

COMP140

Session 03 – Workshop Tasks

Workshop 1

- Create an **Enemy** class which extends AActor. Include a **virtual** Attack() method which method scales the object by 1.5.
- Create **Orc** and **Dragon** classes which inherit from Enemy, these classes should **override** the Attack() method.
 - The Orc class's Attack() method should turn the Actor red.
Hint: **Instanced Materials**
 - The Dragon class's Attack() method should output “flames” to the window.
- Place the three Actors in the scene and add Cube Components
- Create an EnemyManager Actor and add it to the scene. This class must have a **public Enemy TArray**, and when [Space] is pressed it calls the **Attack()** method on each Enemy in the array.

Workshop 2

- In the workshop you will create three different enemy types for a hypothetical SHMUP game.
- Create a `BaseEnemy` class, this will declare variables for `health`, `speed`, and `scoreValue`; along with `OnCollisionEnter()` which handles collision with a player and `Tick()` which moves the Actor in a given direction and speed.
- Also declare a `virtual` method as follows:
`protected virtual Vector3 GetDirection()`
... in the parent class this will simply return `Y Direction of the Actor`
- Create a series of child classes which inherit from `BaseEnemy`.
`Override GetDirection()` with the following behaviours:
 - Heat seeking (move towards player)
 - stretch goal modify velocity: 90% existing, 10% towards player
 - ‘Wave’ pattern (apply a horizontal offset to the movement based on a sin wave over time)