The Making Of Weapons

In Nebular Knights, if you successful cut, slice, slash or smash an enemy three events will be triggered. The effect these events will have on said enemy varies depending on the weapon used and the luck of the player using it.

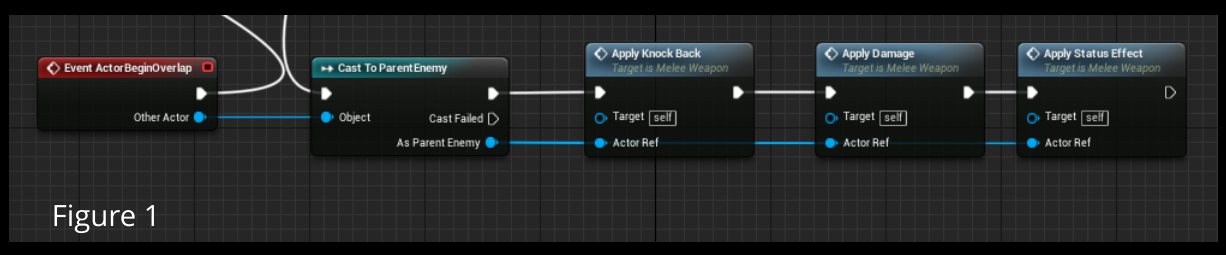

Figure 1

Figure 1 shows the event graph for the Blueprint class "MeleeWeapon". As all enemy classes in Nebula Knights inherit from "ParentEnemy" attempting to cast the overlapped actor to the ParentEnemy provides a clean way of checking if the object the player is hitting is indeed an enemy.

The functionality of the Knock Back is shown in figure 2.

The steps are as follows:

- Calculate line Vector (between enemy and MeleeWeapon)
- Calculate Directional Vector
- Multiply by the variable KnockBack
- Send the vector via Interface message to the enemy
- In the ParentEnemy Class, a vector impulse is added using the vector from the MeleeWeapon.

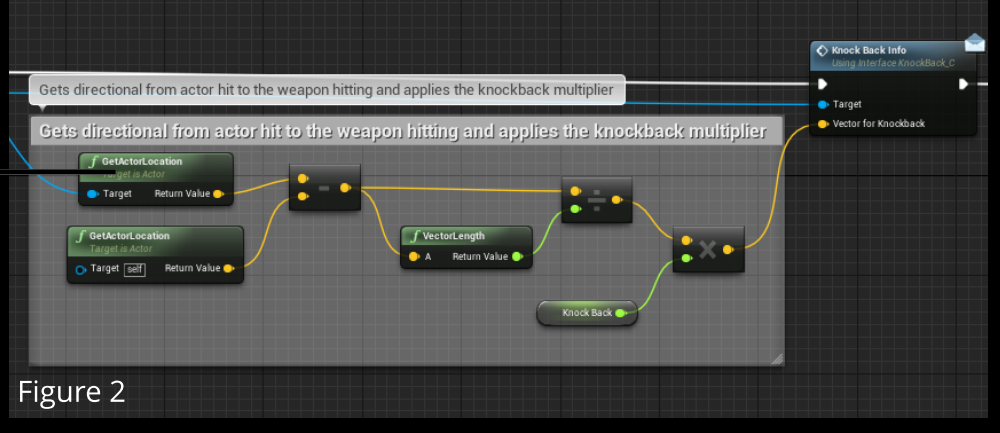

Figure 2

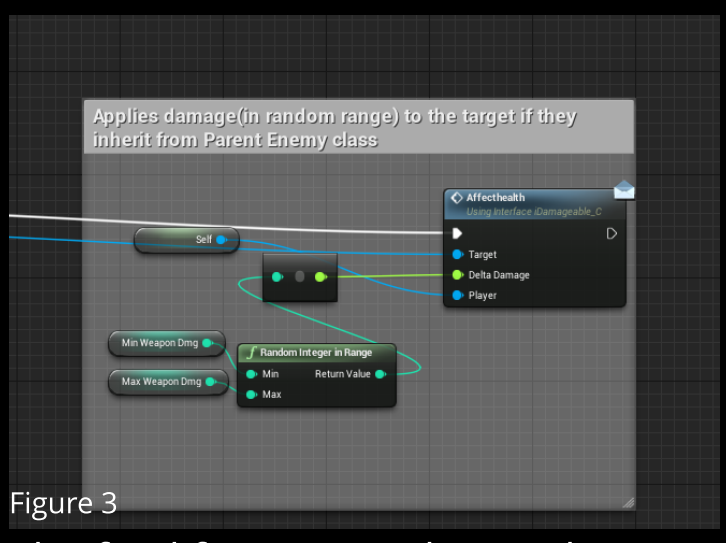

Figure 3

Figure 3 Depicts the function that applies damage to the enemy hit. An integer is randomly generated in the range defined by the two variables. The interface message then sends the damage and the reference to the player who dealt the damage to the instance of the enemy parent.

The final function is the ApplyStatusEffect function. The interface message that sends the status effect information is only called provided that the random 0-1 float that is generated is less than the StatusEffectProbability. If the EffectType is equal to one the enemy will be frozen for the length of the EffectDuration variable. If however, the EffectType is two, the enemy will lose the value of the EffectDamage Variable every second.

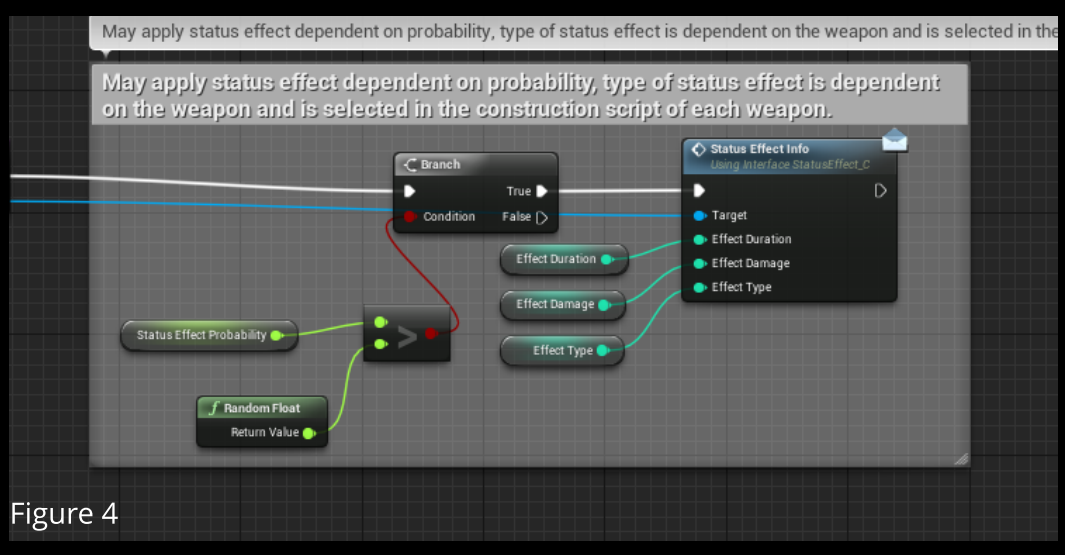

Figure 4

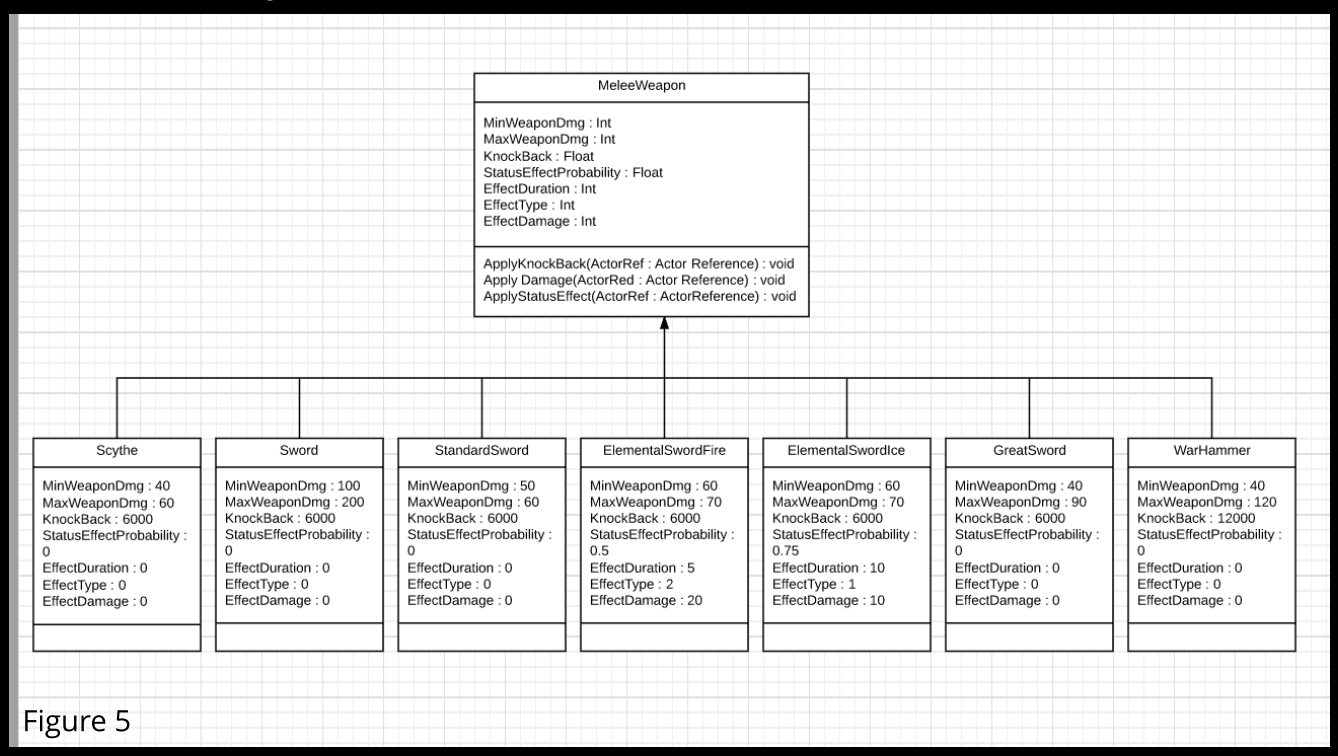

Figure 5

Figure 5 shows a UML diagram of the hierarchical structure of the melee weapons. The values next to the variable names in the children represent the values that are set in the construction scripts of each of those classes. This provides each weapon with its differing effects, damage ranges, and KnockBack values.

Tristan Barlow-Griffin

1607804

Basilisk Studios