Cosmetic attacment system for Toaster Arena weapons

Attachments are skeletal meshes that share the same rig as the base weapon

There will be 2 types of attachments
- Additions

-Replacements

Replacements Replace a part of a weapon, Ex. Triggers, handles, Mags and other parts that are animated

Additions are attachments that can be added to a weapon and are not animated
Like supresors, sights

If it's rigged then it can most likely be changed
(Changed parts might not have custom skin support)

Best that can be done is some sort of color mask to allow for player custommmisation simmilar to armor colors

Replacement attachments need to share the same rig as the weapon

Addition attachments don't need it

Setup in engine is diferent

Attachment quality

Common(These attachements are plain basic and dont allow for any color customization)

Strange(These attachements Simmilar to Common attachments but allow color change)

Mythic(These attachements allow color customization and have particles or some sort of special effect on them)
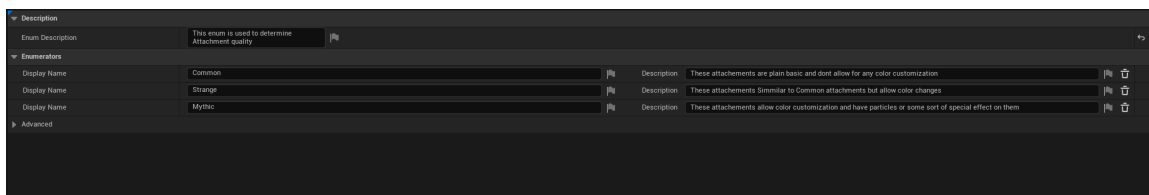
Replacement attachments are more technically complex to setup

They require a couple of things to work propperly
The source weapon model must be stripped away from any part that will work as a replacement
and these parts must be made attachments instead

Example. If I wanted to have a pistol with a replacable trigger then I would need to remove it from the source model and then export it as it's own attachment that shares the same bone hyearchy as the weapon

In engine wepons can have default attachments that will be chosen automatically if a player has none selected

Guide to adding attachments to weapons

Adding replacement Attachments

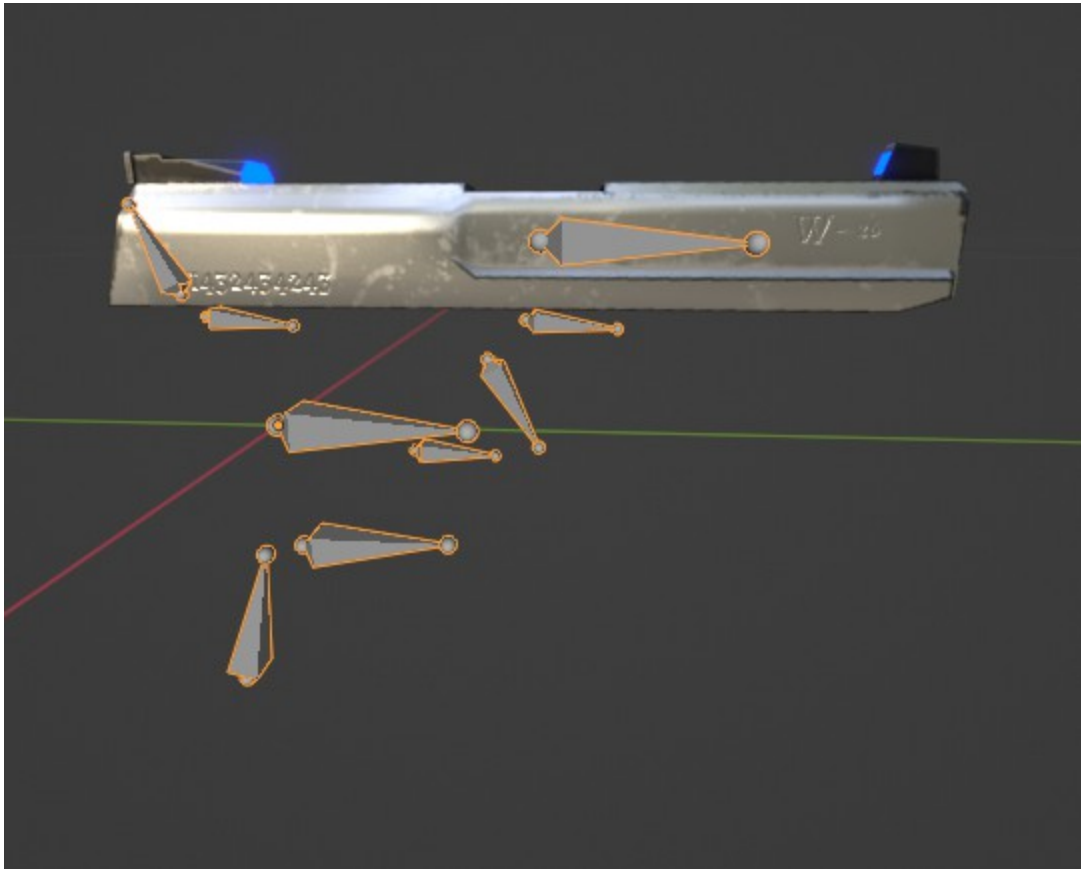Weapons must be modified a specific way to support replacement attachments

weapon model must be stripped from any parts that can be replaced
and these models must be exported separetley with the same rig as base weapon
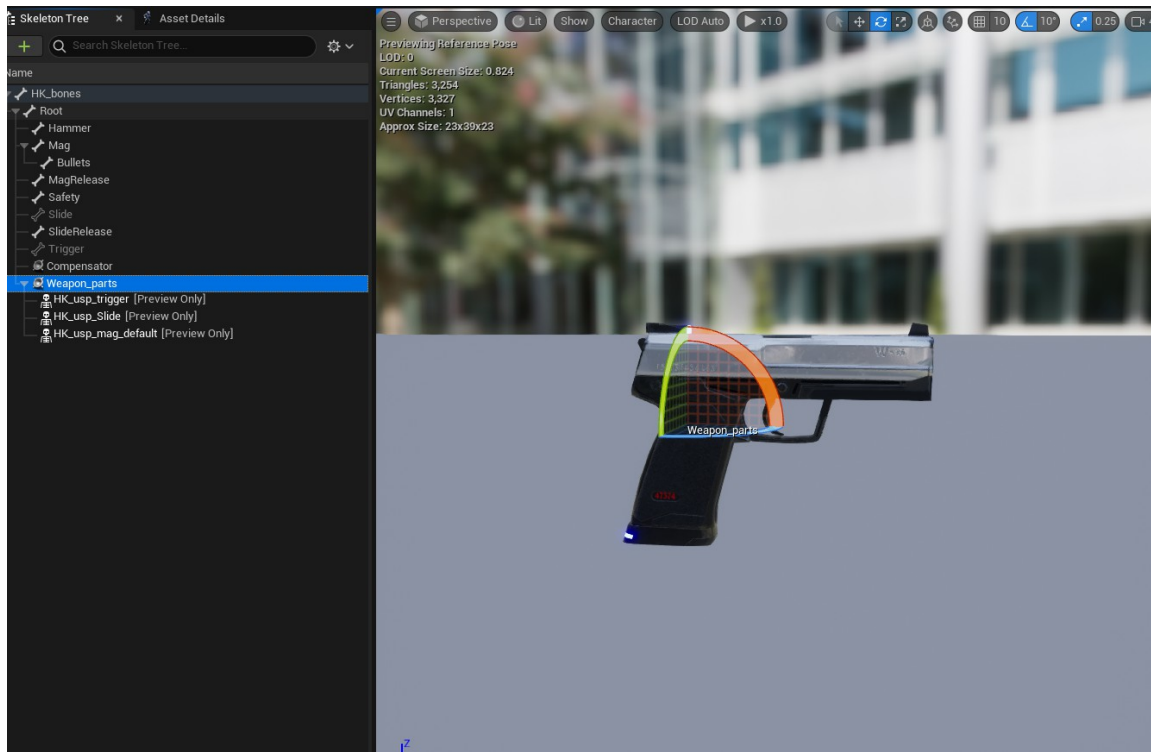
Example of HK pistol striped down

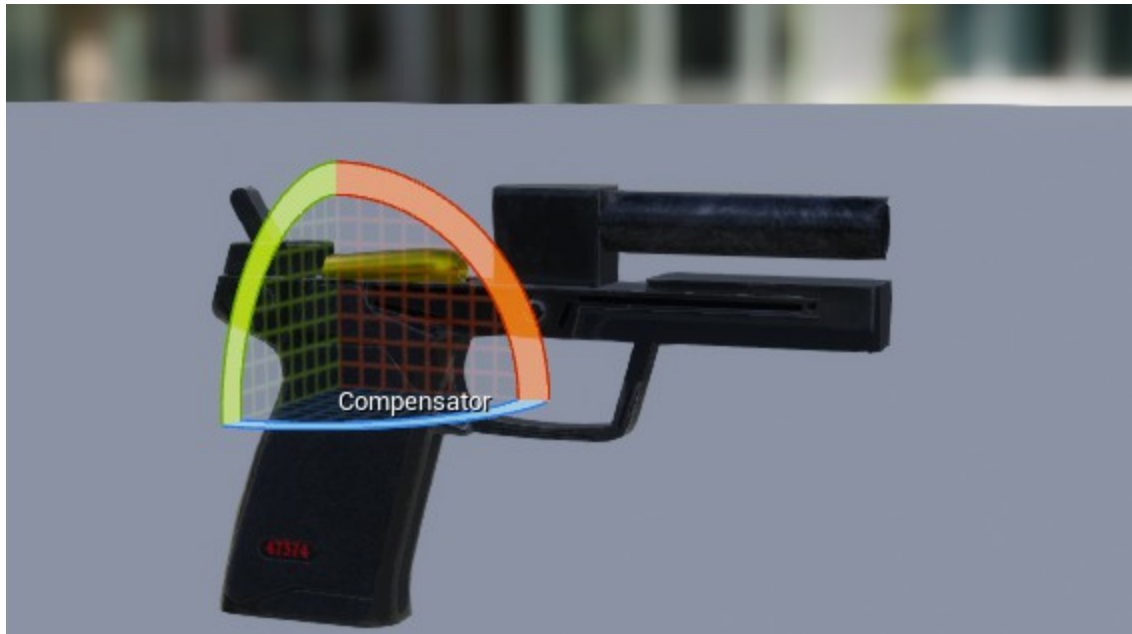Replacable parts are exported as separate models (must inlcude rig)

Engine setup

Make sure the attachments have propper sockets in unreal
are properly scaled

Here we can see that all the replacement parts will use the same socket
called "Weapon_parts"

Here we can see how the weapon model looks without any of the replacement parts

Adding the attachments to work in game

Right now we only have the model setup for attachments but they cant be selected in game yet, to do that we need to make a Data Asset
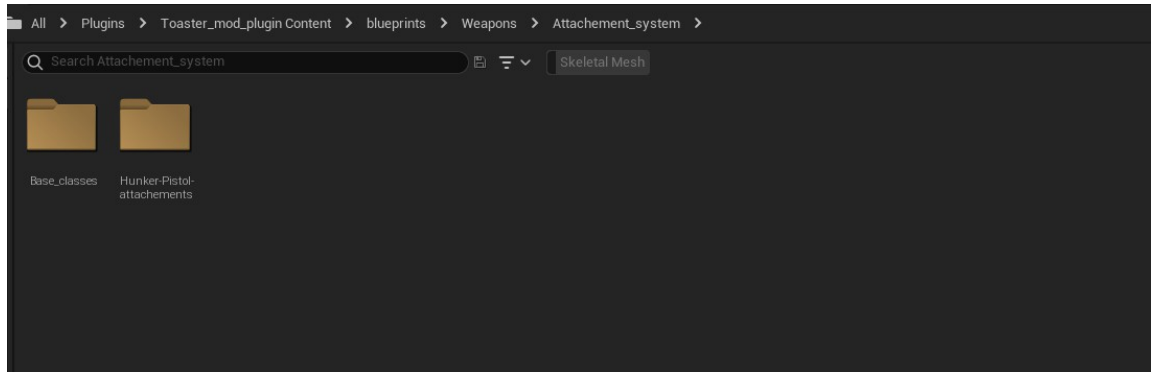
Normally the weapon wont automatically load any parts unless they are specified
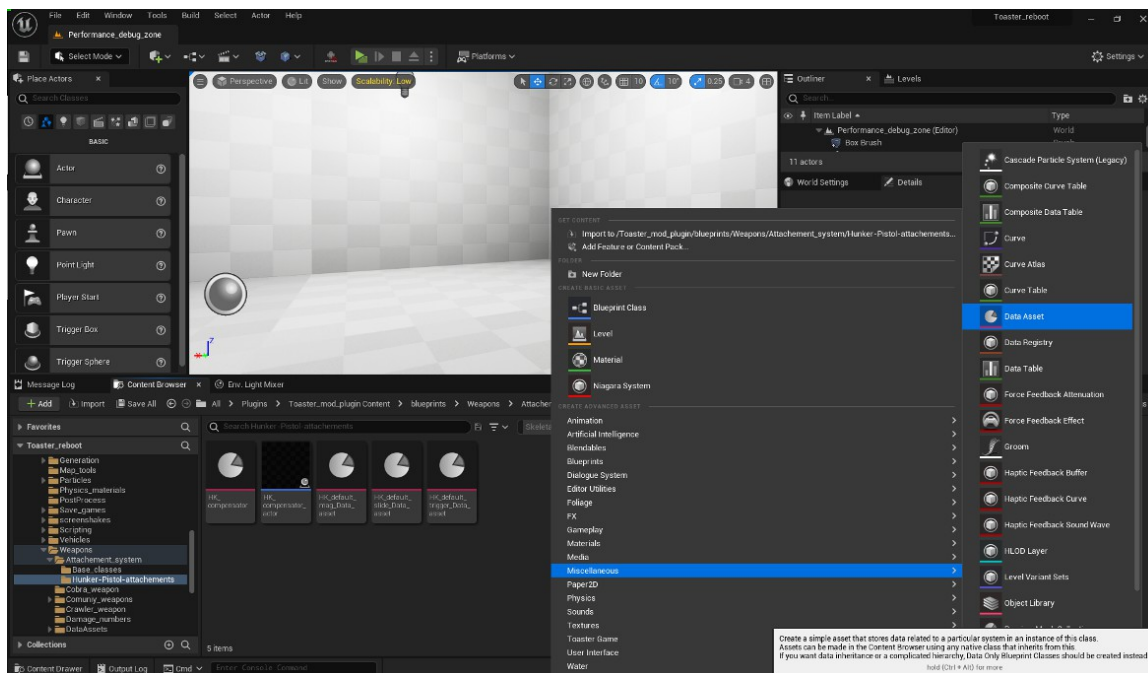
so it will look like this in game

This is because we havent added any attachments data assets and havent specified the weapon's default parts
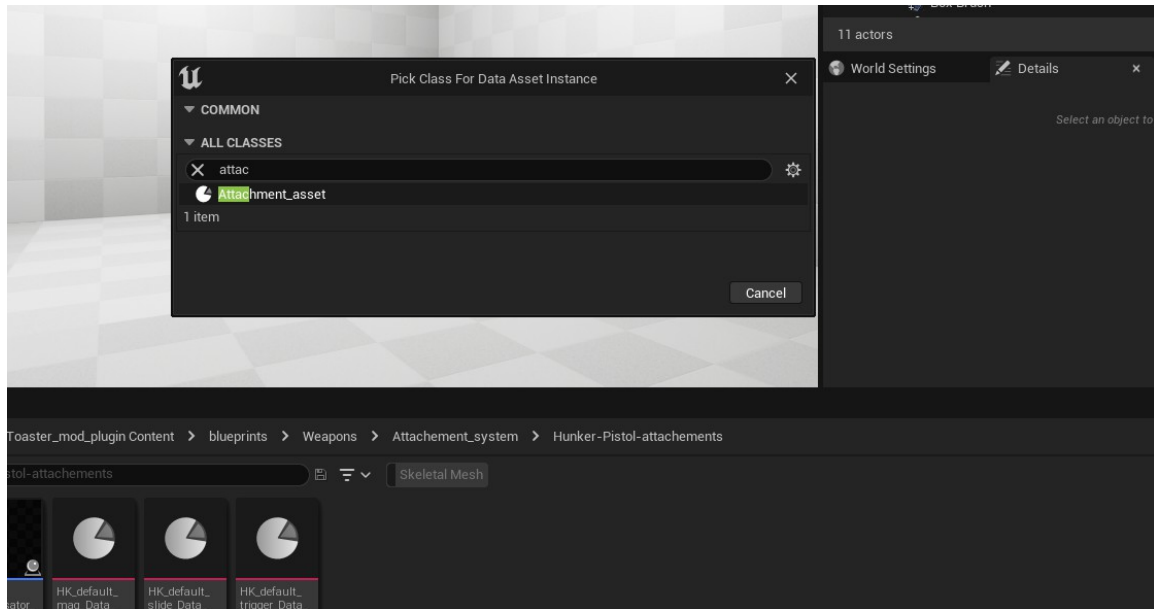
To make a attachment asset Navigate to this folder

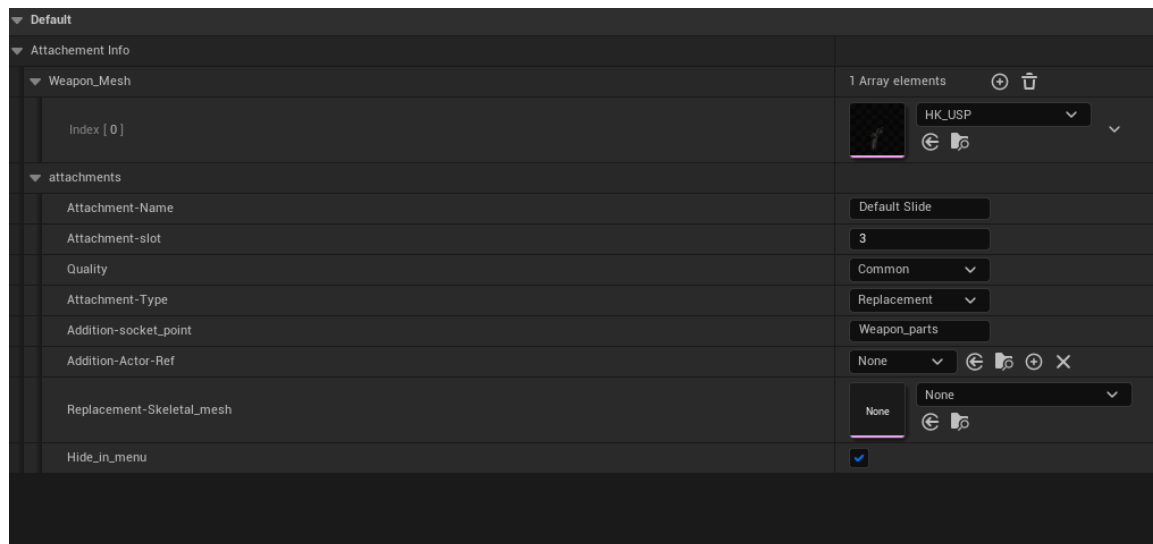Make a folder here if the weapon you are adding the attachment for does not exist

Create a new Data Asset

Select Attachment_asset

this will create a Data Asset for your attachment

A few things need to be specified
such as the compatible modles that this attachment will use
The Name
Slot (Slot makes it so that there are not repeats of the same attachment For
example. It makes it so that I cant select to supressors to be used on the
weapon at the same time)

Attachment-Type (Is this attachment a part replacment or an addition)
Example. Part replacements could be a diferent trigger model

and Additions can be something like a supressor on the weapon

Addition-socket_point (The weapon socket that the attachment will be attached to)

Addition-Actor-Ref (Bluepprint object that will be used for additive attachments)

Replacement-Skeletal_mesh(Skeletal mesh that will be used for weapon part replacement)

Hide_in_menu (Makes this attachment not show in the customization menu, used for weapon default replacement parts)

Default replacement parts are the parts that will be chosen if the player has not selected any

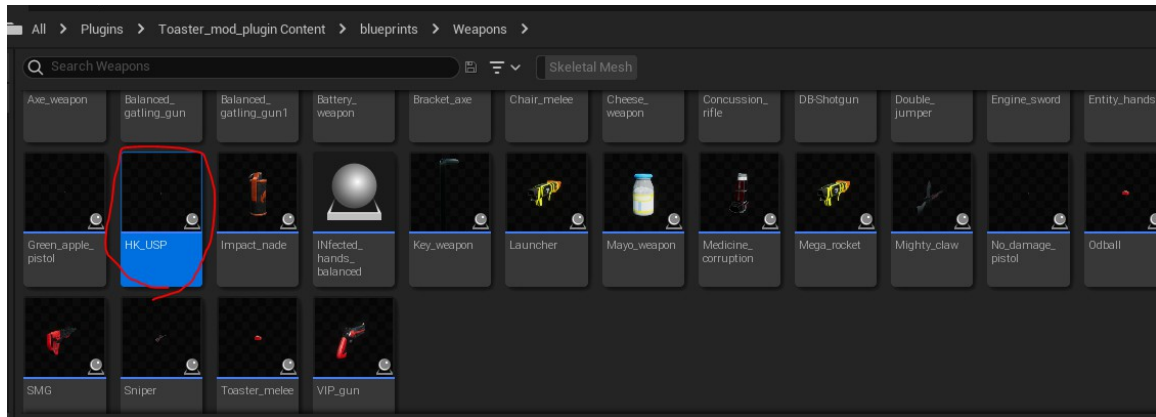speaking of default attachments
we have to fix that
so far we have added attachment to our weapon but if none are selected, the weapon will just look like this
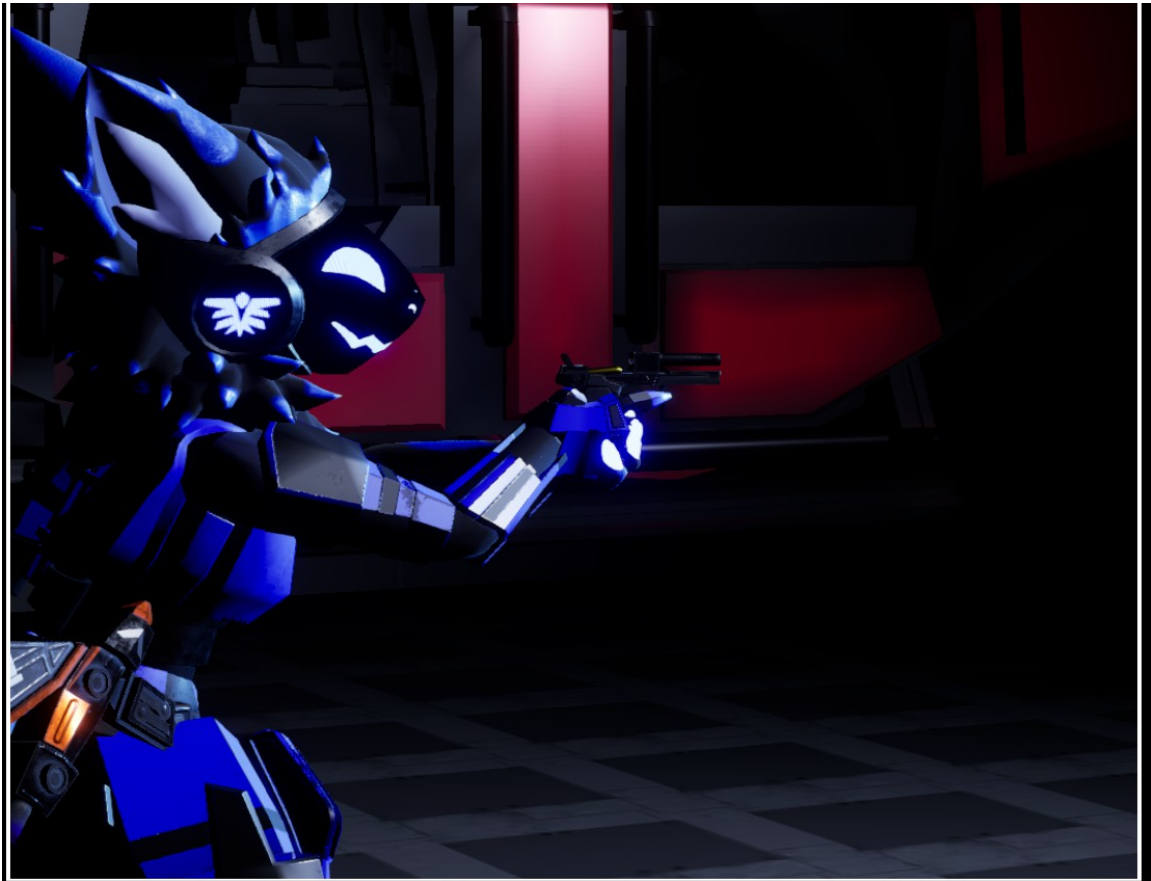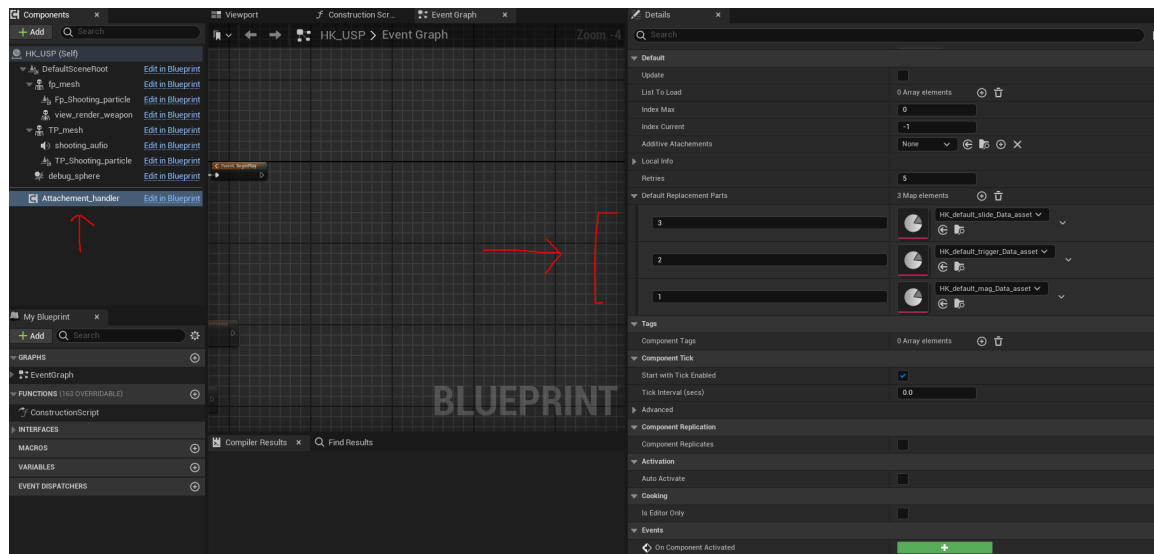
Navigate to the weapon blueprint and open it, in my case the hunker pistol is located here


Open it and navigate here

The options here will specify what attachments the weapon will select by default when none take their place
The numbers specify the attachment slot and the Data asset specifies what attachment to use
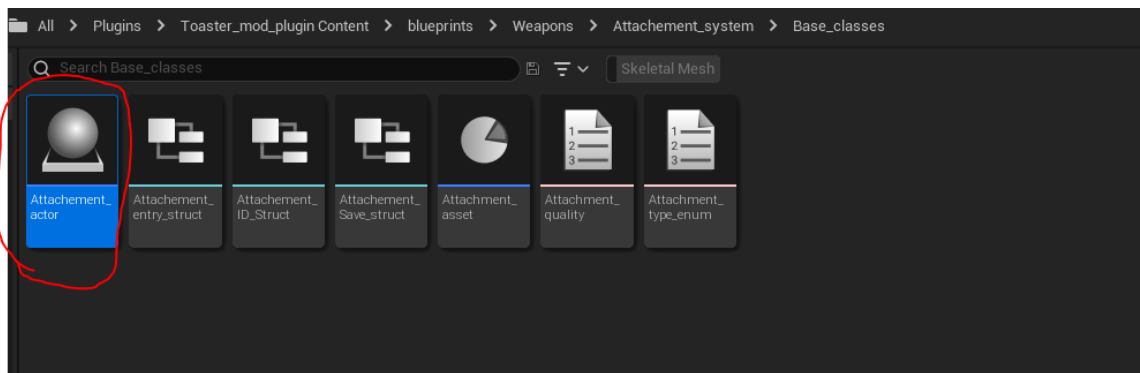there is no limit on how many you can add

If everything is setup propperly you should have something like this

For additive attachments use this setup instead
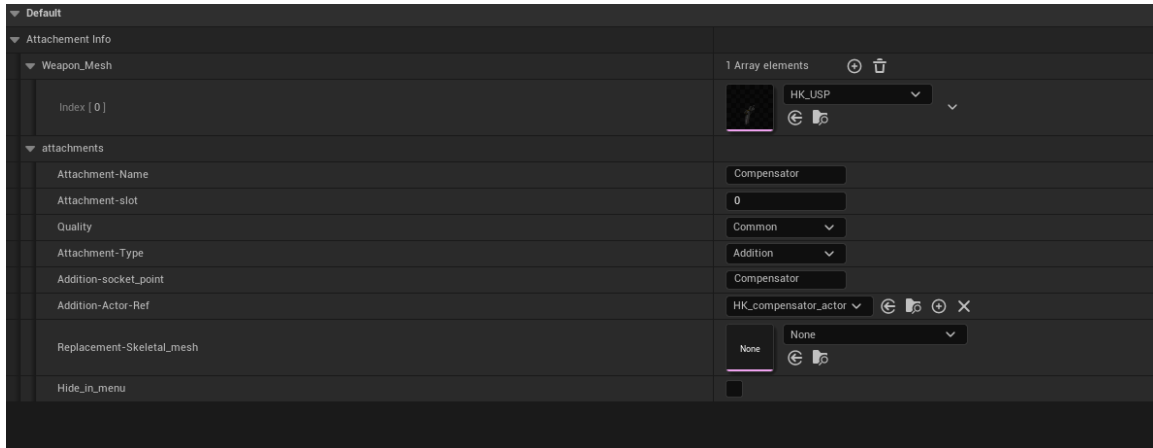
Notice how on this one
a Blueprint reference is used instead of a skeletal reference
the reason for this is that for the future aditive attachments will have some
sort of logic related to them

Additive attachments must be a child of this class or else they wont
work