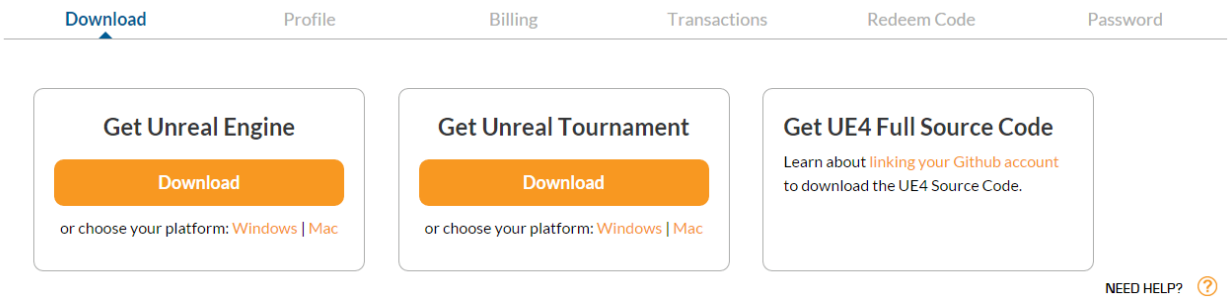
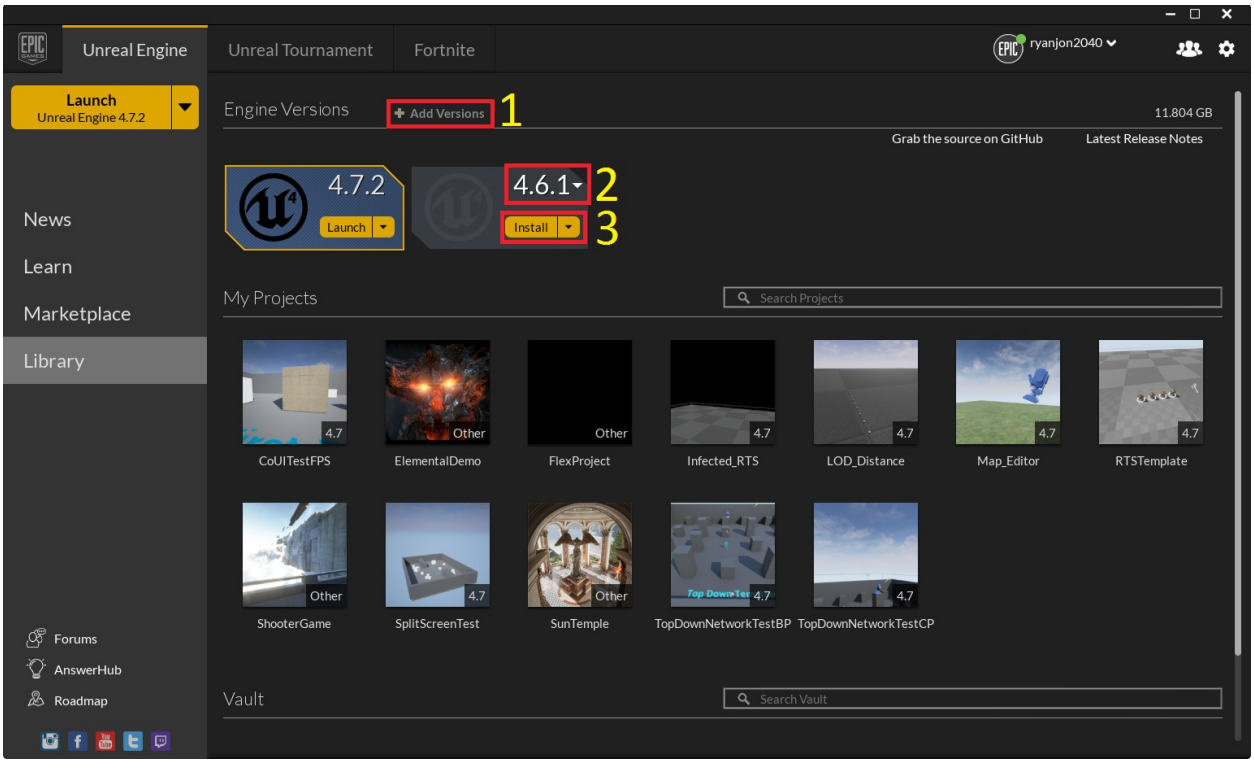
Unreal Engine 4 Game Development Essentials

Chapter 1: Introduction to Unreal Engine 4




Unreal Engine
Unreal Tournament
Fortnite
ryanjon2040
Launch
Unreal Engine 4.7.2
Engine Versions
Add Versions
1
11.804 GB
Grab the source on GitHub
Latest Release Notes
4.7.2
Launch
4.6.1
2
Install
3
News
Learn
Marketplace
Library
My Projects
Search Projects
CoUITestFPS
ElementalDemo
FlexProject
Infected_RTS
LOD_Distance
Map_Editor
RTSTemplate
ShooterGame
SplitScreenTest
SunTemple
TopDownNetworkTestBP
TopDownNetworkTestCP
Forums
AnswerHub
Roadmap
Vault
Search Vault

Download | **Profile** | Billing | Transactions

* FIRST NAME [redacted]

* LAST NAME [redacted]

NEW COMPANY [redacted]

* ADDRESS LINE 1

NEW MOBILE PHONE NUMBER

ADDRESS LINE 2

GITHUB ACCOUNT NAME [redacted]

* CITY

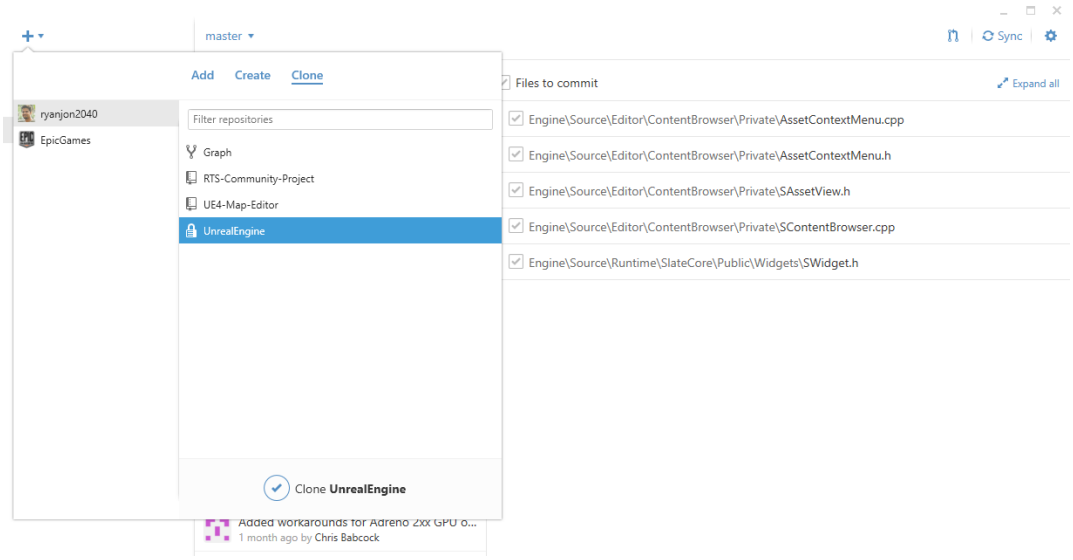
* COMMUNICATION LANGUAGE
English

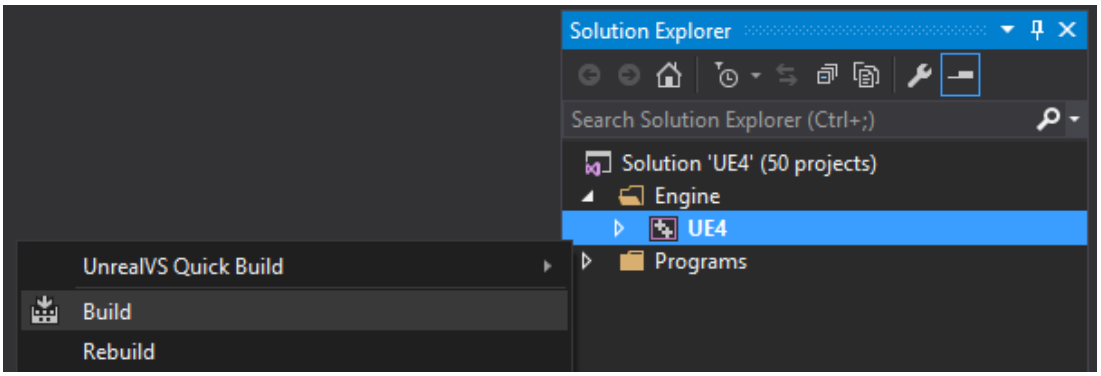
REGION

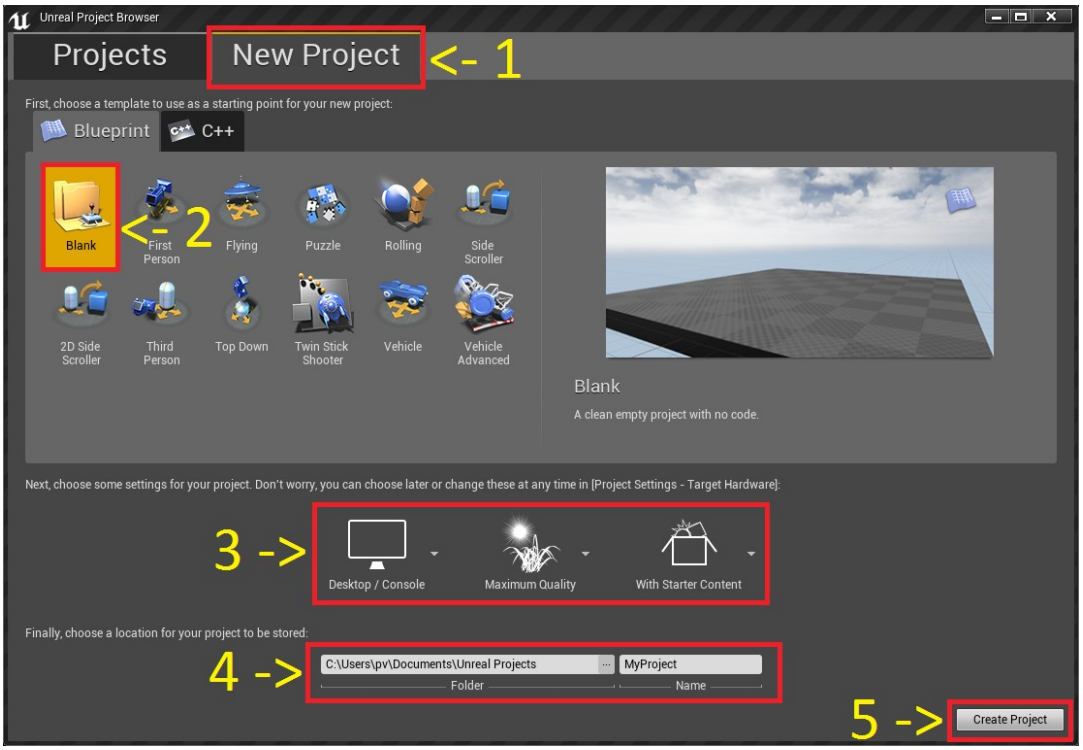
POSTAL CODE

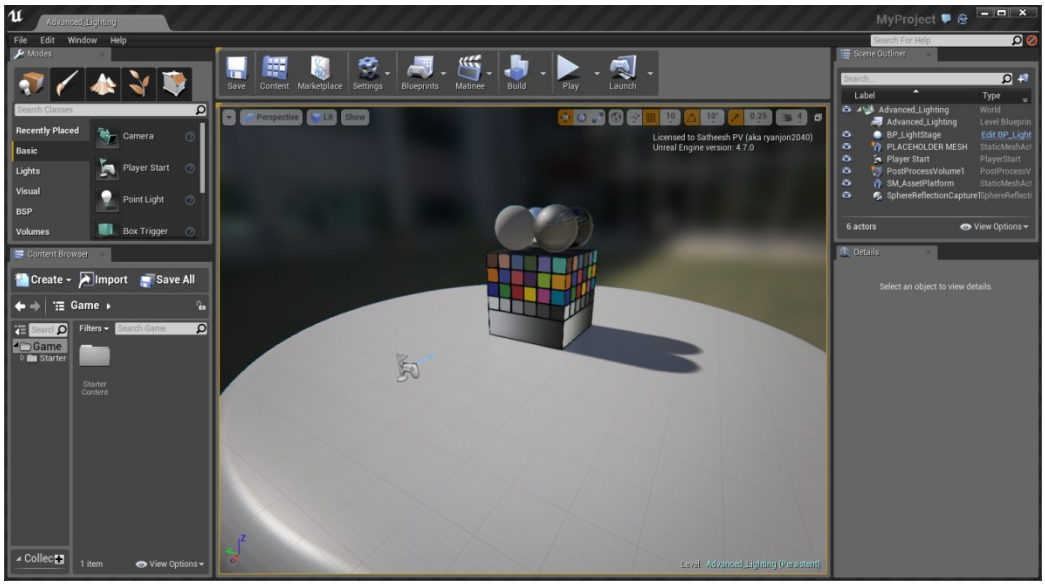
Save

* COUNTRY
INDIA

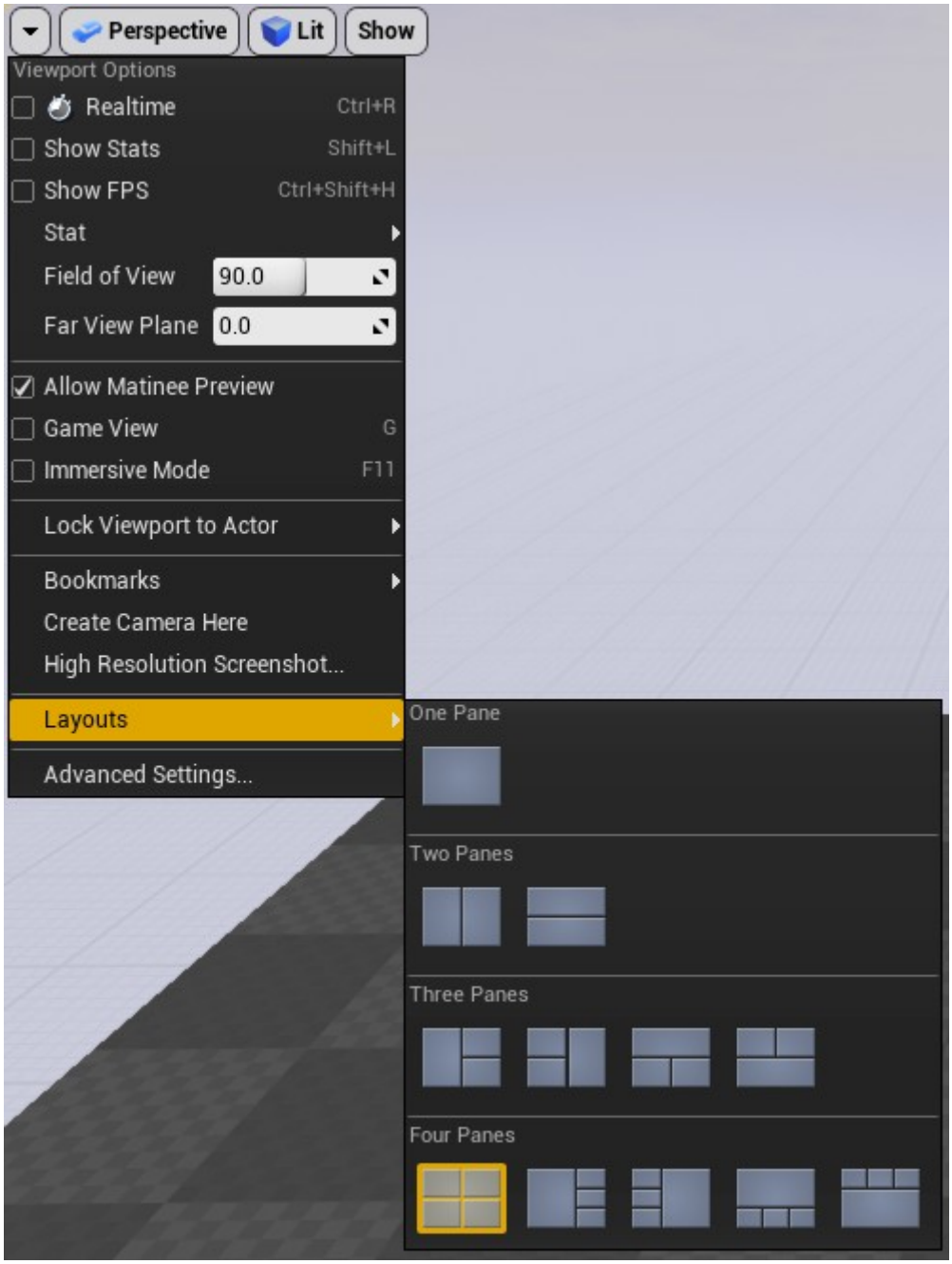


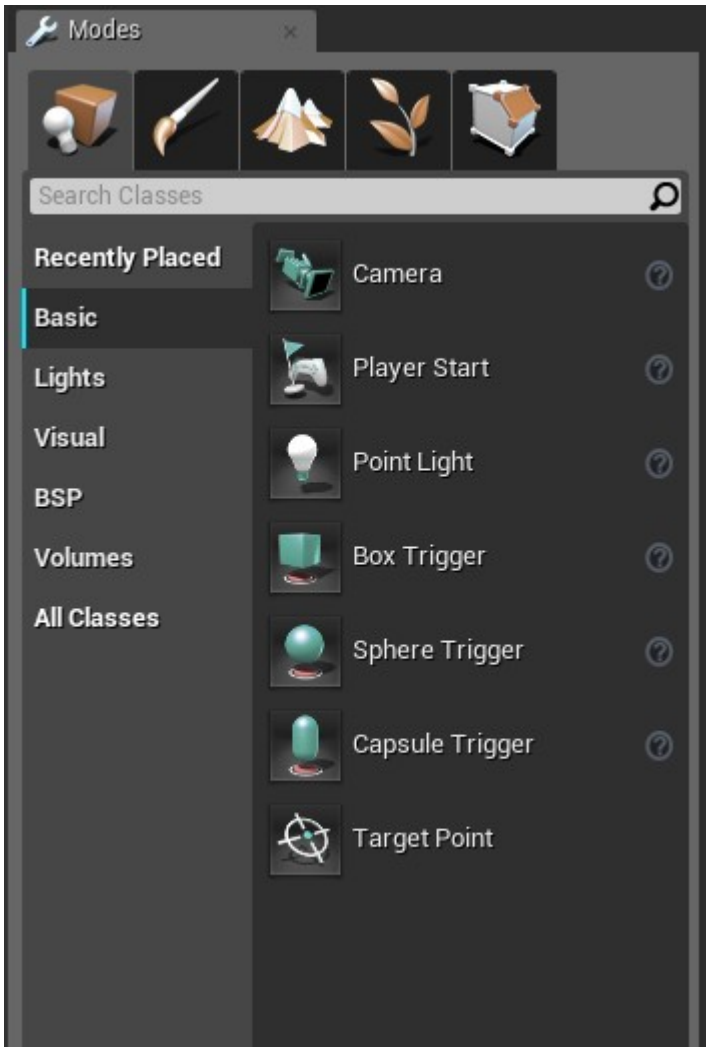

Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'UE4' (50 projects)
Engine
UE4
Programs
UnrealVS Quick Build
Build
Rebuild


Unreal Project Browser
Projects
New Project
<- 1
First, choose a template to use as a starting point for your new project:
Blueprint
C++
Blank
<- 2
First Person
Flying
Puzzle
Rolling
Side Scroller
2D Side Scroller
Third Person
Top Down
Twin Stick Shooter
Vehicle
Vehicle Advanced
Blank
A clean empty project with no code.
Next, choose some settings for your project. Don't worry, you can choose later or change these at any time in [Project Settings - Target Hardware]:
3 ->
Desktop / Console
Maximum Quality
With Starter Content
Finally, choose a location for your project to be stored:
4 ->
C:\Users\pv\Documents\Unreal Projects
MyProject
Folder
Name
5 ->
Create Project

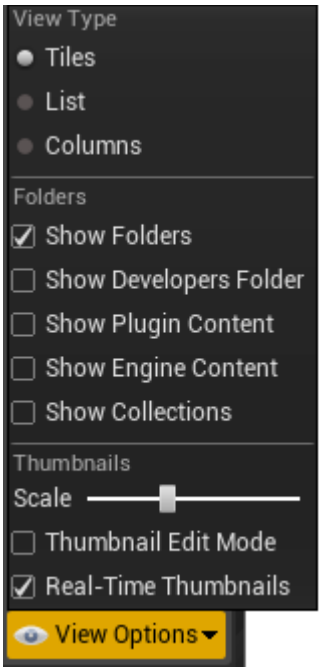

Advanced_Lighting
MyProject
File Edit Window Help
Modes
Save Content Marketplace Settings Blueprints Matinee Build Play Launch
Recently Placed
Basic
Lights
Visual
BSP
Volumes
Camera
Player Start
Point Light
Box Trigger
Perspective Lit Show
Licensed to Satheesh PV (aka ryanjon2040)
Unreal Engine version: 4.7.0
Scene Outliner
Label Type
Advanced_Lighting World
Advanced_Lighting Level Blueprin
BP_LightStage Edit BP_Light
PLACEHOLDER MESH StaticMeshAc
Player Start PlayerStart
PostProcessVolume1 PostProcessV
SM_AssetPlatform StaticMeshAc
SphereReflectionCapture1 SphereReflecti
6 actors
View Options
Details
Select an object to view details.
Content Browser
Create Import Save All
Game
Filters
Search Game
Starter Content
1 item
View Options
Level: Advanced_Lighting (Persistent)

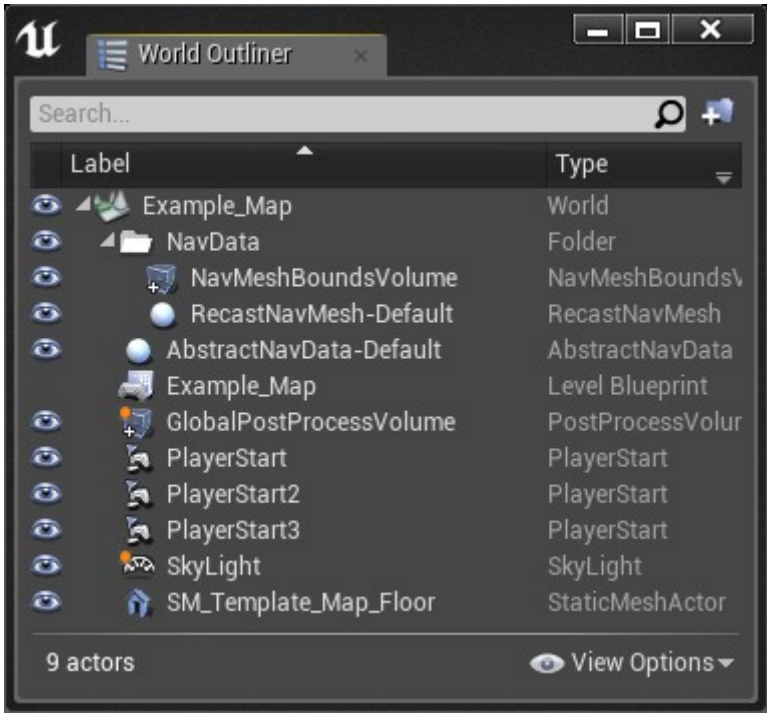
10
10°
0.25
4
1
2
3
4
5
6
7


Perspective
Lit
Show
Viewport Options
Realtime Ctrl+R
Show Stats Shift+L
Show FPS Ctrl+Shift+H
Stat
Field of View 90.0
Far View Plane 0.0
Allow Matinee Preview
Game View G
Immersive Mode F11
Lock Viewport to Actor
Bookmarks
Create Camera Here
High Resolution Screenshot...
Layouts
Advanced Settings...
One Pane
Two Panes
Three Panes
Four Panes


Modes
Search Classes
Recently Placed
Basic
Lights
Visual
BSP
Volumes
All Classes
Camera
Player Start
Point Light
Box Trigger
Sphere Trigger
Capsule Trigger
Target Point

Content Browser
Create
Import
Save All
Game
Search
Filters
Search Game
Game
Starter
Starter Content
Collec
1 item
View Options


View Type
Tiles
List
Columns
Folders
Show Folders
Show Developers Folder
Show Plugin Content
Show Engine Content
Show Collections
Thumbnails
Scale
Thumbnail Edit Mode
Real-Time Thumbnails
View Options


World Outliner
Search...
Label
Type
Example_Map
World
NavData
Folder
NavMeshBoundsVolume
RecastNavMesh-Default
RecastNavMesh
AbstractNavData-Default
AbstractNavData
Example_Map
Level Blueprint
GlobalPostProcessVolume
PlayerStart
PlayerStart2
PlayerStart3
SkyLight
SM_Template_Map_Floor
StaticMeshActor
9 actors
View Options

Navigation

Perspective Viewport	
Move forward / backward	LMB + Drag up / down
Rotate left / right	LMB + Drag left / right
Free Rotate	RMB + Drag
Move up / down	LMB + RMB + Drag
Zoom in / out	Mouse Scroll Wheel
Top / Front / Side Viewport	
Pan	RMB + Drag
Zoom in / out	LMB + RMB + Drag or Mouse Scroll Wheel

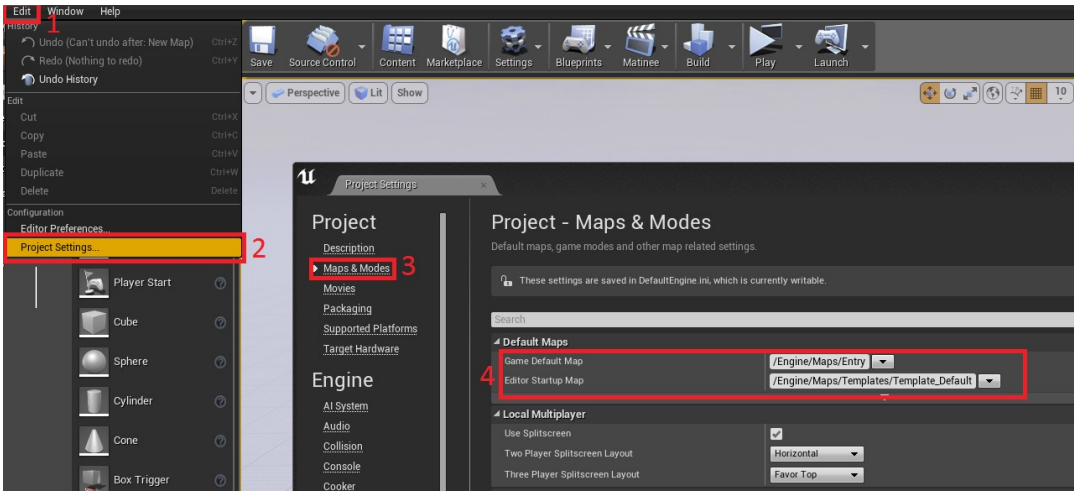
Selection

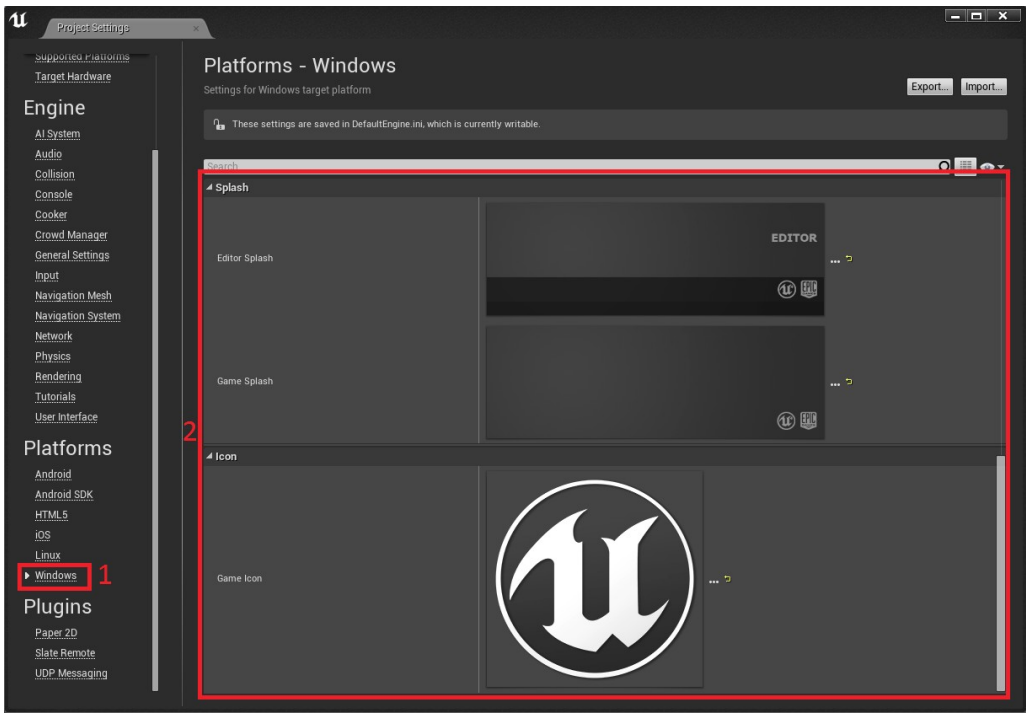
Select	LMB on Actor
Toggle selection	Ctrl + LMB on Actor
Marquee Selection	LMB + Drag
Clear Selection	Esc

Focusing

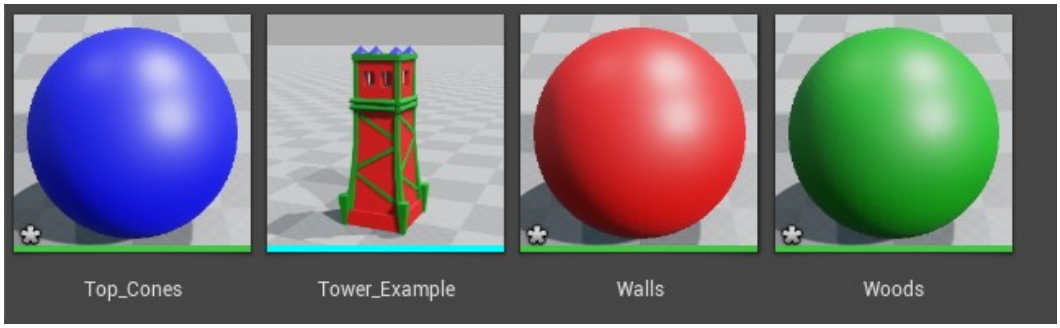
Focus selected object	F

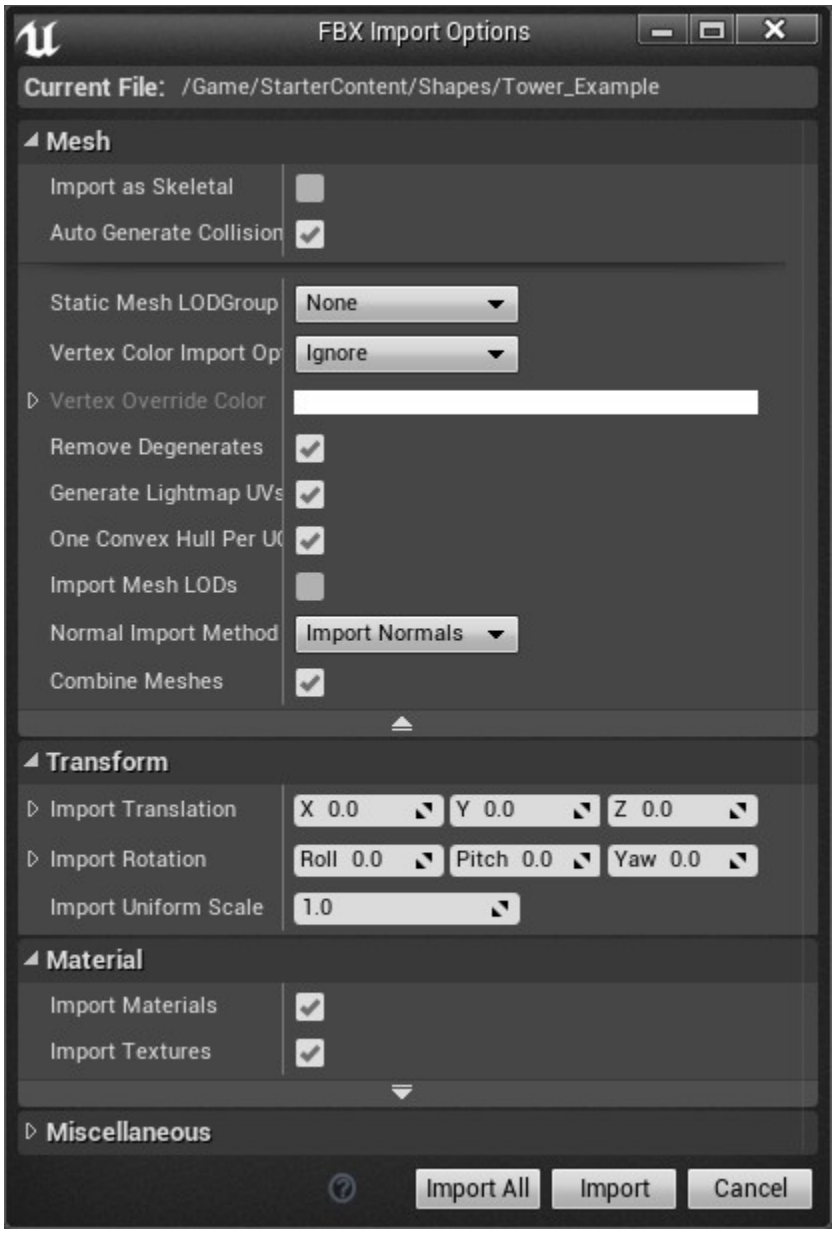
LMB = Left Mouse Button
RMB = Right Mouse Button

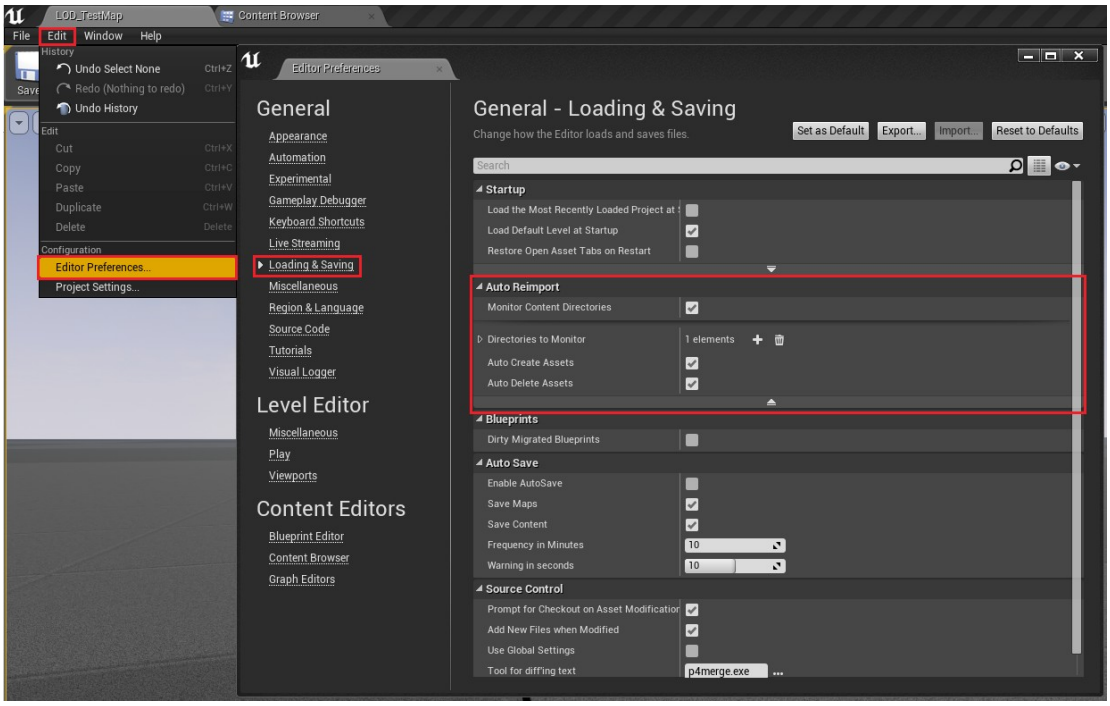

Edit
Window
Help
1
Undo (Can't undo after: New Map) Ctrl+Z
Redo (Nothing to redo) Ctrl+Y
Undo History
Edit
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+W
Delete Delete
Configuration
Editor Preferences...
Project Settings...
2
Player Start
Cube
Sphere
Cylinder
Cone
Box Trigger
Save
Source Control
Content
Marketplace
Settings
Blueprints
Matinee
Build
Play
Launch
Perspective
Lit
Show
Project Settings
Project
Description
Maps & Modes
3
Movies
Packaging
Supported Platforms
Target Hardware
Engine
AI System
Audio
Collision
Console
Cooker
Project - Maps & Modes
Default maps, game modes and other map related settings.
These settings are saved in DefaultEngine.ini, which is currently writable.
Search
Default Maps
4
Game Default Map
/Engine/Maps/Entry
Editor Startup Map
/Engine/Maps/Templates/Template_Default
Local Multiplayer
Use Splitscreen
Two Player Splitscreen Layout
Horizontal
Three Player Splitscreen Layout
Favor Top

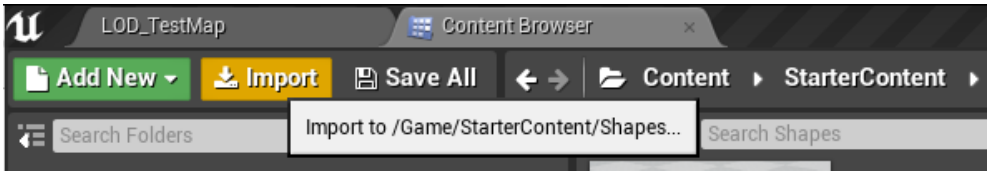

Project Settings
Target Hardware
Engine
AI System
Audio
Collision
Console
Cooker
Crowd Manager
General Settings
Input
Navigation Mesh
Navigation System
Network
Physics
Rendering
Tutorials
User Interface
Platforms
Android
Android SDK
HTML5
iOS
Linux
Windows
1
Plugins
Paper 2D
Slate Remote
UDP Messaging
Platforms - Windows
Settings for Windows target platform
Export...
Import...
These settings are saved in DefaultEngine.ini, which is currently writable.
Search
Splash
Editor Splash
EDITOR
Game Splash
2
Icon
Game Icon

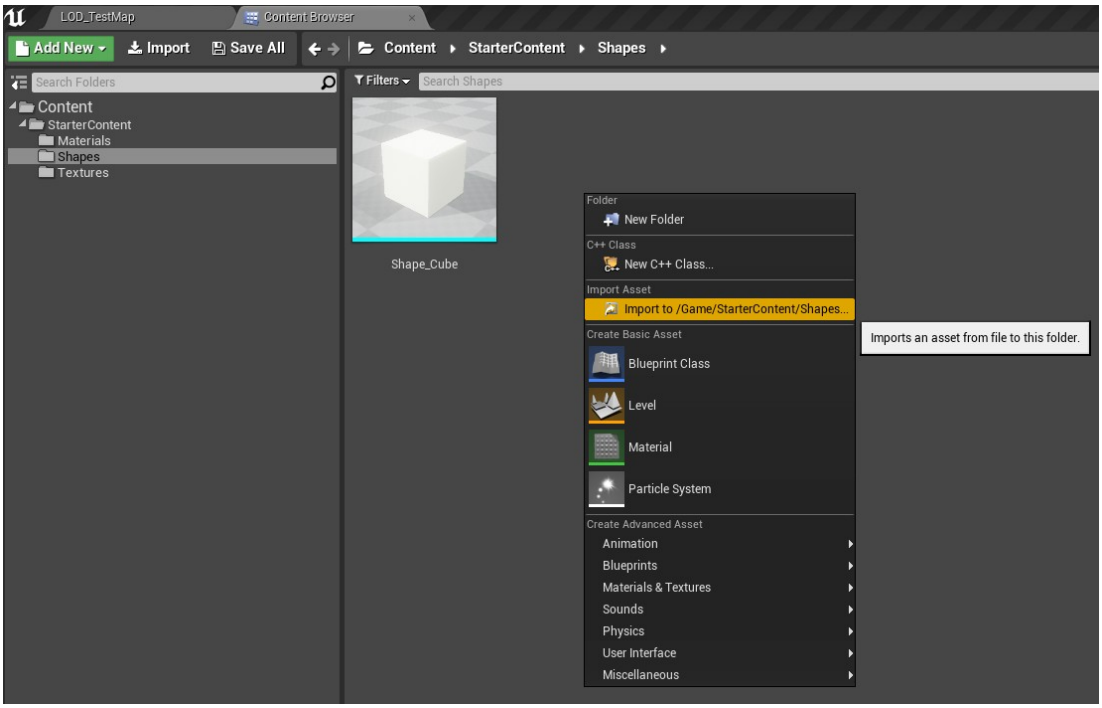
Chapter 2: Importing Assets

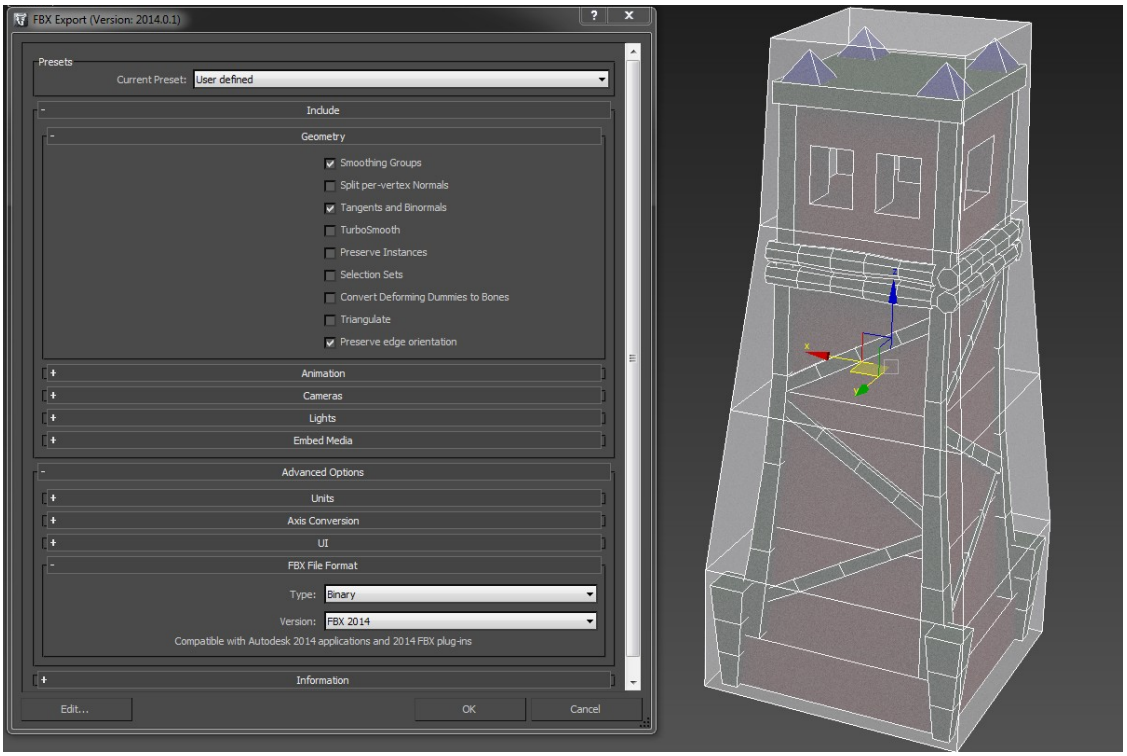


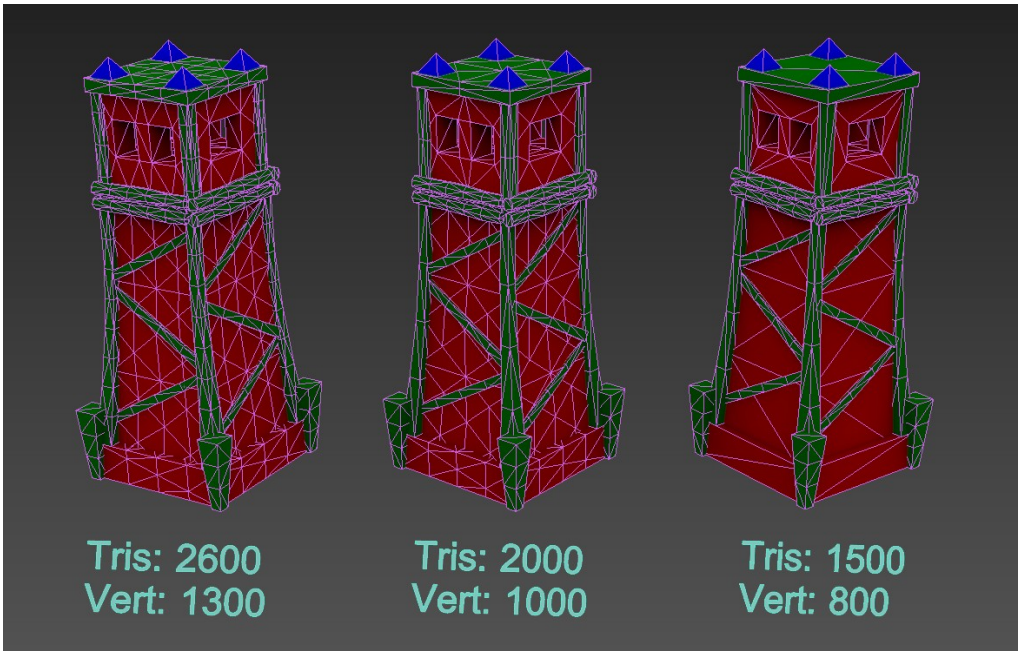

FBX Import Options
Current File: /Game/StarterContent/Shapes/Tower_Example
Mesh
Import as Skeletal
Auto Generate Collision
Static Mesh LODGroup
None
Vertex Color Import Op
Ignore
Vertex Override Color
Remove Degenerates
Generate Lightmap UVs
One Convex Hull Per U
Import Mesh LODs
Normal Import Method
Import Normals
Combine Meshes
Transform
Import Translation
X 0.0
Y 0.0
Z 0.0
Import Rotation
Roll 0.0
Pitch 0.0
Yaw 0.0
Import Uniform Scale
1.0
Material
Import Materials
Import Textures
Miscellaneous
Import All
Import
Cancel

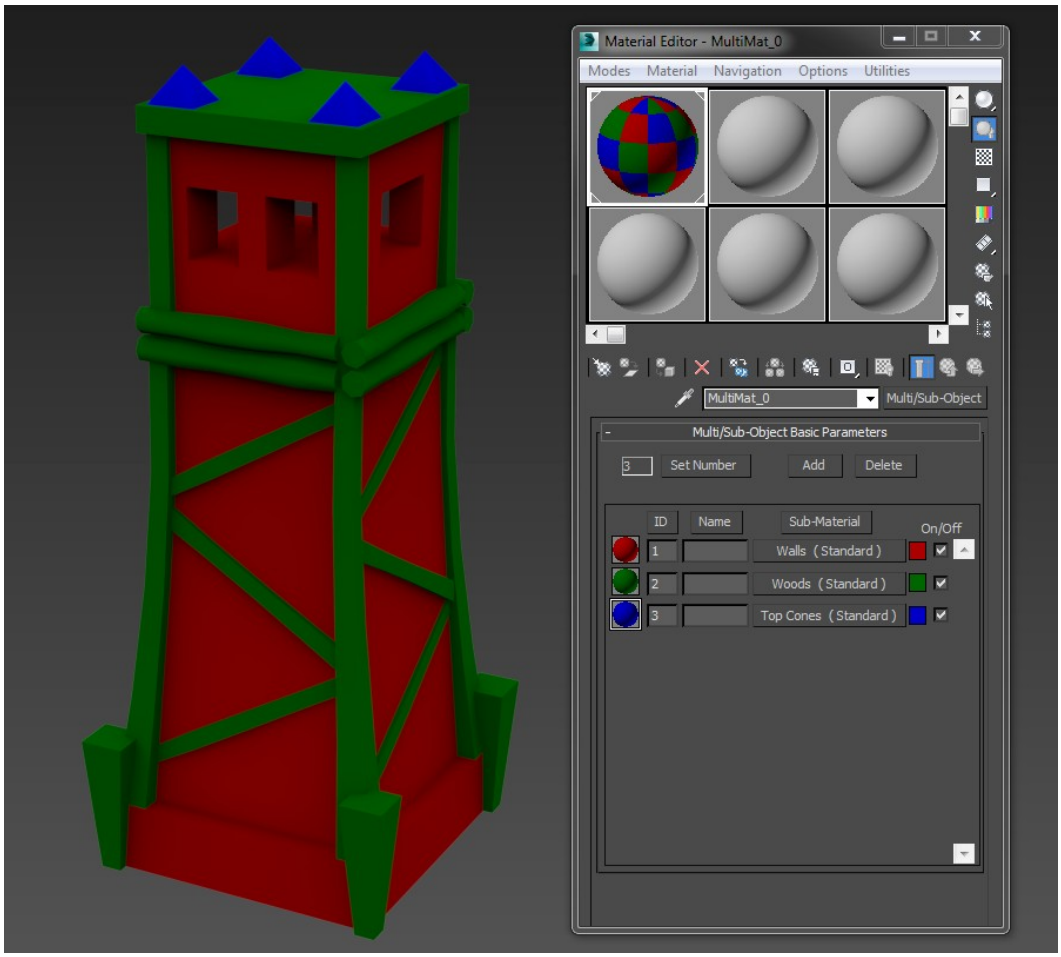

LOD_TestMap
Content Browser
File
Edit
Window
Help
History
Undo Select None Ctrl+Z
Redo (Nothing to redo) Ctrl+Y
Undo History
Edit
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+W
Delete Delete
Configuration
Editor Preferences...
Project Settings...
Editor Preferences
General
Appearance
Automation
Experimental
Gameplay Debugger
Keyboard Shortcuts
Live Streaming
Loading & Saving
Miscellaneous
Region & Language
Source Code
Tutorials
Visual Logger
Level Editor
Miscellaneous
Play
Viewports
Content Editors
Blueprint Editor
Content Browser
Graph Editors
General - Loading & Saving
Change how the Editor loads and saves files.
Set as Default
Export...
Import...
Reset to Defaults
Search
Startup
Load the Most Recently Loaded Project at
Load Default Level at Startup
Restore Open Asset Tabs on Restart
Auto Reimport
Monitor Content Directories
Directories to Monitor
1 elements
Auto Create Assets
Auto Delete Assets
Blueprints
Dirty Migrated Blueprints
Auto Save
Enable AutoSave
Save Maps
Save Content
Frequency in Minutes
10
Warning in seconds
10
Source Control
Prompt for Checkout on Asset Modification
Add New Files when Modified
Use Global Settings
Tool for diff'ing text
p4merge.exe

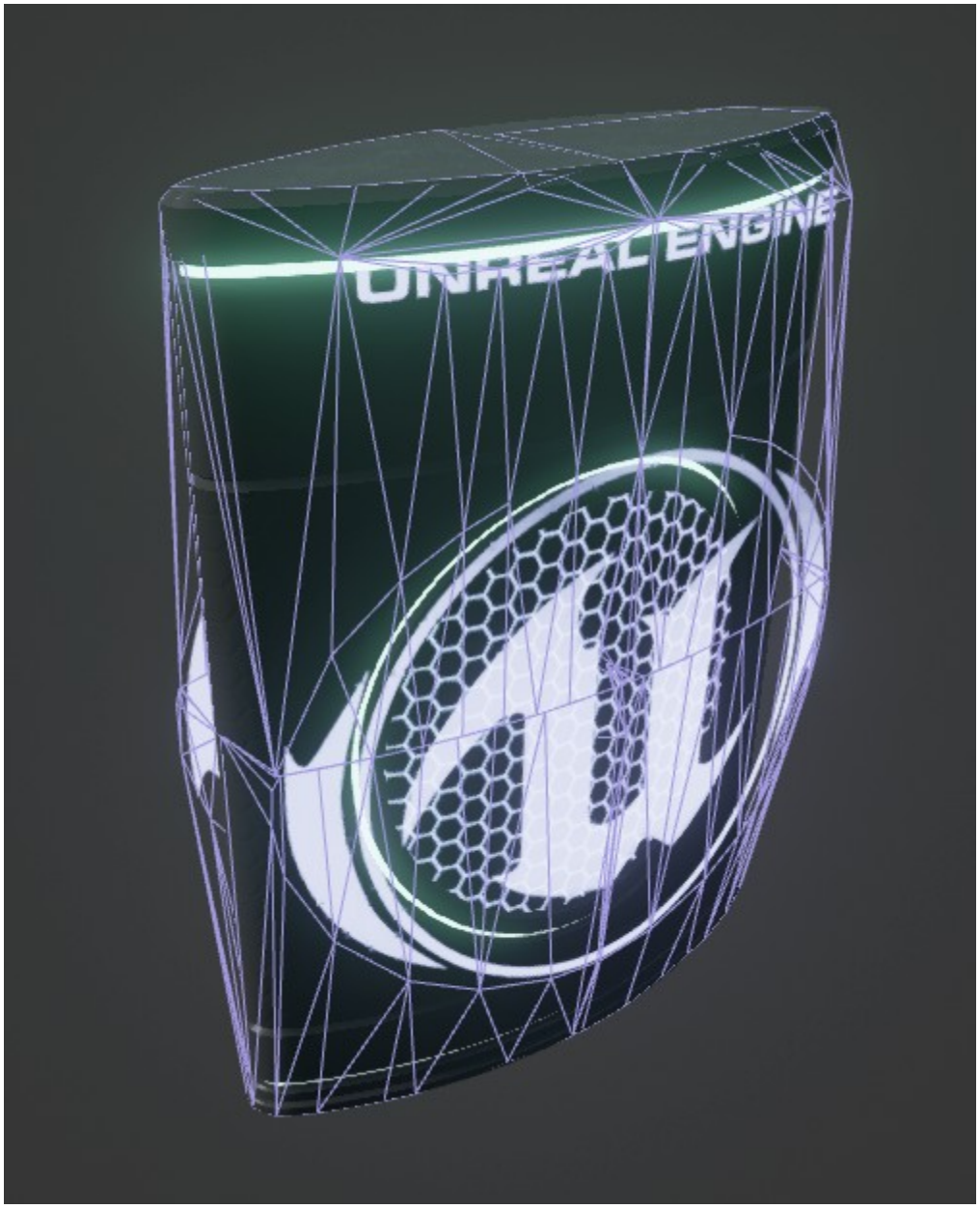

LOD_TestMap
Content Browser
Add New
Import
Save All
Content
StarterContent
Search Folders
Import to /Game/StarterContent/Shapes...
Search Shapes

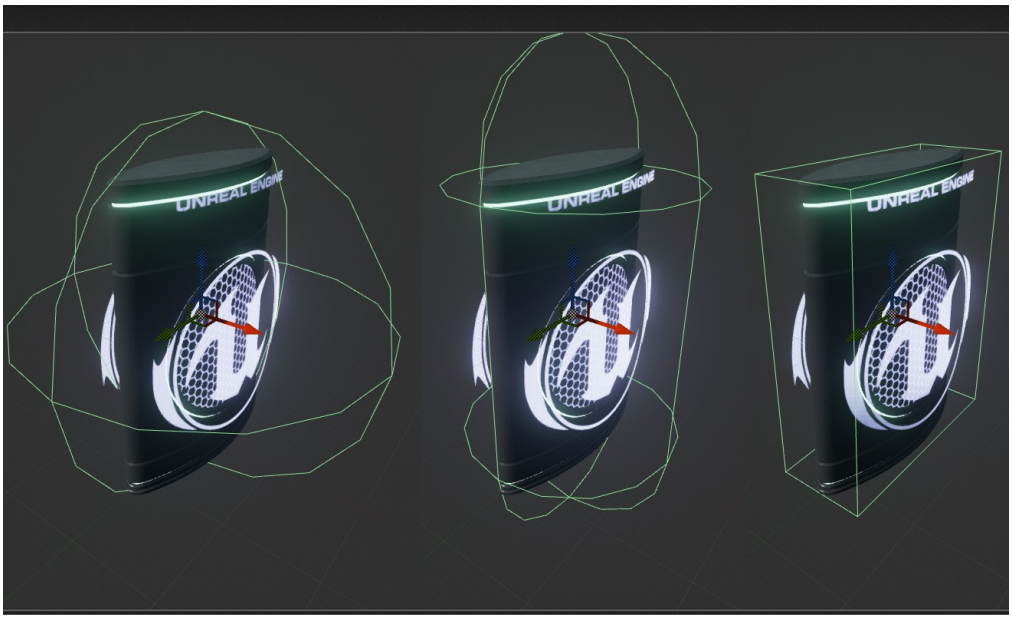

LOD_TestMap
Content Browser
Add New
Import
Save All
Content
StarterContent
Shapes
Search Folders
Content
StarterContent
Materials
Shapes
Textures
Filters
Search Shapes
Shape_Cube
Folder
New Folder
C++ Class
New C++ Class...
Import Asset
Import to /Game/StarterContent/Shapes...
Imports an asset from file to this folder.
Create Basic Asset
Blueprint Class
Level
Material
Particle System
Create Advanced Asset
Animation
Blueprints
Materials & Textures
Sounds
Physics
User Interface
Miscellaneous

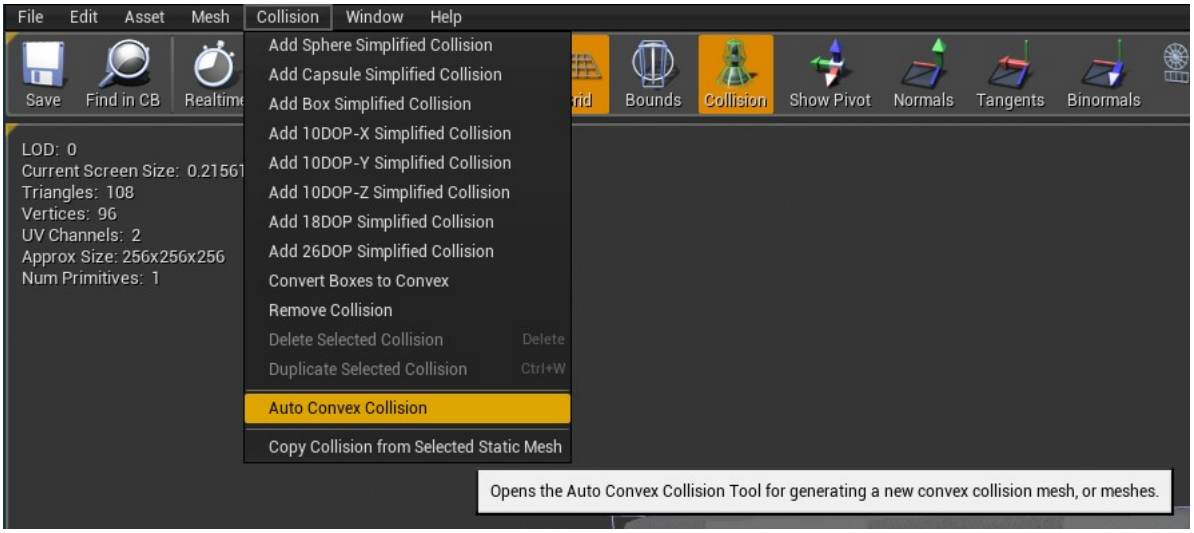

FBX Export (Version: 2014.0.1)
Presets
Current Preset: User defined
Include
Geometry
Smoothing Groups
Split per-vertex Normals
Tangents and Binormals
TurboSmooth
Preserve Instances
Selection Sets
Convert Deforming Dummies to Bones
Triangulate
Preserve edge orientation
Animation
Cameras
Lights
Embed Media
Advanced Options
Units
Axis Conversion
UI
FBX File Format
Type: Binary
Version: FBX 2014
Compatible with Autodesk 2014 applications and 2014 FBX plug-ins
Information
Edit...
OK
Cancel

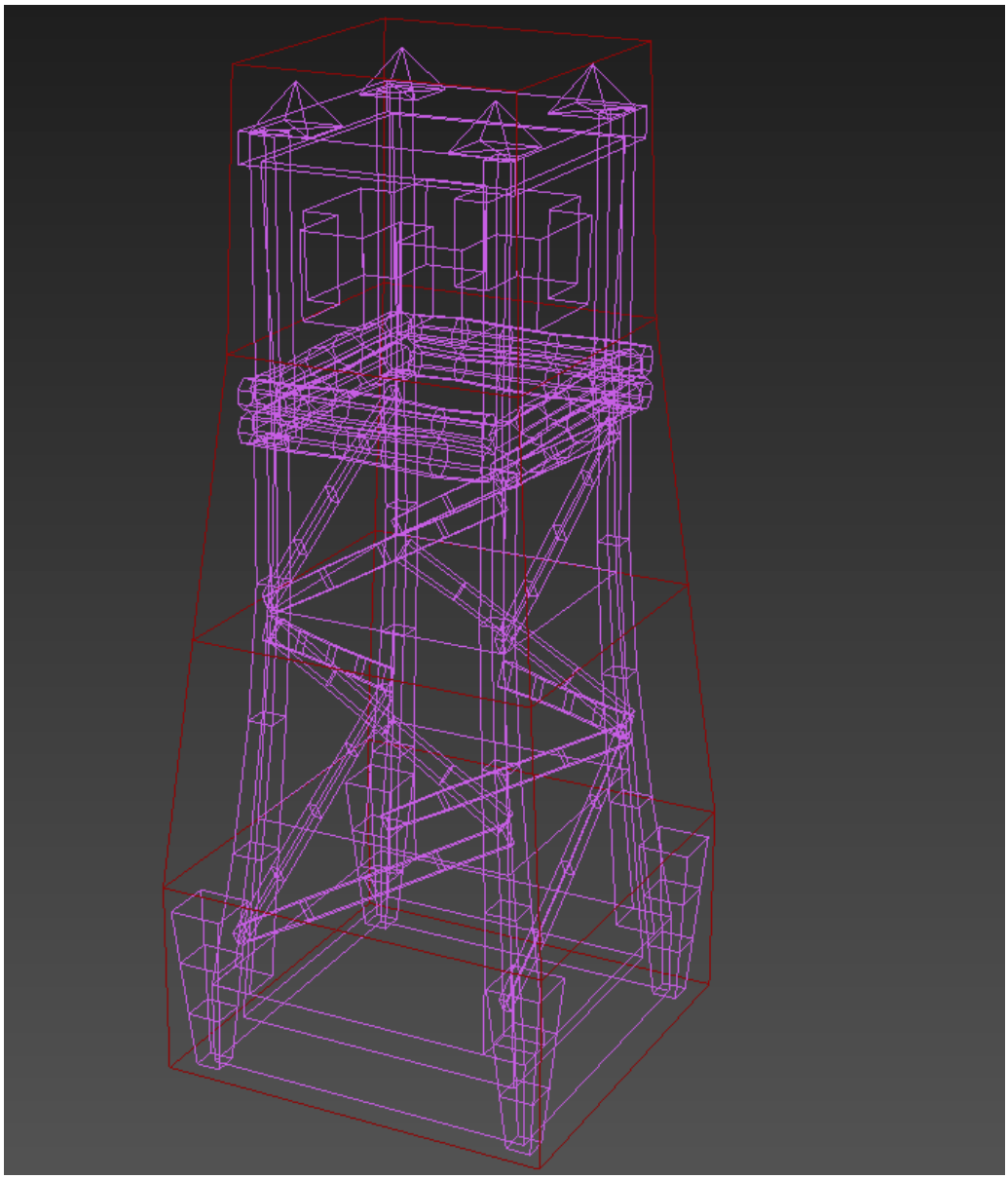

Tris: 2600
Vert: 1300
Tris: 2000
Vert: 1000
Tris: 1500
Vert: 800

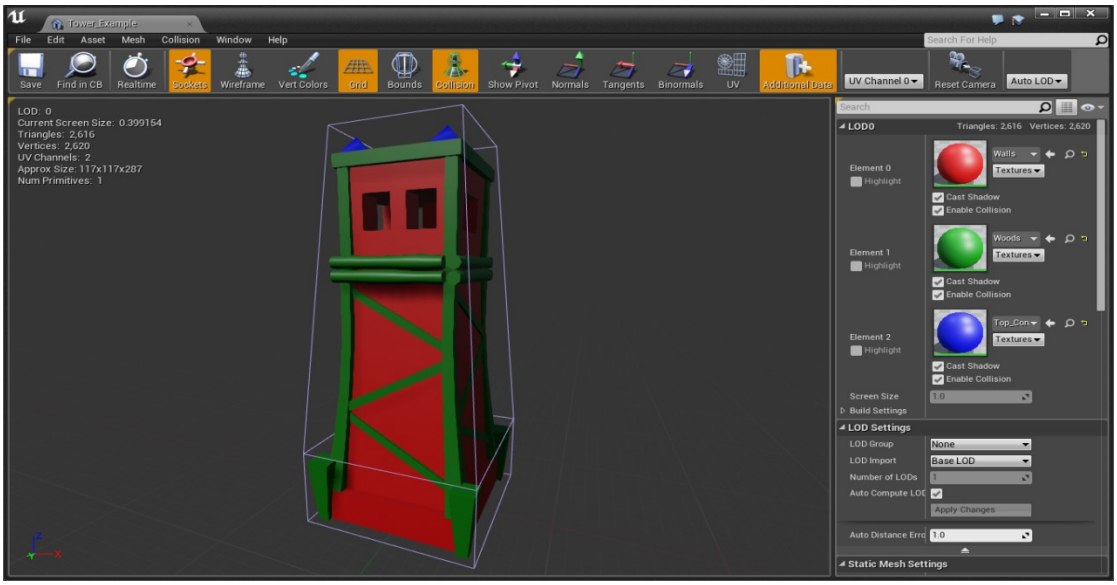

Material Editor - MultiMat_0
Modes
Material
Navigation
Options
Utilities
MultiMat_0
Multi/Sub-Object
Multi/Sub-Object Basic Parameters
3
Set Number
Add
Delete
ID
Name
Sub-Material
On/Off
1
Walls (Standard)
2
Woods (Standard)
3
Top Cones (Standard)


UNREAL ENGINE

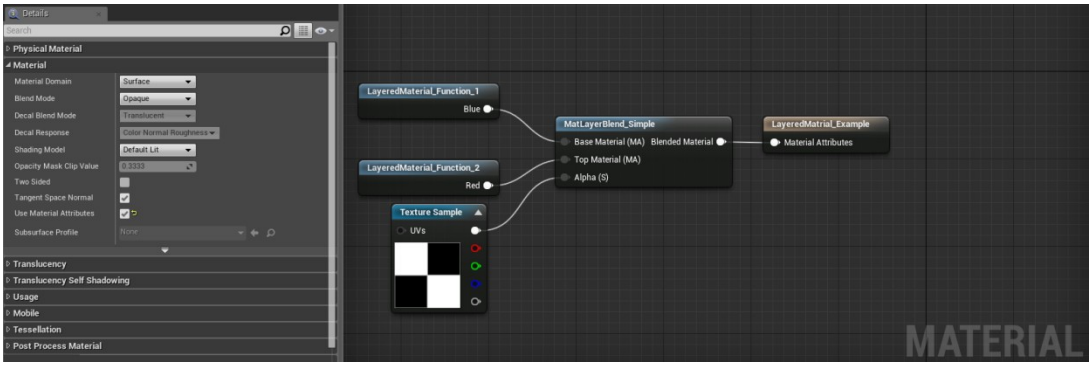

UNREAL ENGINE
UNREAL ENGINE
UNREAL ENGINE

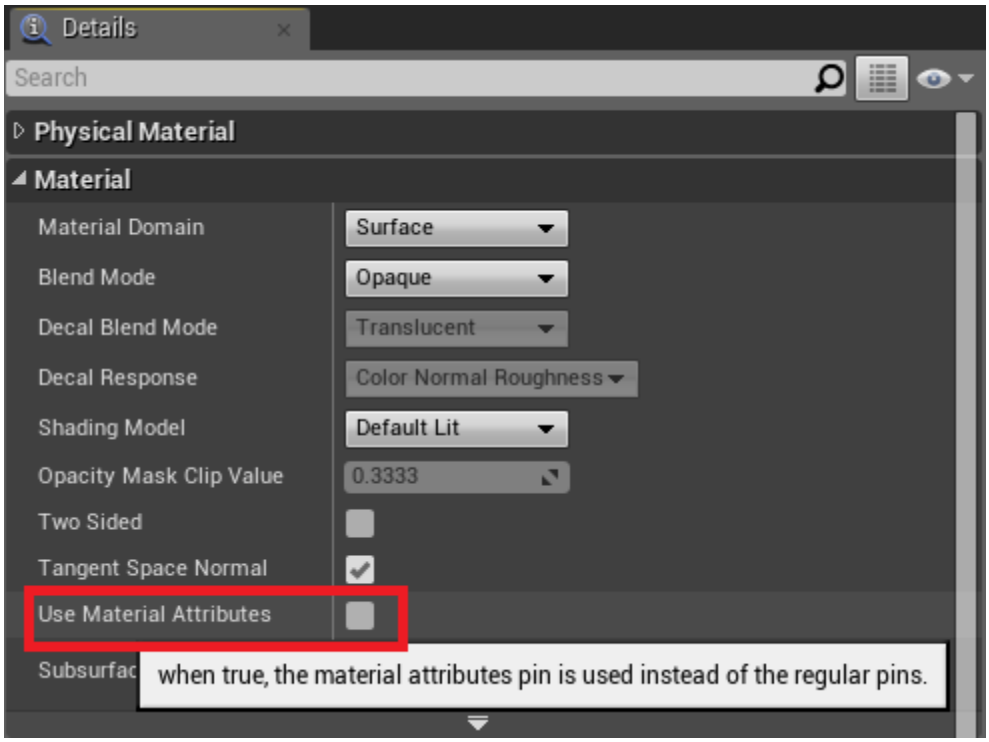

File
Edit
Asset
Mesh
Collision
Window
Help
Save
Find in CB
Realtime
Bounds
Collision
Show Pivot
Normals
Tangents
Binormals
LOD: 0
Current Screen Size: 0.2156
Triangles: 108
Vertices: 96
UV Channels: 2
Approx Size: 256x256x256
Num Primitives: 1
Add Sphere Simplified Collision
Add Capsule Simplified Collision
Add Box Simplified Collision
Add 10DOP-X Simplified Collision
Add 10DOP-Y Simplified Collision
Add 10DOP-Z Simplified Collision
Add 18DOP Simplified Collision
Add 26DOP Simplified Collision
Convert Boxes to Convex
Remove Collision
Delete Selected Collision
Delete
Duplicate Selected Collision
Ctrl+W
Auto Convex Collision
Copy Collision from Selected Static Mesh
Opens the Auto Convex Collision Tool for generating a new convex collision mesh, or meshes.

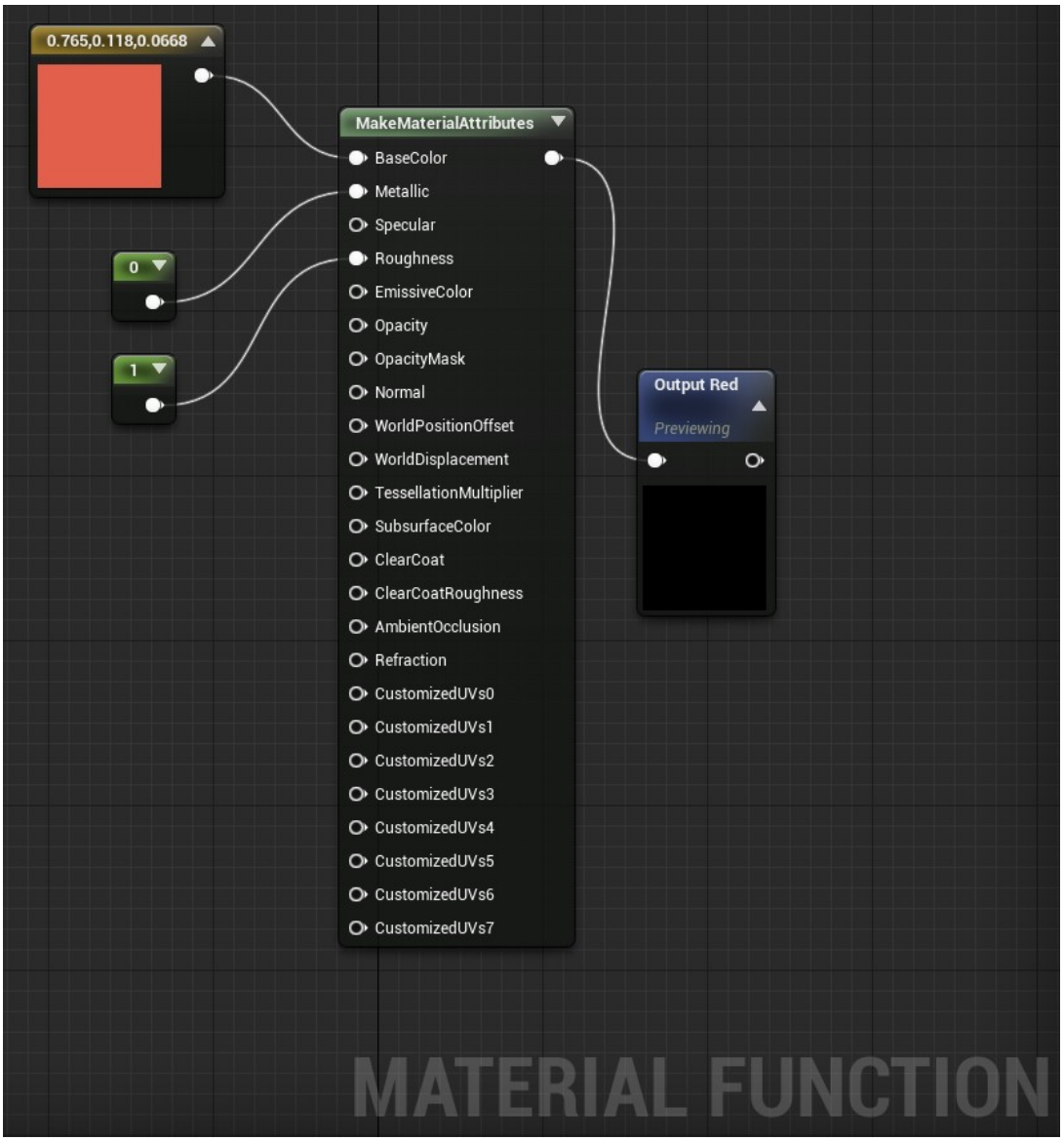


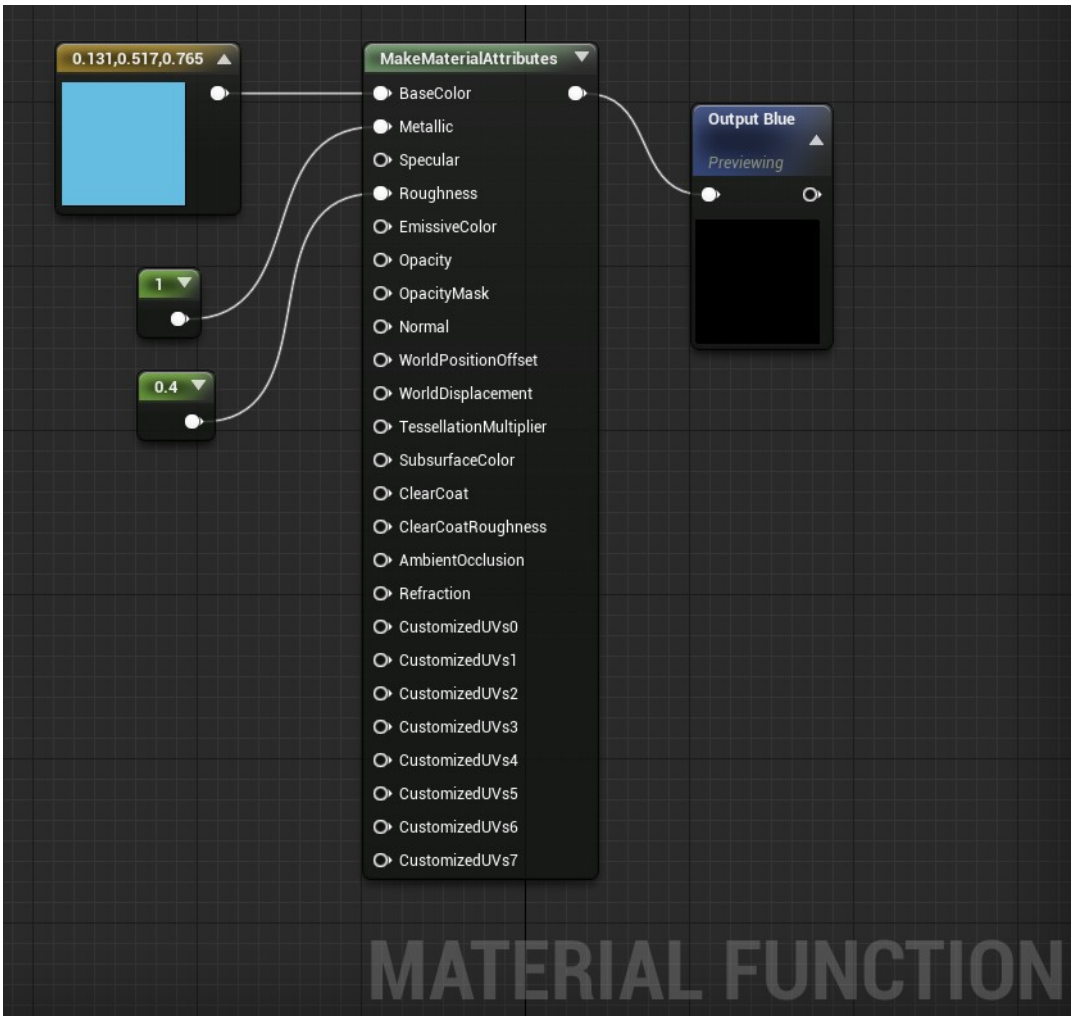


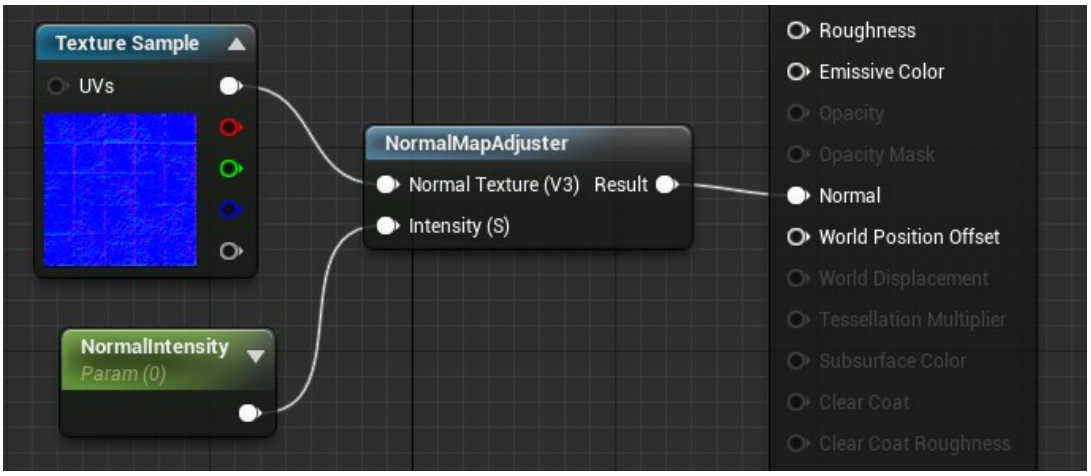
Chapter 3: Materials

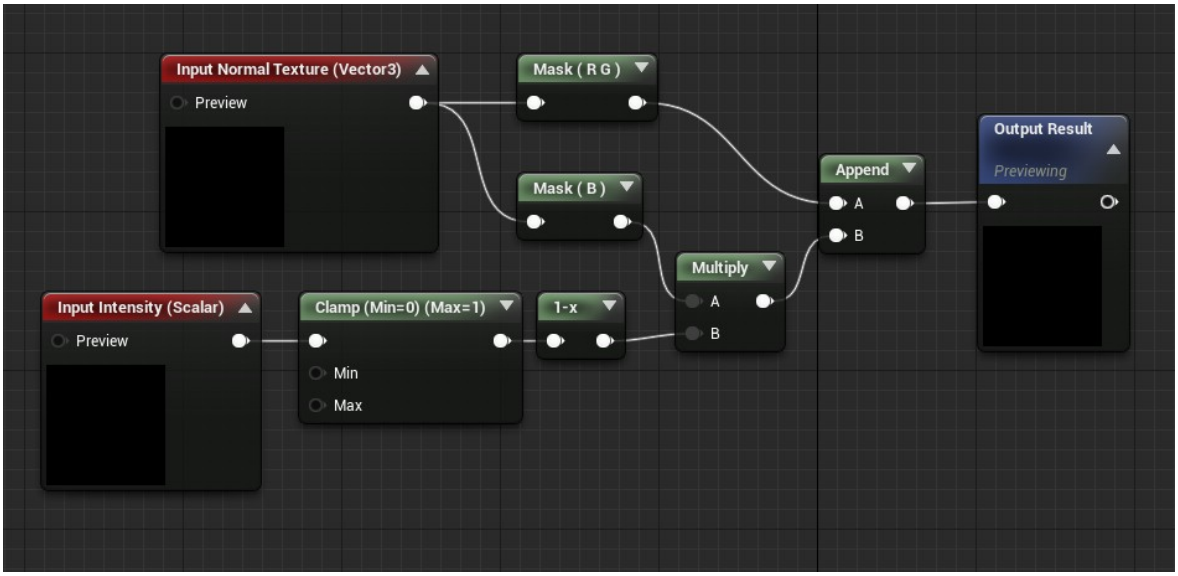


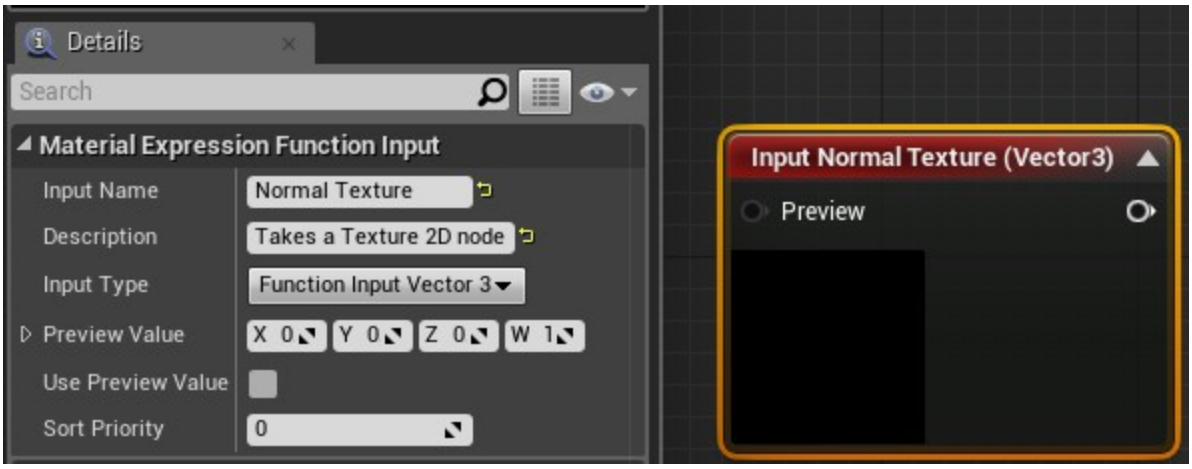

Details
Search
Physical Material
Material
Material Domain
Surface
Blend Mode
Opaque
Decal Blend Mode
Translucent
Decal Response
Color Normal Roughness
Shading Model
Default Lit
Opacity Mask Clip Value
0.3333
Two Sided
Tangent Space Normal
Use Material Attributes
Subsurfac
when true, the material attributes pin is used instead of the regular pins.


0.765,0.118,0.0668
MakeMaterialAttributes
BaseColor
Metallic
Specular
Roughness
EmissiveColor
Opacity
OpacityMask
Normal
WorldPositionOffset
WorldDdisplacement
TessellationMultiplier
SubsurfaceColor
ClearCoat
ClearCoatRoughness
AmbientOcclusion
Refraction
CustomizedUVs0
CustomizedUVs1
CustomizedUVs2
CustomizedUVs3
CustomizedUVs4
CustomizedUVs5
CustomizedUVs6
CustomizedUVs7
0
1
Output Red
Previewing
MATERIAL FUNCTION

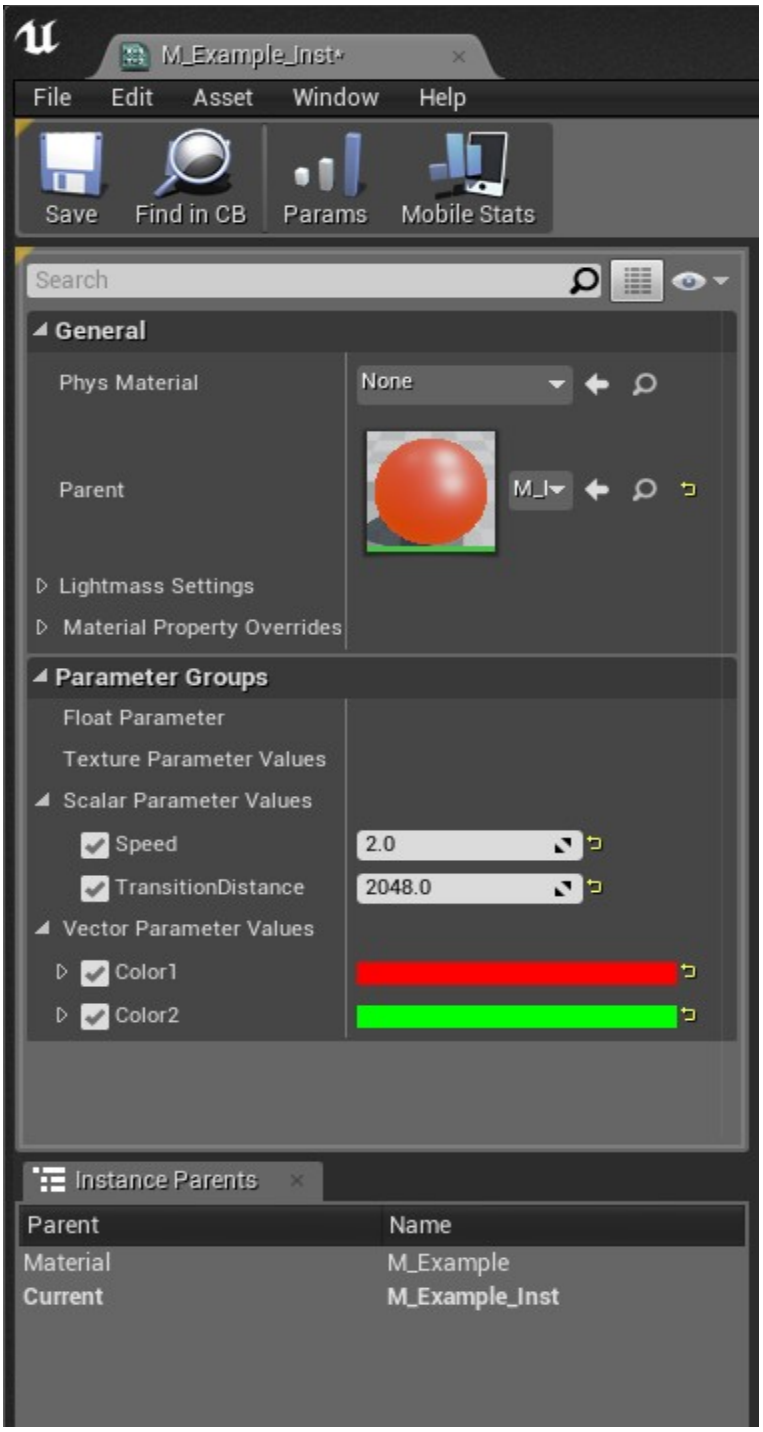

0.131,0.517,0.765
MakeMaterialAttributes
BaseColor
Metallic
Specular
Roughness
EmissiveColor
Opacity
OpacityMask
Normal
WorldPositionOffset
WorldDisplacement
TessellationMultiplier
SubsurfaceColor
ClearCoat
ClearCoatRoughness
AmbientOcclusion
Refraction
CustomizedUVs0
CustomizedUVs1
CustomizedUVs2
CustomizedUVs3
CustomizedUVs4
CustomizedUVs5
CustomizedUVs6
CustomizedUVs7
Output Blue
Previewing
1
0.4
MATERIAL FUNCTION

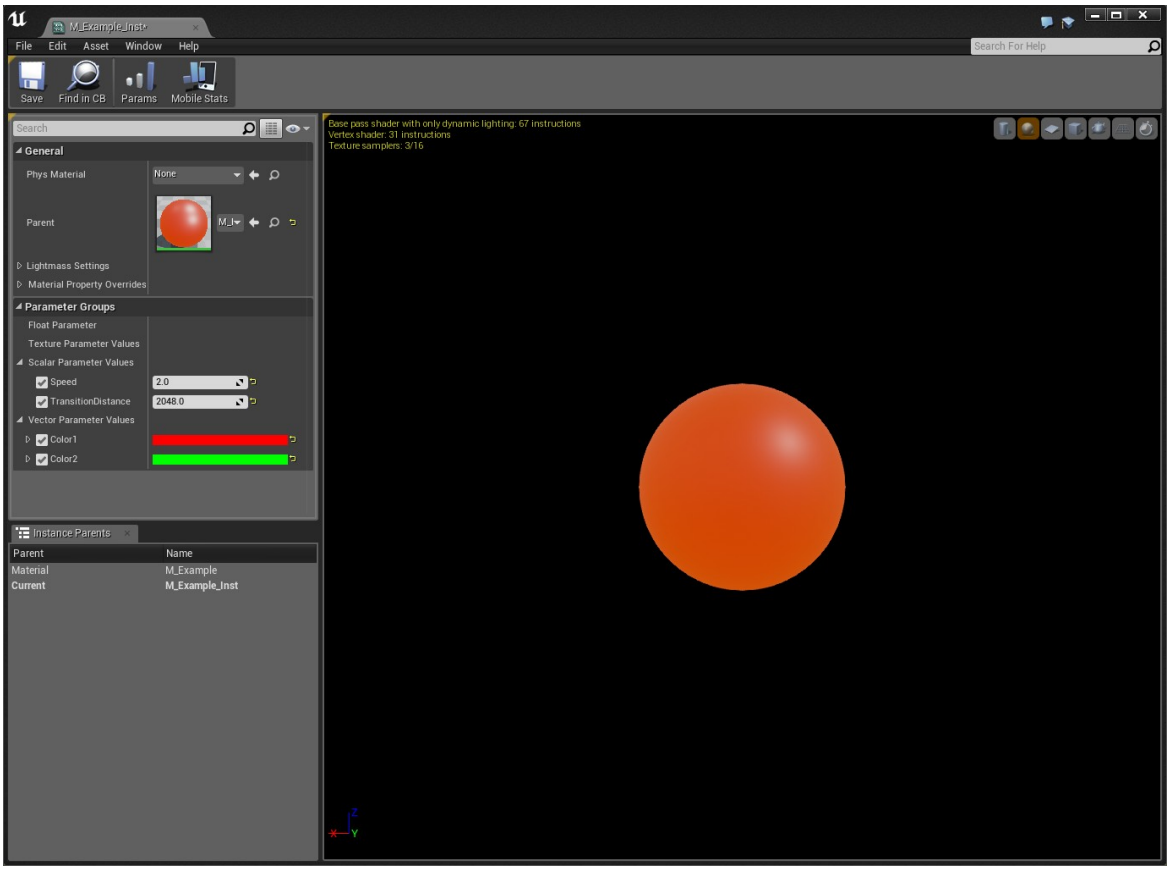

Texture Sample
UVs
NormalMapAdjuster
Normal Texture (V3)
Result
Intensity (S)
NormalIntensity
Param (0)
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness

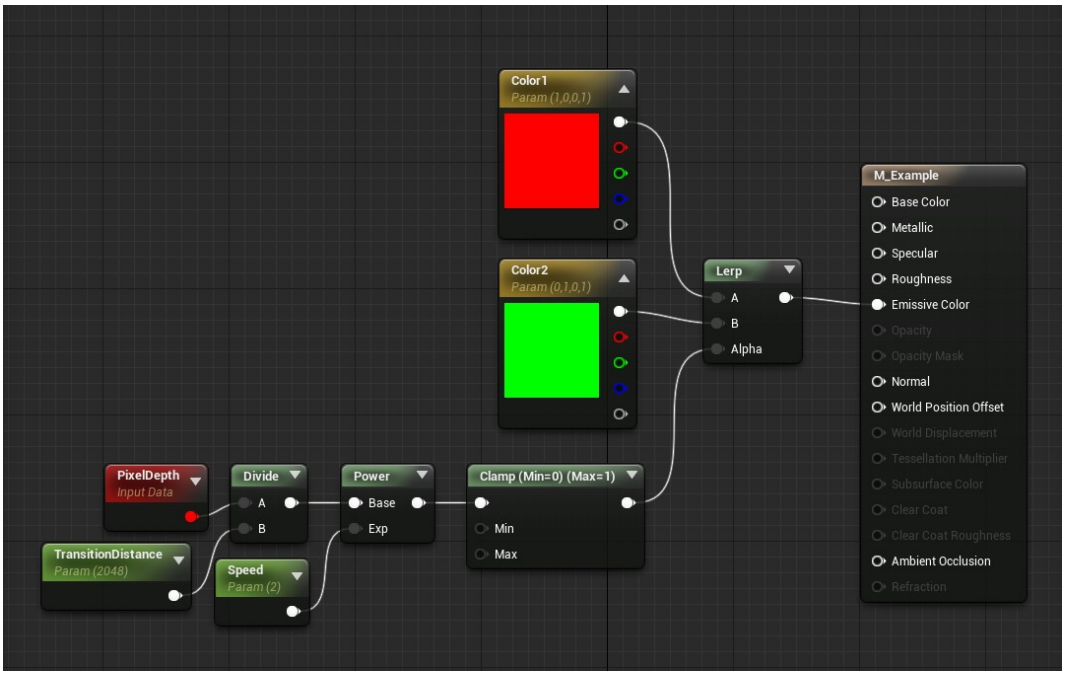

Input Normal Texture (Vector3)
Preview
Mask (R G)
Mask (B)
Append
A
B
Output Result
Previewing
Multiply
A
B
Input Intensity (Scalar)
Preview
Clamp (Min=0) (Max=1)
Min
Max
1-x

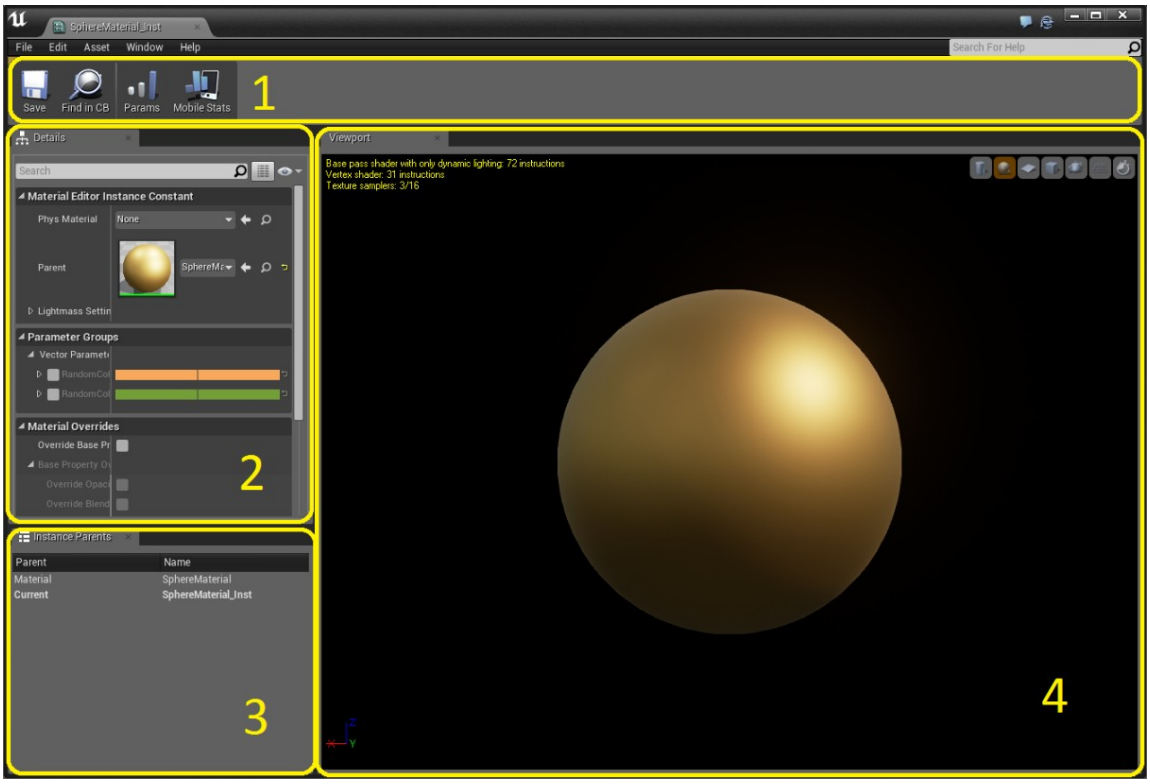

Details
Search
Material Expression Function Input
Input Name
Normal Texture
Description
Takes a Texture 2D node
Input Type
Function Input Vector 3
Preview Value
X 0
Y 0
Z 0
W 1
Use Preview Value
Sort Priority
0
Input Normal Texture (Vector3)
Preview

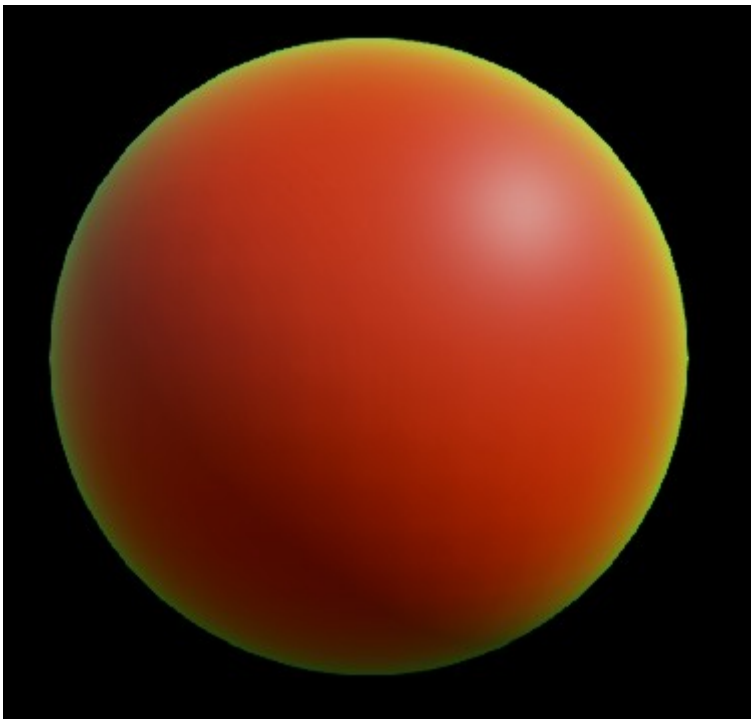
Input
Functions
FunctionInput

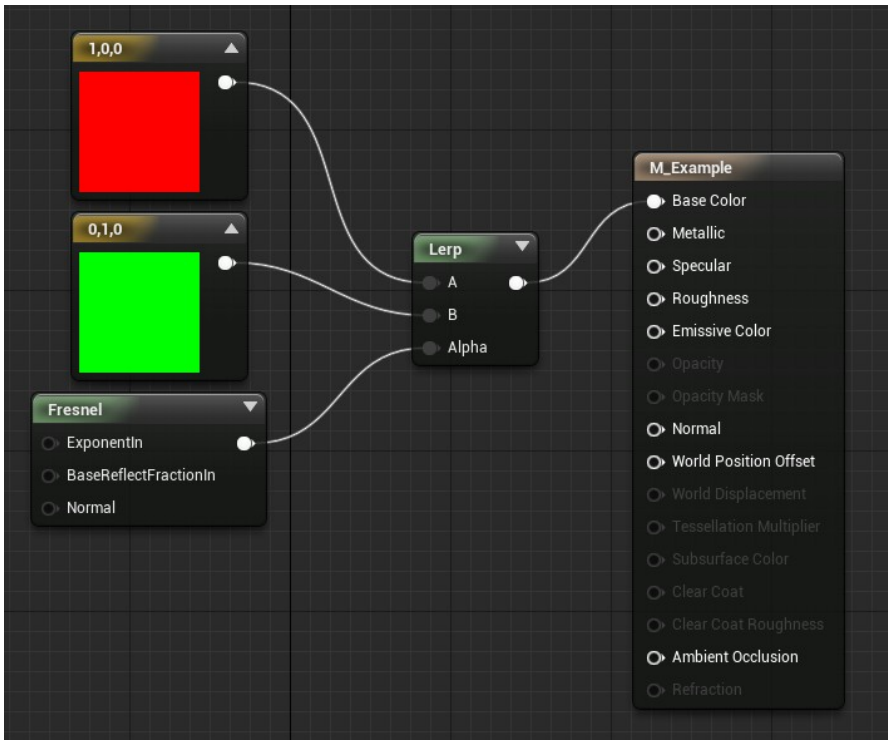

M_Example_Inst*
File
Edit
Asset
Window
Help
Save
Find in CB
Params
Mobile Stats
Search
General
Phys Material
None
Parent
M_I
Lightmass Settings
Material Property Overrides
Parameter Groups
Float Parameter
Texture Parameter Values
Scalar Parameter Values
Speed
2.0
TransitionDistance
2048.0
Vector Parameter Values
Color1
Color2
Instance Parents
Parent
Name
Material
M_Example
Current
M_Example_Inst

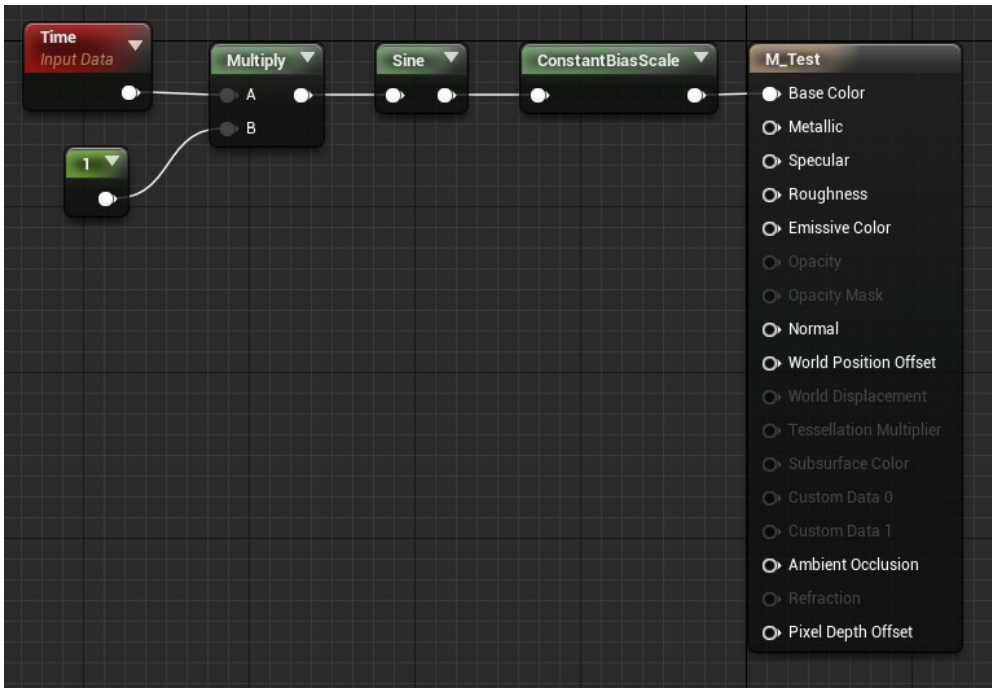

M_Example_Inst*
File
Edit
Asset
Window
Help
Search For Help
Save
Find in CB
Params
Mobile Stats
Search
General
Phys Material
None
Parent
Lightmass Settings
Material Property Overrides
Parameter Groups
Float Parameter
Texture Parameter Values
Scalar Parameter Values
Speed
2.0
TransitionDistance
2048.0
Vector Parameter Values
Color1
Color2
Instance Parents
Parent
Name
Material
M_Example
Current
M_Example_Inst
Base pass shader with only dynamic lighting: 67 instructions
Vertex shader: 31 instructions
Texture samplers: 3/16
Z
Y

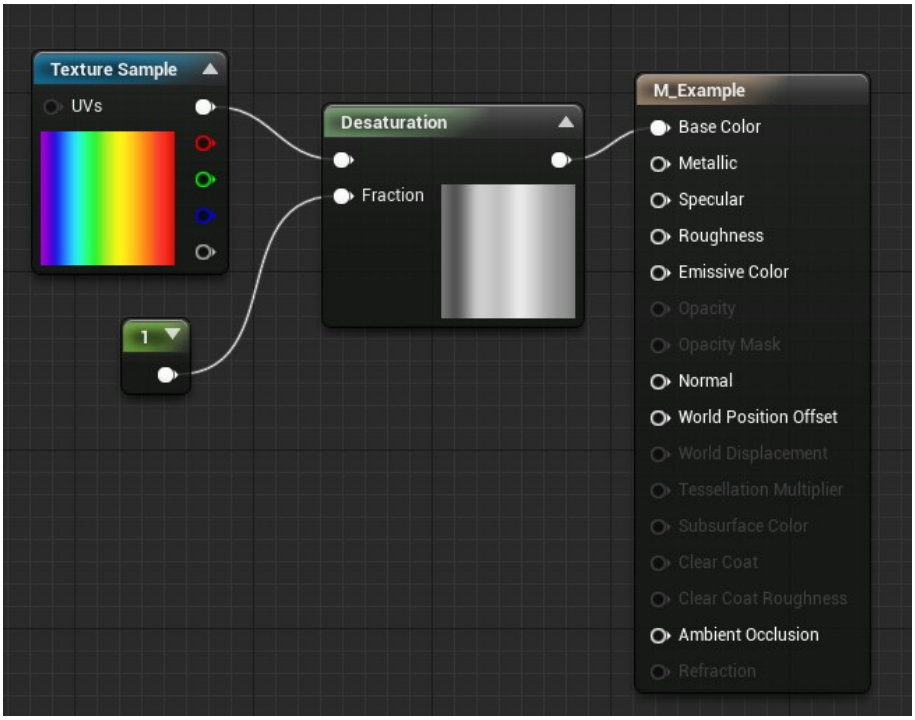

Color1
Param (1,0,0,1)
Color2
Param (0,1,0,1)
Lerp
A
B
Alpha
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
PixelDepth
Input Data
Divide
A
B
Power
Base
Exp
Clamp (Min=0) (Max=1)
Min
Max
TransitionDistance
Param (2048)
Speed
Param (2)

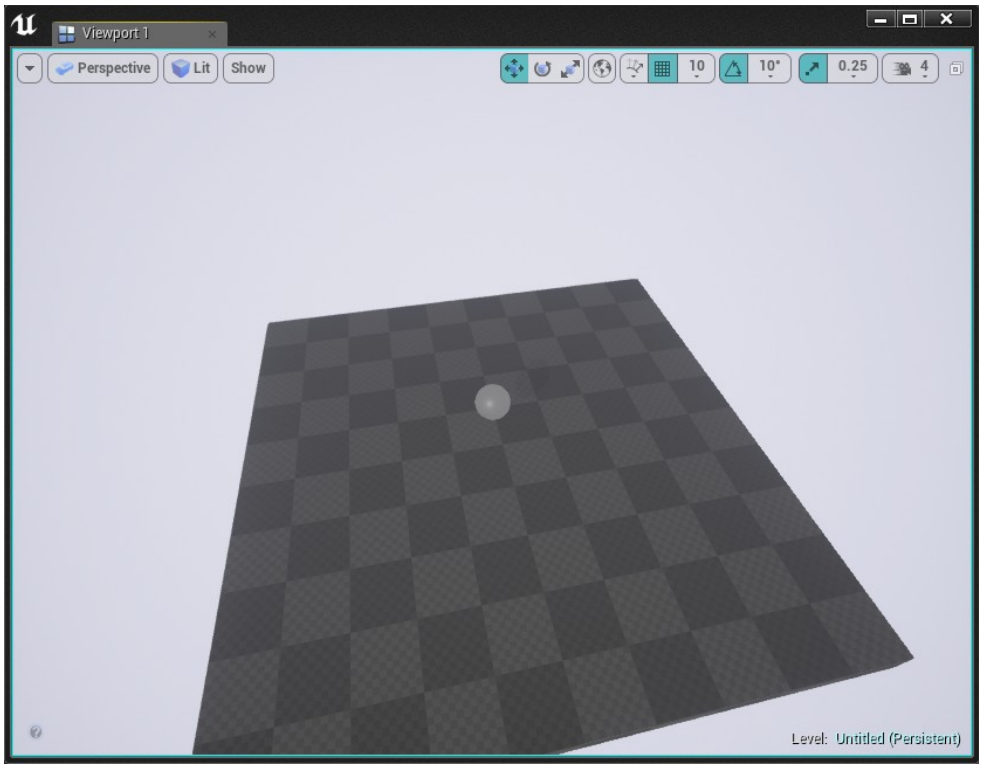

SphereMaterial_Inst
File
Edit
Asset
Window
Help
Search For Help
Save
Find in CB
Params
Mobile Stats
1
Details
Search
Material Editor Instance Constant
Phys Material
None
Parent
Lightmass Settin
Parameter Groups
Material Overrides
2
Instance Parents
Parent
Name
Material
SphereMaterial
Current
SphereMaterial_Inst
3
Viewport
Base pass shader with only dynamic lighting: 72 instructions
Vertex shader: 31 instructions
Texture samplers: 3/16
4

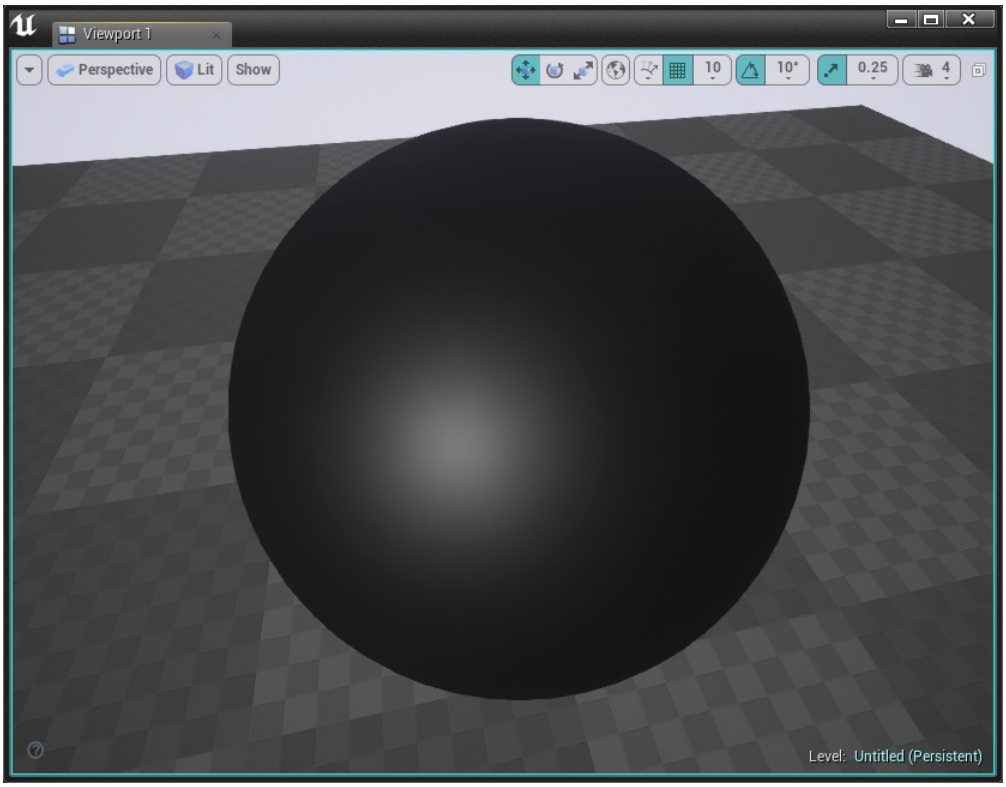


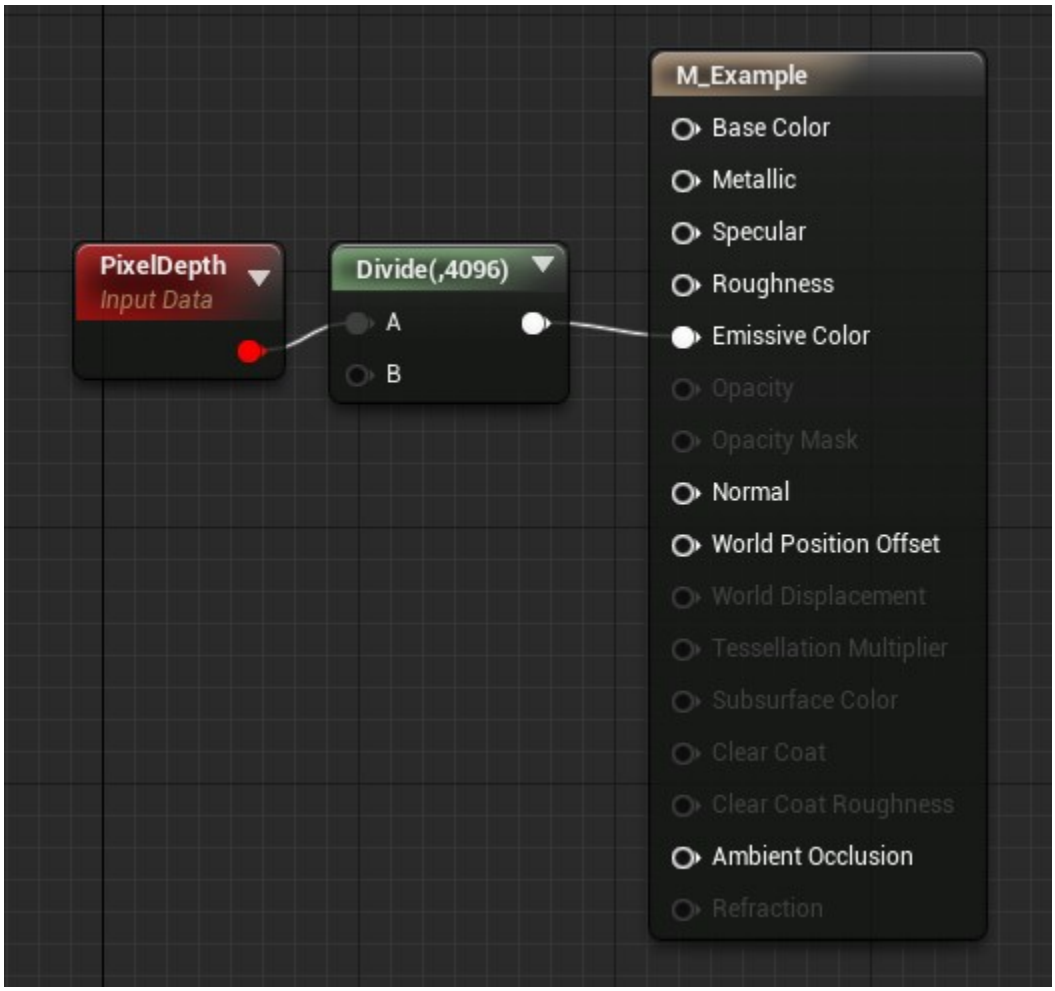

1,0,0
0,1,0
Fresnel
ExponentIn
BaseReflectFractionIn
Normal
Lerp
A
B
Alpha
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

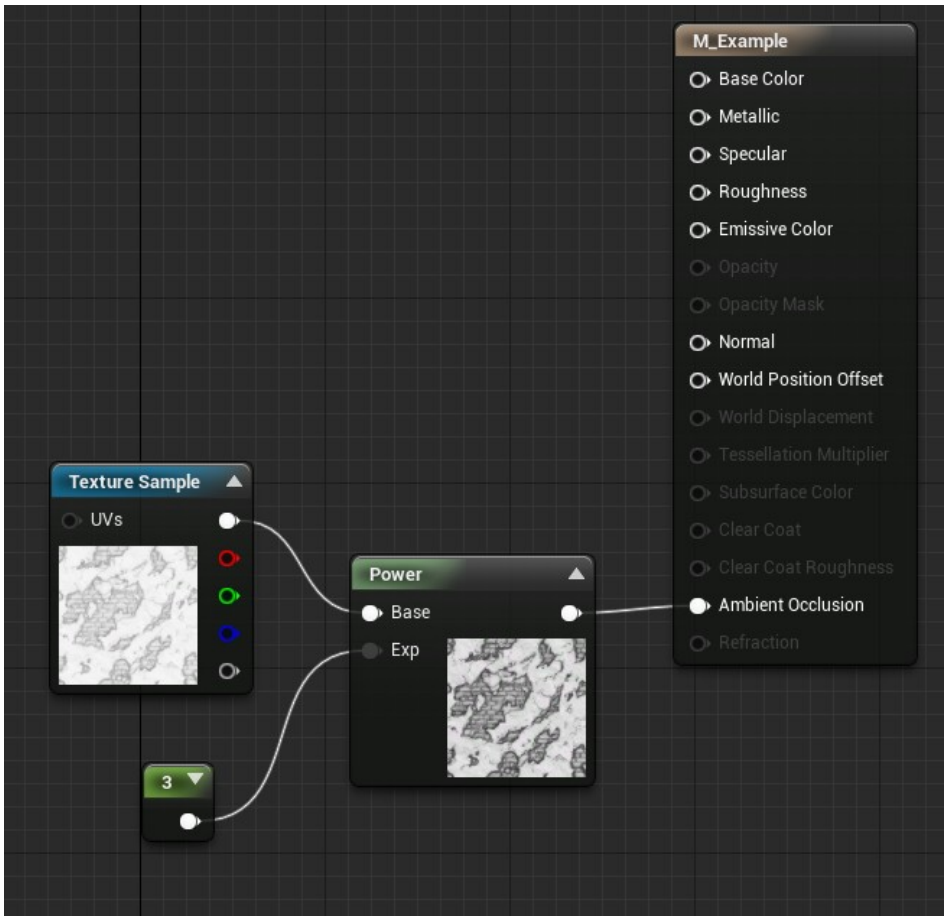

Time
Input Data
Multiply
A
B
Sine
ConstantBiasScale
1
M_Test
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Custom Data 0
Custom Data 1
Ambient Occlusion
Refraction
Pixel Depth Offset

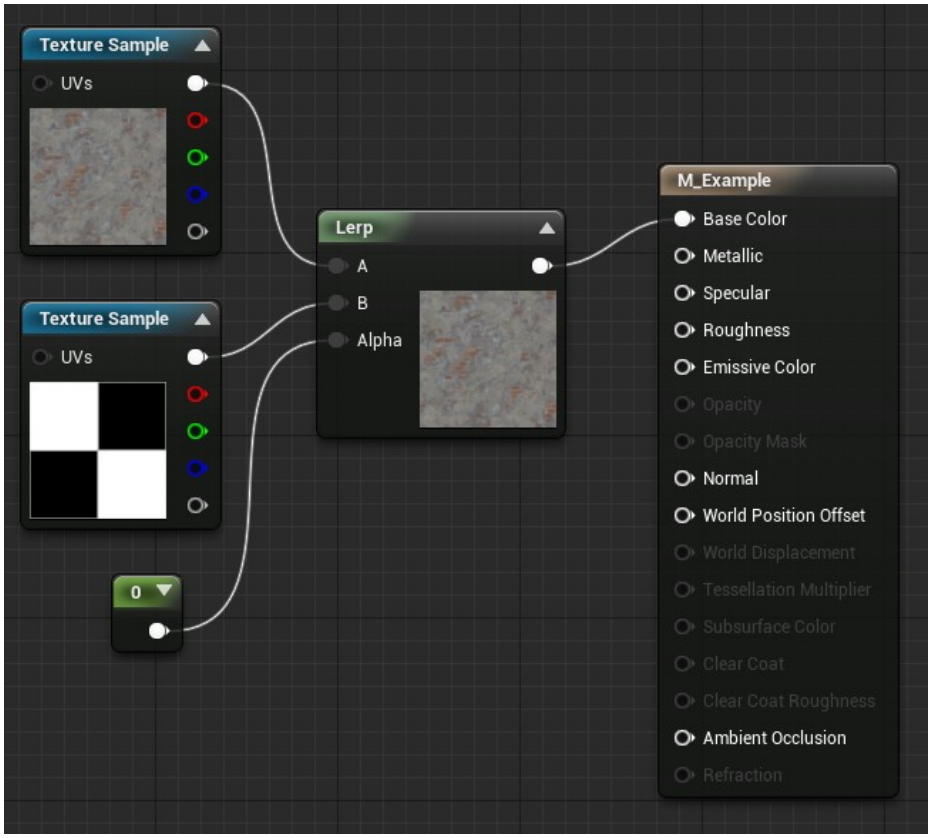

Texture Sample
UVs
Desaturation
Fraction
1
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

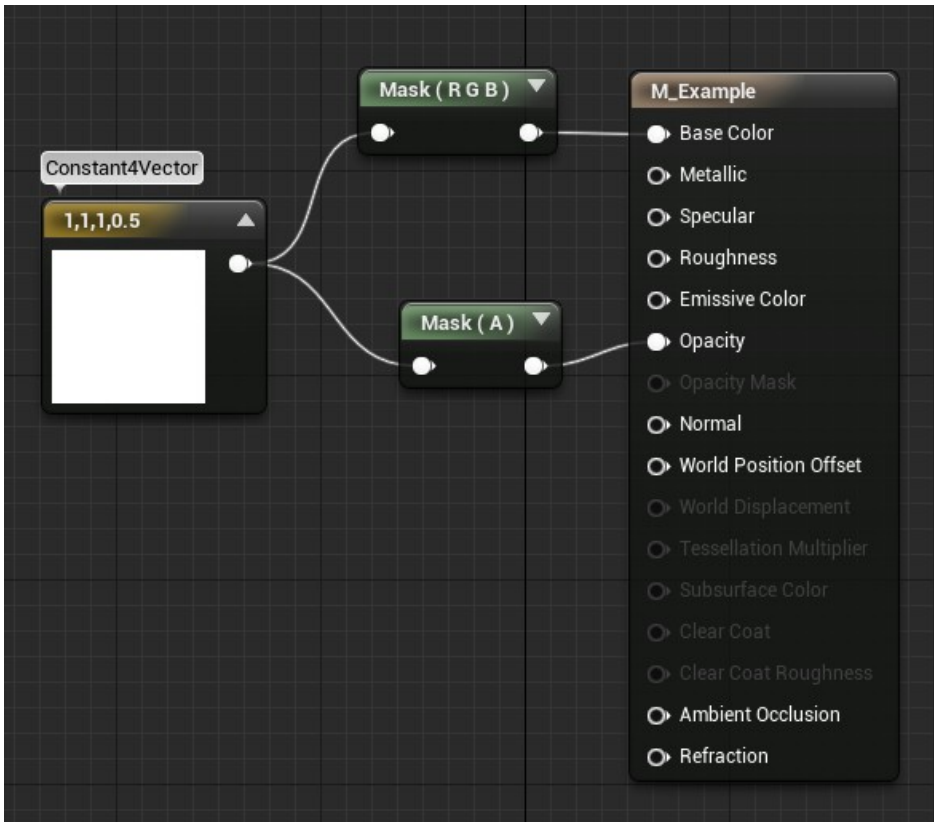

Viewport 1
Perspective
Lit
Show
10
10°
0.25
4
Level: Untitled (Persistent)

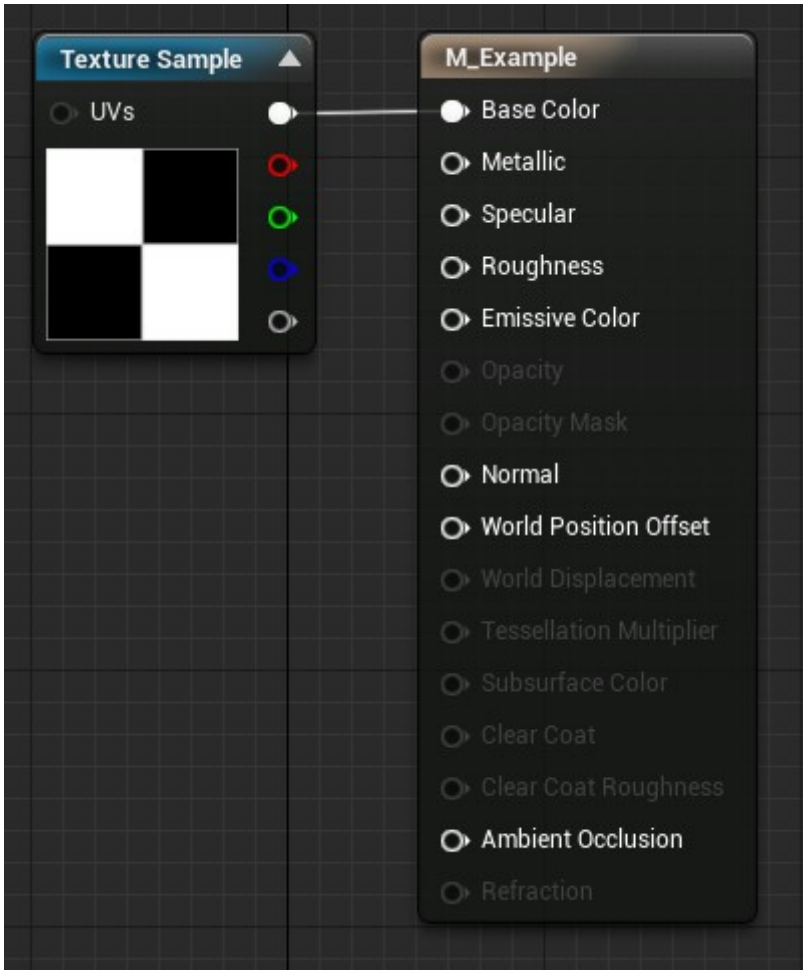

Viewport 1
Perspective
Lit
Show
10
10°
0.25
4
Level: Untitled (Persistent)

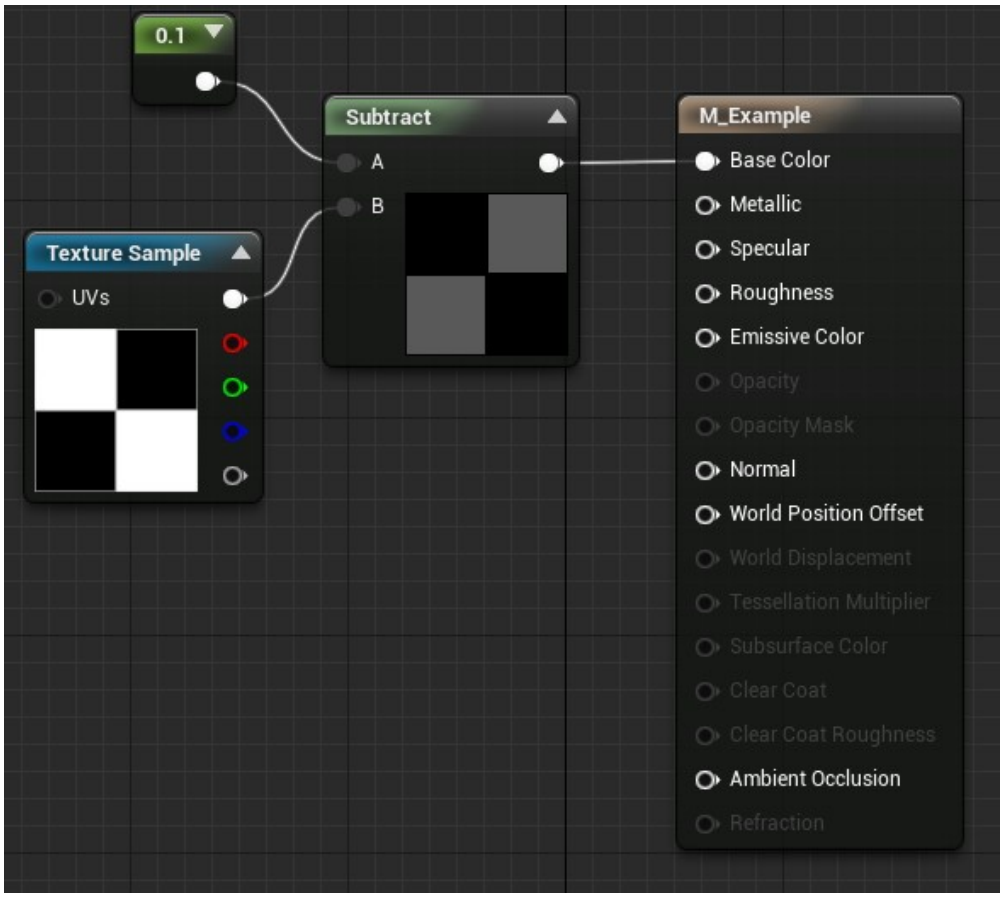

PixelDepth
Input Data
Divide(,4096)
A
B
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

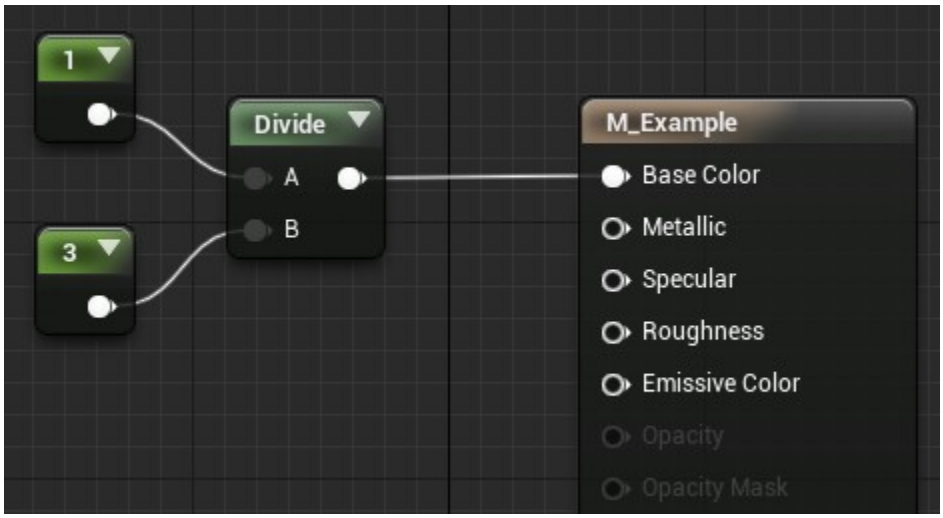

M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
Texture Sample
UVs
Power
Base
Exp
3

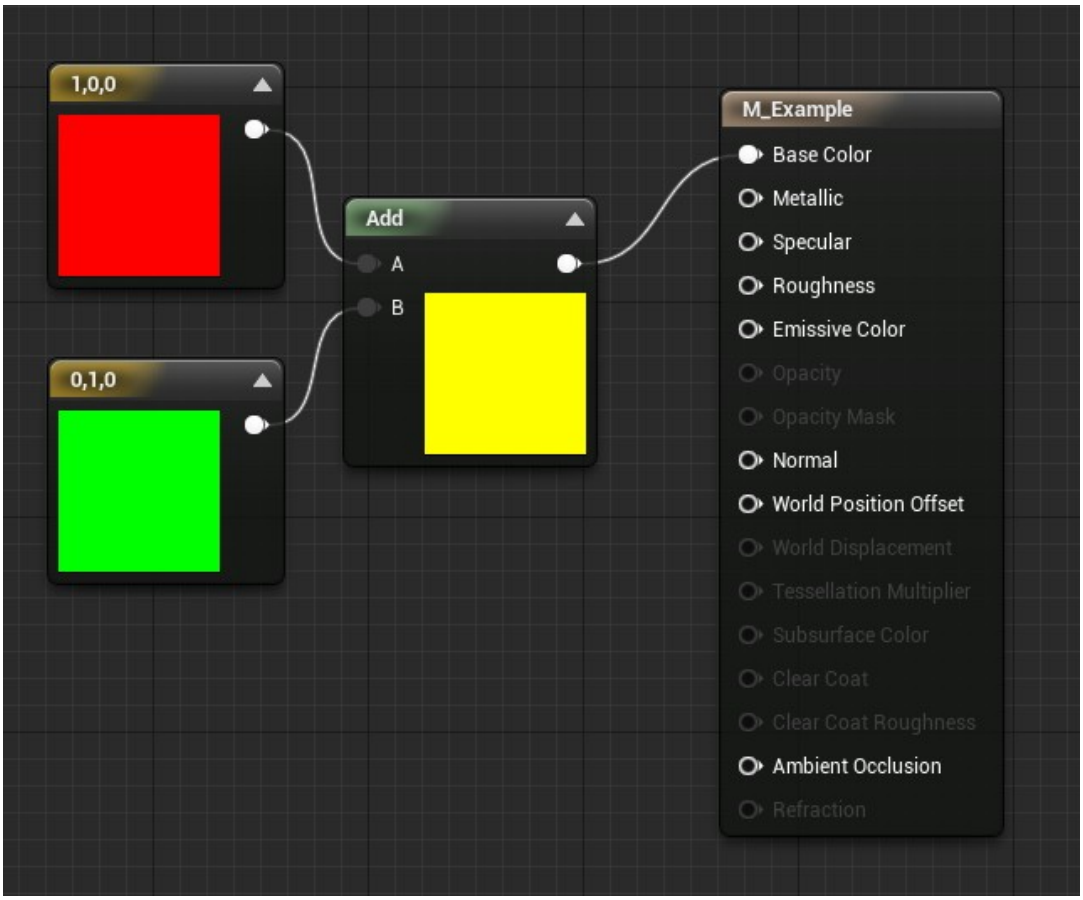

Texture Sample
UVs
Texture Sample
UVs
0
Lerp
A
B
Alpha
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

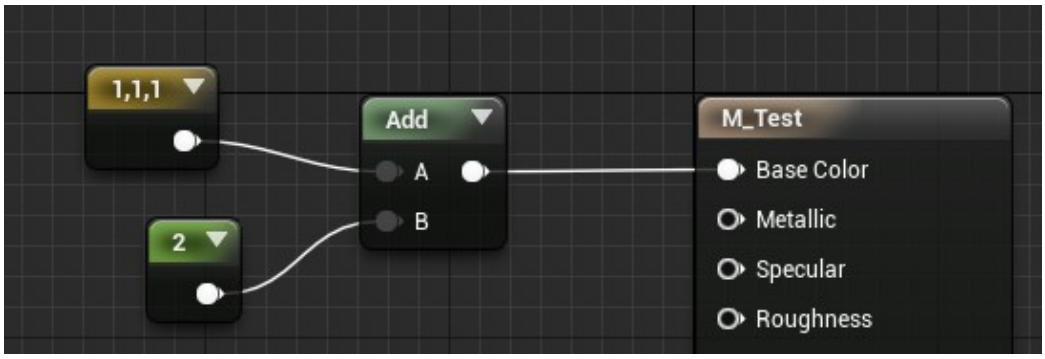

Mask (R G B)
M_Example
Base Color
Constant4Vector
Metallic
1,1,1,0.5
Specular
Roughness
Emissive Color
Mask (A)
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

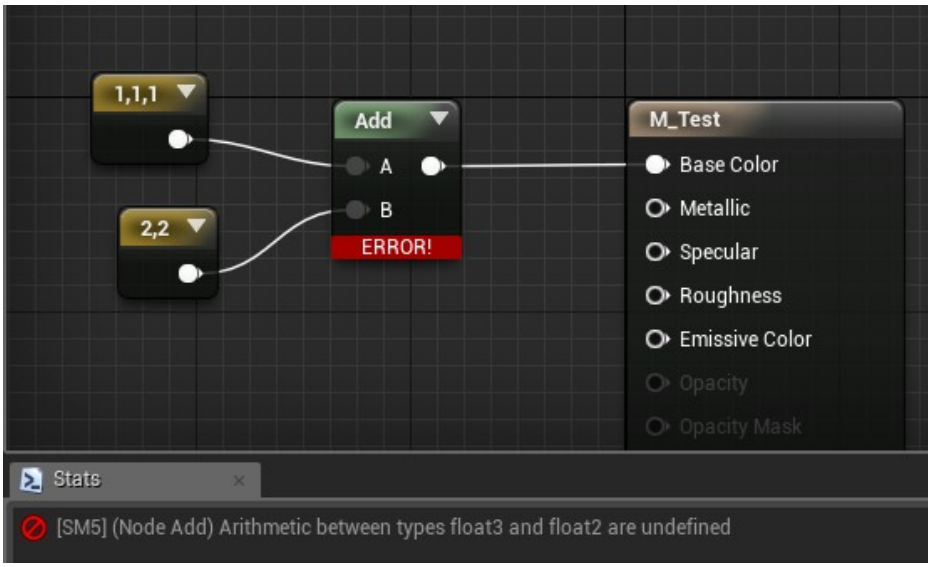

Texture Sample
UVs
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

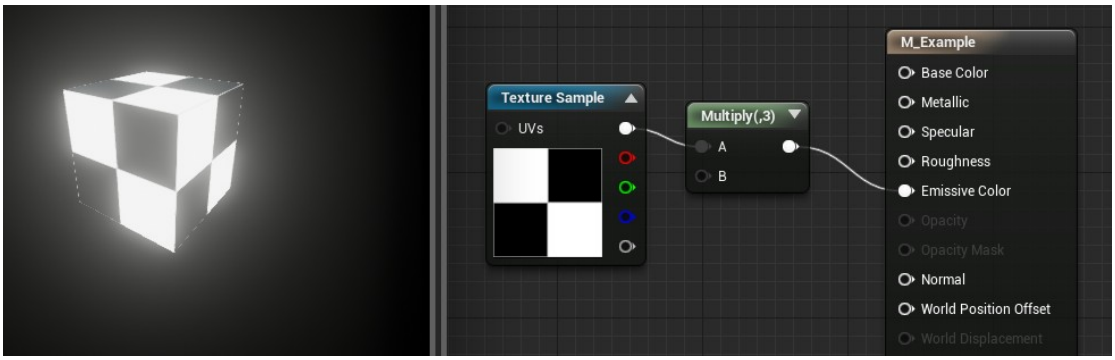

0.1
Subtract
A
B
Texture Sample
UVs
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

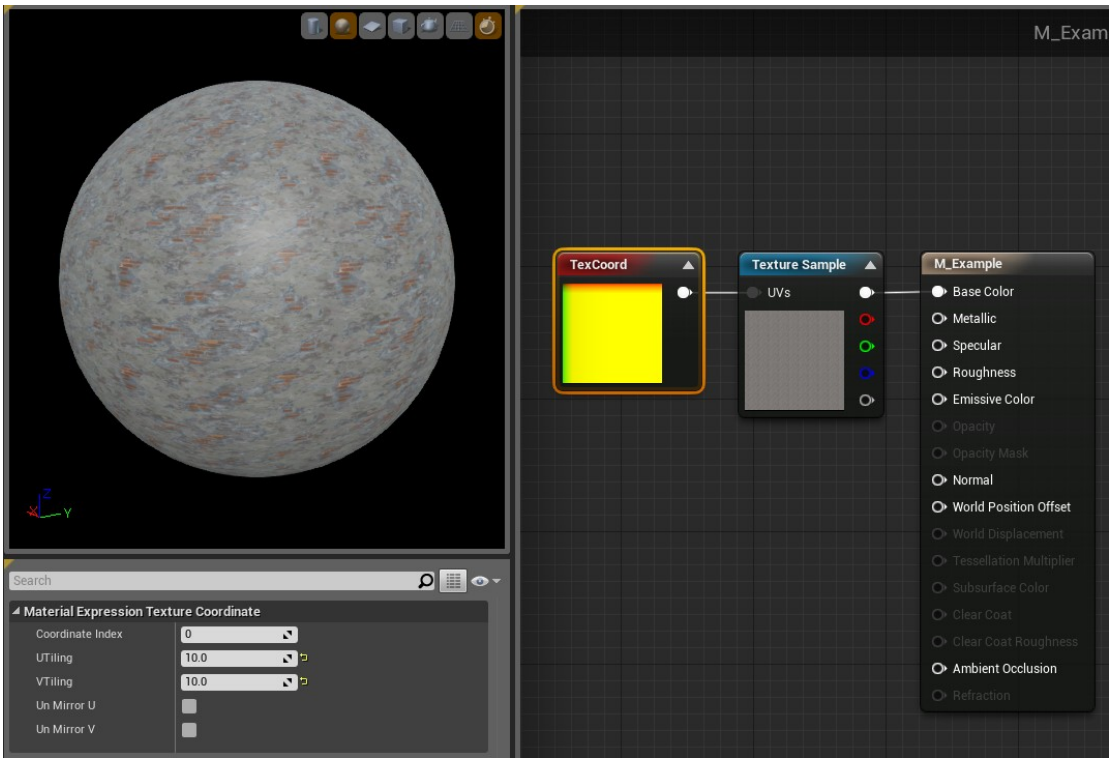

1
Divide
A
B
3
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask

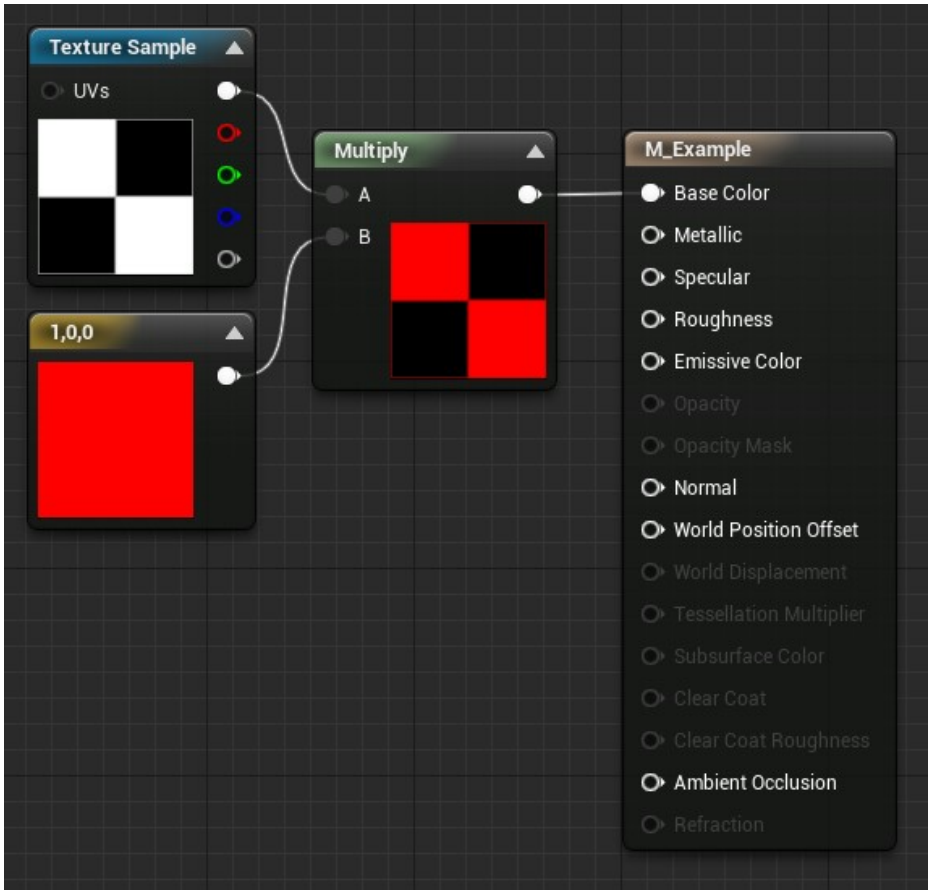

1,0,0
0,1,0
Add
A
B
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

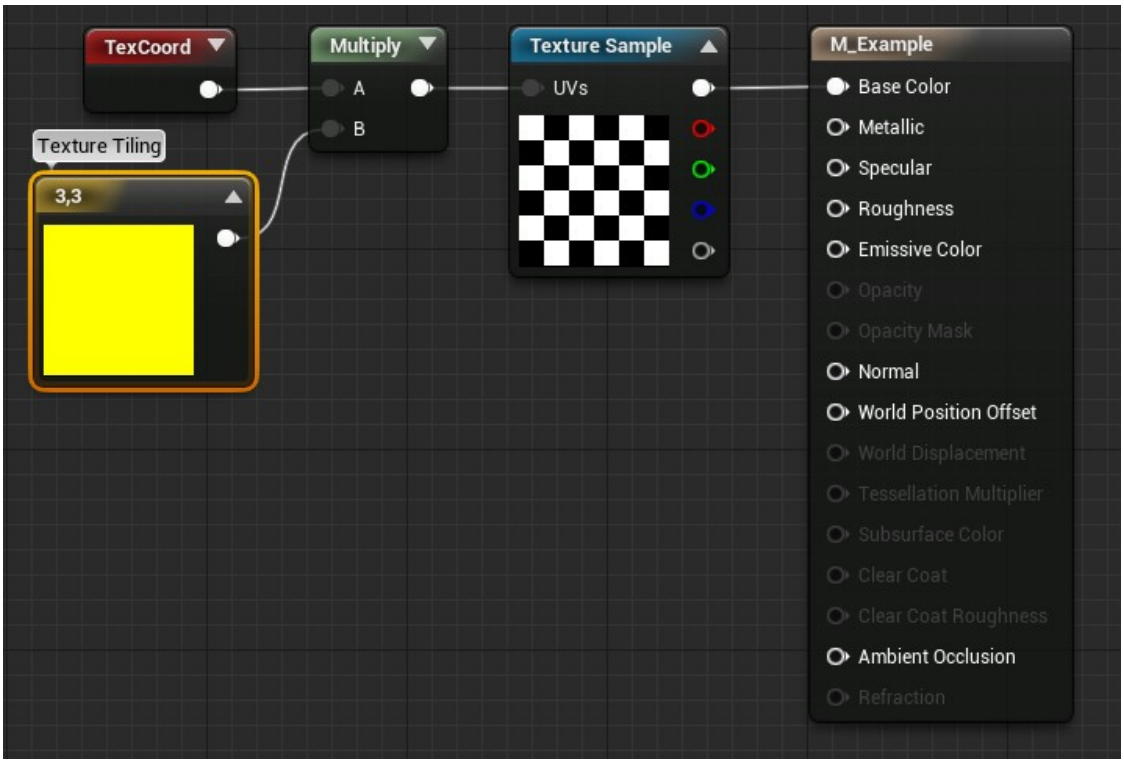

1,1,1
2
Add
A
B
M_Test
Base Color
Metallic
Specular
Roughness

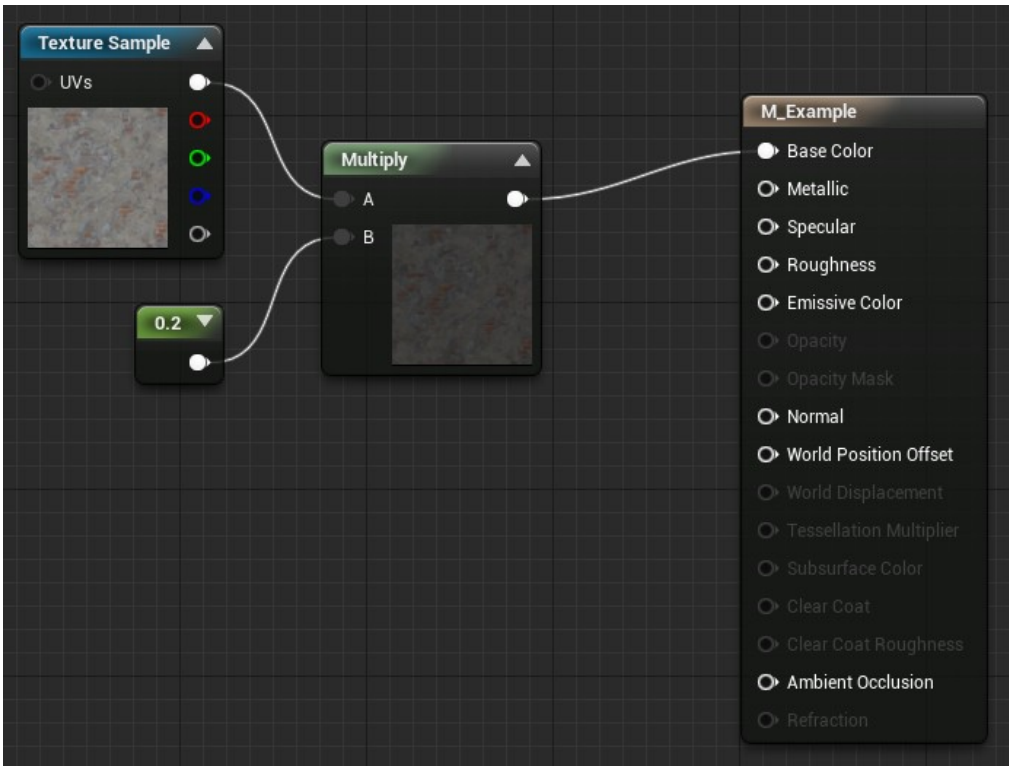

1,1,1
2,2
Add
A
B
ERROR!
M_Test
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Stats
[SM5] (Node Add) Arithmetic between types float3 and float2 are undefined

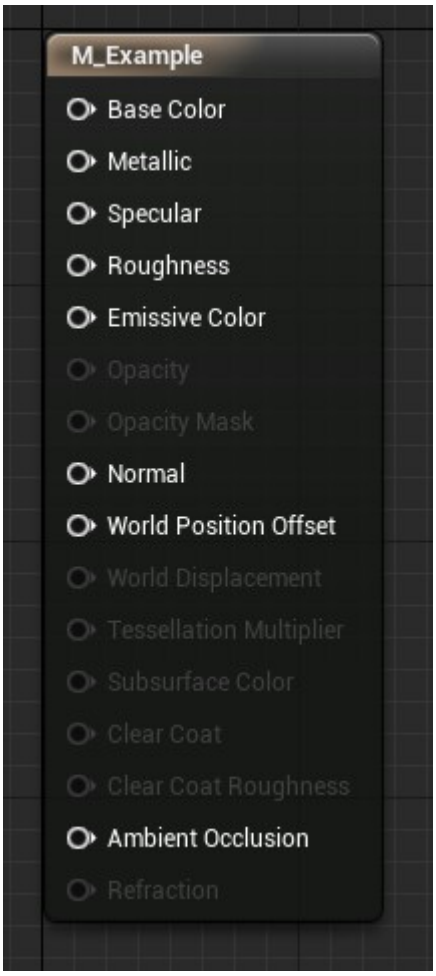

Texture Sample
UVs
Multiply(,3)
A
B
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement

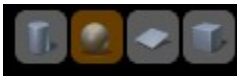

M_Exam
TexCoord
Texture Sample
UVs
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
Search
Material Expression Texture Coordinate
Coordinate Index
0
UTiling
10.0
VTiling
10.0
Un Mirror U
Un Mirror V

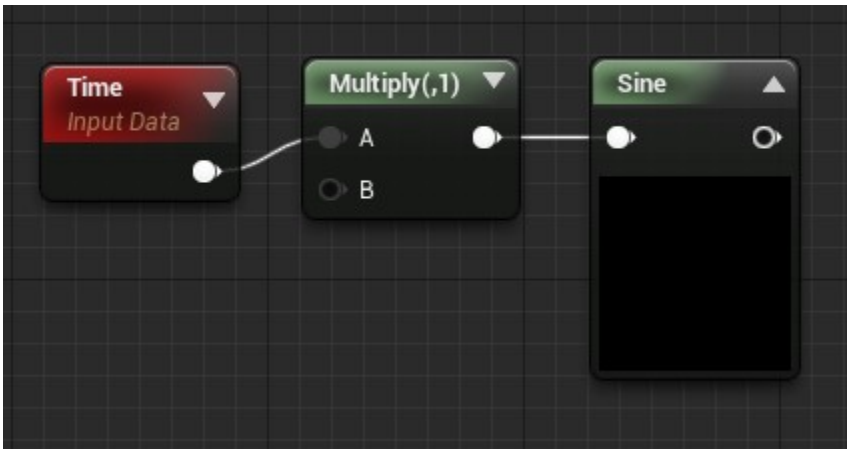

Texture Sample
UVs
1,0,0
Multiply
A
B
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction

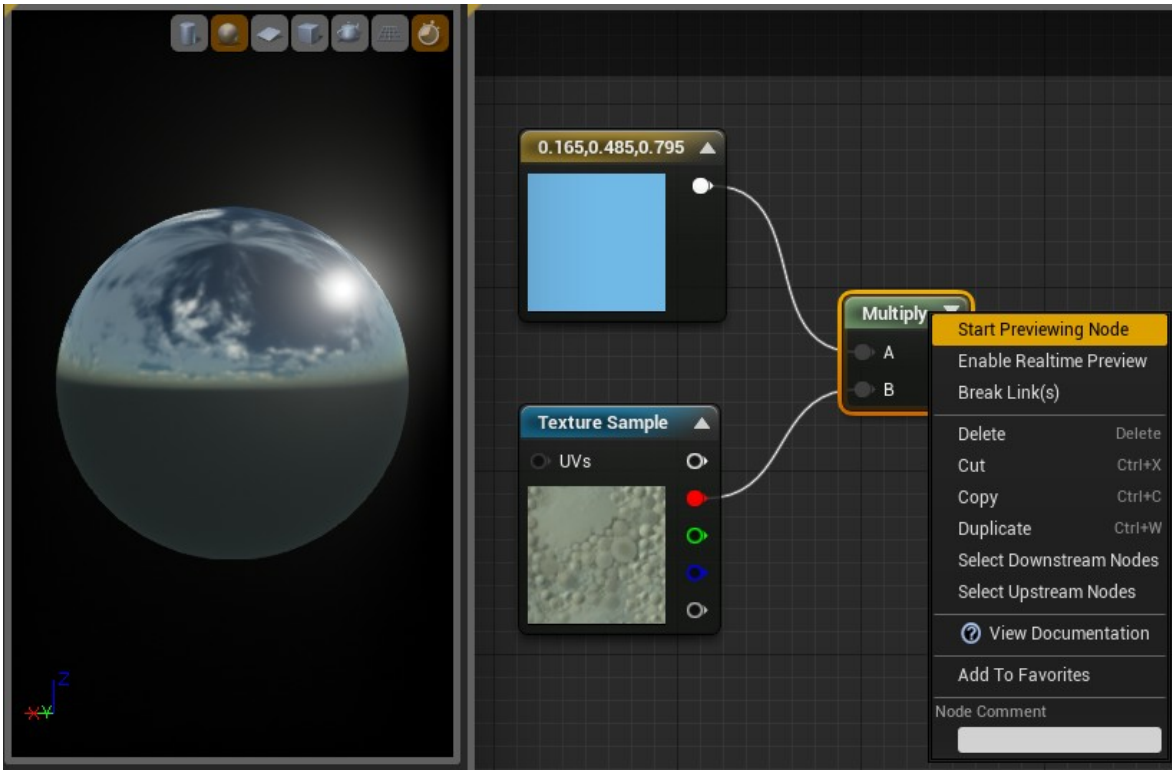

TexCoord
Multiply
A
B
Texture Sample
UVs
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
Texture Tiling
3,3


Texture Sample
UVs
Multiply
A
B
0.2
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction


M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction



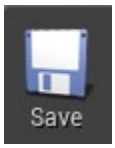

Time
Input Data
Multiply(,1)
A
B
Sine

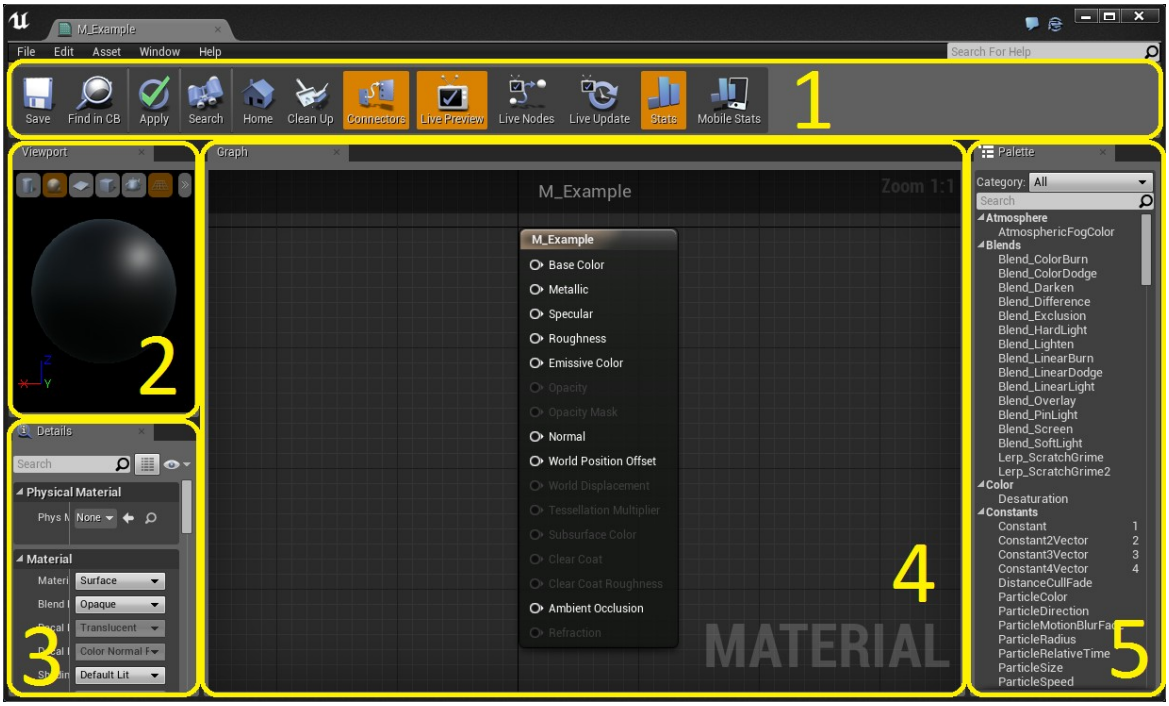

0.165,0.485,0.795
Multiply
A
B
Texture Sample
UVs
Start Previewing Node
Enable Realtime Preview
Break Link(s)
Delete Delete
Cut Ctrl+X
Copy Ctrl+C
Duplicate Ctrl+W
Select Downstream Nodes
Select Upstream Nodes
View Documentation
Add To Favorites
Node Comment

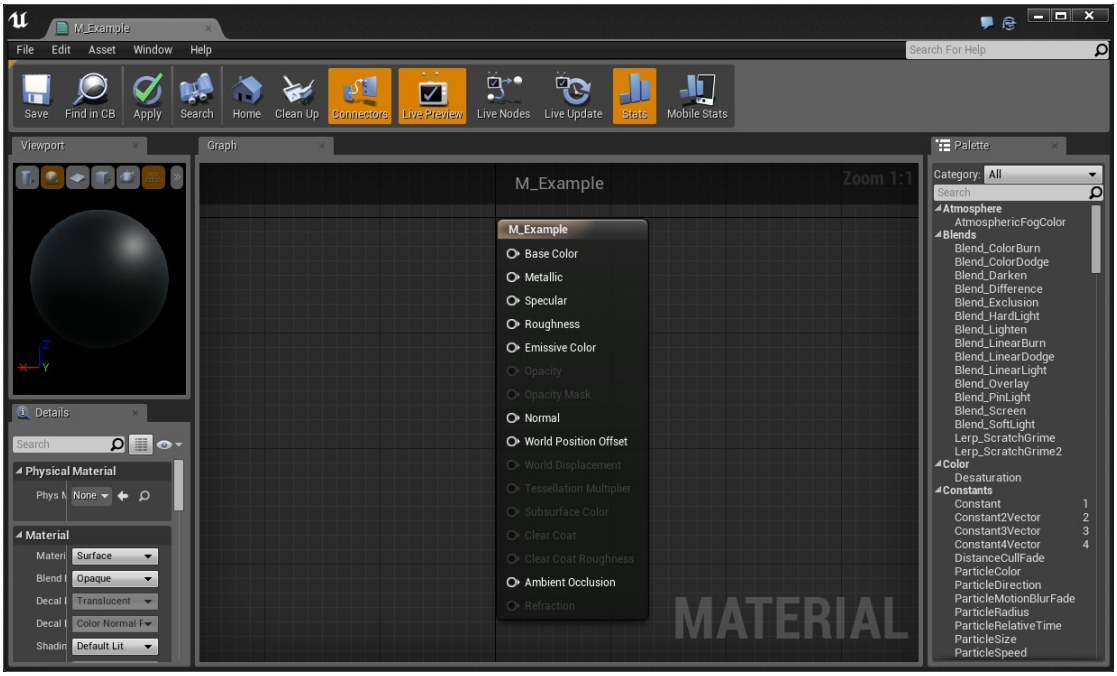
Stats
Mobile Stats

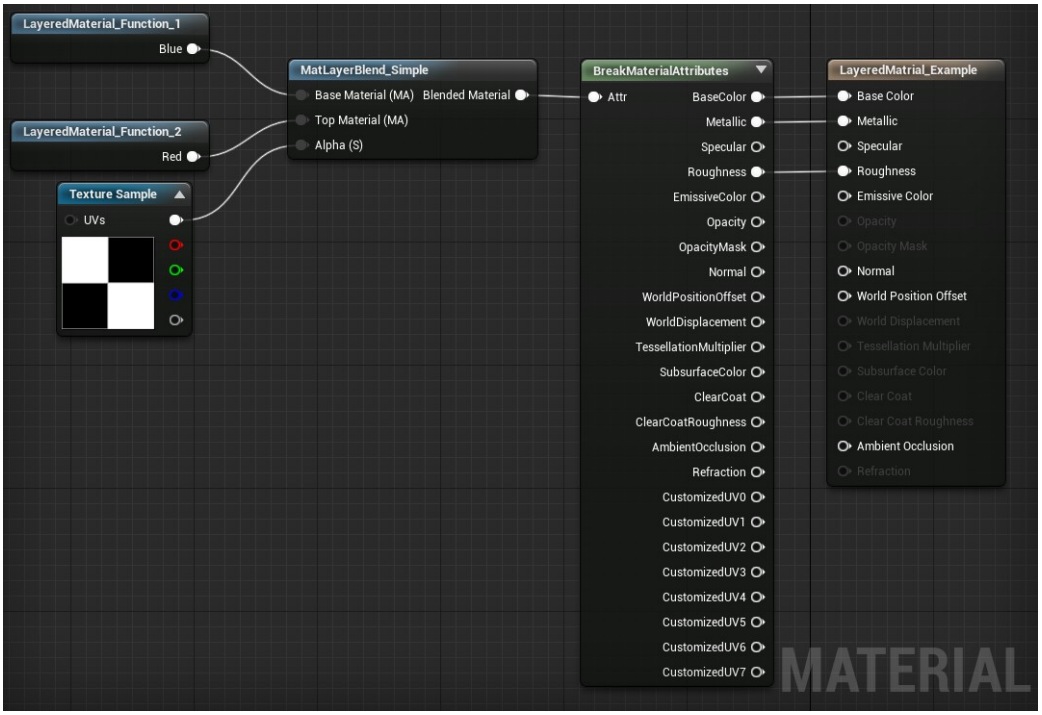
Live Update
Live Nodes
Live Preview
Connectors
Clean Up
Home
Search
Apply

Find in CB

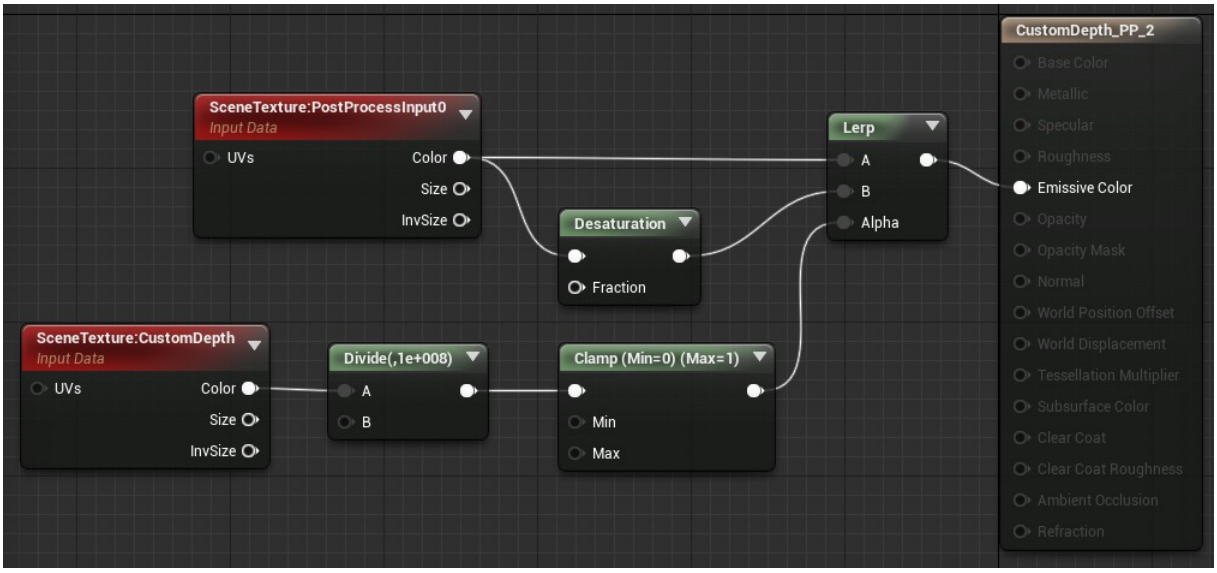

Save

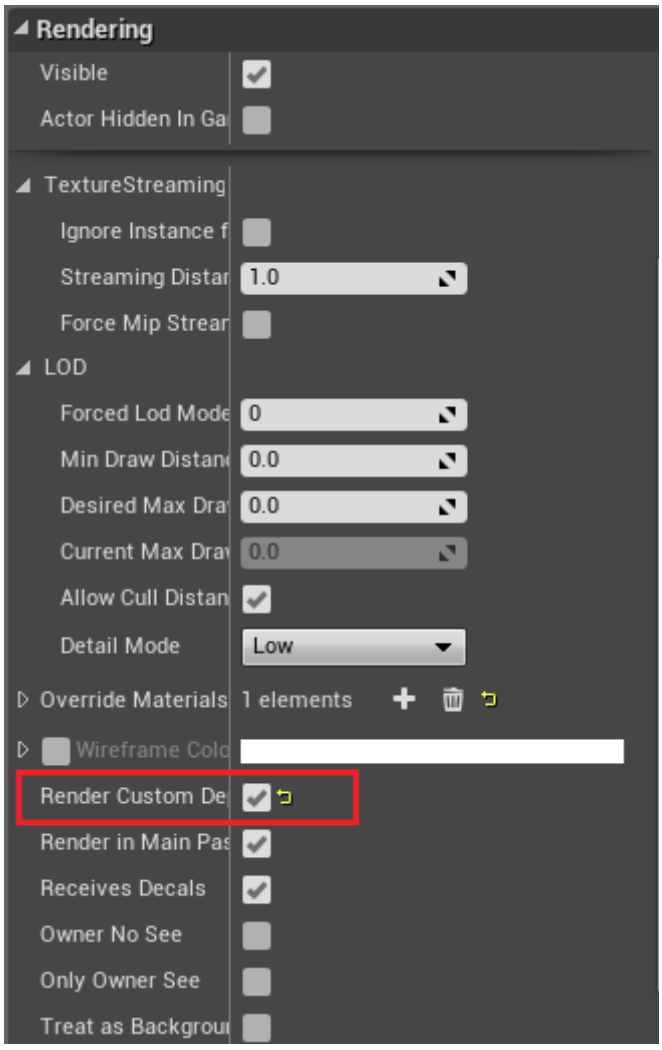

M_Example
File
Edit
Asset
Window
Help
Search For Help
Save
Find in CB
Apply
Search
Home
Clean Up
Connectors
Live Preview
Live Nodes
Live Update
Stats
Mobile Stats
1
Viewport
2
Details
Search
Physical Material
Material
Surface
Opaque
Translucent
Default Lit
3
Graph
M_Example
Zoom 1:1
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
4
MATERIAL
Palette
Category: All
Search
Atmosphere
AtmosphericFogColor
Blends
Blend_ColorBurn
Blend_ColorDodge
Blend_Darken
Blend_Difference
Blend_Exclusion
Blend_HardLight
Blend_Lighten
Blend_LinearBurn
Blend_LinearDodge
Blend_LinearLight
Blend_Overlay
Blend_PinLight
Blend_Screen
Blend_SoftLight
Lerp_ScratchGrime
Lerp_ScratchGrime2
Color
Desaturation
Constants
Constant
Constant2Vector
Constant3Vector
Constant4Vector
DistanceCullFade
ParticleColor
ParticleDirection
ParticleRadius
ParticleRelativeTime
ParticleSize
ParticleSpeed
5

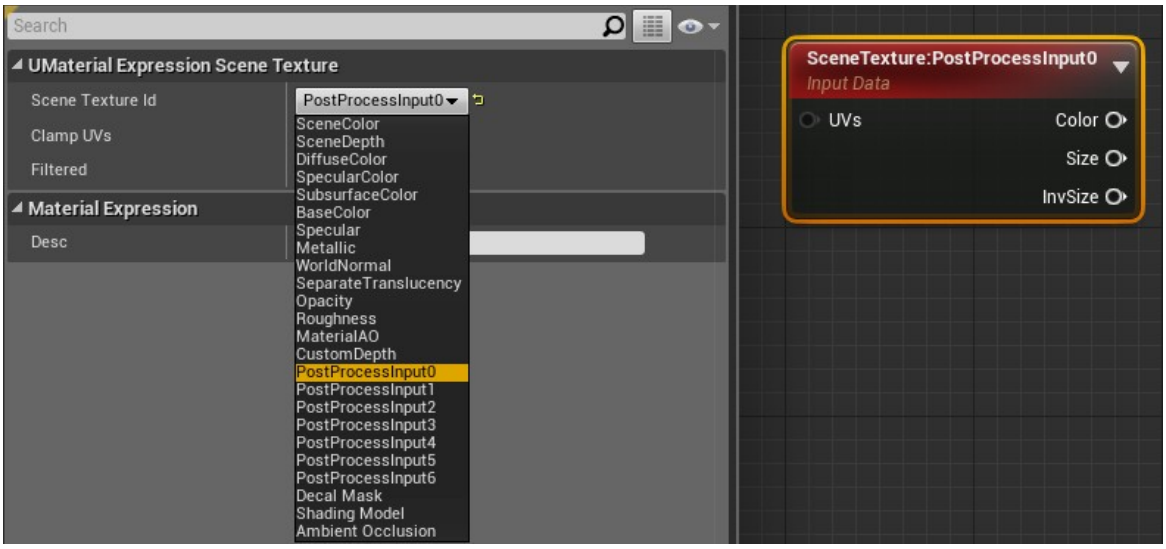

M_Example
File
Edit
Asset
Window
Help
Search For Help
Save
Find in CB
Apply
Search
Home
Clean Up
Connectors
Live Preview
Live Nodes
Live Update
Stats
Mobile Stats
Viewport
Graph
M_Example
Zoom 1:1
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
MATERIAL
Palette
Category: All
Search
Atmosphere
AtmosphericFogColor
Blends
Blend_ColorBurn
Blend_ColorDodge
Blend_Darken
Blend_Difference
Blend_Exclusion
Blend_HardLight
Blend_Lighten
Blend_LinearBurn
Blend_LinearDodge
Blend_LinearLight
Blend_Overlay
Blend_PinLight
Blend_Screen
Blend_SoftLight
Lerp_ScratchGrime
Lerp_ScratchGrime2
Color
Desaturation
Constants
Constant
Constant2Vector
Constant3Vector
Constant4Vector
DistanceCullFade
ParticleColor
ParticleDirection
ParticleMotionBlurFade
ParticleRadius
ParticleRelativeTime
ParticleSize
ParticleSpeed
Details
Search
Physical Material
Material
Surface
Opaque
Translucent
Default Lit

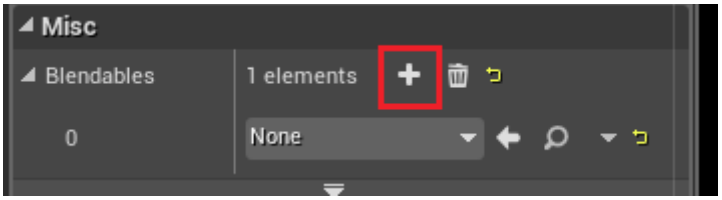

LayeredMaterial_Function_1
Blue
LayeredMaterial_Function_2
Red
Texture Sample
UVs
MatLayerBlend_Simple
Base Material (MA)
Blended Material
Top Material (MA)
Alpha (S)
BreakMaterialAttributes
Attr
BaseColor
Metallic
Specular
Roughness
EmissiveColor
Opacity
OpacityMask
Normal
WorldPositionOffset
WorldDisplacement
TessellationMultiplier
SubsurfaceColor
ClearCoat
ClearCoatRoughness
AmbientOcclusion
Refraction
CustomizedUV0
CustomizedUV1
CustomizedUV2
CustomizedUV3
CustomizedUV4
CustomizedUV5
CustomizedUV6
CustomizedUV7
LayeredMatrial_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
MATERIAL

Chapter 4: Post Process

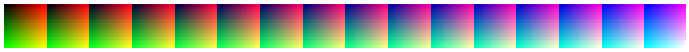


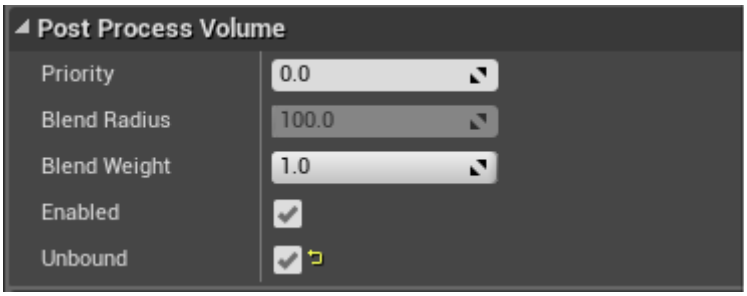

Rendering
Visible
Actor Hidden In Ga
TextureStreaming
Ignore Instance f
Streaming Distar
1.0
Force Mip Strear
LOD
Forced Lod Mode
0
Min Draw Distan
0.0
Desired Max Dra
0.0
Current Max Dra
0.0
Allow Cull Distan
Detail Mode
Low
Override Materials
1 elements
Wireframe Colo
Render Custom De
Render in Main Pas
Receives Decals
Owner No See
Only Owner See
Treat as Backgrou

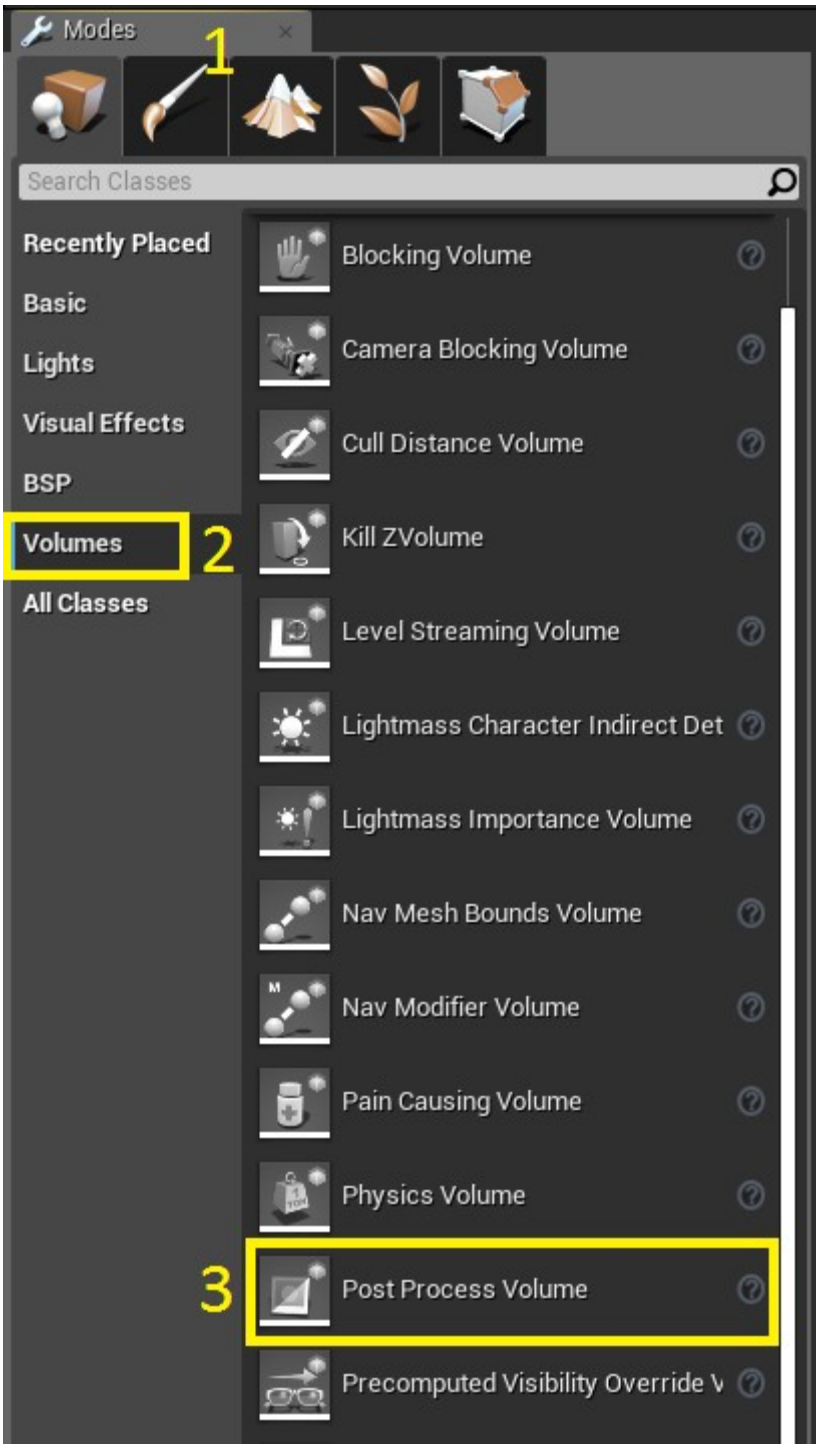

Search
UMaterial Expression Scene Texture
Scene Texture Id
PostProcessInput0
Clamp UVs
Filtered
Material Expression
Desc
SceneColor
SceneDepth
DiffuseColor
SpecularColor
SubsurfaceColor
BaseColor
Specular
Metallic
WorldNormal
SeparateTranslucency
Opacity
Roughness
MaterialAO
CustomDepth
PostProcessInput0
PostProcessInput1
PostProcessInput2
PostProcessInput3
PostProcessInput4
PostProcessInput5
PostProcessInput6
Decal Mask
Shading Model
Ambient Occlusion
SceneTexture:PostProcessInput0
Input Data
UVs
Color
Size
InvSize

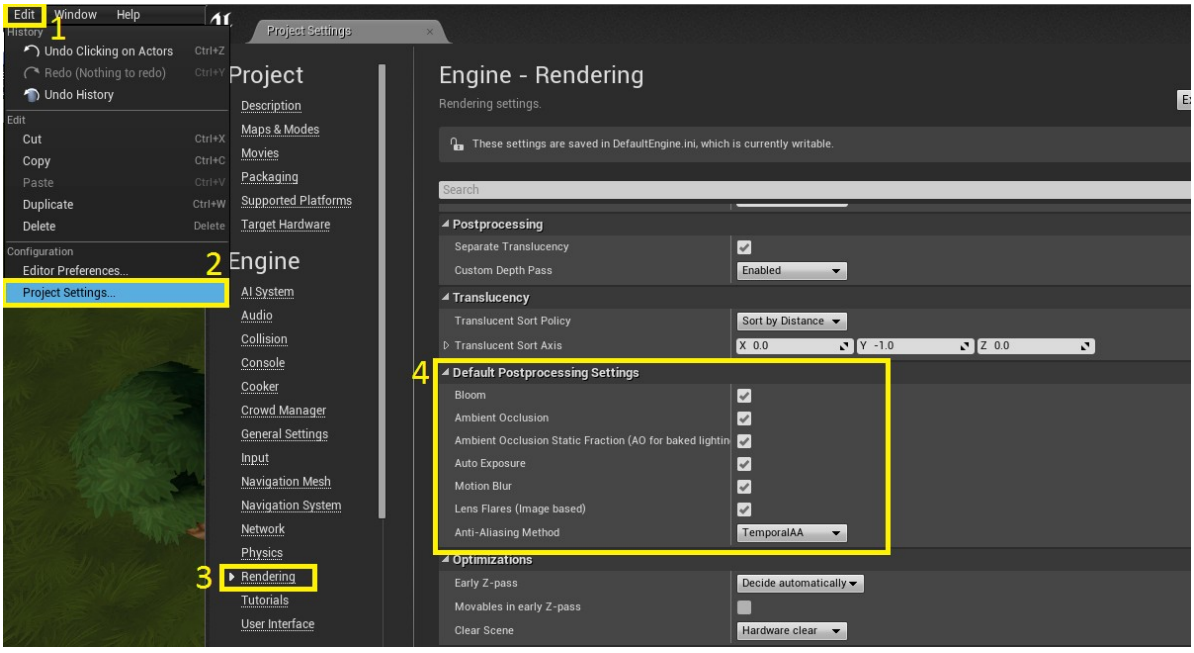

Misc
Blendables
1 elements
0
None

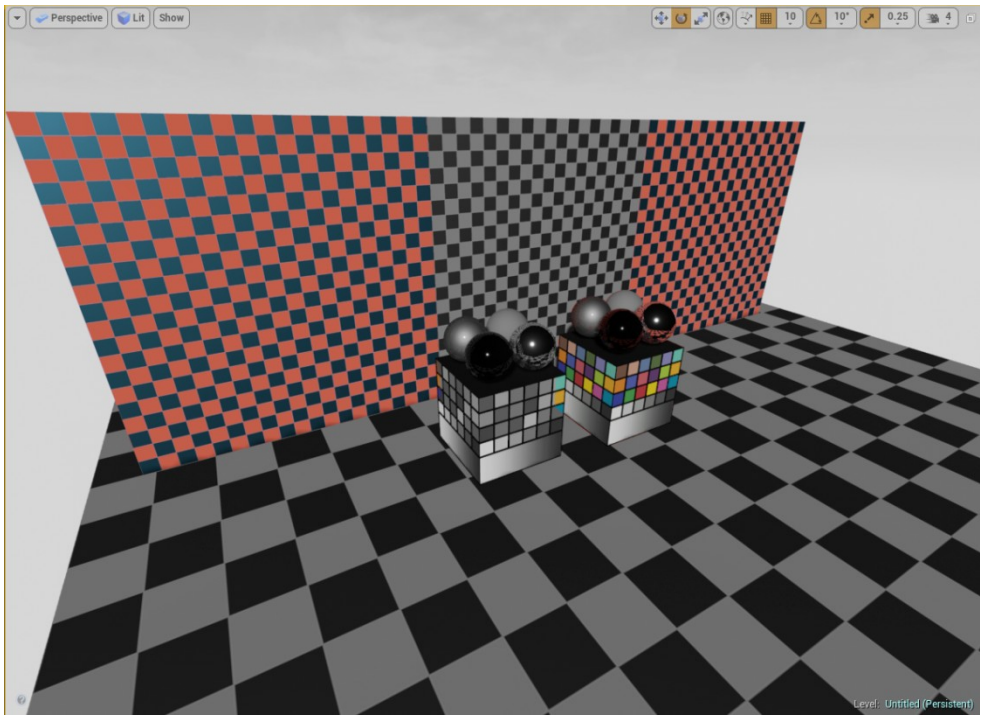
Color Grading Intensity
1.0
Color Grading
LUT_Morning



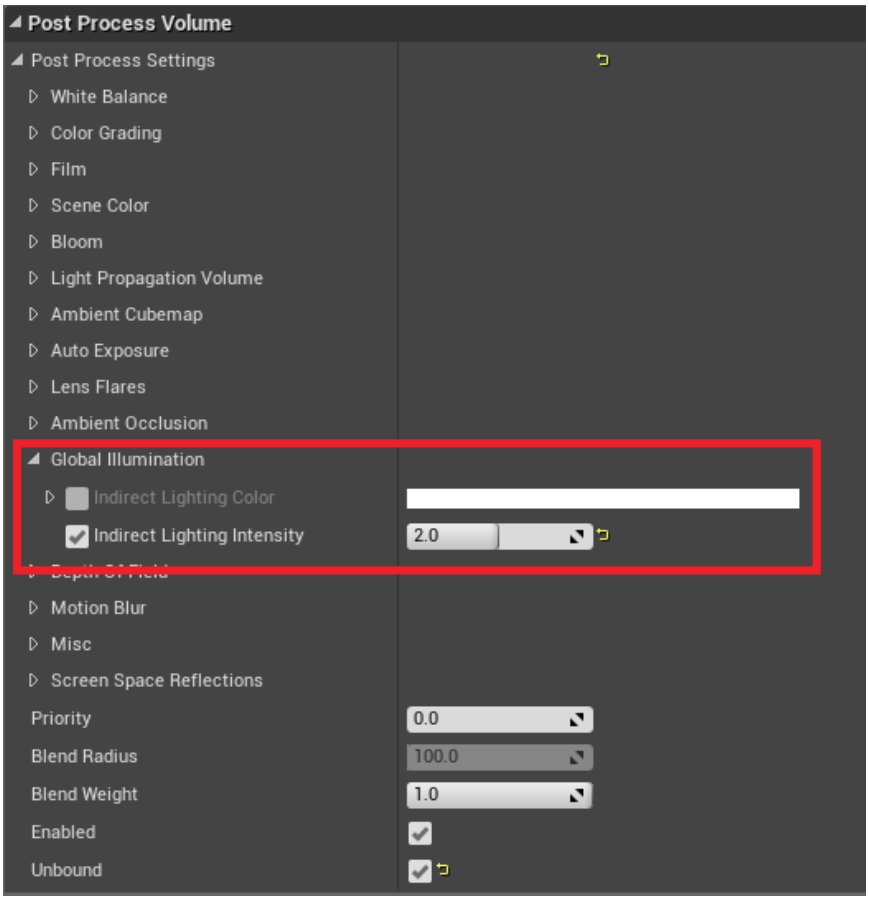

Post Process Volume
Priority
0.0
Blend Radius
100.0
Blend Weight
1.0
Enabled
Unbound

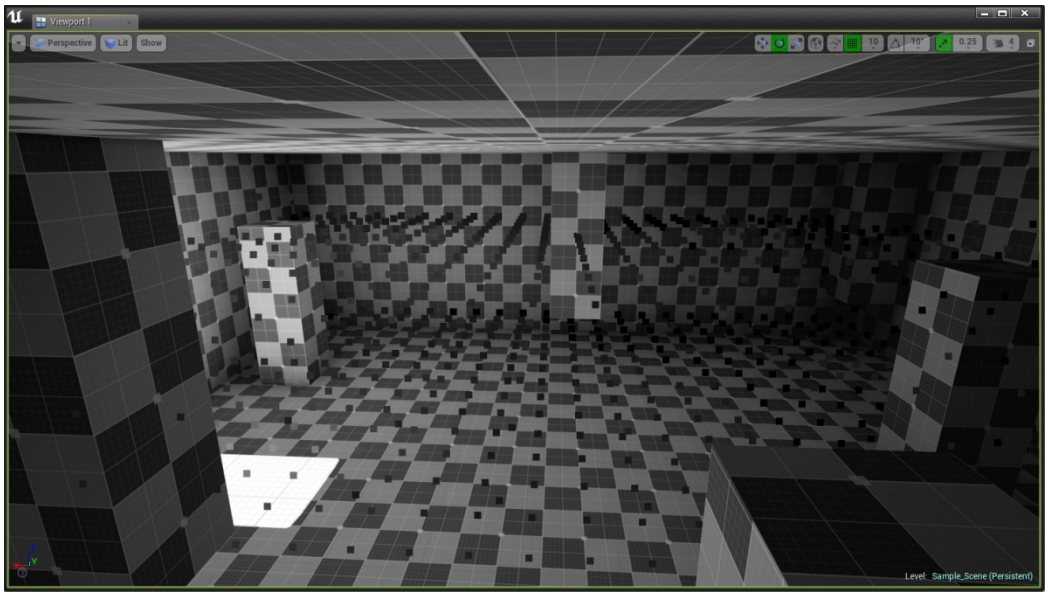

Modes
1
Search Classes
Recently Placed
Basic
Lights
Visual Effects
BSP
Volumes
2
All Classes
Blocking Volume
Camera Blocking Volume
Cull Distance Volume
Kill ZVolume
Level Streaming Volume
Lightmass Character Indirect Det
Lightmass Importance Volume
Nav Mesh Bounds Volume
Nav Modifier Volume
Pain Causing Volume
Physics Volume
3
Post Process Volume
Precomputed Visibility Override V

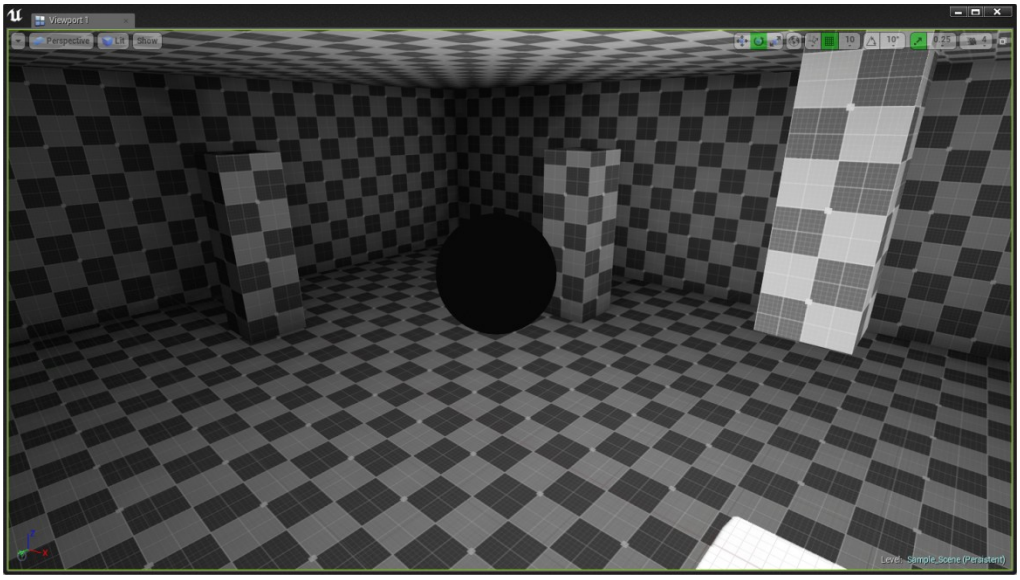

Edit
Window
Help
1
History
Undo Clicking on Actors Ctrl+Z
Redo (Nothing to redo) Ctrl+Y
Undo History
Edit
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+W
Delete Delete
Configuration
Editor Preferences...
Project Settings...
2
Project Settings
Project
Description
Maps & Modes
Movies
Packaging
Supported Platforms
Target Hardware
Engine
AI System
Audio
Collision
Console
Cooker
Crowd Manager
General Settings
Input
Navigation Mesh
Navigation System
Network
Physics
3
Rendering
Tutorials
User Interface
Engine - Rendering
Rendering settings.
These settings are saved in DefaultEngine.ini, which is currently writable.
Search
Postprocessing
Separate Translucency
Custom Depth Pass
Enabled
Translucency
Translucent Sort Policy
Sort by Distance
Translucent Sort Axis
X 0.0
Y -1.0
Z 0.0
4
Default Postprocessing Settings
Bloom
Ambient Occlusion
Ambient Occlusion Static Fraction (AO for baked lightin
Auto Exposure
Motion Blur
Lens Flares (Image based)
Anti-Aliasing Method
TemporalAA
Optimizations
Early Z-pass
Decide automatically
Movables in early Z-pass
Clear Scene
Hardware clear

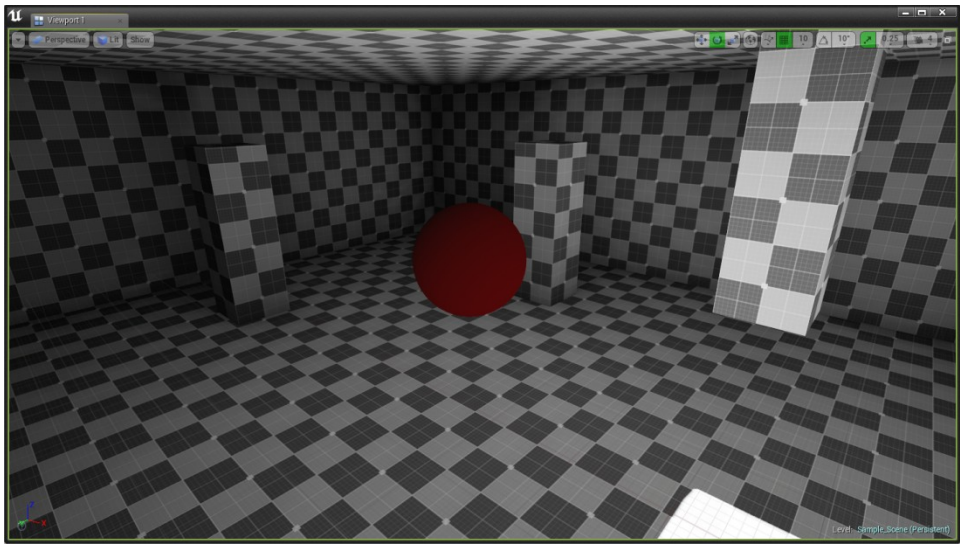

Perspective
Lit
Show
Level: Untitled (Persistent)

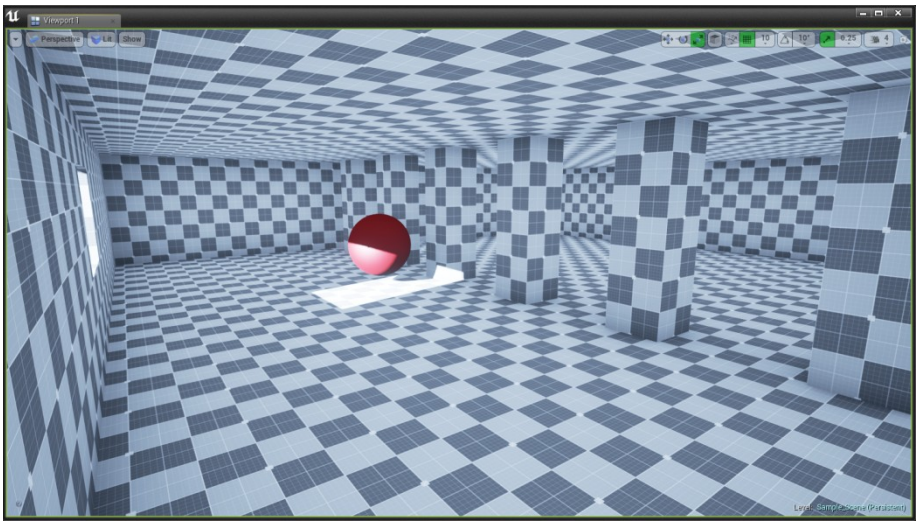
Chapter 5: Lights

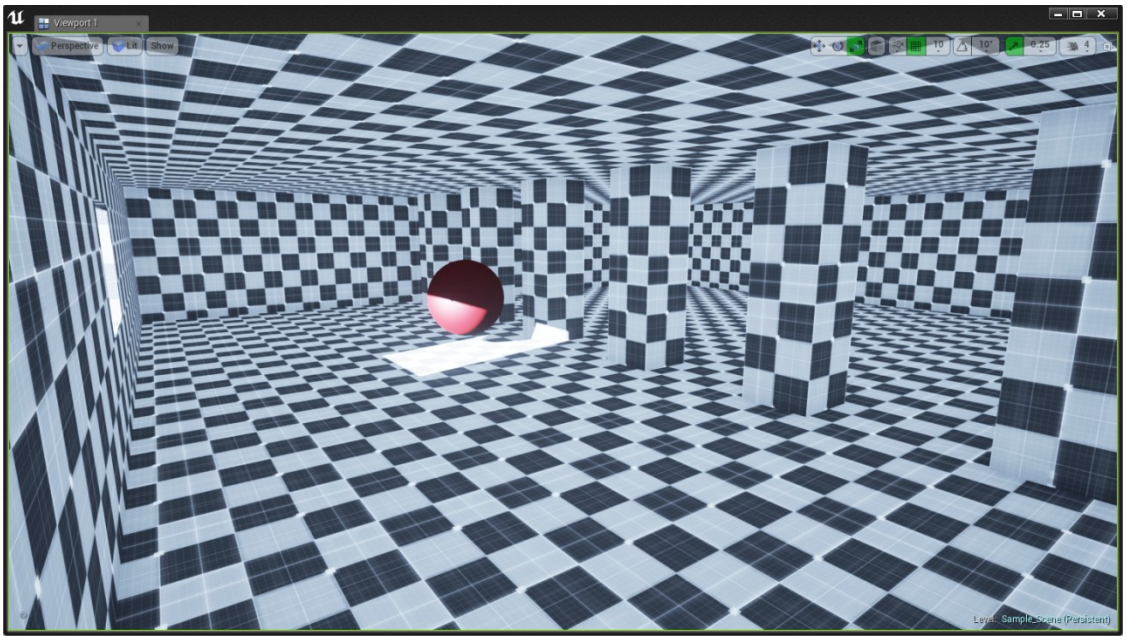

Post Process Volume
Post Process Settings
White Balance
Color Grading
Film
Scene Color
Bloom
Light Propagation Volume
Ambient Cubemap
Auto Exposure
Lens Flares
Ambient Occlusion
Global Illumination
Indirect Lighting Color
Indirect Lighting Intensity
2.0
Motion Blur
Misc
Screen Space Reflections
Priority
0.0
Blend Radius
100.0
Blend Weight
1.0
Enabled
Unbound

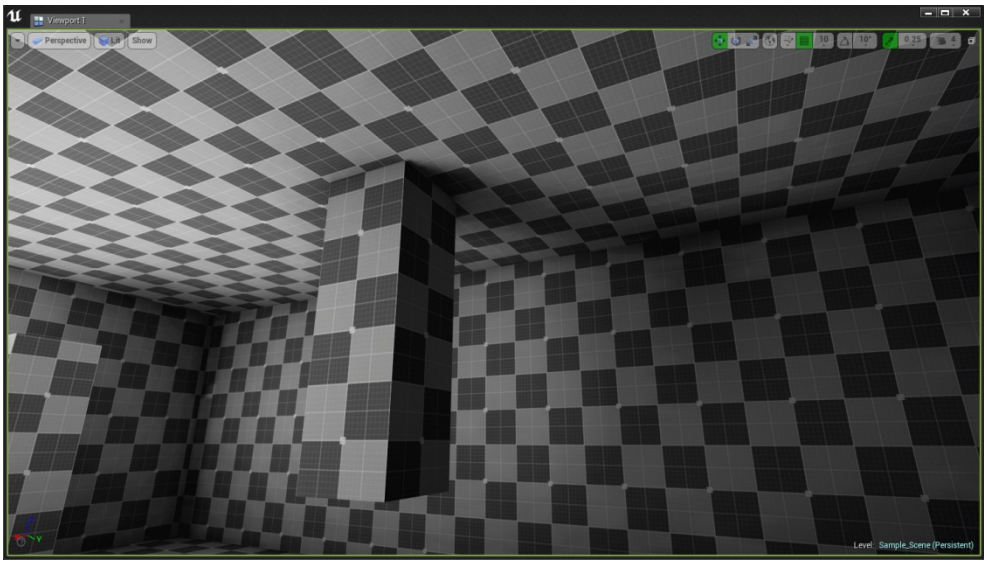

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

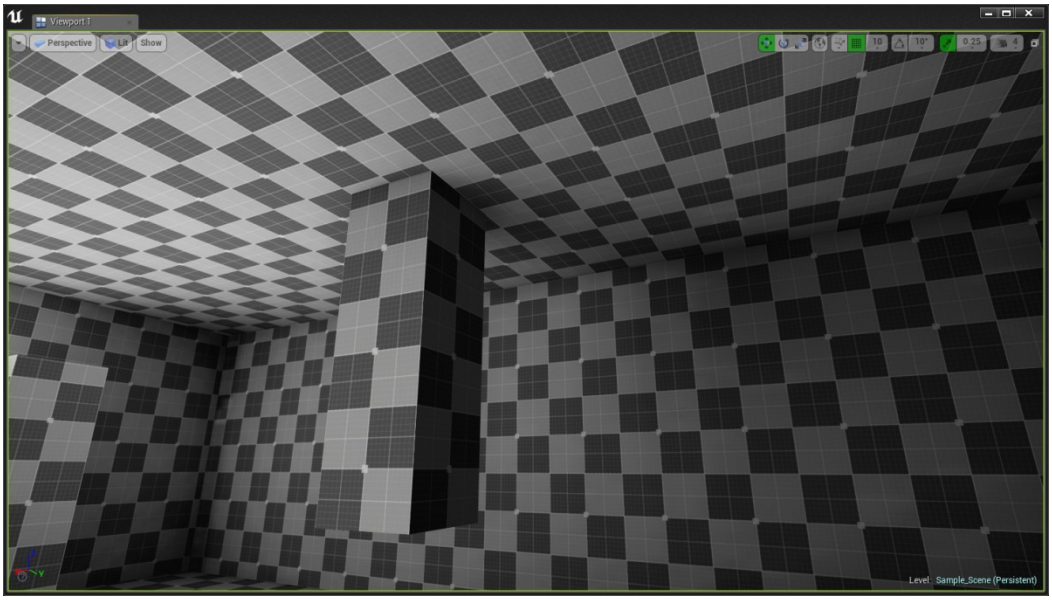

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

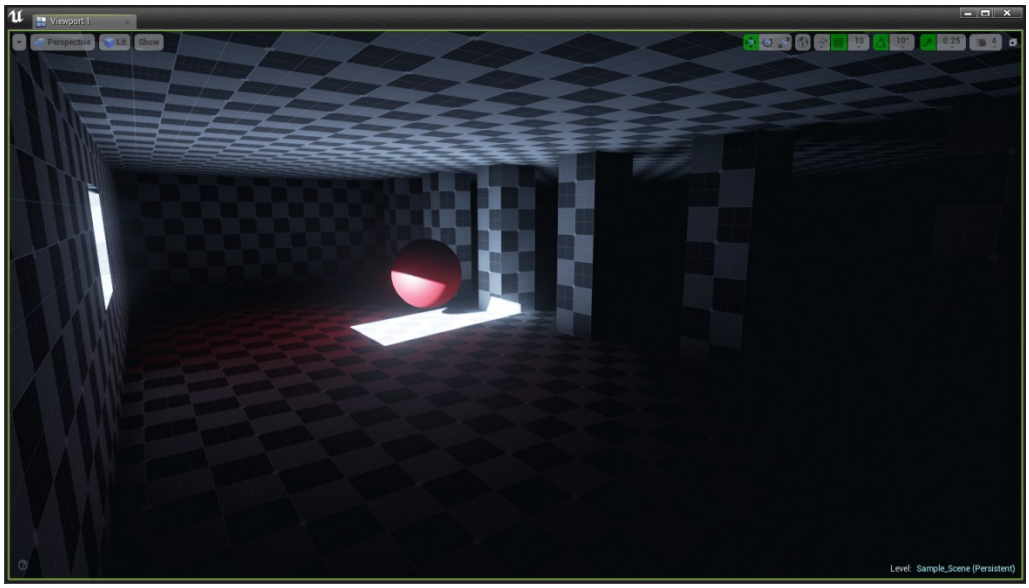

Viewport 1
Perspective
Lit
Show
Level: Sample Scene (Persistent)

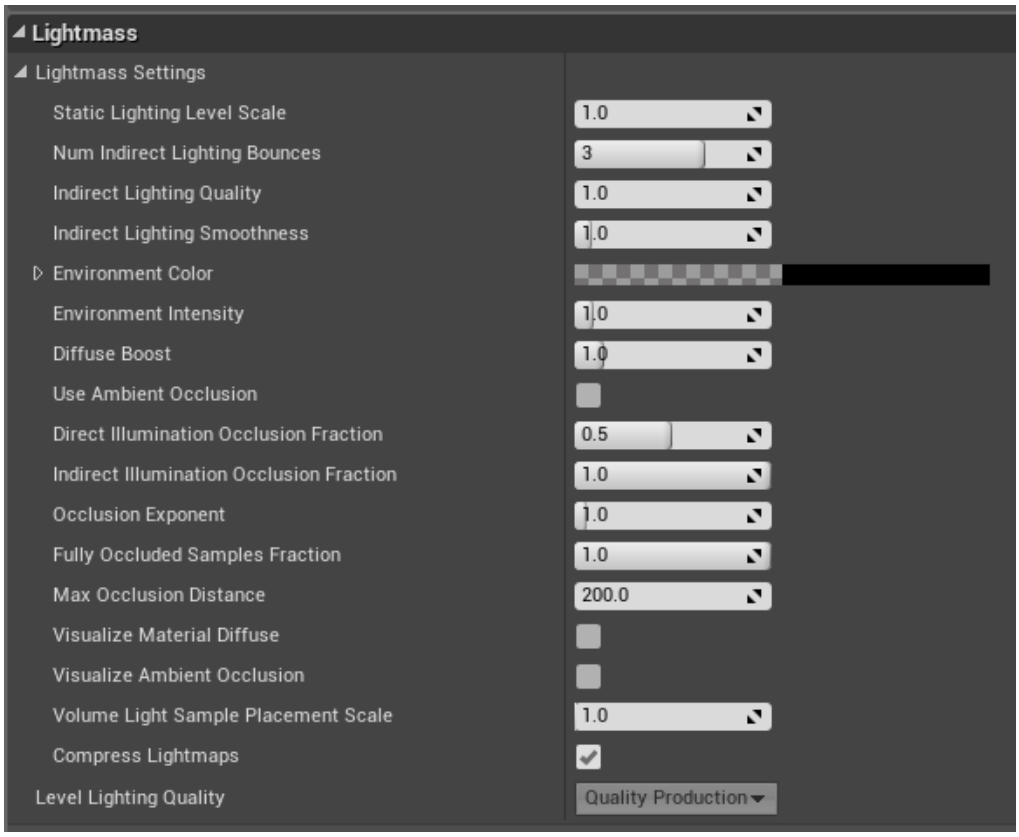

Viewport 1
Perspective
Lit
Show
Level: Sample Scene (Persistent)

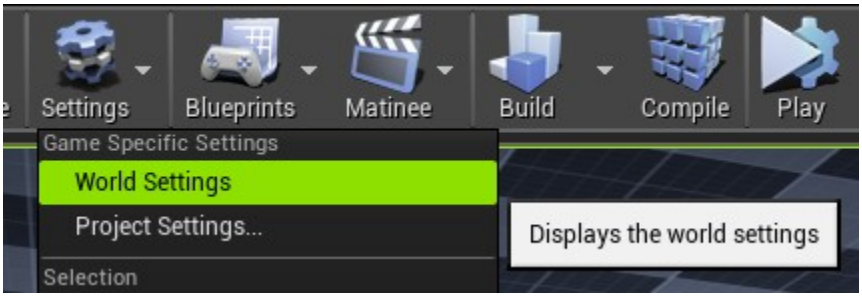

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

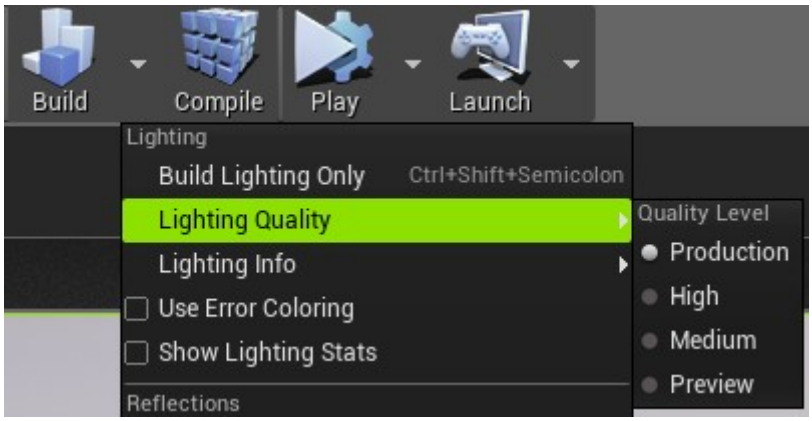

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)


Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

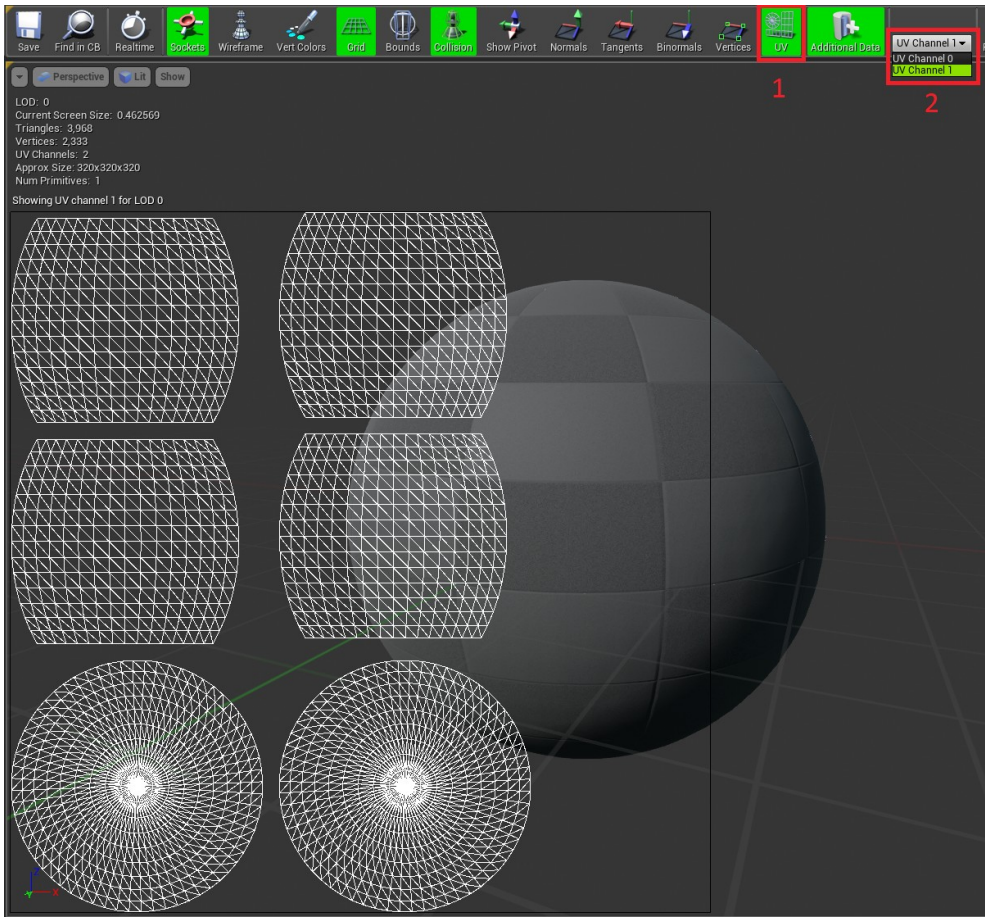

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

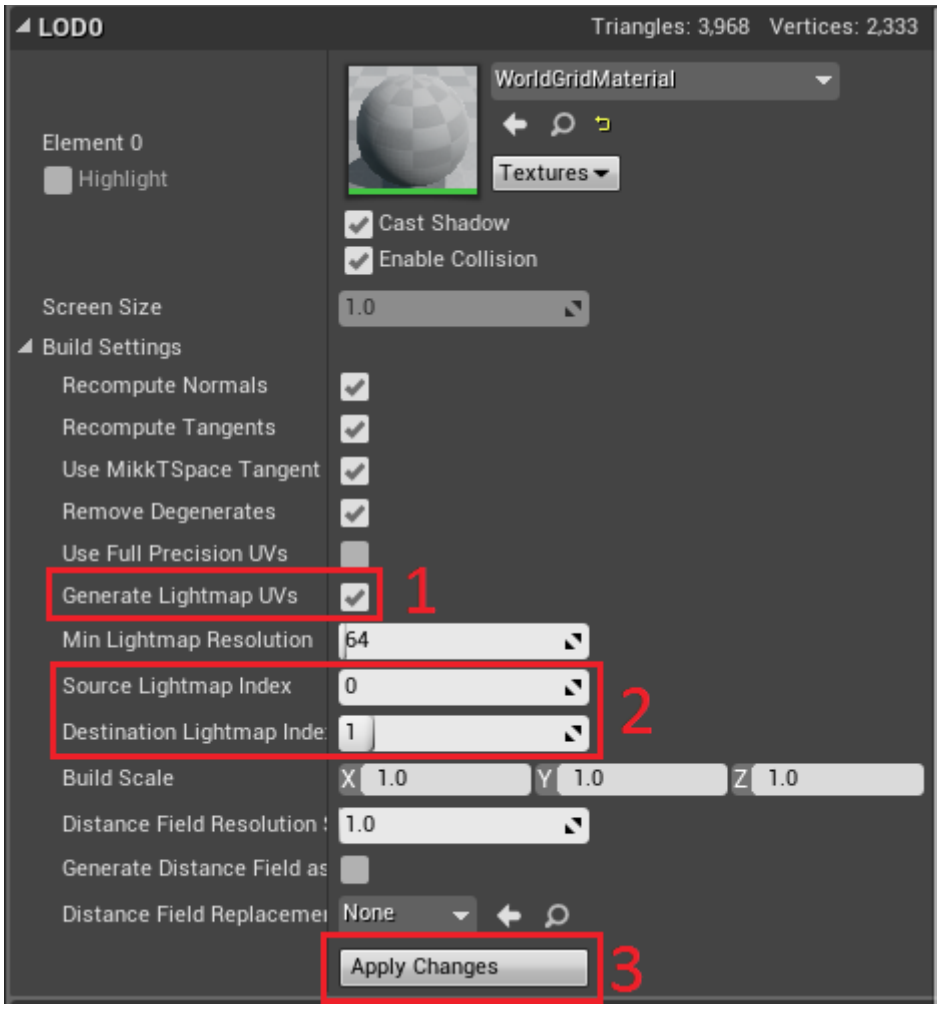

Lightmass
Lightmass Settings
Static Lighting Level Scale
1.0
Num Indirect Lighting Bounces
3
Indirect Lighting Quality
1.0
Indirect Lighting Smoothness
1.0
Environment Color
Environment Intensity
1.0
Diffuse Boost
1.0
Use Ambient Occlusion
Direct Illumination Occlusion Fraction
0.5
Indirect Illumination Occlusion Fraction
1.0
Occlusion Exponent
1.0
Fully Occluded Samples Fraction
1.0
Max Occlusion Distance
200.0
Visualize Material Diffuse
Visualize Ambient Occlusion
Volume Light Sample Placement Scale
1.0
Compress Lightmaps
Level Lighting Quality
Quality Production

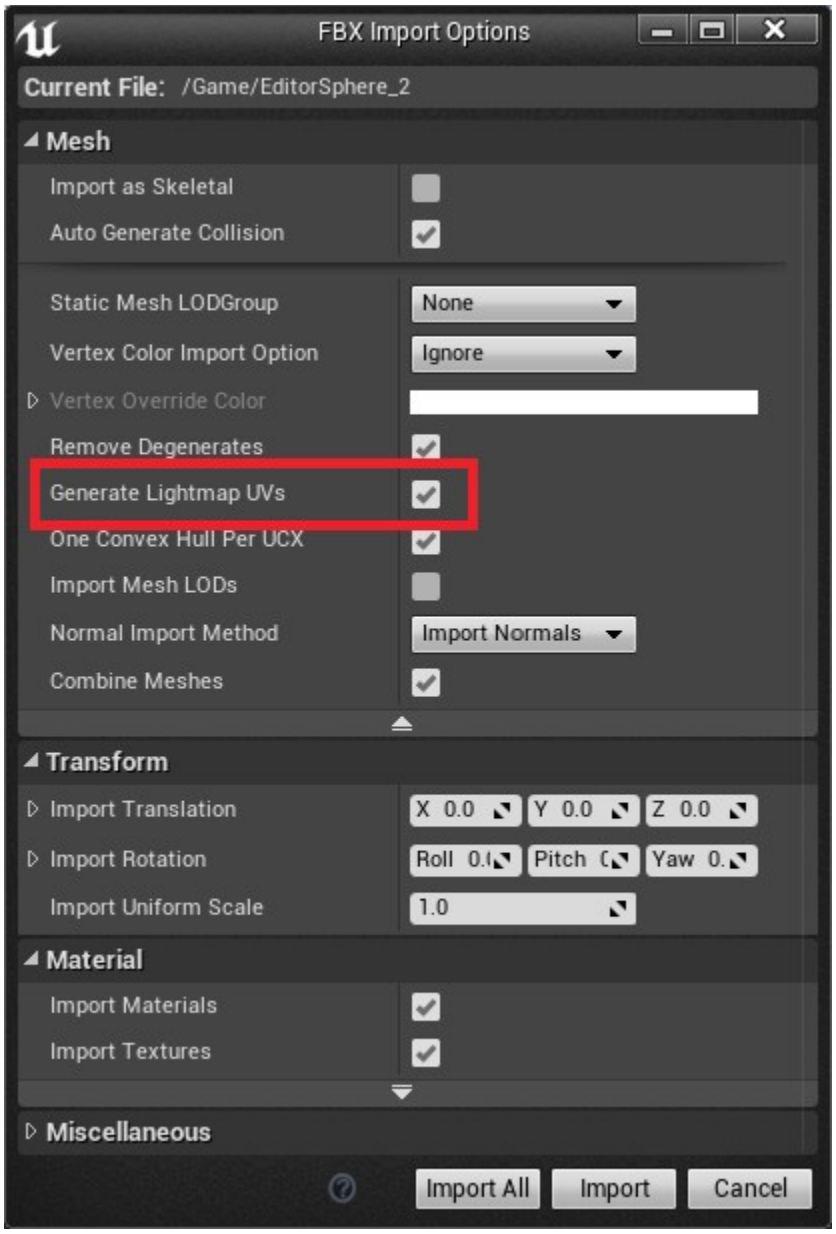

Settings
Blueprints
Matinee
Build
Compile
Play
Game Specific Settings
World Settings
Project Settings...
Selection
Displays the world settings

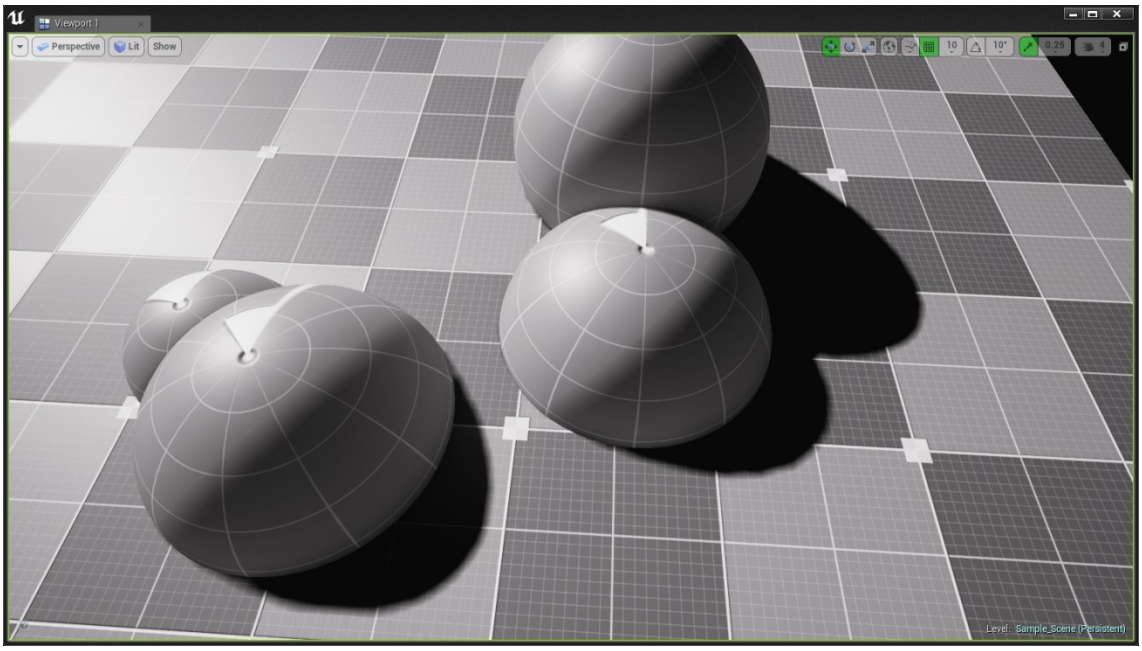

Build
Compile
Play
Launch
Lighting
Build Lighting Only
Ctrl+Shift+Semicolon
Lighting Quality
Lighting Info
Use Error Coloring
Show Lighting Stats
Reflections
Quality Level
Production
High
Medium
Preview

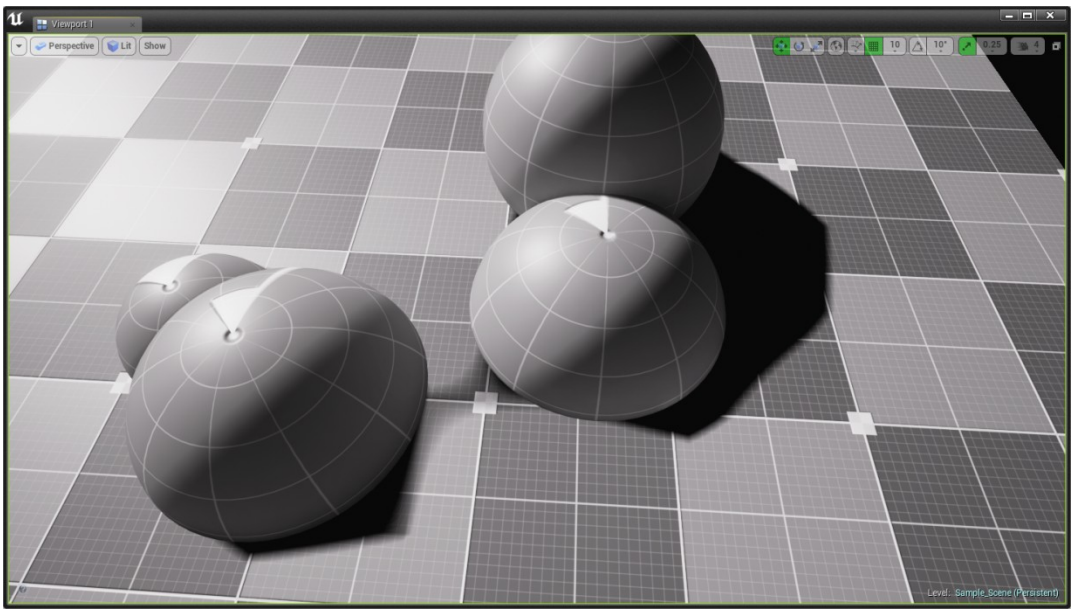
Build
Compile
Play
Launch
Lighting
Build Lighting Only
Ctrl+Shift+Semicolon

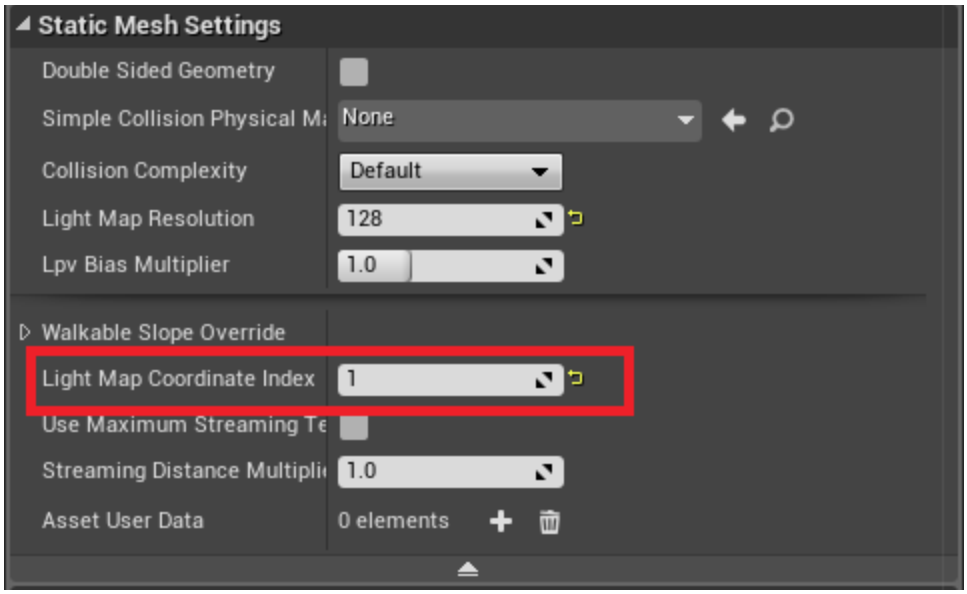

Save
Find in CB
Realtime
Sockets
Wireframe
Vert Colors
Grid
Bounds
Collision
Show Pivot
Normals
Tangents
Binormals
Vertices
UV
Additional Data
UV Channel 1
UV Channel 0
UV Channel 1
1
2
Perspective
Lit
Show
LOD: 0
Current Screen Size: 0.462569
Triangles: 3,968
Vertices: 2,333
UV Channels: 2
Approx Size: 320x320x320
Num Primitives: 1
Showing UV channel 1 for LOD 0

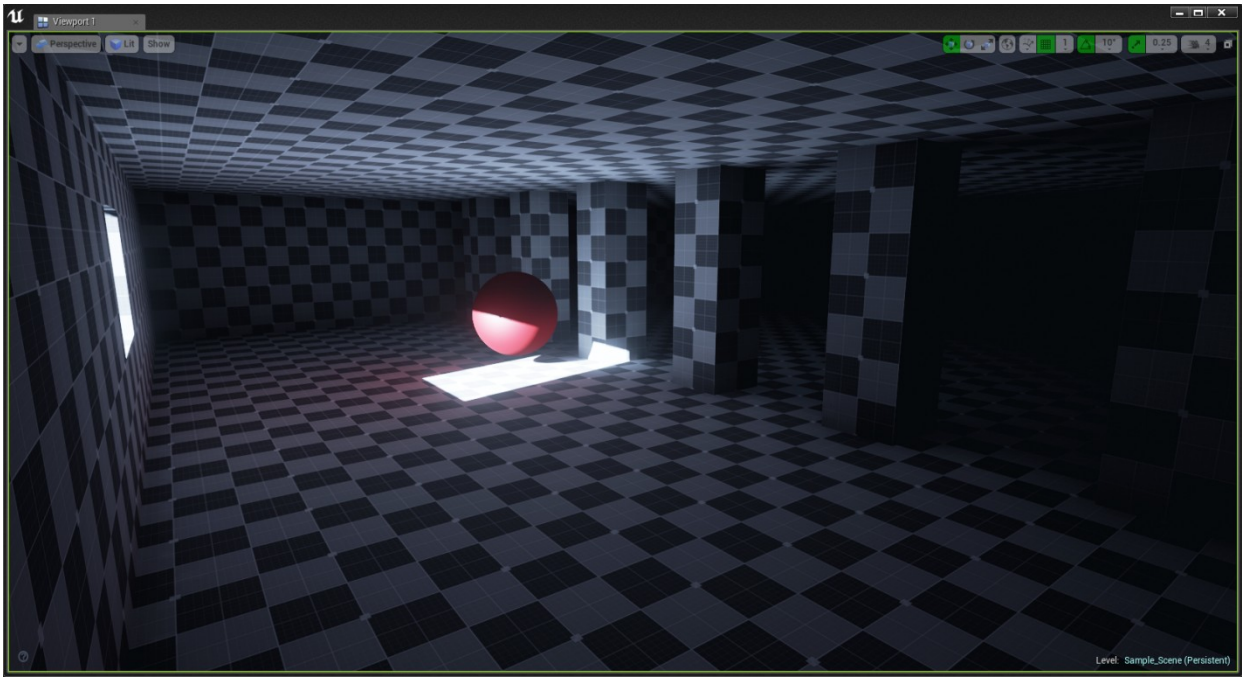

LOD0
Triangles: 3,968
Vertices: 2,333
Element 0
Highlight
WorldGridMaterial
Textures
Cast Shadow
Enable Collision
Screen Size
1.0
Build Settings
Recompute Normals
Recompute Tangents
Use MikkTSpace Tangent
Remove Degenerates
Use Full Precision UVs
Generate Lightmap UVs
1
Min Lightmap Resolution
64
Source Lightmap Index
0
Destination Lightmap Inde
1
2
Build Scale
X 1.0
Y 1.0
Z 1.0
Distance Field Resolution
1.0
Generate Distance Field as
Distance Field Replacemer
None
Apply Changes
3

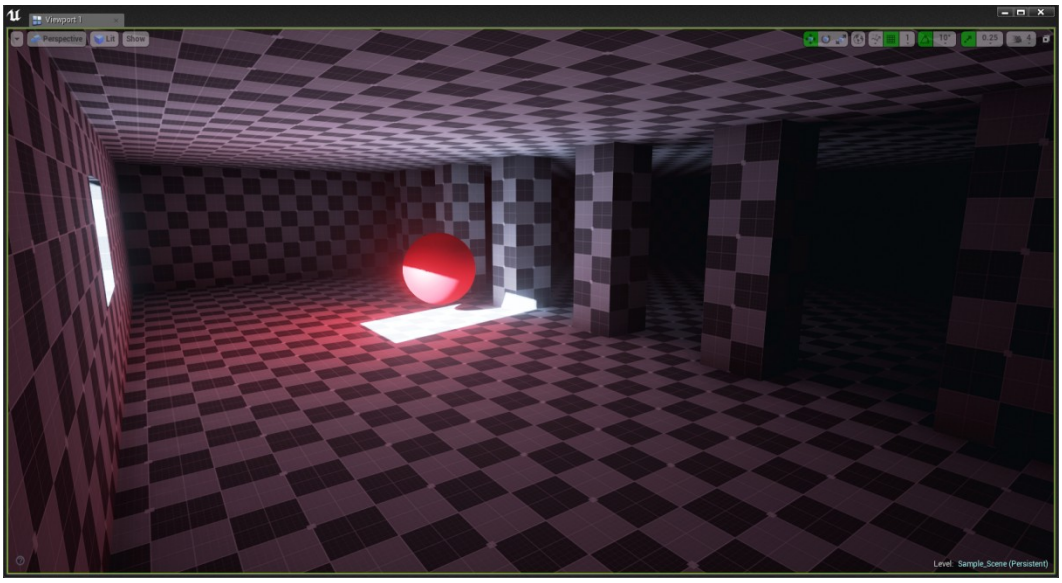

FBX Import Options
Current File: /Game/EditorSphere_2
Mesh
Import as Skeletal
Auto Generate Collision
Static Mesh LODGroup
None
Vertex Color Import Option
Ignore
Vertex Override Color
Remove Degenerates
Generate Lightmap UVs
One Convex Hull Per UCX
Import Mesh LODs
Normal Import Method
Import Normals
Combine Meshes
Transform
Import Translation
X 0.0
Y 0.0
Z 0.0
Import Rotation
Roll 0.
Pitch
Yaw 0.
Import Uniform Scale
1.0
Material
Import Materials
Import Textures
Miscellaneous
Import All
Import
Cancel

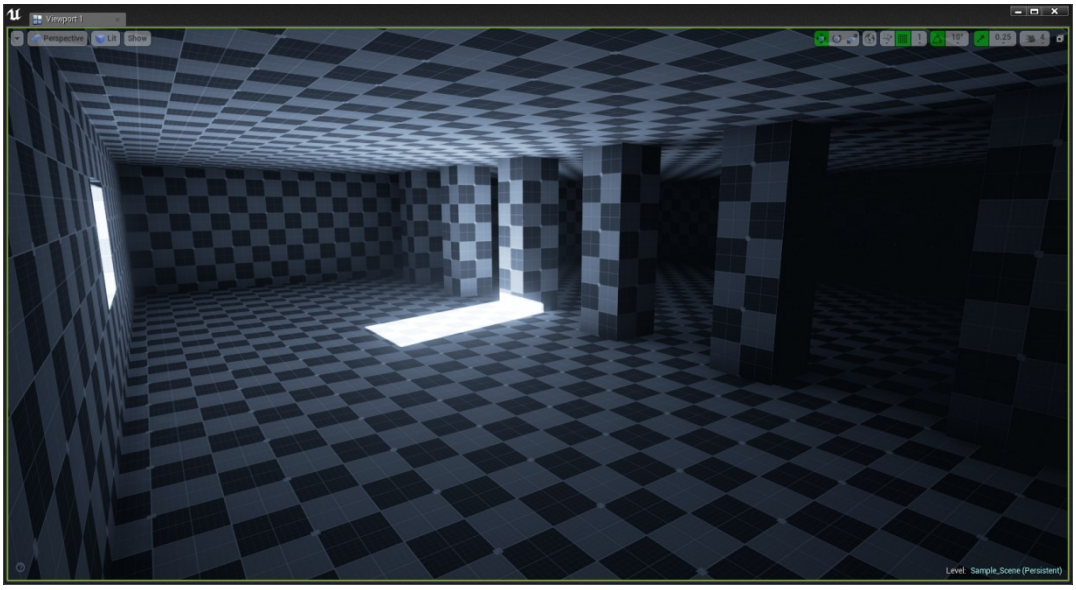

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)


Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

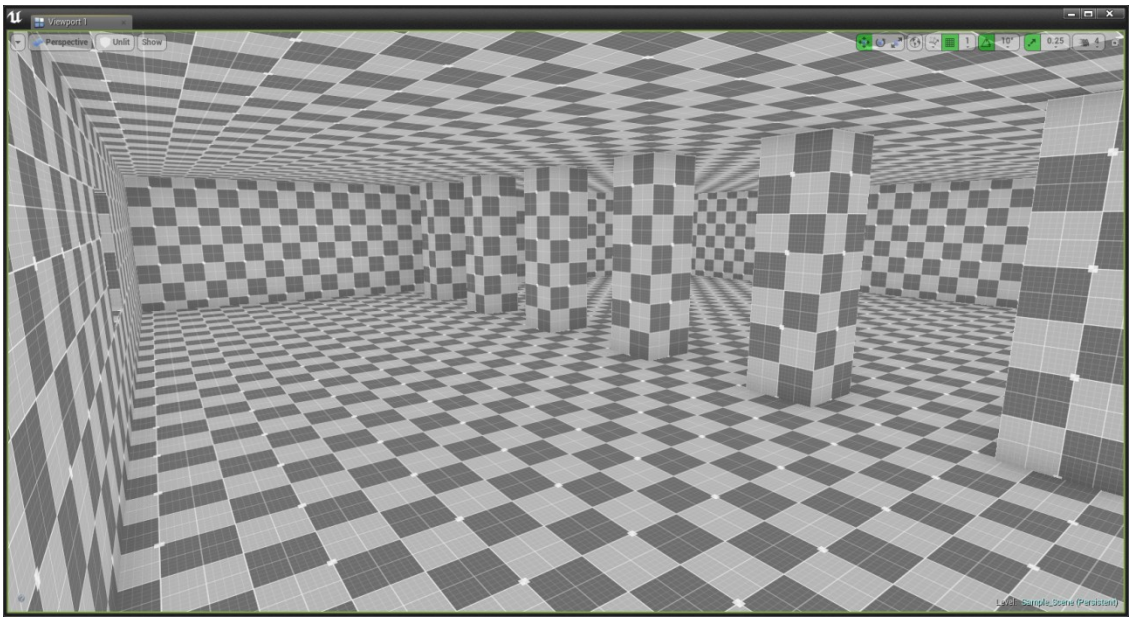

Static Mesh Settings
Double Sided Geometry
Simple Collision Physical Ma
None
Collision Complexity
Default
Light Map Resolution
128
Lpv Bias Multiplier
1.0
Walkable Slope Override
Light Map Coordinate Index
1
Use Maximum Streaming Te
Streaming Distance Multipli
1.0
Asset User Data
0 elements

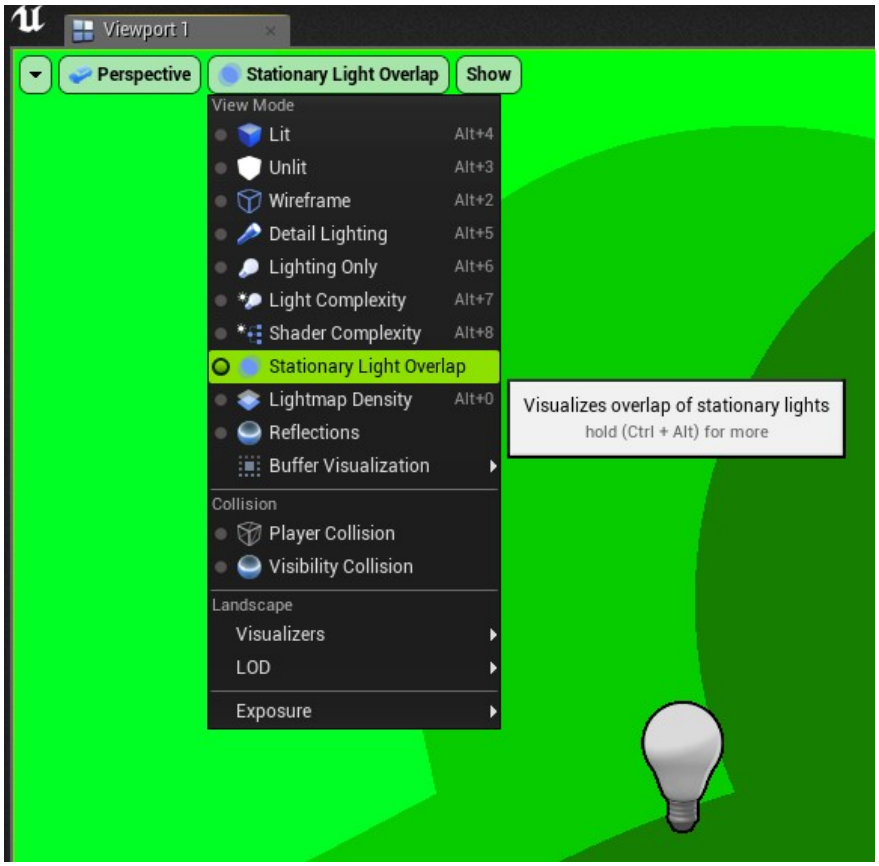

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

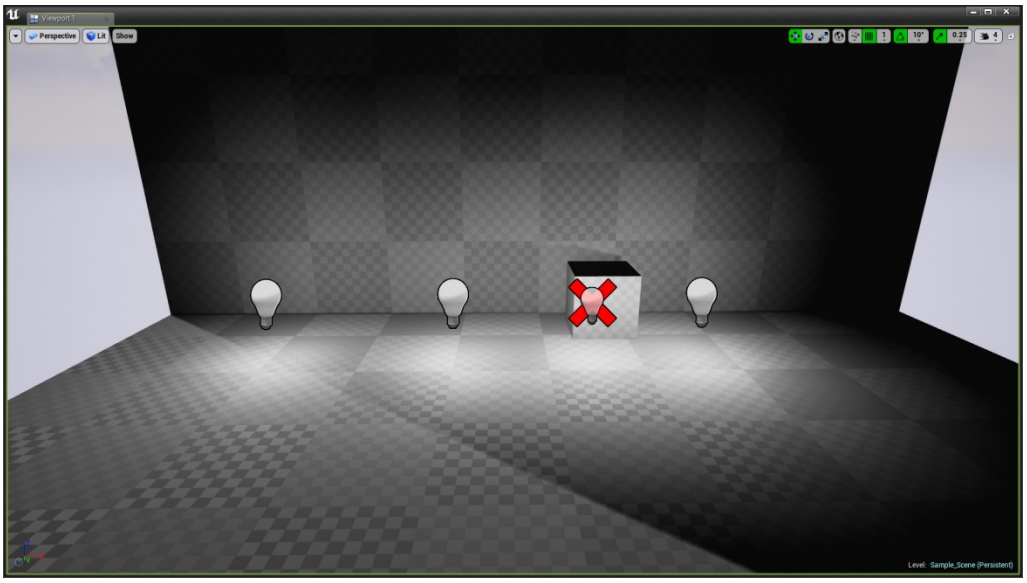

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

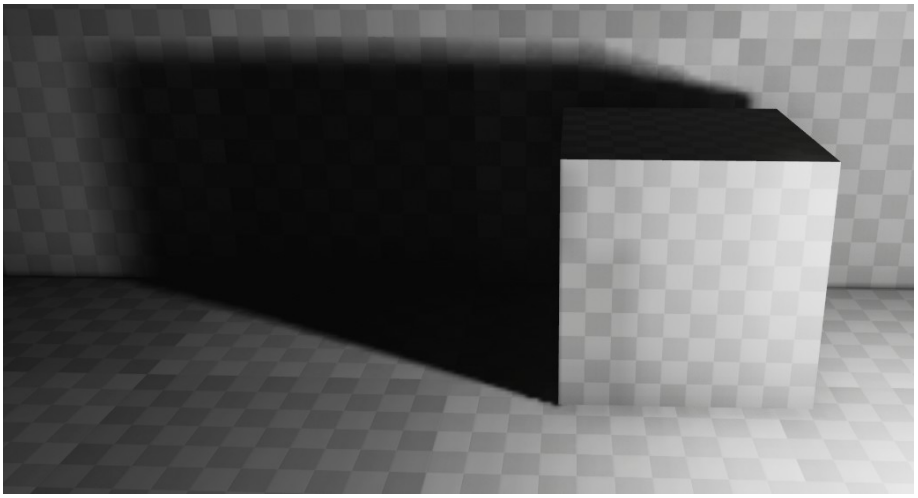

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

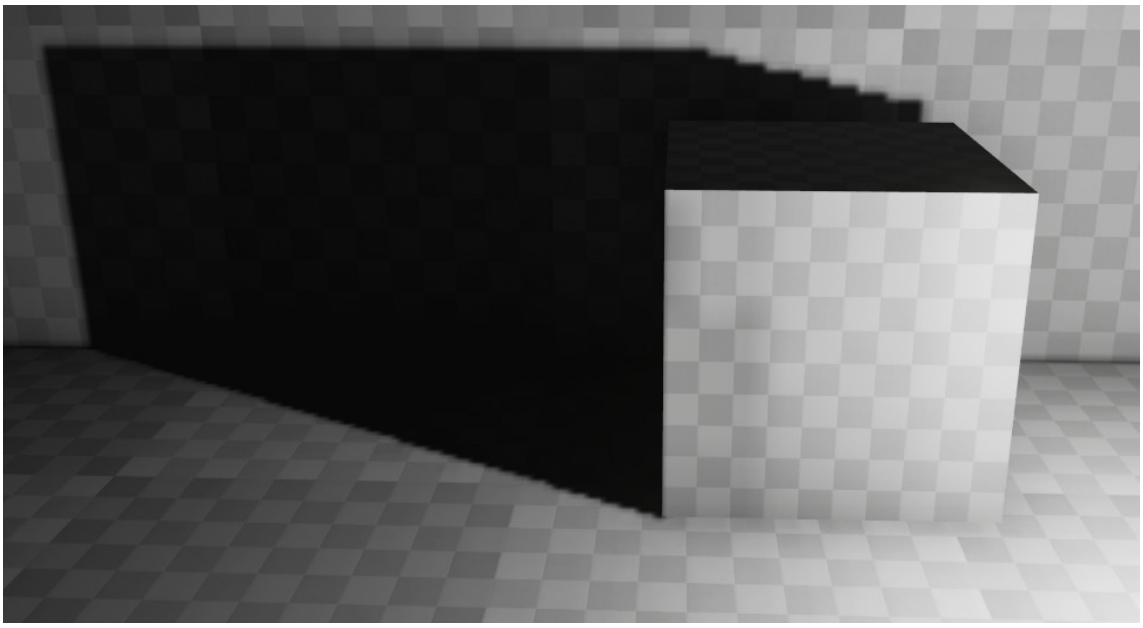
Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)

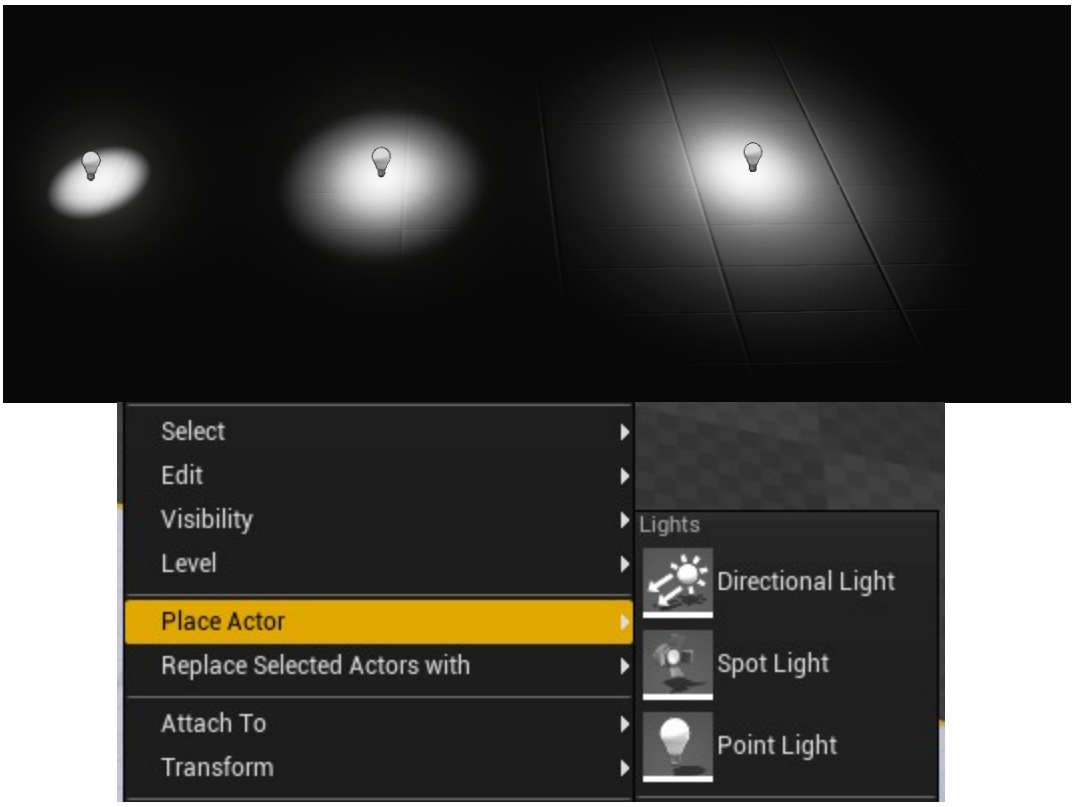

Viewport 1
Perspective
Unlit
Show
Level: Sample_Scene (Persistent)

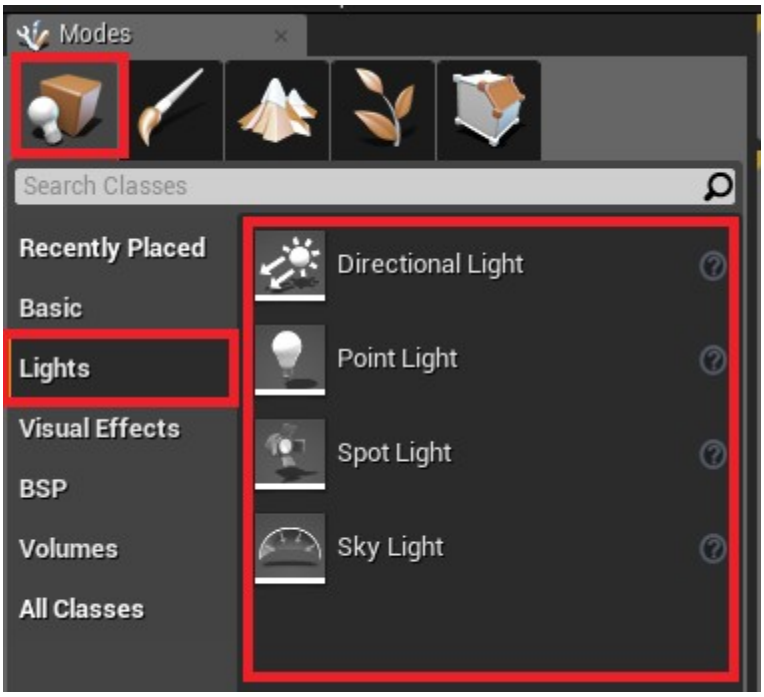

Viewport 1
Perspective
Stationary Light Overlap
Show
View Mode
Lit Alt+4
Unlit Alt+3
Wireframe Alt+2
Detail Lighting Alt+5
Lighting Only Alt+6
Light Complexity Alt+7
Shader Complexity Alt+8
Stationary Light Overlap
Lightmap Density Alt+0
Reflections
Buffer Visualization
Collision
Player Collision
Visibility Collision
Landscape
Visualizers
LOD
Exposure
Visualizes overlap of stationary lights
hold (Ctrl + Alt) for more

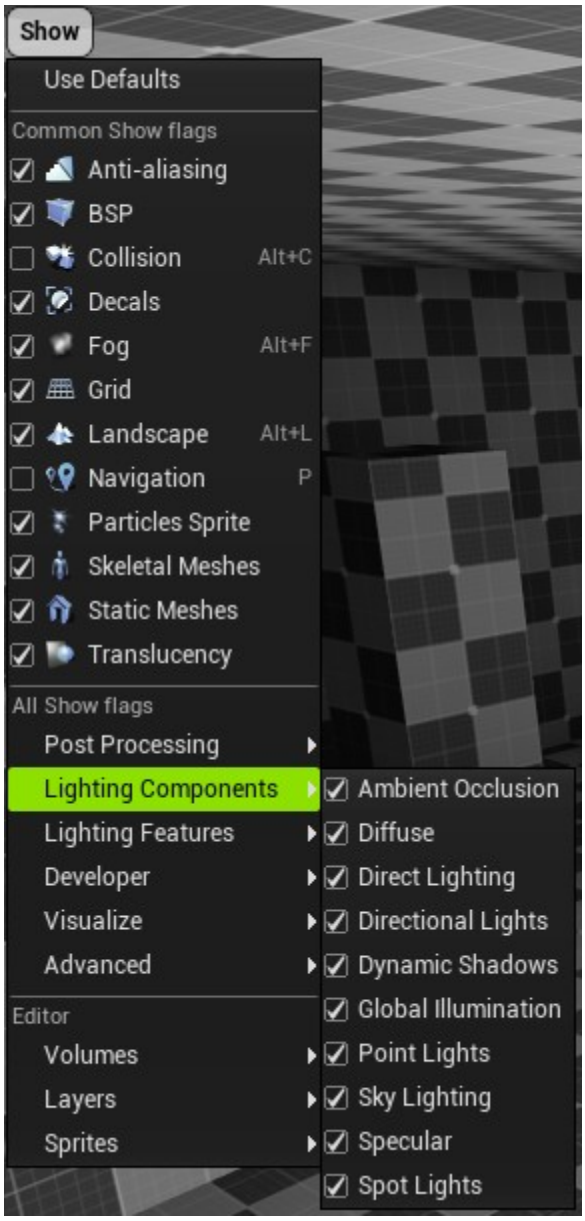

Viewport 1
Perspective
Lit
Show
Level: Sample_Scene (Persistent)



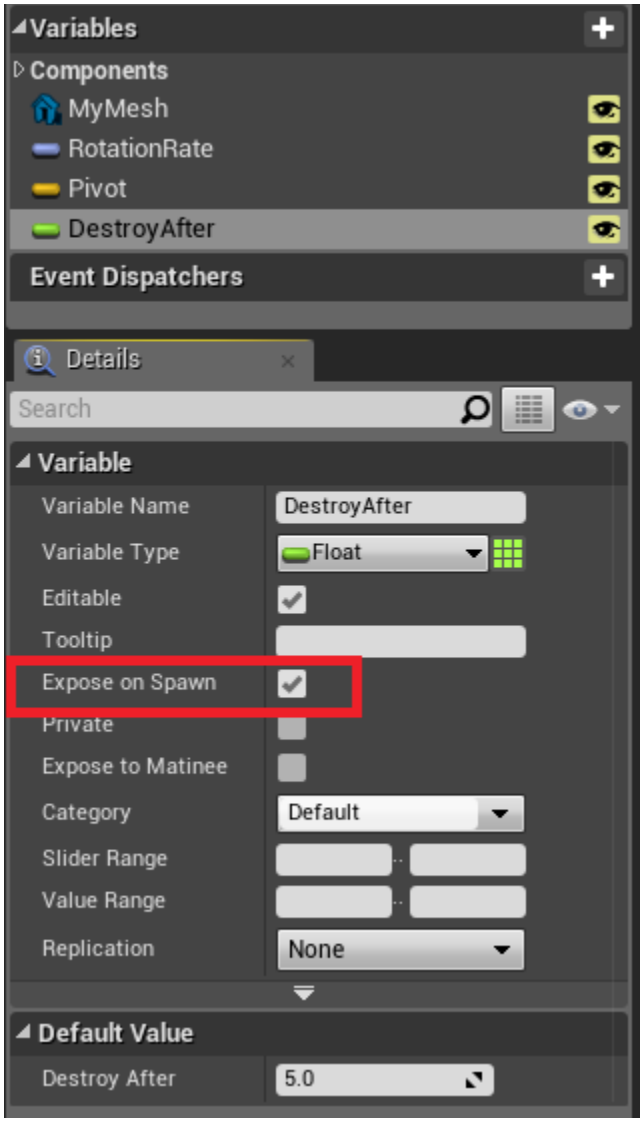


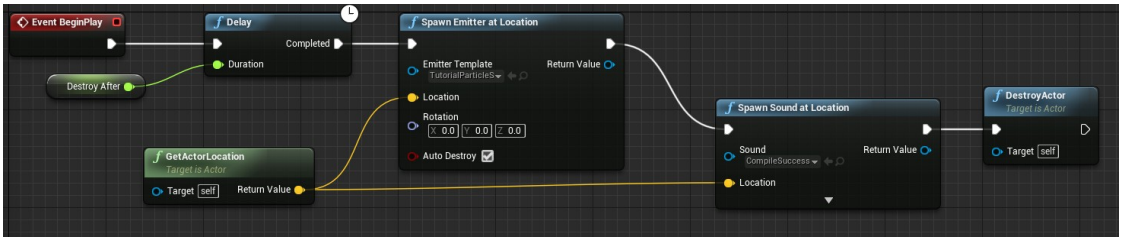

Select
Edit
Visibility
Level
Place Actor
Replace Selected Actors with
Attach To
Transform
Lights
Directional Light
Spot Light
Point Light

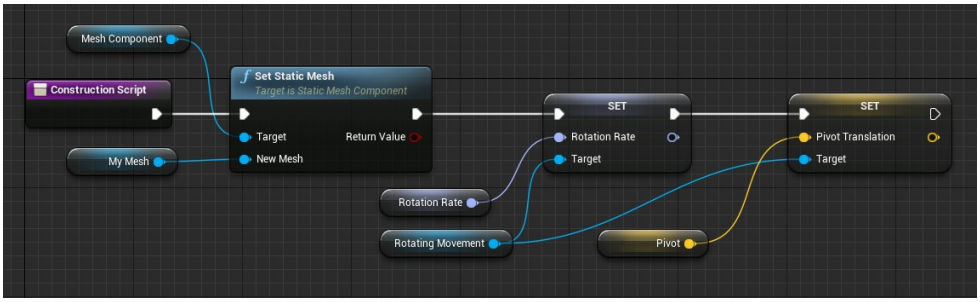

Modes
Search Classes
Recently Placed
Basic
Lights
Visual Effects
BSP
Volumes
All Classes
Directional Light
Point Light
Spot Light
Sky Light

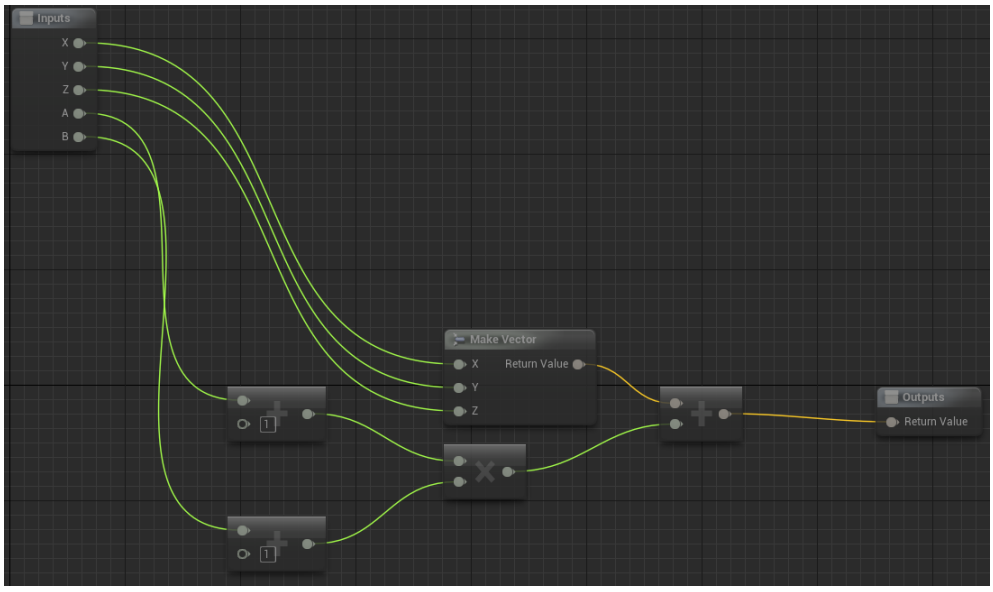

Show
Use Defaults
Common Show flags
Anti-aliasing
BSP
Collision Alt+C
Decals
Fog Alt+F
Grid
Landscape Alt+L
Navigation P
Particles Sprite
Skeletal Meshes
Static Meshes
Translucency
All Show flags
Post Processing
Lighting Components
Lighting Features
Developer
Visualize
Advanced
Editor
Volumes
Layers
Sprites
Ambient Occlusion
Diffuse
Direct Lighting
Directional Lights
Dynamic Shadows
Global Illumination
Point Lights
Sky Lighting
Specular
Spot Lights

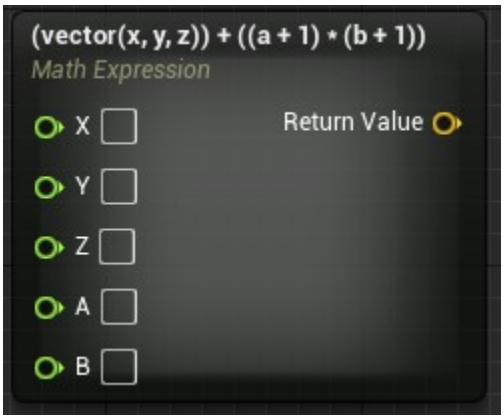
Chapter 6: Blueprints

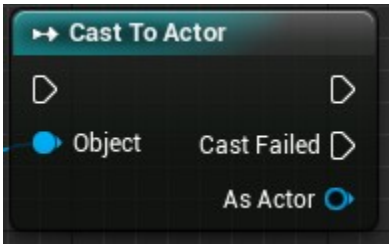


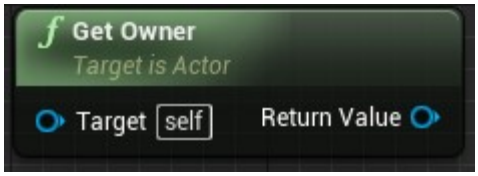

Event BeginPlay
Delay
Completed
Duration
Destroy After
Spawn Emitter at Location
Emitter Template
TutorialParticleS
Return Value
Location
Rotation
X 0.0 Y 0.0 Z 0.0
Auto Destroy
GetActorLocation
Target is Actor
Target self
Return Value
Spawn Sound at Location
Sound
CompileSuccess
Return Value
Location
DestroyActor
Target is Actor
Target self

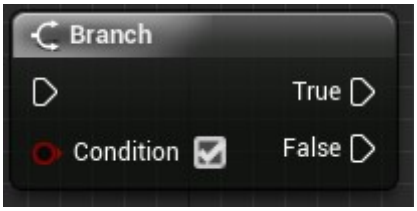

Mesh Component
Construction Script
Set Static Mesh
Target is Static Mesh Component
Target
Return Value
New Mesh
My Mesh
SET
Rotation Rate
Target
SET
Pivot Translation
Target
Rotation Rate
Rotating Movement
Pivot

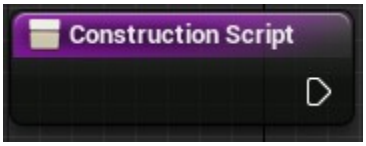

Inputs
X
Y
Z
A
B
Make Vector
X
Y
Z
Return Value
Outputs
Return Value

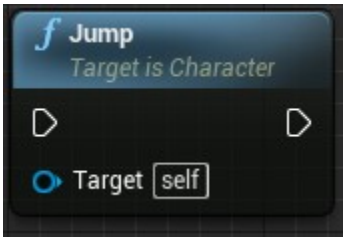

(vector(x, y, z)) + ((a + 1) * (b + 1))
Math Expression
X
Y
Z
A
B
Return Value

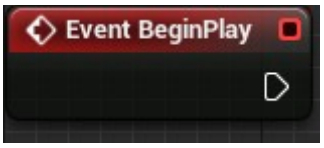

Cast To Actor
Object
Cast Failed
As Actor

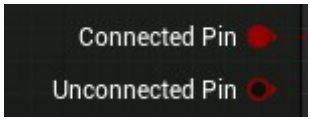

Get Owner
Target is Actor
Target
self
Return Value

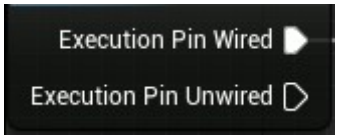

Branch
True
Condition
False


Construction Script

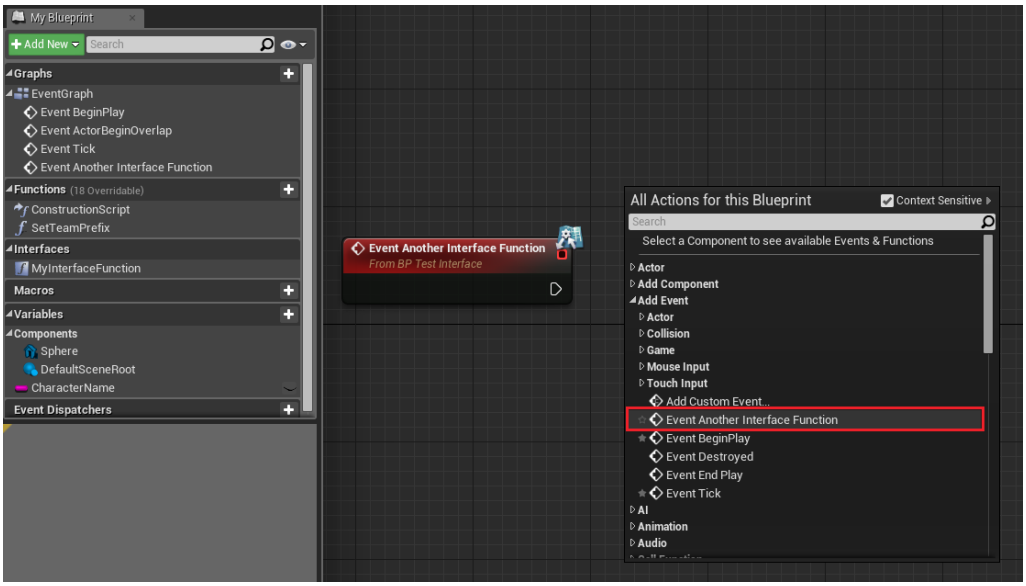

Jump
Target is Character
Target
self

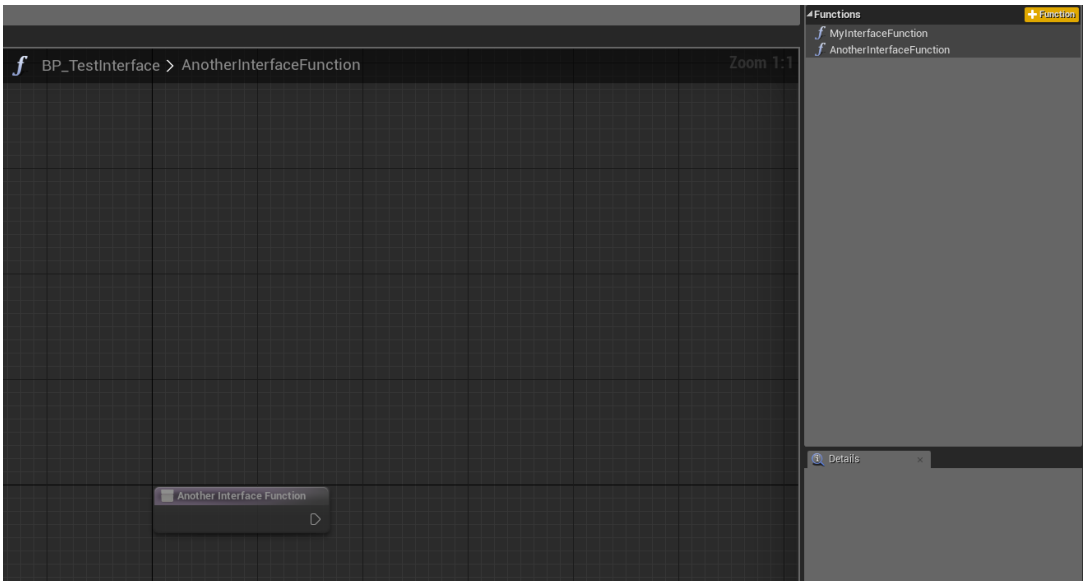

Event BeginPlay

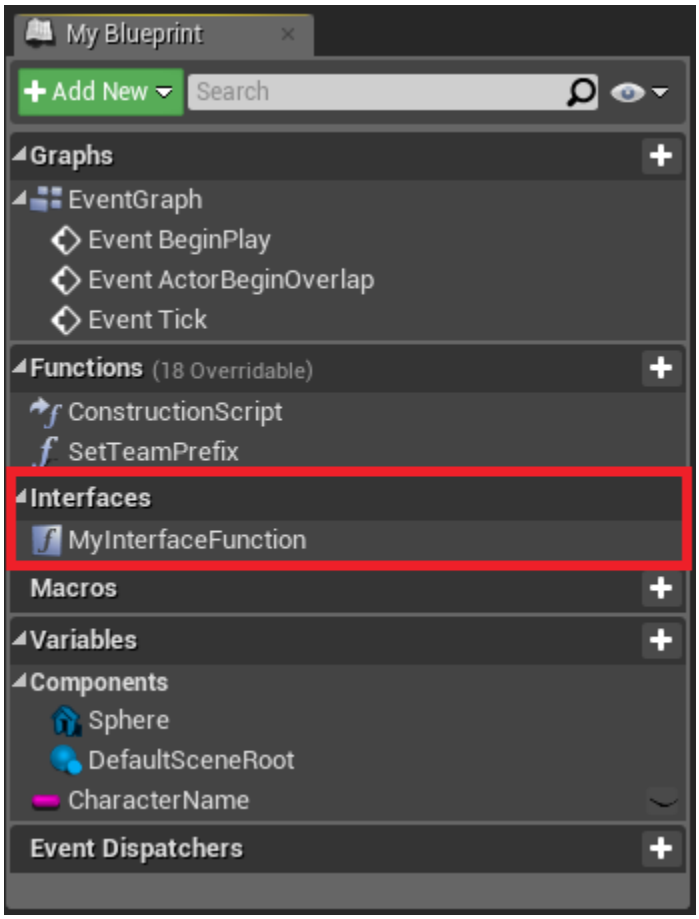

Connected Pin
Unconnected Pin

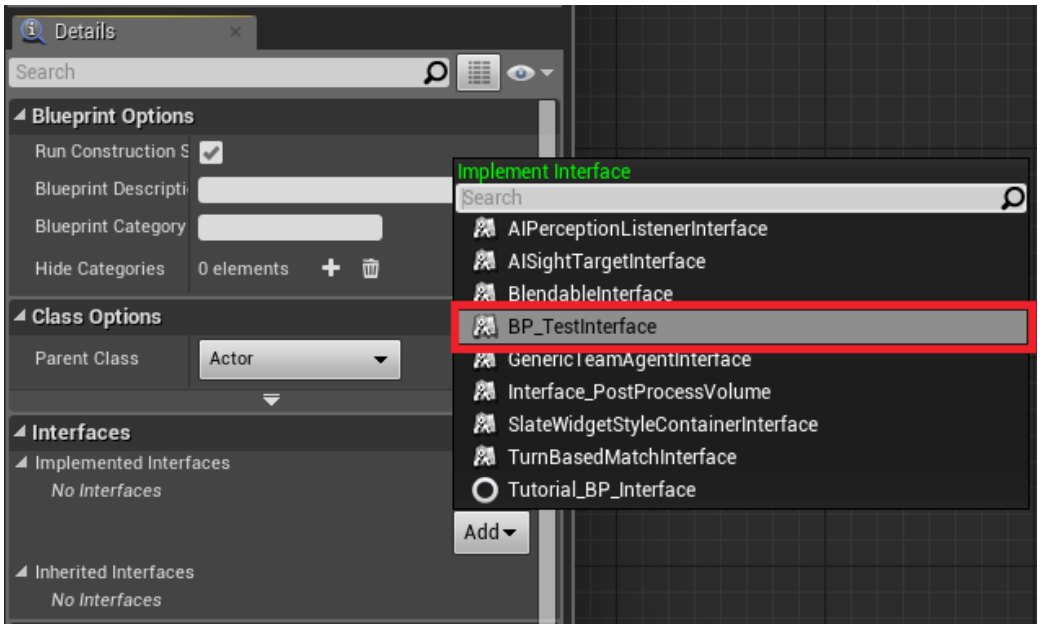

Execution Pin Wired
Execution Pin Unwired

All Actions for this Blueprint
Context Sensitive
Search
Select a Component to see available Events & Functions
Actor
Add Component
Add Event
AI
Animation
Audio
Call Function
Camera
Canvas Render Target 2D
Class
Collision
Components
Data Table
Debug
Development
Effects
Event Dispatchers
Focus

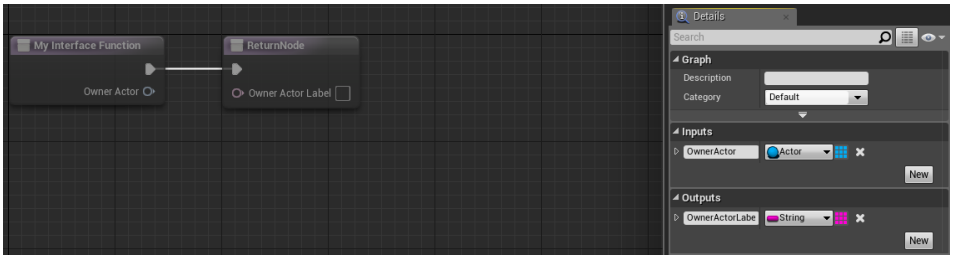

My Blueprint
Add New
Search
Graphs
EventGraph
Event BeginPlay
Event ActorBeginOverlap
Event Tick
Event Another Interface Function
Functions (18 Overridable)
ConstructionScript
SetTeamPrefix
Interfaces
MyInterfaceFunction
Macros
Variables
Components
Sphere
DefaultSceneRoot
CharacterName
Event Dispatchers
Event Another Interface Function
From BP Test Interface
All Actions for this Blueprint
Context Sensitive
Search
Select a Component to see available Events & Functions
Actor
Add Component
Add Event
Actor
Collision
Game
Mouse Input
Touch Input
Add Custom Event...
Event Another Interface Function
Event BeginPlay
Event Destroyed
Event End Play
Event Tick
AI
Animation
Audio

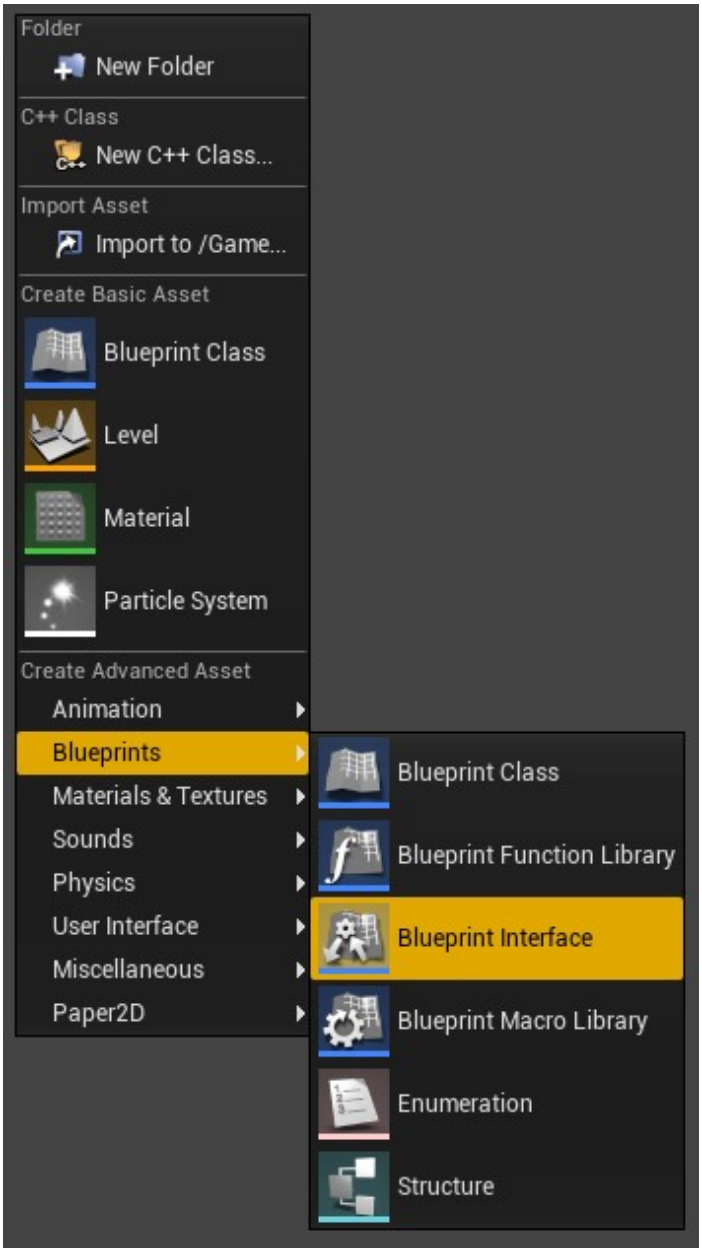

BP_TestInterface
AnotherInterfaceFunction
Zoom 1:1
Another Interface Function
Functions
Function
MyInterfaceFunction
AnotherInterfaceFunction
Details

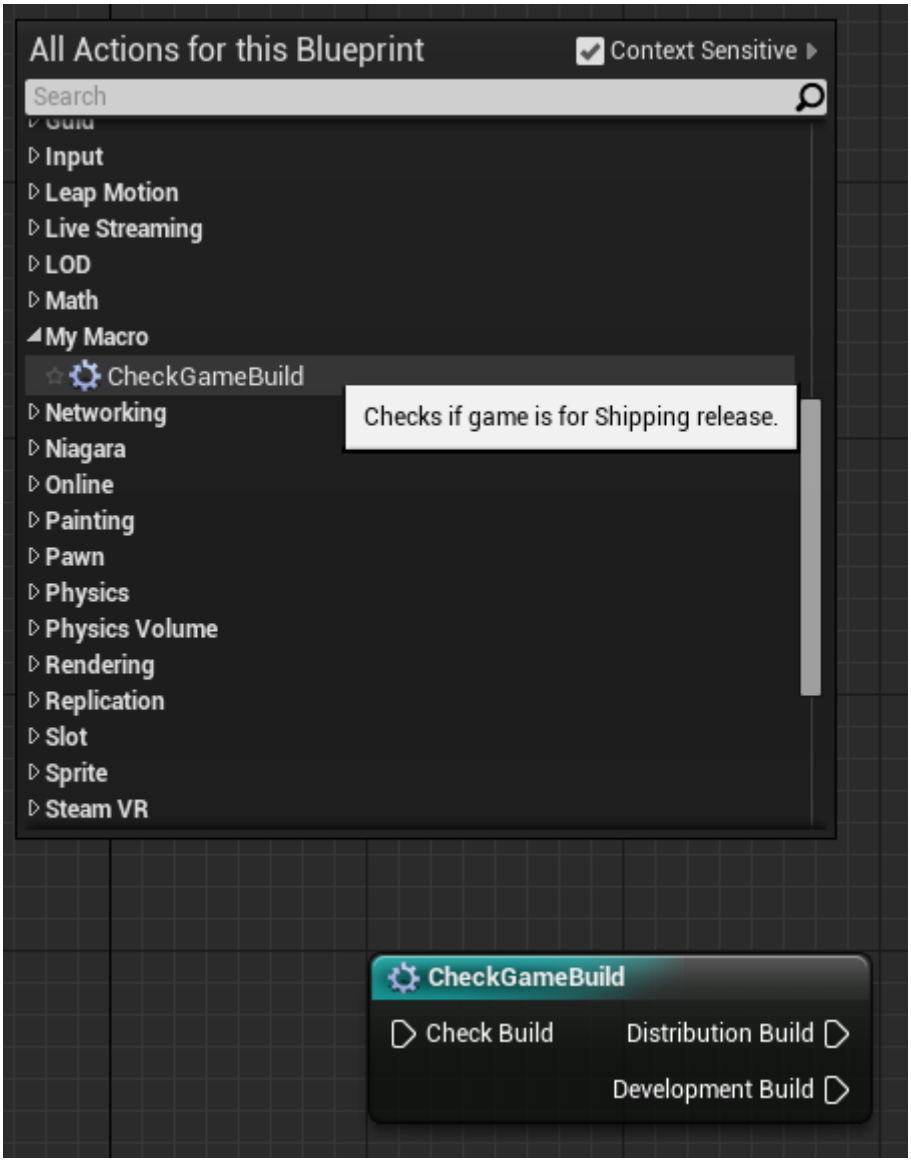

My Blueprint
Add New
Search
Graphs
EventGraph
Event BeginPlay
Event ActorBeginOverlap
Event Tick
Functions (18 Overridable)
ConstructionScript
SetTeamPrefix
Interfaces
MyInterfaceFunction
Macros
Variables
Components
Sphere
DefaultSceneRoot
CharacterName
Event Dispatchers

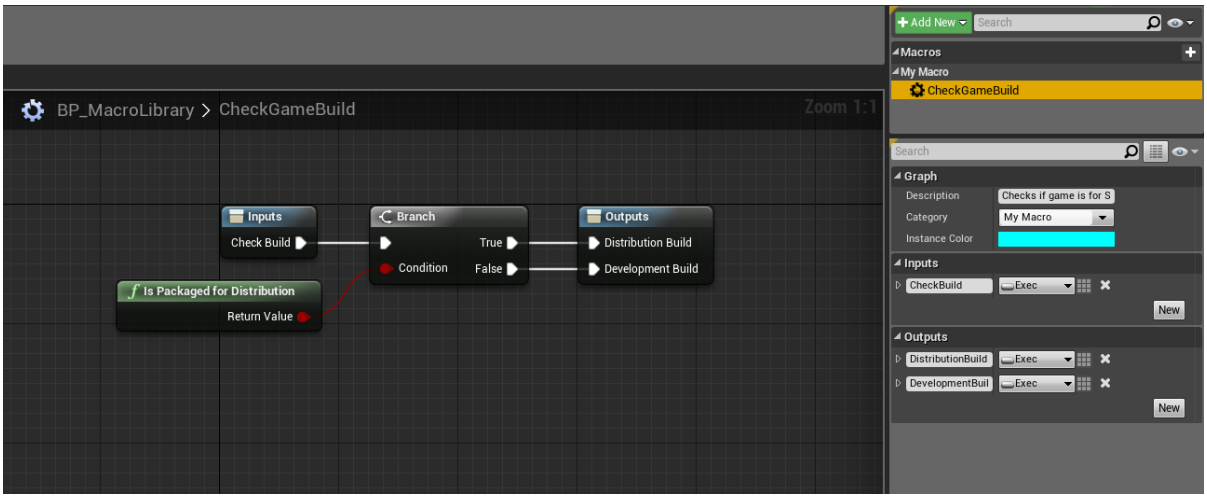

Details
Search
Blueprint Options
Run Construction S
Blueprint Descripti
Blueprint Category
Hide Categories
0 elements
Class Options
Parent Class
Actor
Interfaces
Implemented Interfaces
No Interfaces
Inherited Interfaces
No Interfaces
Implement Interface
Search
AIPerceptionListenerInterface
AISightTargetInterface
BlendableInterface
BP_TestInterface
GenericTeamAgentInterface
Interface_PostProcessVolume
SlateWidgetStyleContainerInterface
TurnBasedMatchInterface
Tutorial_BP_Interface
Add

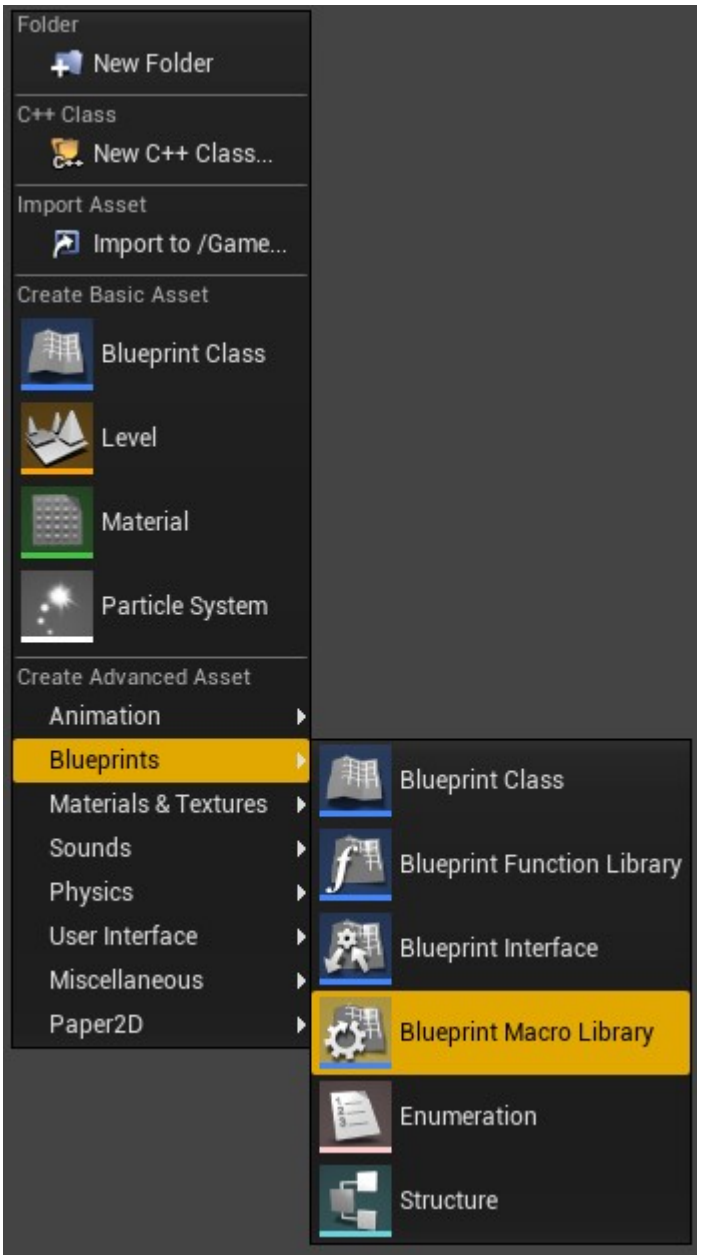
Toolbar
Compile
Save
Find in CB
Search
Class Settings

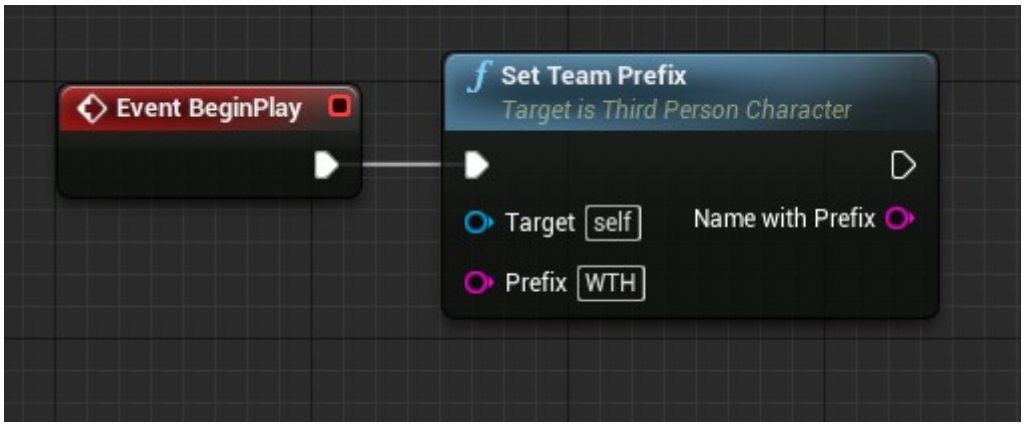

My Interface Function
Owner Actor
ReturnNode
Owner Actor Label
Details
Search
Graph
Description
Category
Default
Inputs
OwnerActor
Actor
New
Outputs
OwnerActorLabe
String
New

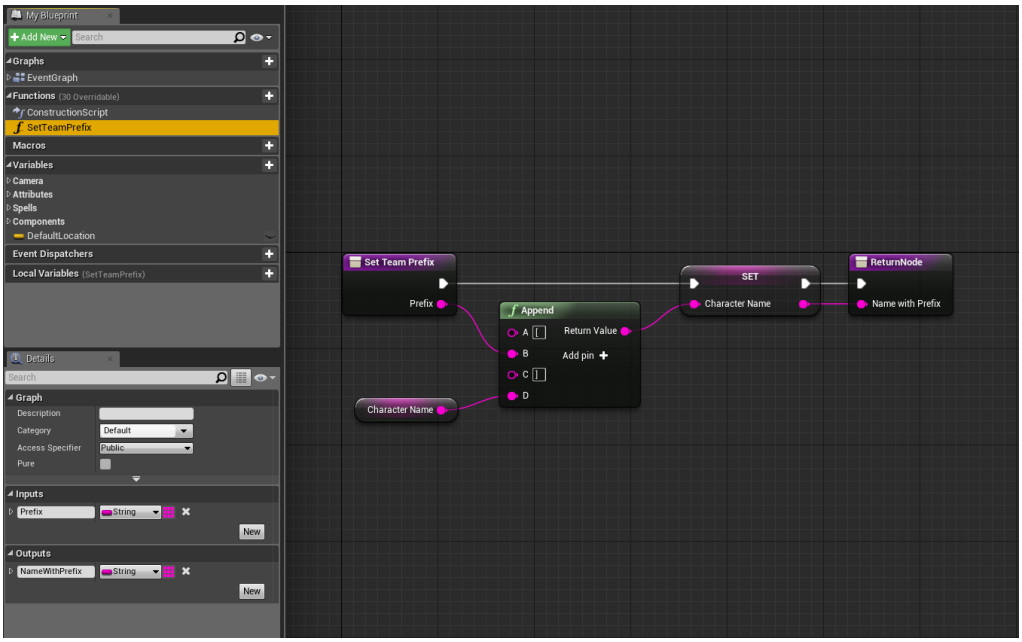

Folder
New Folder
C++ Class
New C++ Class...
Import Asset
Import to /Game...
Create Basic Asset
Blueprint Class
Level
Material
Particle System
Create Advanced Asset
Animation
Blueprints
Materials & Textures
Sounds
Physics
User Interface
Miscellaneous
Paper2D
Blueprint Class
Blueprint Function Library
Blueprint Interface
Blueprint Macro Library
Enumeration
Structure

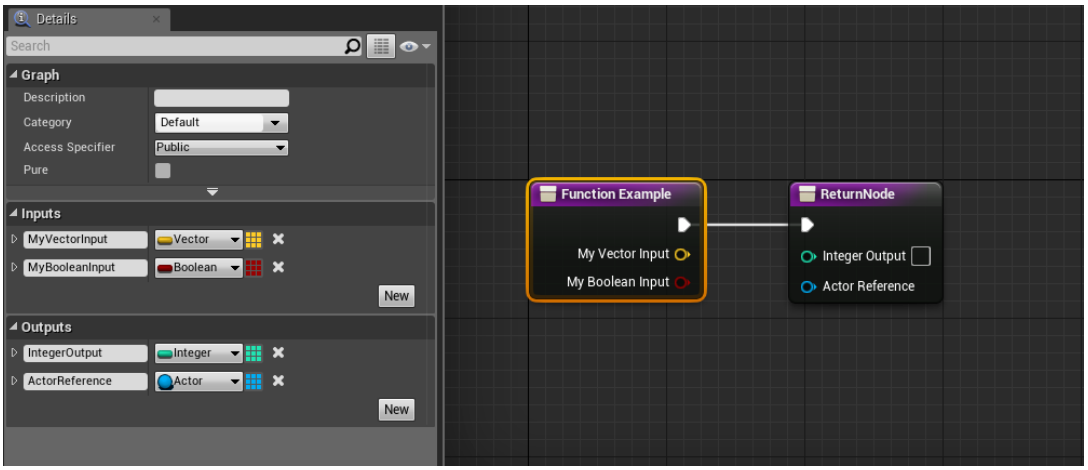

All Actions for this Blueprint
Context Sensitive
Search
Input
Leap Motion
Live Streaming
LOD
Math
My Macro
CheckGameBuild
Networking
Niagara
Online
Painting
Pawn
Physics
Physics Volume
Rendering
Replication
Slot
Sprite
Steam VR
Checks if game is for Shipping release.
CheckGameBuild
Check Build
Distribution Build
Development Build

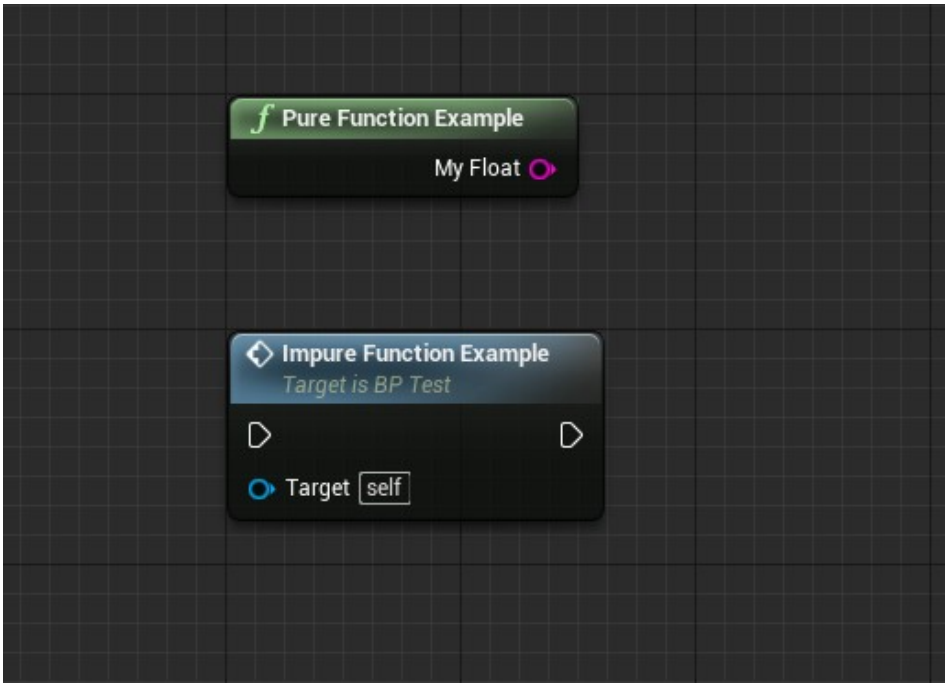

BP_MacroLibrary > CheckGameBuild
Zoom 1:1
Inputs
Check Build
Branch
True
Condition
False
Outputs
Distribution Build
Development Build
Is Packaged for Distribution
Return Value
Add New
Search
Macros
My Macro
CheckGameBuild
Search
Graph
Description
Checks if game is for S
Category
My Macro
Instance Color
Inputs
CheckBuild
Exec
New
Outputs
DistributionBuild
Exec
DevelopmentBuil
Exec
New

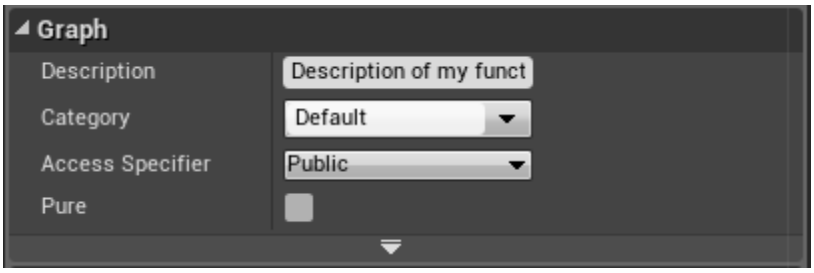

Folder
New Folder
C++ Class
New C++ Class...
Import Asset
Import to /Game...
Create Basic Asset
Blueprint Class
Level
Material
Particle System
Create Advanced Asset
Animation
Blueprints
Materials & Textures
Sounds
Physics
User Interface
Miscellaneous
Paper2D
Blueprint Class
Blueprint Function Library
Blueprint Interface
Blueprint Macro Library
Enumeration
Structure

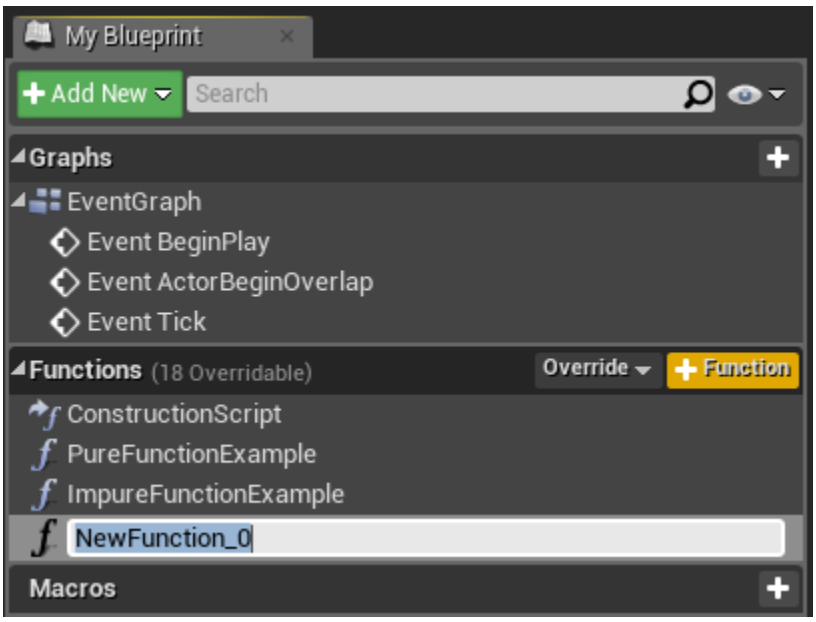

Event BeginPlay
Set Team Prefix
Target is Third Person Character
Target
self
Name with Prefix
Prefix
WTH

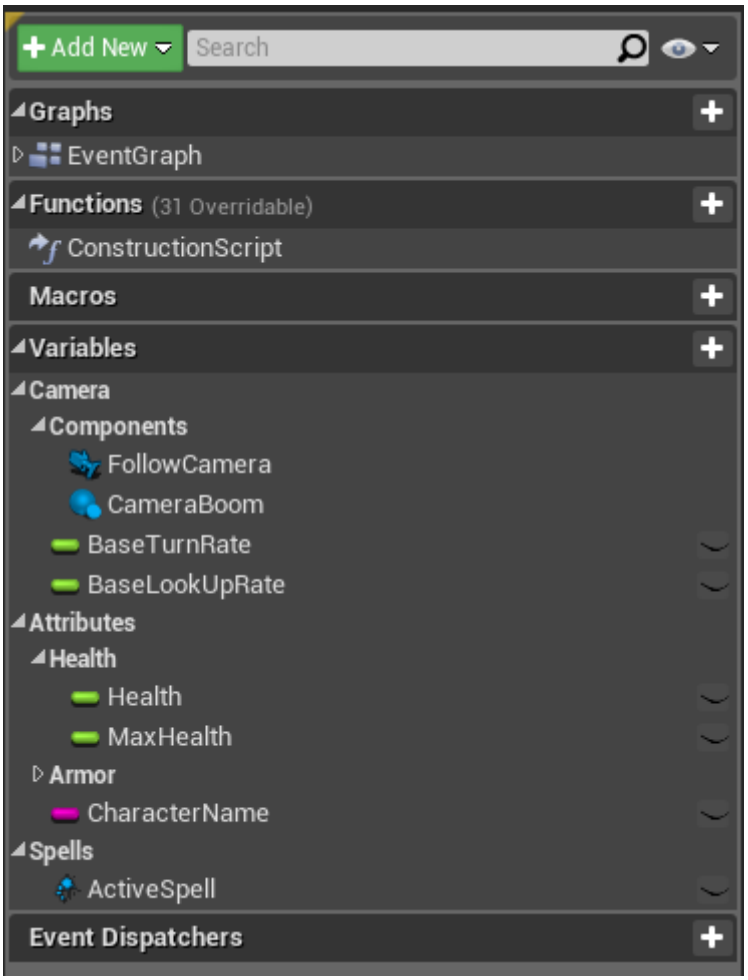

My Blueprint
Add New
Search
Graphs
EventGraph
Functions (30 Overridable)
ConstructionScript
SetTeamPrefix
Macros
Variables
Camera
Attributes
Spells
Components
DefaultLocation
Event Dispatchers
Local Variables (SetTeamPrefix)
Details
Search
Graph
Description
Category
Default
Access Specifier
Public
Pure
Inputs
Prefix
String
New
Outputs
NameWithPrefix
String
New
Set Team Prefix
Prefix
Append
A
B
C
D
Return Value
Add pin
Character Name
SET
Character Name
ReturnNode
Name with Prefix

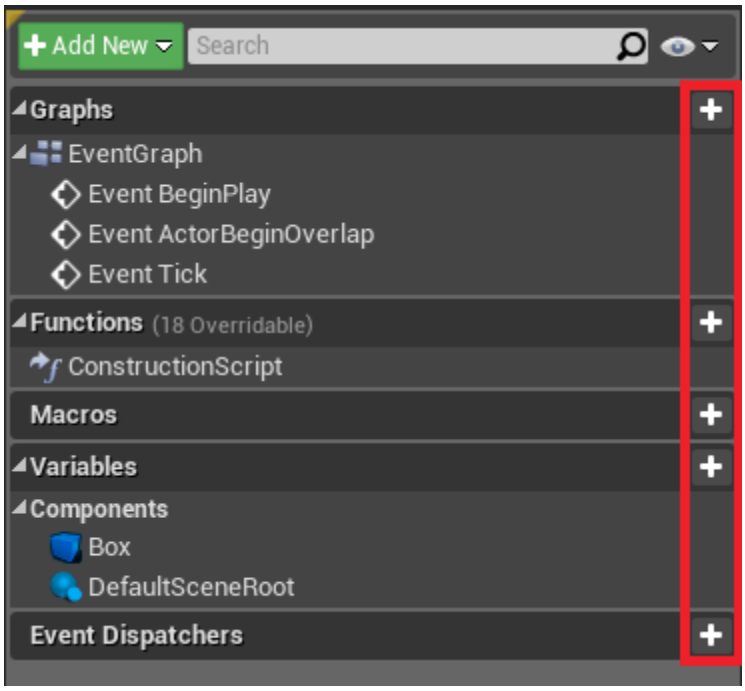

Details
Search
Graph
Description
Category
Default
Access Specifier
Public
Pure
Inputs
MyVectorInput
Vector
MyBooleanInput
Boolean
New
Outputs
IntegerOutput
Integer
ActorReference
Actor
New
Function Example
My Vector Input
My Boolean Input
ReturnNode
Integer Output
Actor Reference

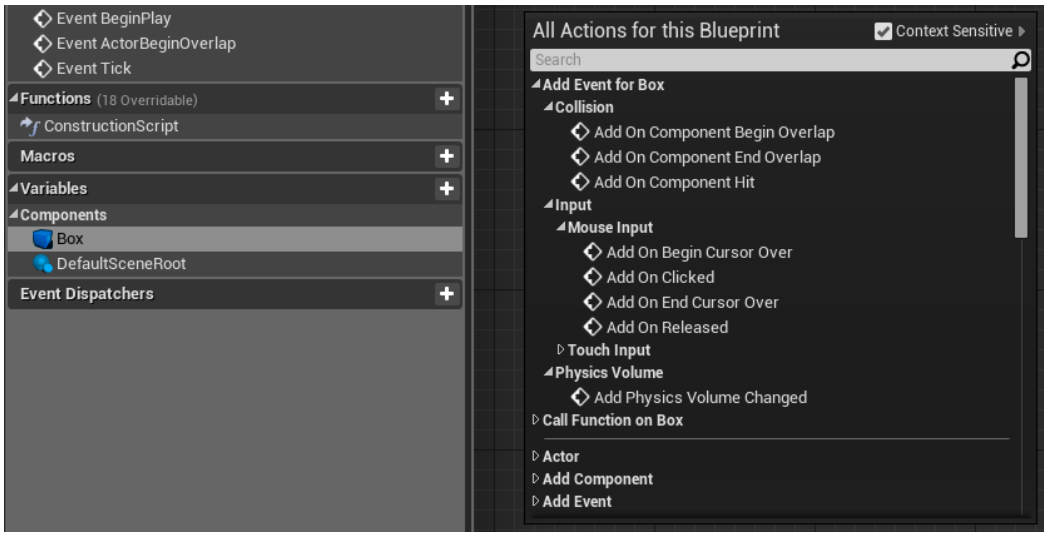

Pure Function Example
My Float
Impure Function Example
Target is BP Test
Target
self

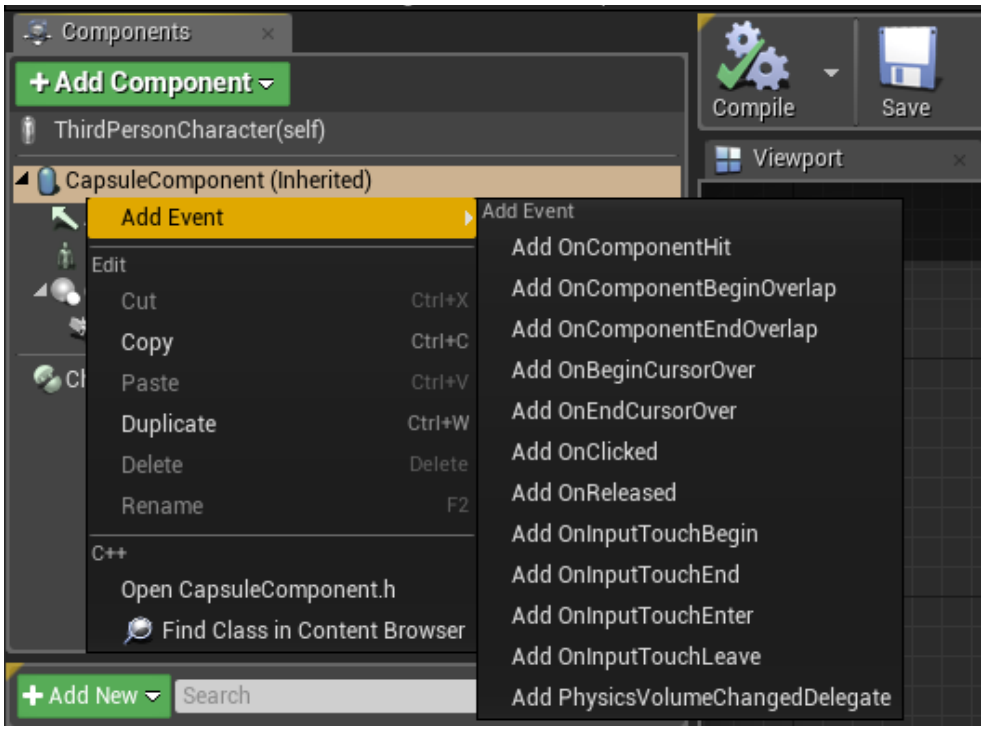

Graph
Description
Description of my funct
Category
Default
Access Specifier
Public
Pure


My Blueprint
Add New
Search
Graphs
EventGraph
Event BeginPlay
Event ActorBeginOverlap
Event Tick
Functions (18 Overridable)
Override
Function
ConstructionScript
PureFunctionExample
ImpureFunctionExample
NewFunction_0
Macros

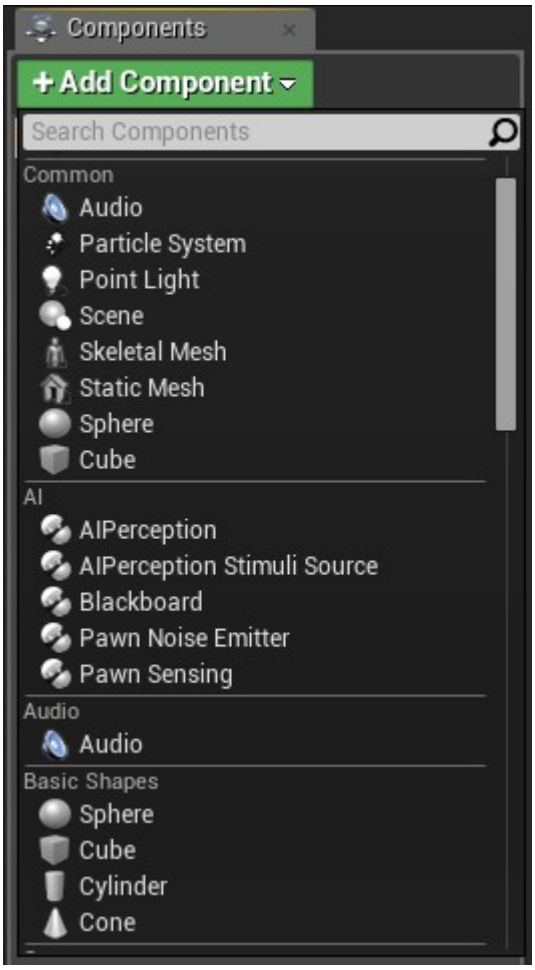

Add New
Search
Graphs
EventGraph
Functions (31 Overridable)
ConstructionScript
Macros
Variables
Camera
Components
FollowCamera
CameraBoom
BaseTurnRate
BaseLookUpRate
Attributes
Health
Health
MaxHealth
Armor
CharacterName
Spells
ActiveSpell
Event Dispatchers

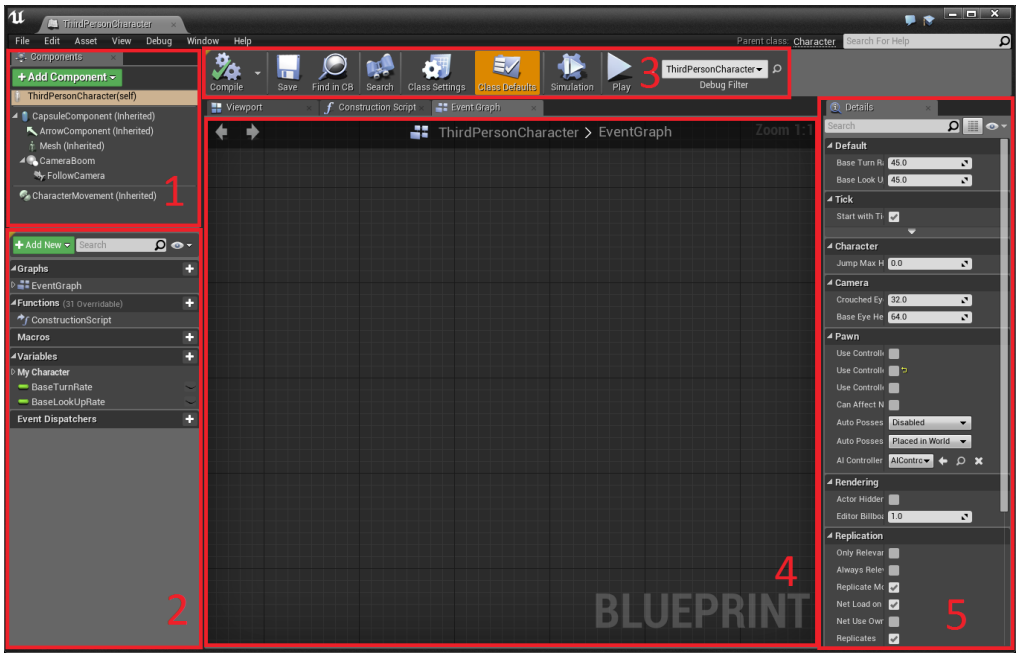

Add New
Search
Graphs
EventGraph
Event BeginPlay
Event ActorBeginOverlap
Event Tick
Functions (18 Overridable)
ConstructionScript
Macros
Variables
Components
Box
DefaultSceneRoot
Event Dispatchers

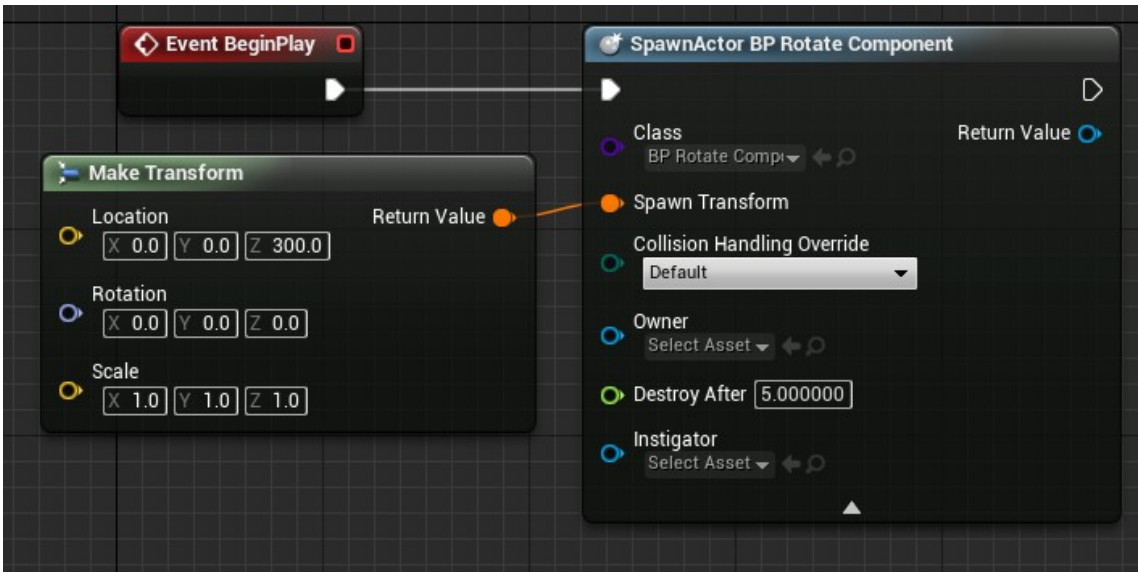

Event BeginPlay
Event ActorBeginOverlap
Event Tick
Functions (18 Overridable)
ConstructionScript
Macros
Variables
Components
Box
DefaultSceneRoot
Event Dispatchers
All Actions for this Blueprint
Context Sensitive
Search
Add Event for Box
Collision
Add On Component Begin Overlap
Add On Component End Overlap
Add On Component Hit
Input
Mouse Input
Add On Begin Cursor Over
Add On Clicked
Add On End Cursor Over
Add On Released
Touch Input
Physics Volume
Add Physics Volume Changed
Call Function on Box
Actor
Add Component
Add Event


Components
+ Add Component
ThirdPersonCharacter(self)
CapsuleComponent (Inherited)
Add Event
Edit
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+W
Delete Delete
Rename F2
C++
Open CapsuleComponent.h
Find Class in Content Browser
Add New
Search
Compile
Save
Viewport
Add Event
Add OnComponentHit
Add OnComponentBeginOverlap
Add OnComponentEndOverlap
Add OnBeginCursorOver
Add OnEndCursorOver
Add OnClicked
Add OnReleased
Add OnInputTouchBegin
Add OnInputTouchEnd
Add OnInputTouchEnter
Add OnInputTouchLeave
Add PhysicsVolumeChangedDelegate

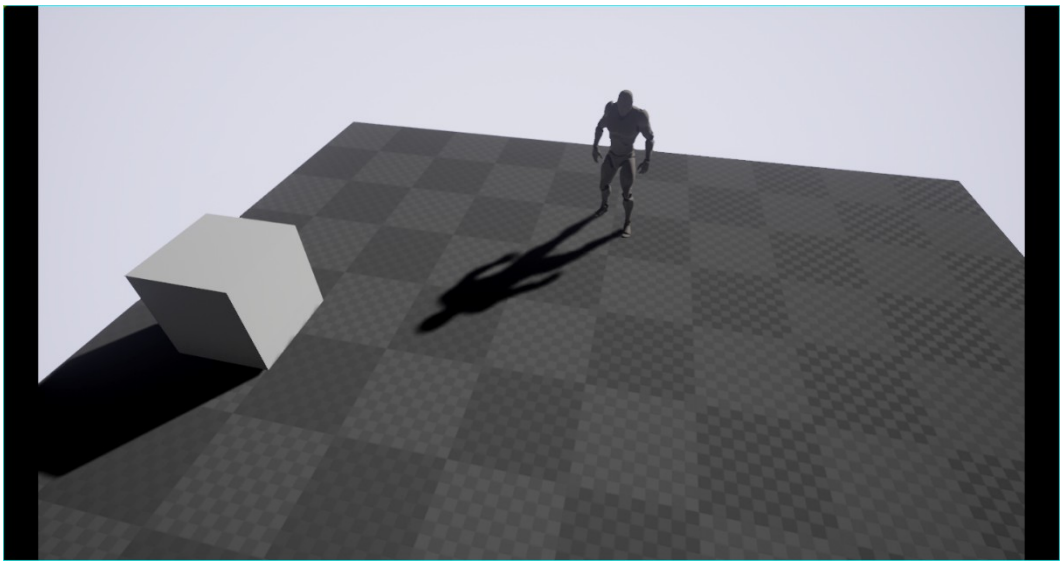
Details
Search
Variable
Transform
Sockets
Shape
Navigation
Rendering
Physics
Collision
Tags
Events
On Component Hit
On Component Begin Overlap
On Component End Overlap
On Begin Cursor Over
On End Cursor Over
On Clicked
On Released
On Input Touch Begin
On Input Touch End
On Input Touch Enter
On Input Touch Leave
Physics Volume Changed

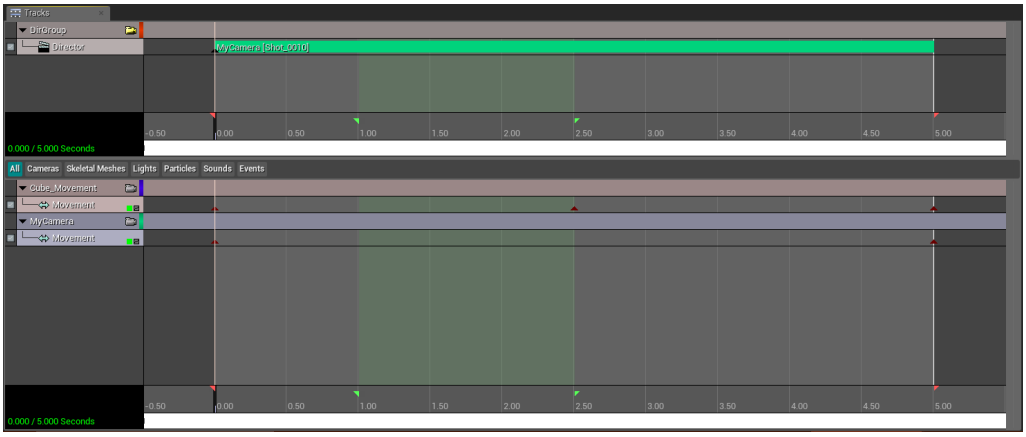

Components
+ Add Component
Search Components
Common
Audio
Particle System
Point Light
Scene
Skeletal Mesh
Static Mesh
Sphere
Cube
AI
AIPerception
AIPerception Stimuli Source
Blackboard
Pawn Noise Emitter
Pawn Sensing
Audio
Audio
Basic Shapes
Sphere
Cube
Cylinder
Cone

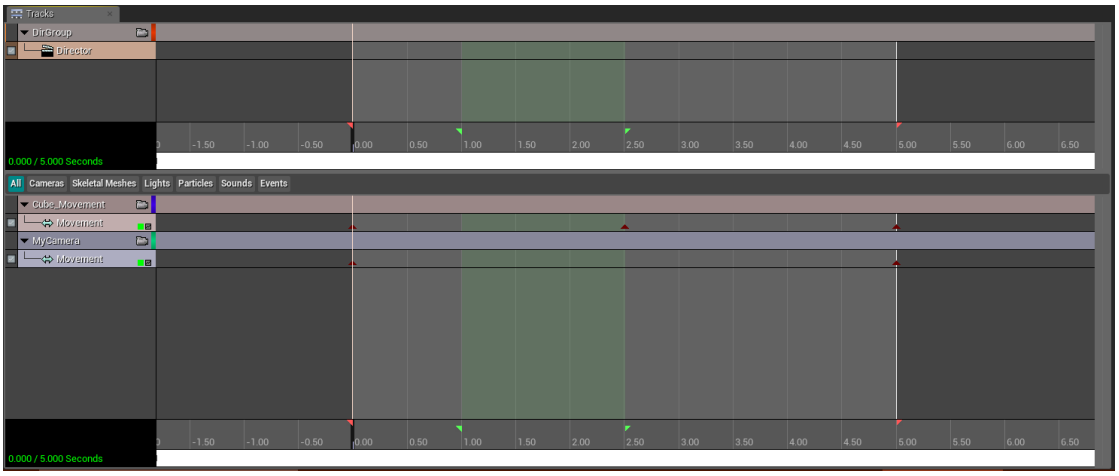

ThirdPersonCharacter
File Edit Asset View Debug Window Help
Parent class: Character
Search For Help
Components
+ Add Component
ThirdPersonCharacter(self)
CapsuleComponent (Inherited)
ArrowComponent (Inherited)
Mesh (Inherited)
CameraBoom
FollowCamera
CharacterMovement (Inherited)
1
Compile
Save
Find in CB
Search
Class Settings
Class Defaults
Simulation
Play
3
ThirdPersonCharacter
Debug Filter
Viewport
Construction Script
Event Graph
ThirdPersonCharacter > EventGraph
Zoom 1:1
Details
Search
Default
Base Turn R
Base Look U
Tick
Start with Ti
Character
Jump Max H
Camera
Crouched Ey
Base Eye He
Pawn
Use Controll
Use Controll
Use Controll
Can Affect N
Auto Posses
Auto Posses
AI Controller
Rendering
Actor Hidder
Editor Billbo
Replication
Only Relevar
Always Rele
Replicate Mc
Net Load on
Net Use Owr
Replicates
Add New
Search
Graphs
EventGraph
Functions (31 Overridable)
ConstructionScript
Macros
Variables
My Character
BaseTurnRate
BaseLookUpRate
Event Dispatchers
2
4
BLUEPRINT
5

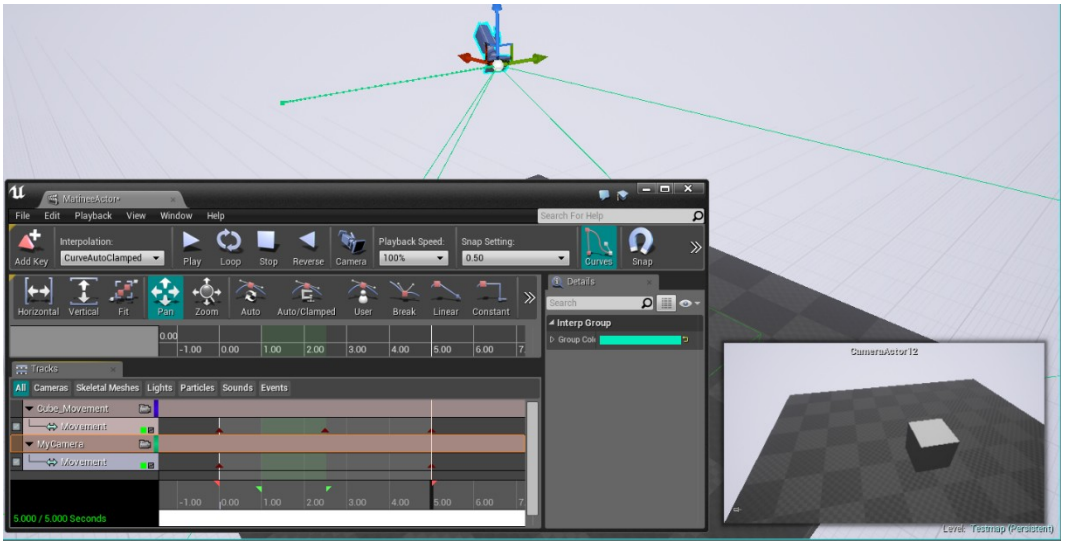

Event BeginPlay
Make Transform
Location
X 0.0 Y 0.0 Z 300.0
Return Value
Rotation
X 0.0 Y 0.0 Z 0.0
Scale
X 1.0 Y 1.0 Z 1.0
SpawnActor BP Rotate Component
Class
BP Rotate Compi
Return Value
Spawn Transform
Collision Handling Override
Default
Owner
Select Asset
Destroy After 5.000000
Instigator
Select Asset

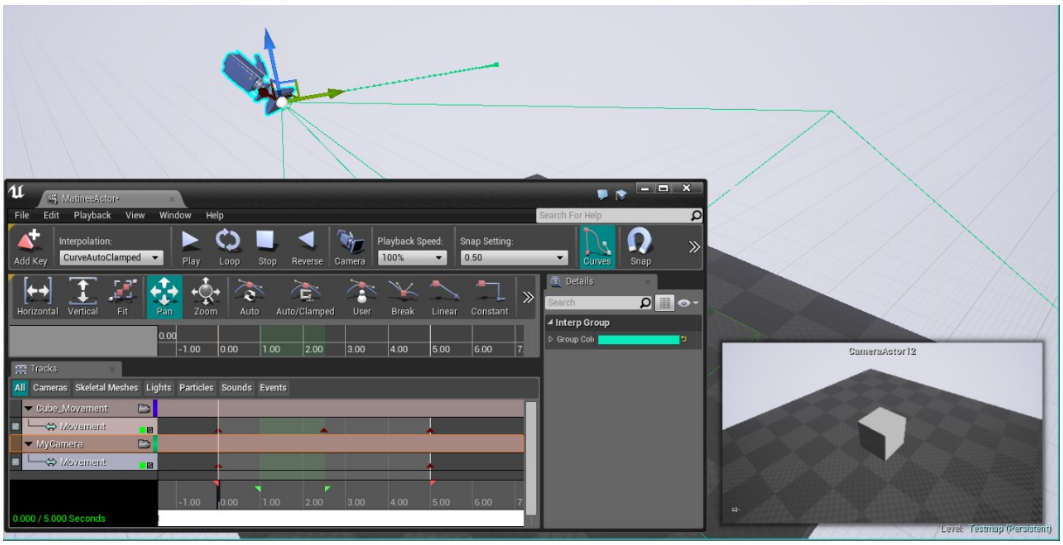
Chapter 7: Matinee



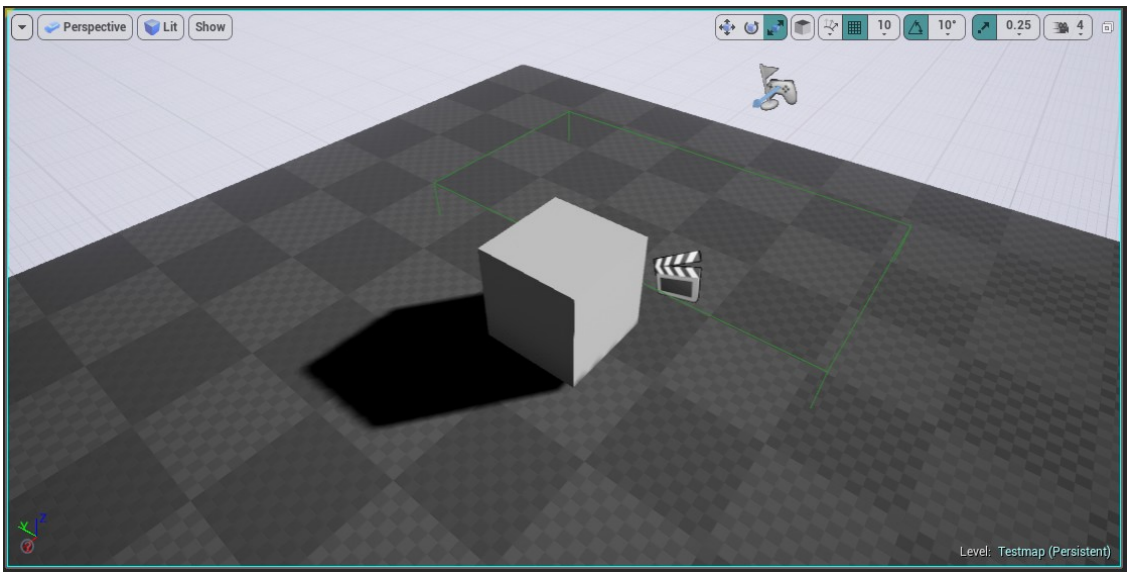


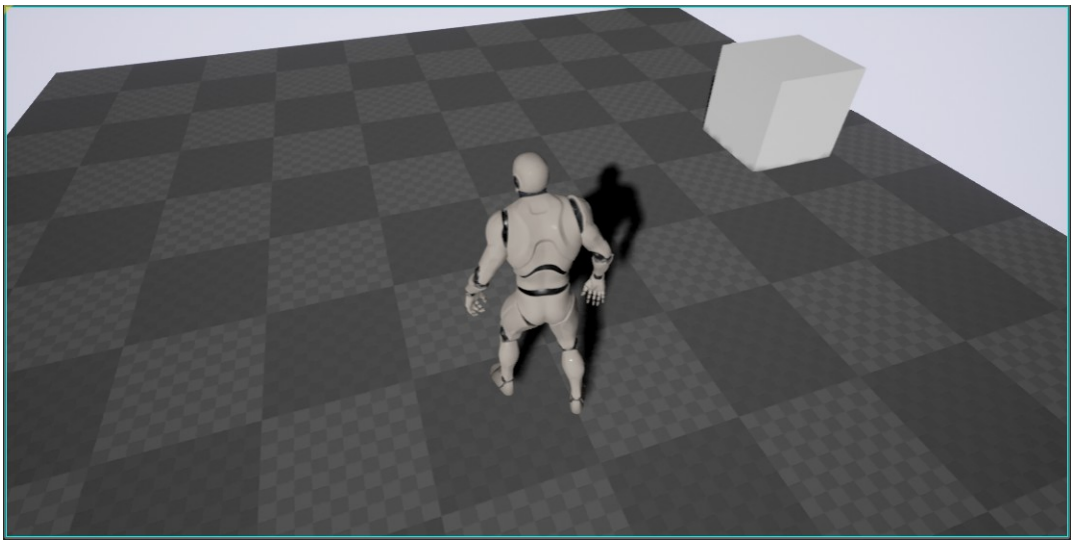

Tracks
DirGroup
Director
0.000 / 5.000 Seconds
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Movement
Movement
MyCamera
Movement
0.000 / 5.000 Seconds

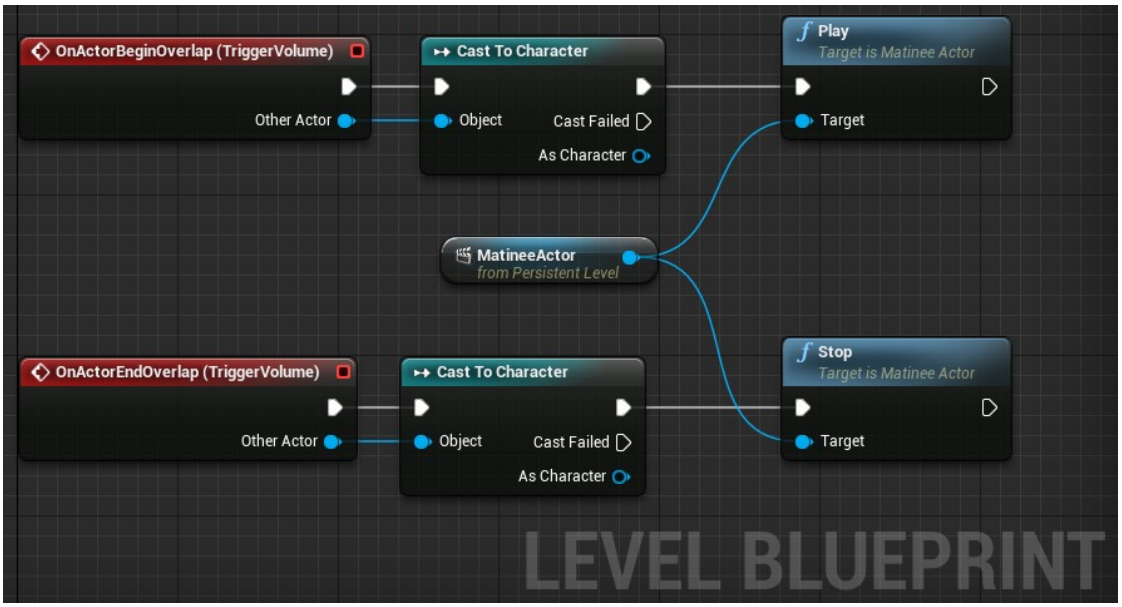

MatineeActor
File
Edit
Playback
View
Window
Help
Search For Help
Add Key
Interpolation:
CurveAutoClamped
Play
Loop
Stop
Reverse
Camera
Playback Speed:
100%
Snap Setting:
0.50
Curves
Snap
Horizontal
Vertical
Fit
Pan
Zoom
Auto
Auto/Clamped
User
Break
Linear
Constant
Details
Search
Interp Group
Group Col
Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Movement
Movement
MyCamera
Movement
5.000 / 5.000 Seconds
CameraActor12
Level: Testmap (Persistent)



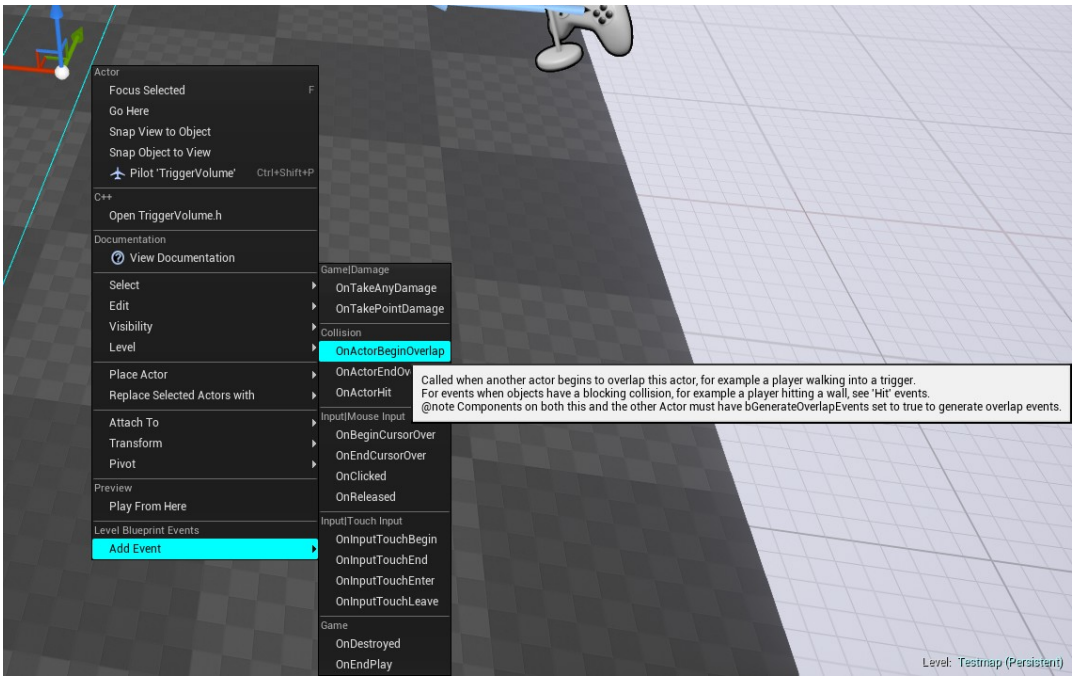
MatineeActor*
File
Edit
Playback
View
Window
Help
Add Key
Interpolation:
CurveAutoClamped
Play
Loop
Stop
Reverse
Camera
Playback Speed:
100%
Snap Setting:
0.50
Create Camera Actor at Current Camera Location

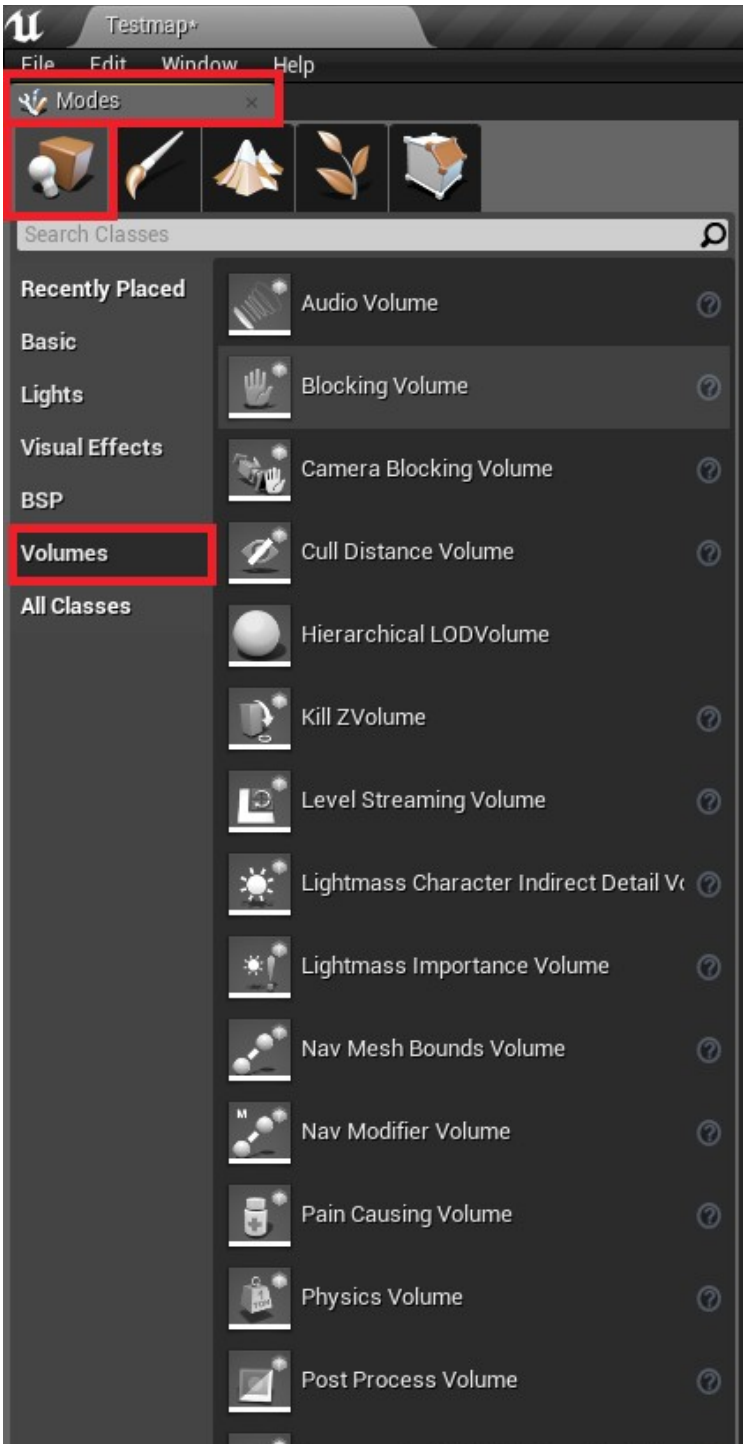

Perspective
Lit
Show
Level: Testmap (Persistent)

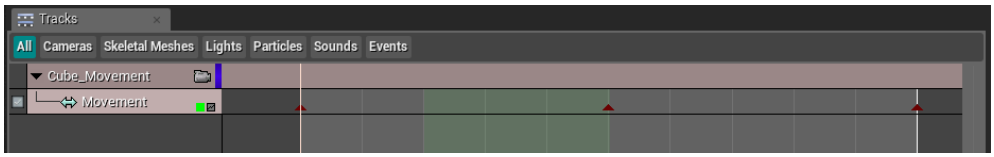


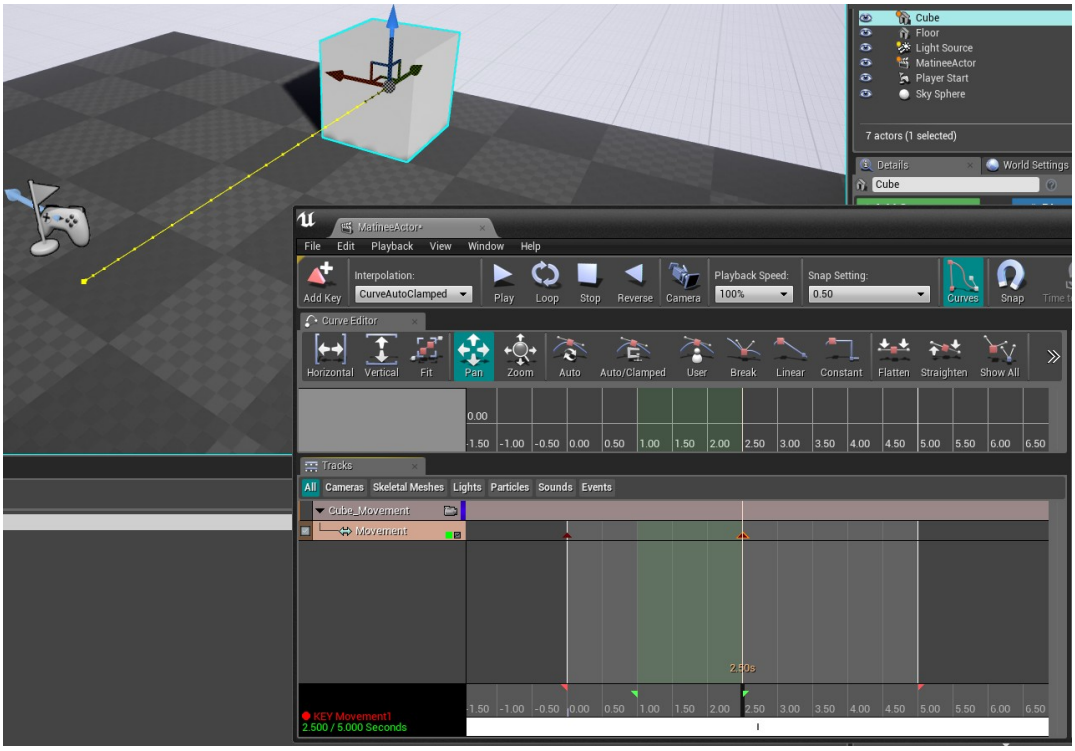

OnActorBeginOverlap (TriggerVolume)
Other Actor
Cast To Character
Object
Cast Failed
As Character
Play
Target is Matinee Actor
Target
MatineeActor
from Persistent Level
OnActorEndOverlap (TriggerVolume)
Other Actor
Cast To Character
Object
Cast Failed
As Character
Stop
Target is Matinee Actor
Target
LEVEL BLUEPRINT

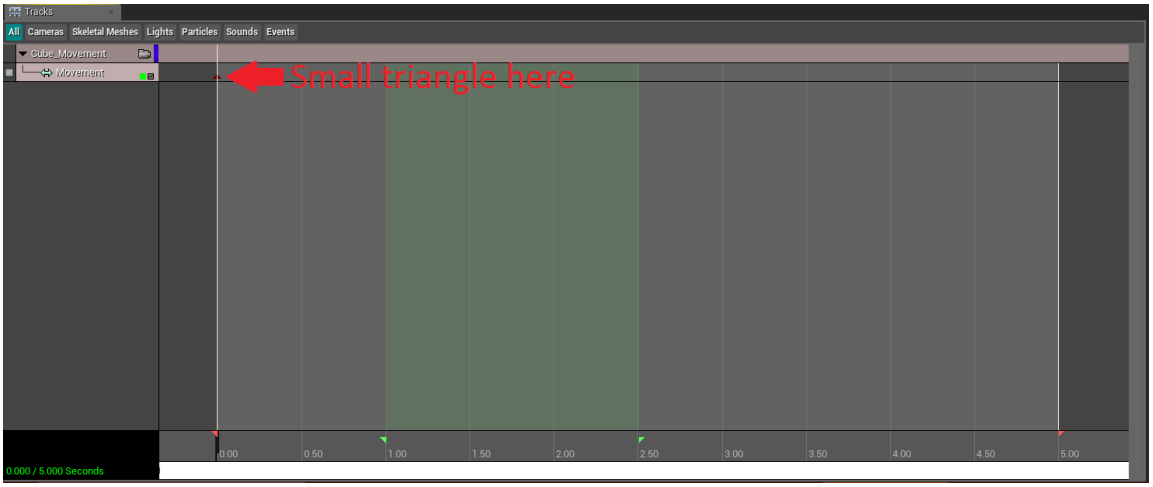
OnActorBeginOverlap (TriggerVolume)
Other Actor
OnActorEndOverlap (TriggerVolume)
Other Actor
LEVEL BLUEPRINT

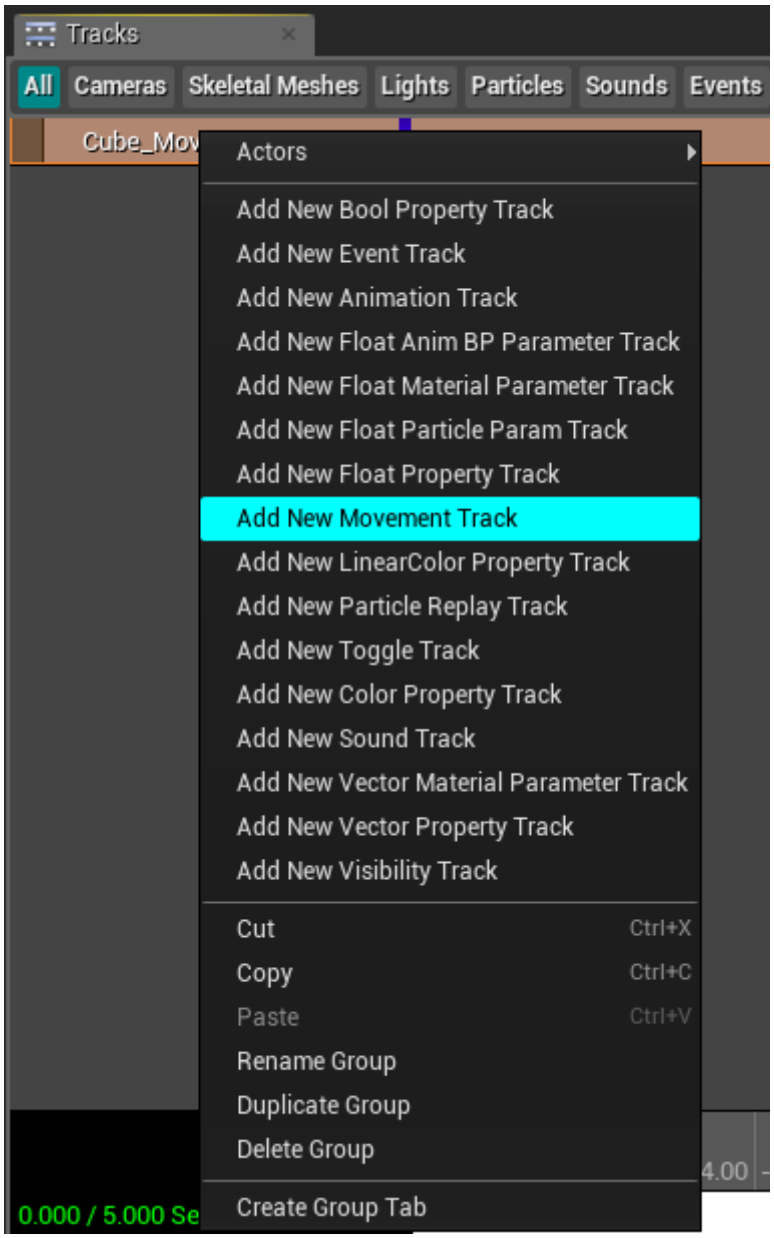

Actor
Focus Selected F
Go Here
Snap View to Object
Snap Object to View
Pilot 'TriggerVolume' Ctrl+Shift+P
C++
Open TriggerVolume.h
Documentation
View Documentation
Select
Edit
Visibility
Level
Place Actor
Replace Selected Actors with
Attach To
Transform
Pivot
Preview
Play From Here
Level Blueprint Events
Add Event
Game|Damage
OnTakeAnyDamage
OnTakePointDamage
Collision
OnActorBeginOverlap
OnActorEndOv
OnActorHit
Input|Mouse Input
OnBeginCursorOver
OnEndCursorOver
OnClicked
OnReleased
Input|Touch Input
OnInputTouchBegin
OnInputTouchEnd
OnInputTouchEnter
OnInputTouchLeave
Game
OnDestroyed
OnEndPlay
Called when another actor begins to overlap this actor, for example a player walking into a trigger.
For events when objects have a blocking collision, for example a player hitting a wall, see 'Hit' events.
@note Components on both this and the other Actor must have bGenerateOverlapEvents set to true to generate overlap events.
Level: Testmap (Persistent)

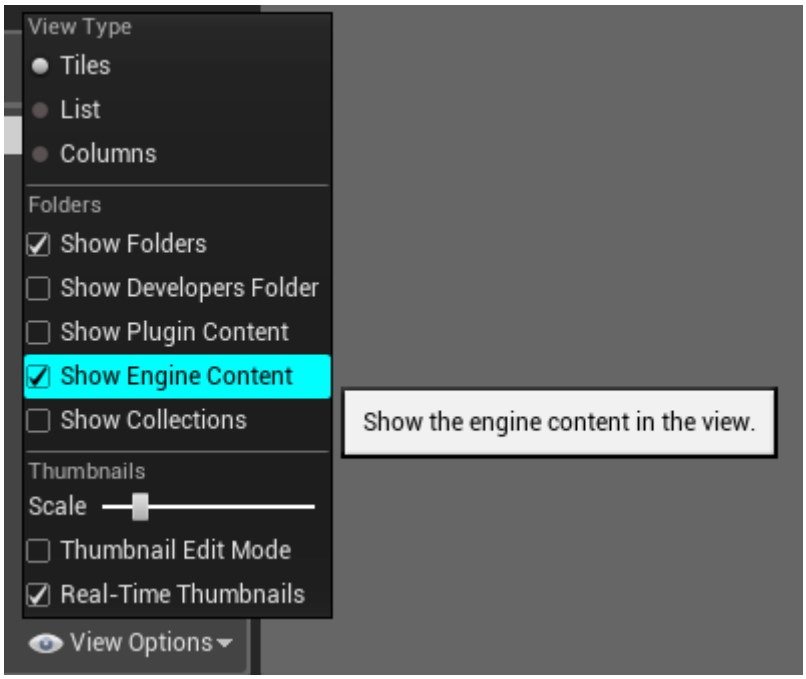

Testmap*
File
Edit
Window
Help
Modes
Search Classes
Recently Placed
Basic
Lights
Visual Effects
BSP
Volumes
All Classes
Audio Volume
Blocking Volume
Camera Blocking Volume
Cull Distance Volume
Hierarchical LODVolume
Kill ZVolume
Level Streaming Volume
Lightmass Character Indirect Detail V
Lightmass Importance Volume
Nav Mesh Bounds Volume
Nav Modifier Volume
Pain Causing Volume
Physics Volume
Post Process Volume

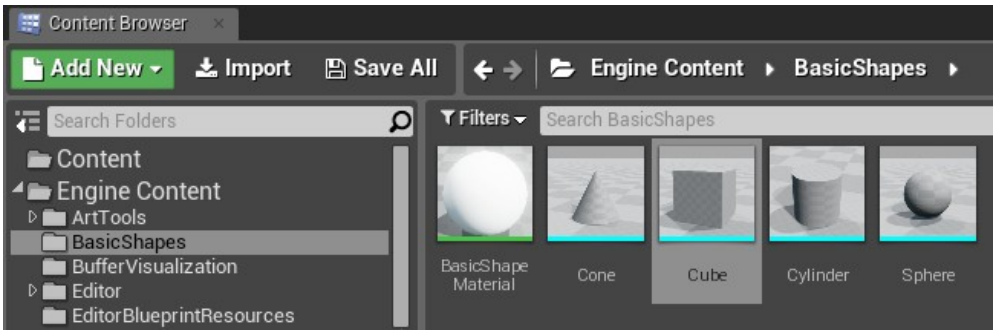

Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Movement
Movement

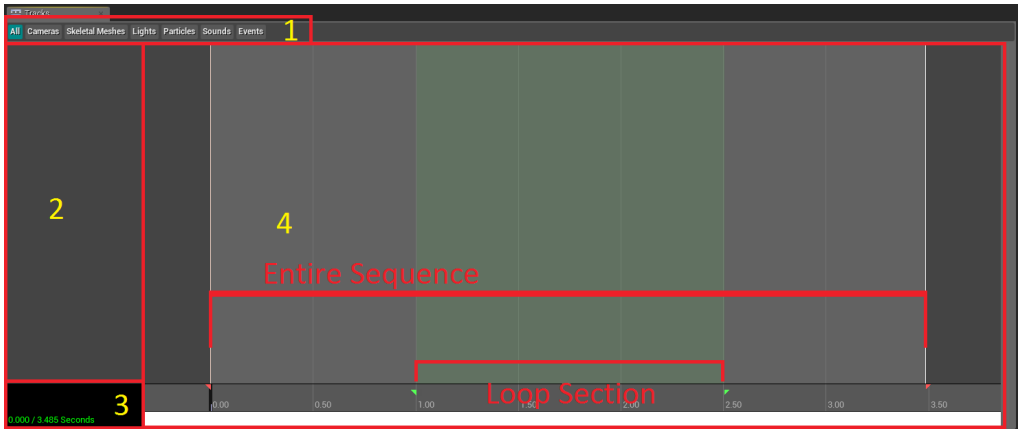

Cube
Floor
Light Source
MatineeActor
Player Start
Sky Sphere
7 actors (1 selected)
Details
World Settings
MatineeActor
File
Edit
Playback
View
Window
Help
Add Key
Interpolation:
CurveAutoClamped
Play
Loop
Stop
Reverse
Camera
Playback Speed:
100%
Snap Setting:
0.50
Curves
Snap
Curve Editor
Horizontal
Vertical
Fit
Pan
Zoom
Auto
Auto/Clamped
User
Break
Linear
Constant
Flatten
Straighten
Show All
Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Movement
Movement
2.50s
KEY Movement1
2.500 / 5.000 Seconds

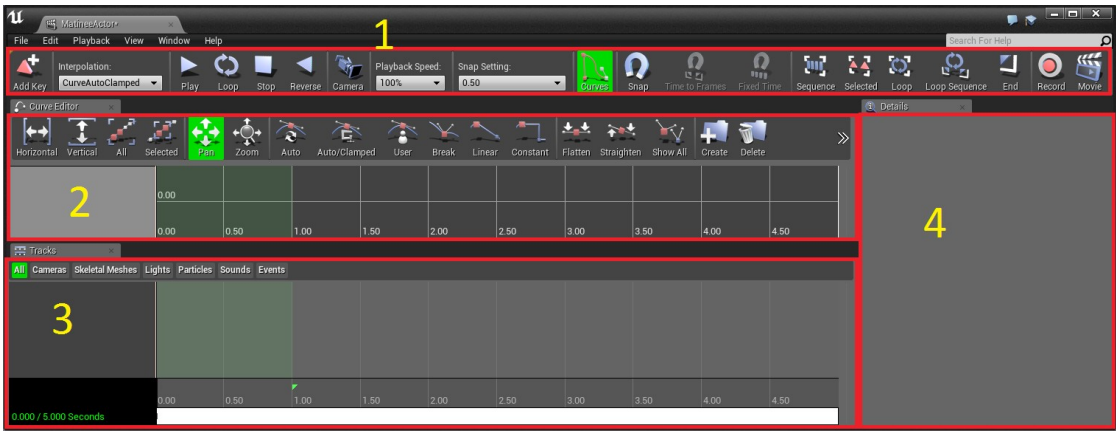

Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Movement
Movement
Small triangle here
0.000 / 5.000 Seconds

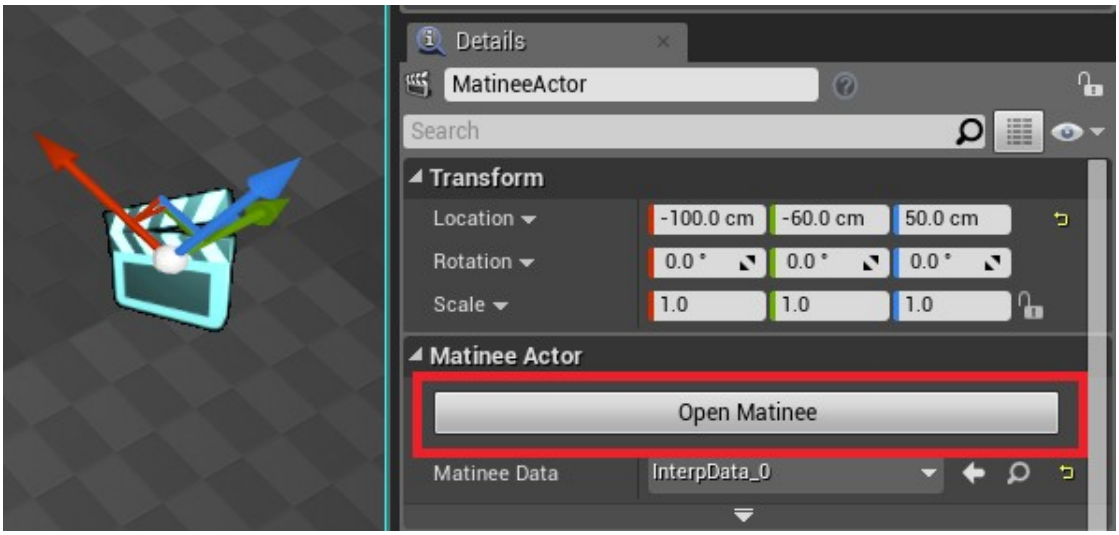

Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
Cube_Mov
Actors
Add New Bool Property Track
Add New Event Track
Add New Animation Track
Add New Float Anim BP Parameter Track
Add New Float Material Parameter Track
Add New Float Particle Param Track
Add New Float Property Track
Add New Movement Track
Add New LinearColor Property Track
Add New Particle Replay Track
Add New Toggle Track
Add New Color Property Track
Add New Sound Track
Add New Vector Material Parameter Track
Add New Vector Property Track
Add New Visibility Track
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Rename Group
Duplicate Group
Delete Group
Create Group Tab
0.000 / 5.000 Se
4.00

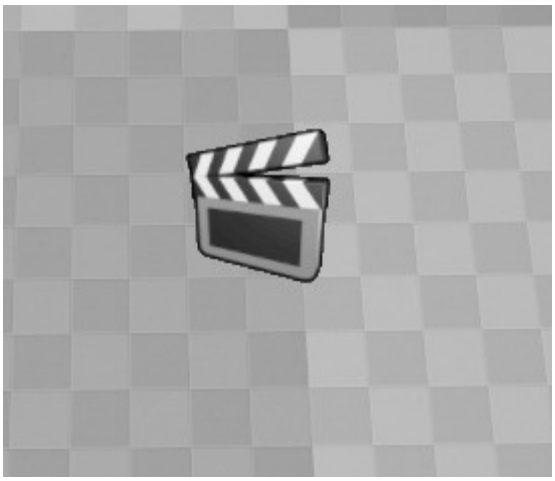

View Type
Tiles
List
Columns
Folders
Show Folders
Show Developers Folder
Show Plugin Content
Show Engine Content
Show Collections
Thumbnails
Scale
Thumbnail Edit Mode
Real-Time Thumbnails
View Options
Show the engine content in the view.

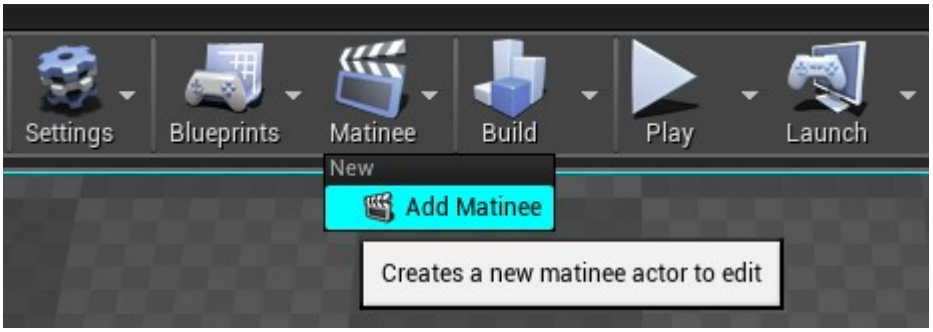

Content Browser
Add New
Import
Save All
Engine Content
BasicShapes
Search Folders
Content
Engine Content
ArtTools
BasicShapes
BufferVisualization
Editor
EditorBlueprintResources
Filters
Search BasicShapes
BasicShape Material
Cone
Cube
Cylinder
Sphere

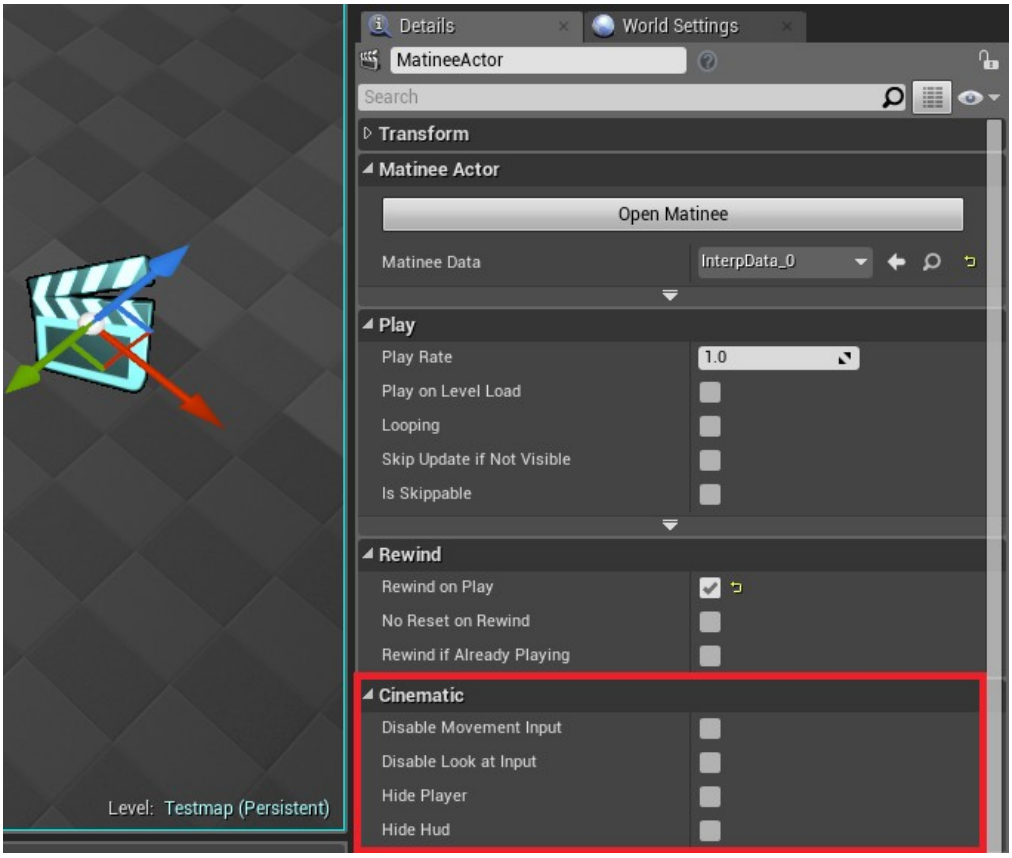

All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
1
2
4
Entire Sequence
Loop Section
3
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
0.000 / 3.485 Seconds


MatineeActor
File
Edit
Playback
View
Window
Help
1
Add Key
Interpolation:
CurveAutoClamped
Play
Loop
Stop
Reverse
Camera
Playback Speed:
100%
Snap Setting:
0.50
Curves
Snap
Time to Frames
Fixed Time
Sequence
Selected
Loop
Loop Sequence
End
Record
Movie
Curve Editor
Horizontal
Vertical
All
Selected
Pan
Zoom
Auto
Auto/Clamped
User
Break
Linear
Constant
Flatten
Straighten
Show All
Create
Delete
Details
2
4
Tracks
All
Cameras
Skeletal Meshes
Lights
Particles
Sounds
Events
3
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
0.000 / 5.000 Seconds

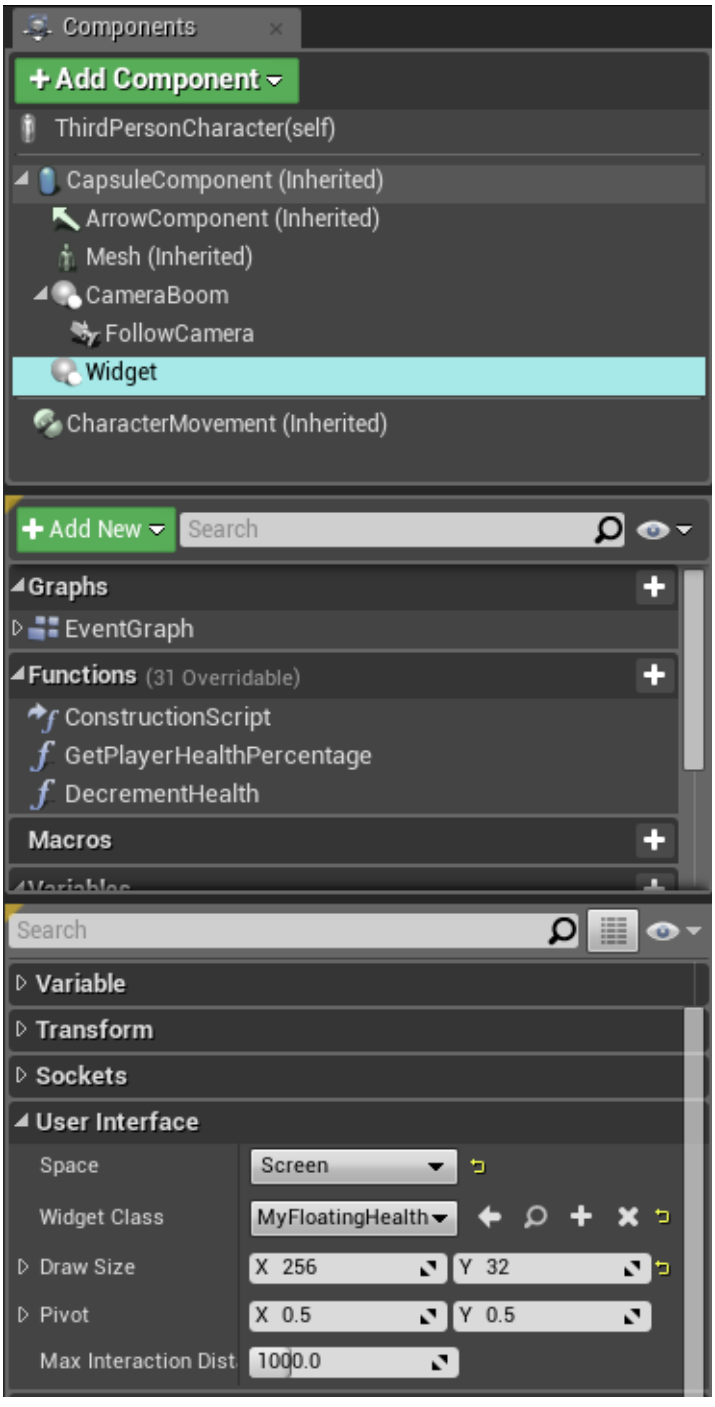

Details
MatineeActor
Search
Transform
Location
-100.0 cm
-60.0 cm
50.0 cm
Rotation
0.0 °
0.0 °
0.0 °
Scale
1.0
1.0
1.0
Matinee Actor
Open Matinee
Matinee Data
InterpData_0

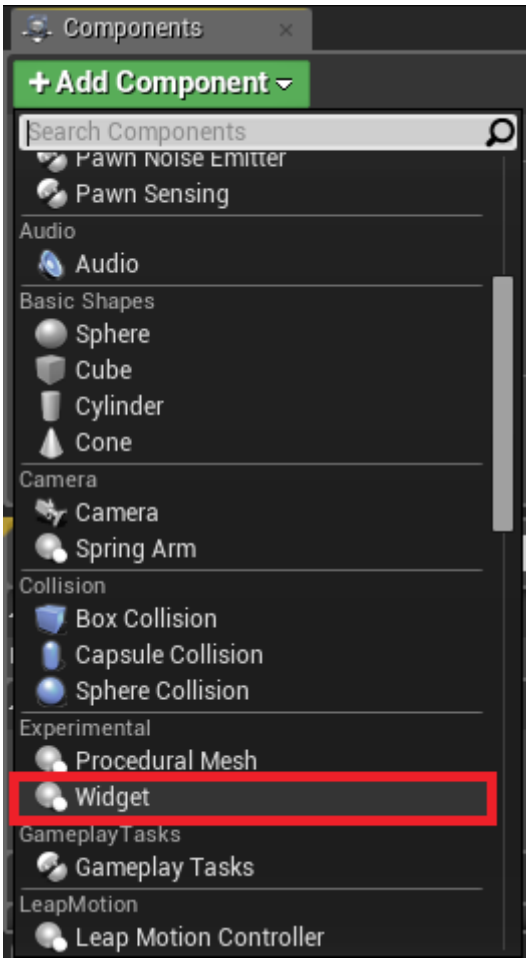


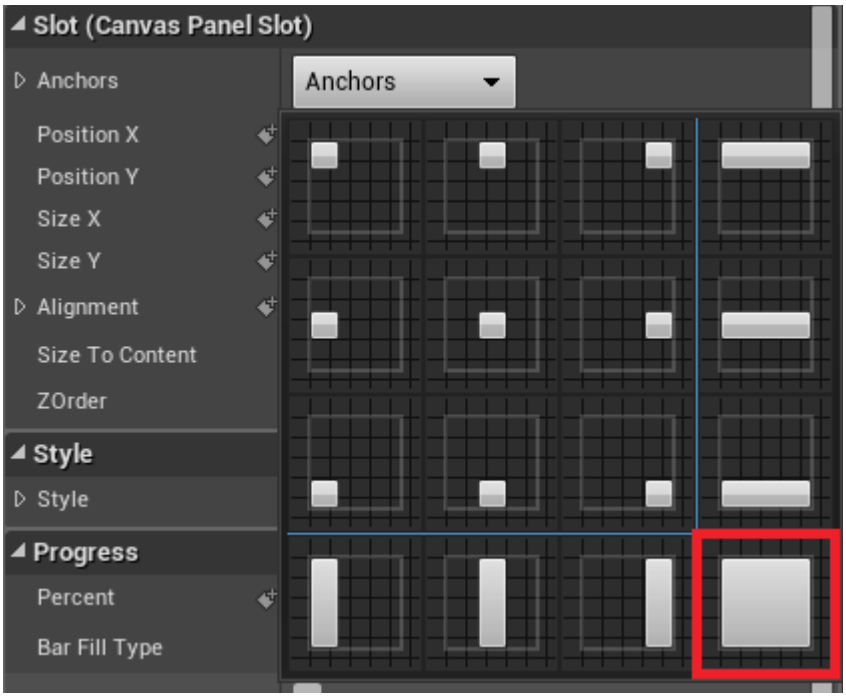

Settings
Blueprints
Matinee
Build
Play
Launch
New
Add Matinee
Creates a new matinee actor to edit

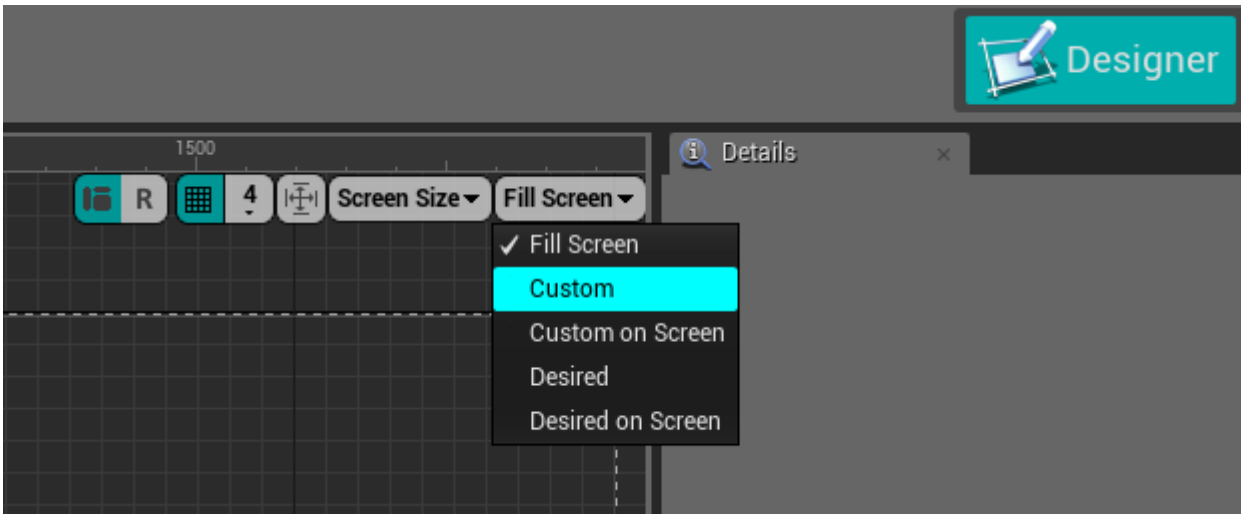

Details
World Settings
MatineeActor
Search
Transform
Matinee Actor
Open Matinee
Matinee Data
InterpData_0
Play
Play Rate
1.0
Play on Level Load
Looping
Skip Update if Not Visible
Is Skippable
Rewind
Rewind on Play
No Reset on Rewind
Rewind if Already Playing
Cinematic
Disable Movement Input
Disable Look at Input
Hide Player
Hide Hud
Level: Testmap (Persistent)

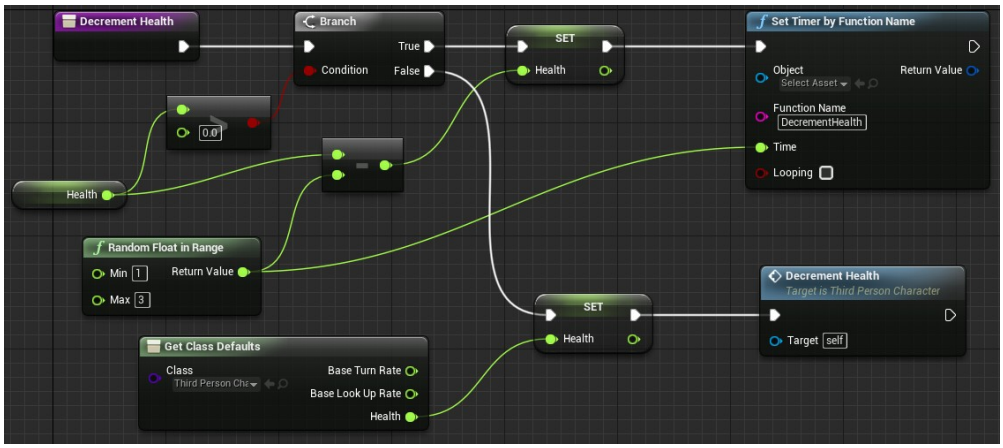
Chapter 8: Unreal Motions Graphics

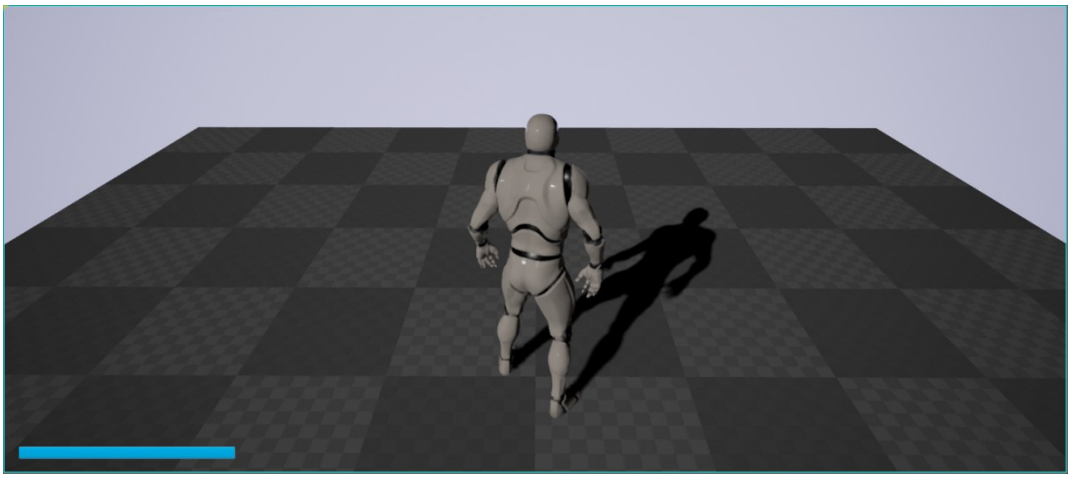

Components
+ Add Component
ThirdPersonCharacter(self)
CapsuleComponent (Inherited)
ArrowComponent (Inherited)
Mesh (Inherited)
CameraBoom
FollowCamera
Widget
CharacterMovement (Inherited)
+ Add New
Search
Graphs
EventGraph
Functions (31 Overridable)
ConstructionScript
GetPlayerHealthPercentage
DecrementHealth
Macros
Search
Variable
Transform
Sockets
User Interface
Space
Screen
Widget Class
MyFloatingHealth
Draw Size
X 256
Y 32
Pivot
X 0.5
Y 0.5
Max Interaction Dist
1000.0

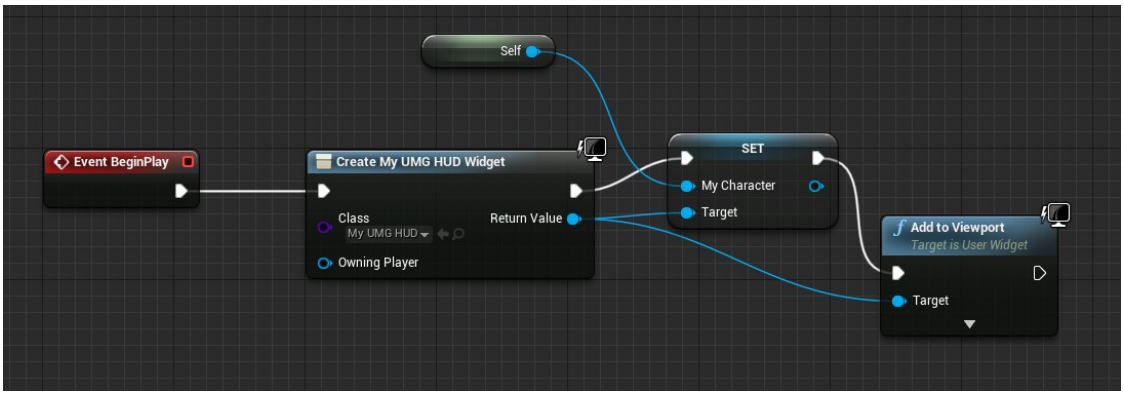

Components
+ Add Component
Search Components
Pawn Noise Emitter
Pawn Sensing
Audio
Audio
Basic Shapes
Sphere
Cube
Cylinder
Cone
Camera
Camera
Spring Arm
Collision
Box Collision
Capsule Collision
Sphere Collision
Experimental
Procedural Mesh
Widget
GameplayTasks
Gameplay Tasks
LeapMotion
Leap Motion Controller

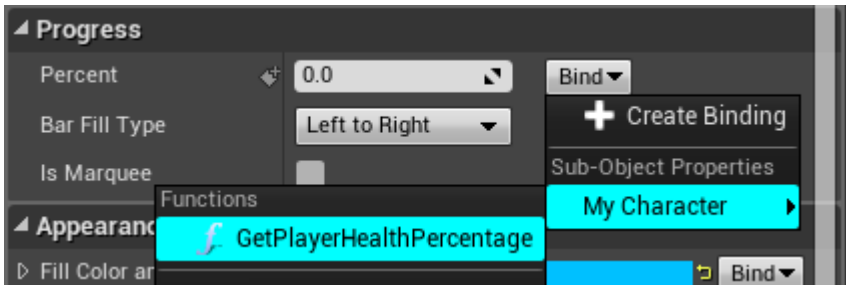

Slot (Canvas Panel Slot)
Anchors
Anchors
Position X
Position Y
Size X
Size Y
Alignment
Size To Content
ZOrder
Style
Style
Progress
Percent
Bar Fill Type

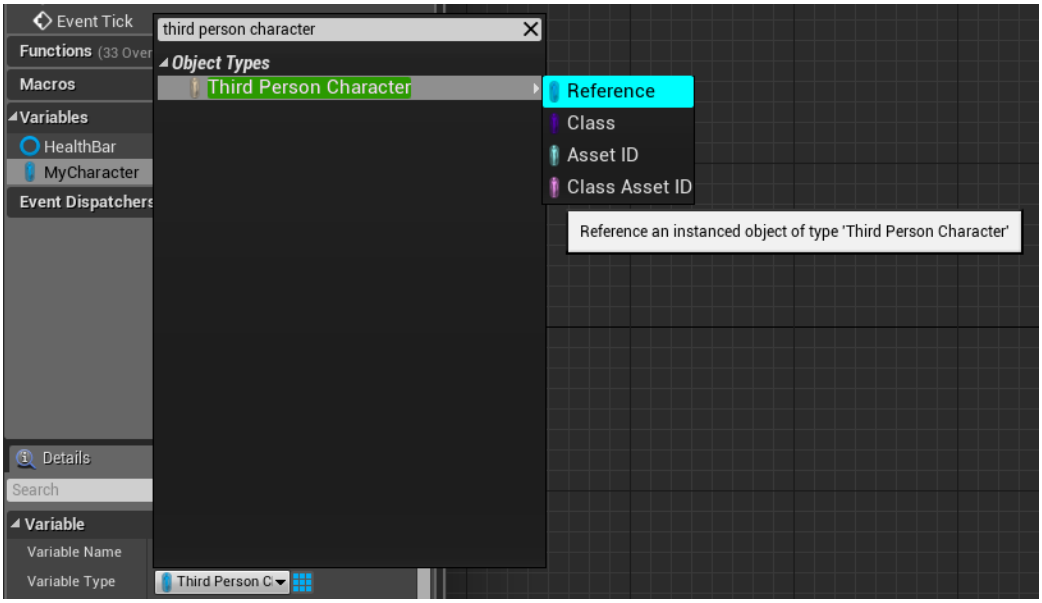

Designer
1500
R
4
Screen Size
Fill Screen
Details
Fill Screen
Custom
Custom on Screen
Desired
Desired on Screen

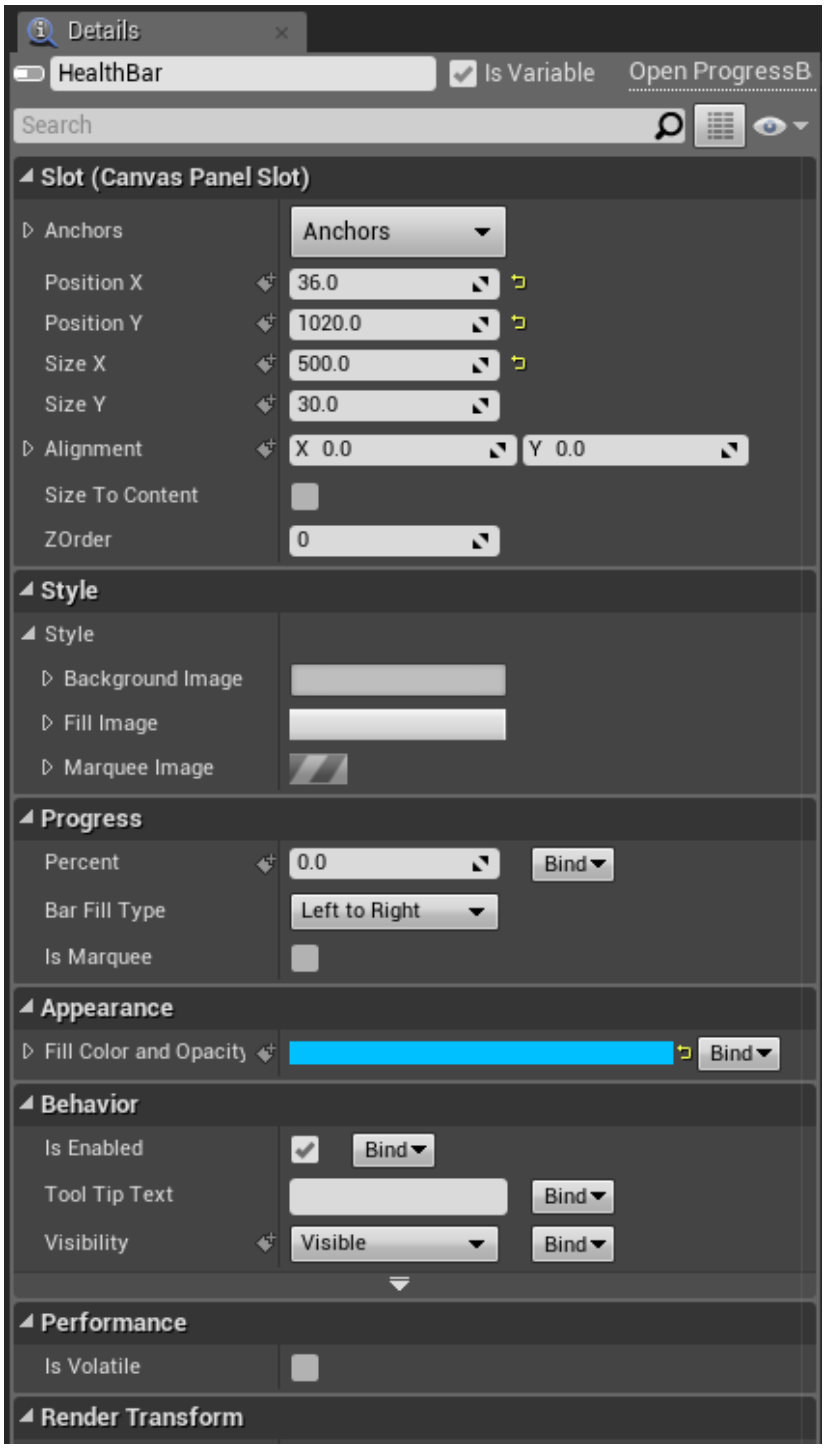

Decrement Health
Branch
True
Condition
False
SET
Health
Set Timer by Function Name
Object
Select Asset
Return Value
Function Name
DecrementHealth
Time
Looping
0.0
Health
Random Float in Range
Min 1
Return Value
Max 3
SET
Health
Decrement Health
Target is Third Person Character
Target self
Get Class Defaults
Class
Third Person Cha
Base Turn Rate
Base Look Up Rate
Health

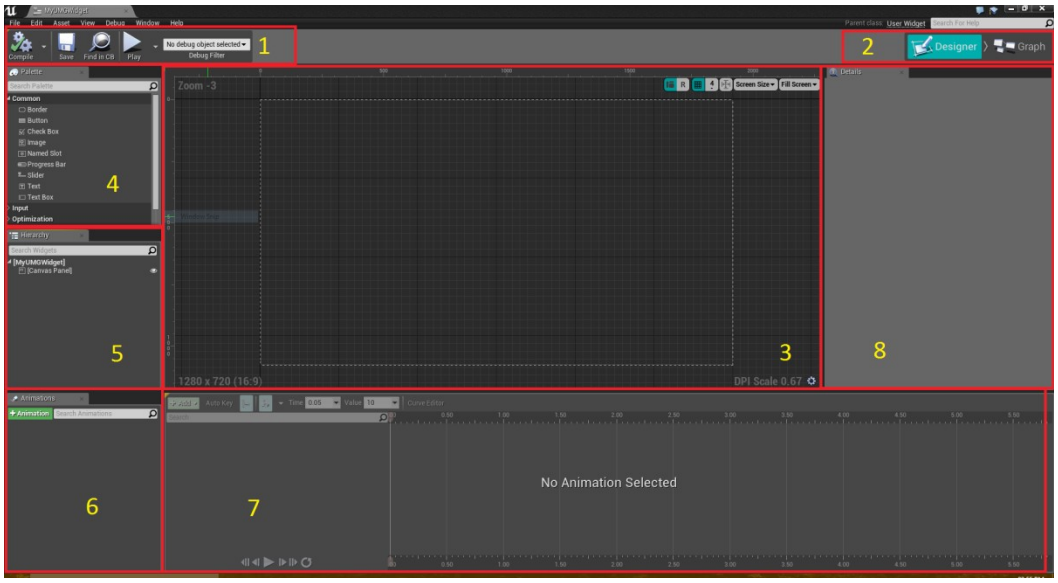



Self
Event BeginPlay
Create My UMG HUD Widget
Class
My UMG HUD
Return Value
Owning Player
SET
My Character
Target
Add to Viewport
Target is User Widget
Target

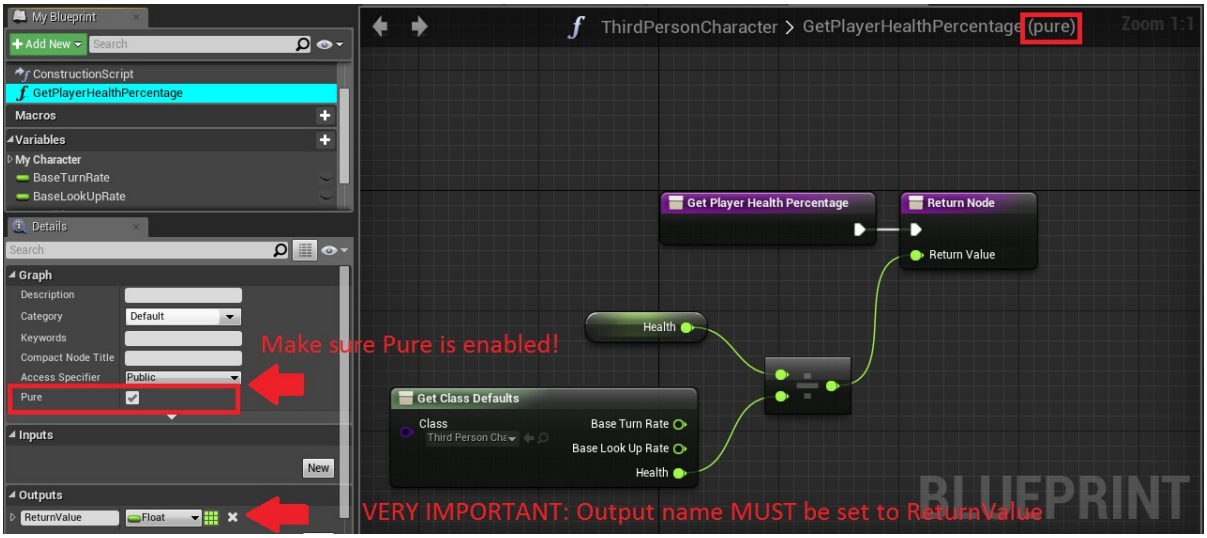

Progress
Percent
0.0
Bind
Bar Fill Type
Left to Right
Create Binding
Is Marquee
Sub-Object Properties
Functions
My Character
Appearanc
GetPlayerHealthPercentage
Fill Color ar
Bind

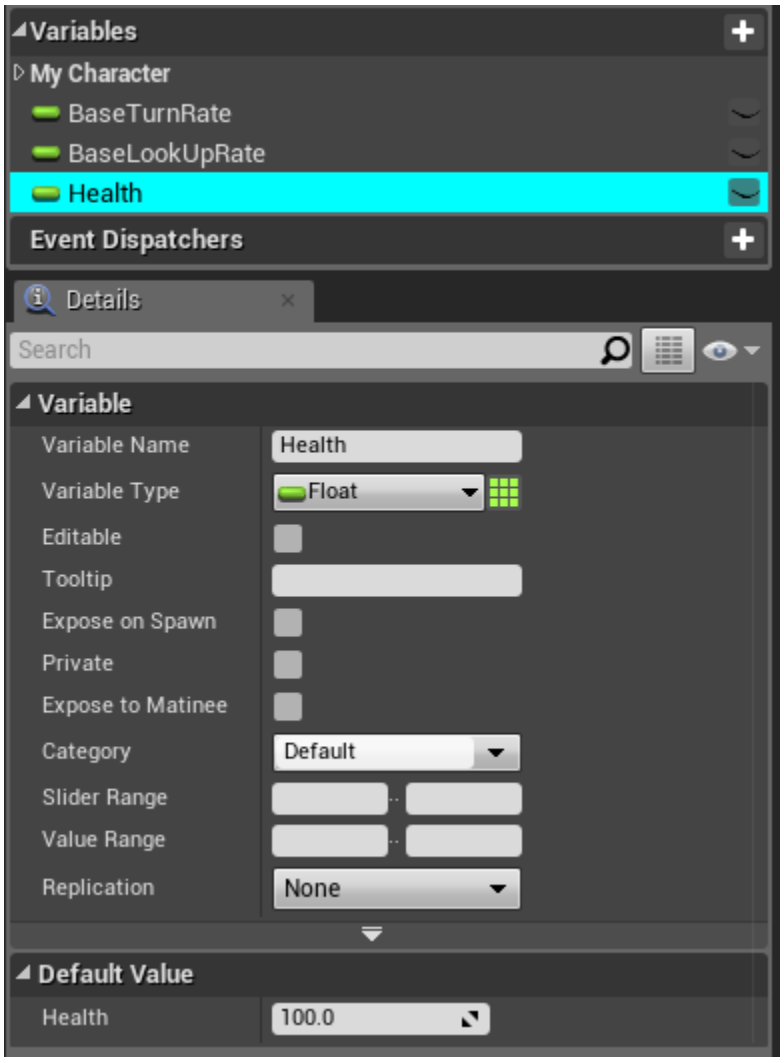

Event Tick
Functions (33 Over
Macros
Variables
HealthBar
MyCharacter
Event Dispatchers
third person character
Object Types
Third Person Character
Reference
Class
Asset ID
Class Asset ID
Reference an instanced object of type 'Third Person Character'
Details
Search
Variable
Variable Name
Variable Type
Third Person C

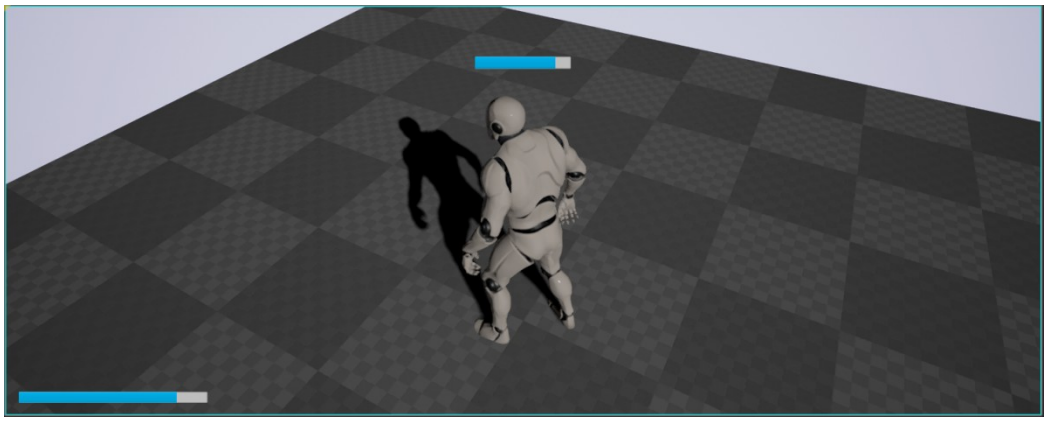

Details
HealthBar
Is Variable
Open ProgressB
Search
Slot (Canvas Panel Slot)
Anchors
Anchors
Position X
36.0
Position Y
1020.0
Size X
500.0
Size Y
30.0
Alignment
X 0.0
Y 0.0
Size To Content
ZOrder
0
Style
Style
Background Image
Fill Image
Marquee Image
Progress
Percent
0.0
Bind
Bar Fill Type
Left to Right
Is Marquee
Appearance
Fill Color and Opacity
Bind
Behavior
Is Enabled
Bind
Tool Tip Text
Bind
Visibility
Visible
Bind
Performance
Is Volatile
Render Transform


1
2
Designer
Graph
4
Zoom -3
5
3
8
1280 x 720 (16:9)
DPI Scale 0.67
6
7
No Animation Selected

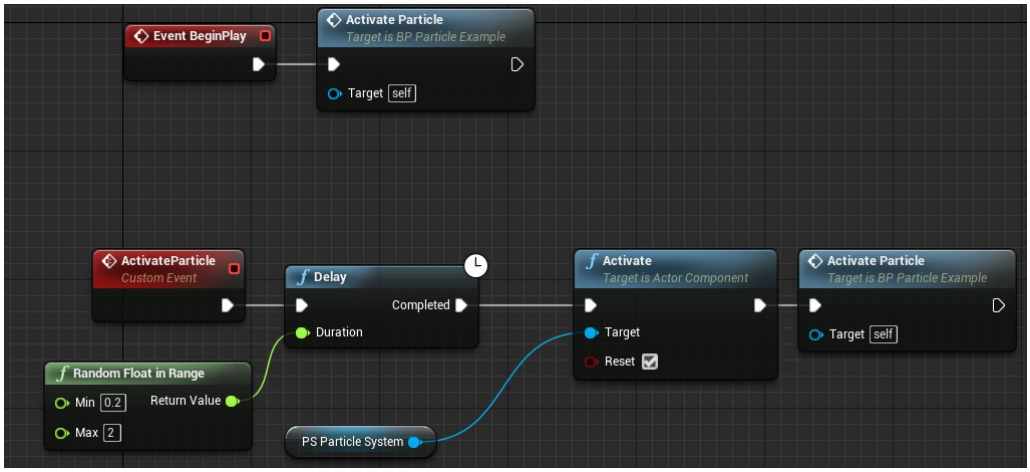
C++ Class
New C++ Class...
Import Asset
Import to /Game...
Create Basic Asset
Blueprint Class
Level
Material
Particle System
Create Advanced Asset
Animation
Blueprints
Materials & Textures
Sounds
Physics
User Interface
Miscellaneous
Blendables
Paper2D
Artificial Intelligence
Font
Slate Brush
Slate Widget Style
Widget Blueprint
The widget blueprint enables extending UUserWidget the user extensible UWidget.
hold (Ctrl + Alt) for more

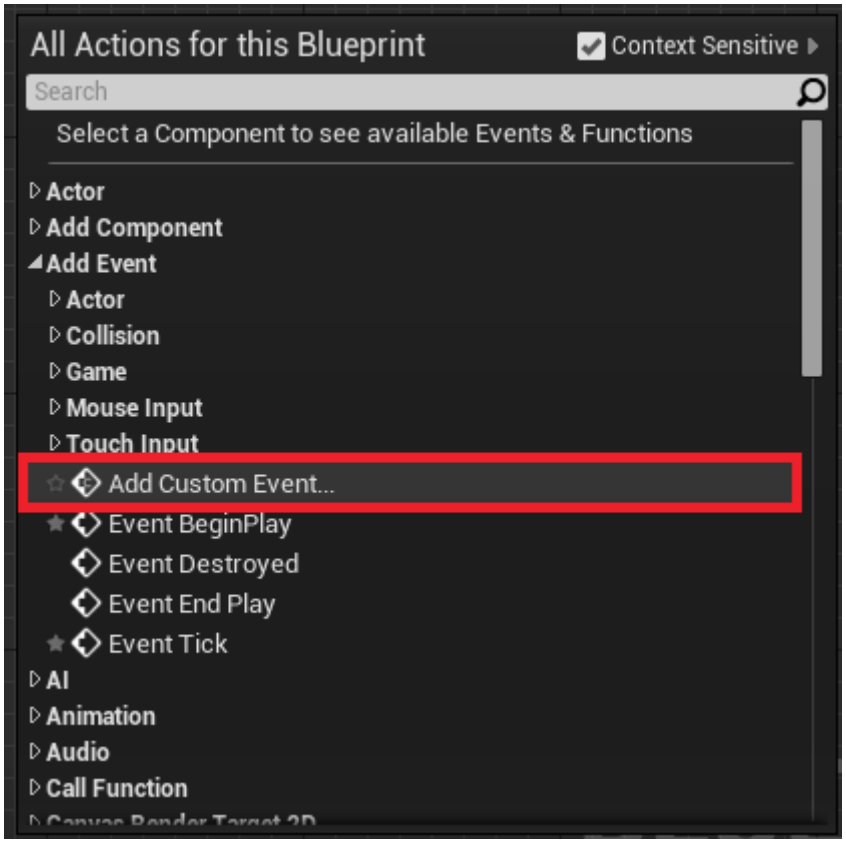

My Blueprint
Add New
Search
ConstructionScript
GetPlayerHealthPercentage
Macros
Variables
My Character
BaseTurnRate
BaseLookUpRate
Details
Search
Graph
Description
Category
Default
Keywords
Compact Node Title
Access Specifier
Public
Pure
Inputs
New
Outputs
ReturnValue
Float
Make sure Pure is enabled!
ThirdPersonCharacter > GetPlayerHealthPercentage (pure)
Zoom 1:1
Get Player Health Percentage
Return Node
Return Value
Health
Get Class Defaults
Class
Third Person Cha
Base Turn Rate
Base Look Up Rate
Health
VERY IMPORTANT: Output name MUST be set to ReturnValue
BLUEPRINT


Variables
My Character
BaseTurnRate
BaseLookUpRate
Health
Event Dispatchers
Details
Search
Variable
Variable Name
Health
Variable Type
Float
Editable
Tooltip
Expose on Spawn
Private
Expose to Matinee
Category
Default
Slider Range
Value Range
Replication
None
Default Value
Health
100.0



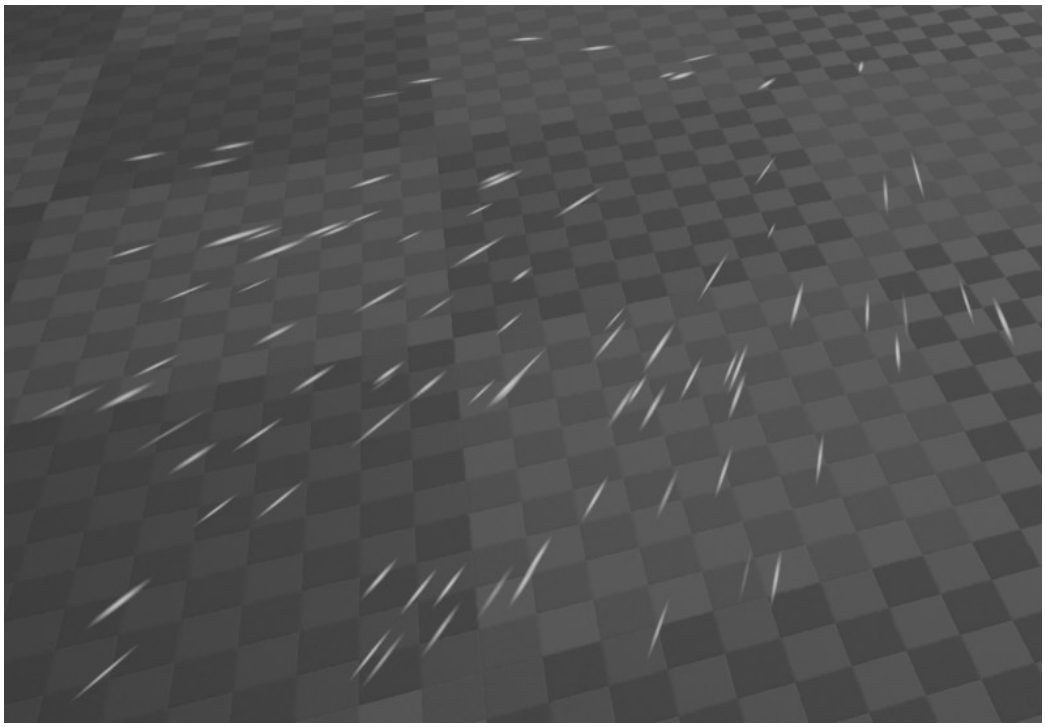
Chapter 9: Particles

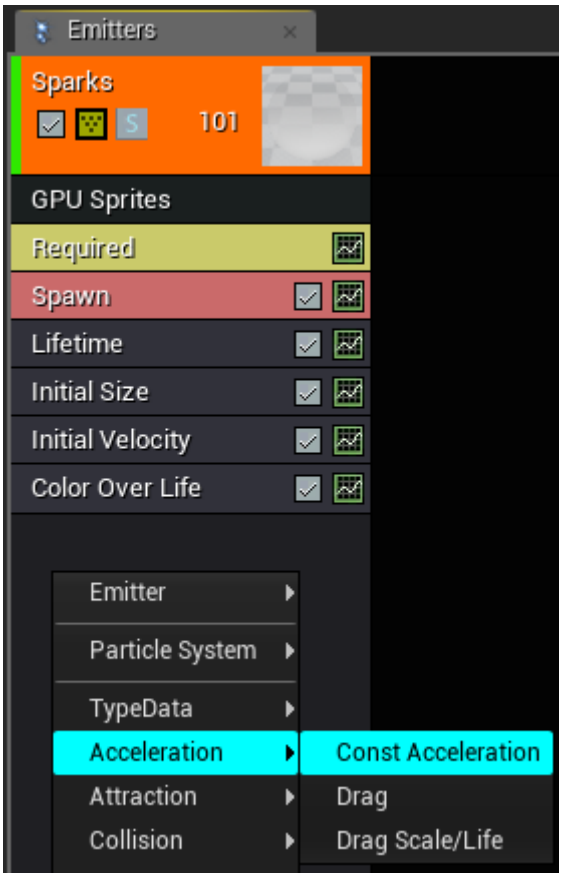


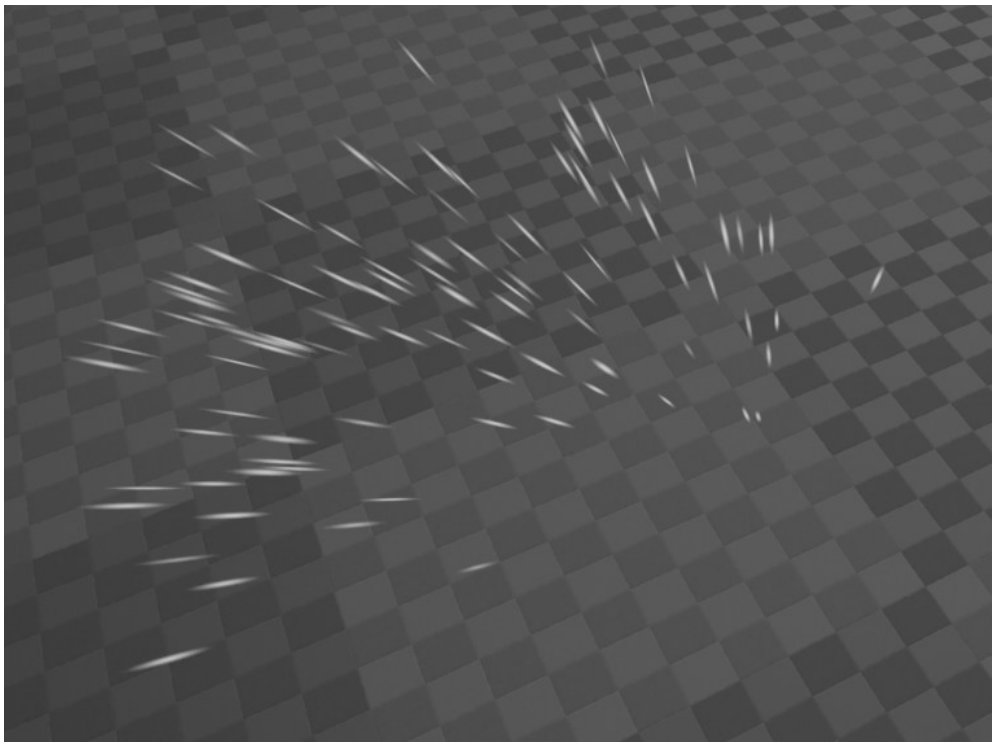

All Actions for this Blueprint
Context Sensitive
Search
Select a Component to see available Events & Functions
Actor
Add Component
Add Event
Actor
Collision
Game
Mouse Input
Touch Input
Add Custom Event...
Event BeginPlay
Event Destroyed
Event End Play
Event Tick
AI
Animation
Audio
Call Function

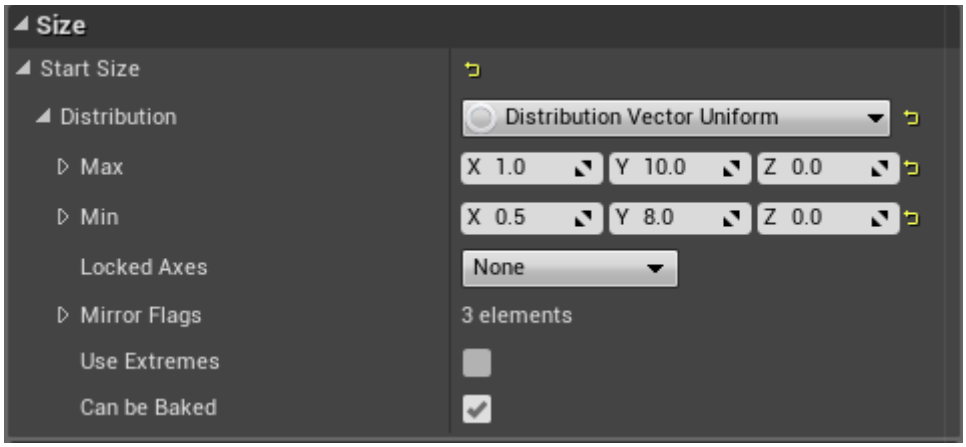
Details
Search
Emitter
Duration
Emitter Duration
1.0
Emitter Duration Low
0.0
Emitter Duration Use Range
Duration Recalc Each Loop
Emitter Loops
1

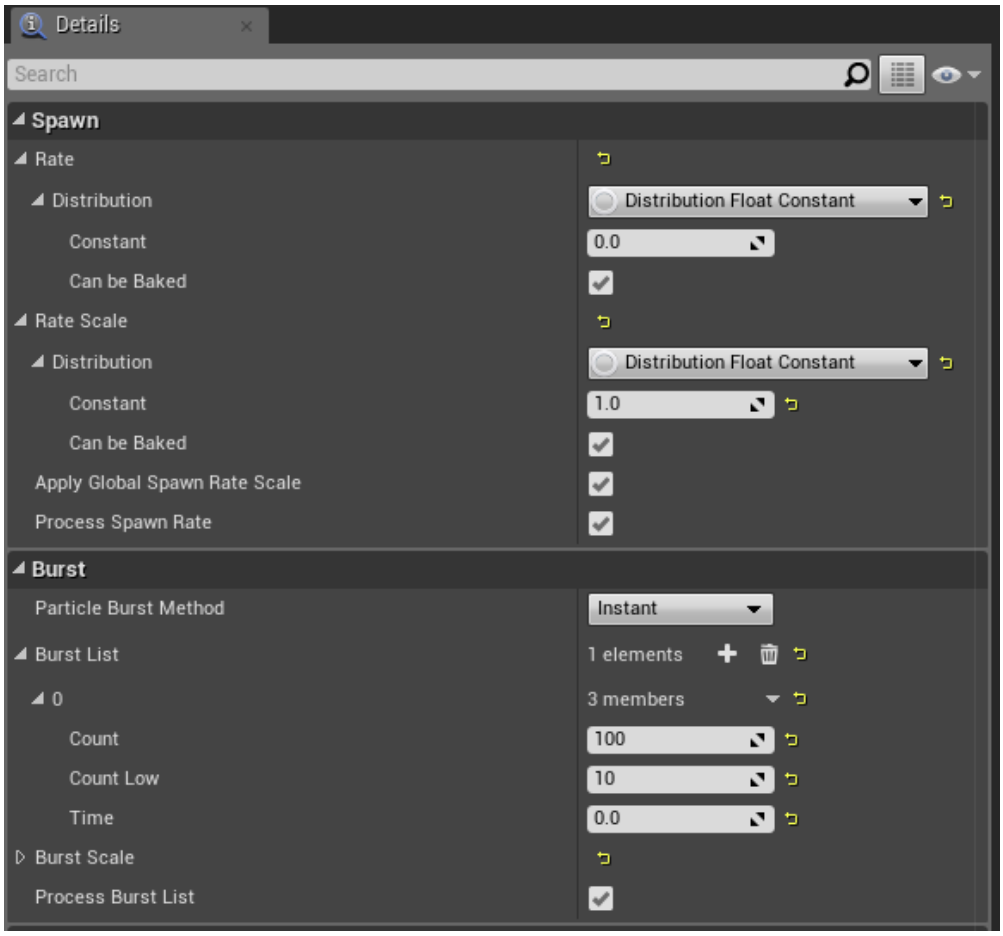
Details
Search
Color
Color Over Life
Distribution
Distribution Vector Constant Curve
Constant Curve
Points
2 elements
0
5 members
In Val
0.0
Out Val
R
50.0
G
20.0
B
8.0
Arrive Tangent
Leave Tangent
Interp Mode
Linear
1
5 members
In Val
1.0
Out Val
R
10.0
G
10.0
B
10.0
Arrive Tangent
Leave Tangent
Interp Mode
Linear
Is Looped
Loop Key Offset
0.0
Locked Axes
None
Can be Baked
Alpha Over Life
Clamp Alpha

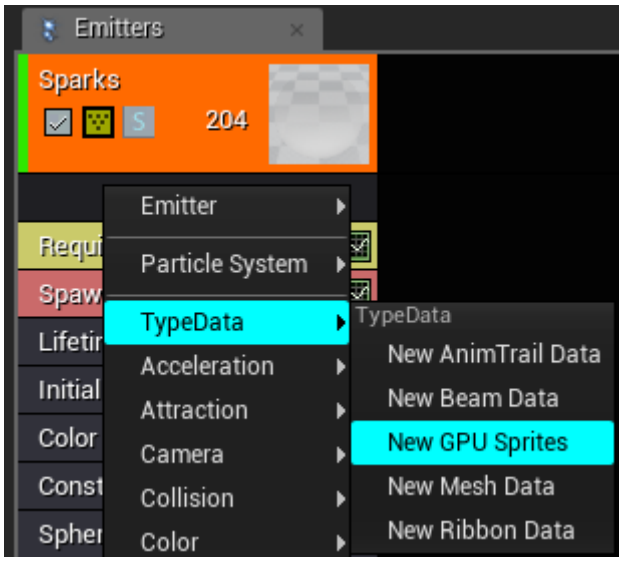


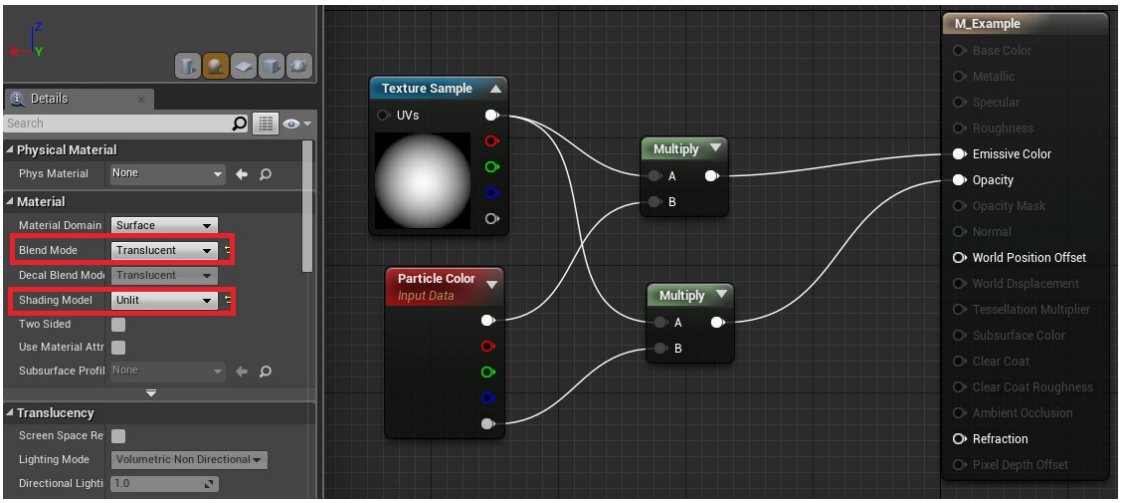

Emitters
Sparks
101
GPU Sprites
Required
Spawn
Lifetime
Initial Size
Initial Velocity
Color Over Life
Emitter
Particle System
TypeData
Acceleration
Attraction
Collision
Const Acceleration
Drag
Drag Scale/Life

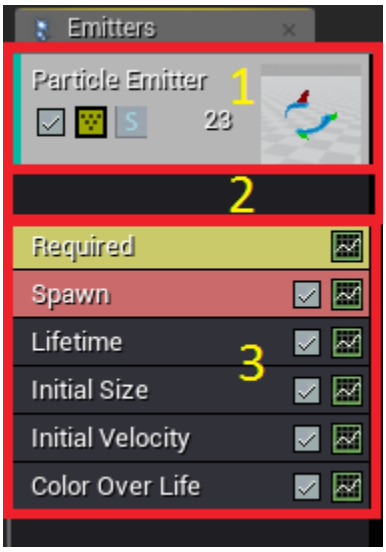


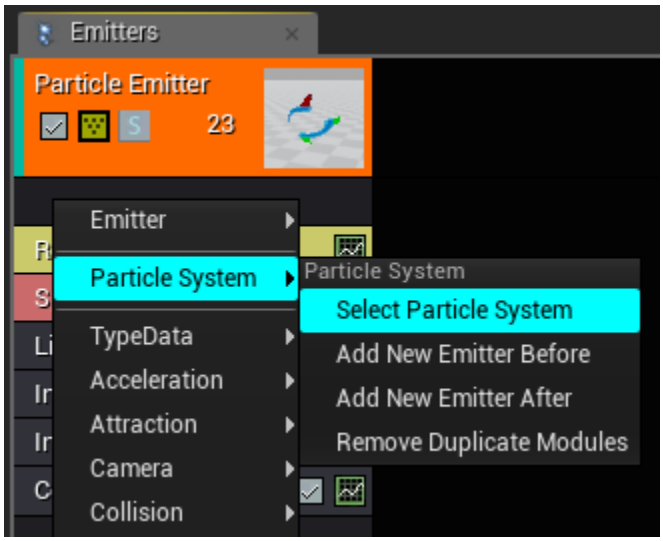

Size
Start Size
Distribution
Distribution Vector Uniform
Max
X 1.0
Y 10.0
Z 0.0
Min
X 0.5
Y 8.0
Z 0.0
Locked Axes
None
Mirror Flags
3 elements
Use Extremes
Can be Baked

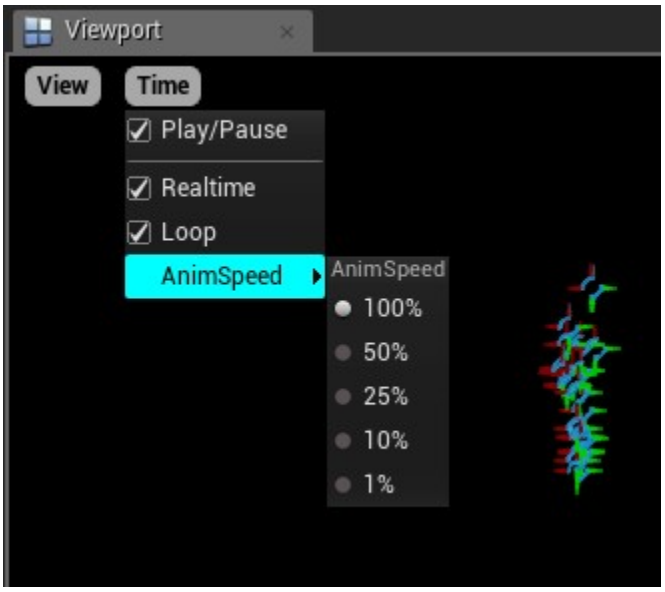

Details
Search
Spawn
Rate
Distribution
Distribution Float Constant
Constant
0.0
Can be Baked
Rate Scale
Distribution
Distribution Float Constant
Constant
1.0
Can be Baked
Apply Global Spawn Rate Scale
Process Spawn Rate
Burst
Particle Burst Method
Instant
Burst List
1 elements
0
3 members
Count
100
Count Low
10
Time
0.0
Burst Scale
Process Burst List

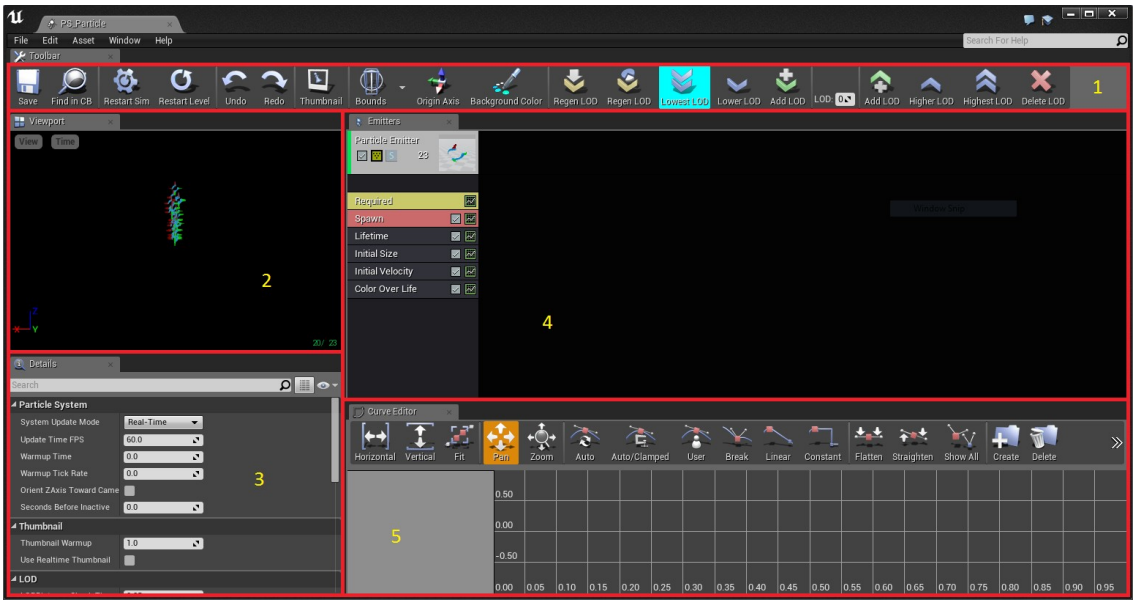

Emitters
Sparks
204
Emitter
Particle System
TypeData
Acceleration
Attraction
Camera
Collision
Color
TypeData
New AnimTrail Data
New Beam Data
New GPU Sprites
New Mesh Data
New Ribbon Data

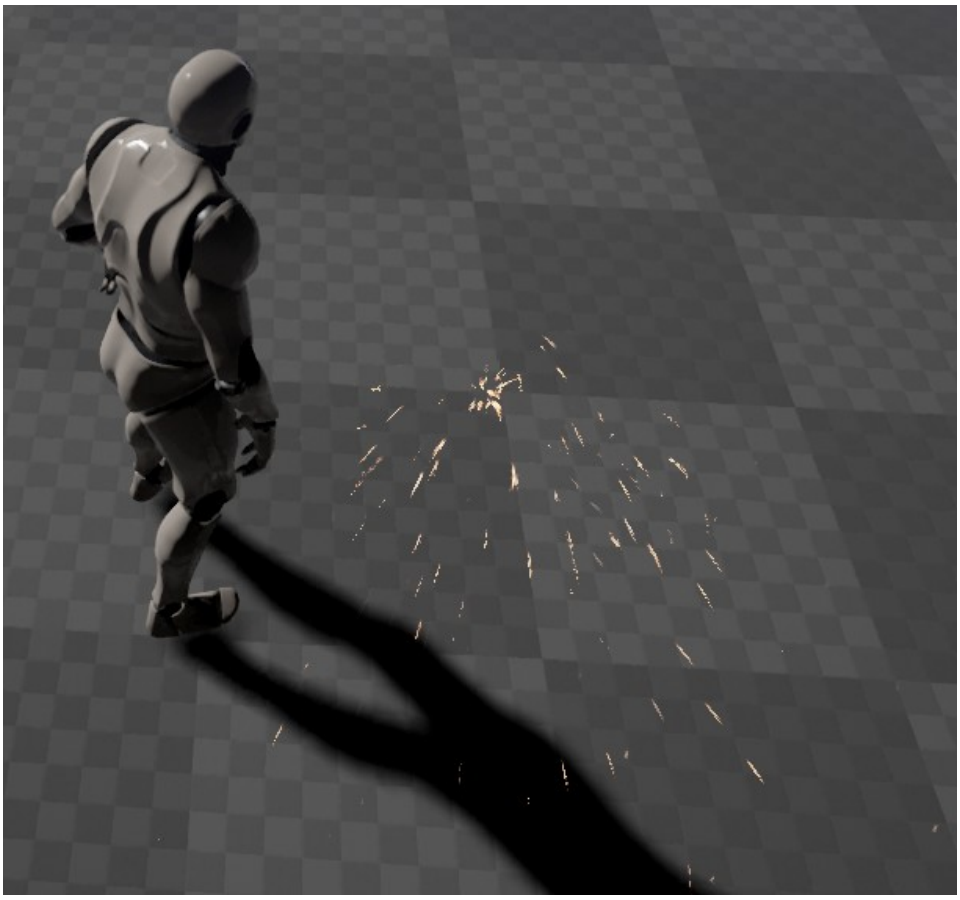

Details
Physical Material
Phys Material
None
Material
Material Domain
Surface
Blend Mode
Translucent
Shading Model
Unlit
Two Sided
Translucency
Lighting Mode
Volumetric Non Directional
Texture Sample
UVs
Particle Color
Input Data
Multiply
A
B
Multiply
A
B
M_Example
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
Pixel Depth Offset


Emitters
Particle Emitter
1
23
2
Required
Spawn
Lifetime
3
Initial Size
Initial Velocity
Color Over Life

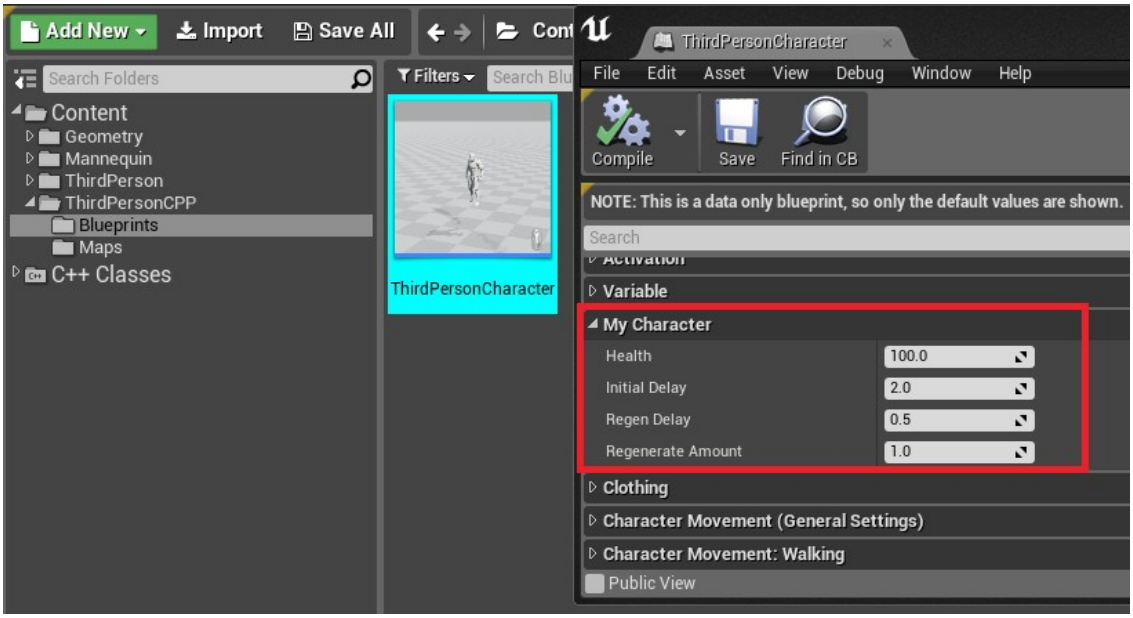

Emitters
Particle Emitter
23
Emitter
Particle System
TypeData
Acceleration
Attraction
Camera
Collision
Particle System
Select Particle System
Add New Emitter Before
Add New Emitter After
Remove Duplicate Modules

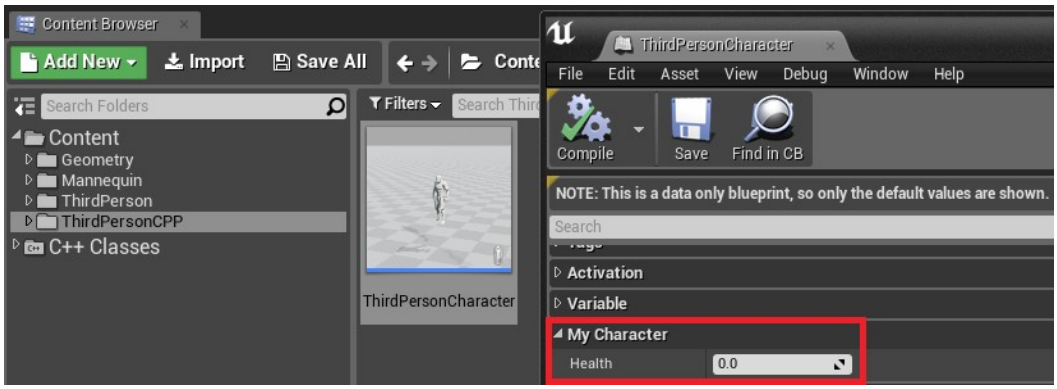

Viewport
View
Time
Play/Pause
Realtime
Loop
AnimSpeed
AnimSpeed
100%
50%
25%
10%
1%

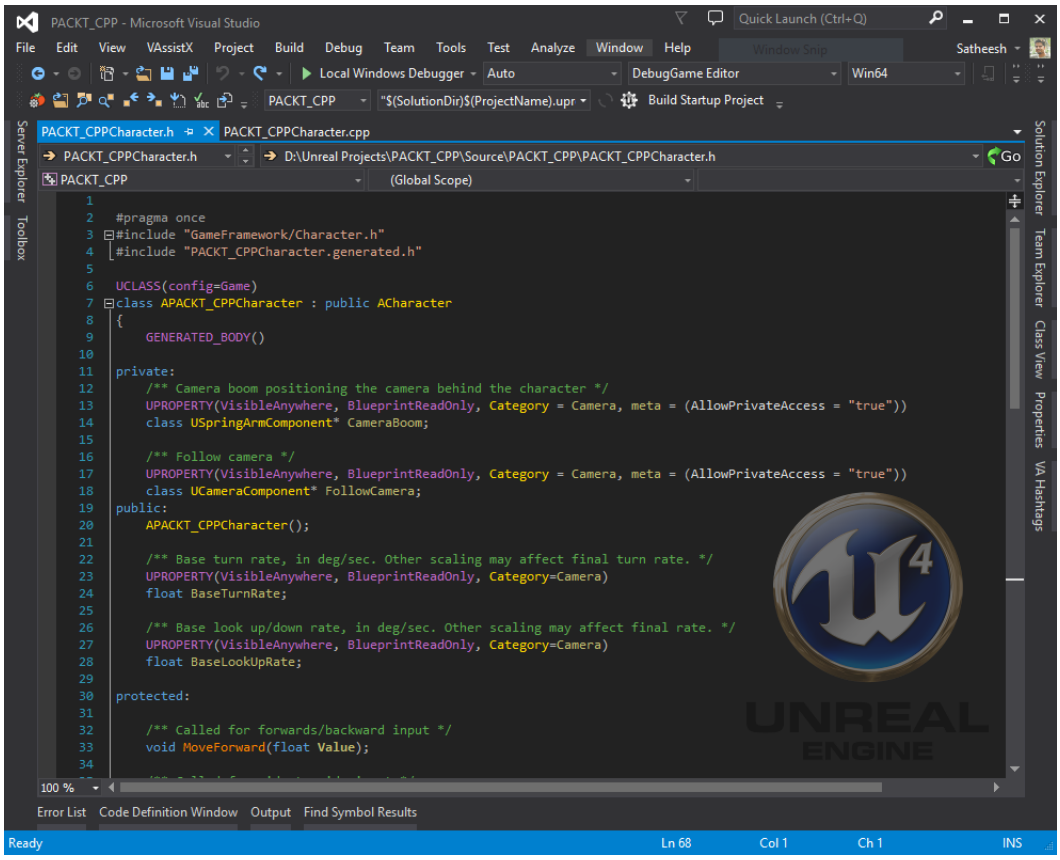

PS_Particle
File
Edit
Asset
Window
Help
Toolbar
Save
Find in CB
Restart Sim
Restart Level
Undo
Redo
Thumbnail
Bounds
Origin Axis
Background Color
Regen LOD
Regen LOD
Lowest LOD
Lower LOD
Add LOD
LOD
Add LOD
Higher LOD
Highest LOD
Delete LOD
1
Viewport
View
Time
2
Emitters
Particle Emitter
Required
Spawn
Lifetime
Initial Size
Initial Velocity
Color Over Life
4
Details
Particle System
System Update Mode
Real-Time
Update Time FPS
60.0
Warmup Time
0.0
Warmup Tick Rate
0.0
Orient ZAxis Toward Came
Seconds Before Inactive
0.0
3
Thumbnail
Thumbnail Warmup
1.0
Use Realtime Thumbnail
LOD
Curve Editor
Horizontal
Vertical
Fit
Pan
Zoom
Auto
Auto/Clamped
User
Break
Linear
Constant
Flatten
Straighten
Show All
Create
Delete
5
0.50
0.00
-0.50
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
0.45
0.50
0.55
0.60
0.65
0.70
0.75
0.80
0.85
0.90
0.95

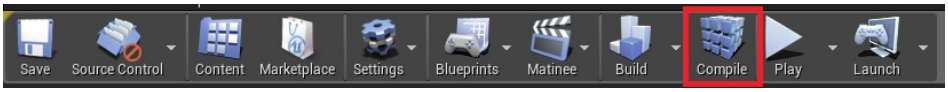


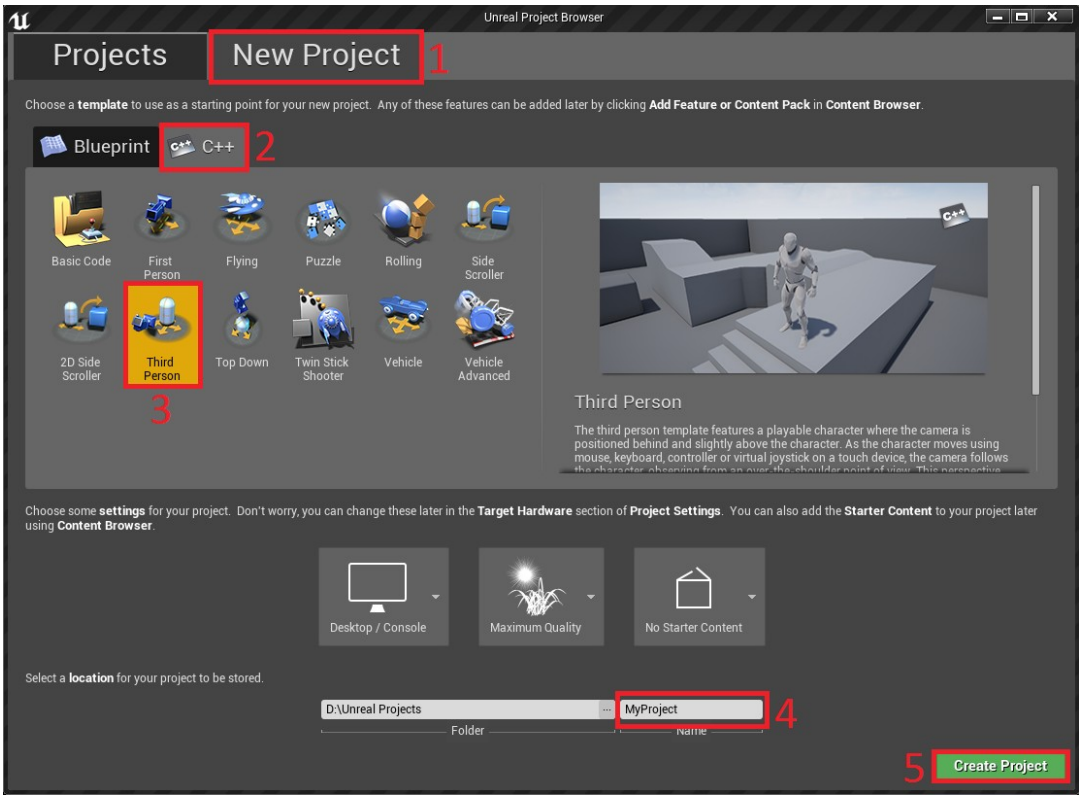
Chapter 10: Introduction to C++

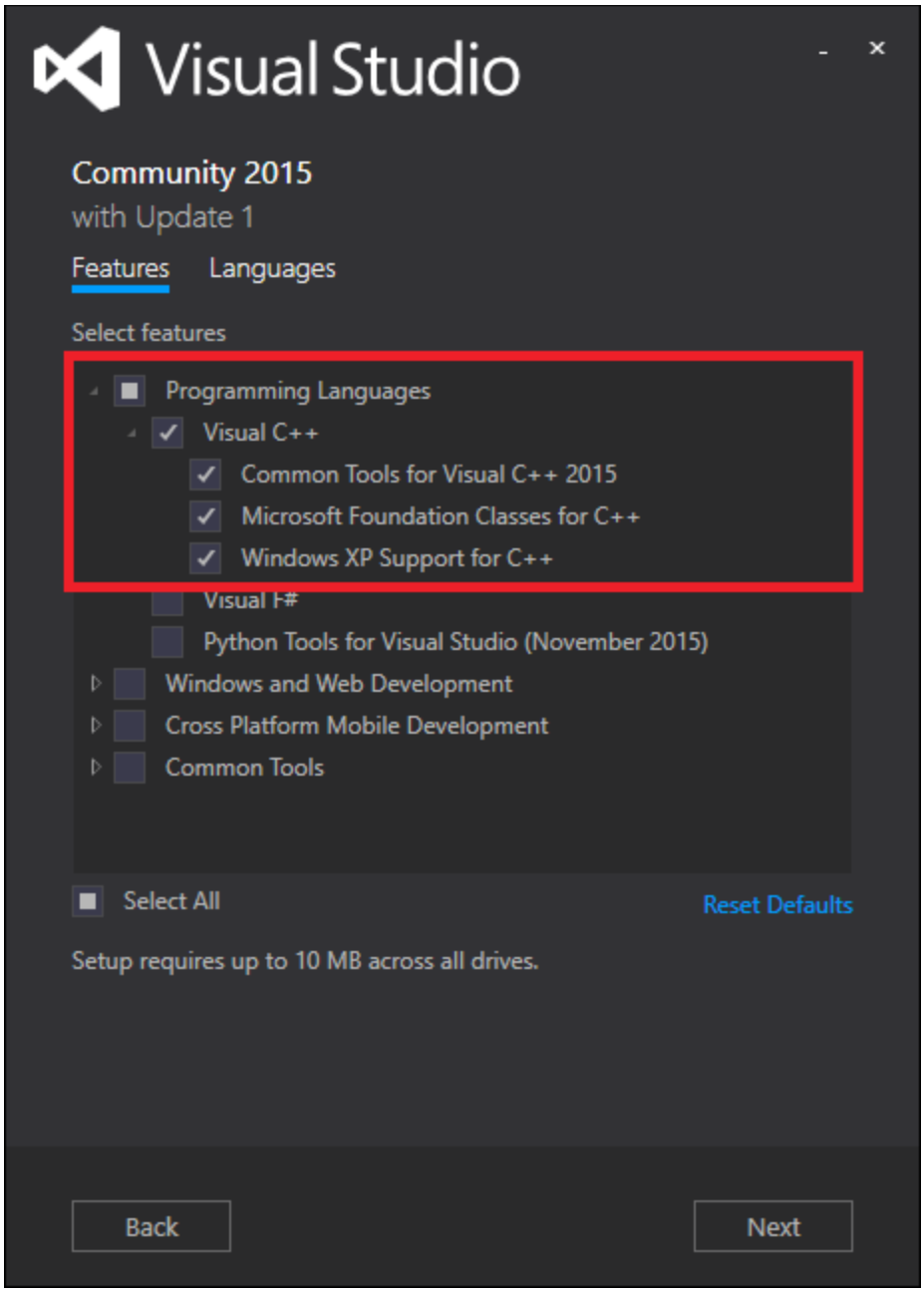





PACKT_CPP - Microsoft Visual Studio
Quick Launch (Ctrl+Q)
File Edit View VAssistX Project Build Debug Team Tools Test Analyze Window Help
Satheesh
Local Windows Debugger
Auto
DebugGame Editor
Win64
PACKT_CPP
"$(SolutionDir)$(ProjectName).upr
Build Startup Project
PACKT_CPPCharacter.h
PACKT_CPPCharacter.cpp
D:\Unreal Projects\PACKT_CPP\Source\PACKT_CPP\PACKT_CPPCharacter.h
Go
PACKT_CPP
(Global Scope)
#pragma once
#include "GameFramework/Character.h"
#include "PACKT_CPPCharacter.generated.h"
UCLASS(config=Game)
class APACKT_CPPCharacter : public ACharacter
{
GENERATED_BODY()
private:
/** Camera boom positioning the camera behind the character */
UPROPERTY(VisibleAnywhere, BlueprintReadOnly, Category = Camera, meta = (AllowPrivateAccess = "true"))
class USpringArmComponent* CameraBoom;
/** Follow camera */
UPROPERTY(VisibleAnywhere, BlueprintReadOnly, Category = Camera, meta = (AllowPrivateAccess = "true"))
class UCameraComponent* FollowCamera;
public:
APACKT_CPPCharacter();
/** Base turn rate, in deg/sec. Other scaling may affect final turn rate. */
UPROPERTY(VisibleAnywhere, BlueprintReadOnly, Category=Camera)
float BaseTurnRate;
/** Base look up/down rate, in deg/sec. Other scaling may affect final rate. */
UPROPERTY(VisibleAnywhere, BlueprintReadOnly, Category=Camera)
float BaseLookUpRate;
protected:
/** Called for forwards/backward input */
void MoveForward(float Value);
UNREAL
ENGINE
100 %
Error List
Code Definition Window
Output
Find Symbol Results
Ready
Ln 68
Col 1
Ch 1
INS


Save
Source Control
Content
Marketplace
Settings
Blueprints
Matinee
Build
Compile
Play
Launch


Unreal Project Browser
Projects
New Project
1
Choose a template to use as a starting point for your new project. Any of these features can be added later by clicking Add Feature or Content Pack in Content Browser.
Blueprint
C++
2
Basic Code
First Person
Flying
Puzzle
Rolling
Side Scroller
2D Side Scroller
Third Person
Top Down
Twin Stick Shooter
Vehicle
Vehicle Advanced
3
Third Person
The third person template features a playable character where the camera is positioned behind and slightly above the character. As the character moves using mouse, keyboard, controller or virtual joystick on a touch device, the camera follows
Choose some settings for your project. Don't worry, you can change these later in the Target Hardware section of Project Settings. You can also add the Starter Content to your project later using Content Browser.
Desktop / Console
Maximum Quality
No Starter Content
Select a location for your project to be stored.
D:\Unreal Projects
MyProject
4
Folder
Name
5
Create Project


Visual Studio
Community 2015
with Update 1
Features
Languages
Select features
Programming Languages
Visual C++
Common Tools for Visual C++ 2015
Microsoft Foundation Classes for C++
Windows XP Support for C++
Visual F#
Python Tools for Visual Studio (November 2015)
Windows and Web Development
Cross Platform Mobile Development
Common Tools
Select All
Reset Defaults
Setup requires up to 10 MB across all drives.
Back
Next

Visual Studio downloads

- Visual Studio 2015
  - Community 2015 1
  - Enterprise 2015
  - Professional 2015
  - Test Professional 2015
  - Express 2015 for Desktop
  - Express 2015 for Web
  - Express 2015 for Windows 10
  - Visual Studio 2015 Update 1
- Team Foundation Server 2015
- Visual Studio Code
- Tools for Visual Studio 2015
- Visual Studio 2013
- Team Foundation Server 2013
- Tools for Visual Studio 2013
- Visual Studio 2012
- Top Third-Party Extensions
- .NET Framework

Visual Studio Community 2015 with Update 1 - Free

Visual Studio Community 2015 with Update 1 is a free, fully featured, and extensible IDE for individual developers, open source projects, academic research, education, and small professional teams. Create applications for Windows, Android, and iOS as well as web applications and cloud services. Build apps for any platform. Use designers, editors, debuggers, and profilers in a single tool. Access thousands of extensions and more.

These cumulative updates to Visual Studio 2015 include a variety of bug fixes and capability improvements. To find out what's new in Visual Studio 2015 Update 1, see the Visual Studio 2015 Update 1 Release Notes. For a list of fixed bugs and known issues, see the Visual Studio 2015 Update 1 MSDN Article.

If you have Visual Studio Community 2015 installed on a machine with Internet access, Visual Studio 2015 Update 1 displays in the Notifications Hub. To install, select the notification, and then complete the installation actions. You can also download Visual Studio 2015 Update 1 here.

Note: If you have Visual Studio Community 2015 (original release version) installed and run the download from this page, only Visual Studio 2015 Update 1 is installed. If you don't have it installed and run the download, both Visual Studio Community 2015 and Update 1 are installed. In either instance, Visual Studio 2015 Language Packs (original release versions) can also be installed.

Release notes
System requirements
Compatibility
SHA-1 values
Compare Visual Studio editions

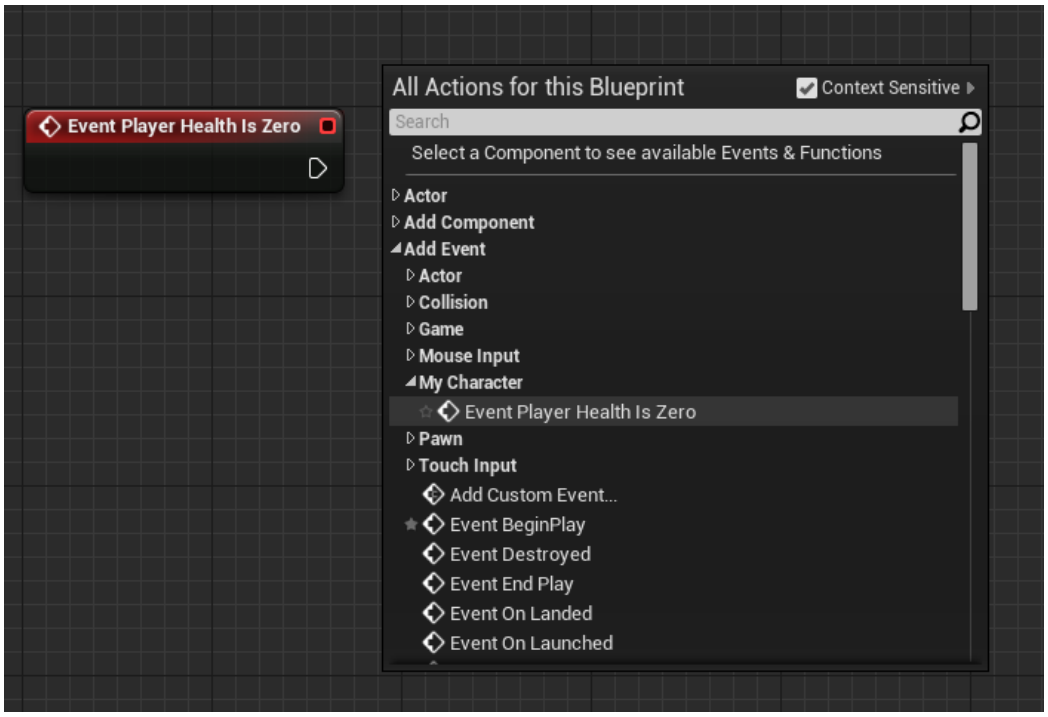
Choose language: English

Choose format: Web installer ISO 2

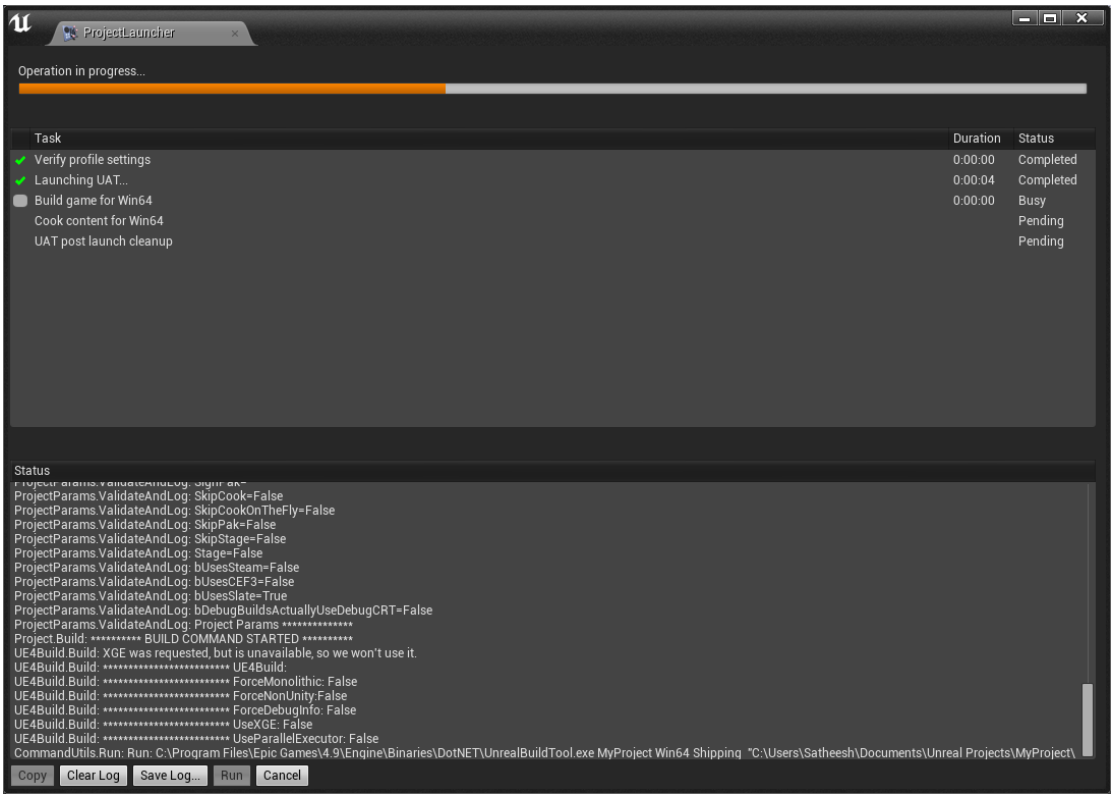
Download

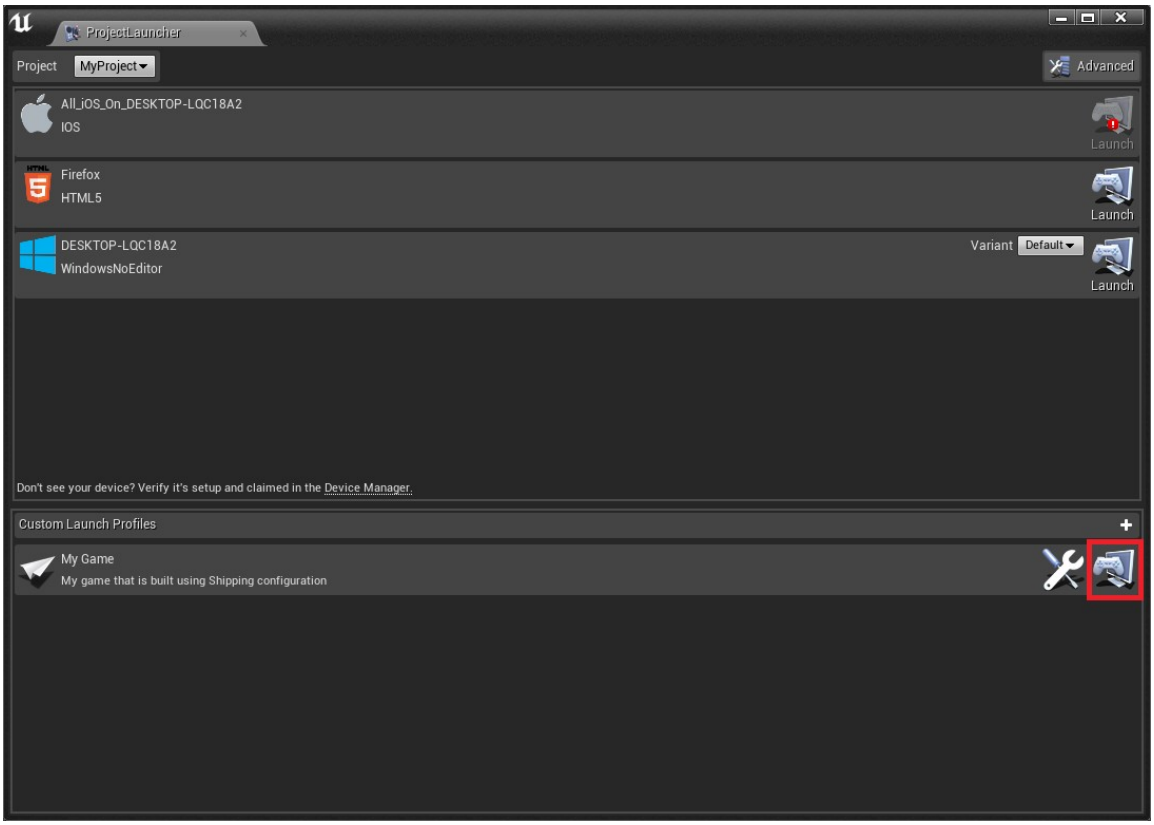
How to install files offline

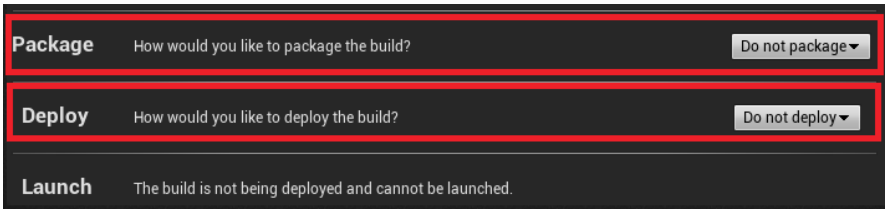
Visual Studio Community 2015 with Update 1 – Free - English

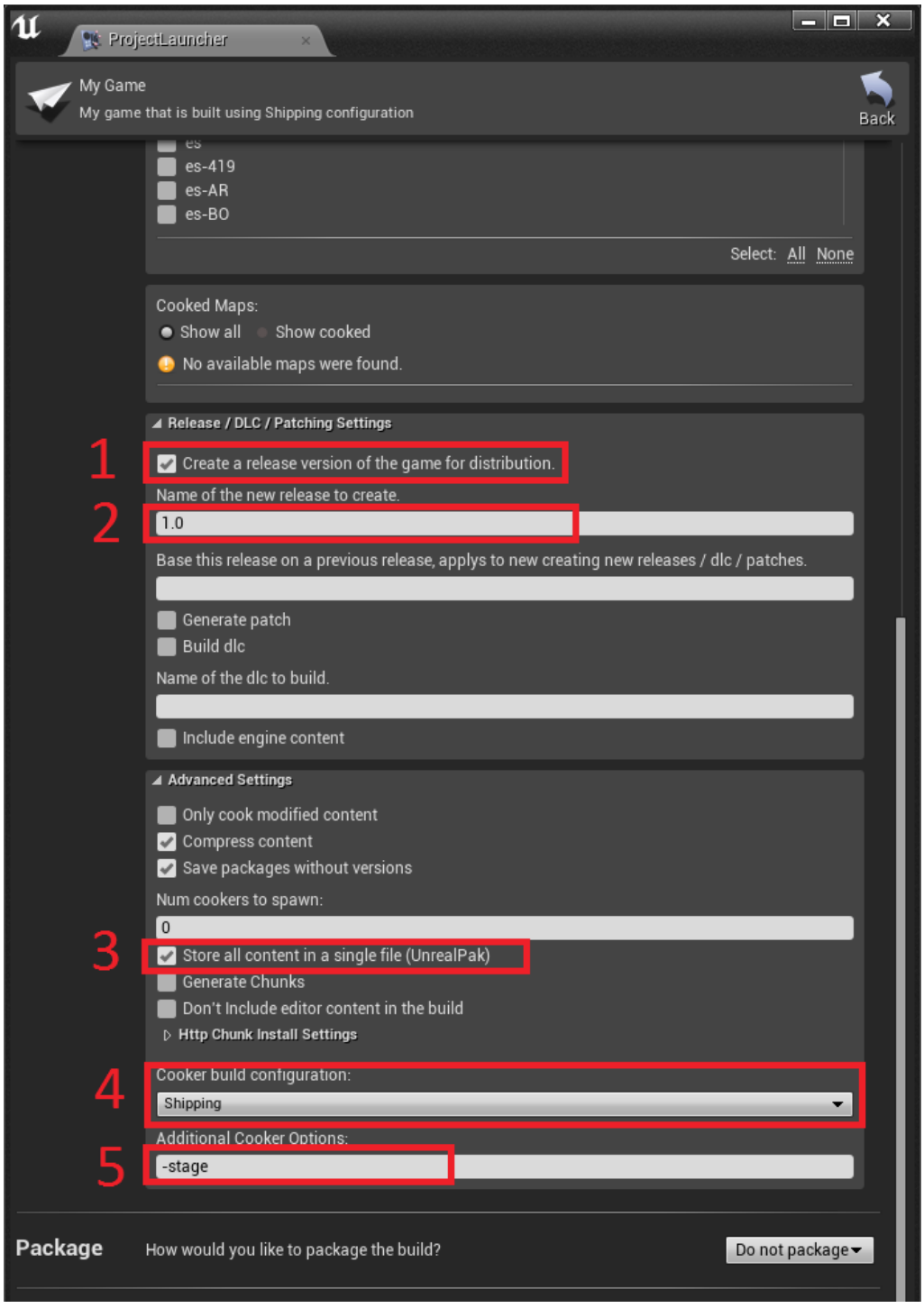


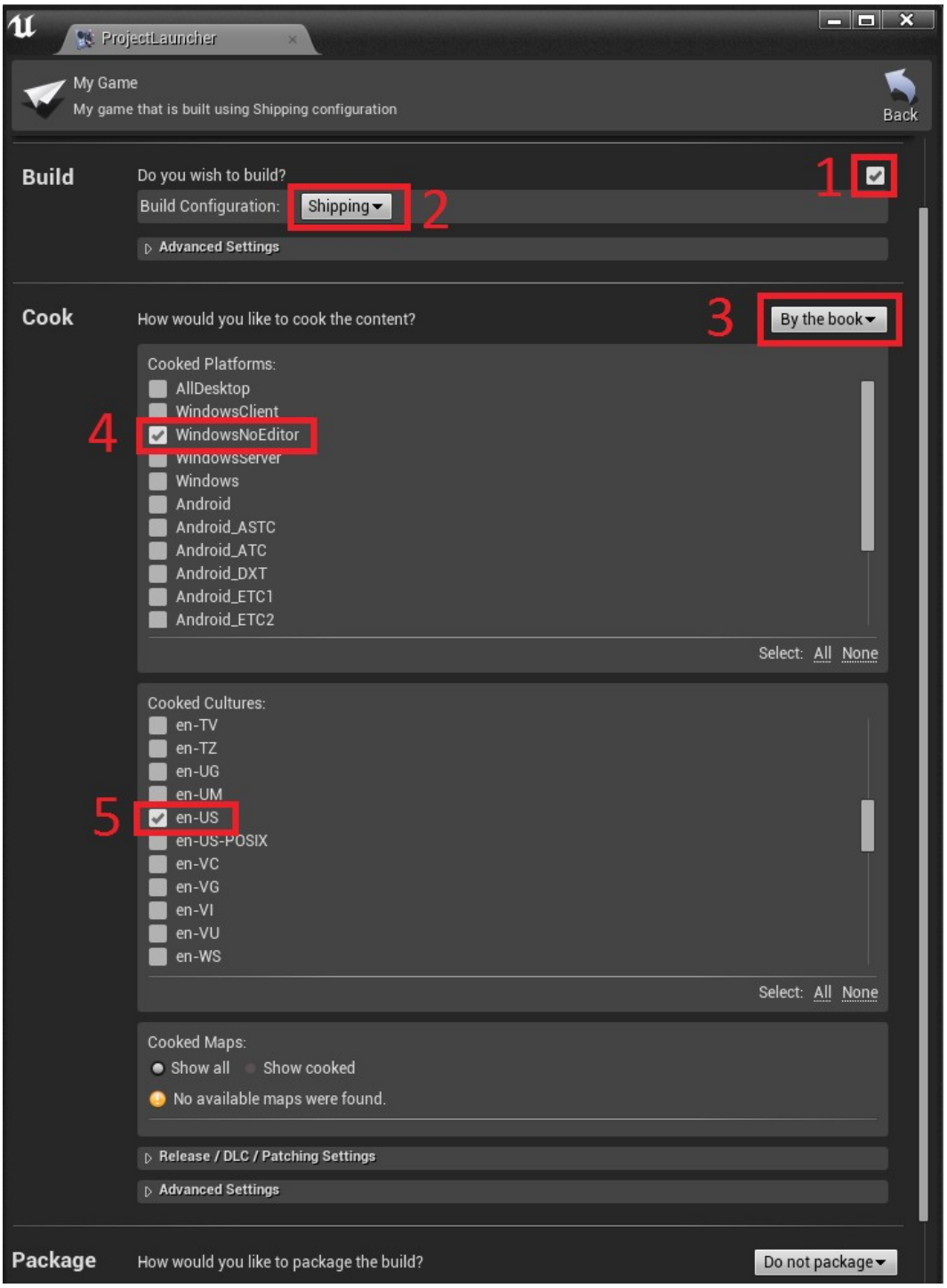
Chapter 11: Packaging Projects

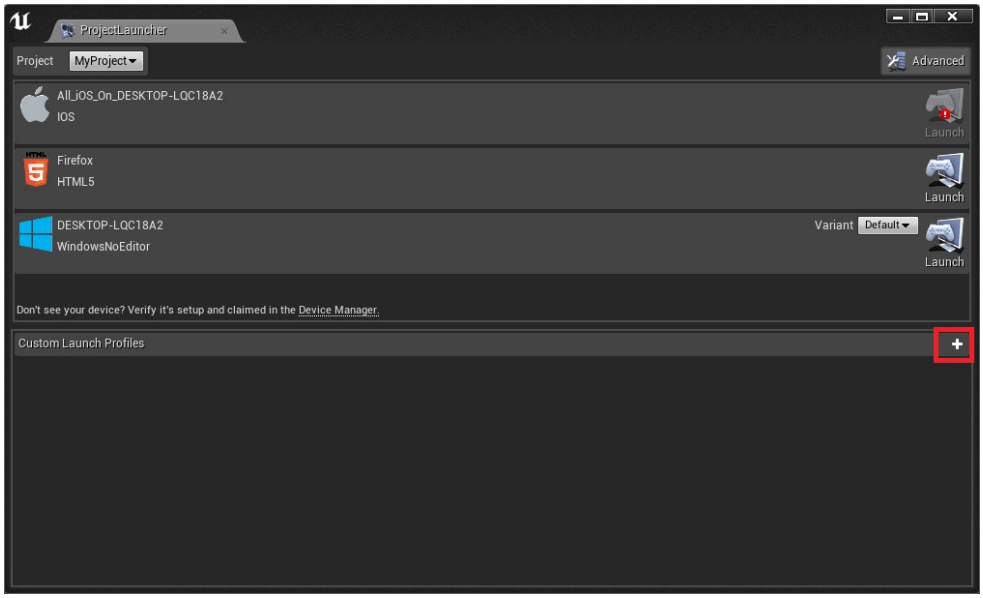



ProjectLauncher
Project
MyProject
Advanced
All_iOS_On_DESKTOP-LQC18A2
IOS
Launch
Firefox
HTML5
Launch
DESKTOP-LQC18A2
WindowsNoEditor
Variant
Default
Launch
Don't see your device? Verify it's setup and claimed in the Device Manager.
Custom Launch Profiles
My Game
My game that is built using Shipping configuration


Package
How would you like to package the build?
Do not package
Deploy
How would you like to deploy the build?
Do not deploy
Launch
The build is not being deployed and cannot be launched.


ProjectLauncher
My Game
My game that is built using Shipping configuration
Back
es-419
es-AR
es-BO
Select: All None
Cooked Maps:
Show all
Show cooked
No available maps were found.
Release / DLC / Patching Settings
1
Create a release version of the game for distribution.
Name of the new release to create.
2
1.0
Base this release on a previous release, applys to new creating new releases / dlc / patches.
Generate patch
Build dlc
Name of the dlc to build.
Include engine content
Advanced Settings
Only cook modified content
Compress content
Save packages without versions
Num cookers to spawn:
0
3
Store all content in a single file (UnrealPak)
Generate Chunks
Don't Include editor content in the build
Http Chunk Install Settings
4
Cooker build configuration:
Shipping
Additional Cooker Options:
5
-stage
Package
How would you like to package the build?
Do not package


ProjectLauncher
My Game
My game that is built using Shipping configuration
Back
Build
Do you wish to build?
1
Build Configuration:
Shipping
2
Advanced Settings
Cook
How would you like to cook the content?
3
By the book
Cooked Platforms:
AllDesktop
WindowsClient
4
WindowsNoEditor
WindowsServer
Windows
Android
Android_ASTC
Android_ATC
Android_DXT
Android_ETC1
Android_ETC2
Select: All None
Cooked Cultures:
en-TV
en-TZ
en-UG
en-UM
5
en-US
en-US-POSIX
en-VC
en-VG
en-VI
en-VU
en-WS
Select: All None
Cooked Maps:
Show all
Show cooked
No available maps were found.
Release / DLC / Patching Settings
Advanced Settings
Package
How would you like to package the build?
Do not package


ProjectLauncher
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MyProject
Advanced
All_iOS_On_DESKTOP-LQC18A2
IOS
Launch
Firefox
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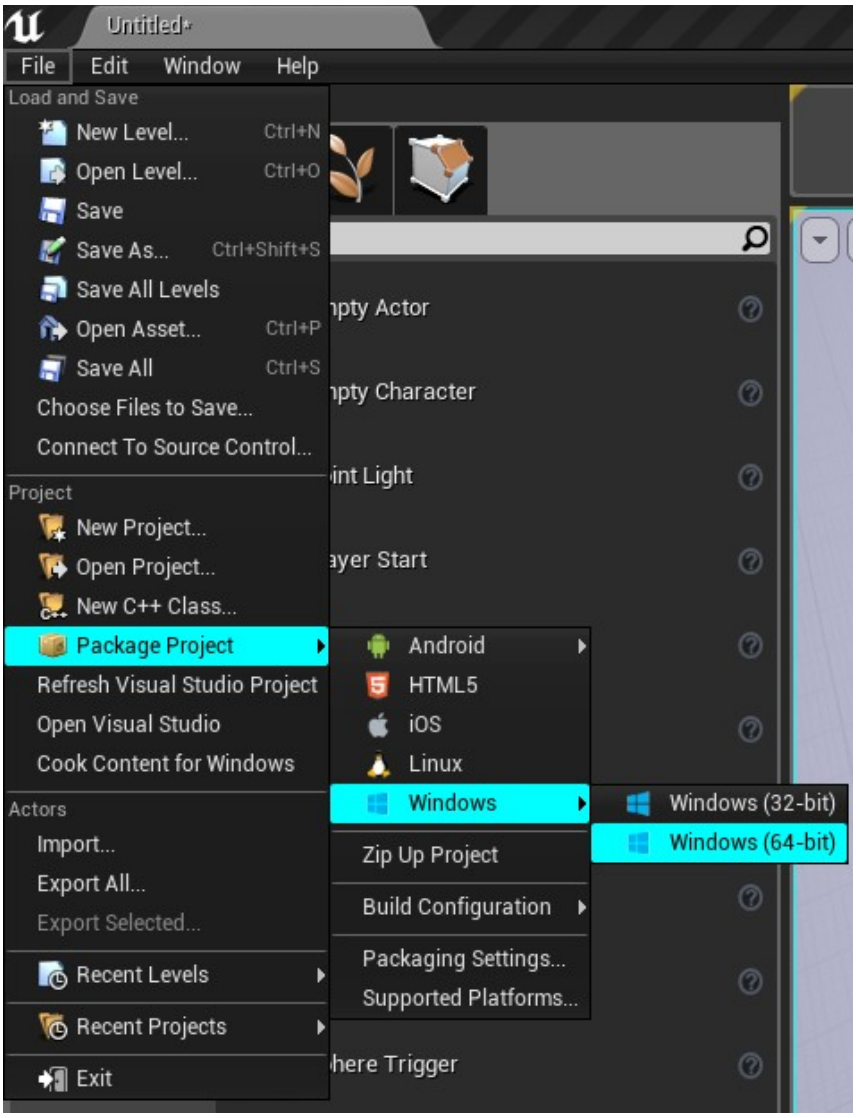
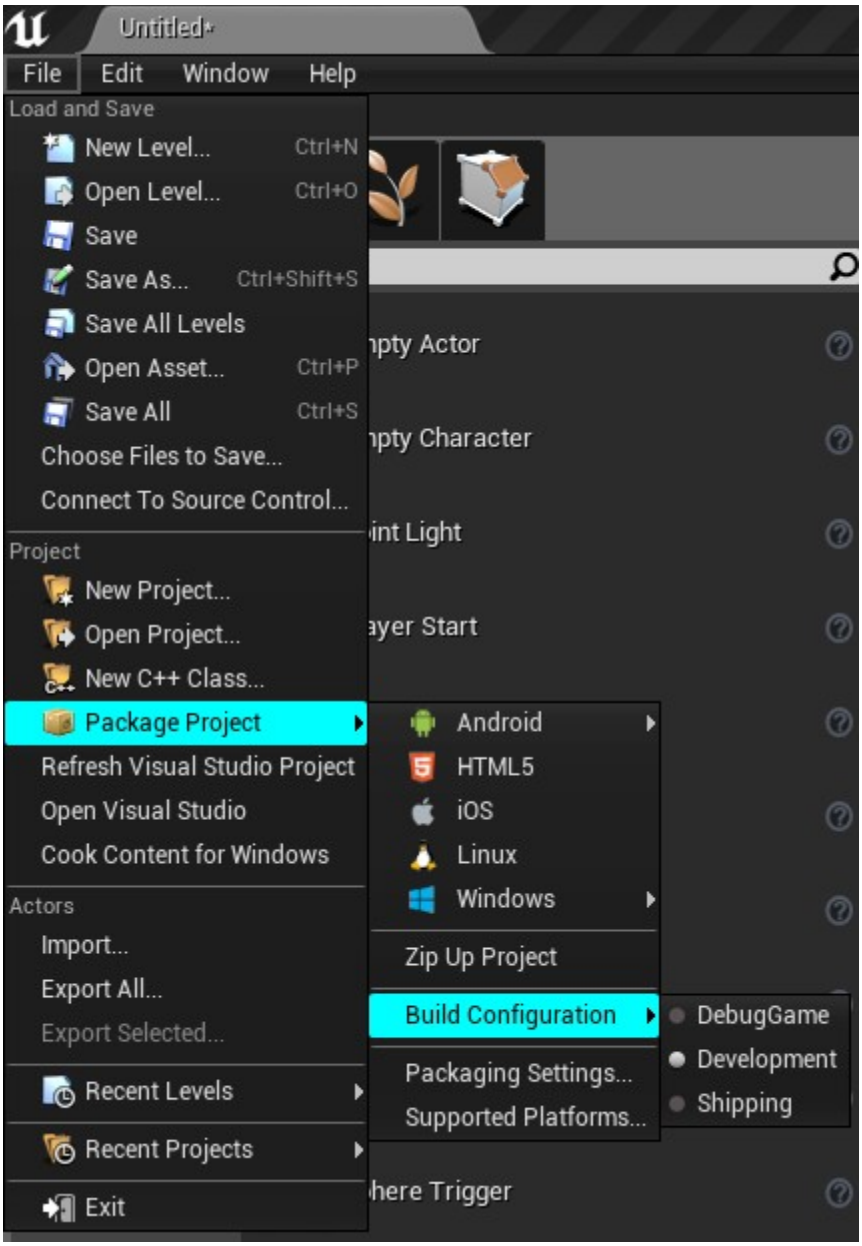
DESKTOP-LQC18A2
WindowsNoEditor
Variant
Default
Launch
Don't see your device? Verify it's setup and claimed in the Device Manager.
Custom Launch Profiles


Untitled*
File
Edit
Window
Help
Load and Save
New Level... Ctrl+N
Open Level... Ctrl+O
Save
Save As... Ctrl+Shift+S
Save All Levels
Open Asset... Ctrl+P
Save All Ctrl+S
Choose Files to Save...
Connect To Source Control...
Project
New Project...
Open Project...
New C++ Class...
Package Project
Refresh Visual Studio Project
Open Visual Studio
Cook Content for Windows
Actors
Import...
Export All...
Export Selected...
Recent Levels
Recent Projects
Exit
Android
HTML5
iOS
Linux
Windows
Zip Up Project
Build Configuration
Packaging Settings...
Supported Platforms...
Windows (32-bit)
Windows (64-bit)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File
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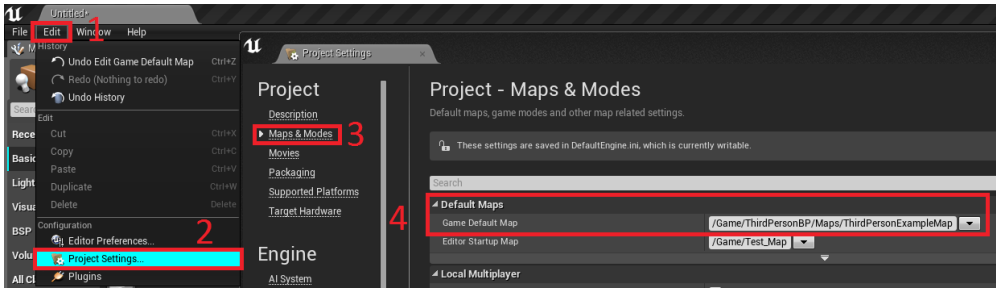
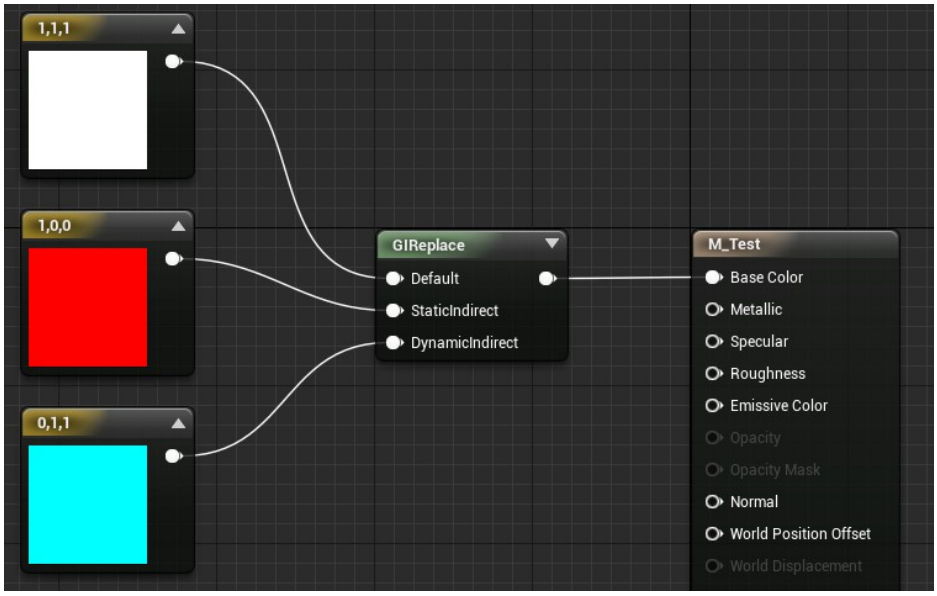
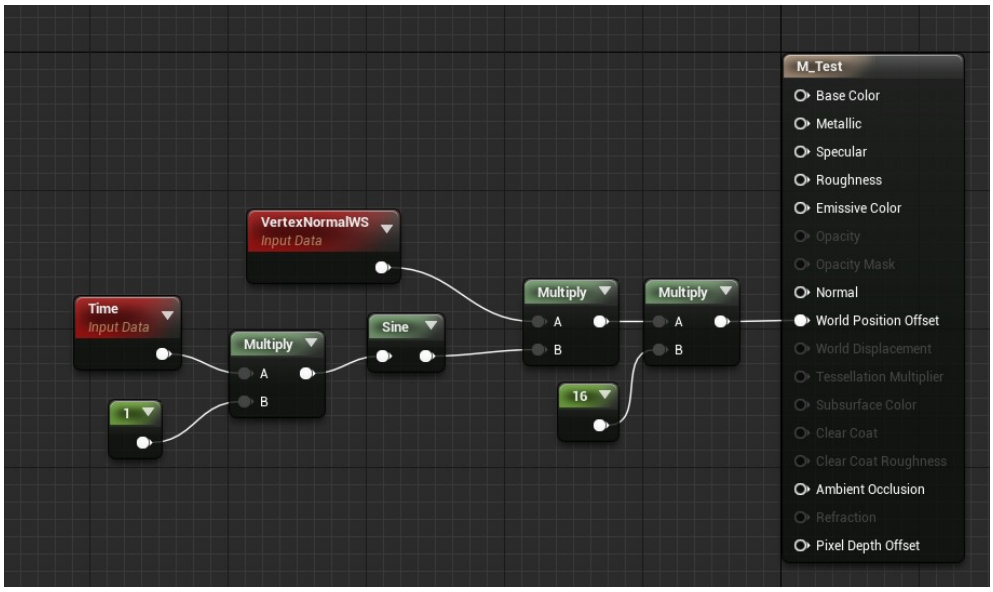
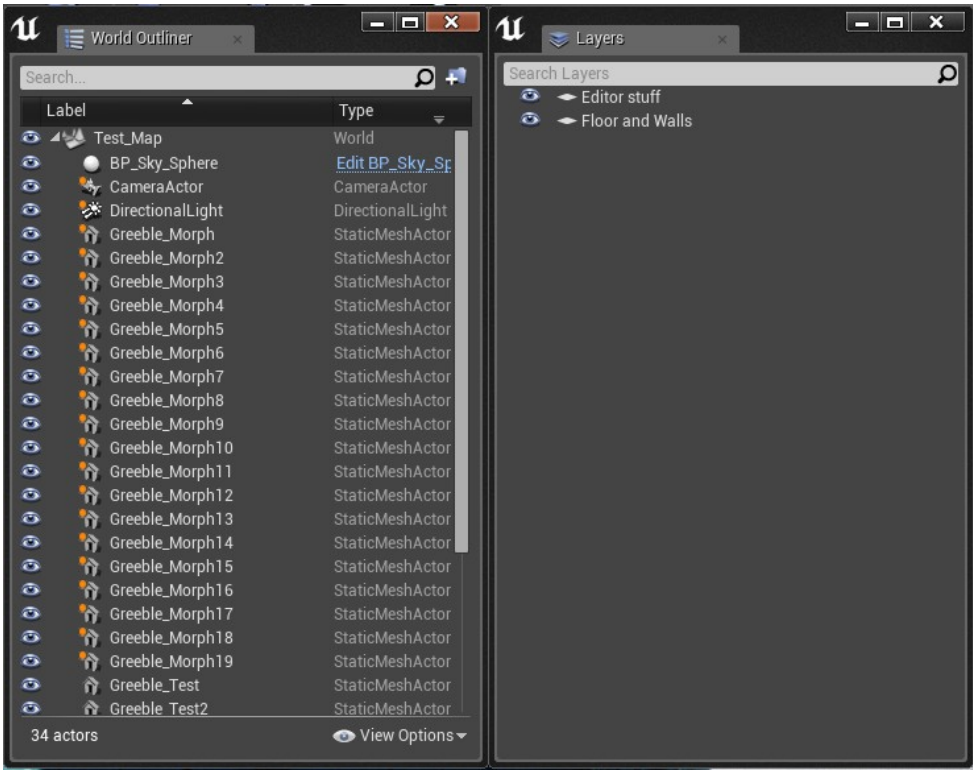
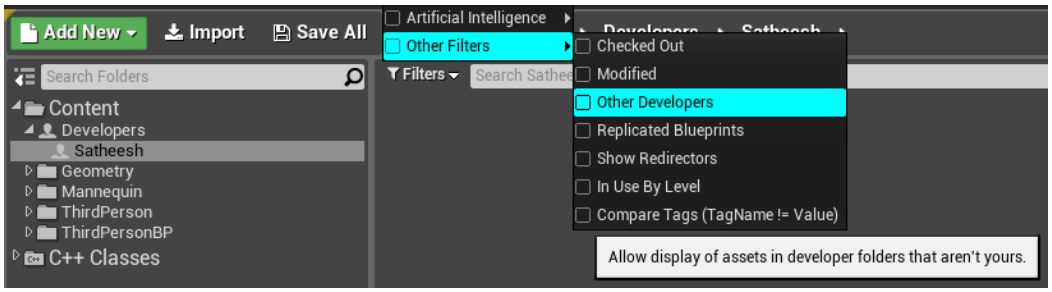
Window
Help
Load and Save
New Level... Ctrl+N
Open Level... Ctrl+O
Save
Save As... Ctrl+Shift+S
Save All Levels
Open Asset... Ctrl+P
Save All Ctrl+S
Choose Files to Save...
Connect To Source Control...
Project
New Project...
Open Project...
New C++ Class...
Package Project
Refresh Visual Studio Project
Open Visual Studio
Cook Content for Windows
Actors
Import...
Export All...
Export Selected...
Recent Levels
Recent Projects
Exit
Android
HTML5
iOS
Linux
Windows
Zip Up Project
Build Configuration
Packaging Settings...
Supported Platforms...
DebugGame
Development
Shipping

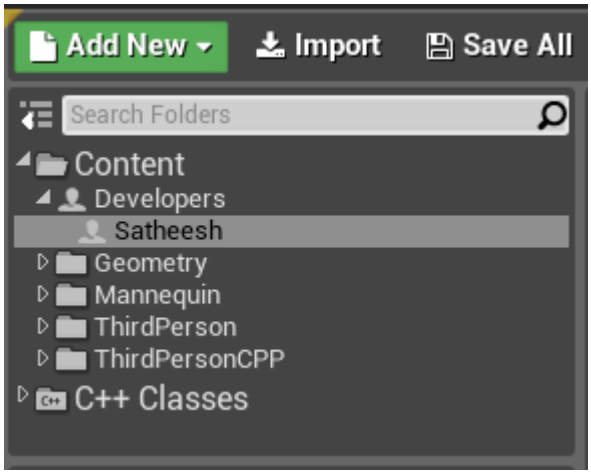

Untitled
File
Edit
Window
Help
1
History
Undo Edit Game Default Map Ctrl+Z
Redo (Nothing to redo) Ctrl+Y
Undo History
Edit
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Duplicate Ctrl+W
Delete Delete
Configuration
Editor Preferences...
2
Project Settings...
Plugins
Project Settings
Project
Description
Maps & Modes
3
Movies
Packaging
Supported Platforms
Target Hardware
Engine
AI System
4
Project - Maps & Modes
Default maps, game modes and other map related settings.
These settings are saved in DefaultEngine.ini, which is currently writable.
Search
Default Maps
Game Default Map
/Game/ThirdPersonBP/Maps/ThirdPersonExampleMap
Editor Startup Map
/Game/Test_Map
Local Multiplayer

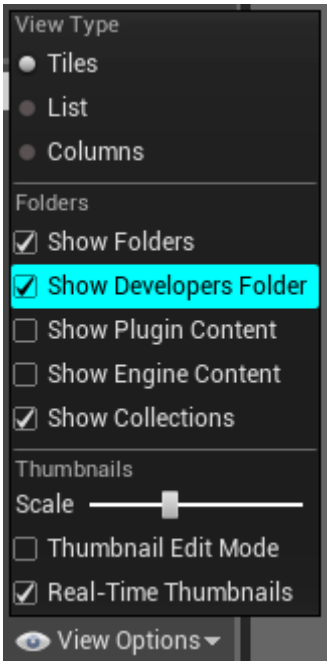

1,1,1
1,0,0
0,1,1
GIReplace
Default
StaticIndirect
DynamicIndirect
M_Test
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement

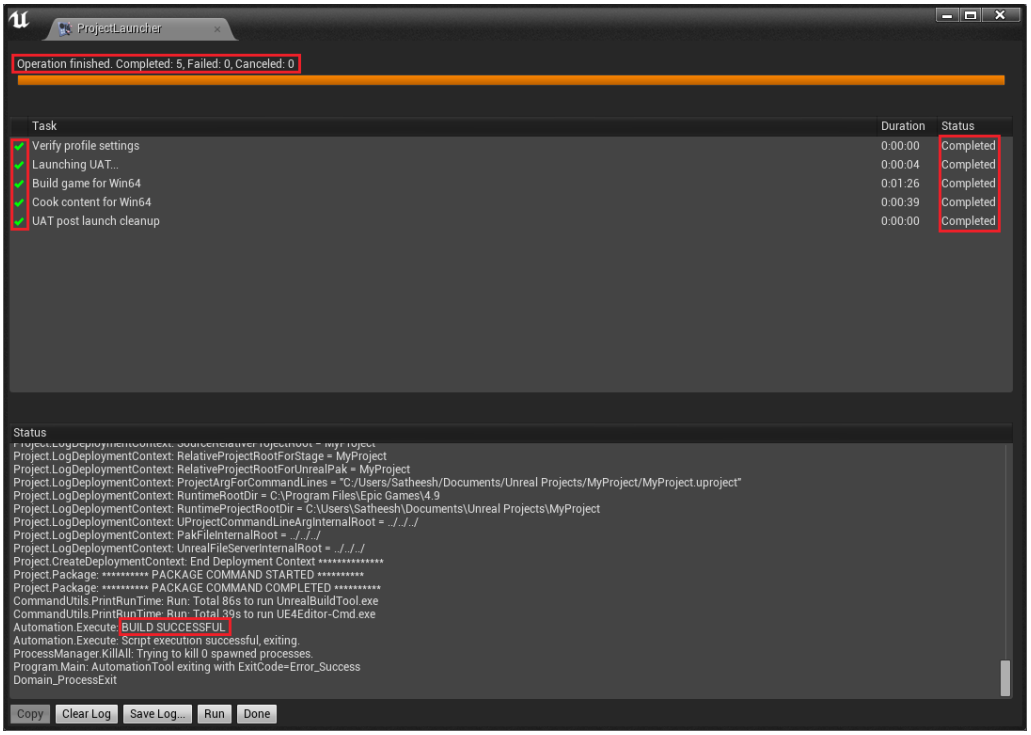

M_Test
Base Color
Metallic
Specular
Roughness
Emissive Color
Opacity
Opacity Mask
Normal
World Position Offset
World Displacement
Tessellation Multiplier
Subsurface Color
Clear Coat
Clear Coat Roughness
Ambient Occlusion
Refraction
Pixel Depth Offset
VertexNormalWS
Input Data
Time
Input Data
Multiply
A
B
Sine
Multiply
A
B
Multiply
A
B
1
16


World Outliner
Search...
Label
Type
Test_Map
World
BP_Sky_Sphere
Edit BP_Sky_Sp
CameraActor
CameraActor
DirectionalLight
DirectionalLight
Greeble_Morph
StaticMeshActor
Greeble_Morph2
StaticMeshActor
Greeble_Morph3
StaticMeshActor
Greeble_Morph4
StaticMeshActor
Greeble_Morph5
StaticMeshActor
Greeble_Morph6
StaticMeshActor
Greeble_Morph7
StaticMeshActor
Greeble_Morph8
StaticMeshActor
Greeble_Morph9
StaticMeshActor
Greeble_Morph10
StaticMeshActor
Greeble_Morph11
StaticMeshActor
Greeble_Morph12
StaticMeshActor
Greeble_Morph13
StaticMeshActor
Greeble_Morph14
StaticMeshActor
Greeble_Morph15
StaticMeshActor
Greeble_Morph16
StaticMeshActor
Greeble_Morph17
StaticMeshActor
Greeble_Morph18
StaticMeshActor
Greeble_Morph19
StaticMeshActor
Greeble_Test
StaticMeshActor
Greeble_Test2
StaticMeshActor
34 actors
View Options
Layers
Search Layers
Editor stuff
Floor and Walls


Add New
Import
Save All
Search Folders
Content
Developers
Satheesh
Geometry
Mannequin
ThirdPerson
ThirdPersonBP
C++ Classes
Artificial Intelligence
Other Filters
Filters
Checked Out
Modified
Other Developers
Replicated Blueprints
Show Redirectors
In Use By Level
Compare Tags (TagName != Value)
Allow display of assets in developer folders that aren't yours.


Add New
Import
Save All
Search Folders
Content
Developers
Satheesh
Geometry
Mannequin
ThirdPerson
ThirdPersonCPP
C++ Classes


View Type
Tiles
List
Columns
Folders
Show Folders
Show Developers Folder
Show Plugin Content
Show Engine Content
Show Collections
Thumbnails
Scale
Thumbnail Edit Mode
Real-Time Thumbnails
View Options


ProjectLauncher
Operation finished. Completed: 5, Failed: 0, Canceled: 0
Task
Duration
Status
Verify profile settings 0:00:00 Completed
Launching UAT... 0:00:04 Completed
Build game for Win64 0:01:26 Completed
Cook content for Win64 0:00:39 Completed
UAT post launch cleanup 0:00:00 Completed
Status
Project.LogDeploymentContext: RelativeProjectRootForStage = MyProject
Project.LogDeploymentContext: RelativeProjectRootForUnrealPak = MyProject
Project.LogDeploymentContext: ProjectArgForCommandLines = "C:/Users/Satheesh/Documents/Unreal Projects/MyProject/MyProject.uproject"
Project.LogDeploymentContext: RuntimeRootDir = C:\Program Files\Epic Games\4.9
Project.LogDeploymentContext: RuntimeProjectRootDir = C:\Users\Satheesh\Documents\Unreal Projects\MyProject
Project.LogDeploymentContext: UProjectCommandLineArgInternalRoot = ../../../
Project.LogDeploymentContext: PakFileInternalRoot = ../../../
Project.LogDeploymentContext: UnrealFileServerInternalRoot = ../../../
Project.CreateDeploymentContext: End Deployment Context **********
Project.Package: ********** PACKAGE COMMAND STARTED **********
Project.Package: ********** PACKAGE COMMAND COMPLETED **********
CommandUtils.PrintRunTime: Run: Total 86s to run UnrealBuildTool.exe
CommandUtils.PrintRunTime: Run: Total 39s to run UE4Editor-Cmd.exe
Automation.Execute: BUILD SUCCESSFUL
Automation.Execute: Script execution successful, exiting.
ProcessManager.KillAll: Trying to kill 0 spawned processes.
Program.Main: AutomationTool exiting with ExitCode=Error_Success
Domain_ProcessExit
Copy
Clear Log
Save Log...
Run
Done