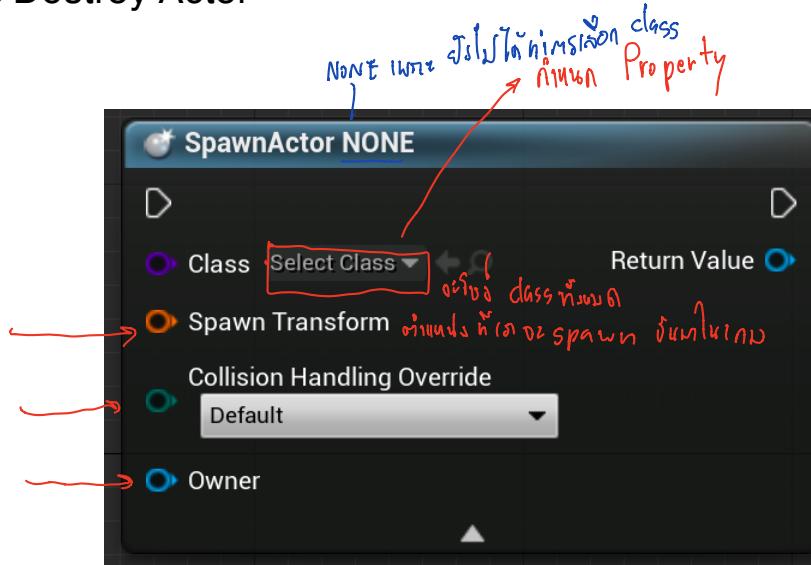
ສ່າງ ເຕັມ → Spawn Actor from Class *

ຍົກລົງ → Destroy Actor

Spawn ສ່າງ ms ອອນ object ນີ້ໃຫຍ້

ໄຟ້ໂຄສະນາ ms spawn ຢັ້ງໃຫ້ການ ກອບຍຸ້ນຢູ່ນີ້ແລ້ວ

ເຊື້ອດີນສ spawn ລັກກາລີ່ມ ເຕັມໃຈດີນນາ ດິນມີມາຍ ມີກົດກົນໃນເນັດ
spawn ຈະເປັນນີ້

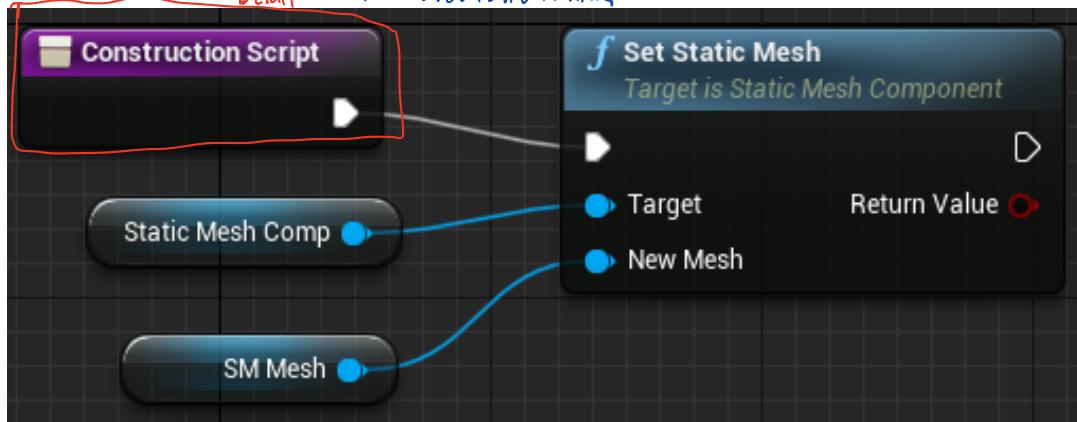


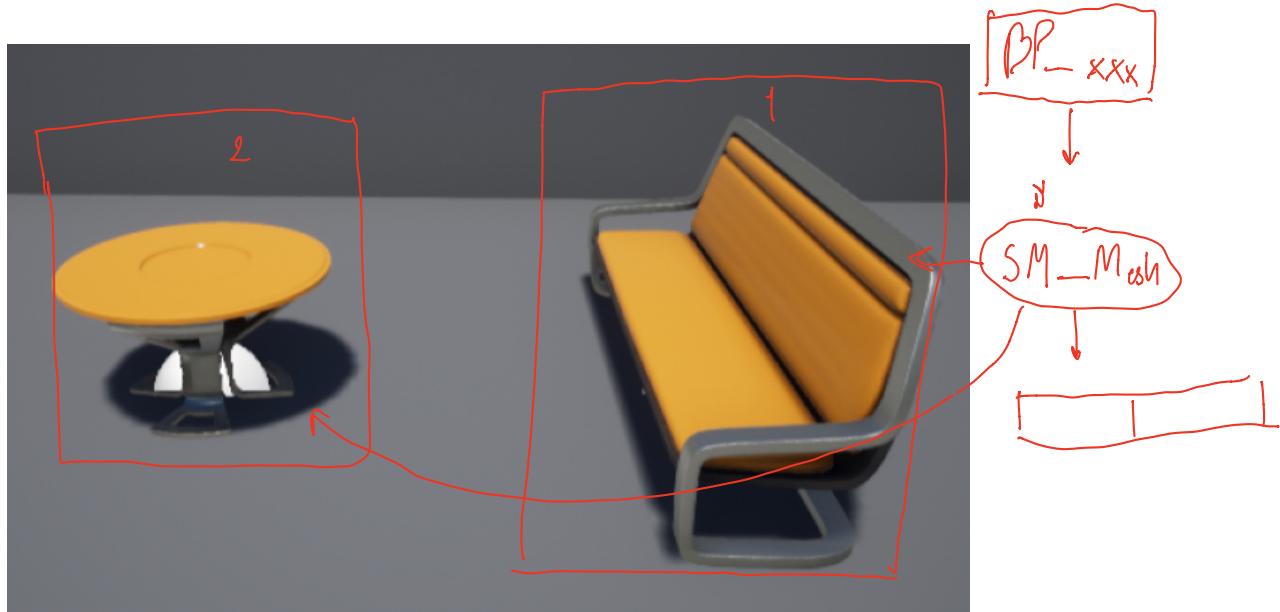
- Construction Script → Syn BPTR 98 min 3 ns

- All Actor Blueprints**

 - ① Added to the Level (first time), របៀបរាយនៅ CS មិនមែនជារួចរាល់ទេ ត្រូវការកំណត់ឡាអ្នកបង្កើតរបស់ខ្លួន
 - ② Change is made to its properties in the Level Editor, ផ្តល់ព័ត៌មាន នៃការកំណត់របស់ខ្លួន
 - ③ An instance is spawned at runtime ដើម្បីការកំណត់របស់ខ្លួន នៅពេលការបង្កើតរបស់ខ្លួន

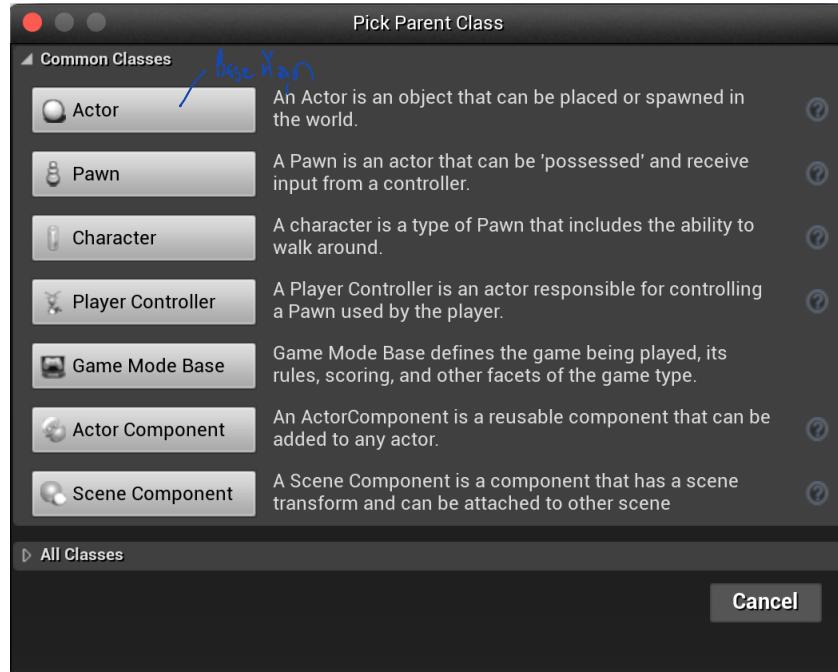
Default → ការកំណត់របស់ខ្លួនដោយផ្តល់ព័ត៌មាន





ສະເໜີ ໃນ $\text{X} \text{ BP-XXX}$ ໂລັບ ກິນທຸກ ຫຼື SM-Mesh ສູງ SM-mesh ດາວໂຫຼນຂອງ ມີເຖິງ object ອີງສ ໂດຍ ສັງເກດ ກຳຕົວລະບົບ
ໄດ້ມີຄວາມ ສັງເກດ 2 BP ທີ່ມີທີ່ຈະເກີດ object ທີ່ມີພົນ ເກີນ CS ໃນ ພົມ ວິຊາ ລາວ ຈົດກຳໄດ້ static mesh ຮັບໃຫຍ່ກົດ ໄປ
ສະເໜີ ການຂອງ object ຕ່າງໆ ອີງ SM ສັງເກດ ເກີນ BP ຕໍ່ມີຄວາມ ຖະແຫຼງ ສົມ ຖະແຫຼງ ຕໍ່ມີ

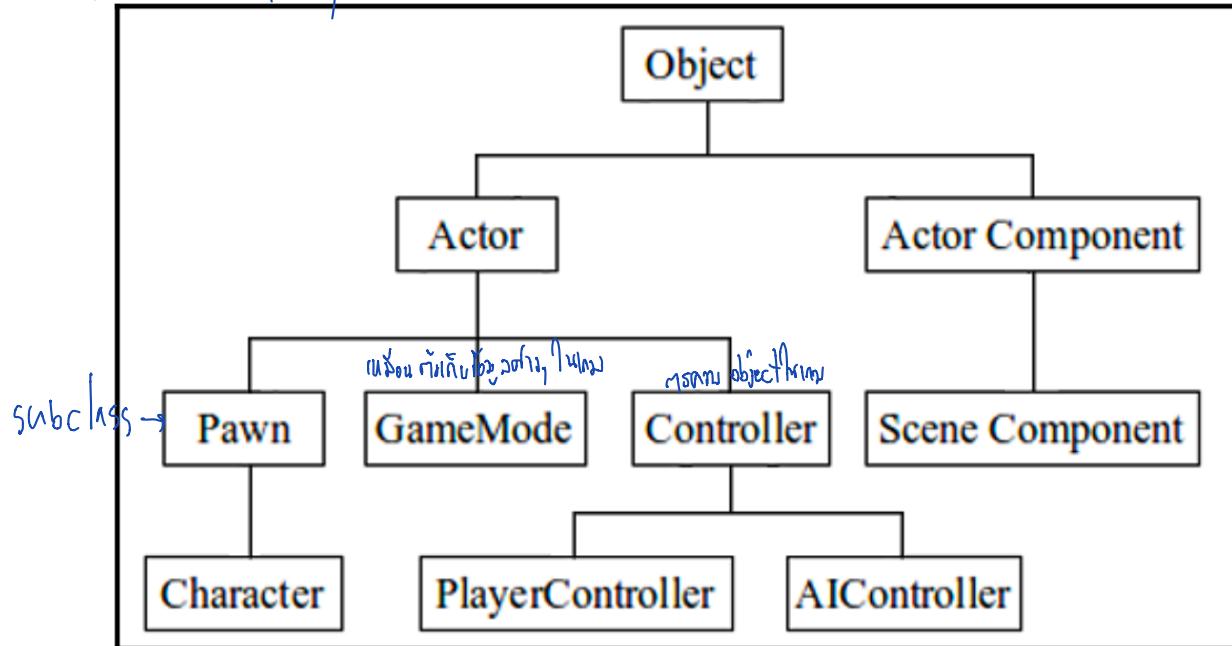
▪ Gameplay Framework Classes



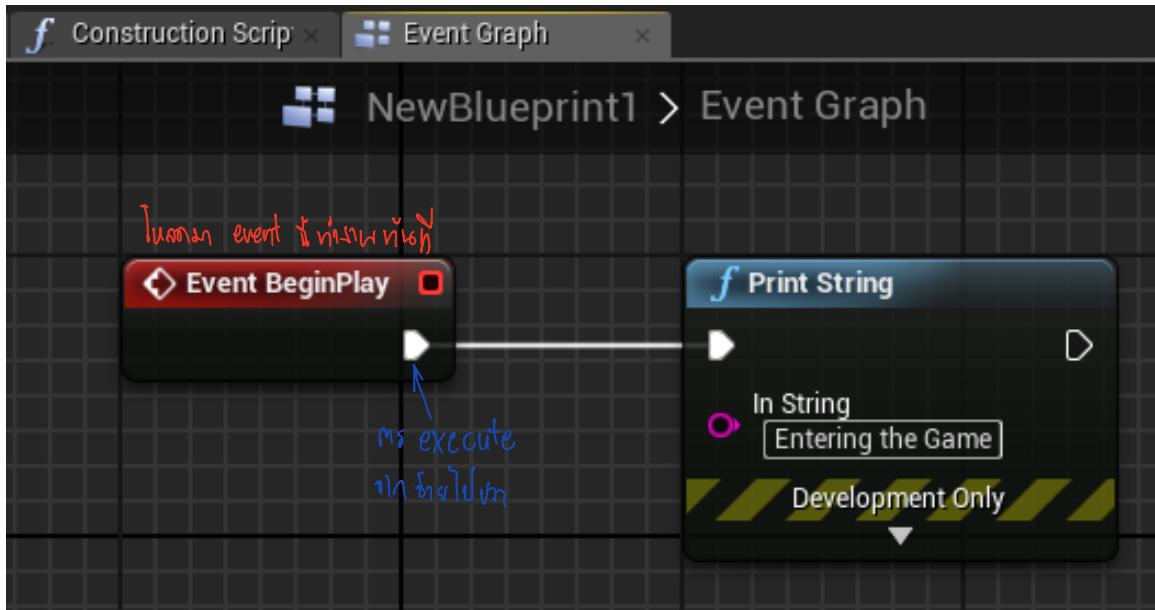
Actor Classes

Hierarchy

มรดก hierarchy



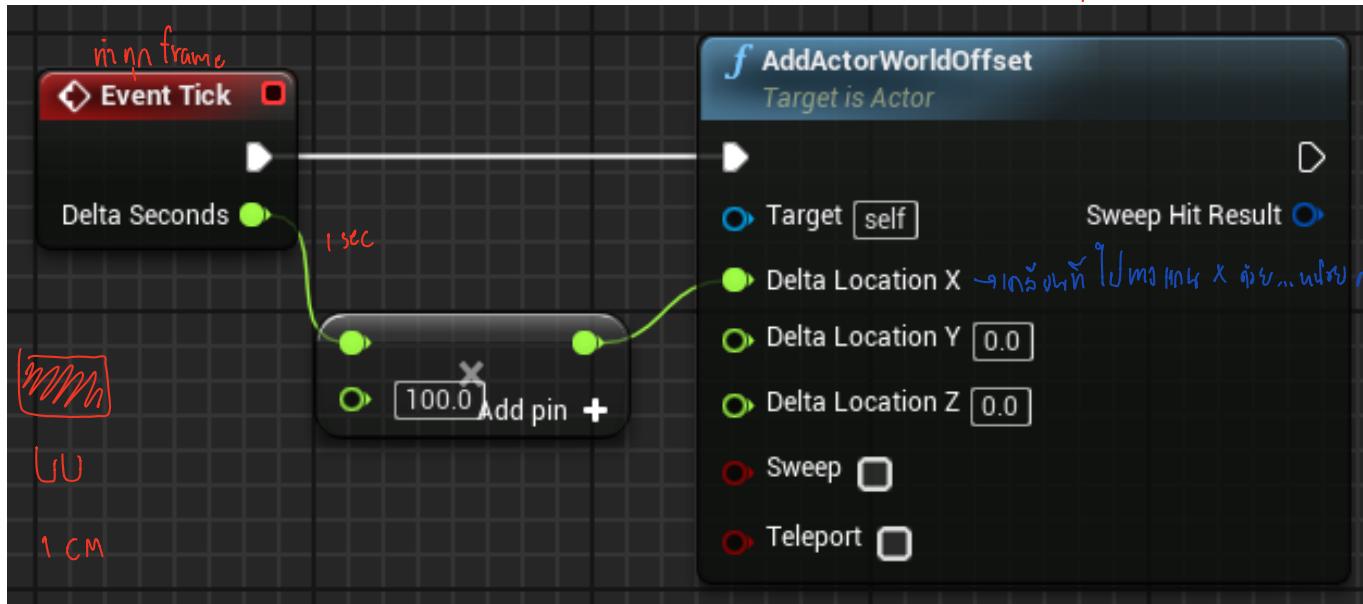
▪ Begin Play Event



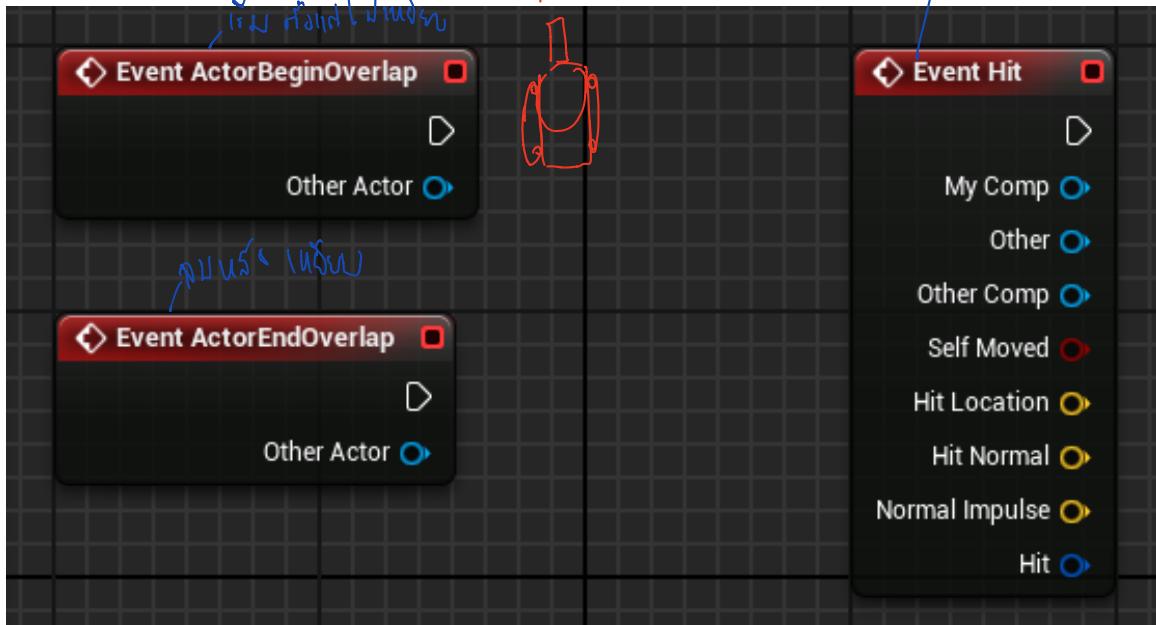
▪ Tick Event

60 FPS

1 s = 60 F



▪ Collision Events



▪ Mouse Interaction

