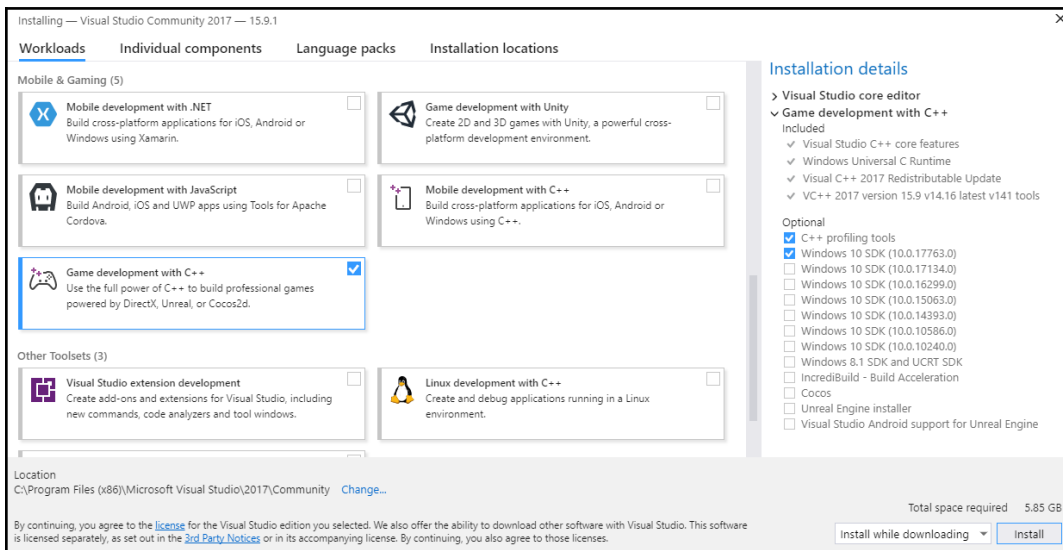
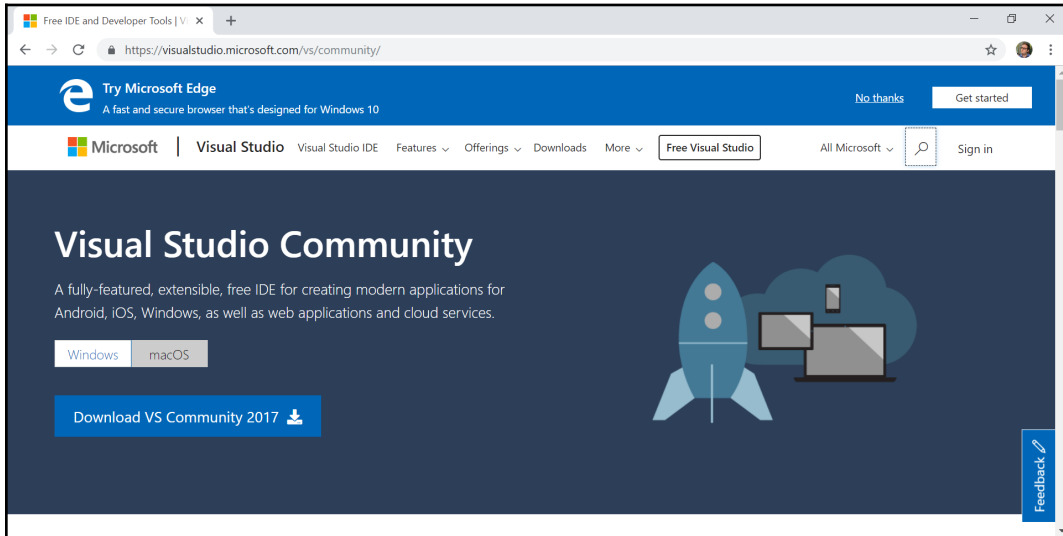


# Chapter 1: UE4 Development Tools





Welcome!

Connect to all your developer services.

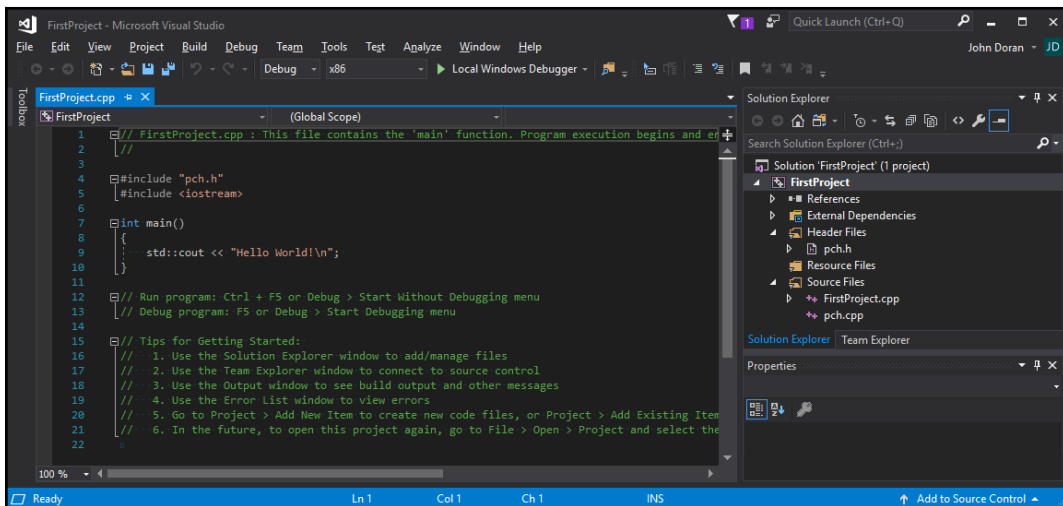
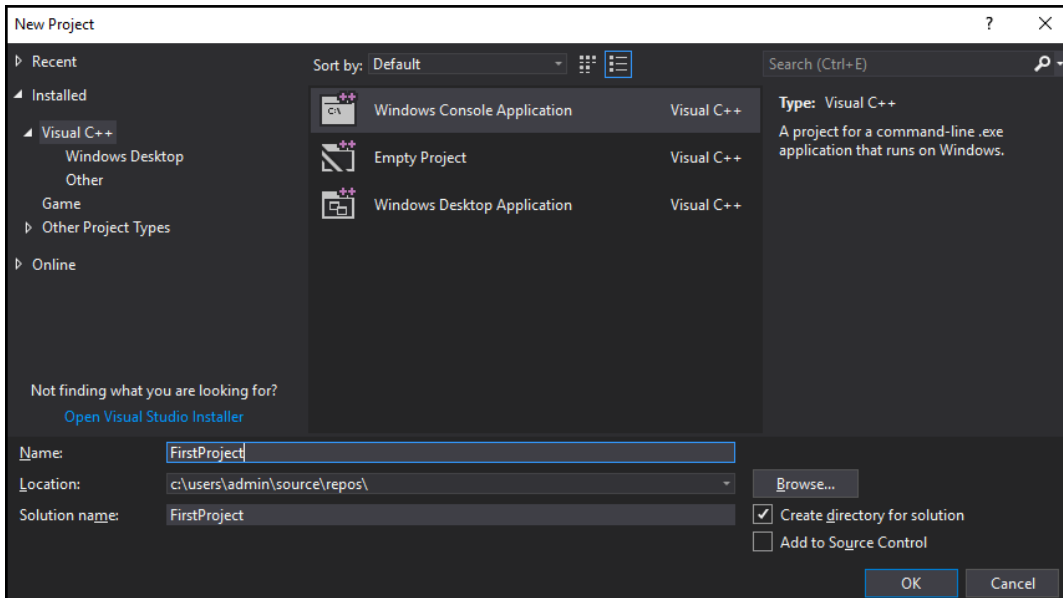
Sign in to start using your Azure credits, publish code to a private Git repository, sync your settings, and unlock the IDE.

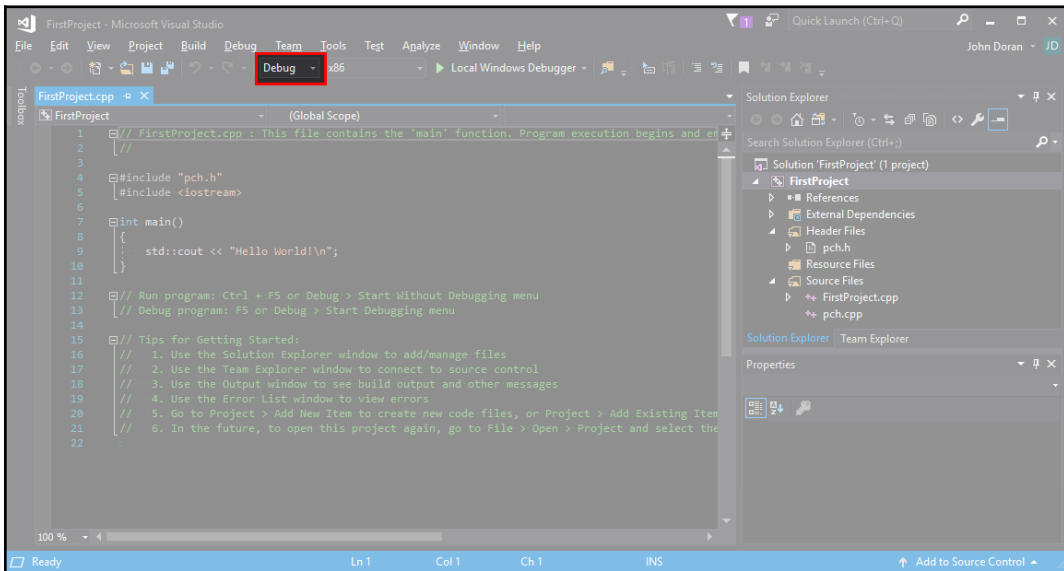
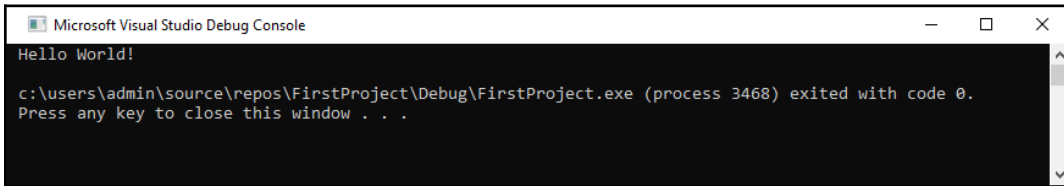
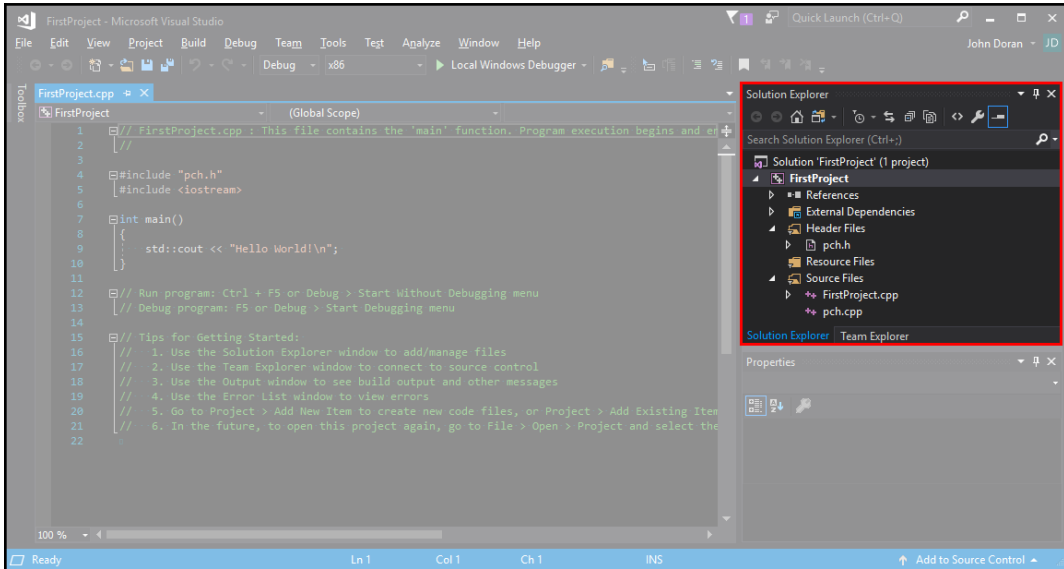
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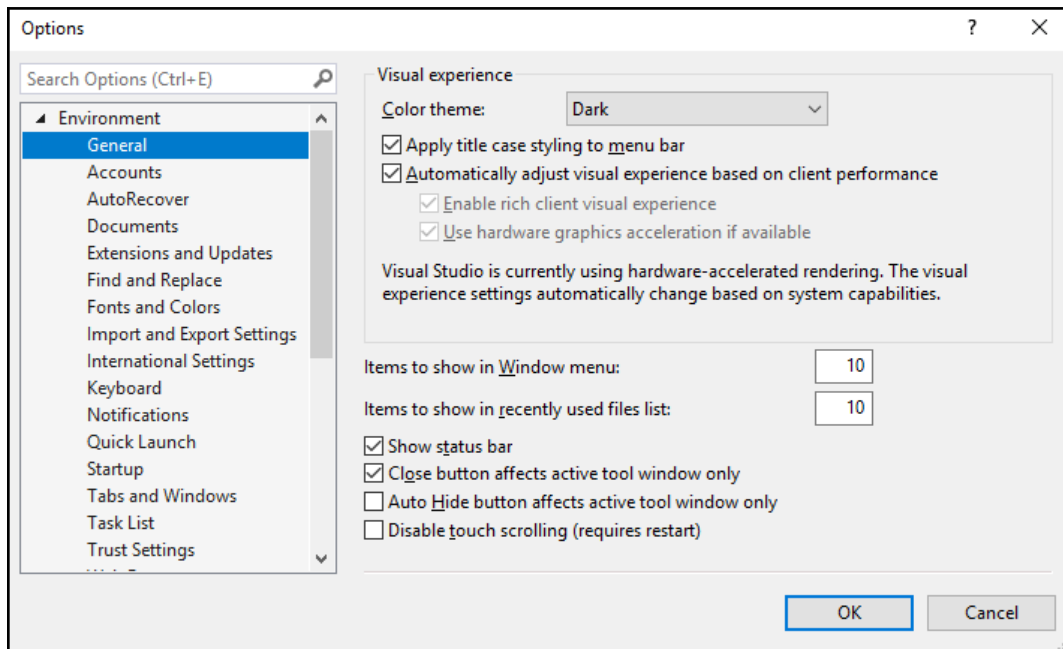
[Not now, maybe later.](#)

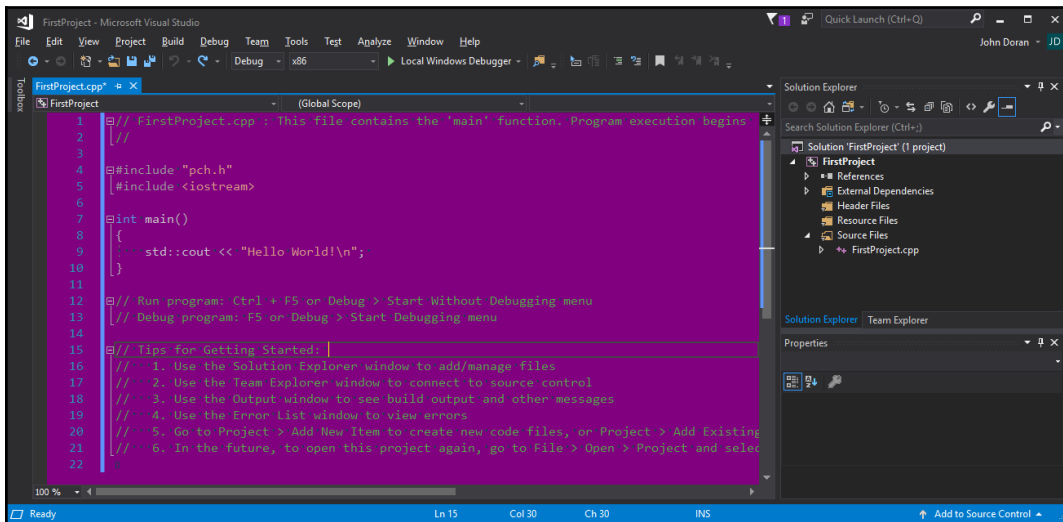
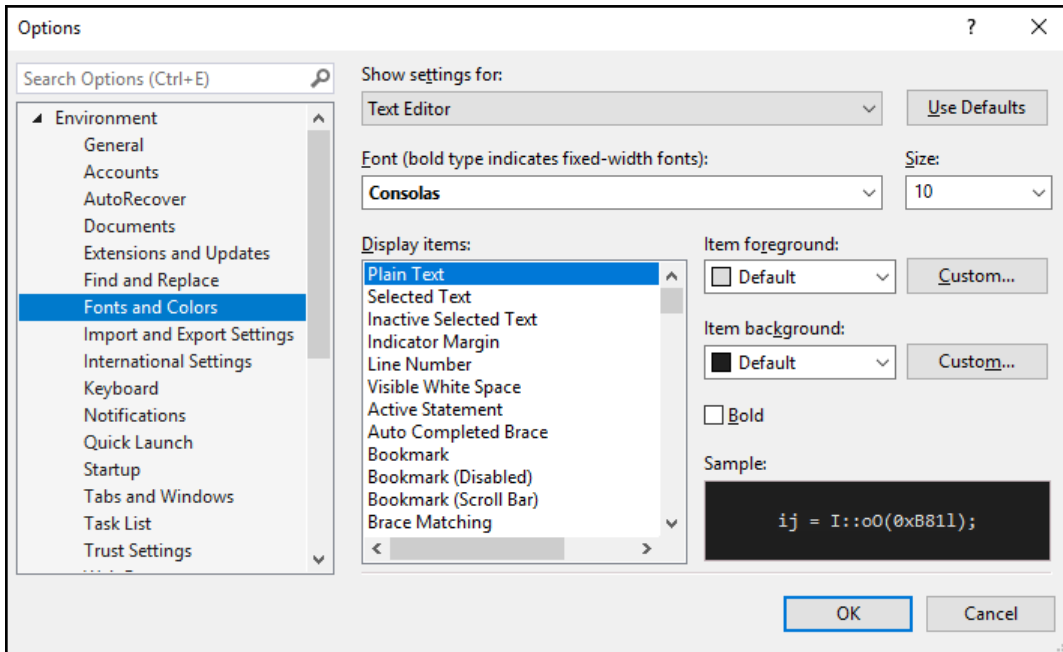


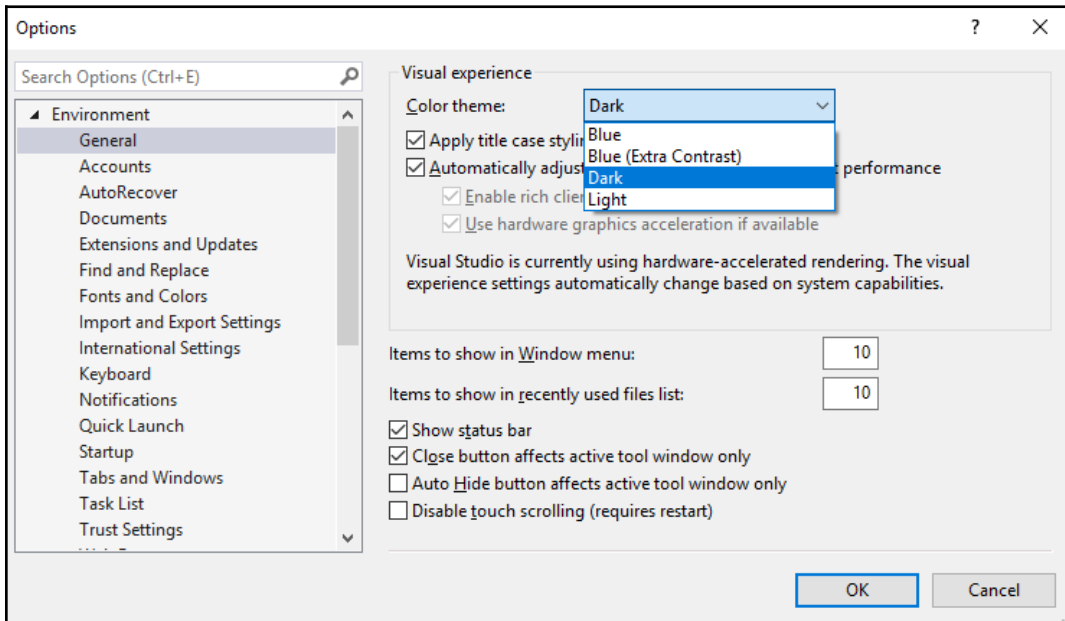
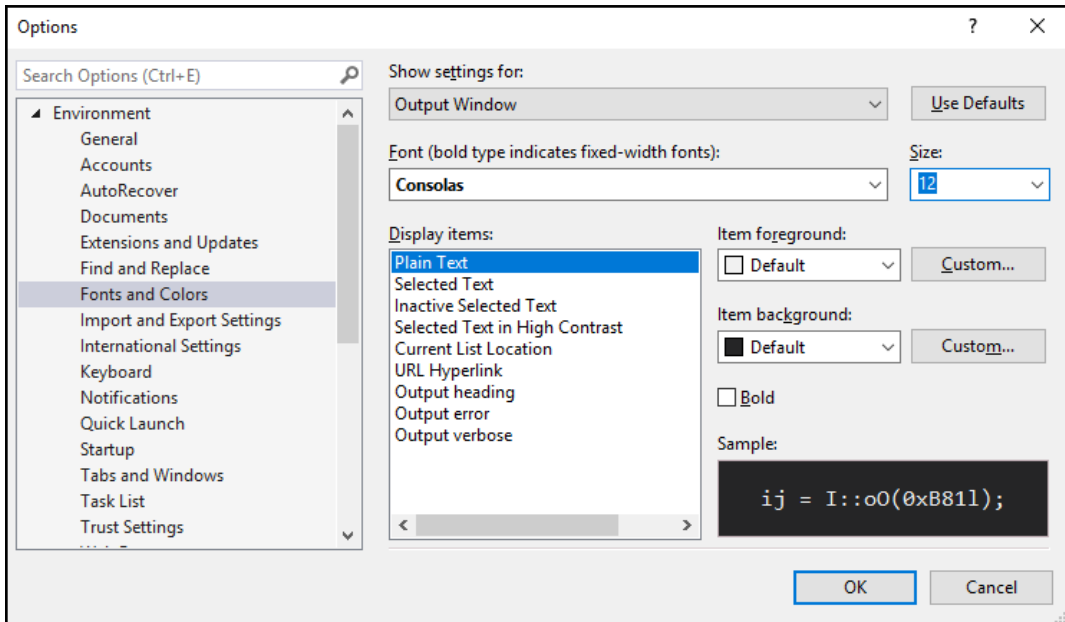


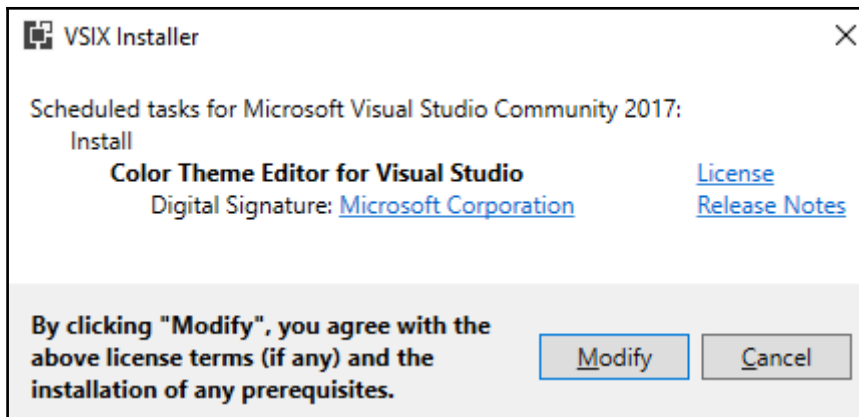
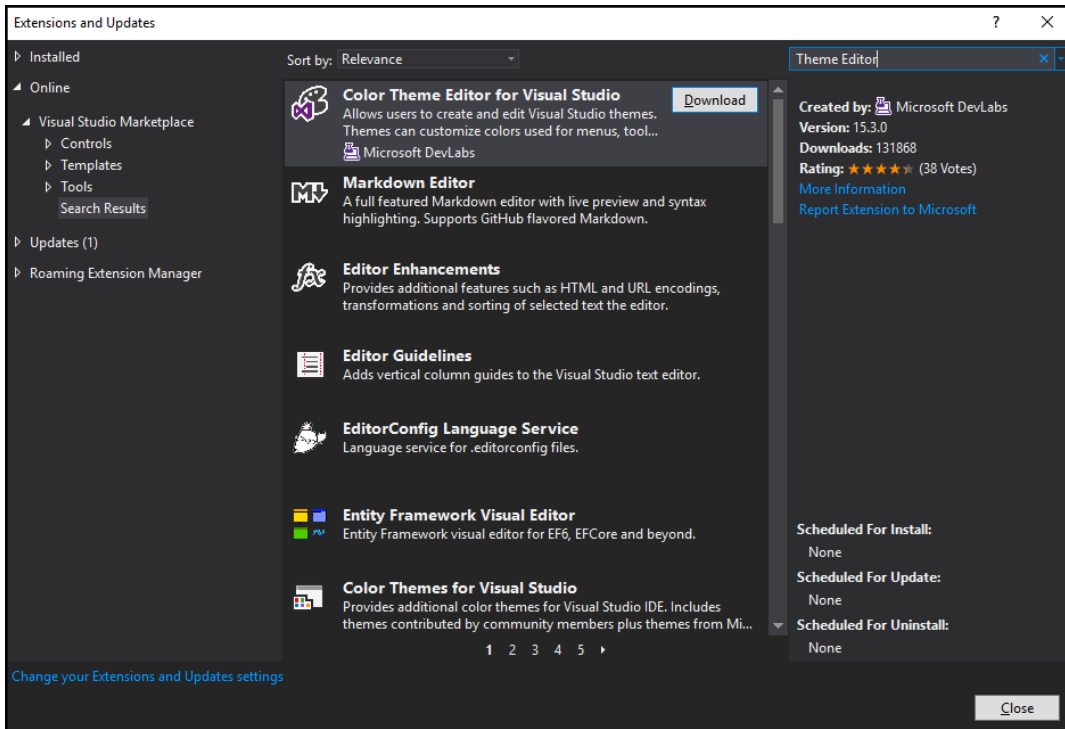
```
#include "pch.h"
#include <iostream>

int main()
{
    std::cout << "Hello World!\n";
}
```

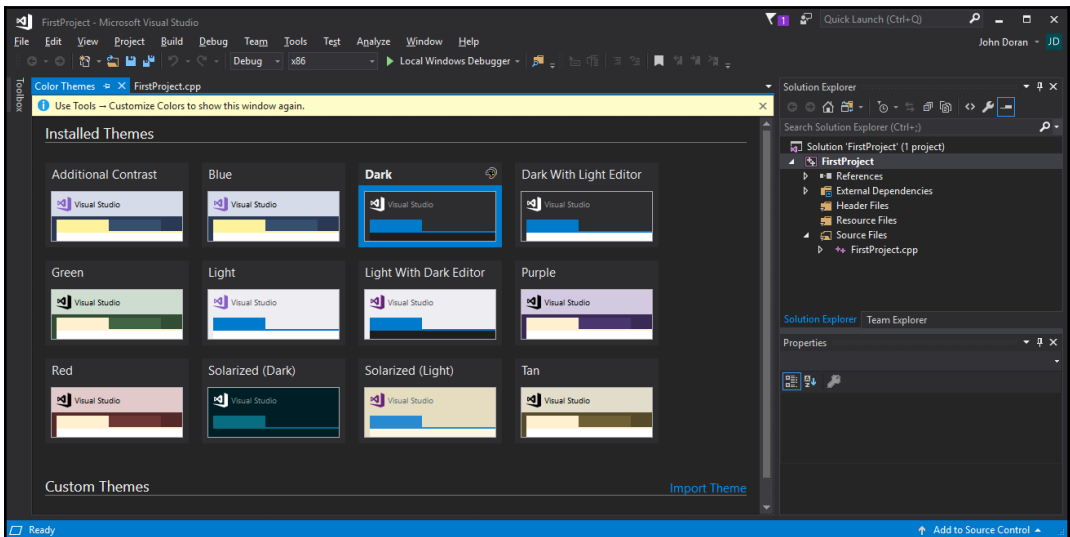
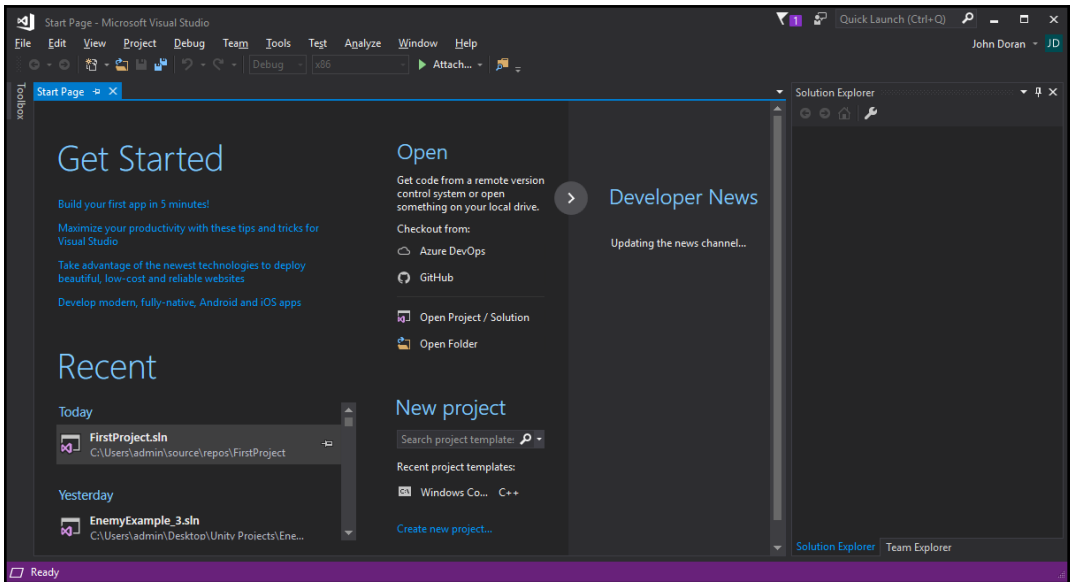


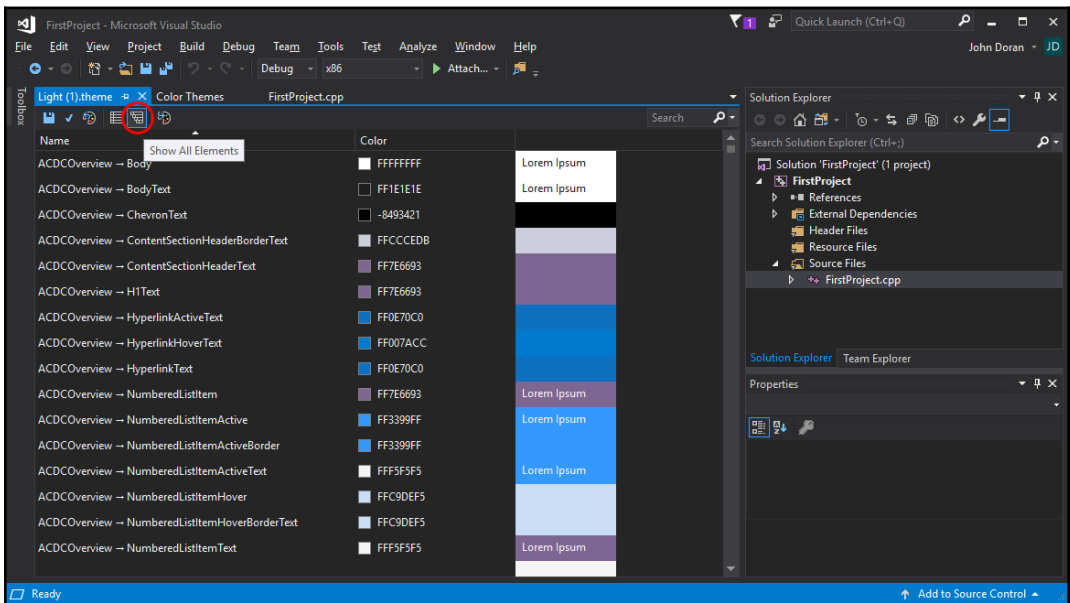
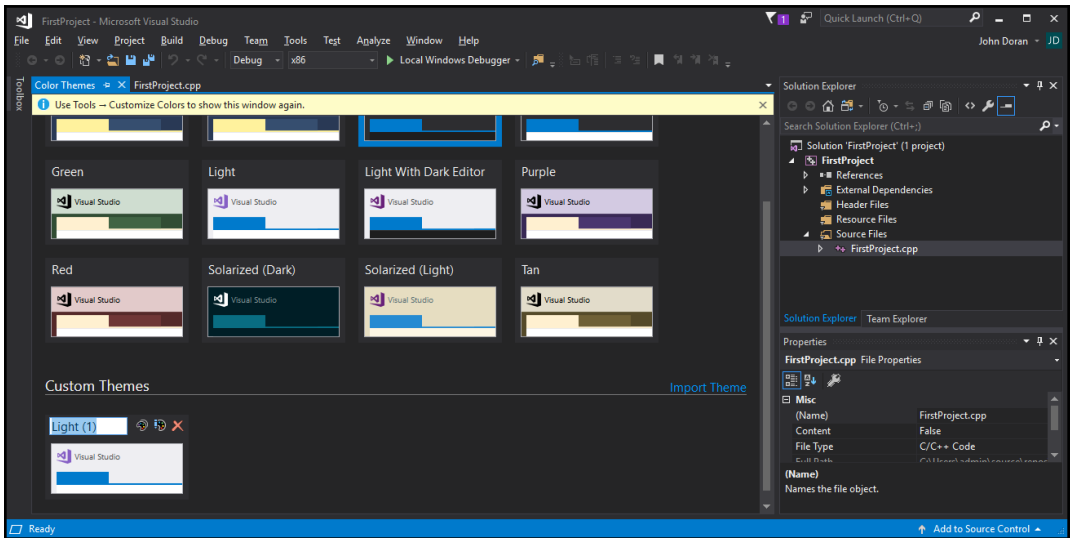


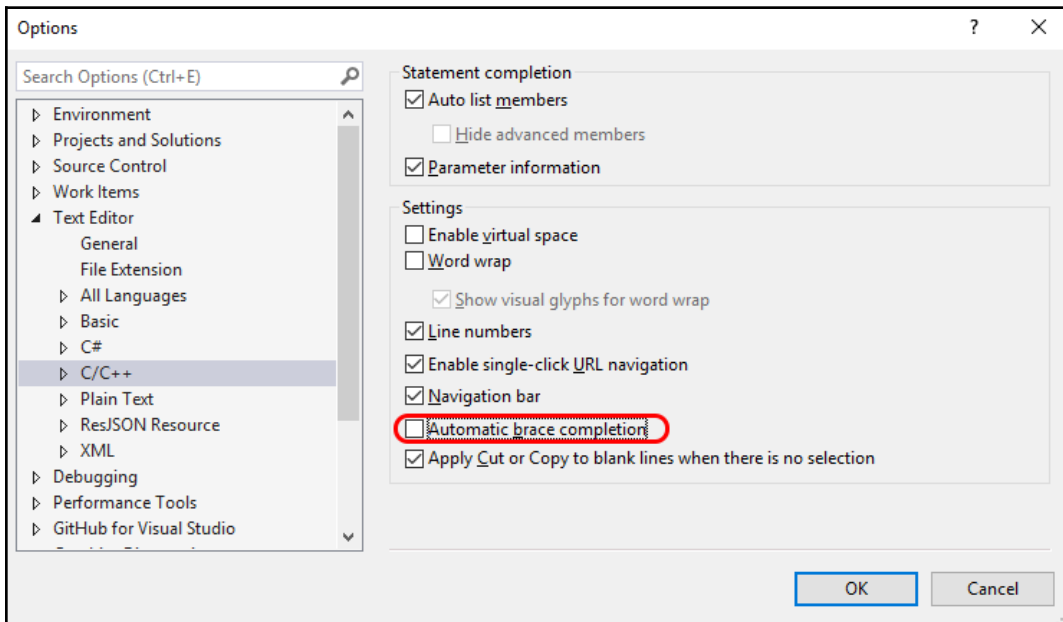
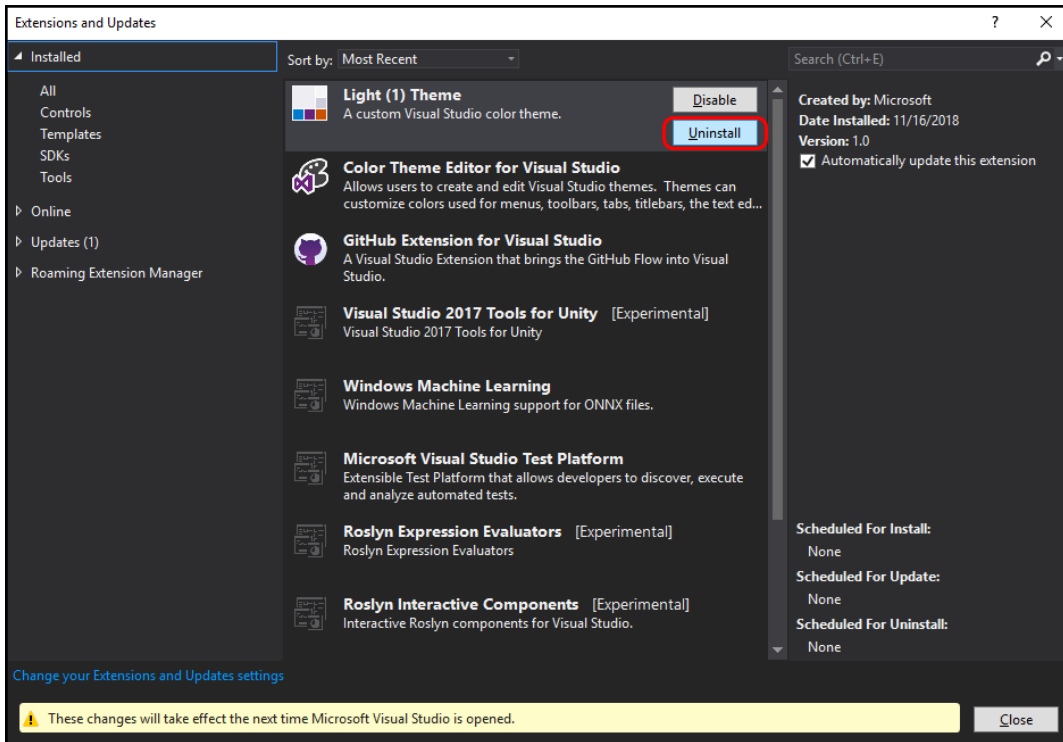




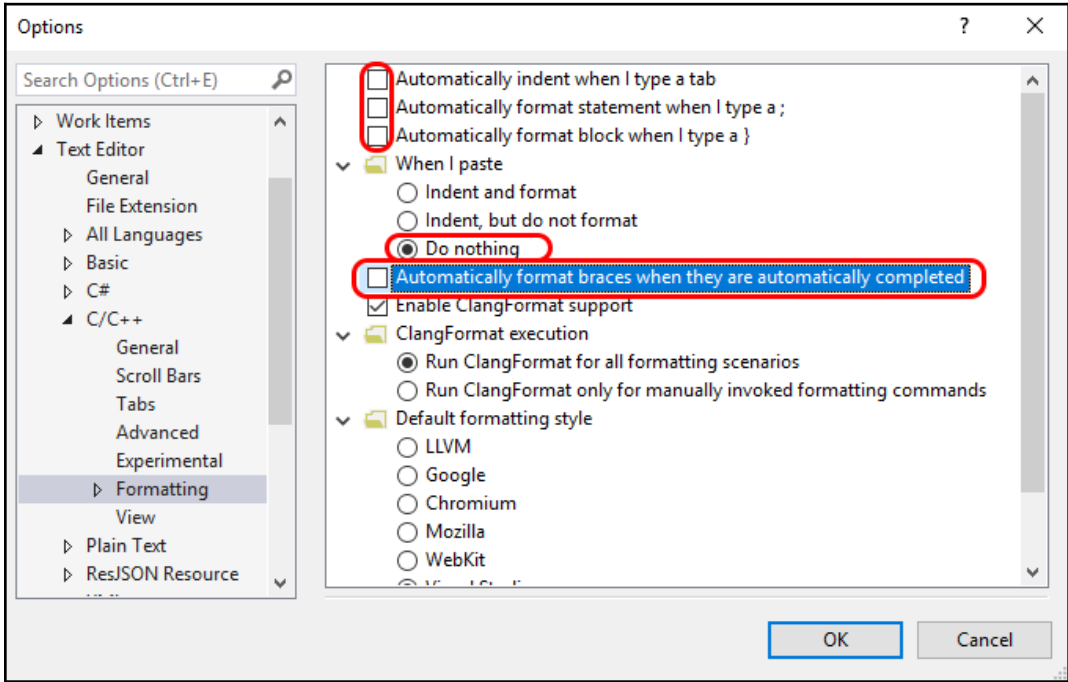
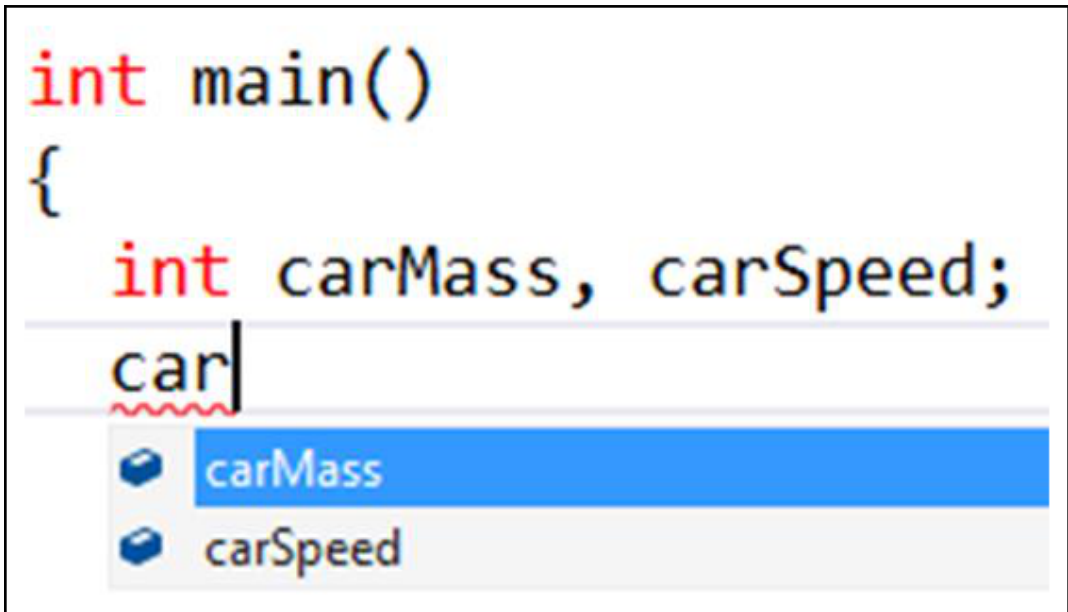




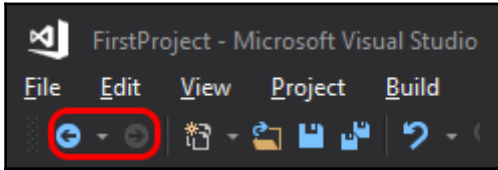




```
int main()
{
    int carMass, carSpeed;
    car
```



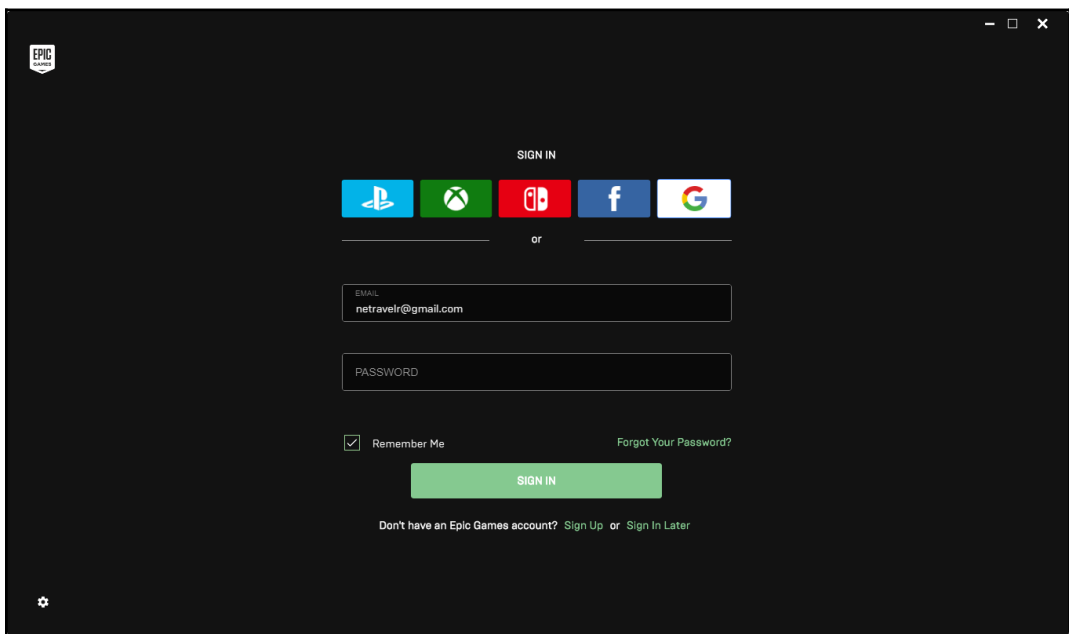
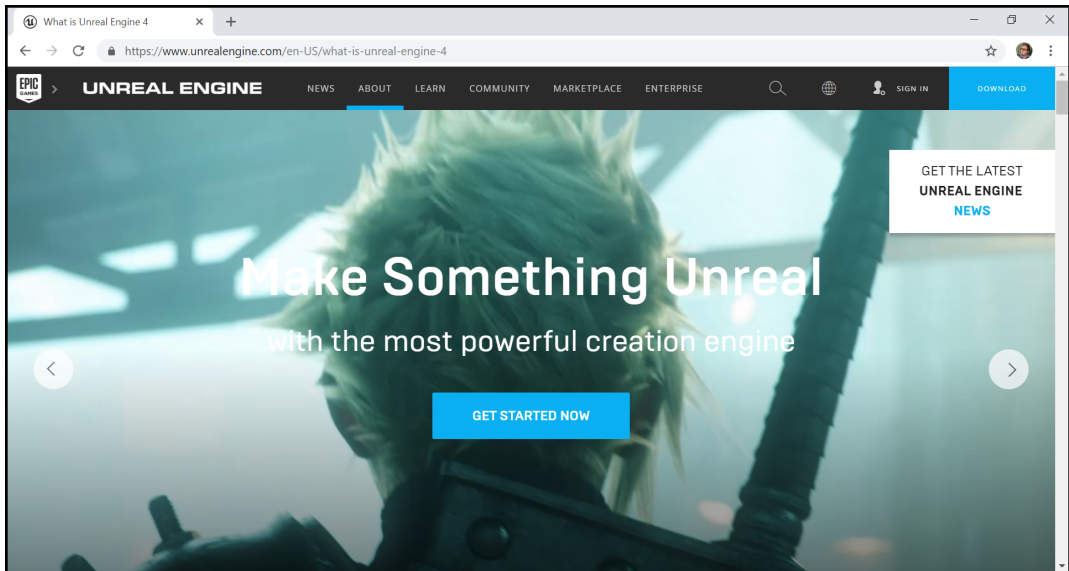
```
14 UCLASS( Abstract, meta=(ShortTooltip="Abstract base f
15
16 class WRV_API UAction : public UObject
17 {
18     GENERATED_UCLASS_BODY()
19 public:
```

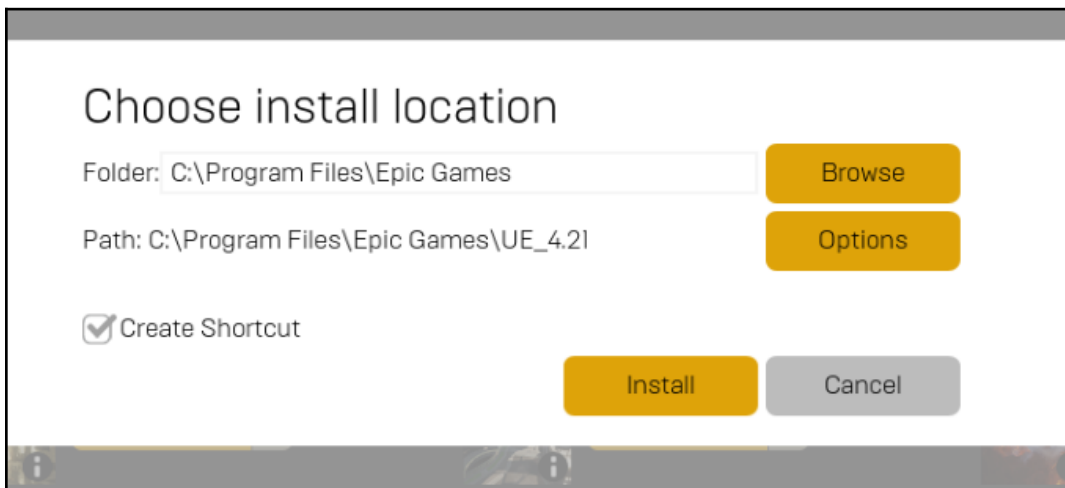
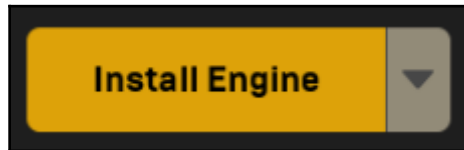
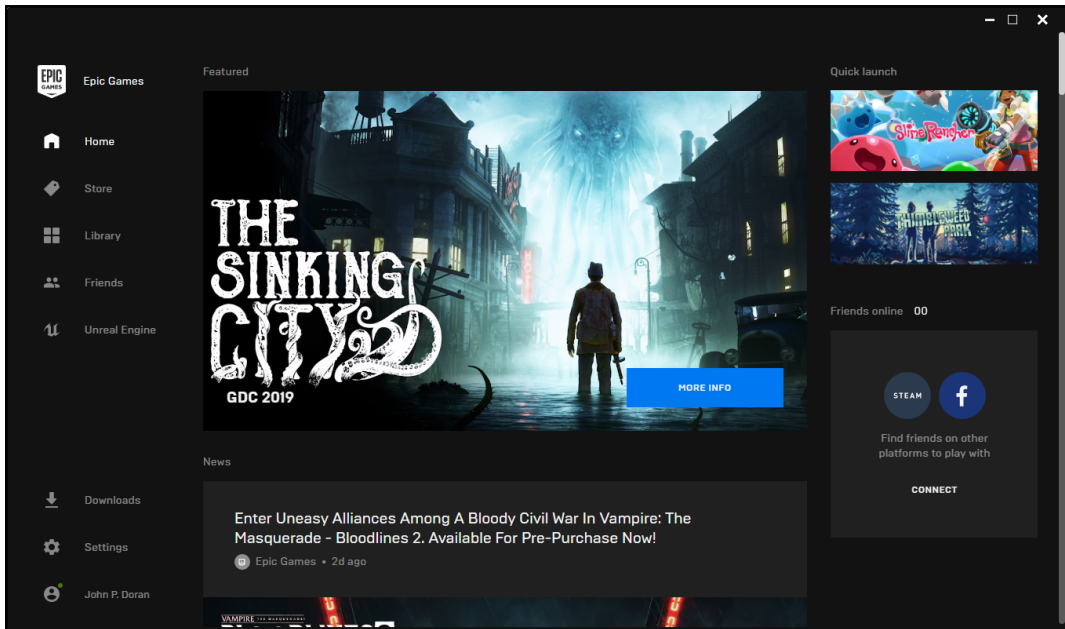


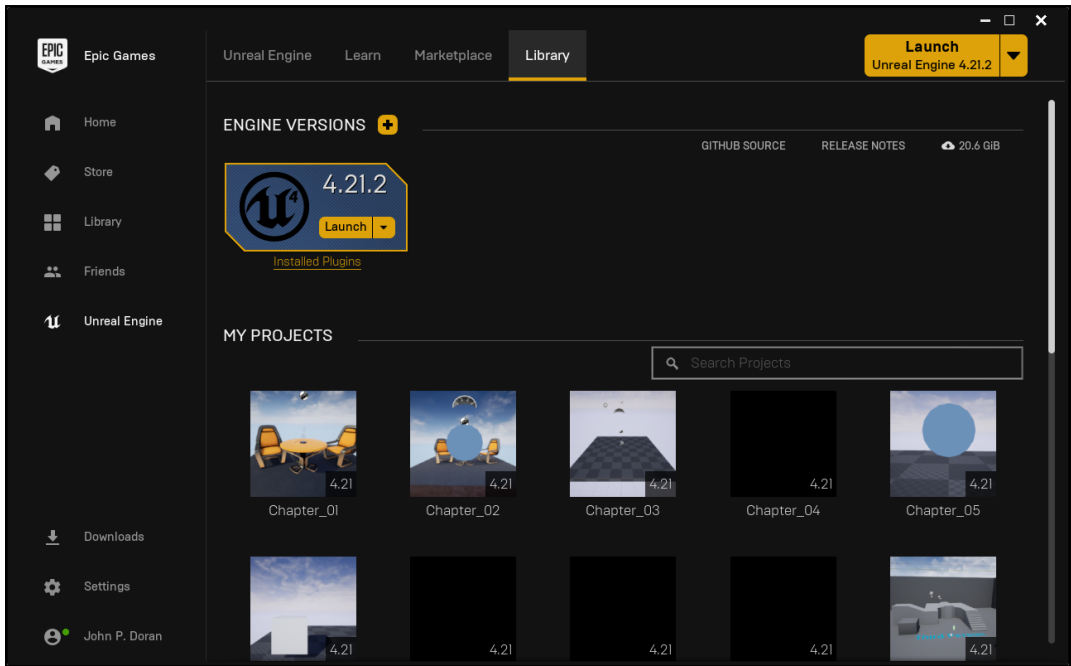
```
UTexture* UBuildAction::GetIcon()
{
    return Game->GetData( BuildingType ).Portrait;
}
```

FString::Printf( TEXT(

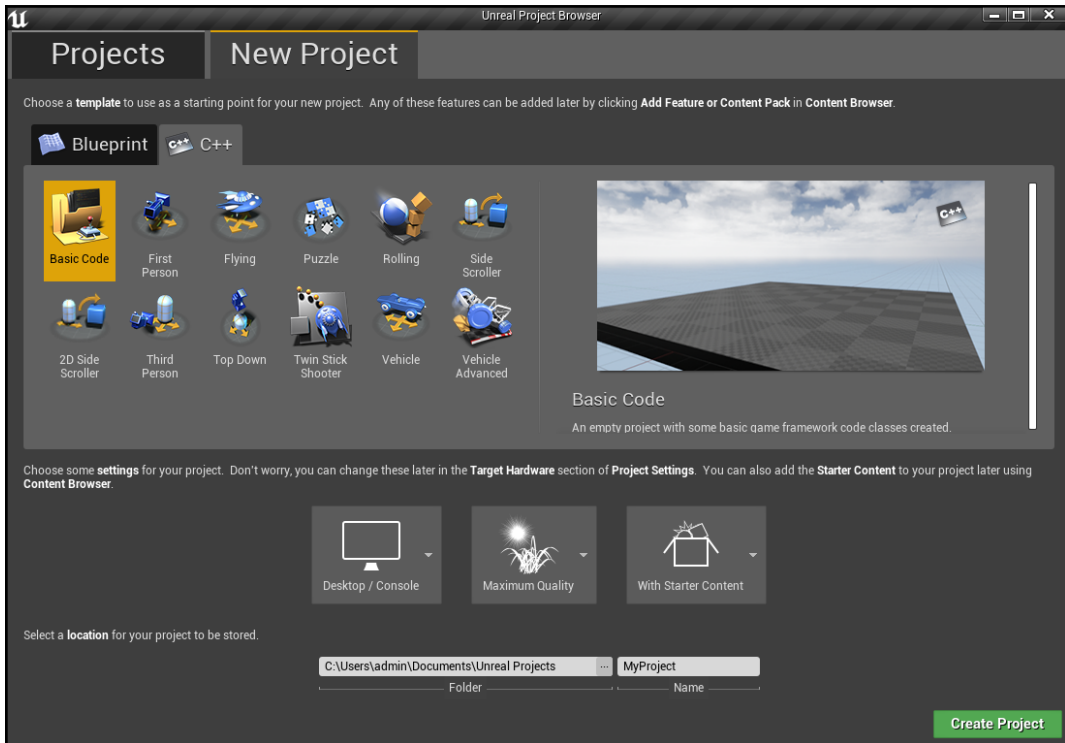
```
// initialize a bunch of cooldown
FString name = FString::Printf(
Clock* clock = new Clock( name,
```

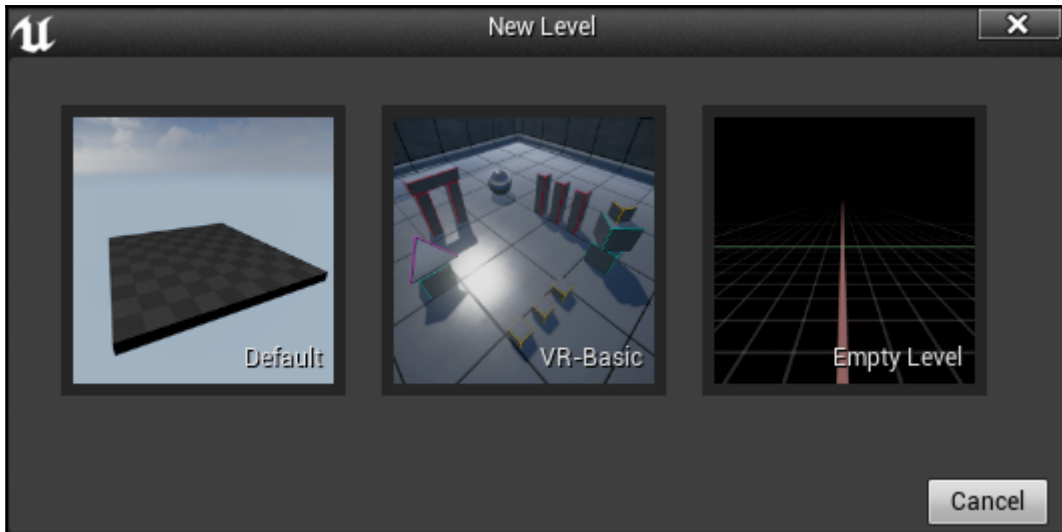


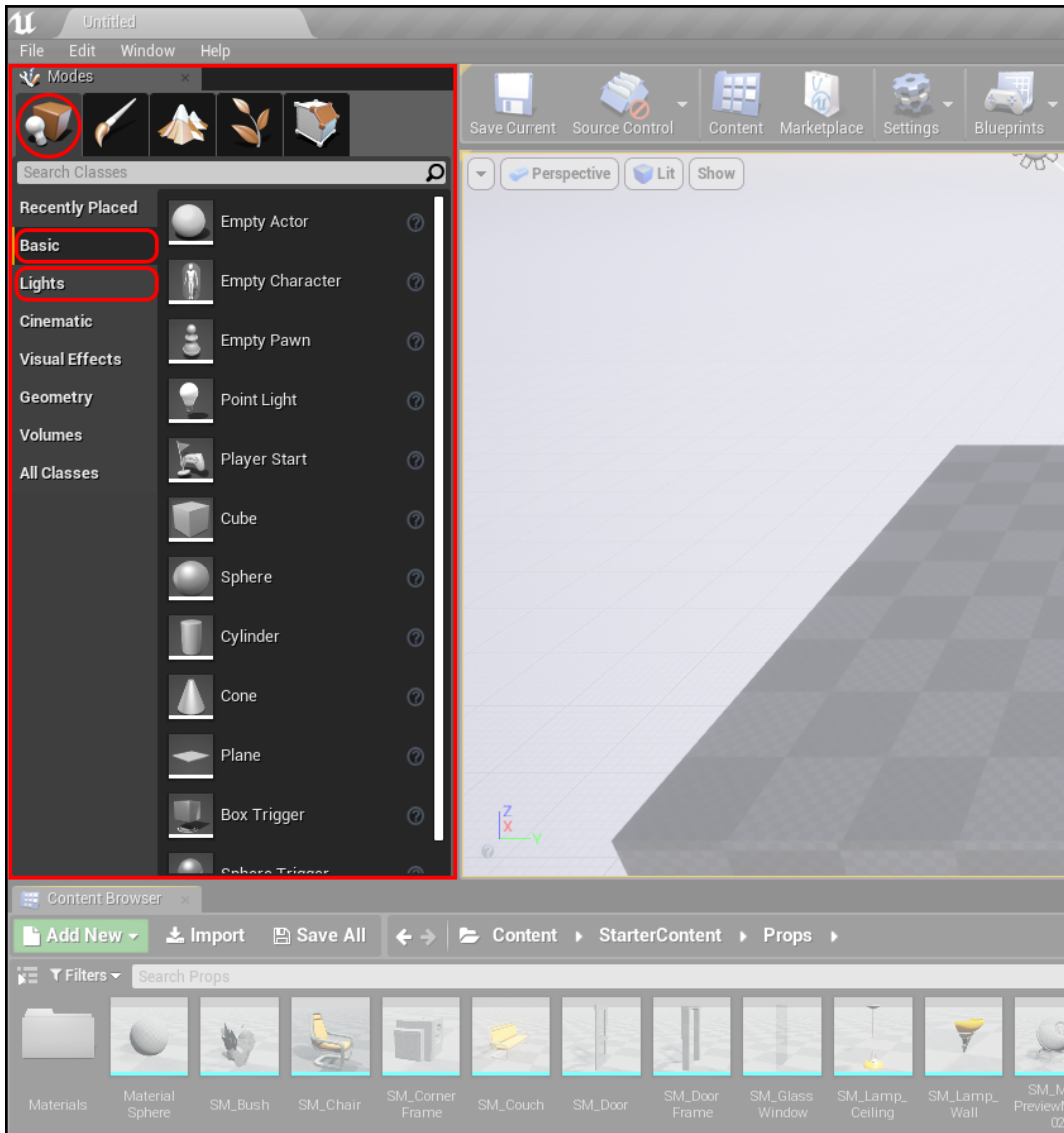


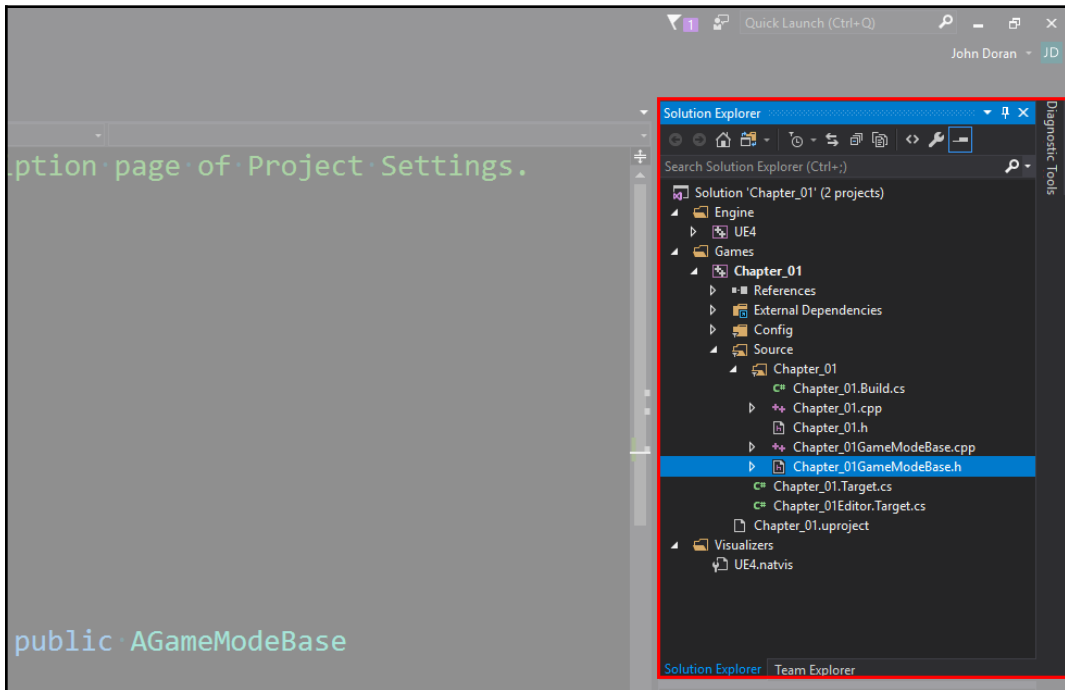
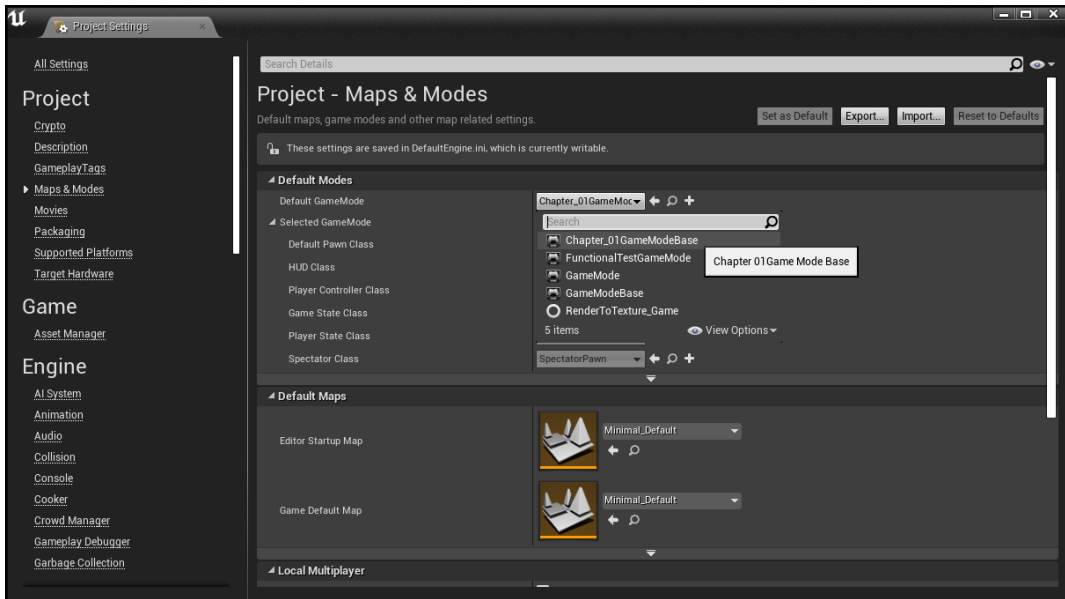


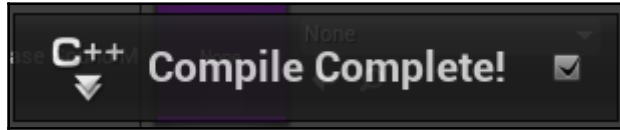
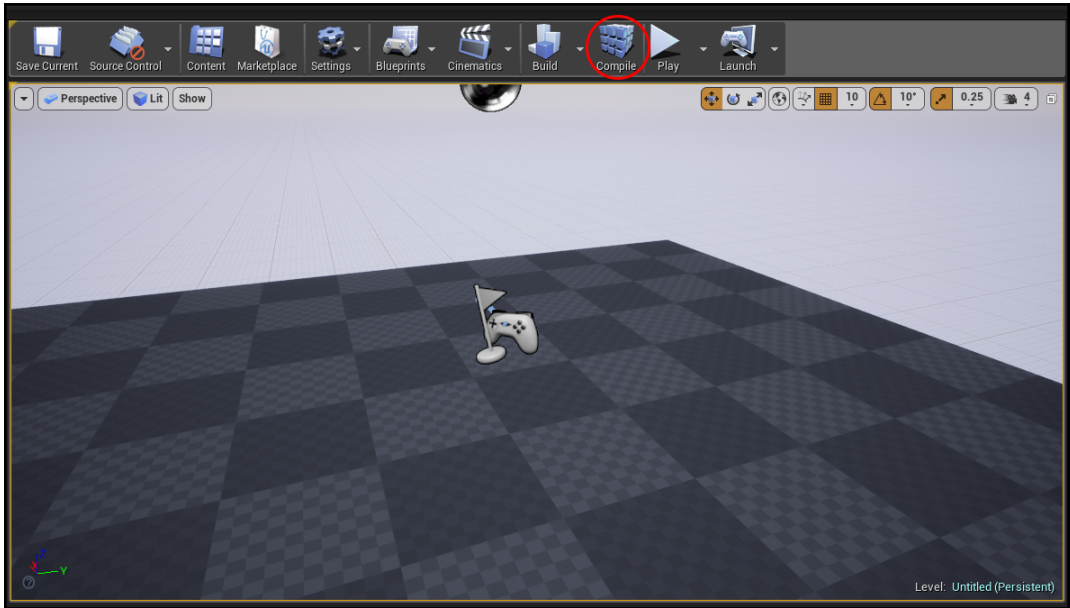


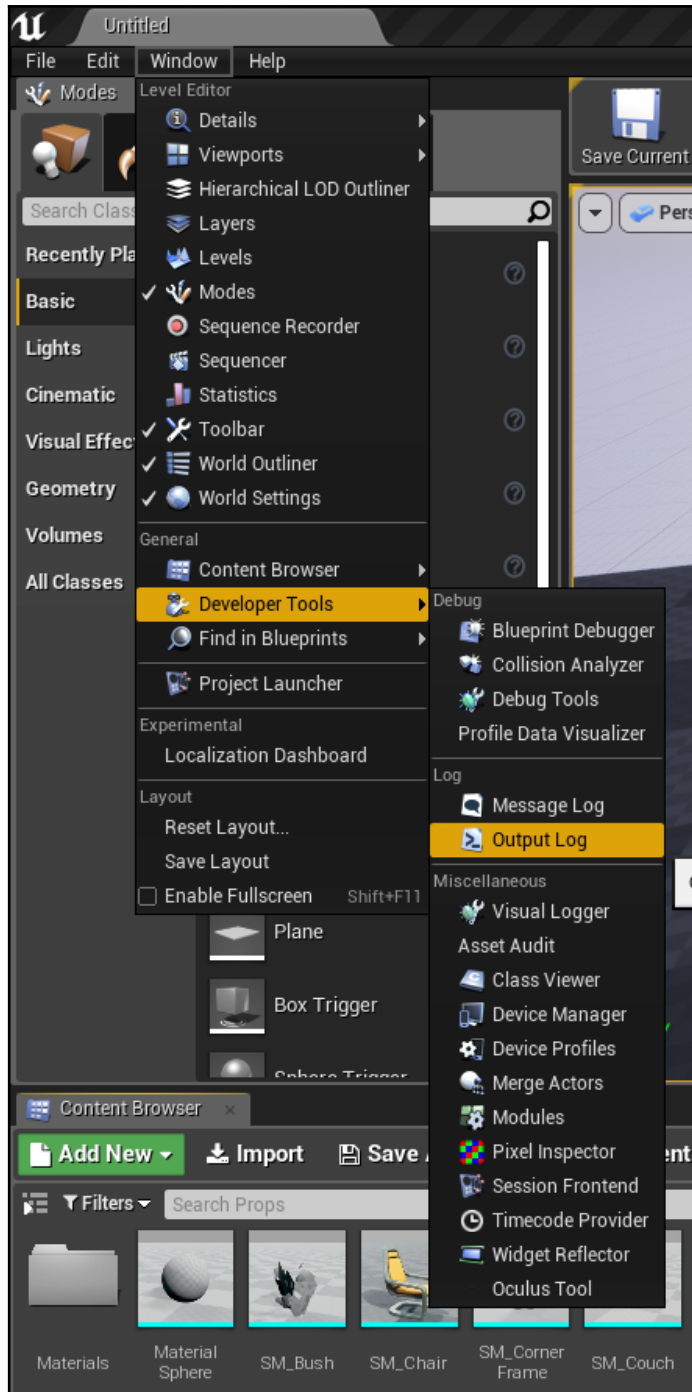








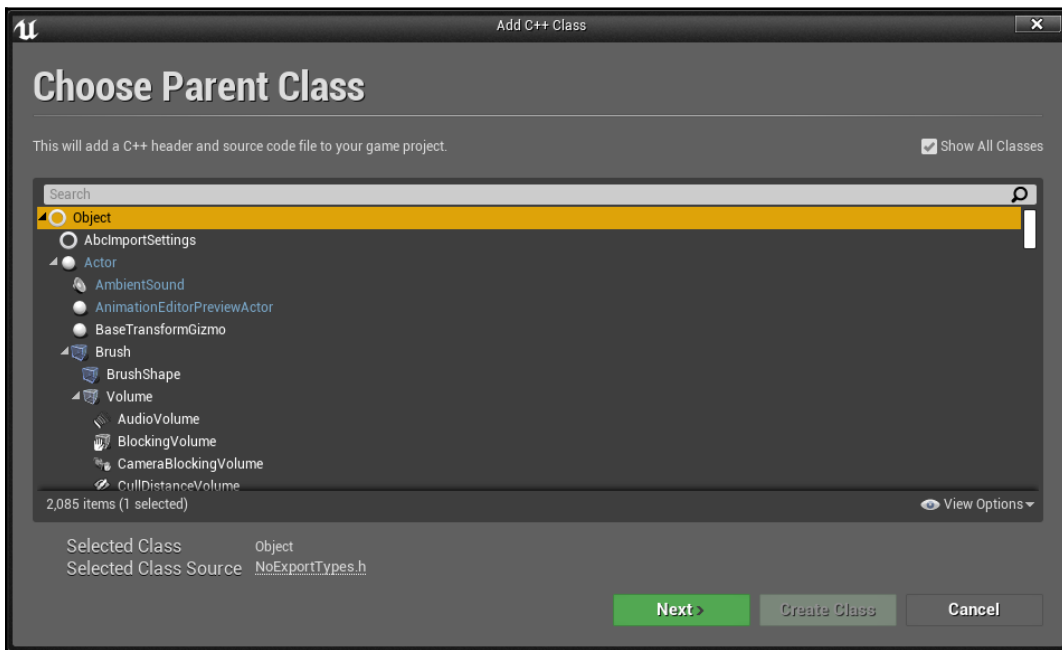
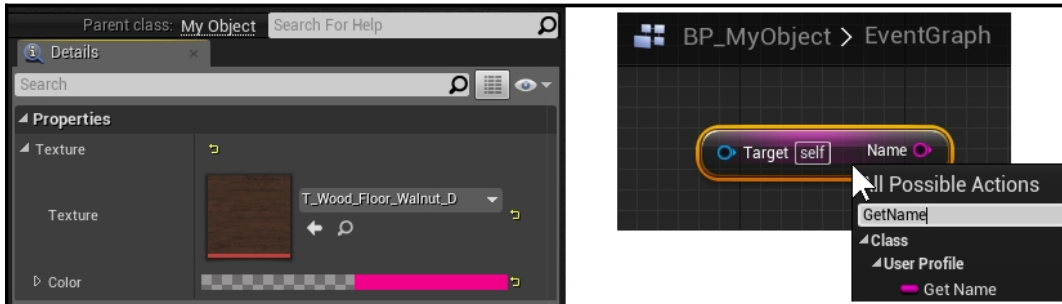




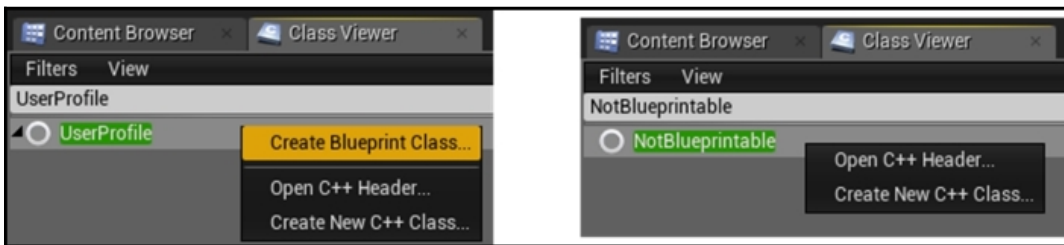
```
Content Browser x Output Log x
Filters Search Log
LogTemp: Repeating last play command: Selected Viewport
LogBlueprintUserMessages: Early PlayInEditor Detection: Level '/Temp/Untitled_1.Untitled_1:Persist
LogPlayLevel: PlayLevel: No blueprints needed recompiling
PIE: New page: PIE session: Untitled_1 (Nov 17, 2018, 3:54:52 PM)
LogPlayLevel: Creating play world package: /Temp/UEDPiE_0_Untitled_1
LogPlayLevel: PIE: StaticDuplicateObject took: (0.002391s)
LogAIModule: Creating AISystem for world Untitled_1
LogPlayLevel: PIE: World Init took: (0.000488s)
LogPlayLevel: PIE: Created PIE world by copying editor world from /Temp/Untitled_1.Untitled_1 to
LogInit: XAudio2 using 'Speakers (Realtek(R) Audio)' : 2 channels at 48 kHz using 32 bits per sam
LogInit: FAudioDevice initialized.
LogLoad: Game class is 'Chapter_01GameModeBase'
LogWorld: Bringing World /Temp/UEDPiE_0_Untitled_1.Untitled_1 up for play (max tick rate 60) at 2
LogWorld: Bringing up level for play took: 0.000423
LogTemp: Warning: Some warning message
PIE: Play in editor start time for /Temp/UEDPiE_0_Untitled_1 -0.232
LogBlueprintUserMessages: Late PlayInEditor Detection: Level '/Temp/Untitled_1.Untitled_1:Persist
Cmd Enter Console Command
```

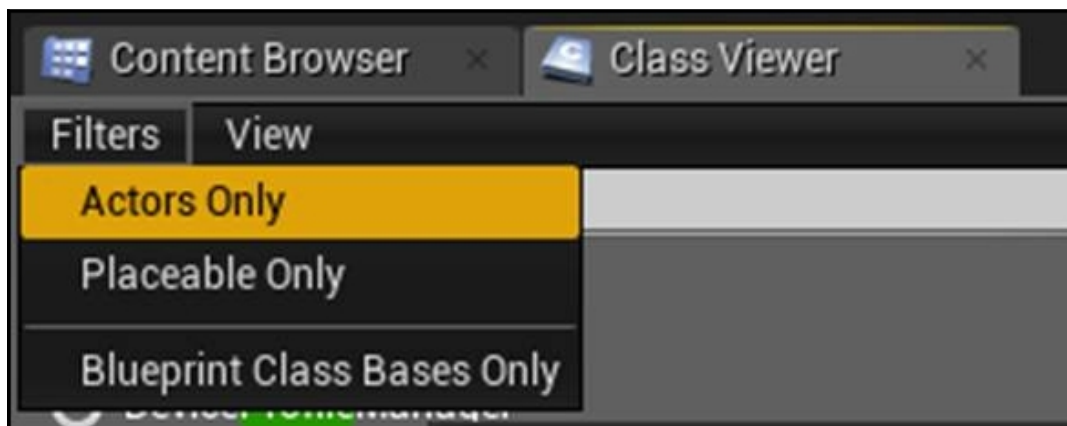
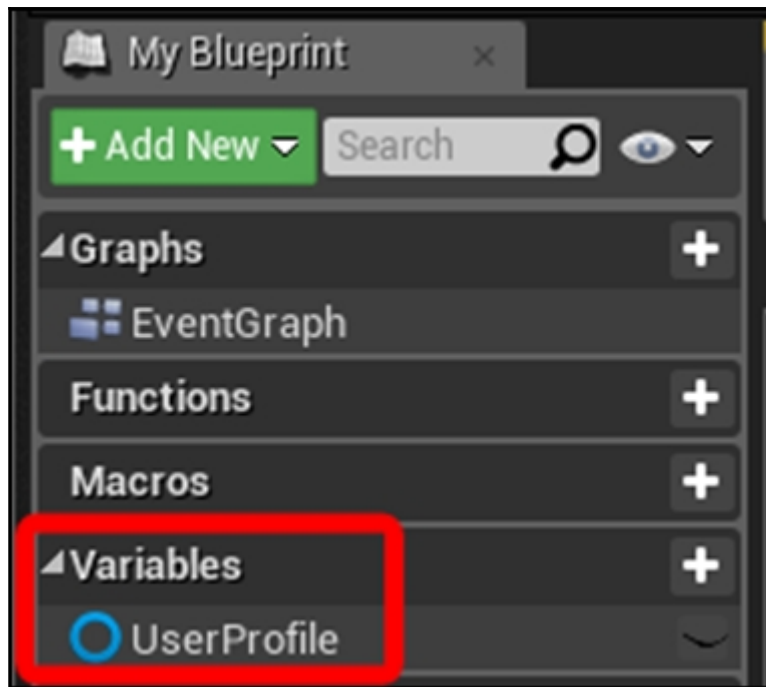
```
Content Browser x Output Log x
Filters Search Log
LogBlueprintUserMessages: Early PlayInEditor Detection: Level '/Temp/Untitled_1.Untitled_1:PersistentLevel' has LevelScri
LogPlayLevel: PlayLevel: No blueprints needed recompiling
PIE: New page: PIE session: Untitled_1 (Nov 17, 2018, 4:01:57 PM)
LogPlayLevel: Creating play world package: /Temp/UEDPiE_0_Untitled_1
LogPlayLevel: PIE: StaticDuplicateObject took: (0.002663s)
LogAIModule: Creating AISystem for world Untitled_1
LogPlayLevel: PIE: World Init took: (0.000569s)
LogPlayLevel: PIE: Created PIE world by copying editor world from /Temp/Untitled_1.Untitled_1 to /Temp/UEDPiE_0_Untitled_
LogInit: XAudio2 using 'Speakers (Realtek(R) Audio)' : 2 channels at 48 kHz using 32 bits per sample (channel mask 0x3)
LogInit: FAudioDevice initialized.
LogLoad: Game class is 'Chapter_01GameModeBase'
LogWorld: Bringing World /Temp/UEDPiE_0_Untitled_1.Untitled_1 up for play (max tick rate 60) at 2018.11.17-22.01.57
LogWorld: Bringing up level for play took: 0.000552
LogTemp: Warning: Some warning message
LogTemp: Warning: Text, 5 3.700000 an FString variable
LogTemp: Warning: Your string: Name = Tim Mana = 450
PIE: Play in editor start time for /Temp/UEDPiE_0_Untitled_1 -0.029
LogBlueprintUserMessages: Late PlayInEditor Detection: Level '/Temp/Untitled_1.Untitled_1:PersistentLevel' has LevelScri
```

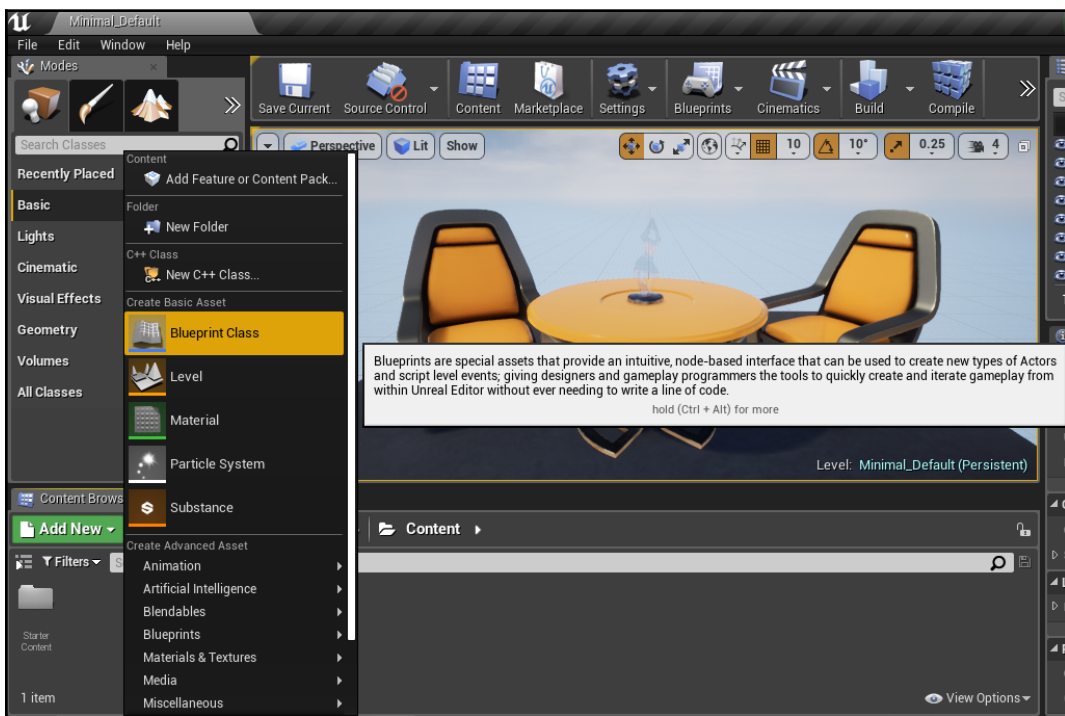
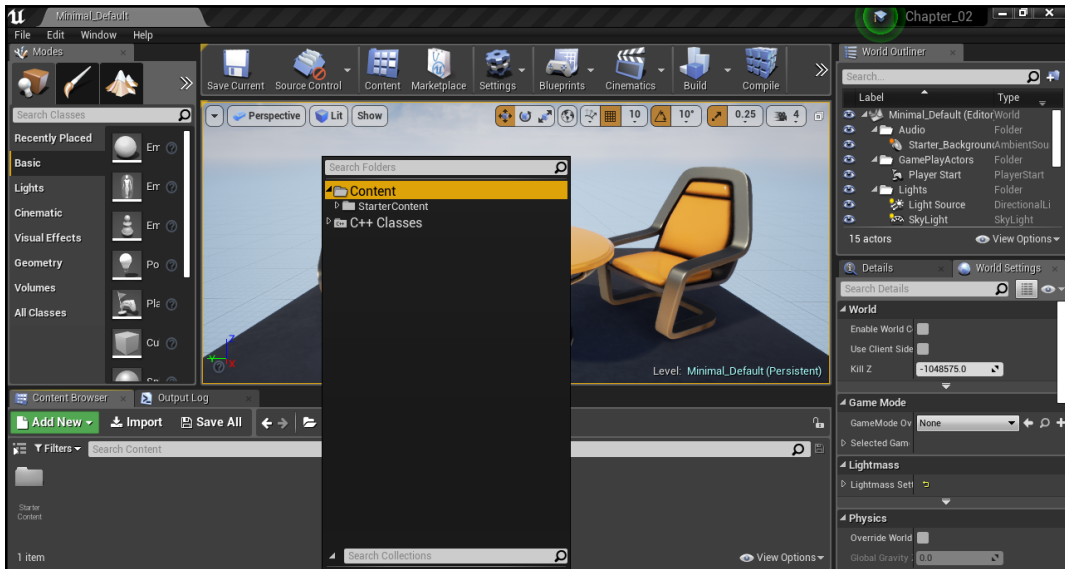
# Chapter 2: Creating Classes

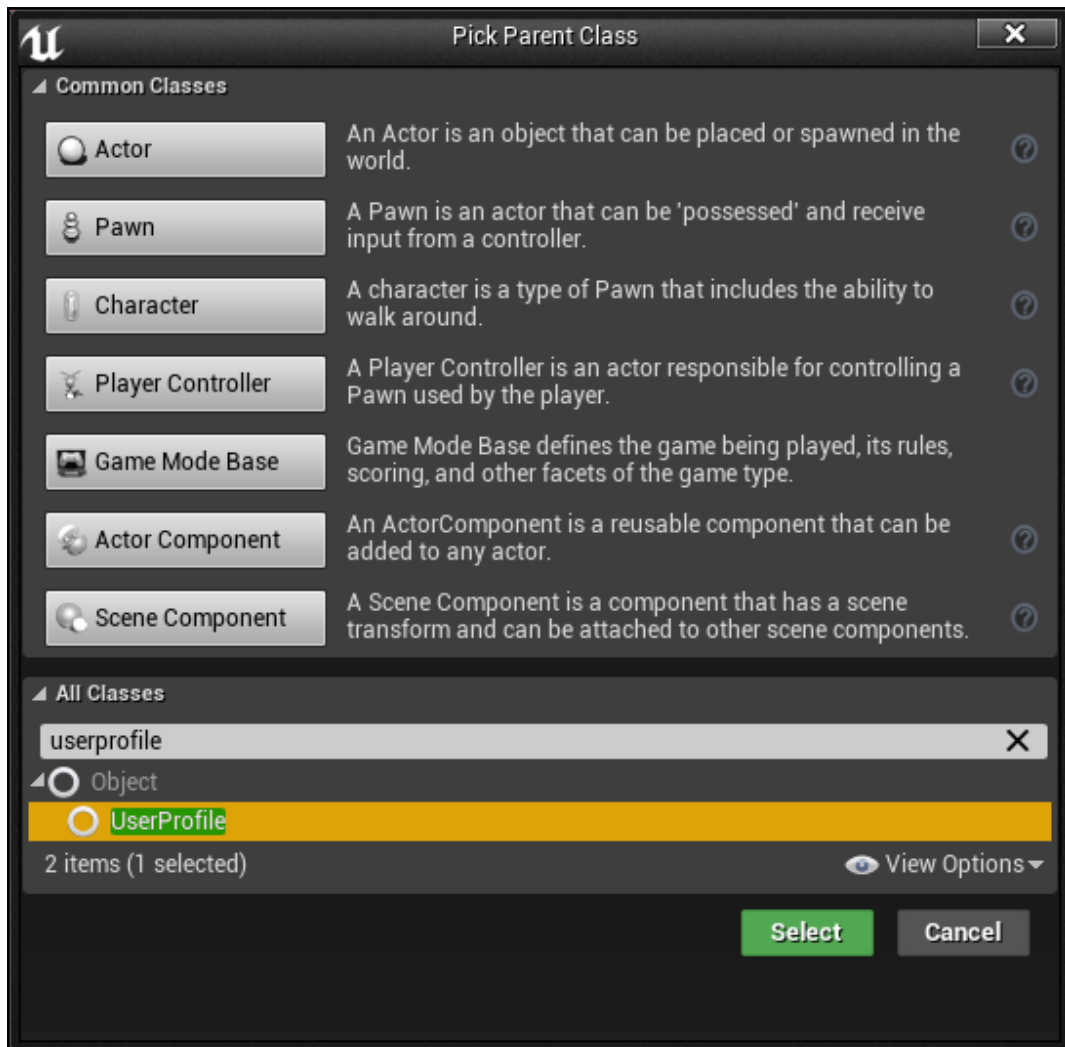


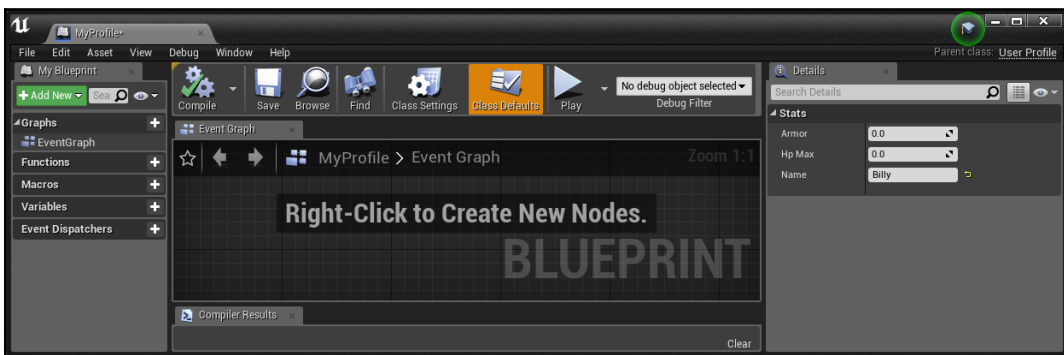
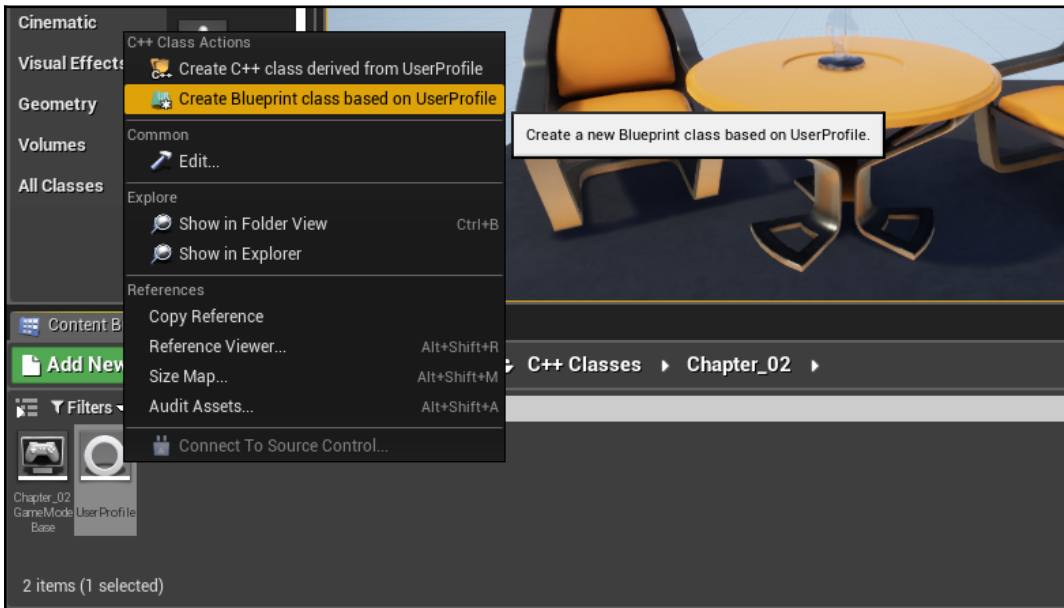
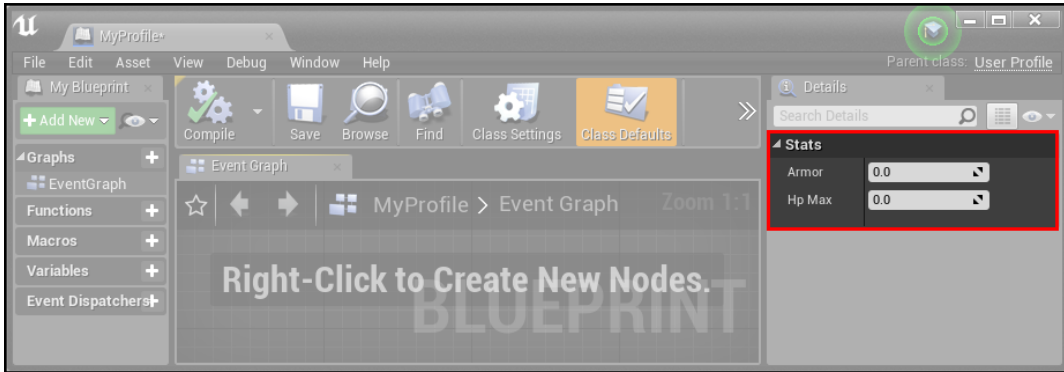


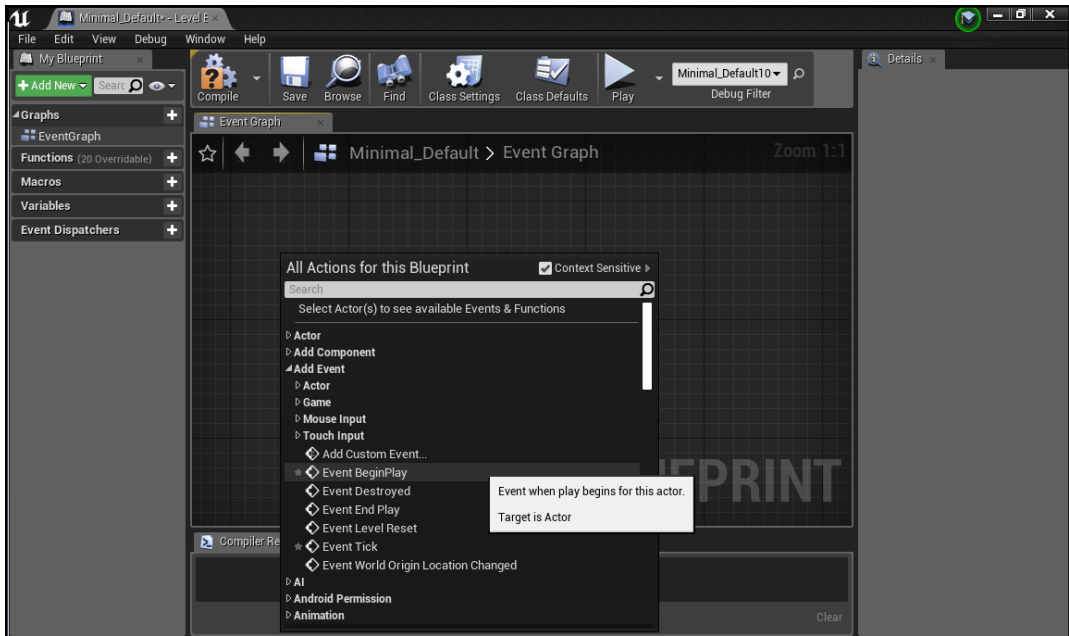


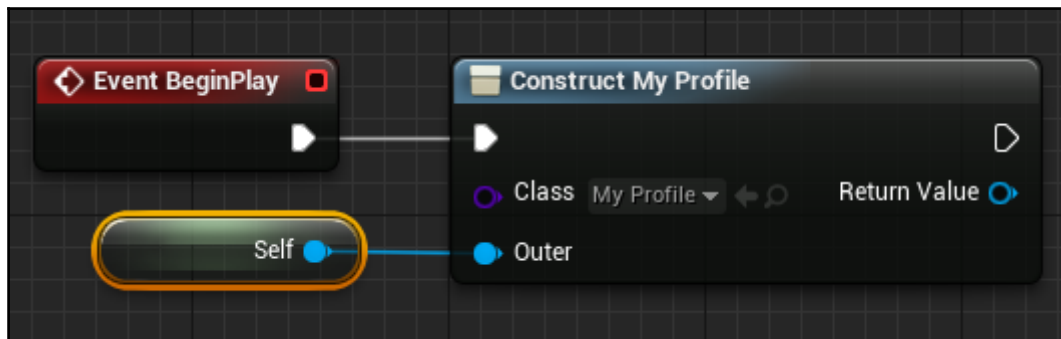
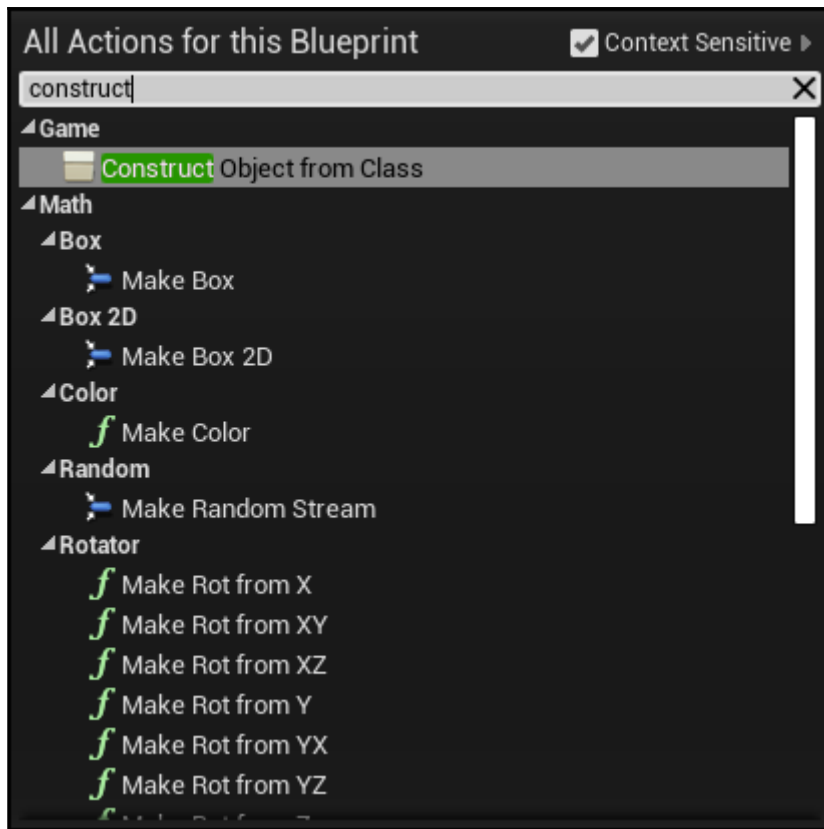


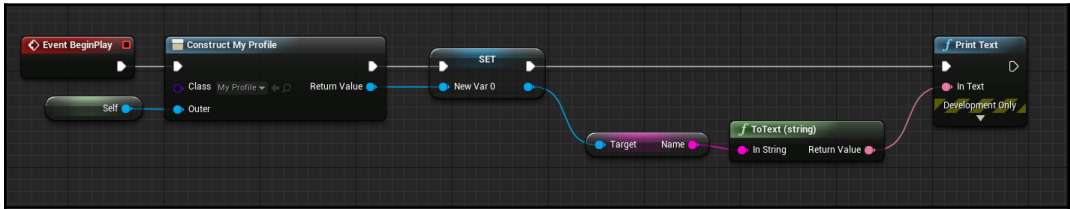
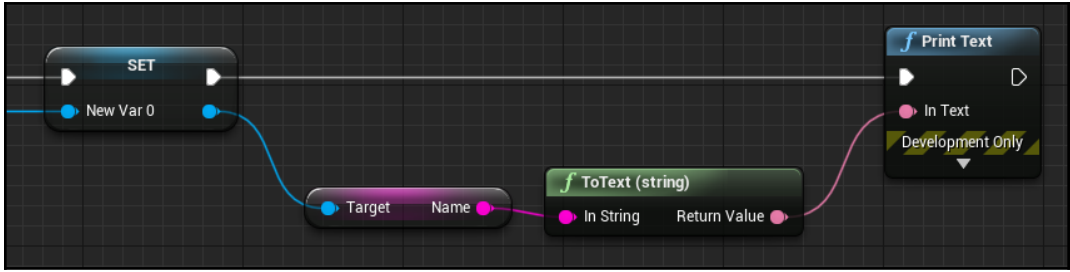




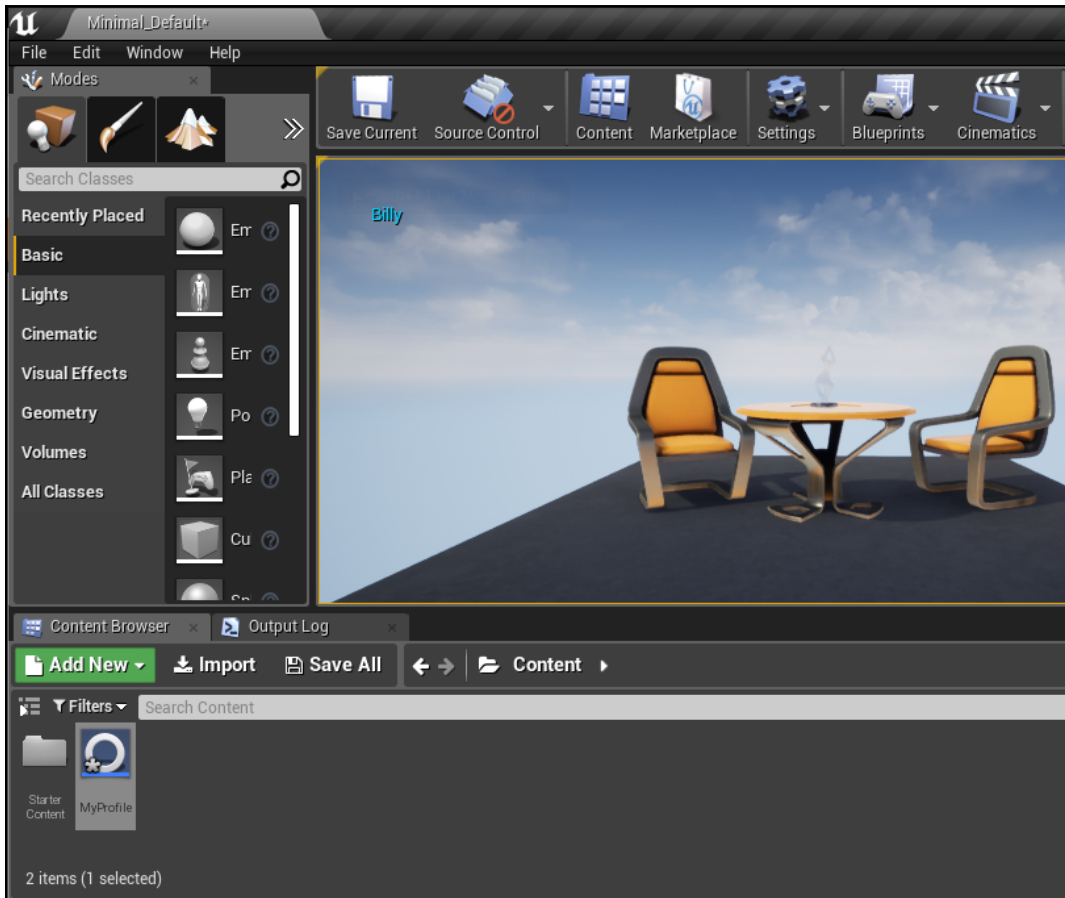


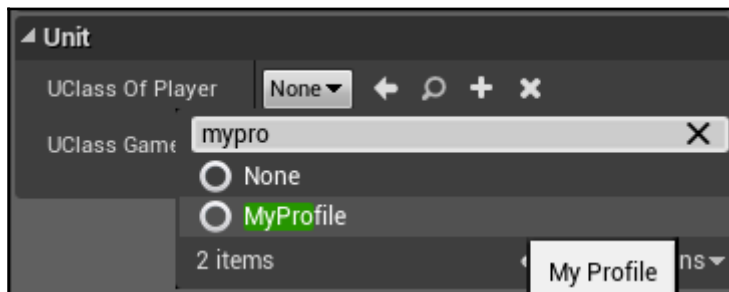
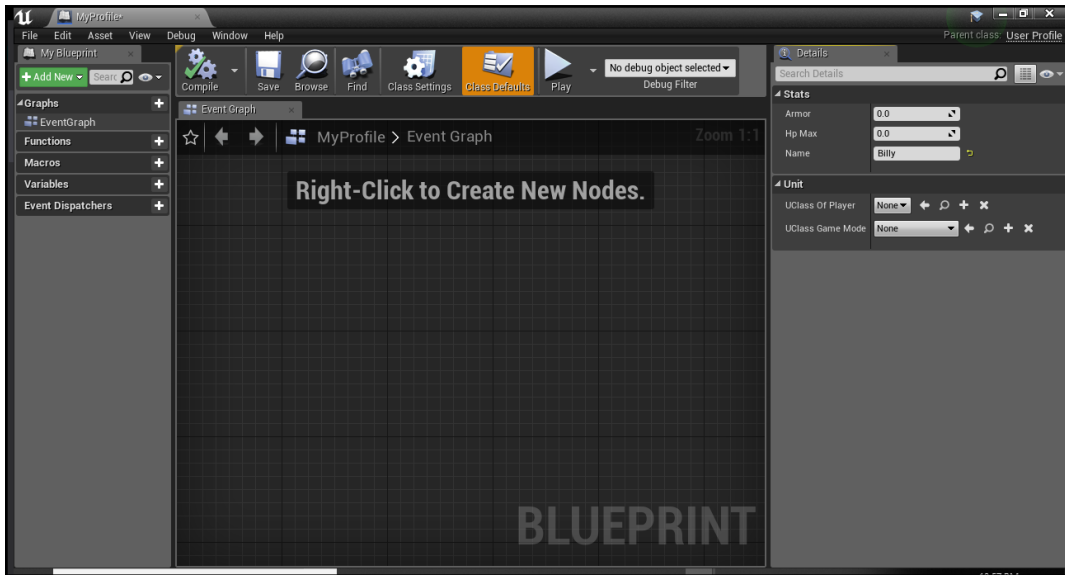


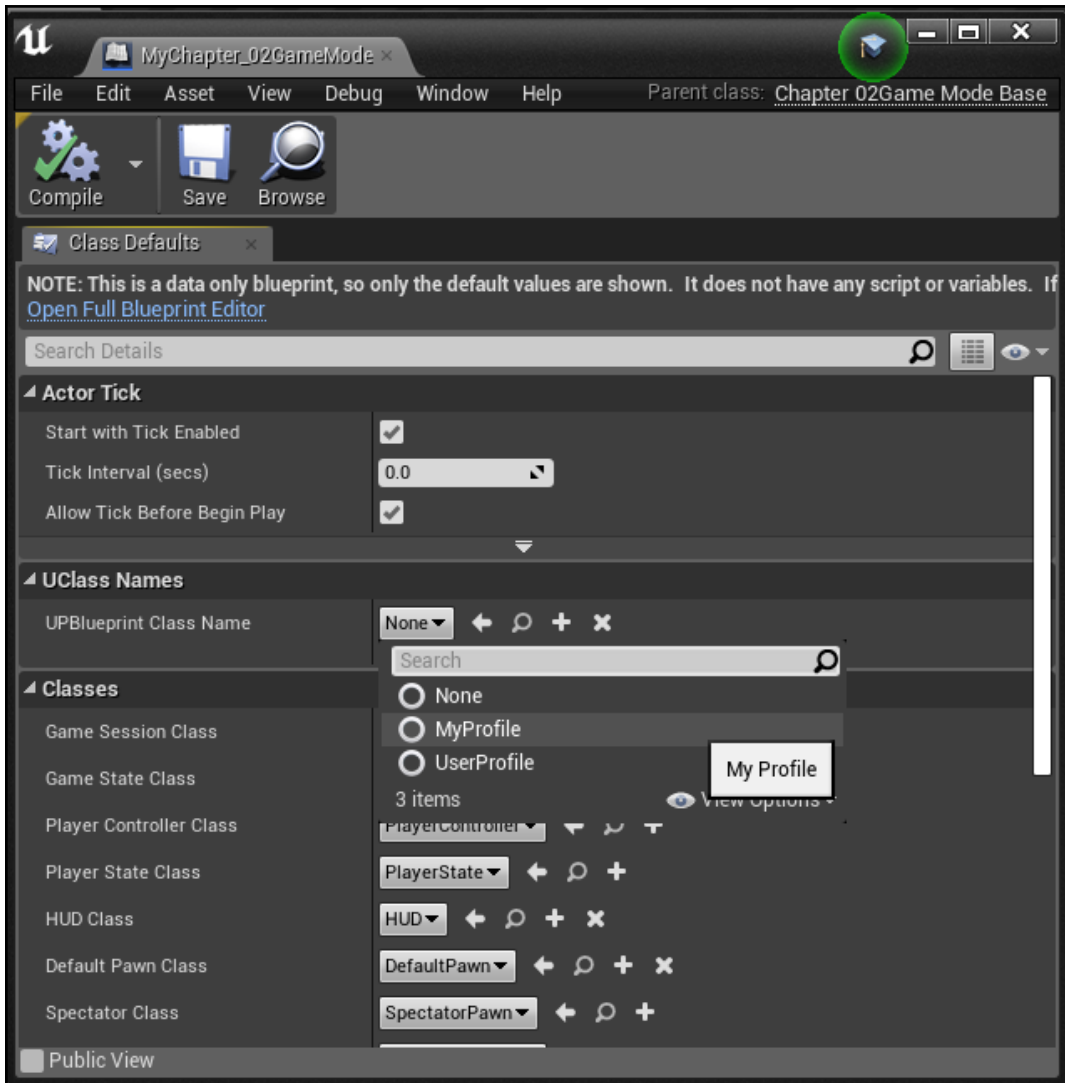


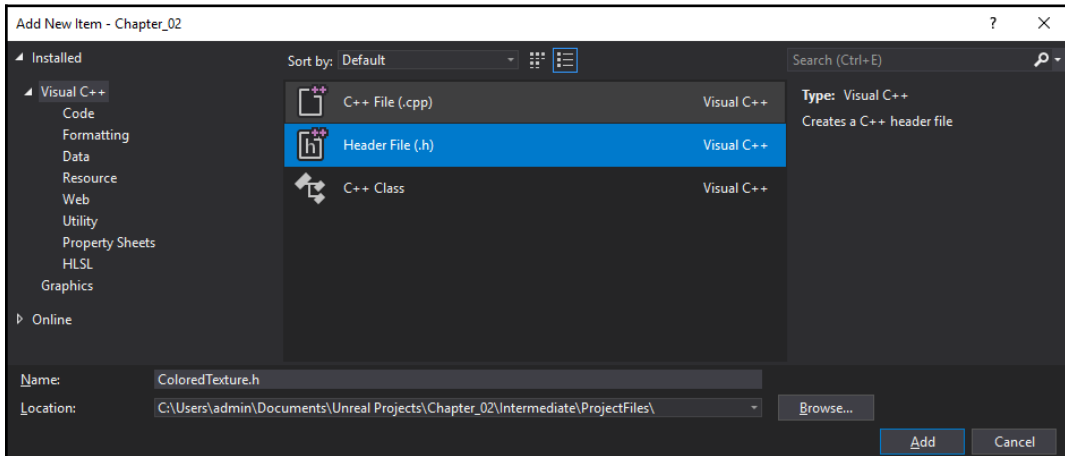
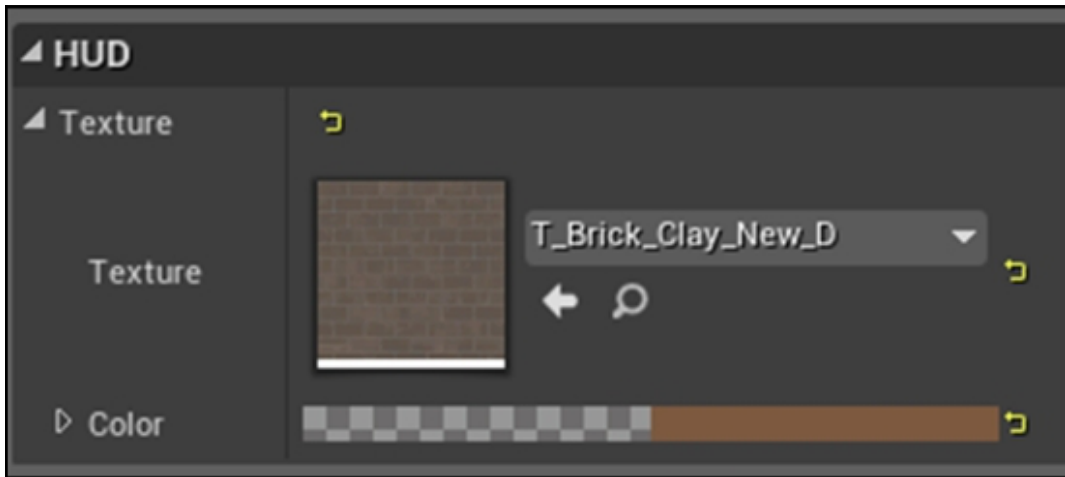


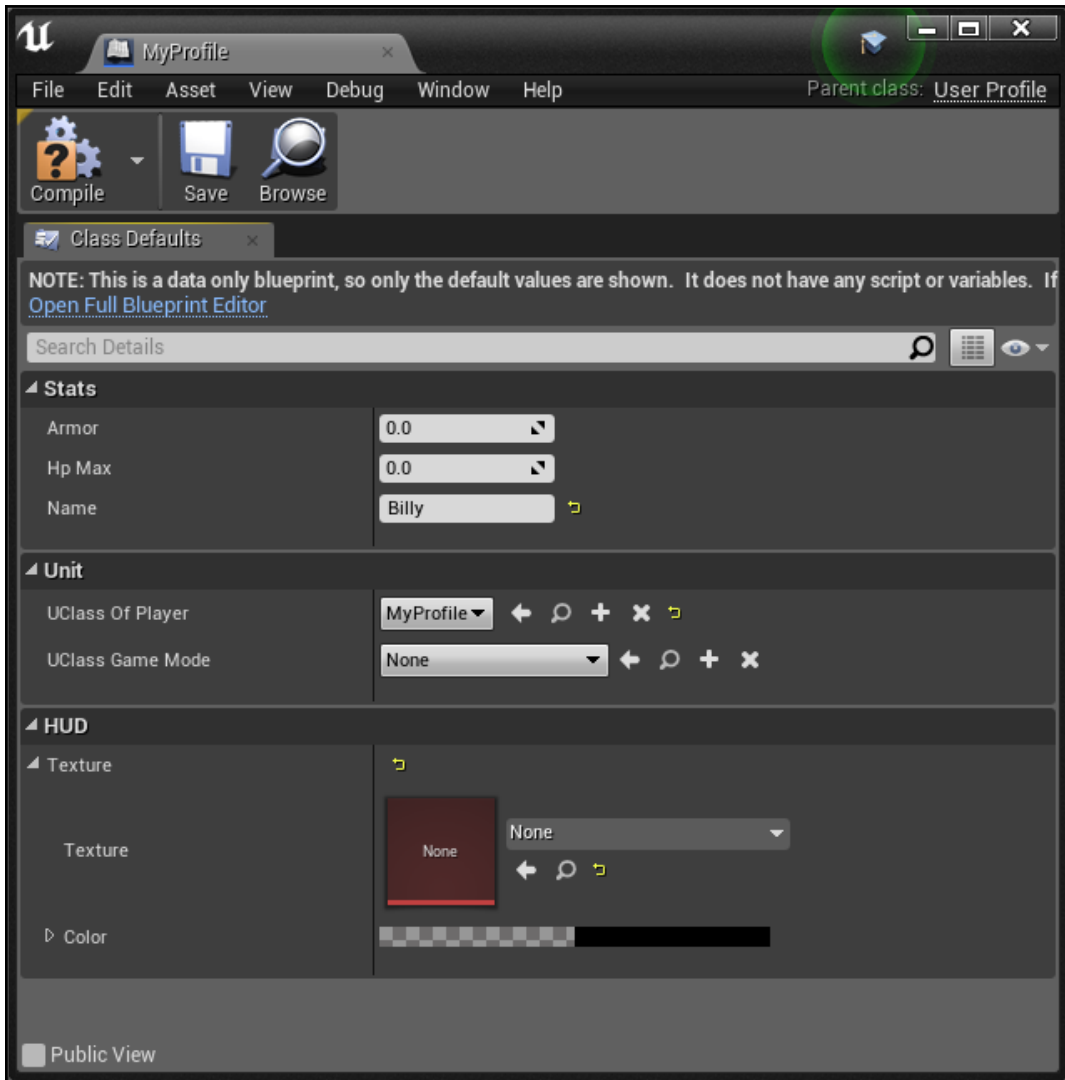


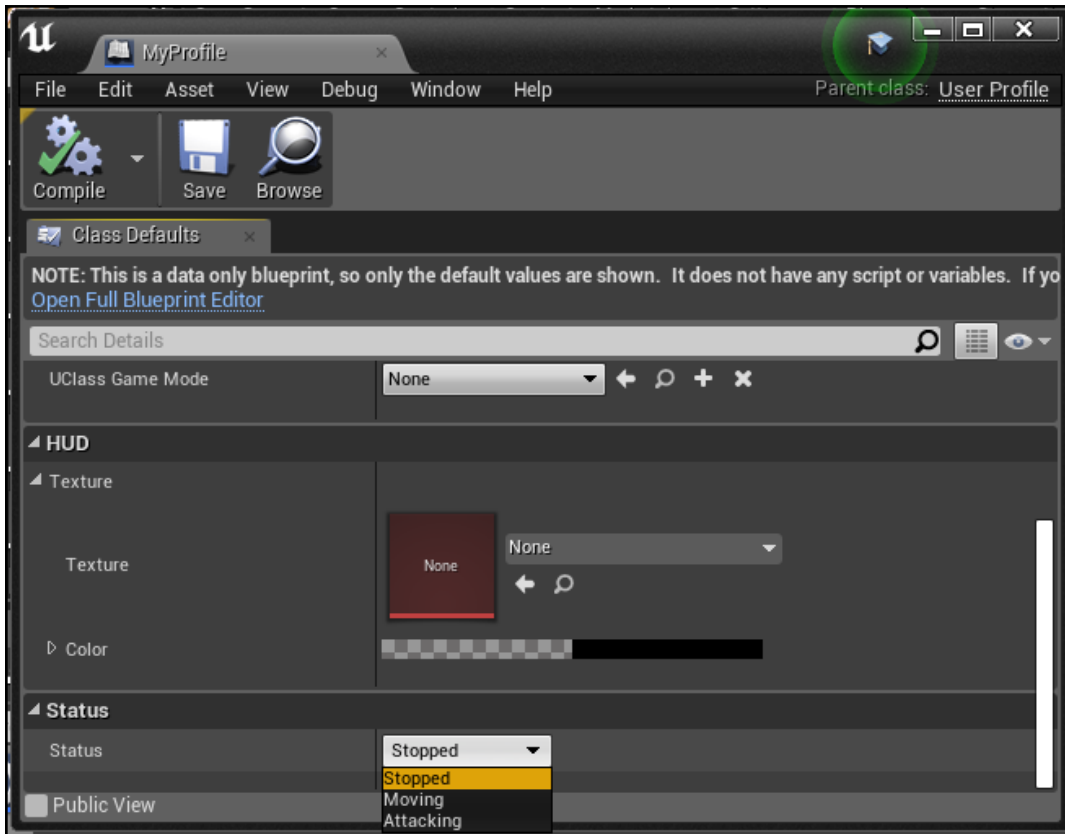






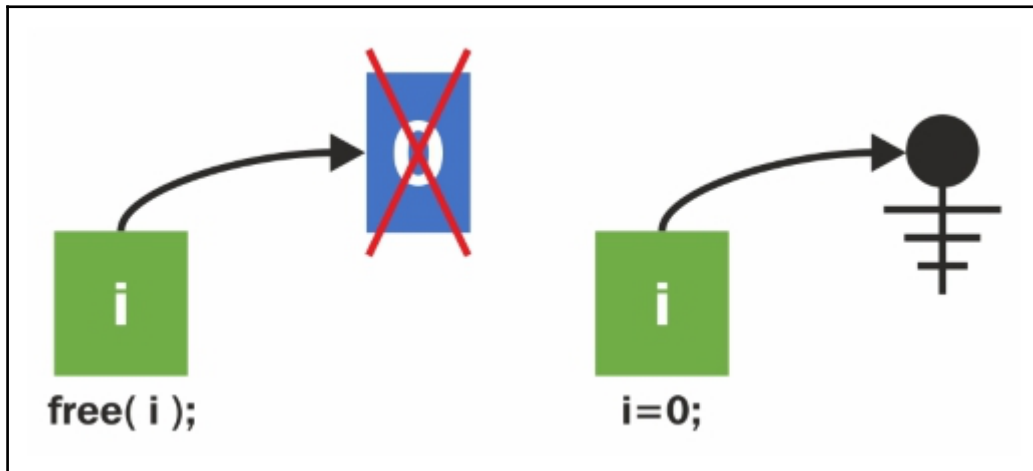
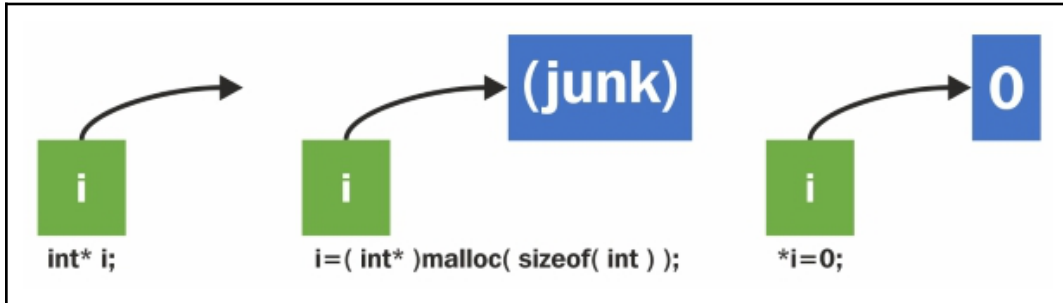


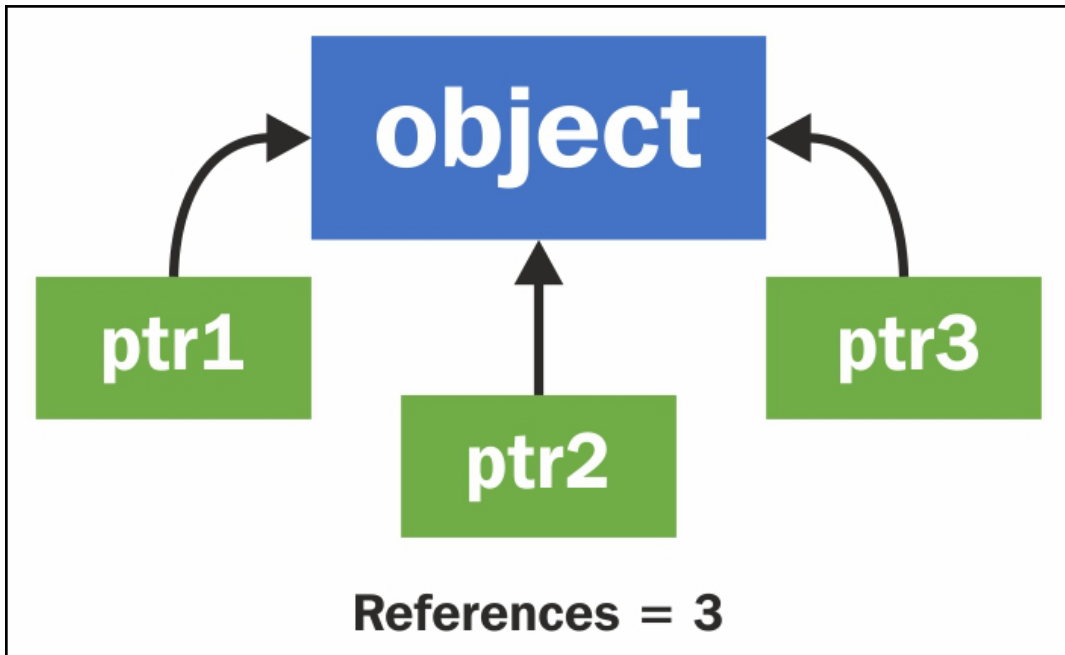




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## Chapter 3: Memory Management, Smart Pointers, and Debugging

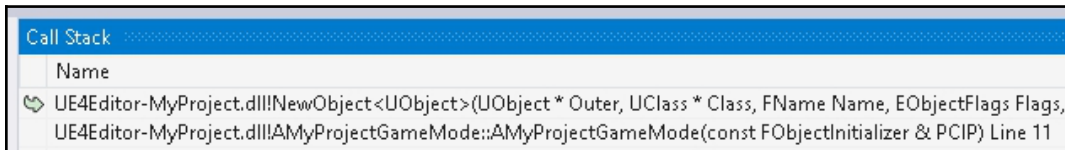
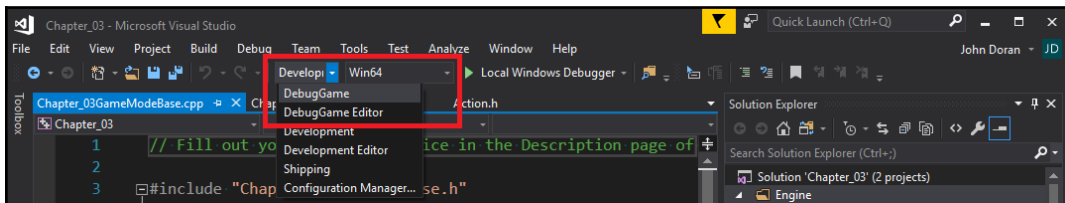




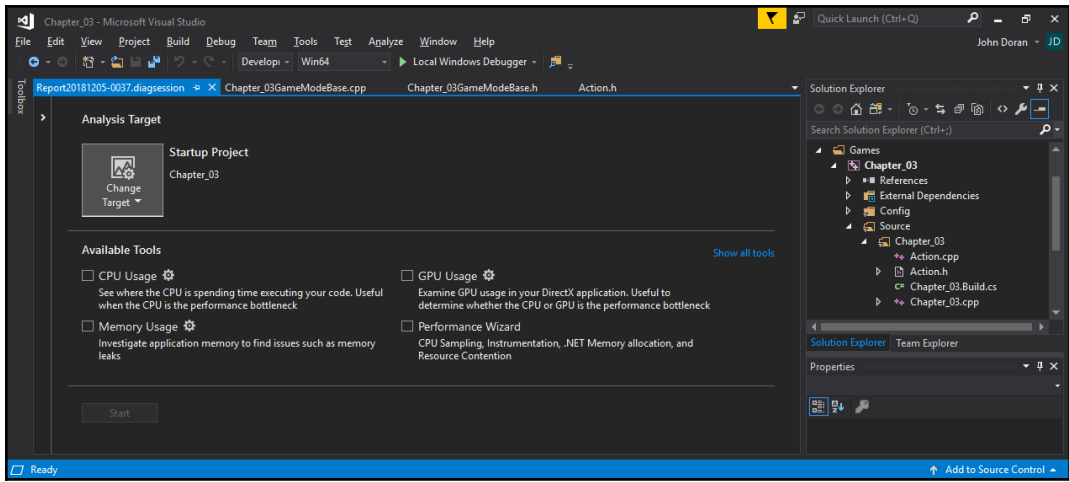
```

8   UObject *o = NewObject<UObject>( GetTransientPackage(),
9   UObject::StaticClass() );

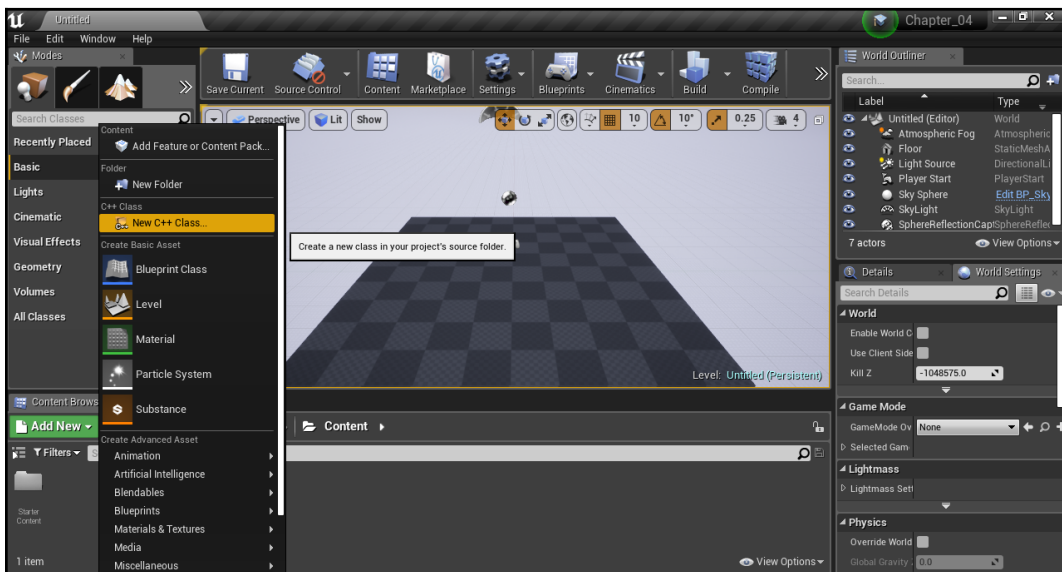
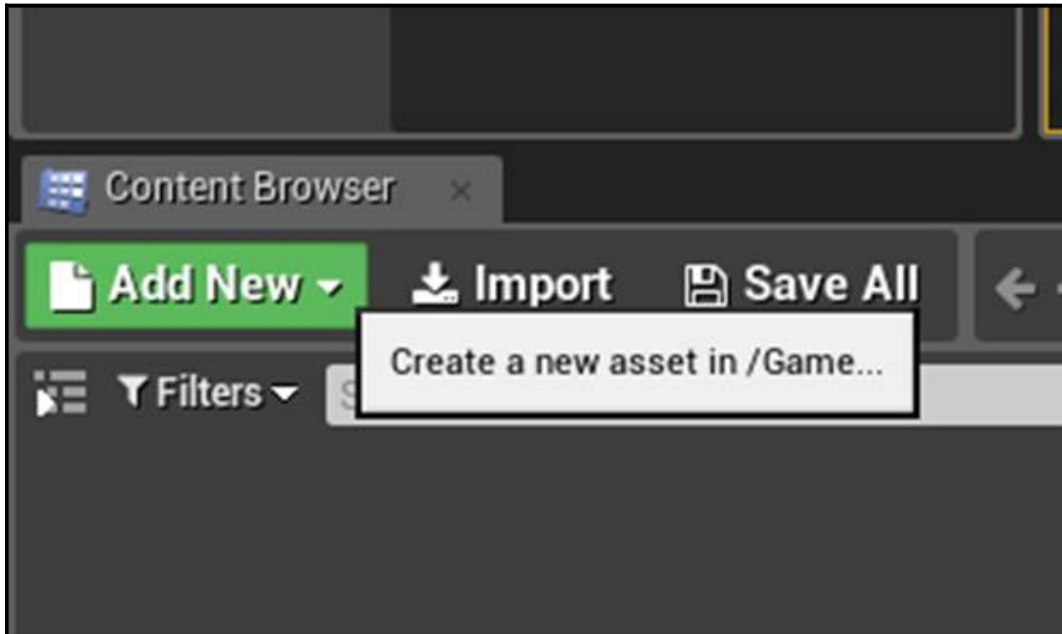
```

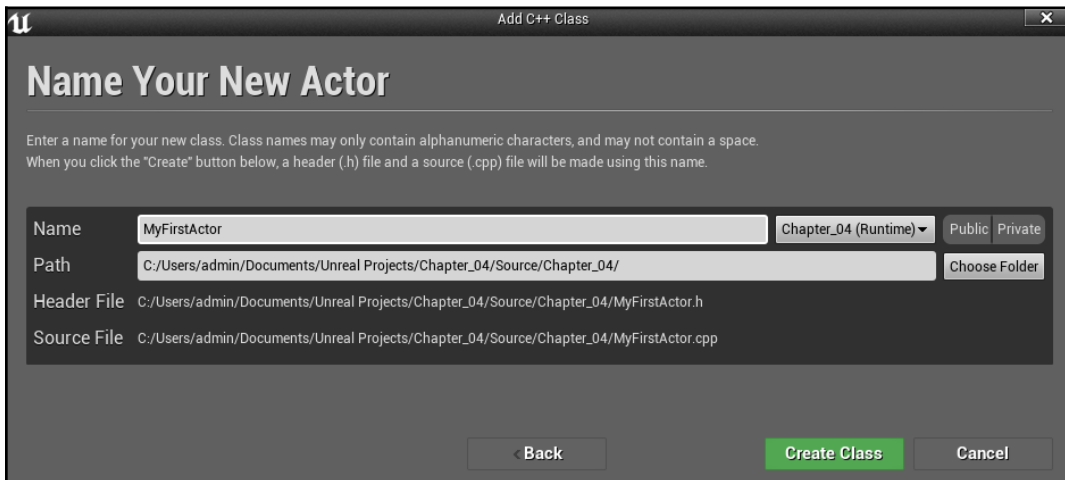
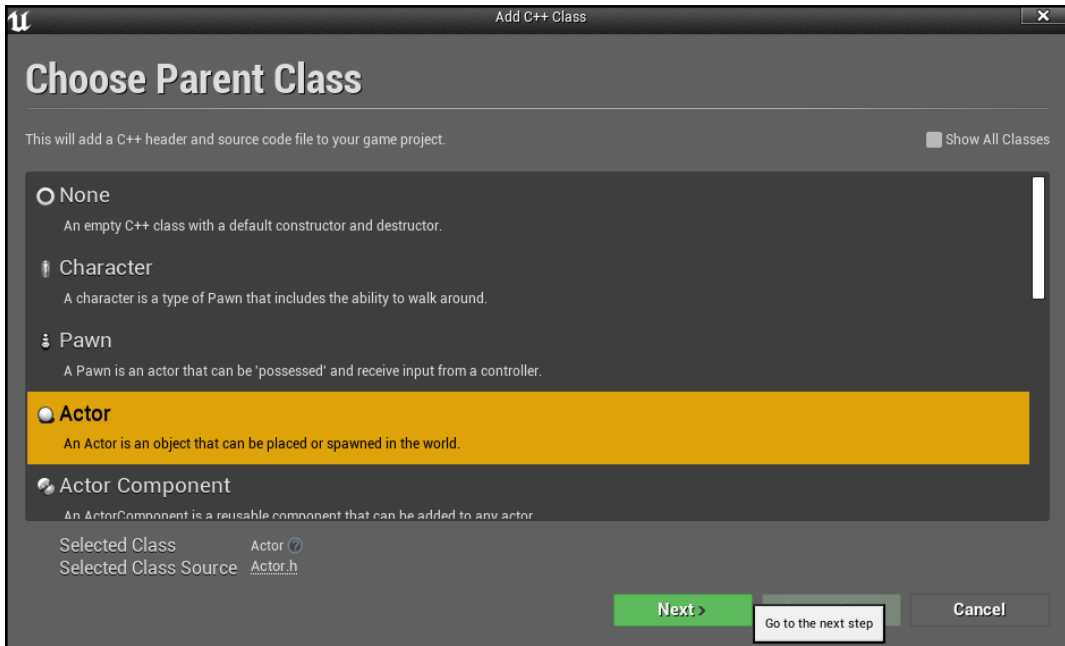


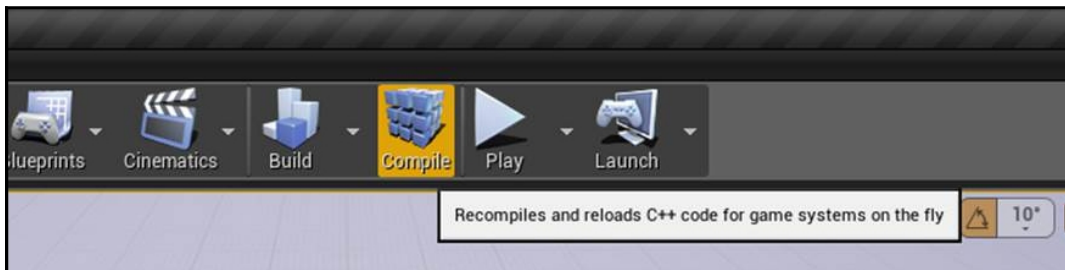
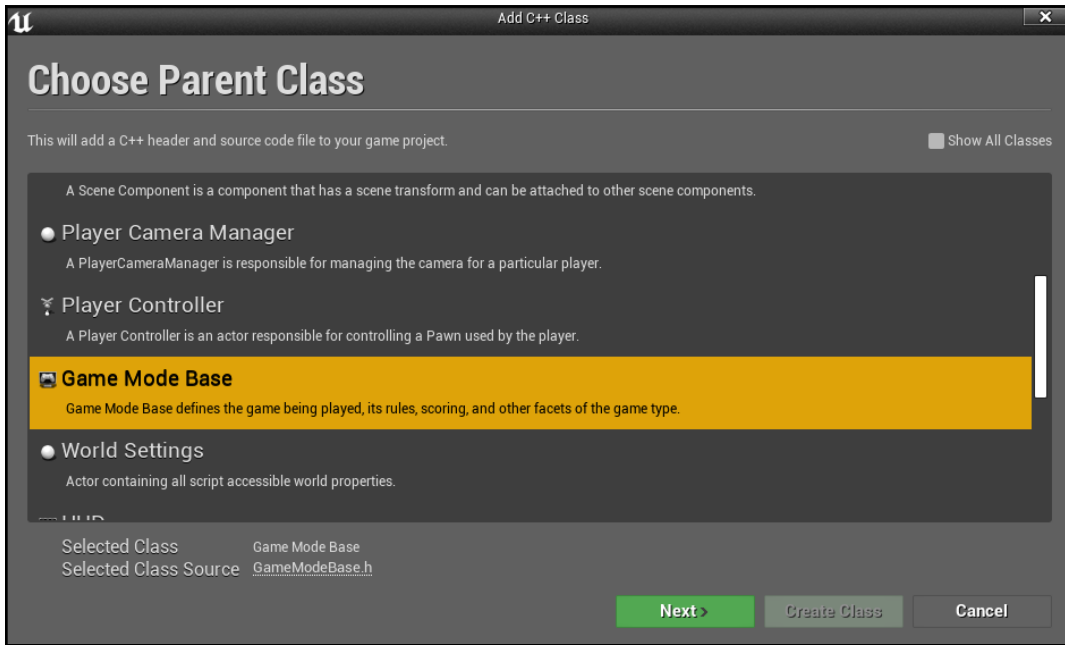


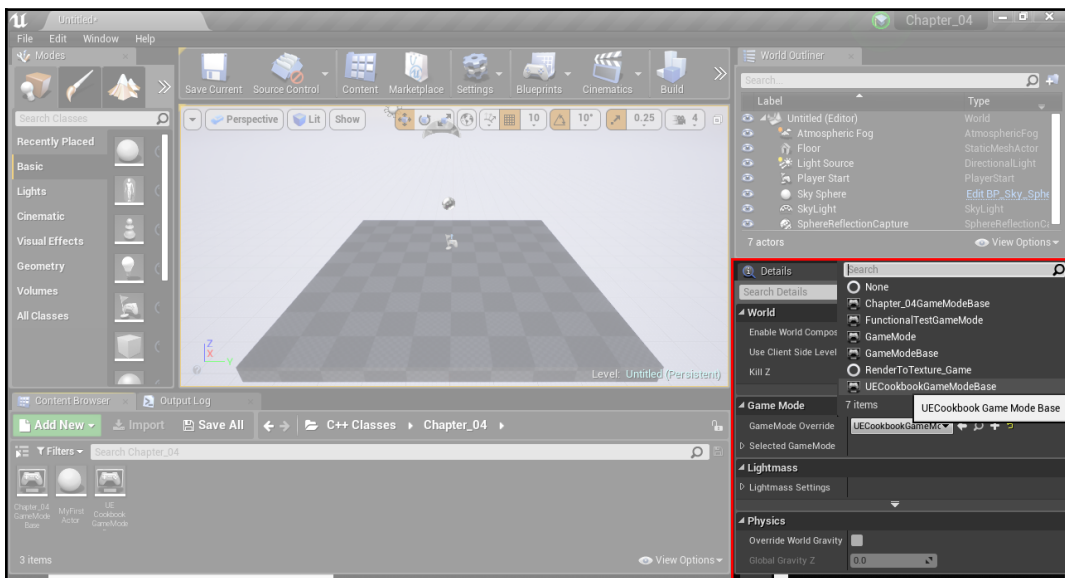
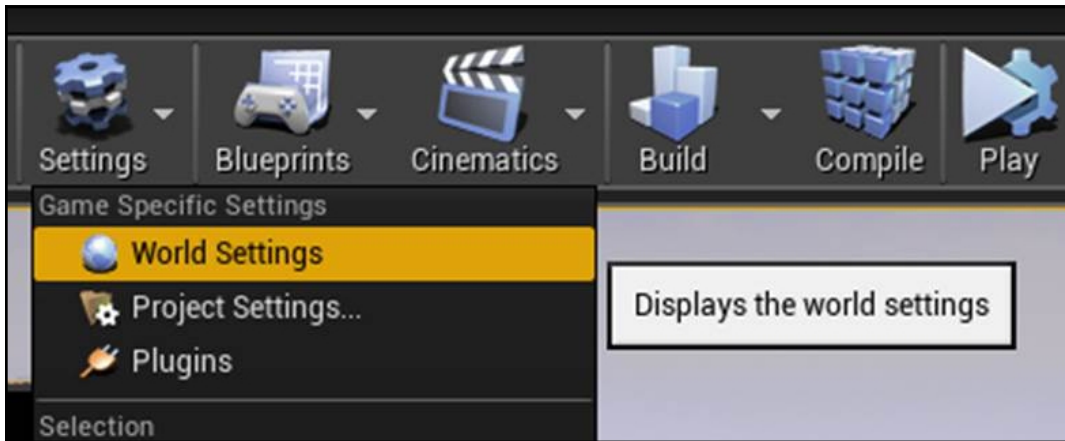


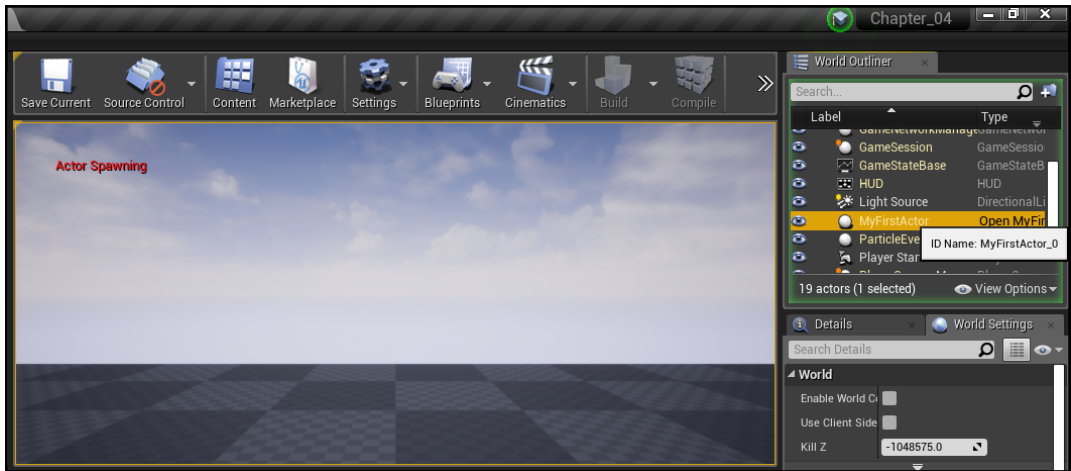
# Chapter 4: Actors and Components

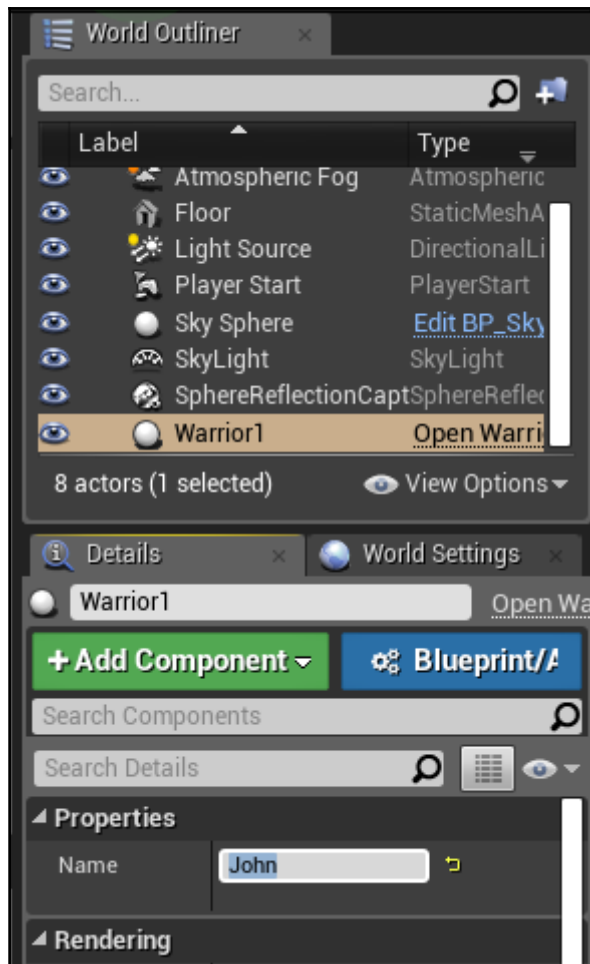


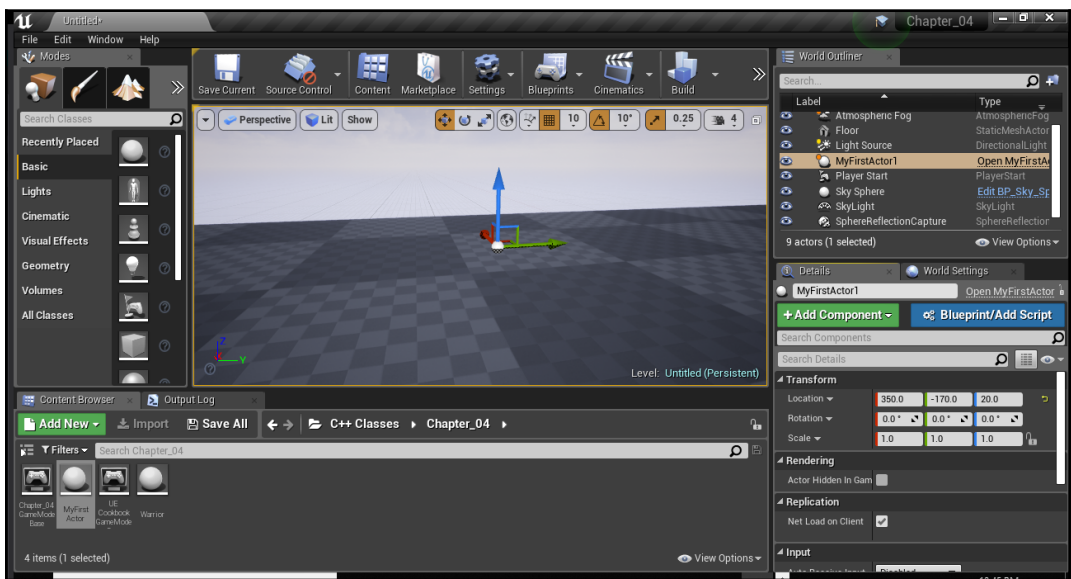
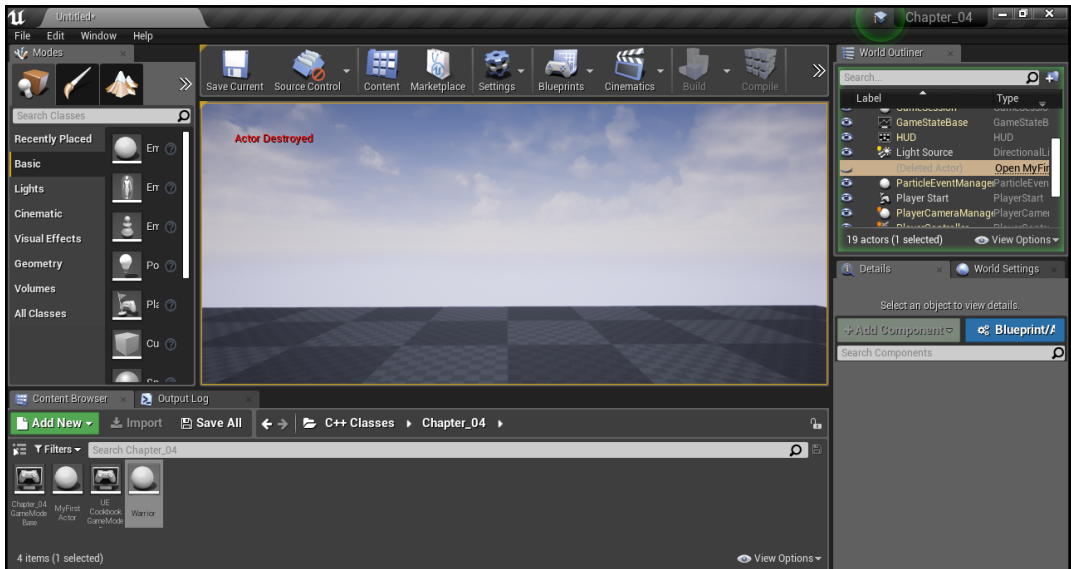




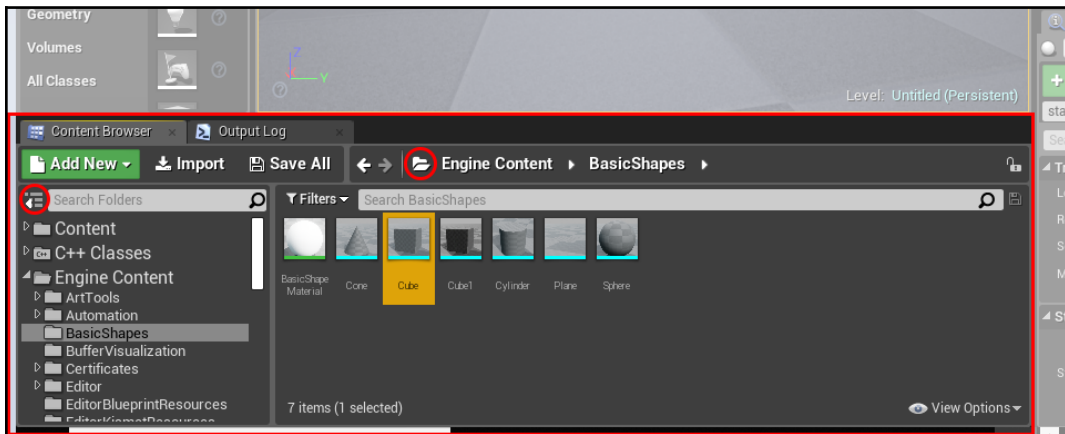
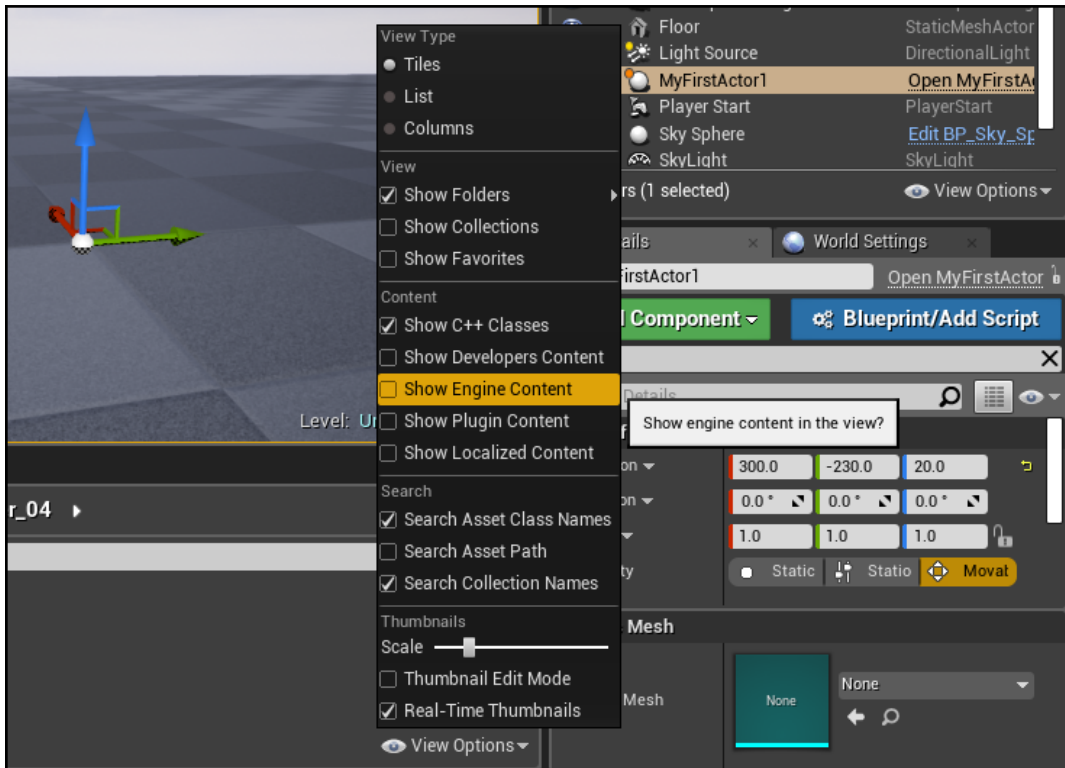


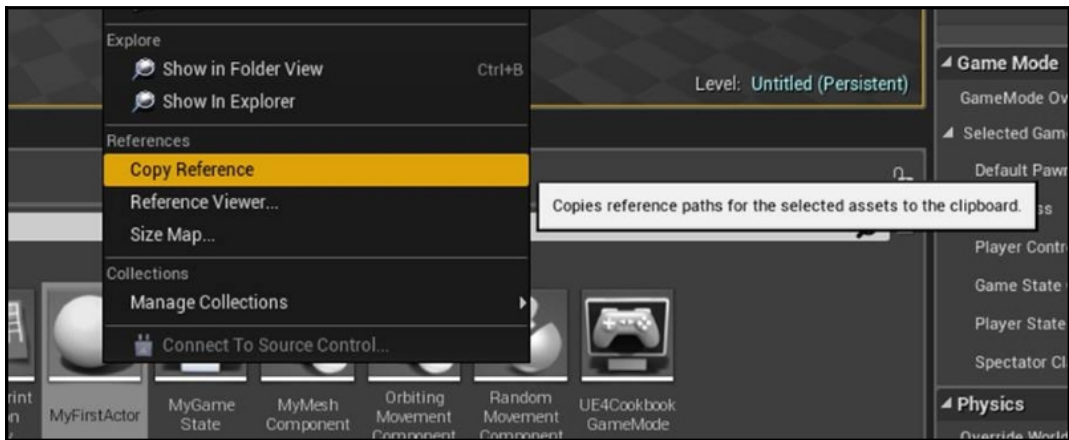
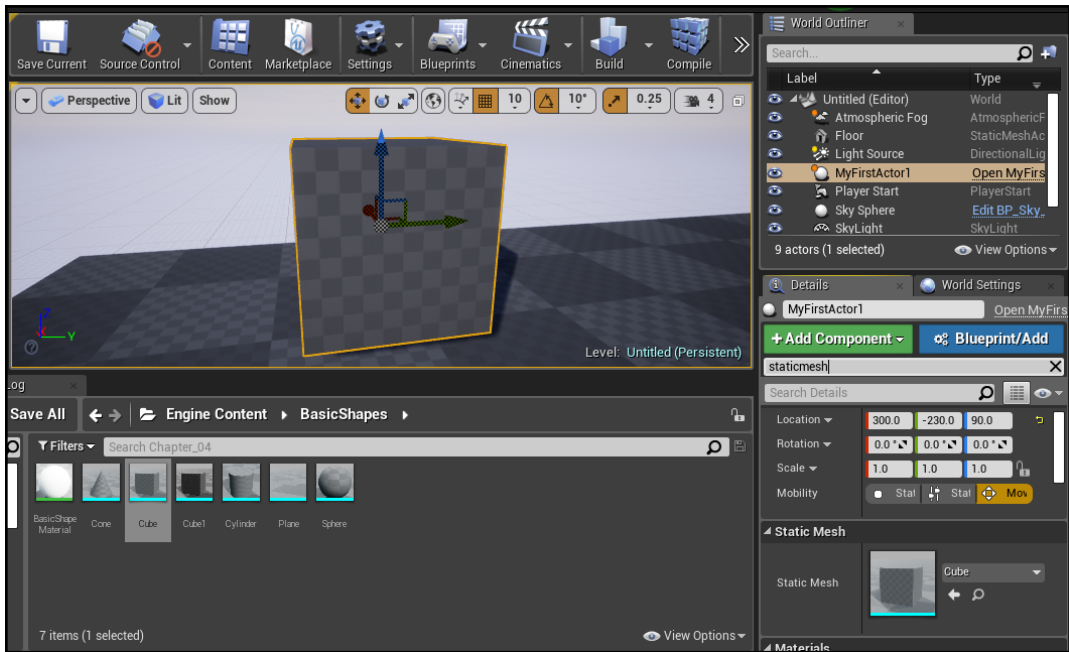


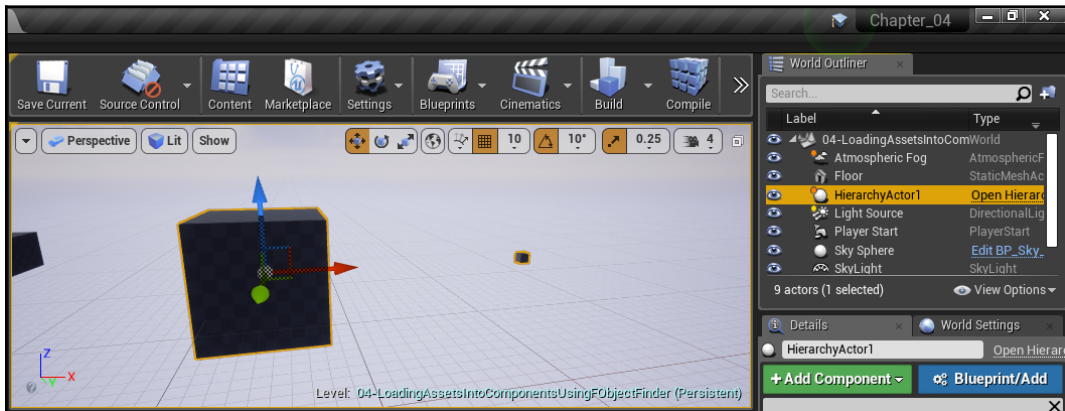
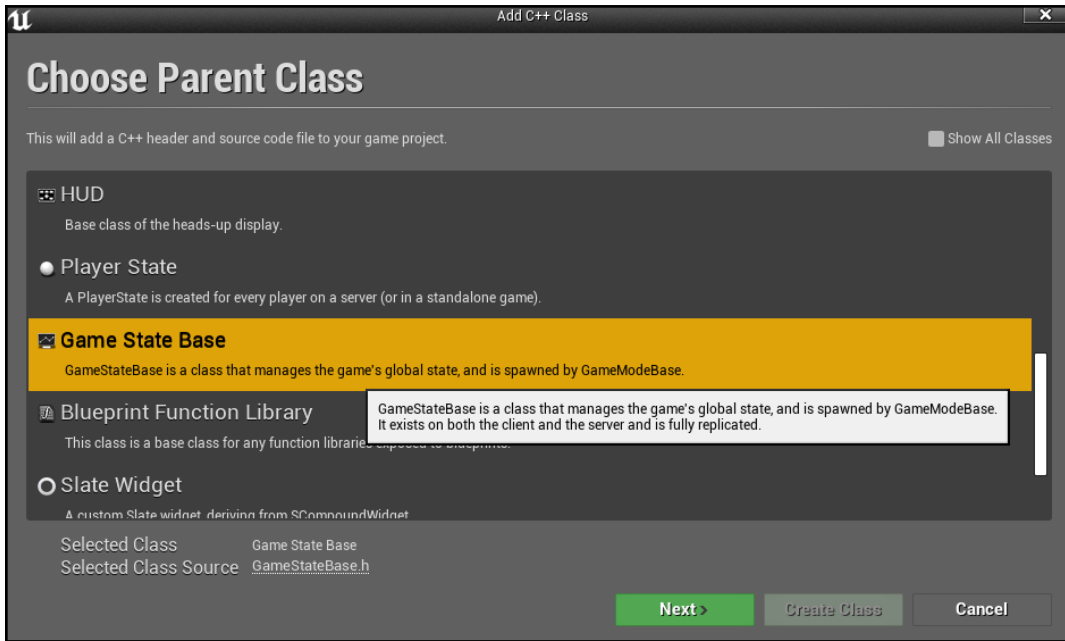


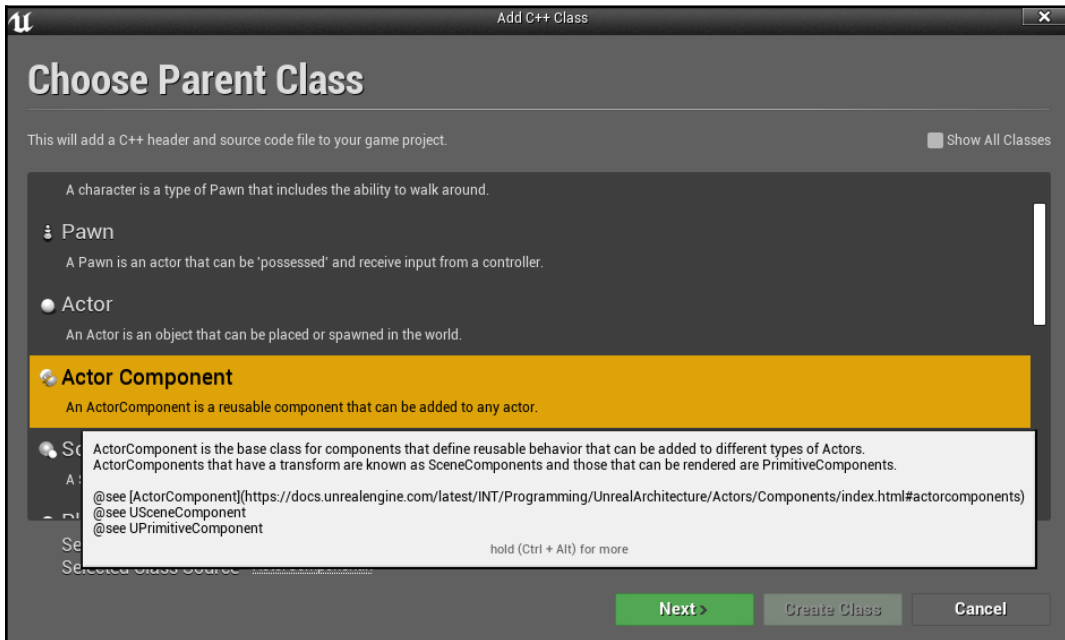
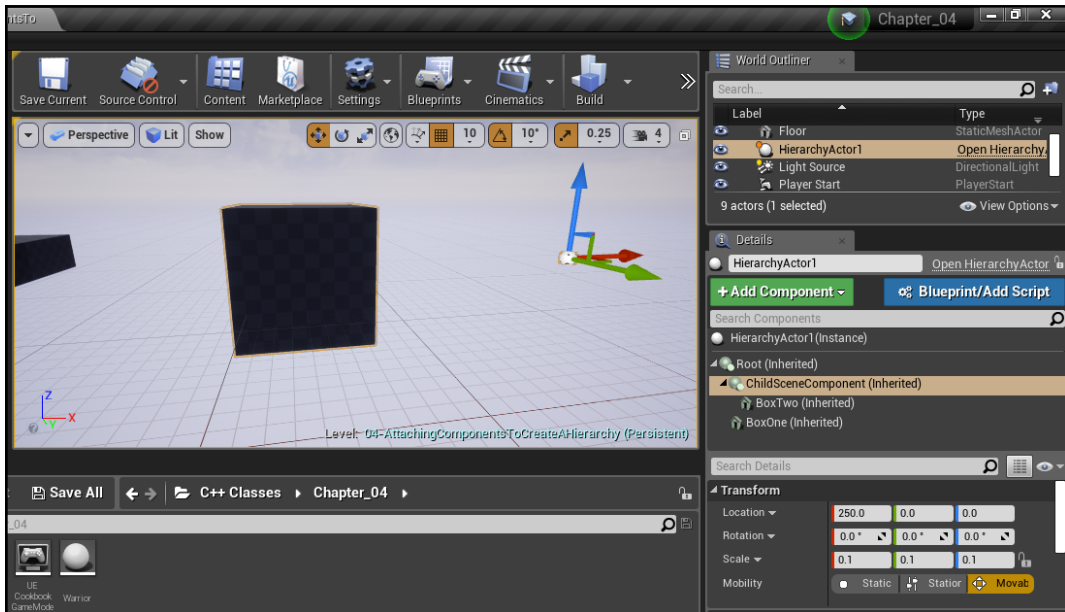




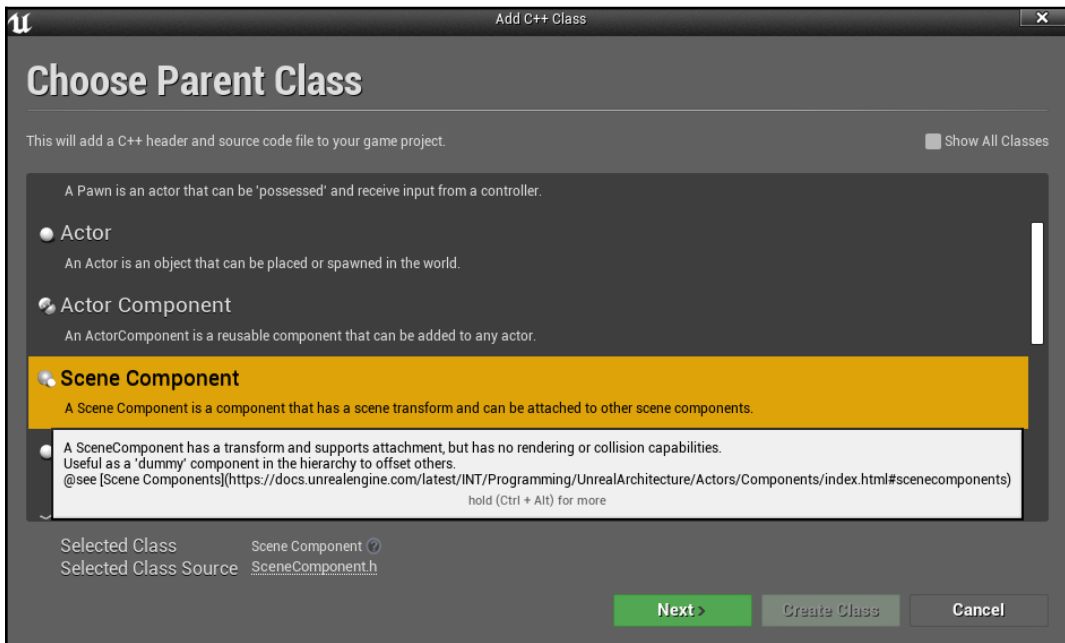
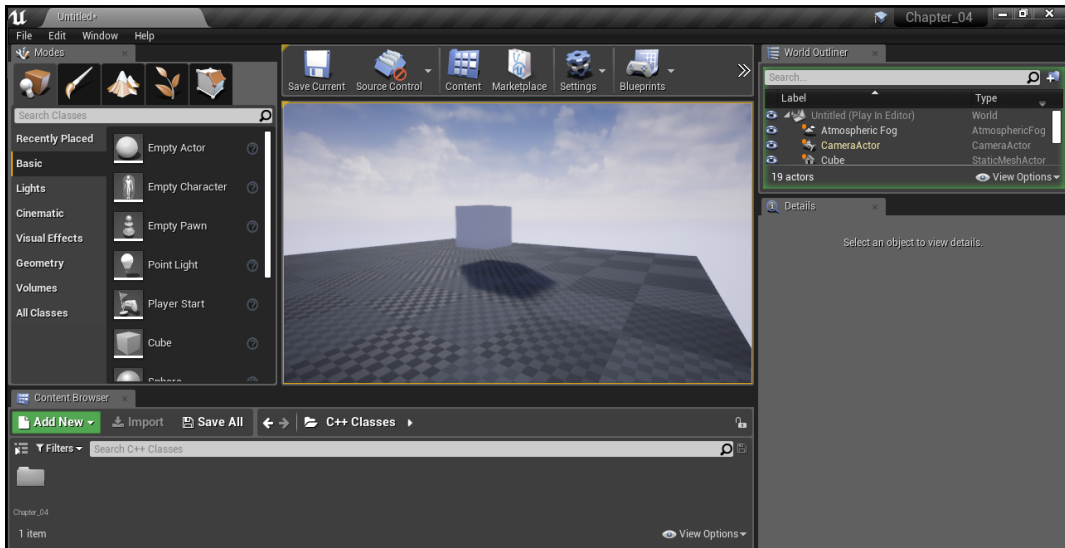


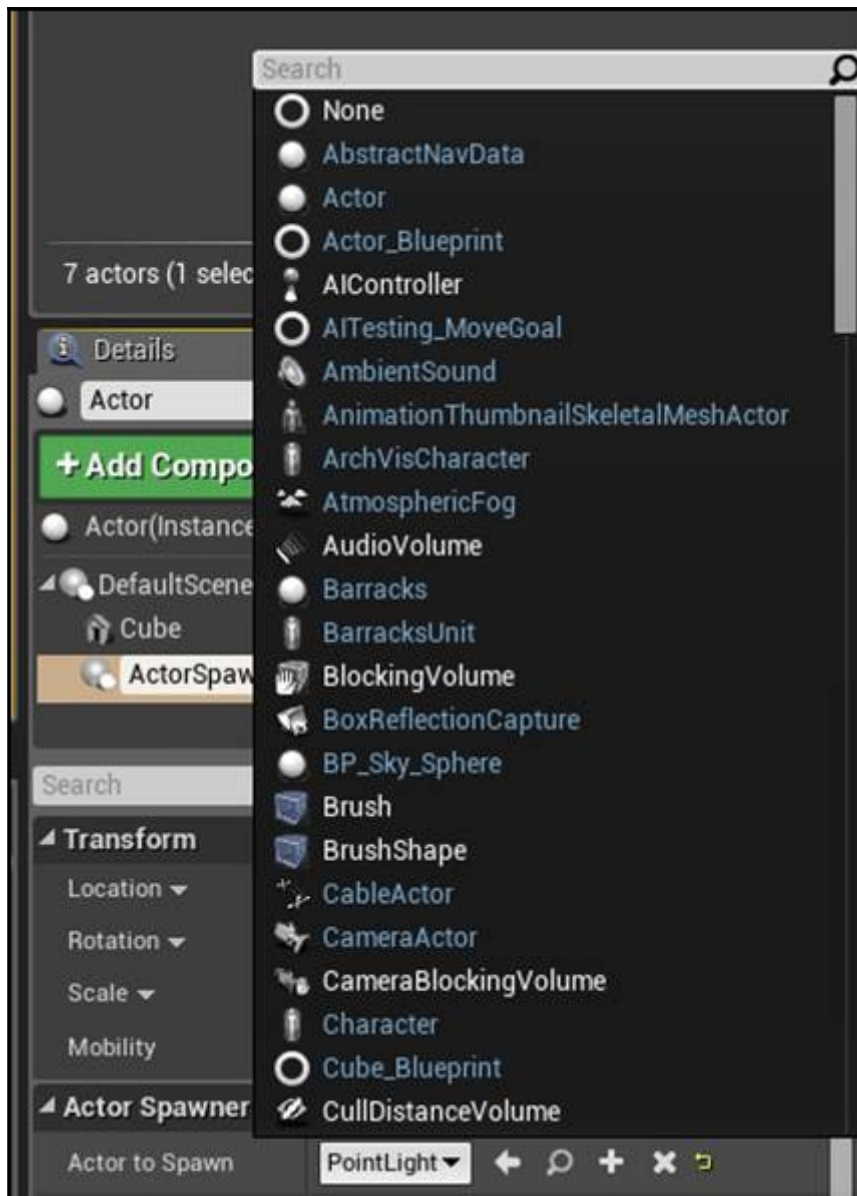


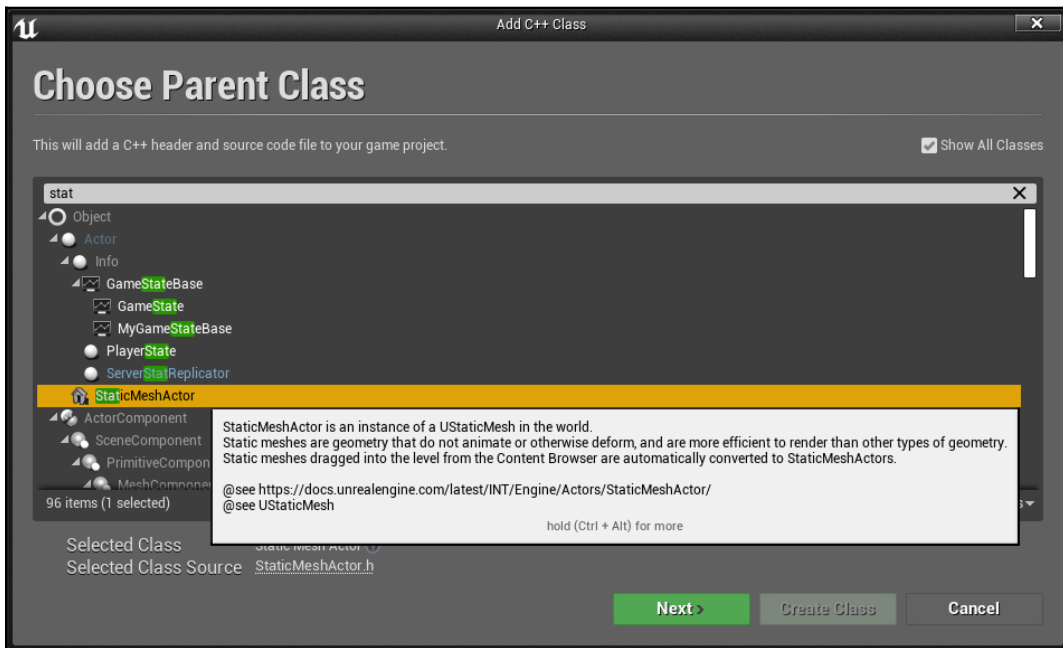




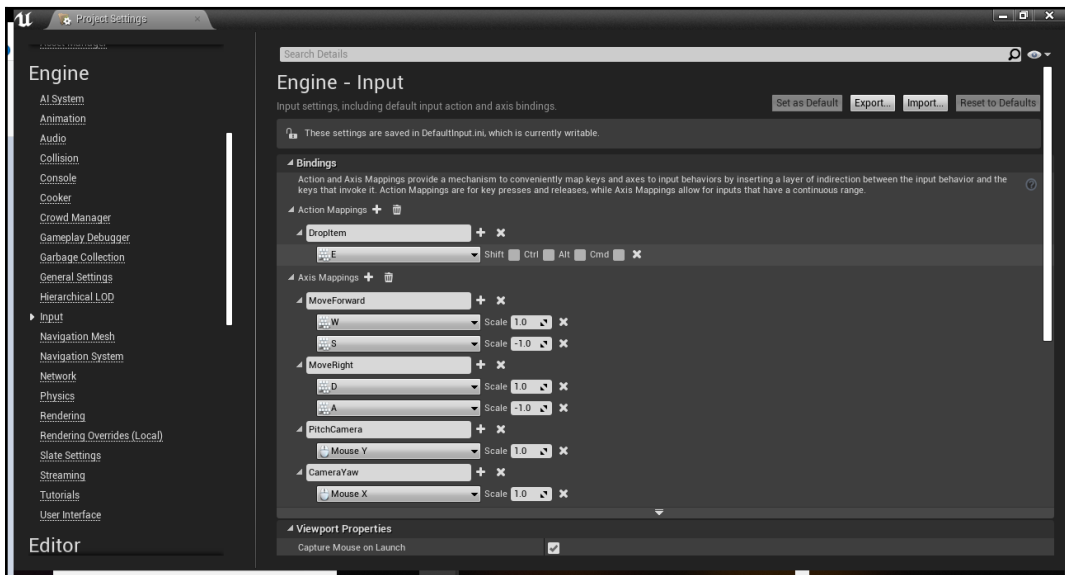
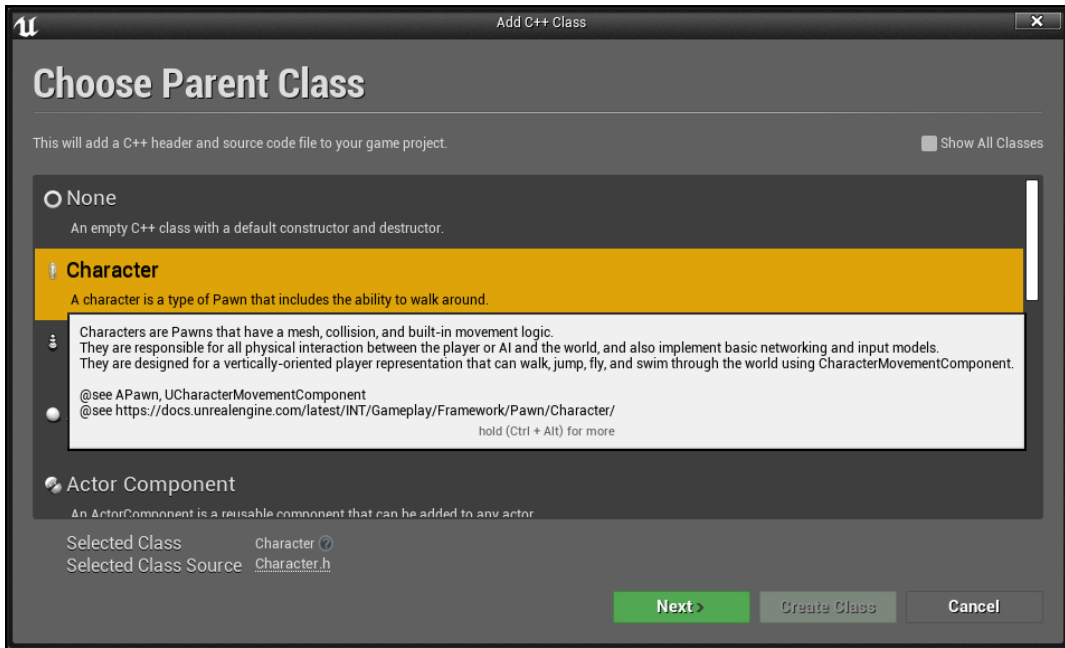


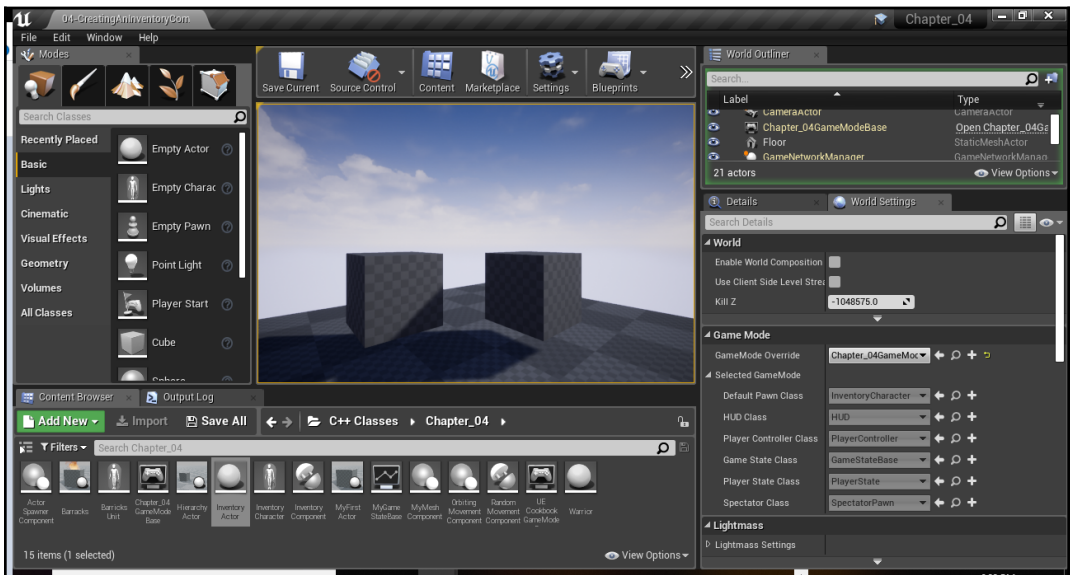
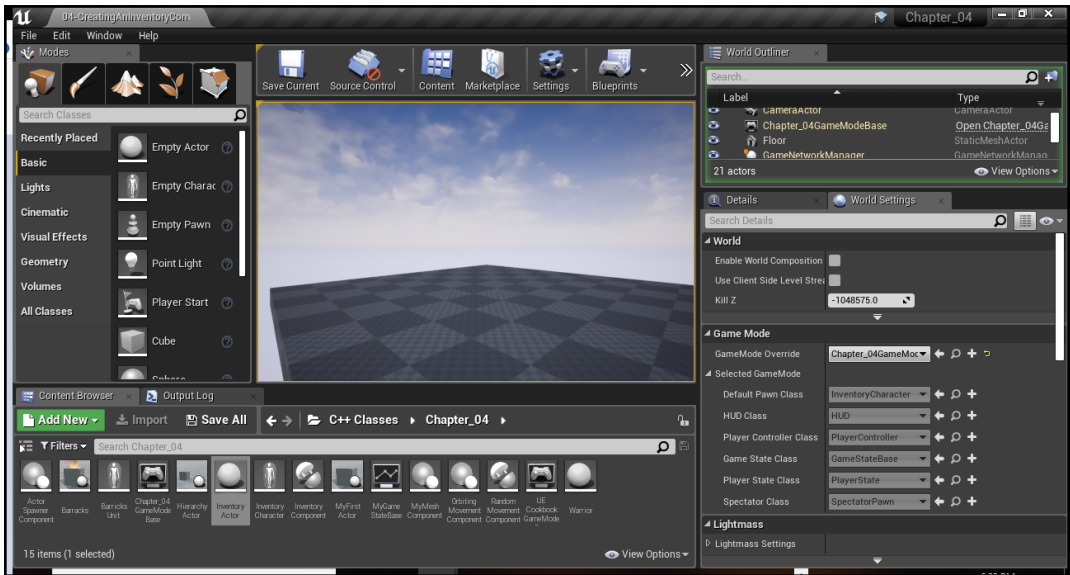


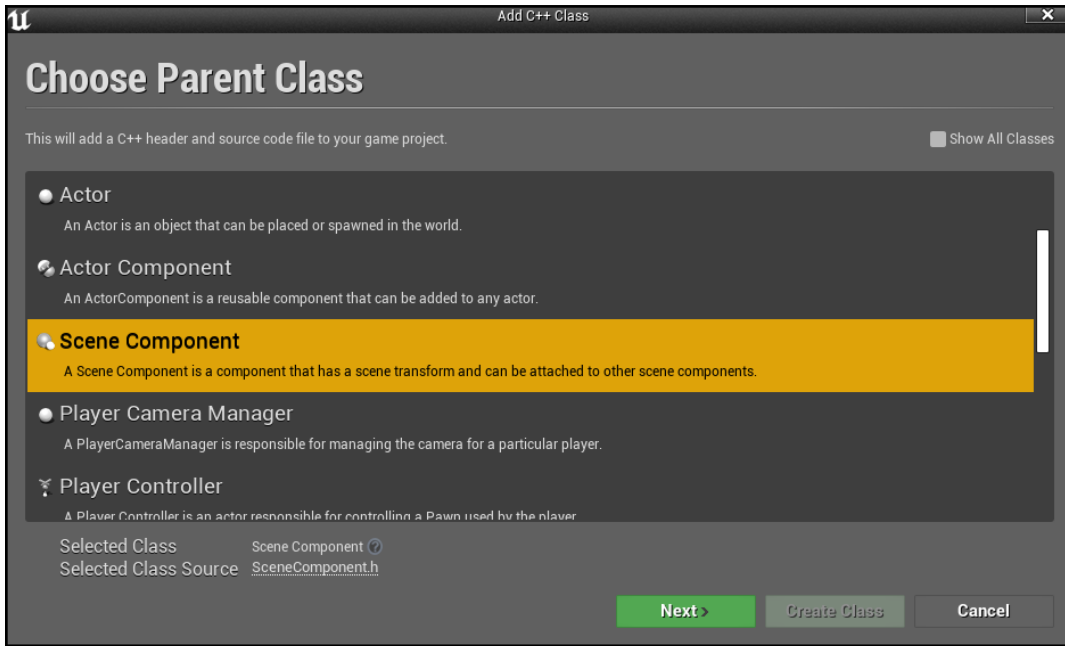


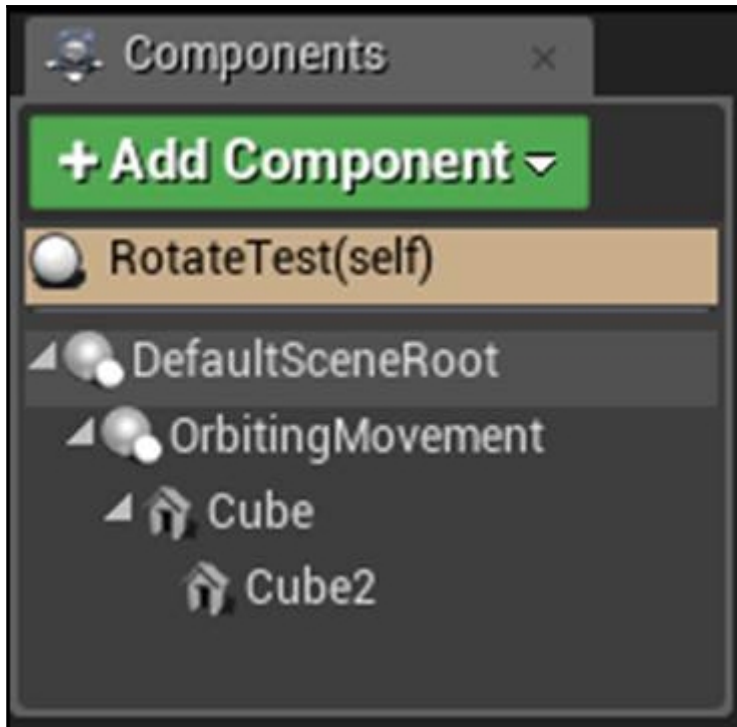


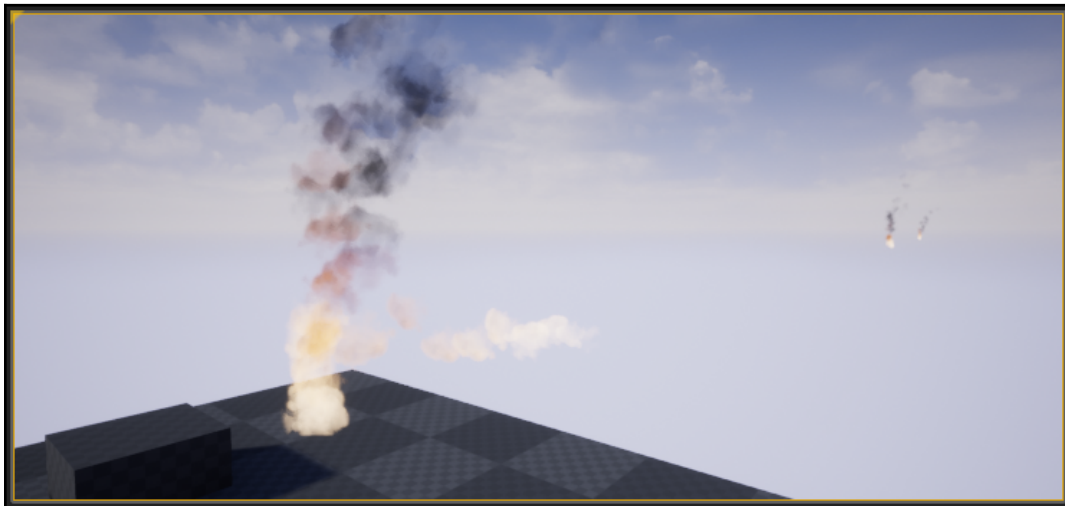
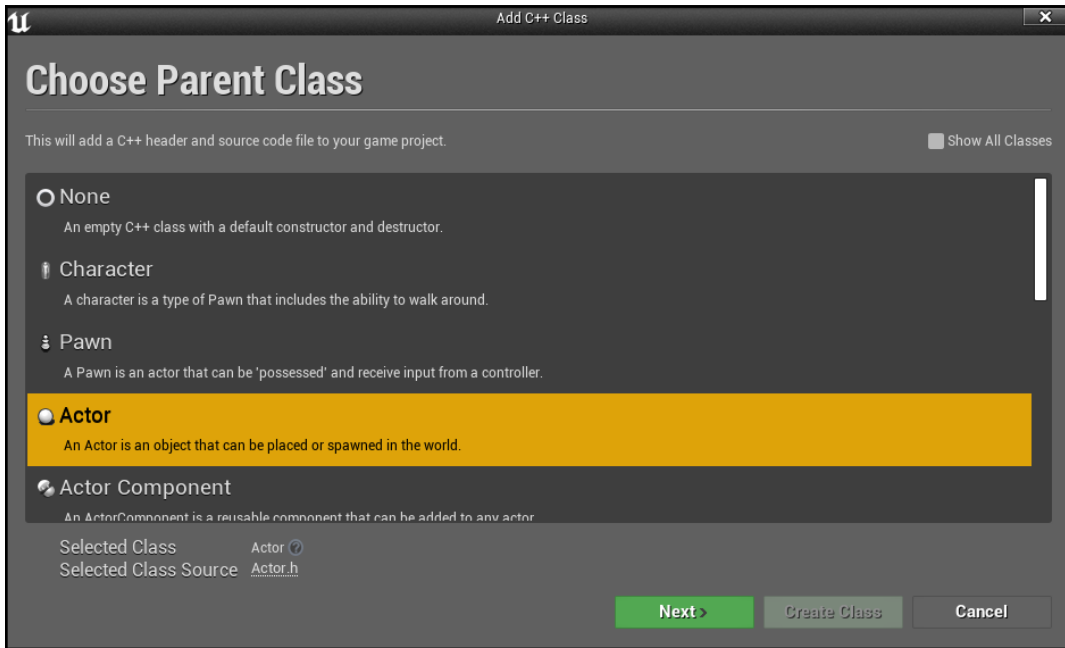




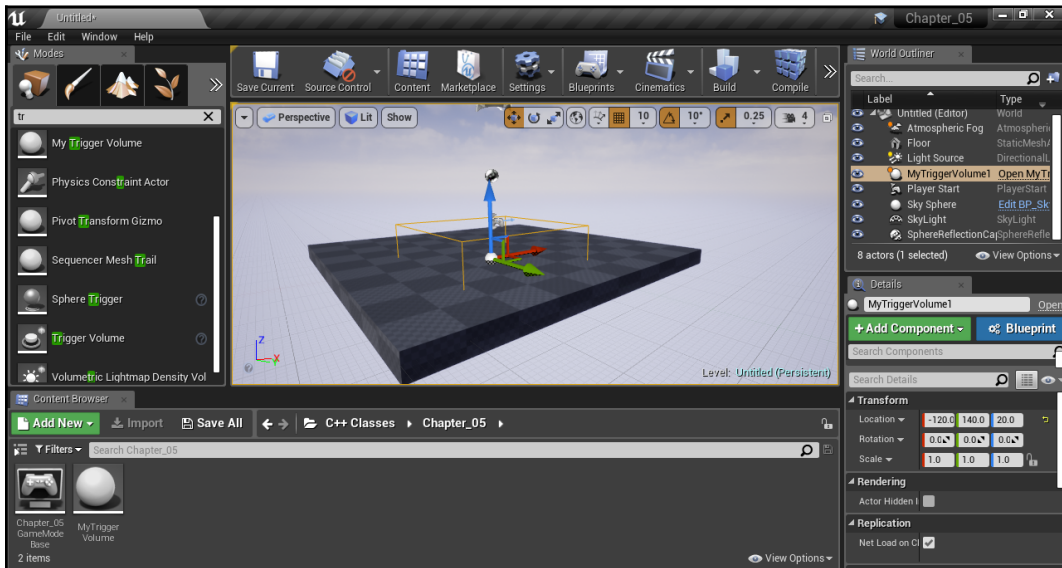


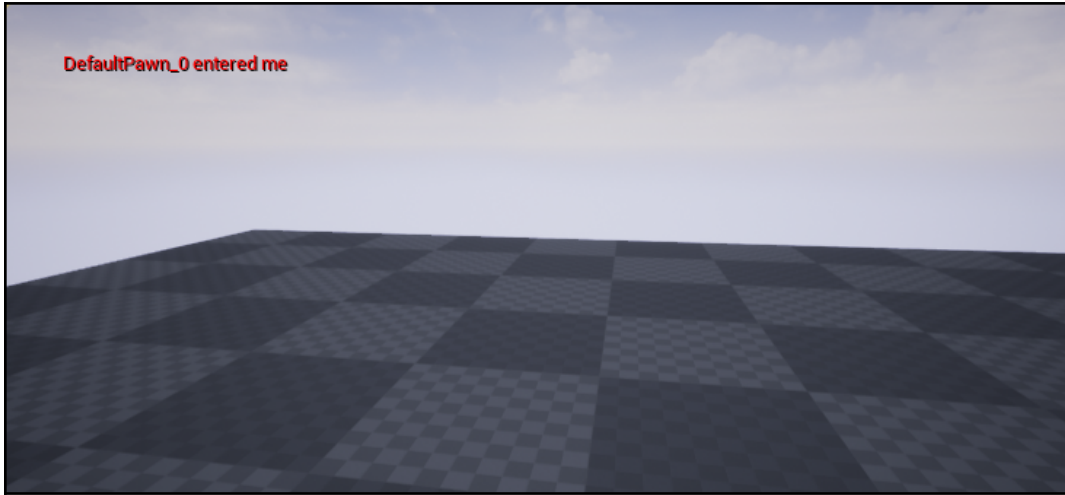






















# Chapter 5: Handling Events and Delegates



A screenshot of the Unreal Engine documentation website for the AActor class. The browser address bar shows the URL: https://api.unrealengine.com/INT/API/Runtime/Engine/GameFramework/AActor/index.html. The page header includes the Unreal Engine logo and navigation links for NEWS, ABOUT, LEARN, COMMUNITY, MARKETPLACE, and ENTERPRISE. The main content area is titled "AActor" and includes an "Inheritance Hierarchy" section with links to UObjectBase, UObjectBaseUtility, UObject, and AActor, plus a link for "+ 157 derived classes". A "Syntax" section shows the code: 

```
class AActor : public UObject
```

. A "Remarks" section explains that Actor is the base class for objects that can be placed or spawned in a level. On the right side, there is a search bar, a language dropdown set to "English", and social media sharing icons for Facebook, Twitter, YouTube, LinkedIn, and Google+.

Icon	Return Type	Function Name	Description
 	void	<a href="#">NotifyActorBeginCursorOver()</a>	Event when this actor has the mouse moved over it with the clickable interface.
 	void	<a href="#">NotifyActorBeginOverlap</a> ( AActor * OtherActor )	Event when this actor overlaps another actor, for example a player walking into a trigger.
 	void	<a href="#">NotifyActorEndCursorOver()</a>	Event when this actor has the mouse moved off of it with the clickable interface.
 	void	<a href="#">NotifyActorEndOverlap</a> ( AActor * OtherActor )	Event when an actor no longer overlaps another actor, and they have separated.
 	void	<a href="#">NotifyActorOnClicked</a> ( FKey ButtonPressed )	Event when this actor is clicked by the mouse when using the clickable interface.
 	void	<a href="#">NotifyActorOnInputTouchBegin</a> ( const ETouchIndex::Type FingerIndex )	Event when this actor is touched when click events are enabled.
 	void	<a href="#">NotifyActorOnInputTouchEnd</a> ( const ETouchIndex::Type FingerIndex )	Event when this actor is under the finger when untouched when click events are enabled.
 	void	<a href="#">NotifyActorOnInputTouchEnter</a> ( const ETouchIndex::Type FingerIndex )	Event when this actor has a finger moved over it with the clickable interface.

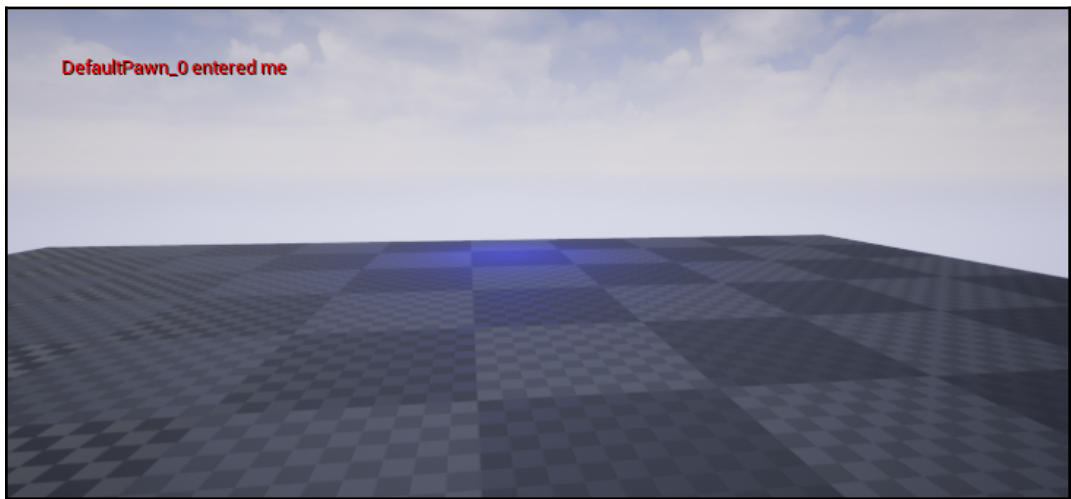
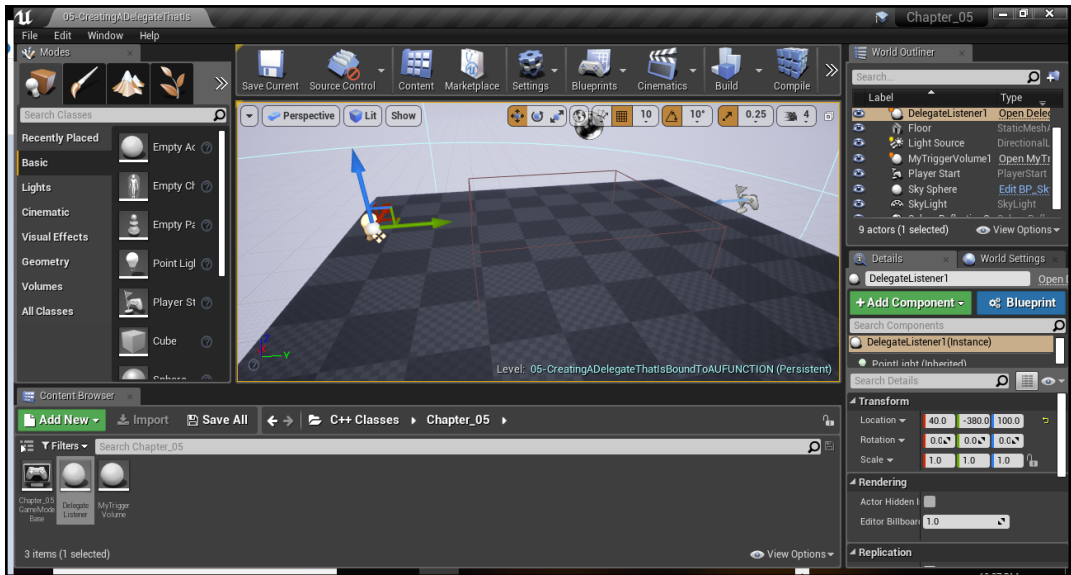
Add C++ Class

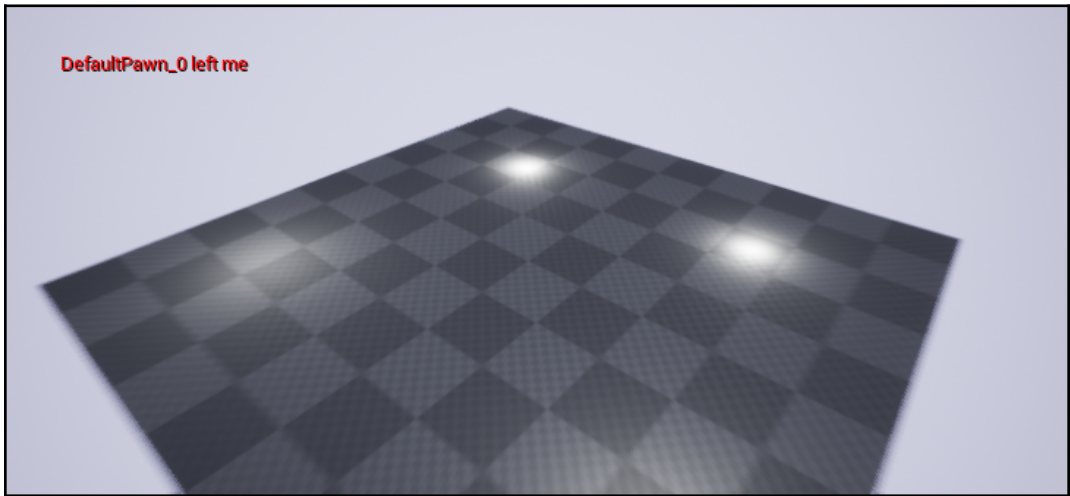
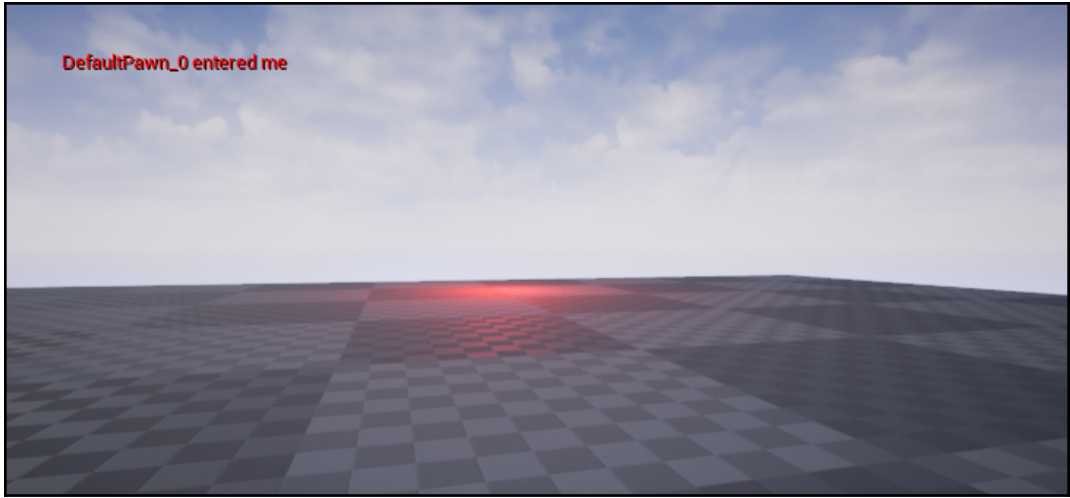
## Name Your New Actor

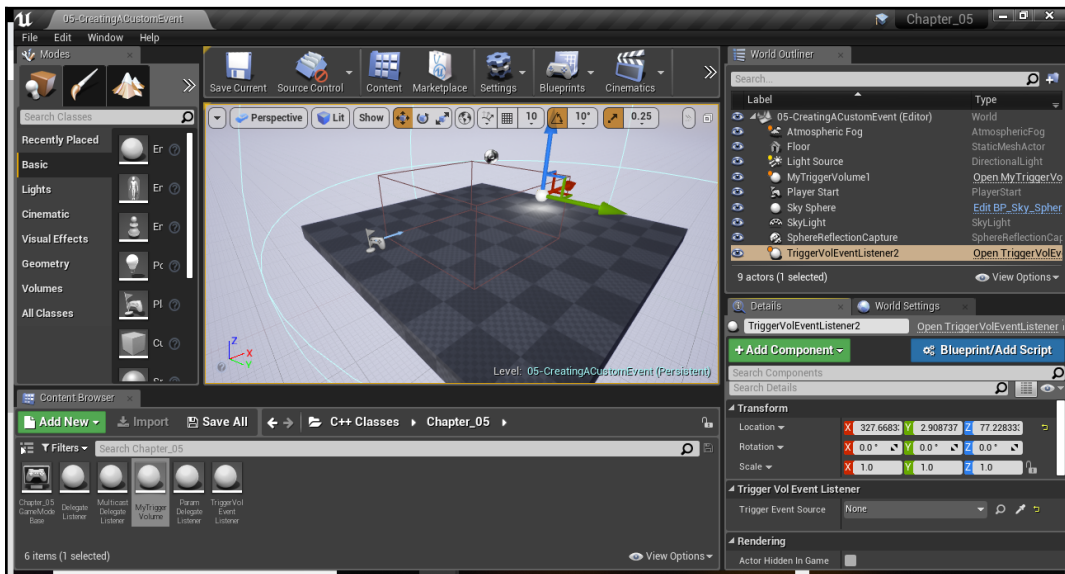
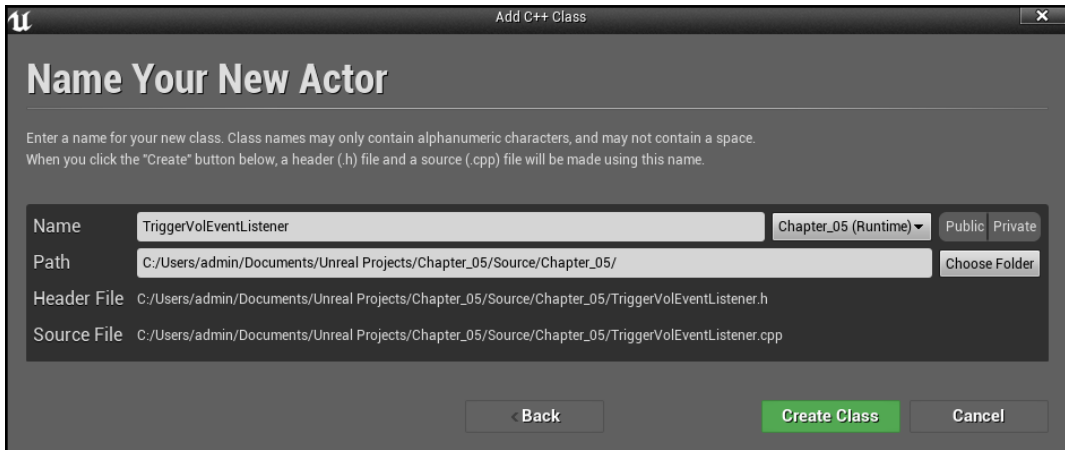
Enter a name for your new class. Class names may only contain alphanumeric characters, and may not contain a space. When you click the "Create" button below, a header (.h) file and a source (.cpp) file will be made using this name.

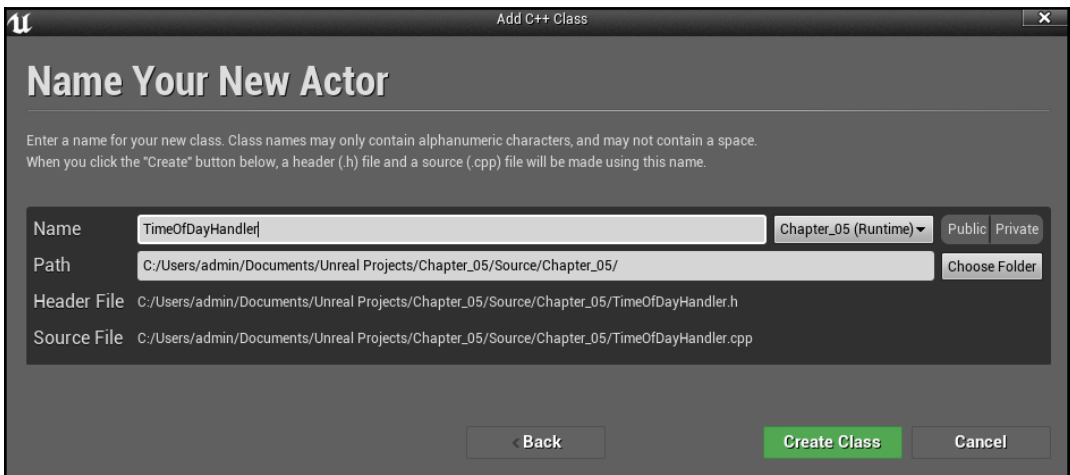
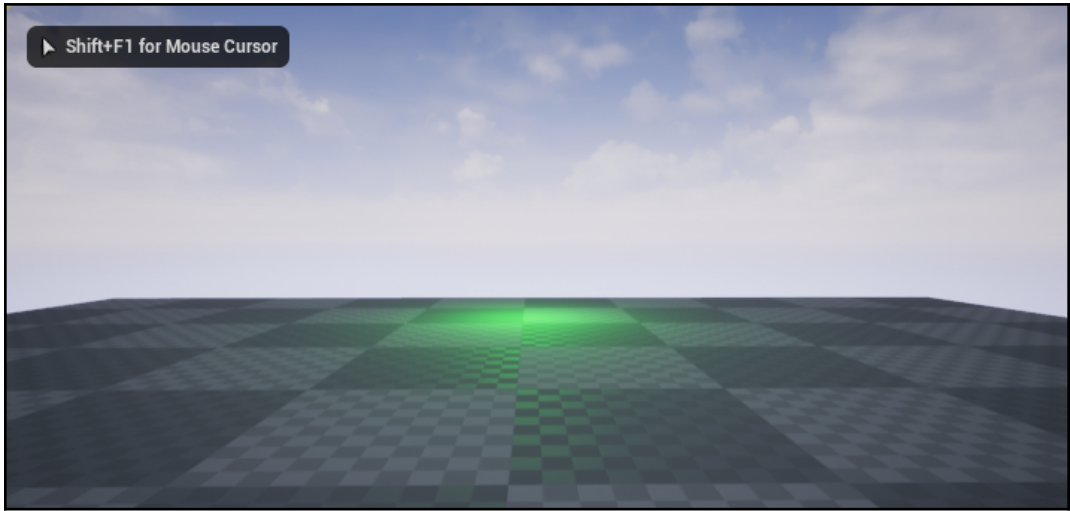
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Path	<input type="text" value="C:/Users/admin/Documents/Unreal Projects/Chapter_05/Source/Chapter_05/"/>			<input type="button" value="Choose Folder"/>
Header File	<input type="text" value="C:/Users/admin/Documents/Unreal Projects/Chapter_05/Source/Chapter_05/DelegateListener.h"/>			
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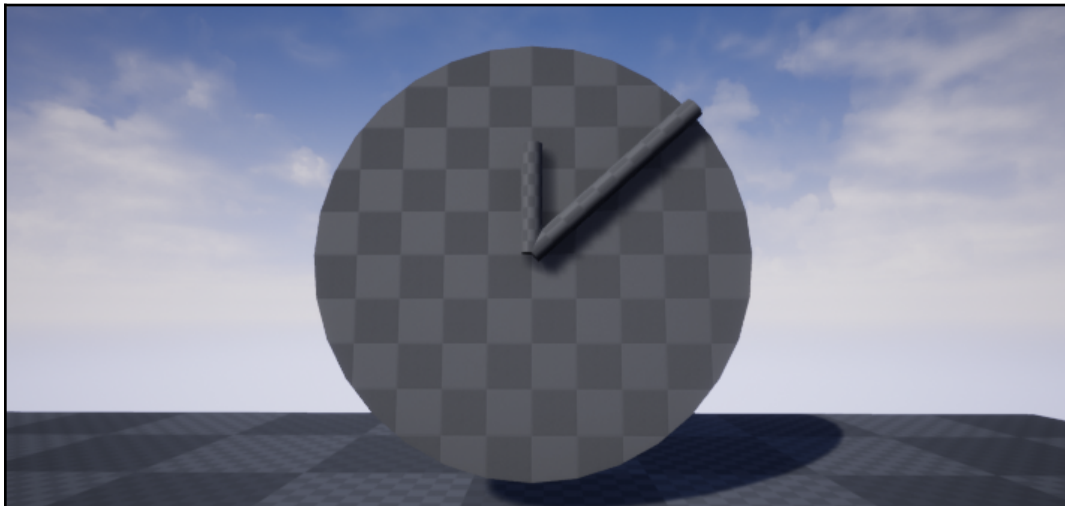
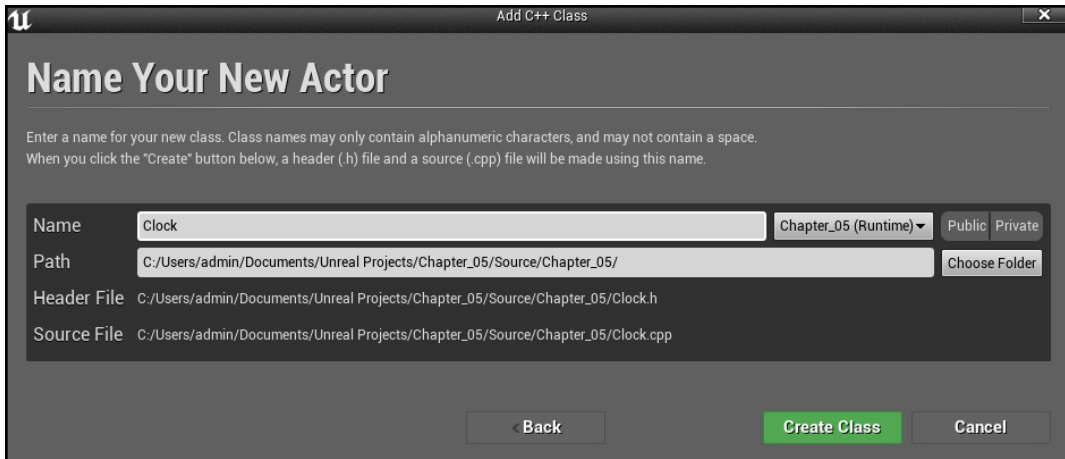


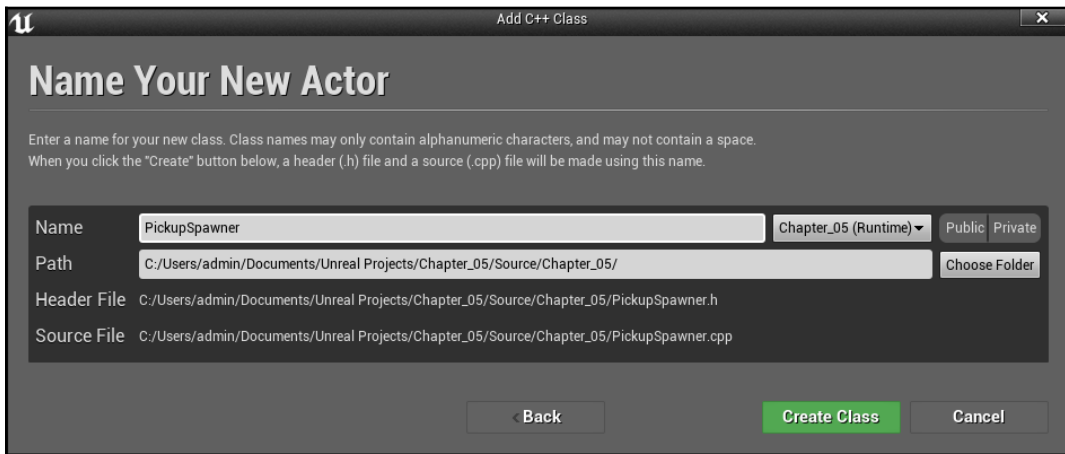
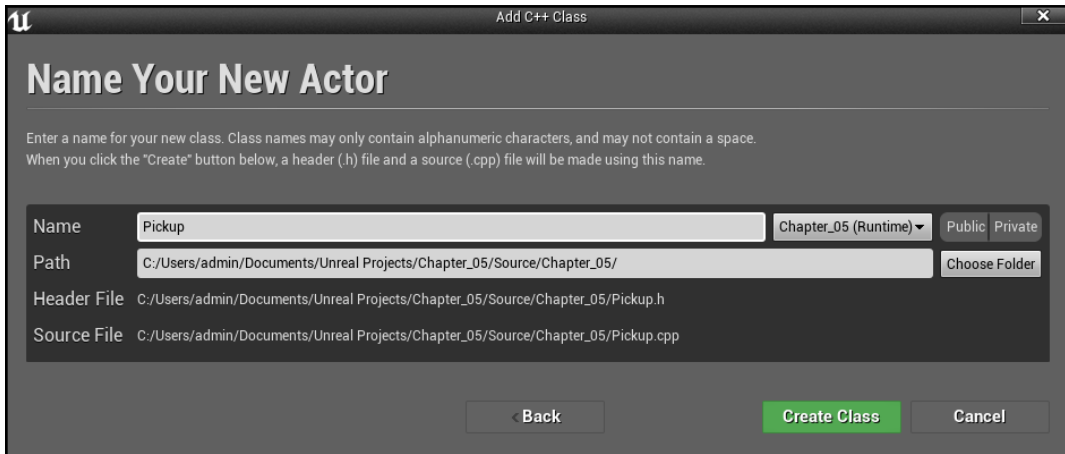


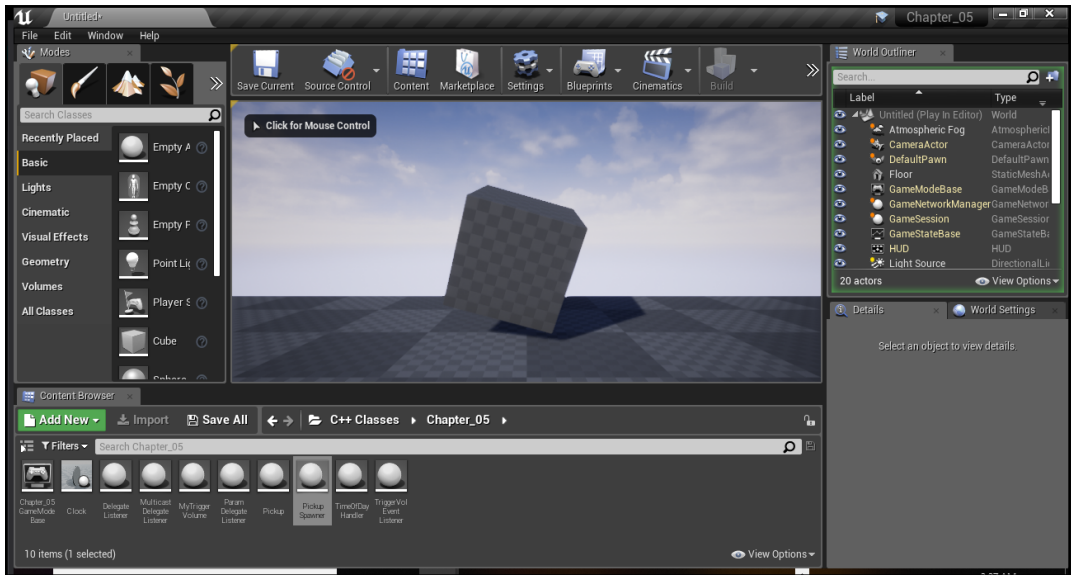




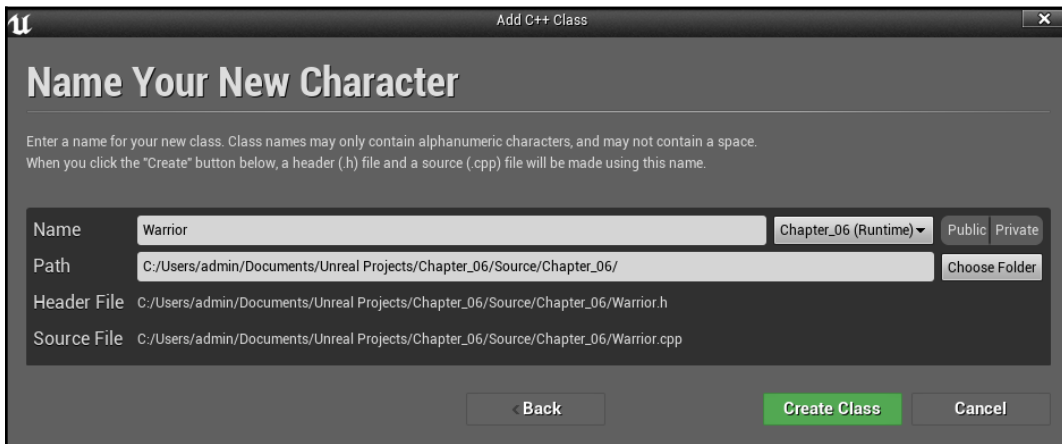
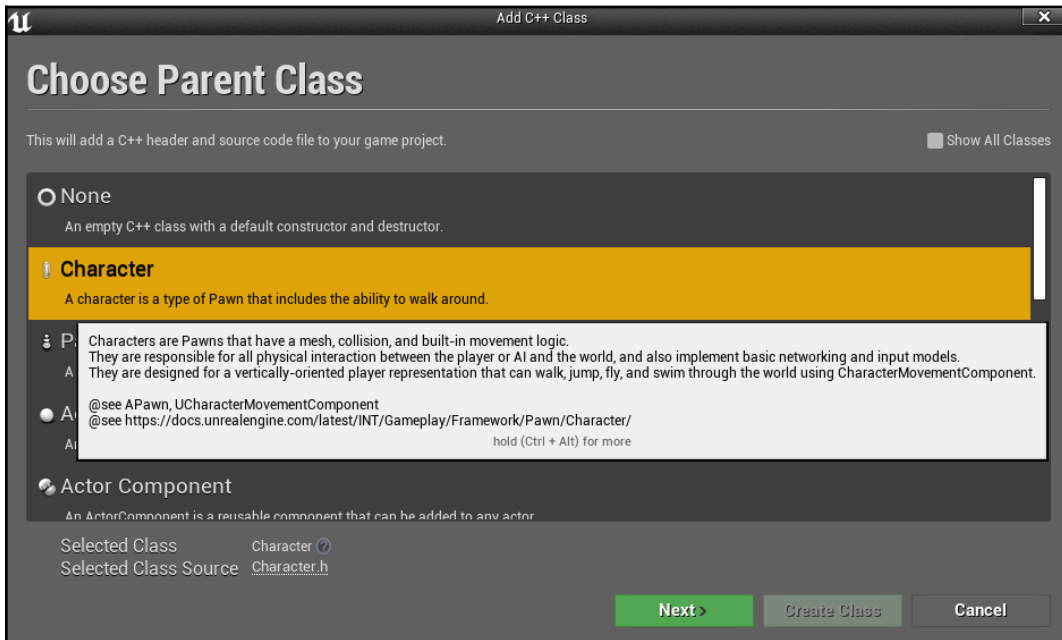




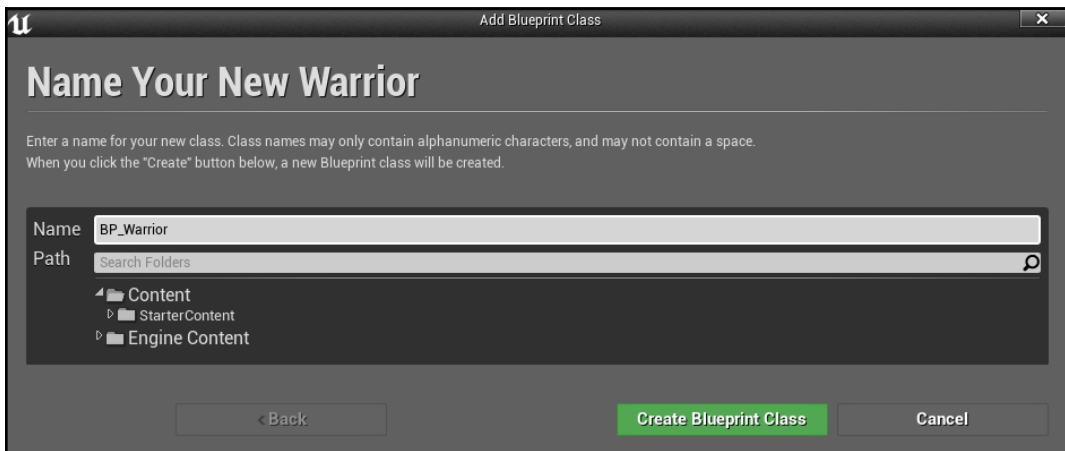
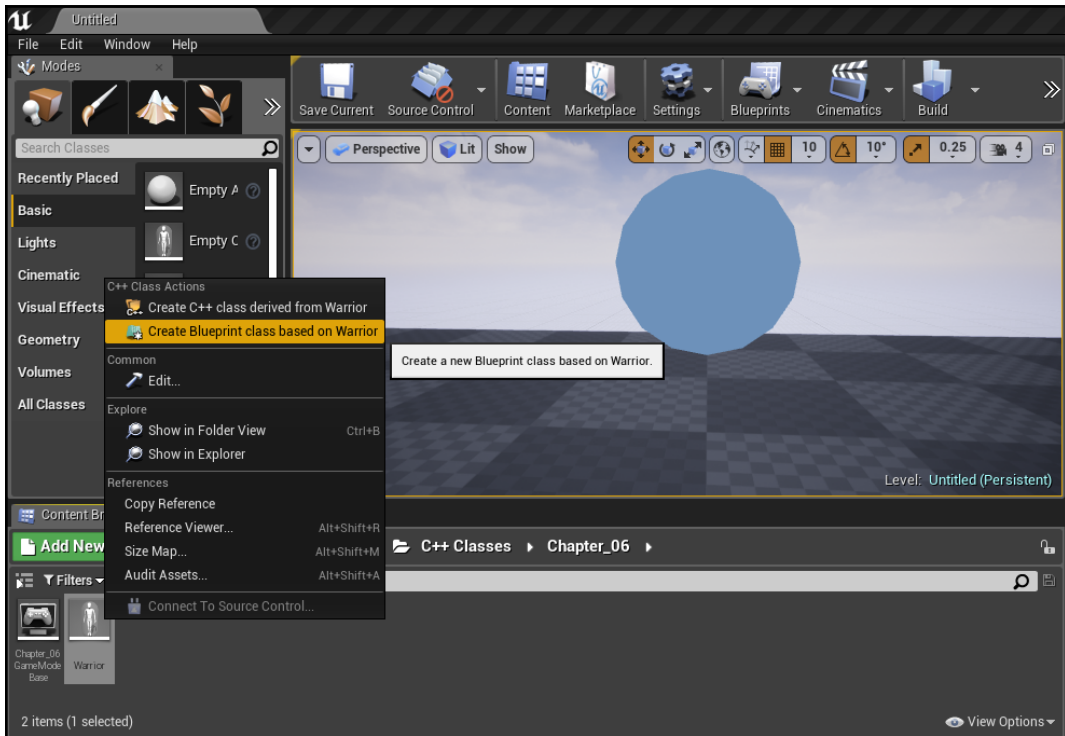


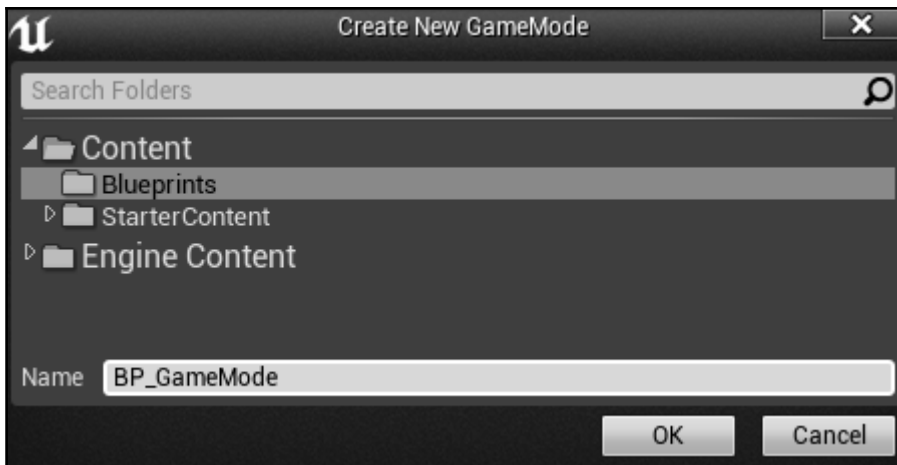
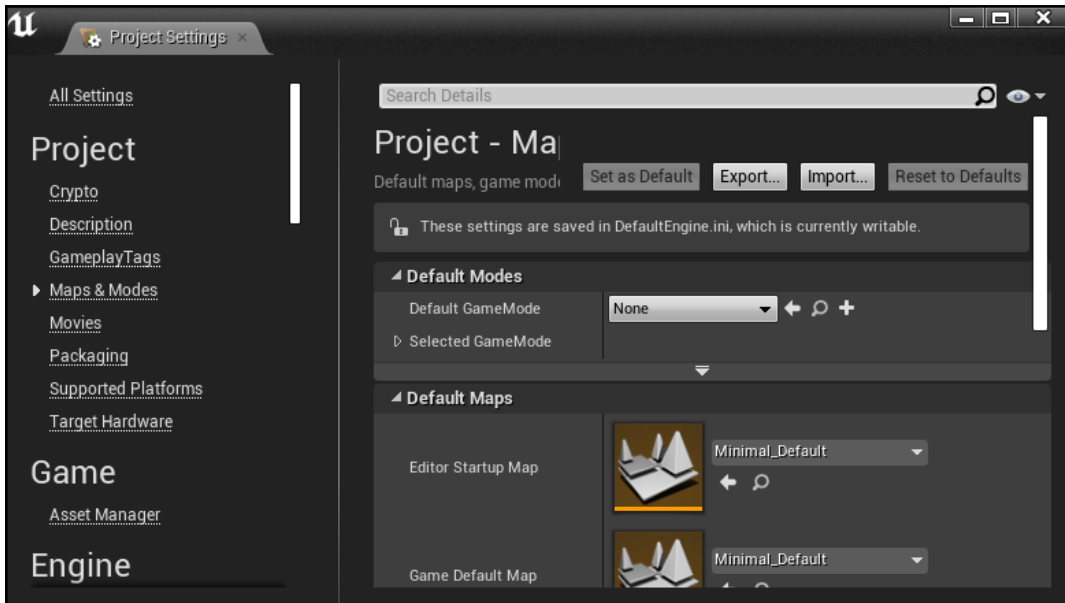


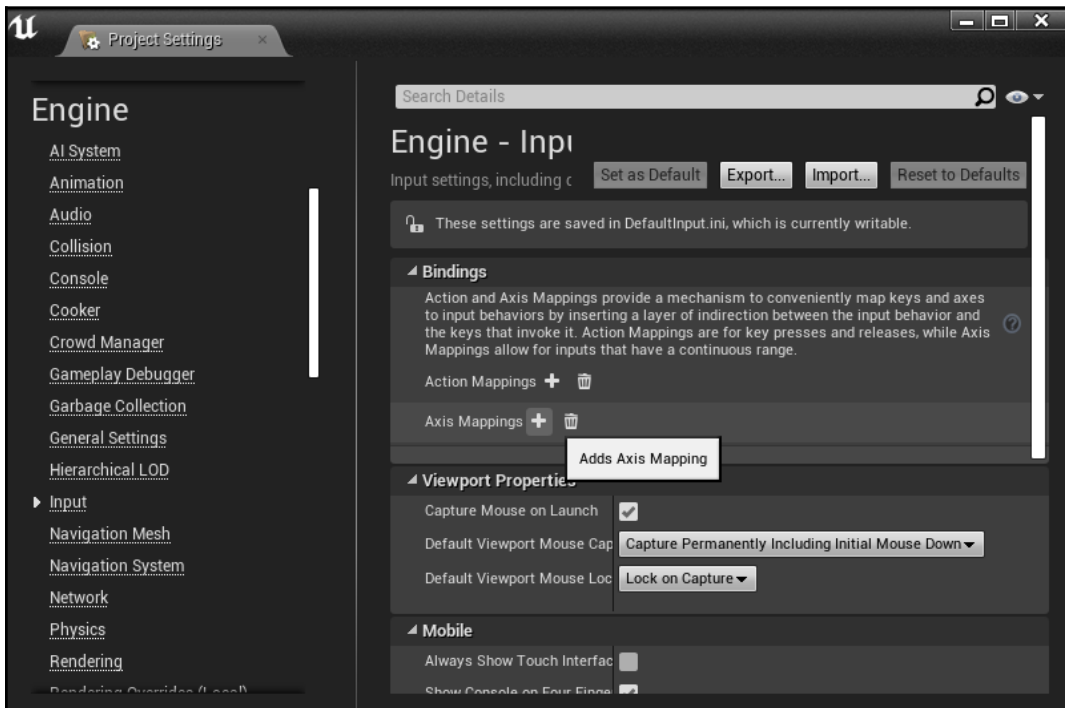
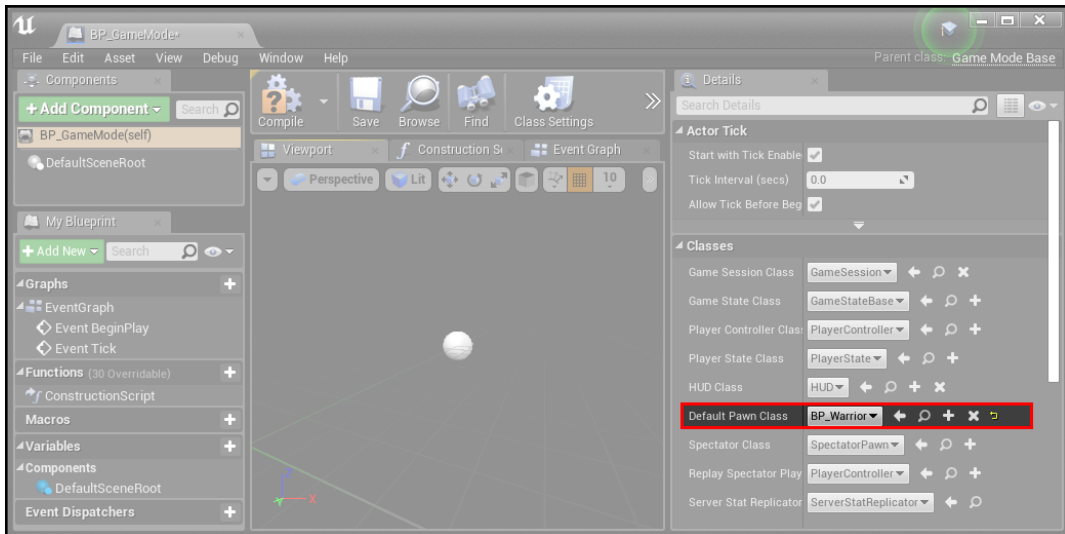
# Chapter 6: Input and Collision

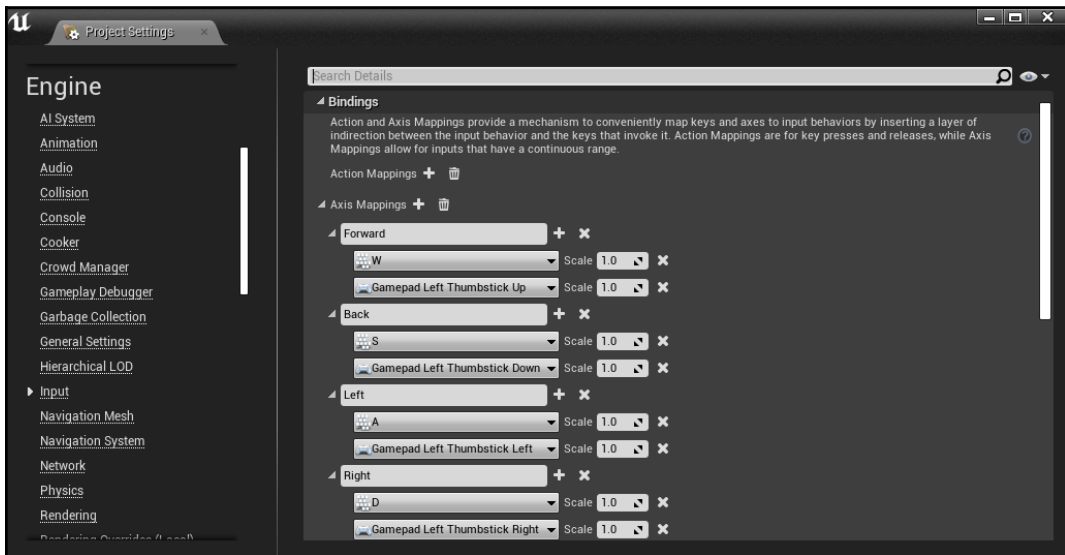
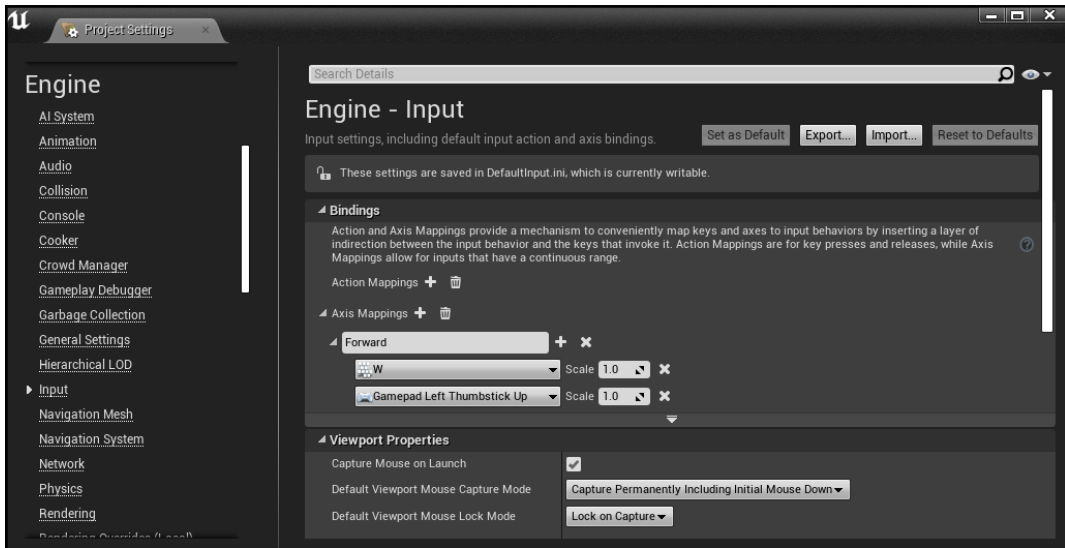


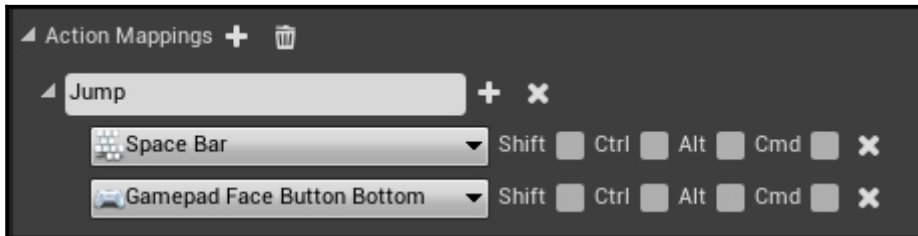
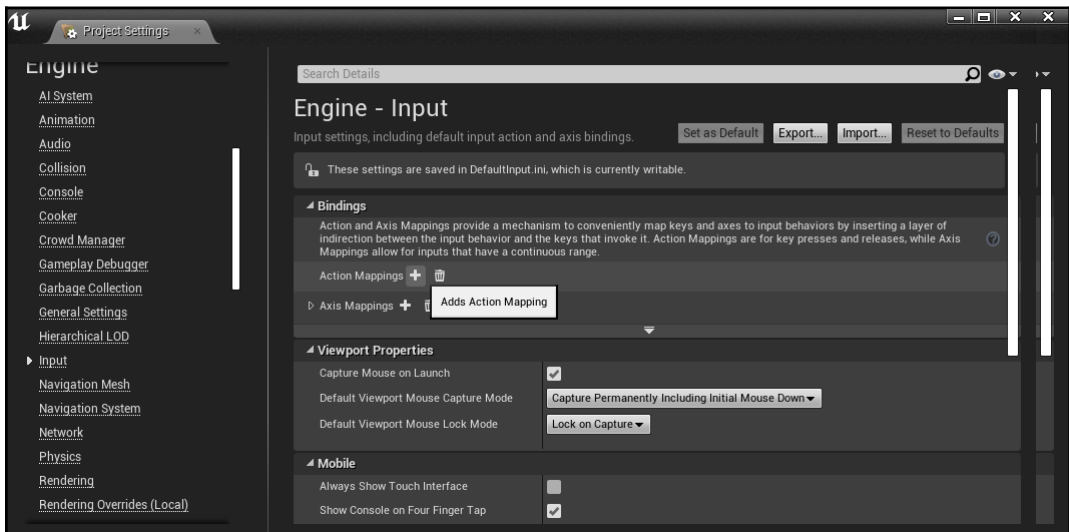
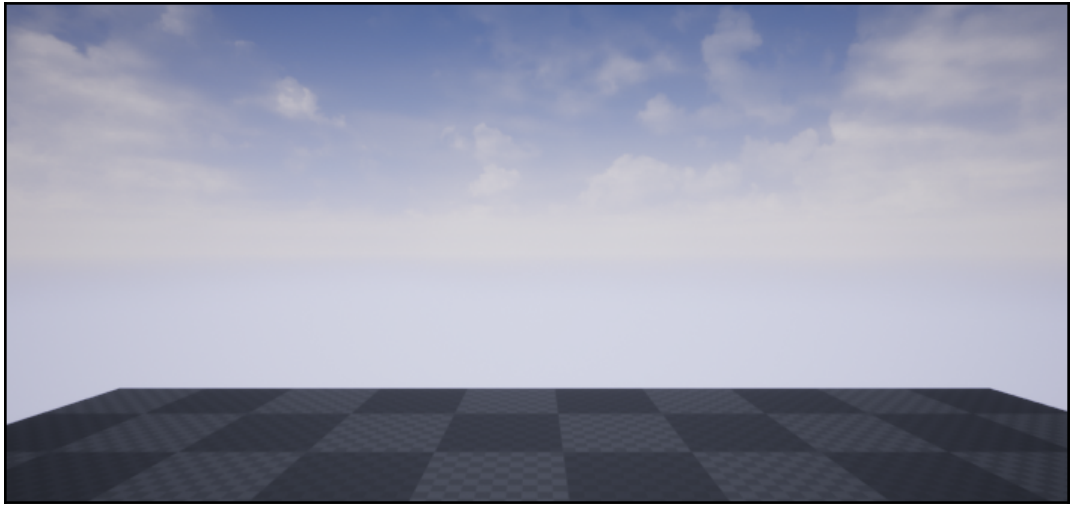


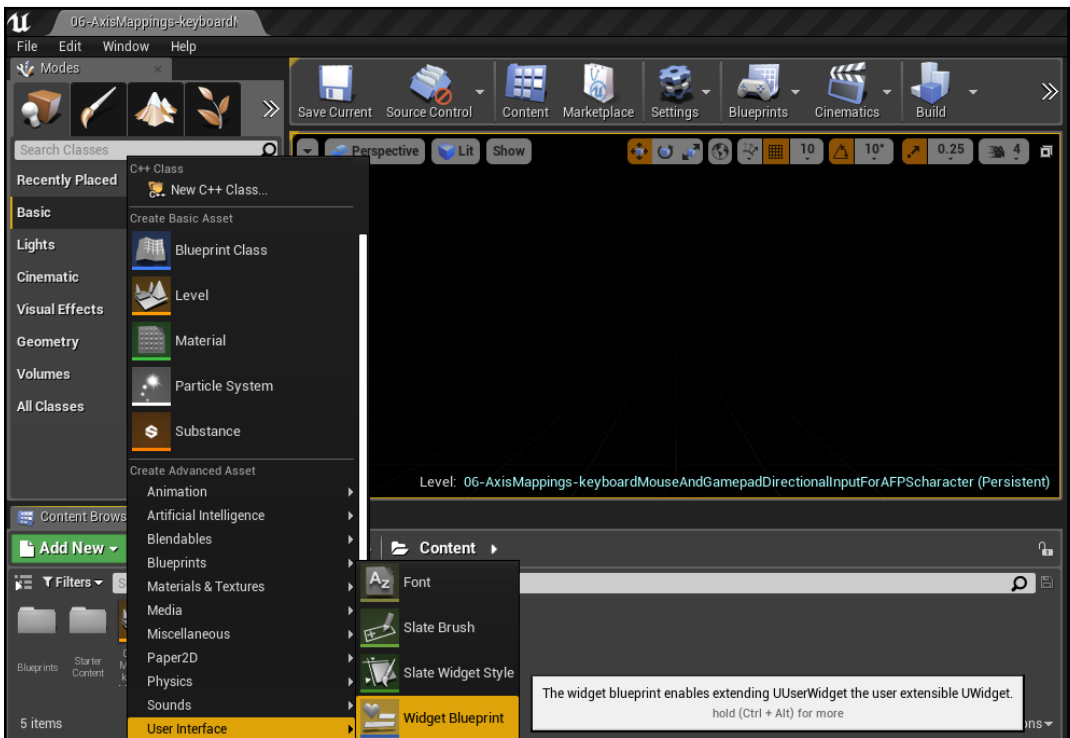


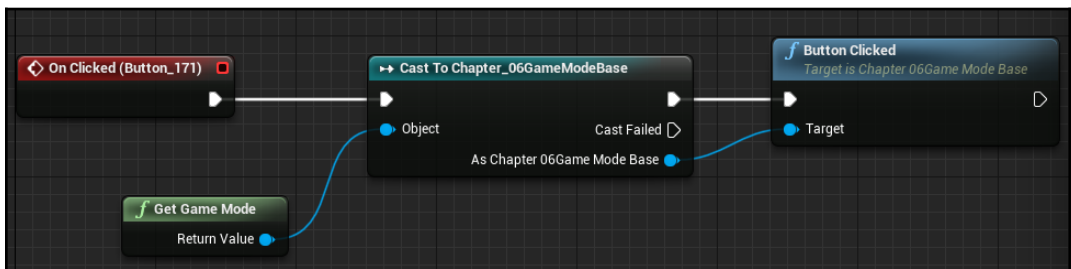
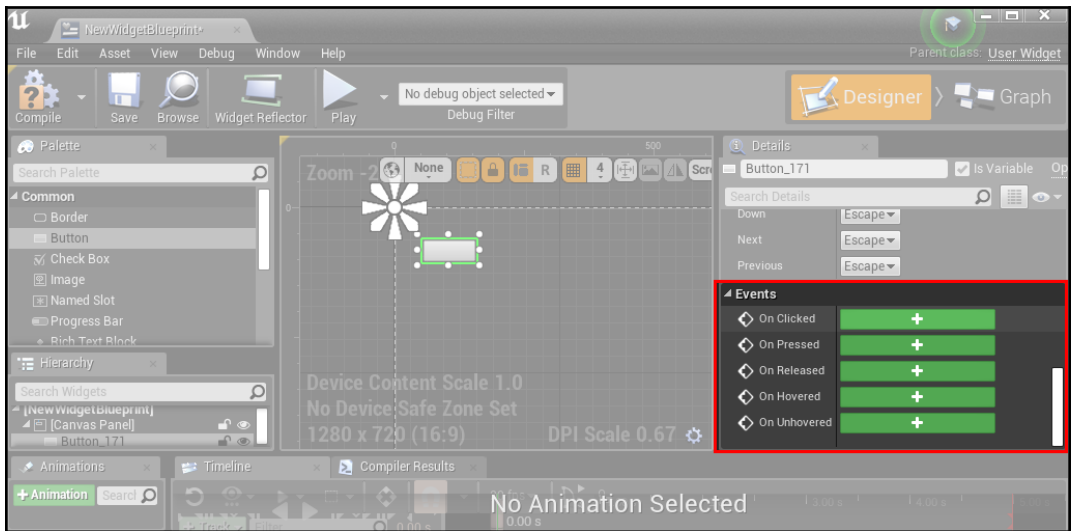
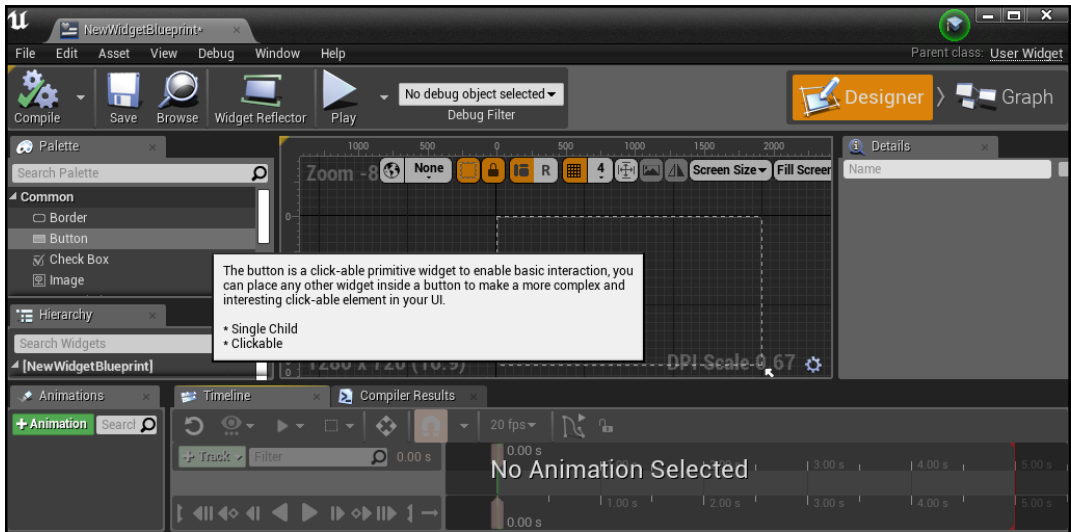


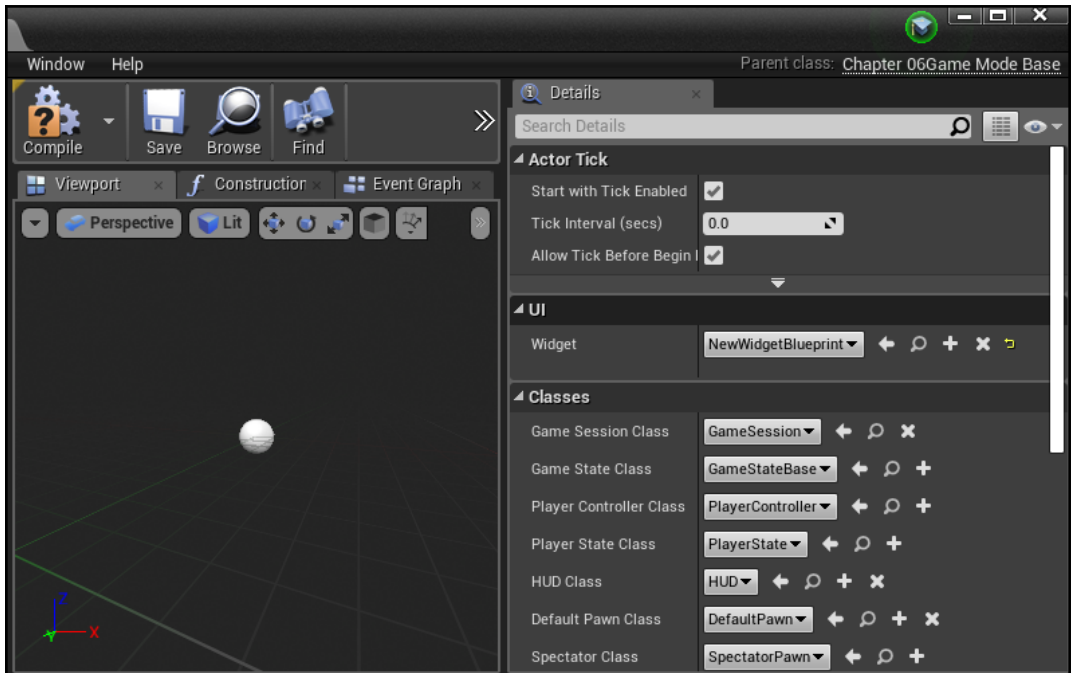




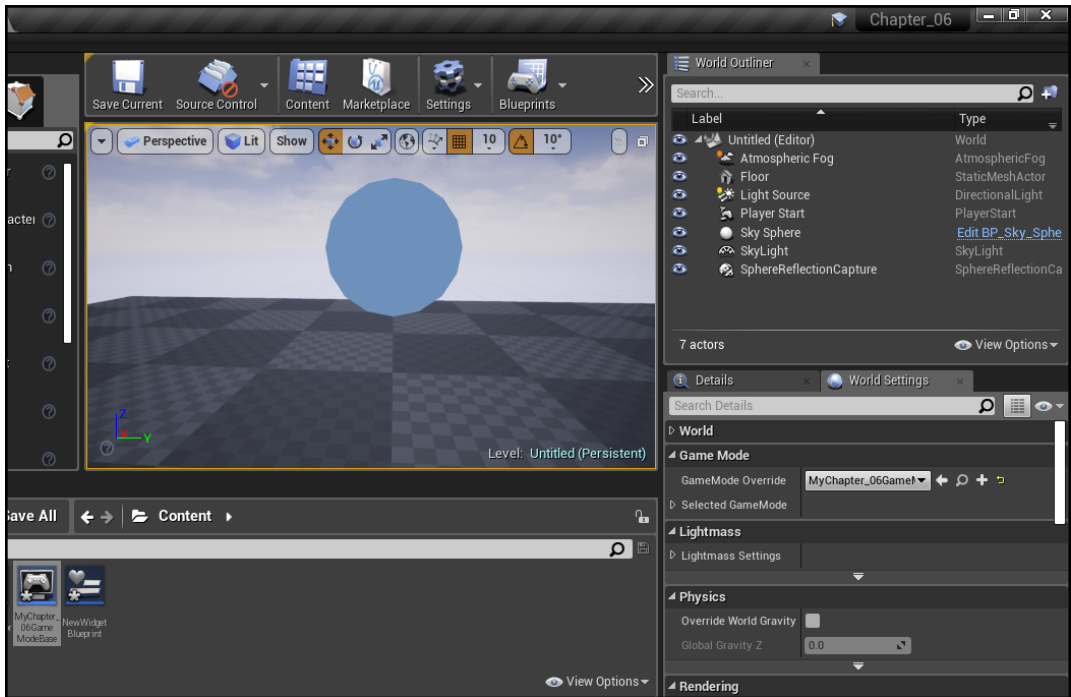


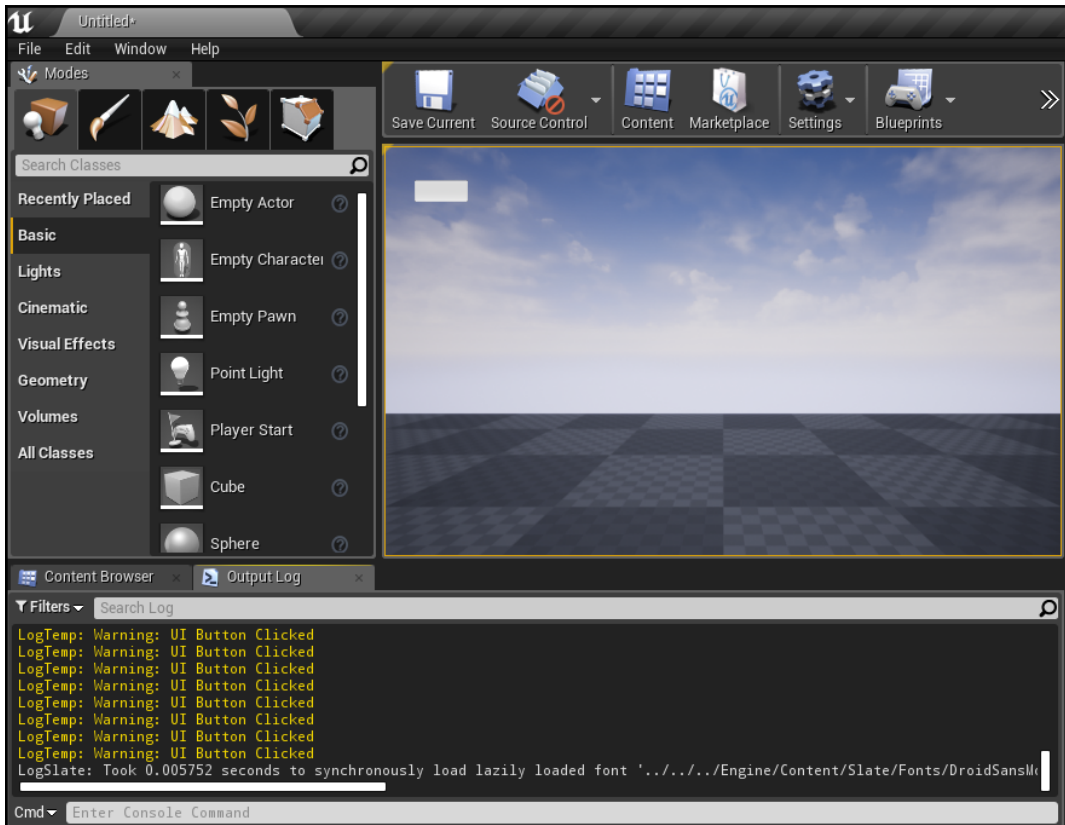


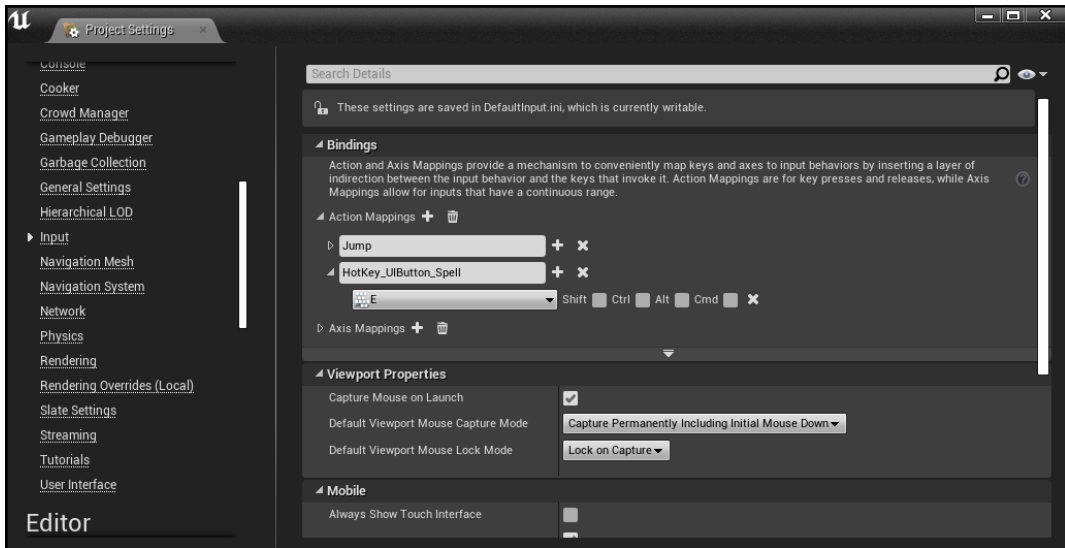






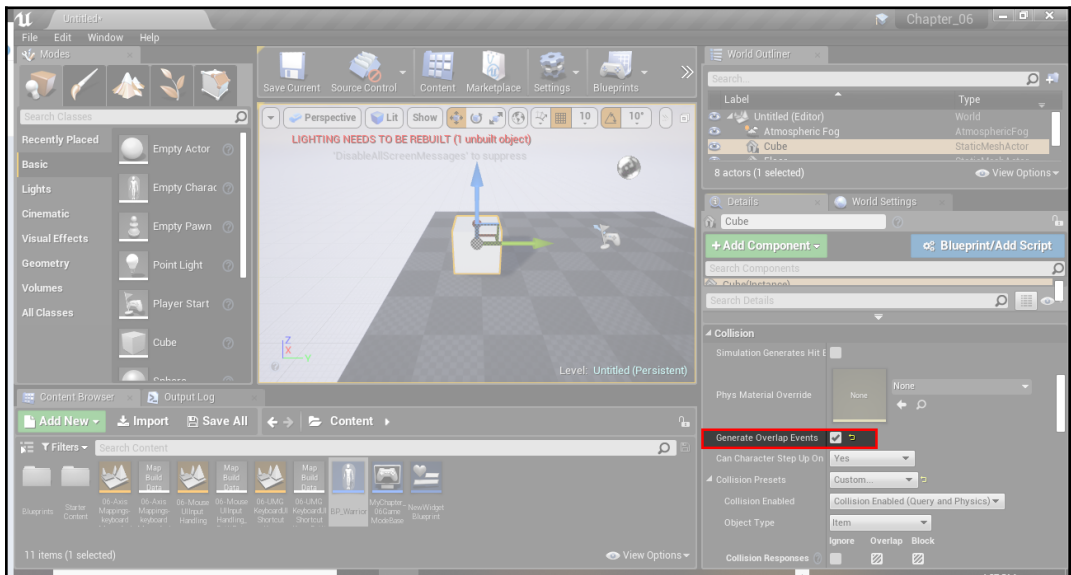
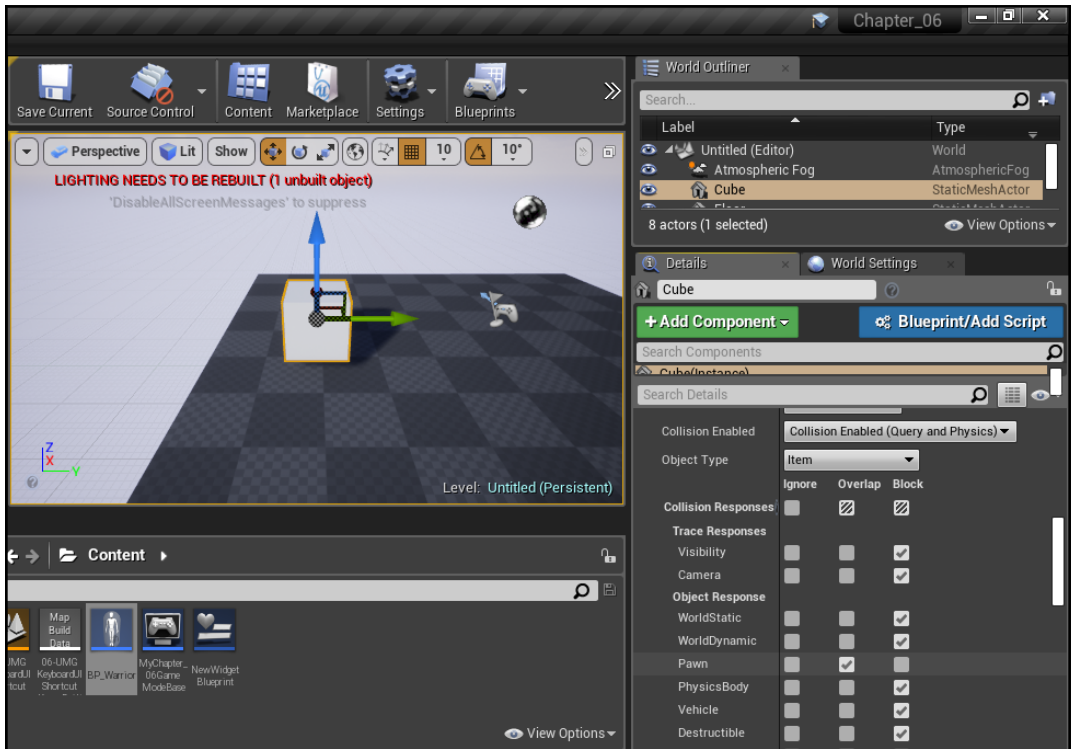


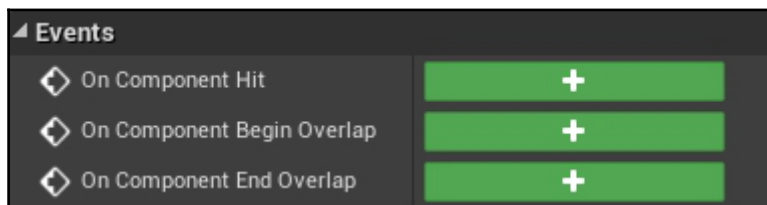
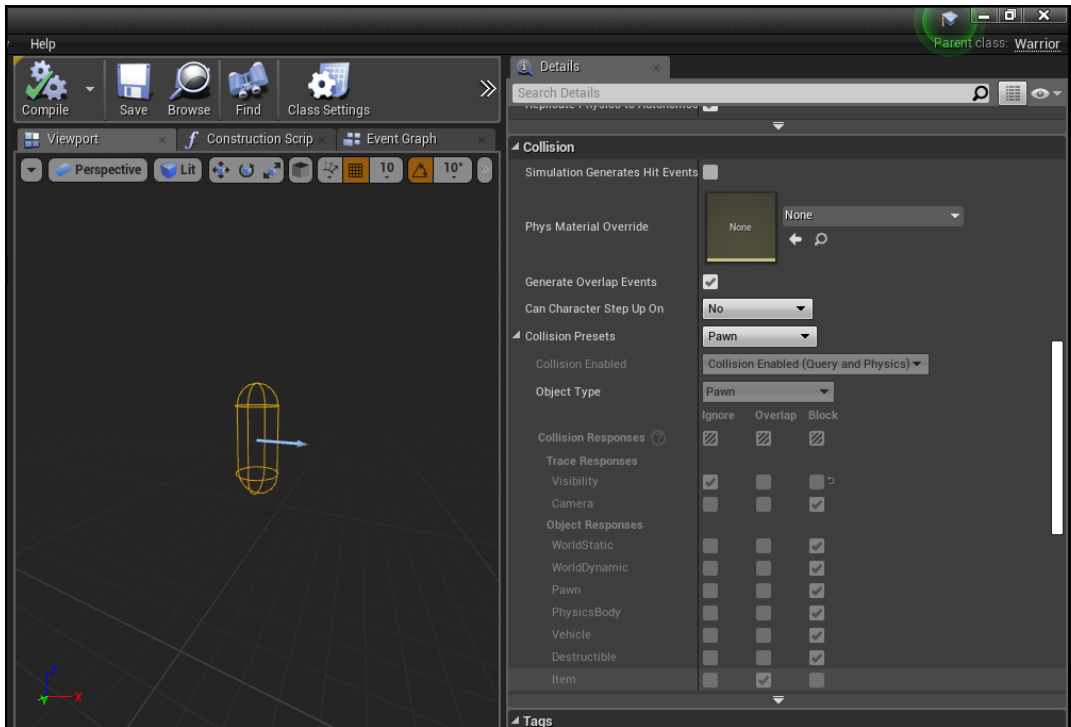


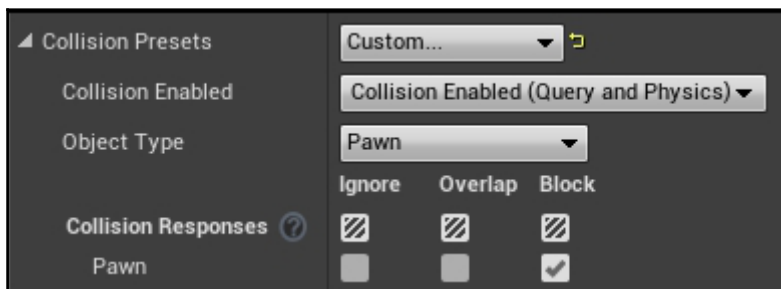
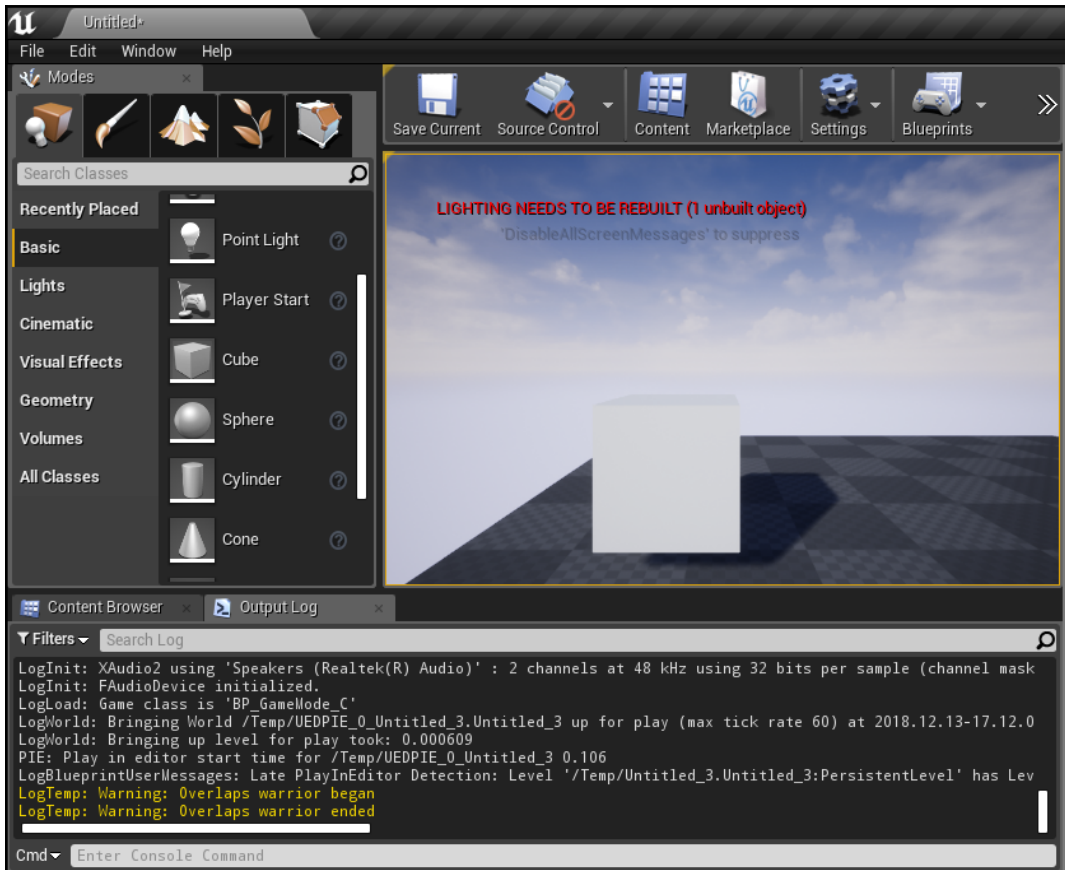








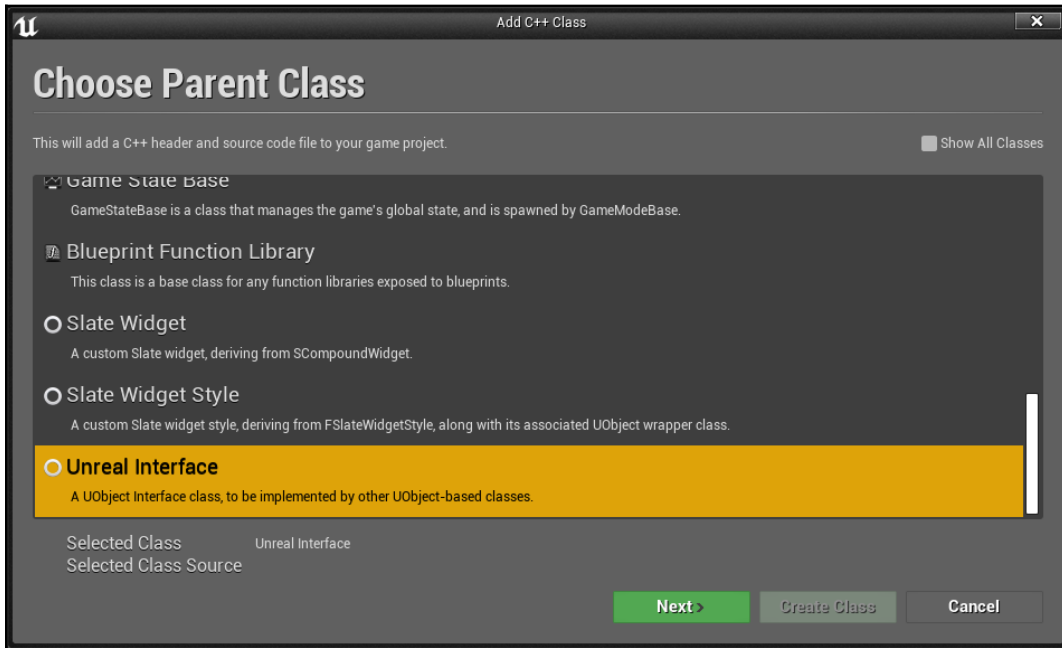


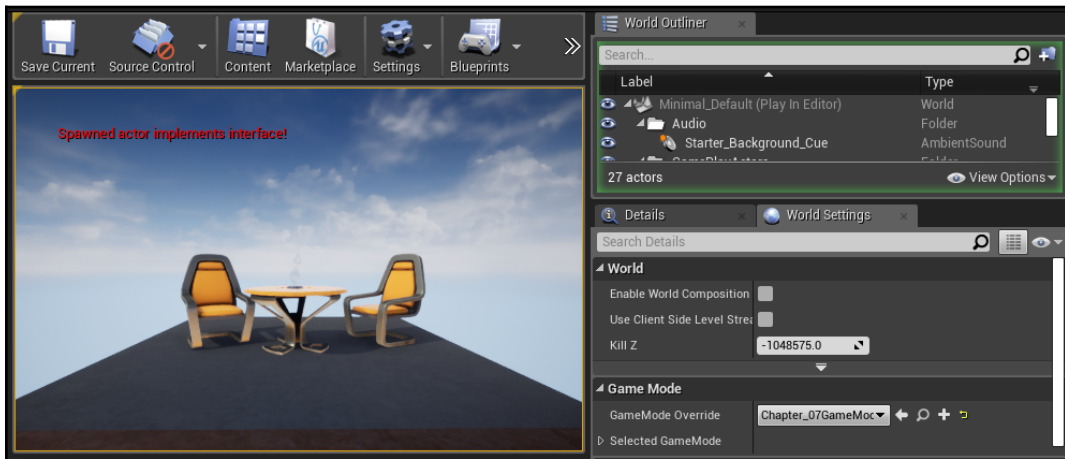




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# Chapter 7: Communication Between Classes and Interfaces: Part I





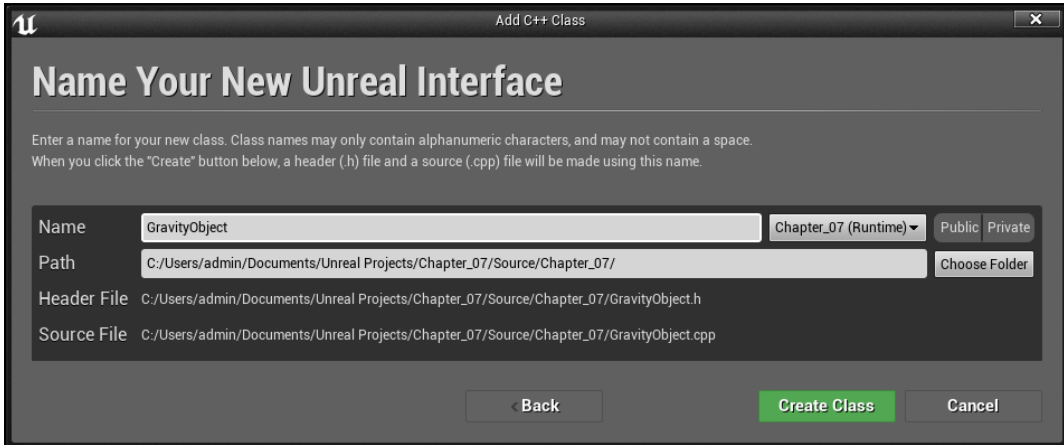


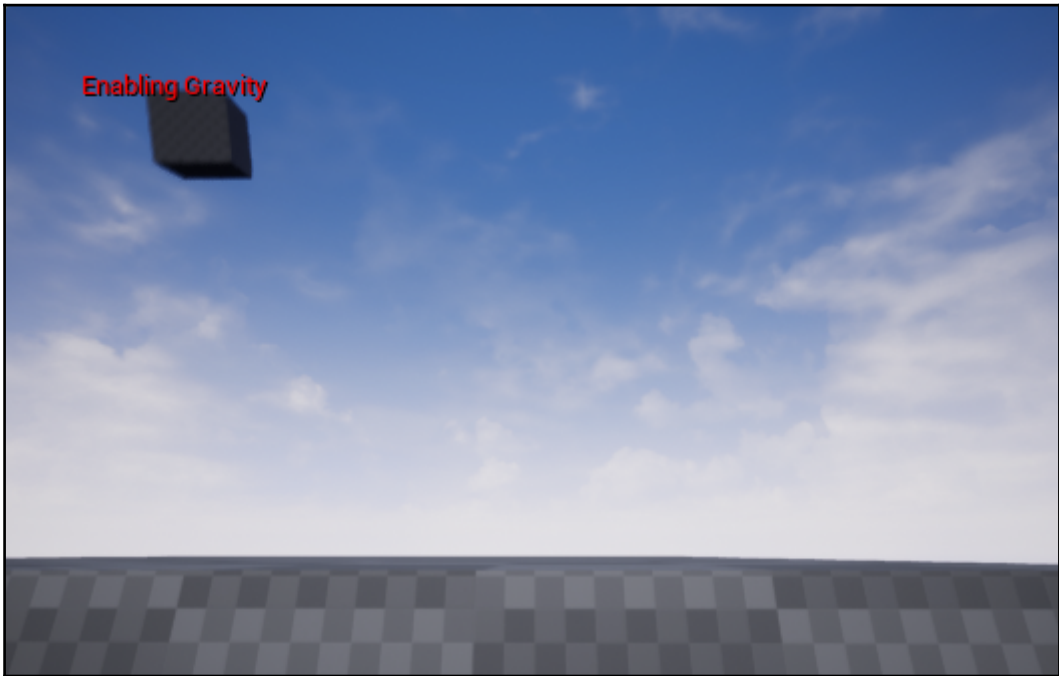
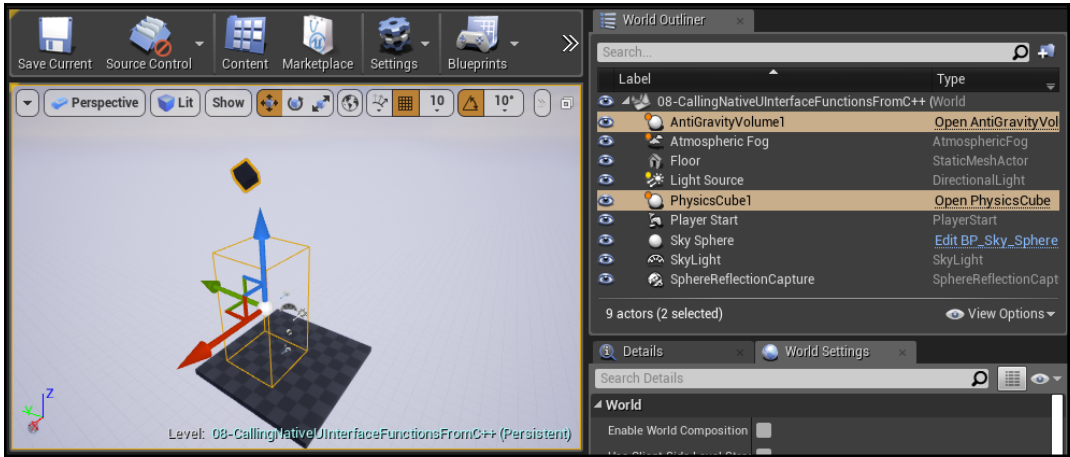
**u** Add C++ Class ✕

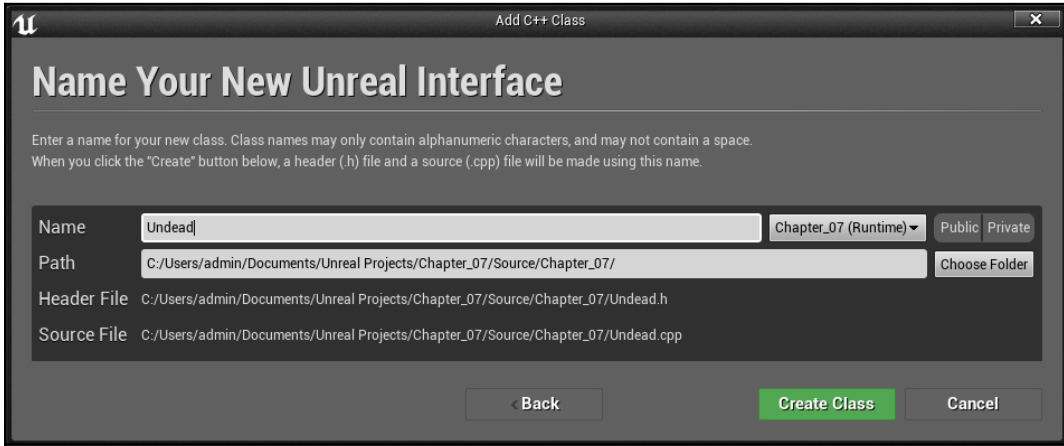
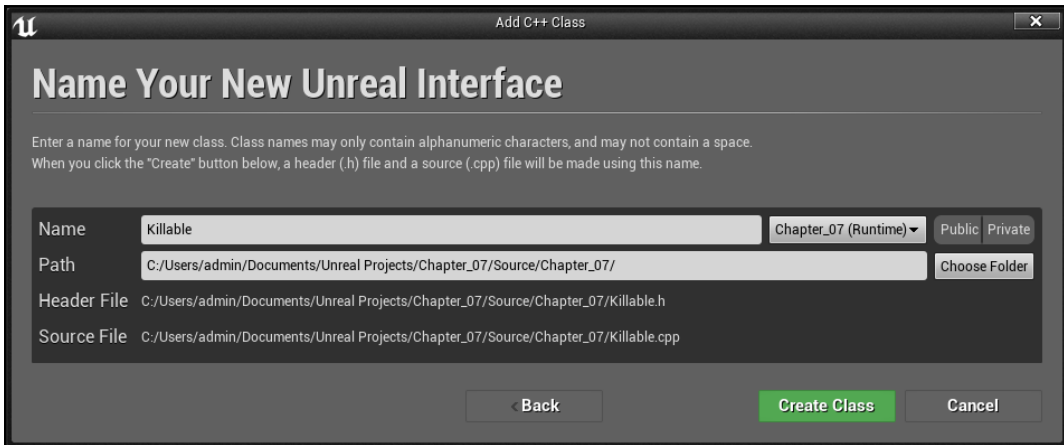
## Name Your New Actor

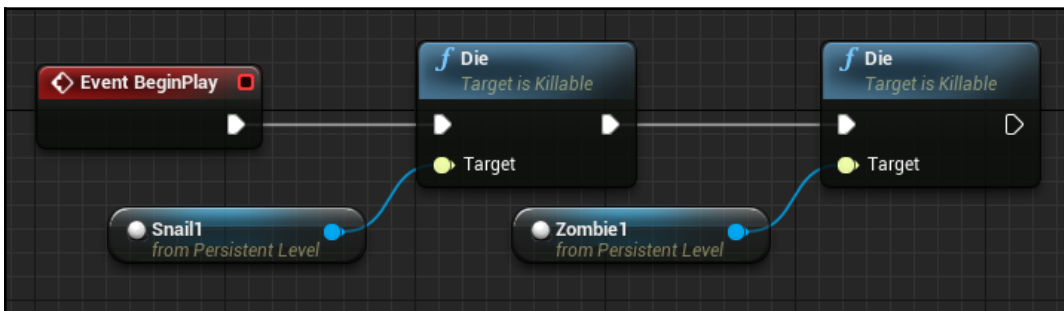
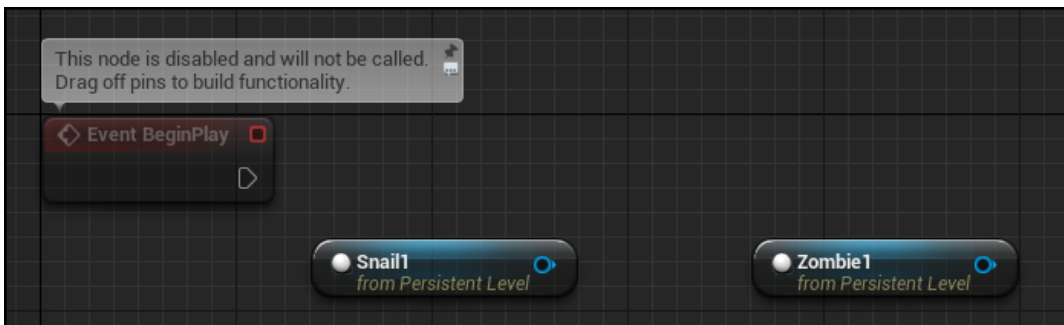
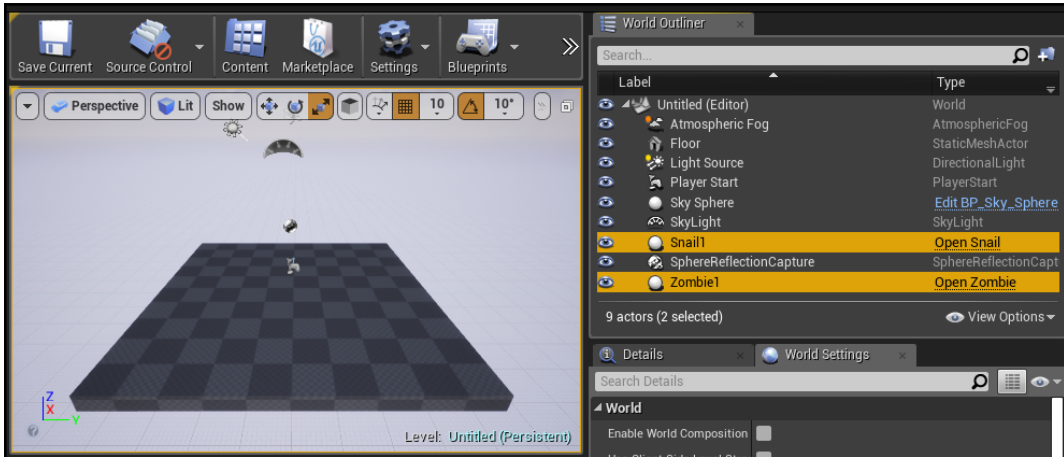
Enter a name for your new class. Class names may only contain alphanumeric characters, and may not contain a space.  
When you click the "Create" button below, a header (.h) file and a source (.cpp) file will be made using this name.

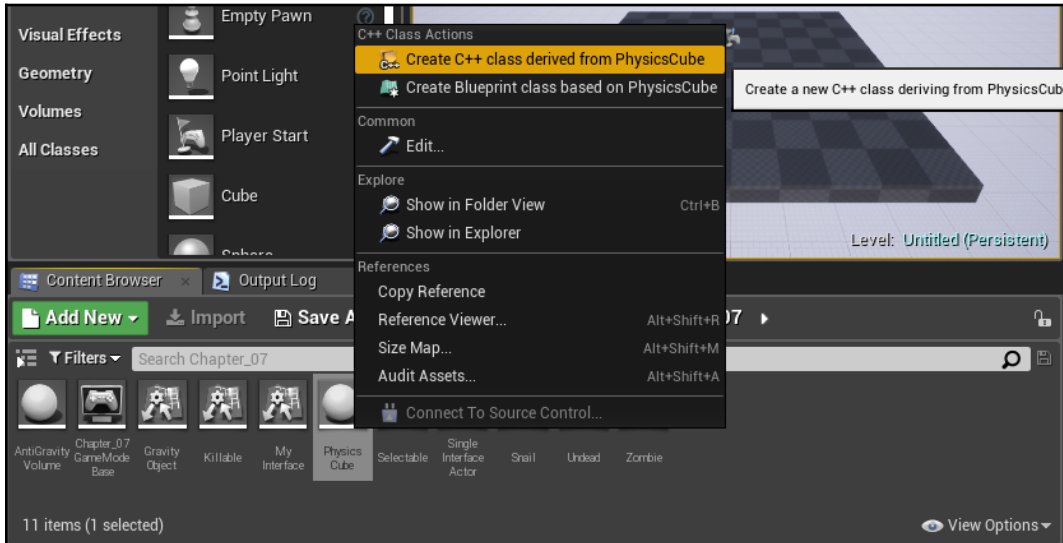
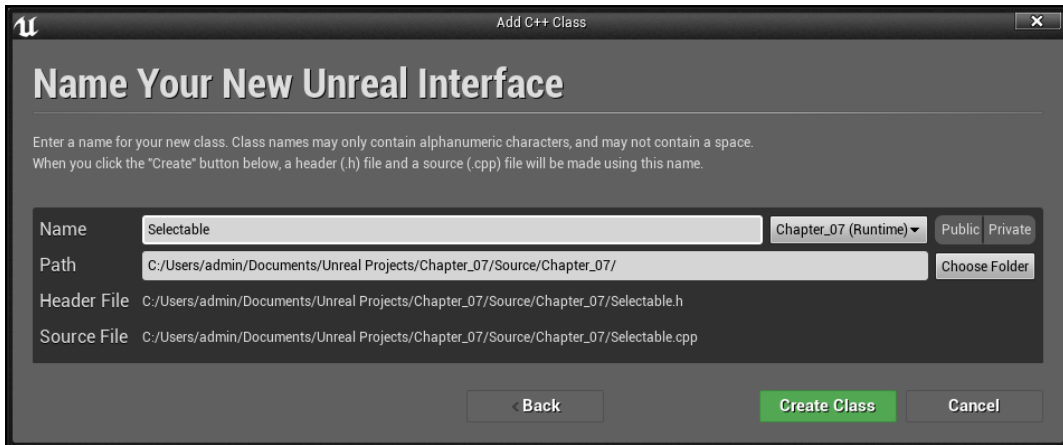
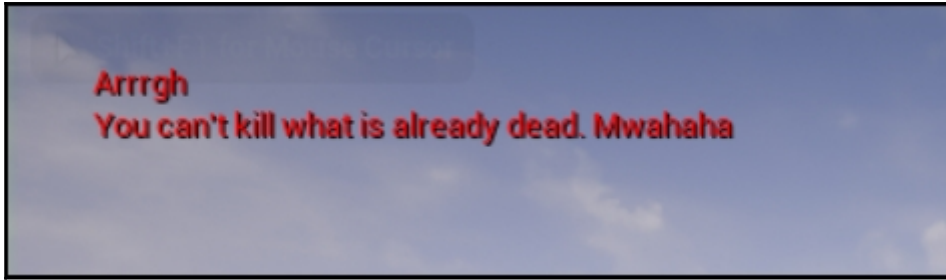
Name	<input type="text" value="AntiGravityVolume"/>	Chapter_07 (Runtime) ▾	Public Private
Path	<input type="text" value="C:/Users/admin/Documents/Unreal Projects/Chapter_07/Source/Chapter_07/"/>		Choose Folder
Header File	C:/Users/admin/Documents/Unreal Projects/Chapter_07/Source/Chapter_07/AntiGravityVolume.h		
Source File	C:/Users/admin/Documents/Unreal Projects/Chapter_07/Source/Chapter_07/AntiGravityVolume.cpp		



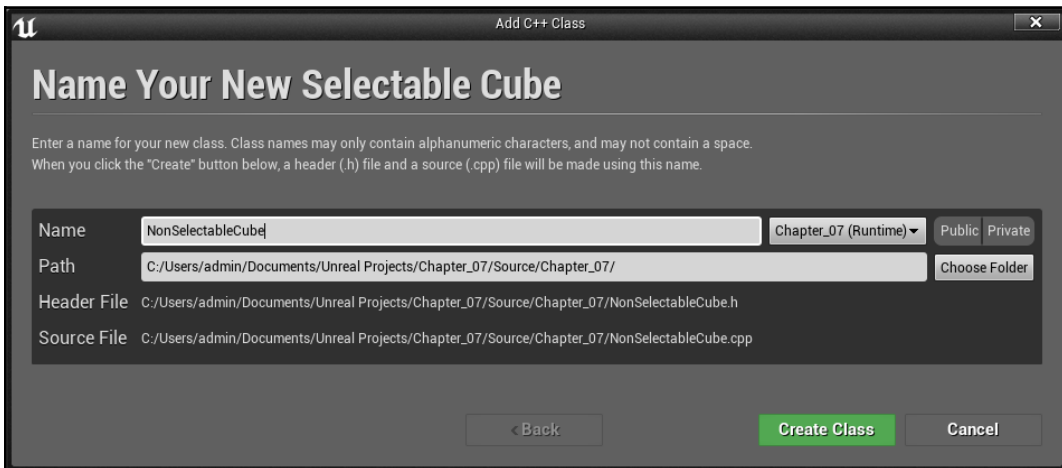
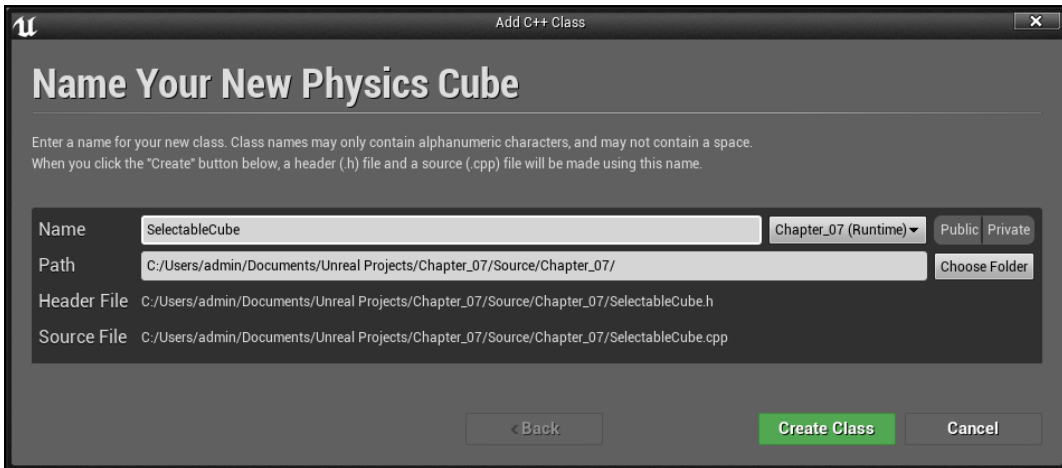


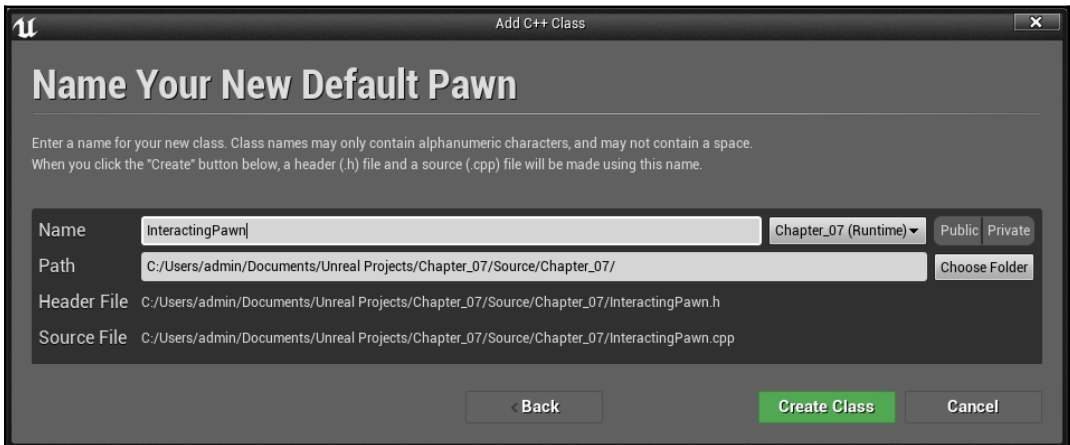
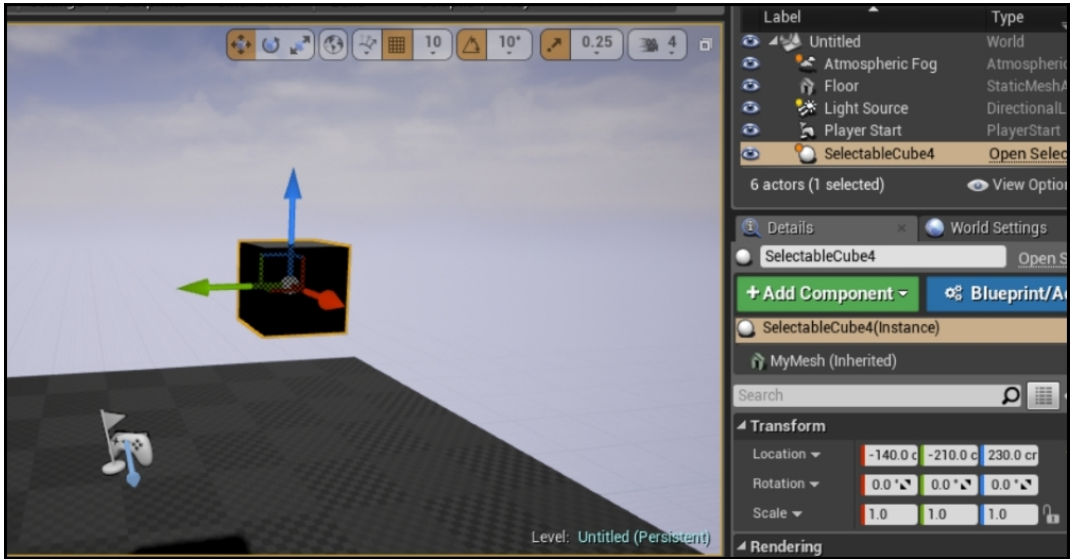


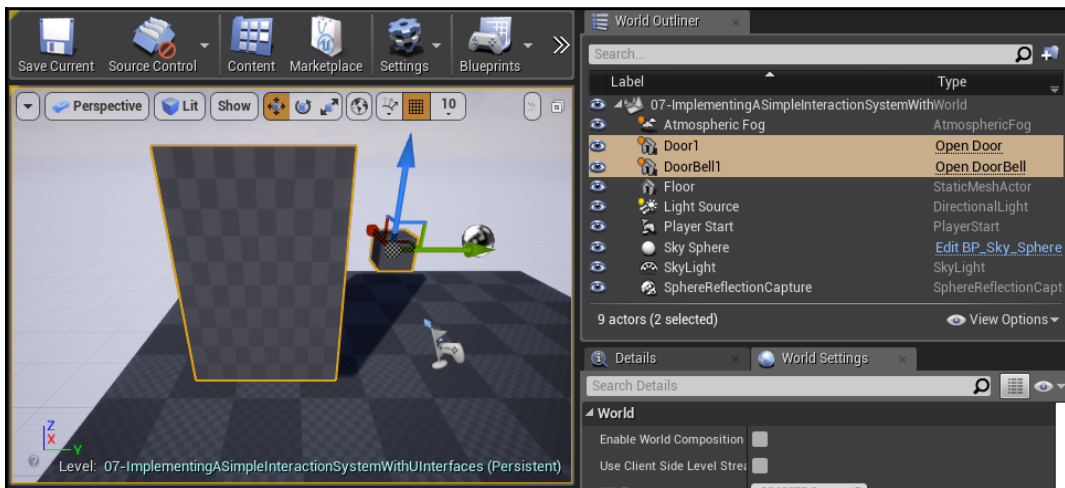
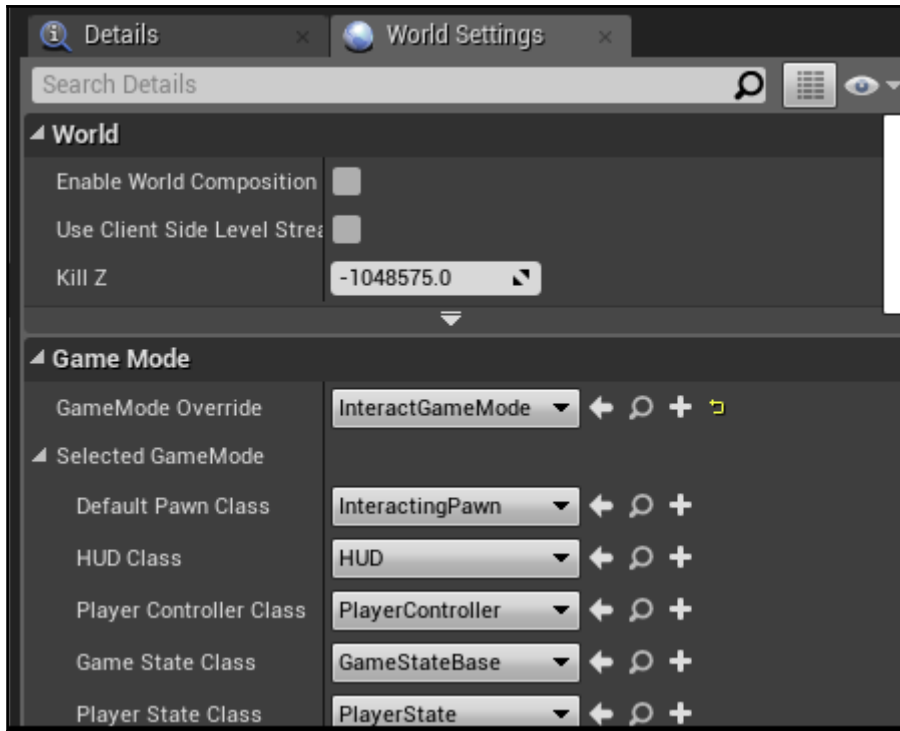


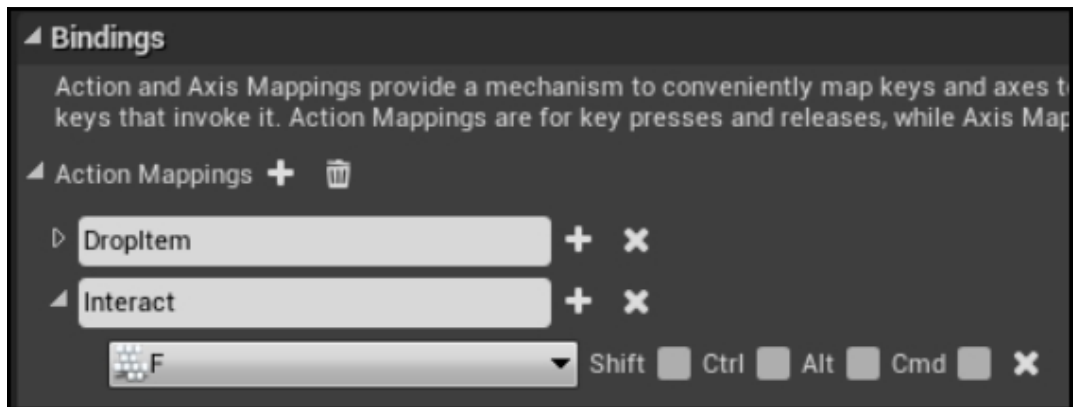
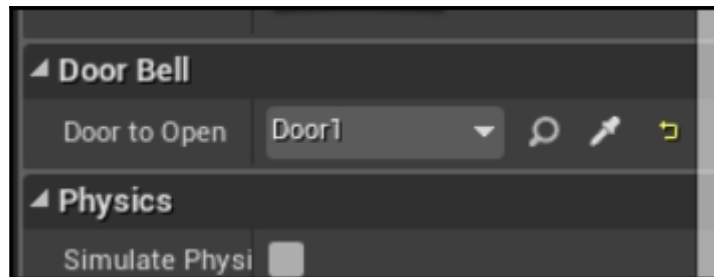
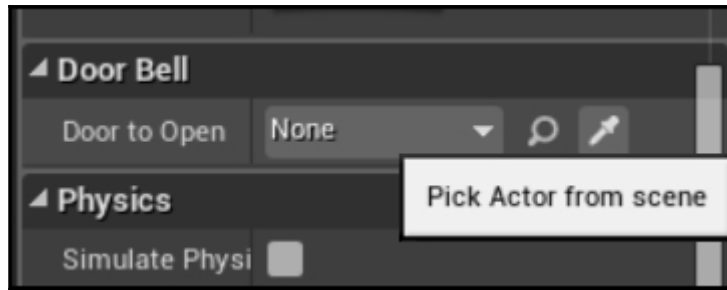


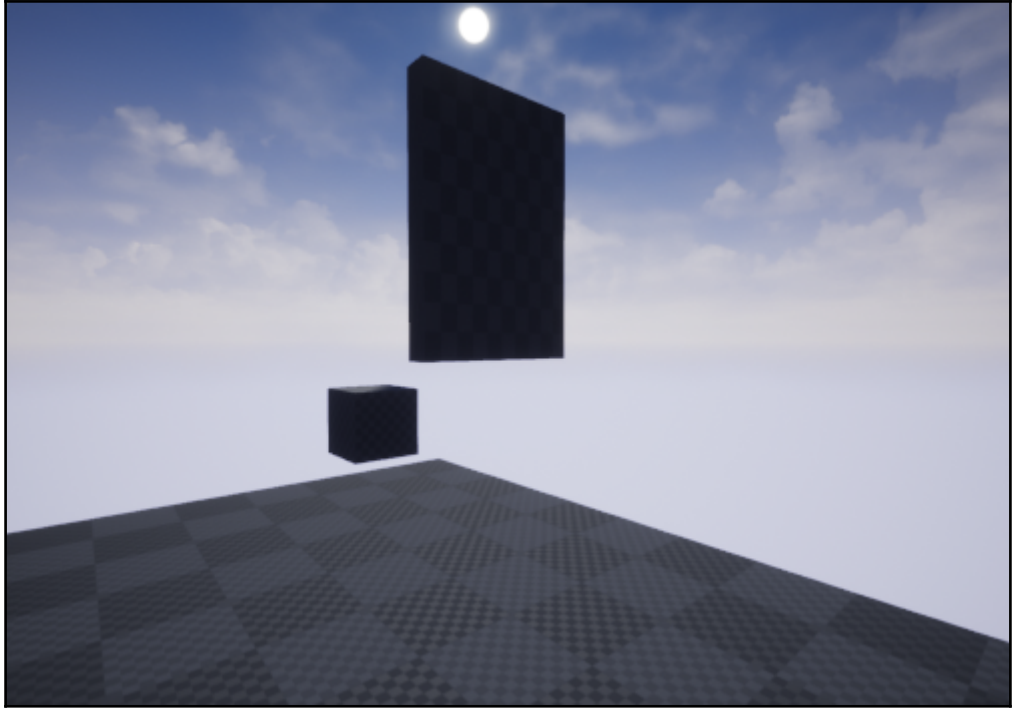








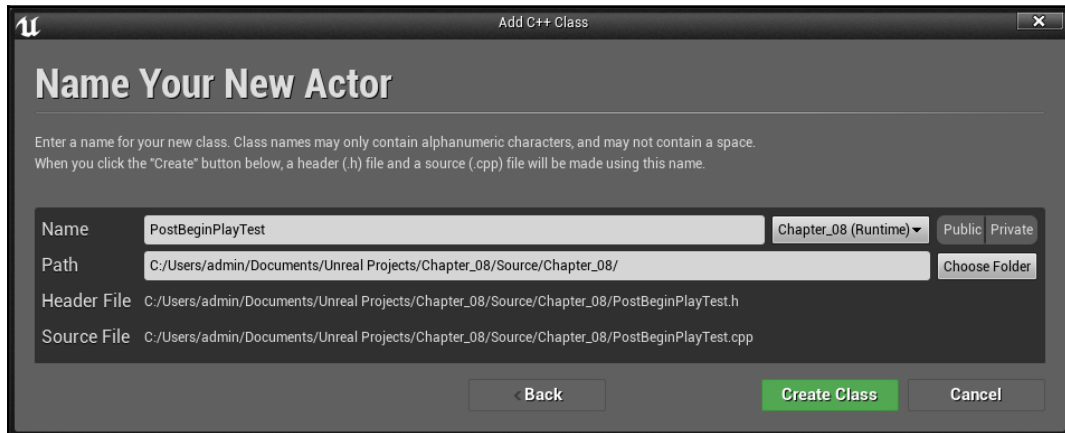
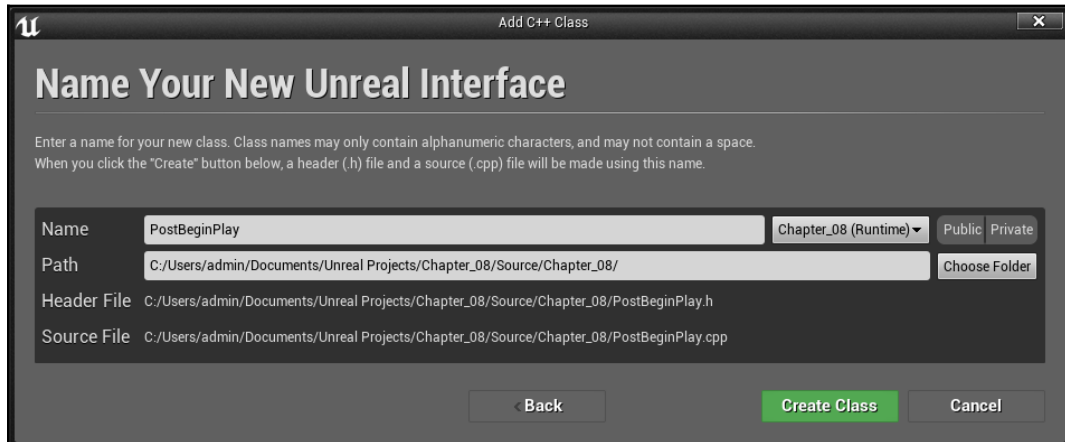


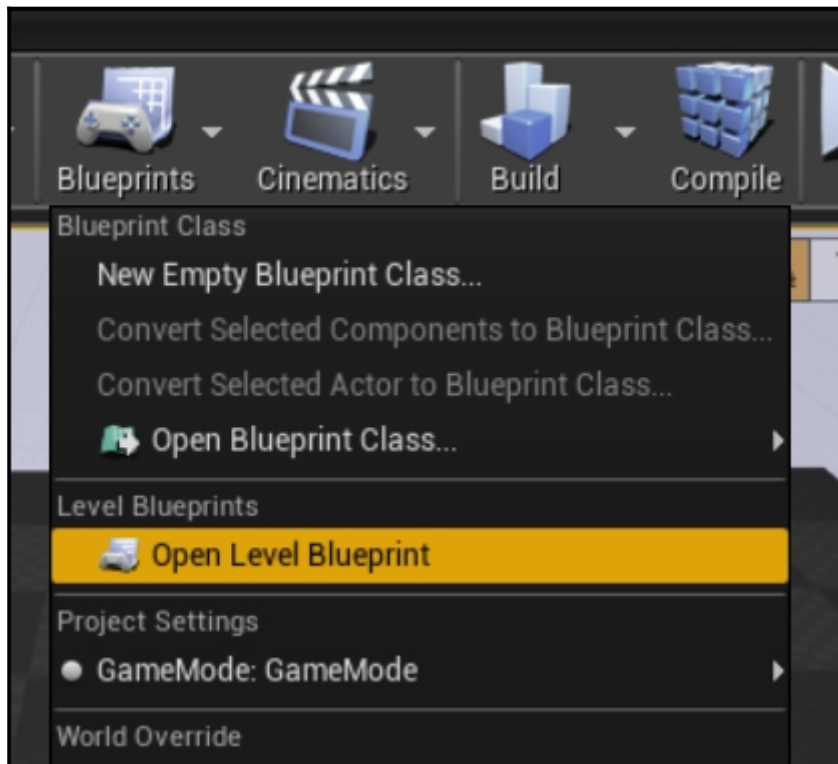
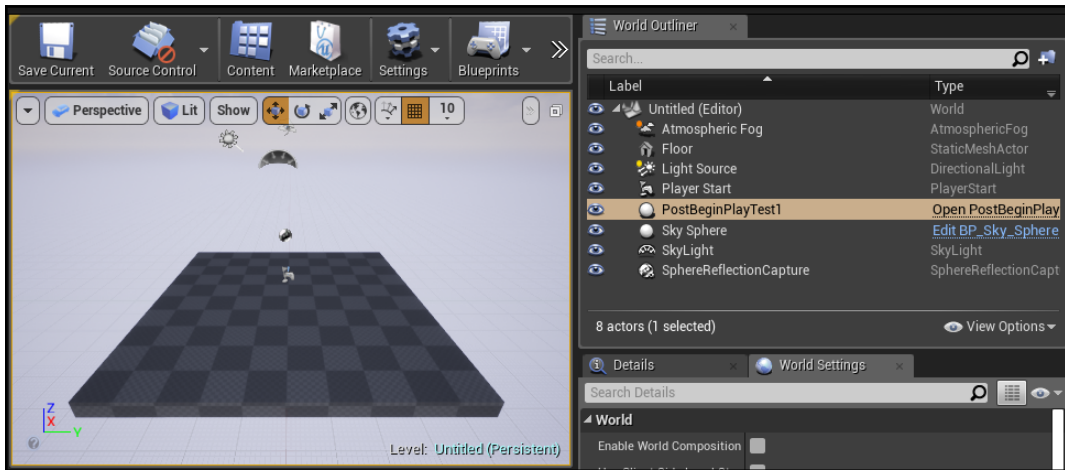




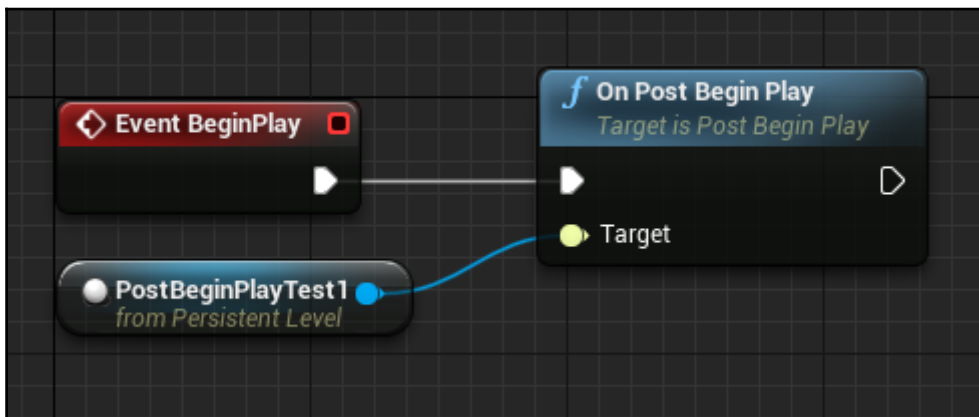
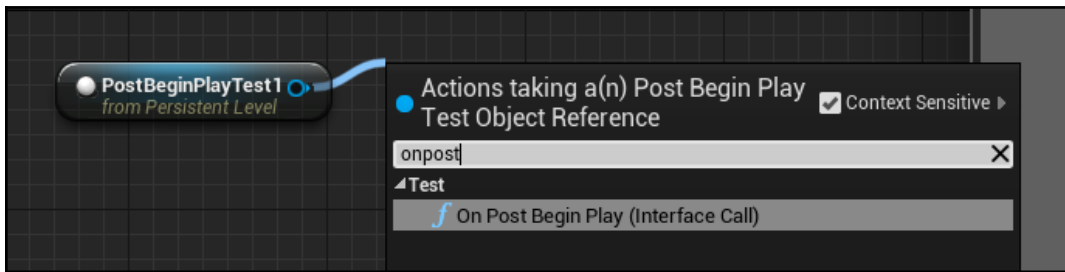
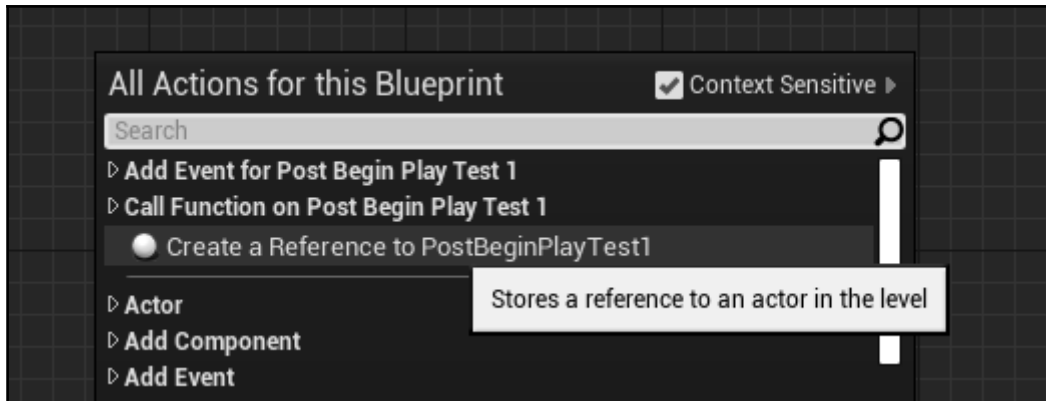
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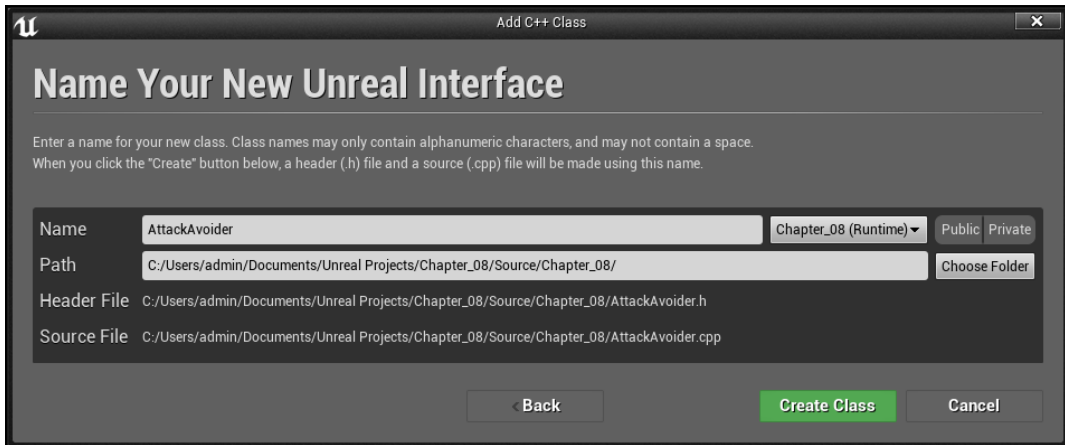
# Chapter 8: Communication Between Classes and Interfaces: Part II

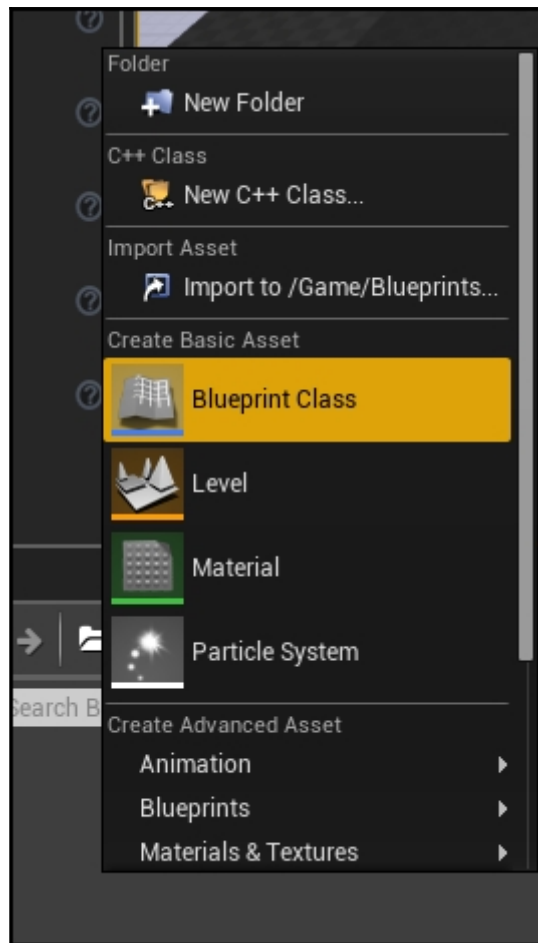


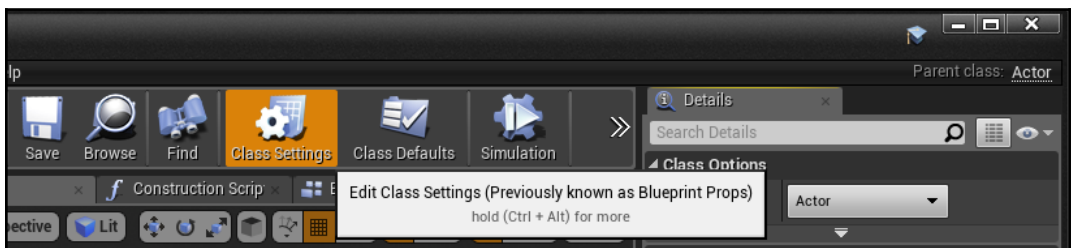
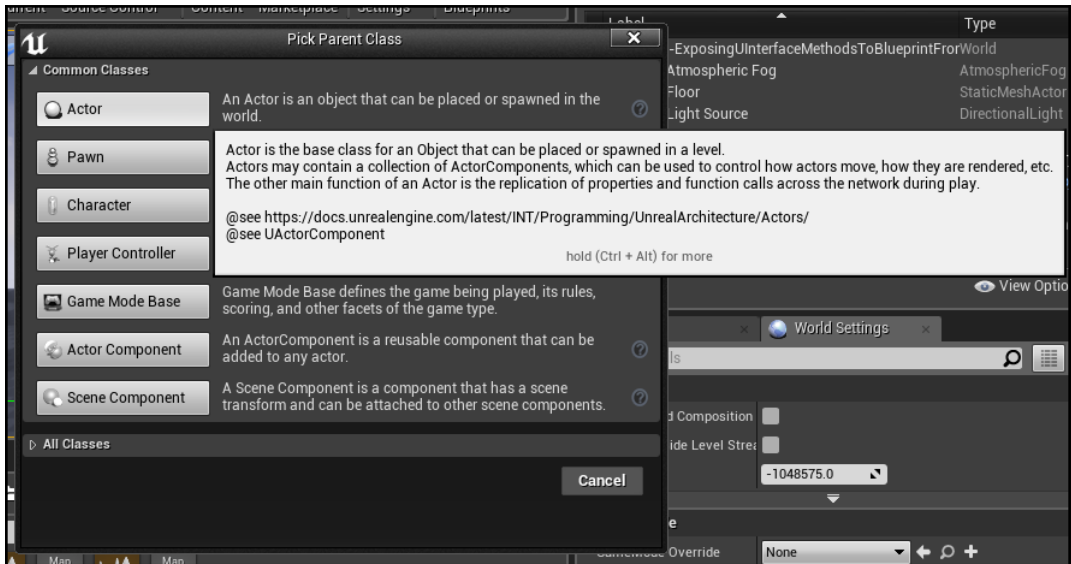


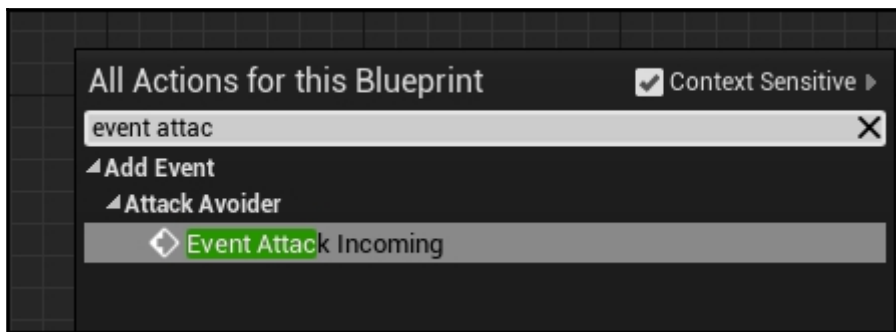
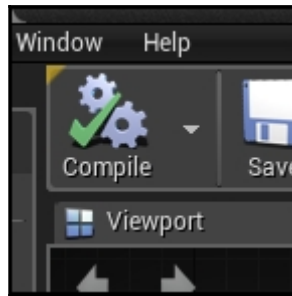
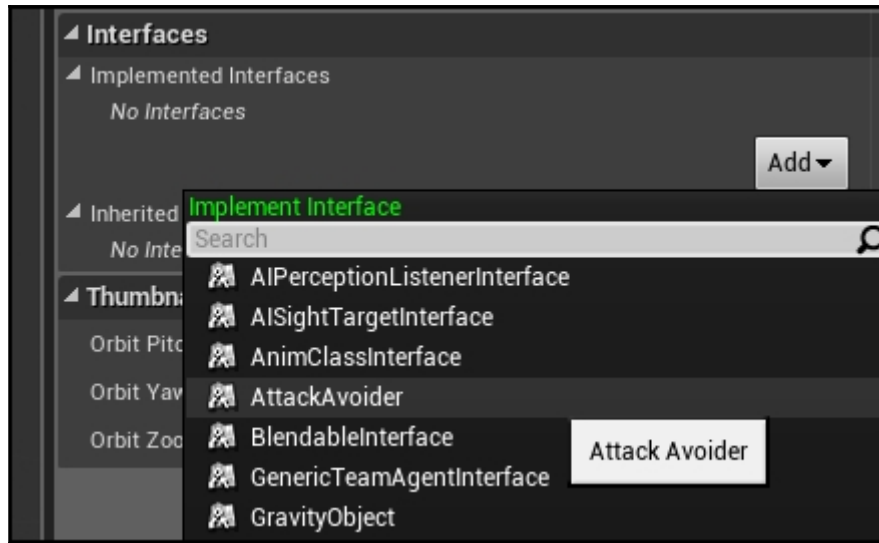


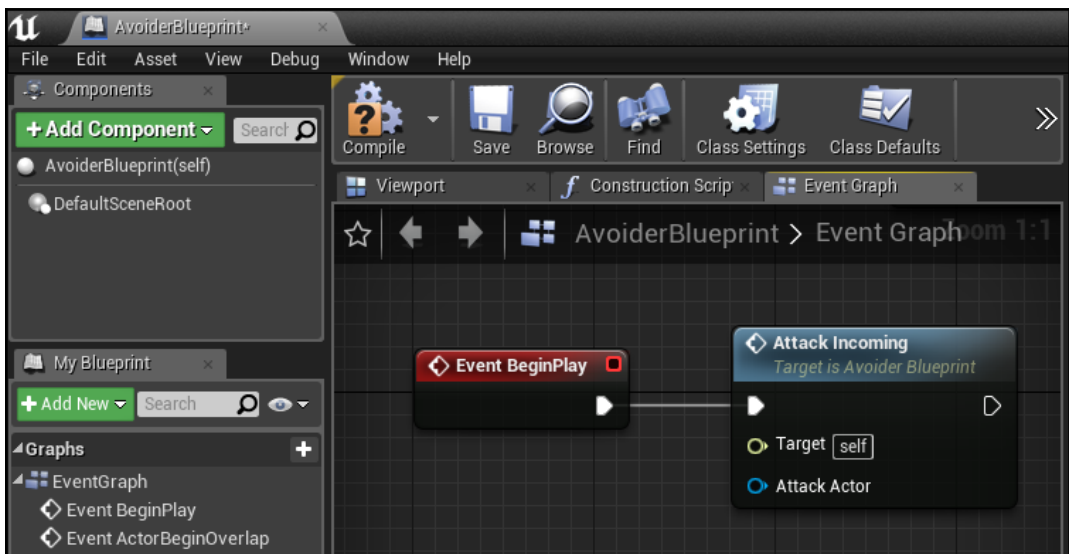
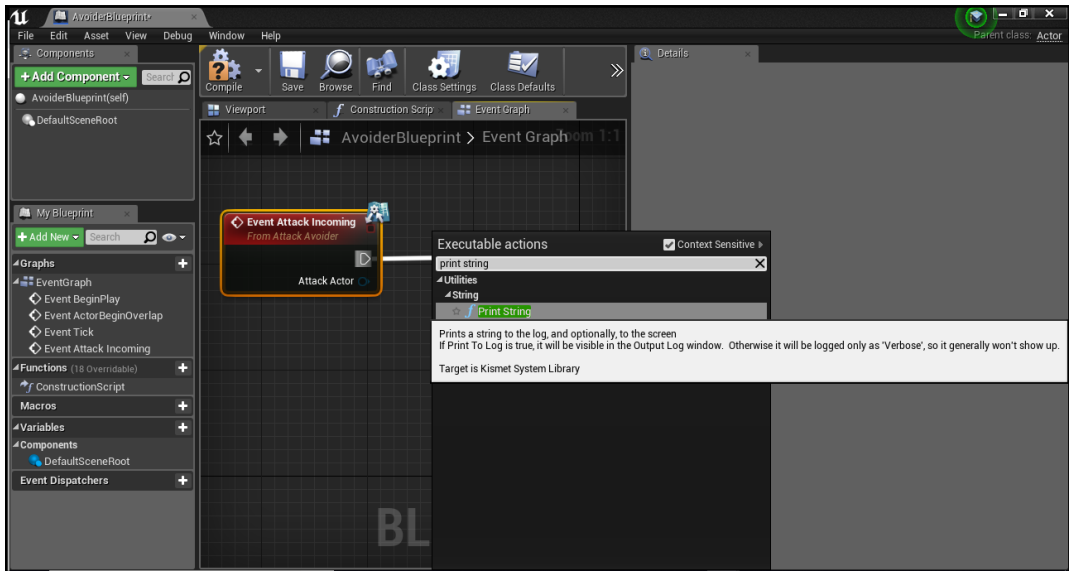


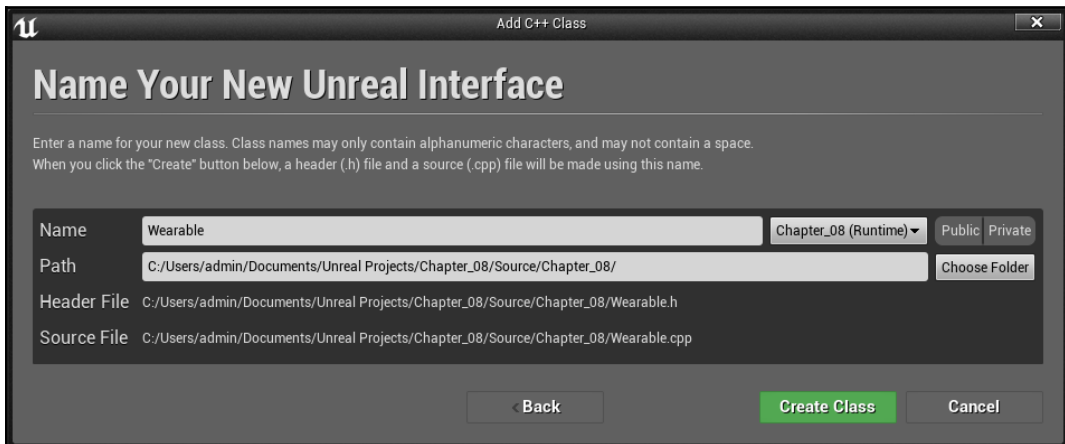
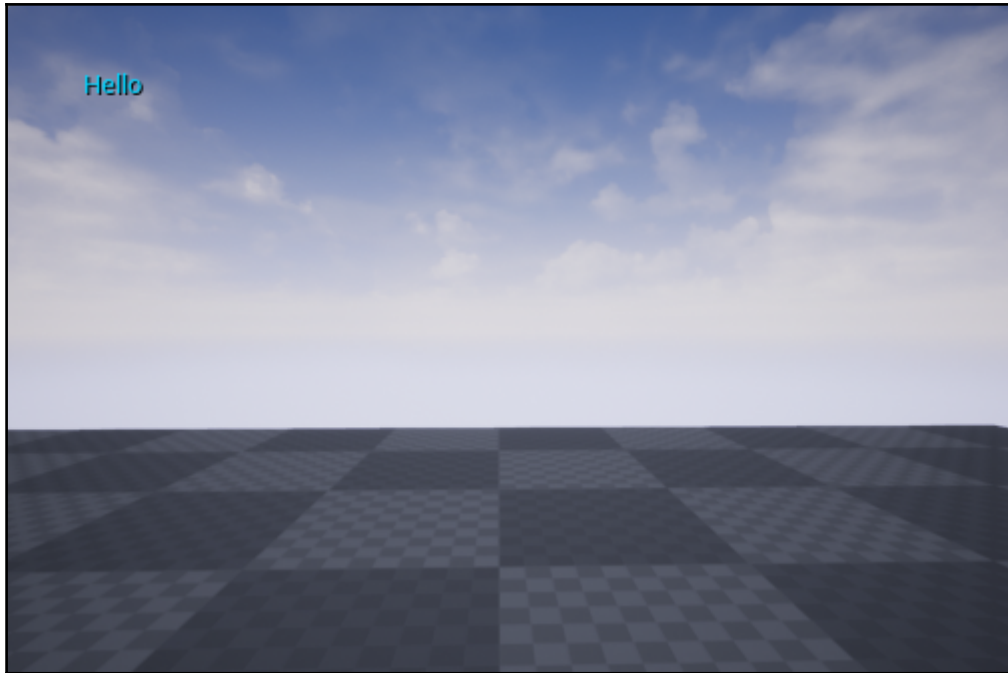


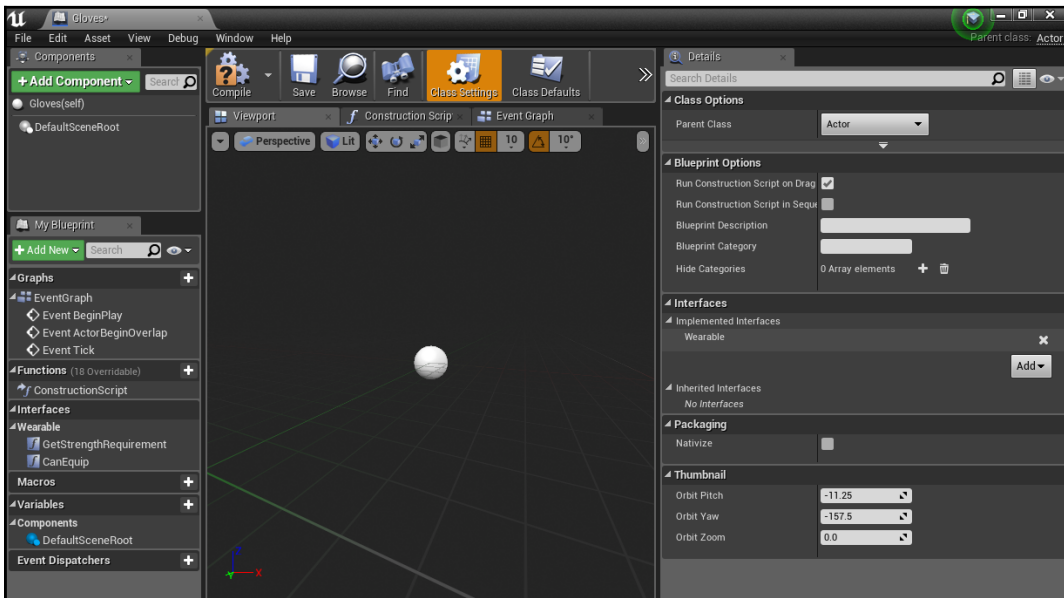




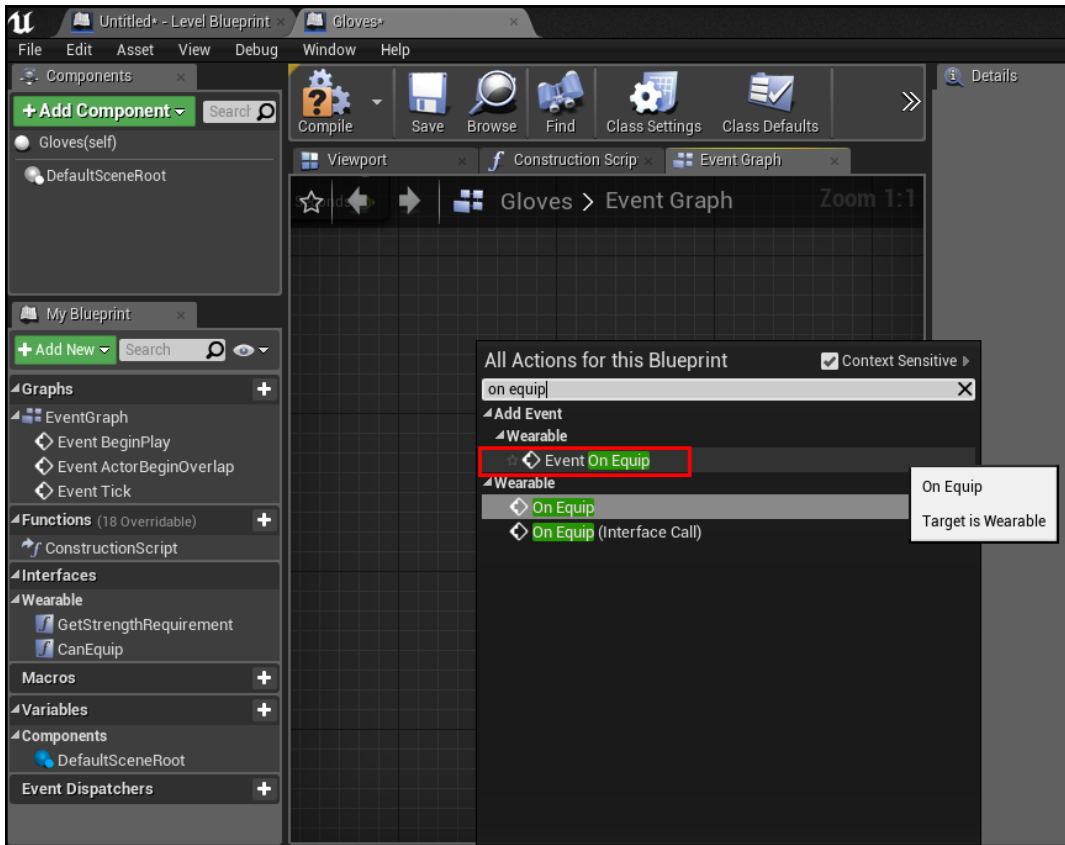


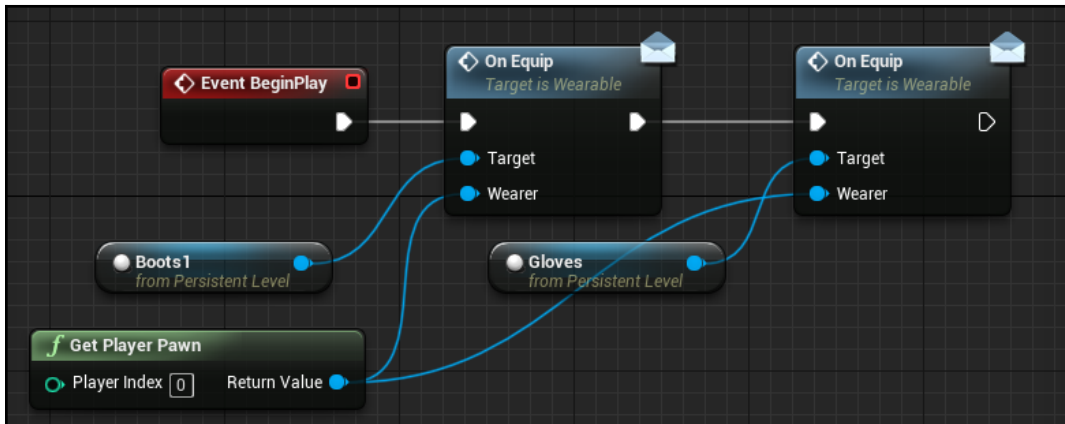
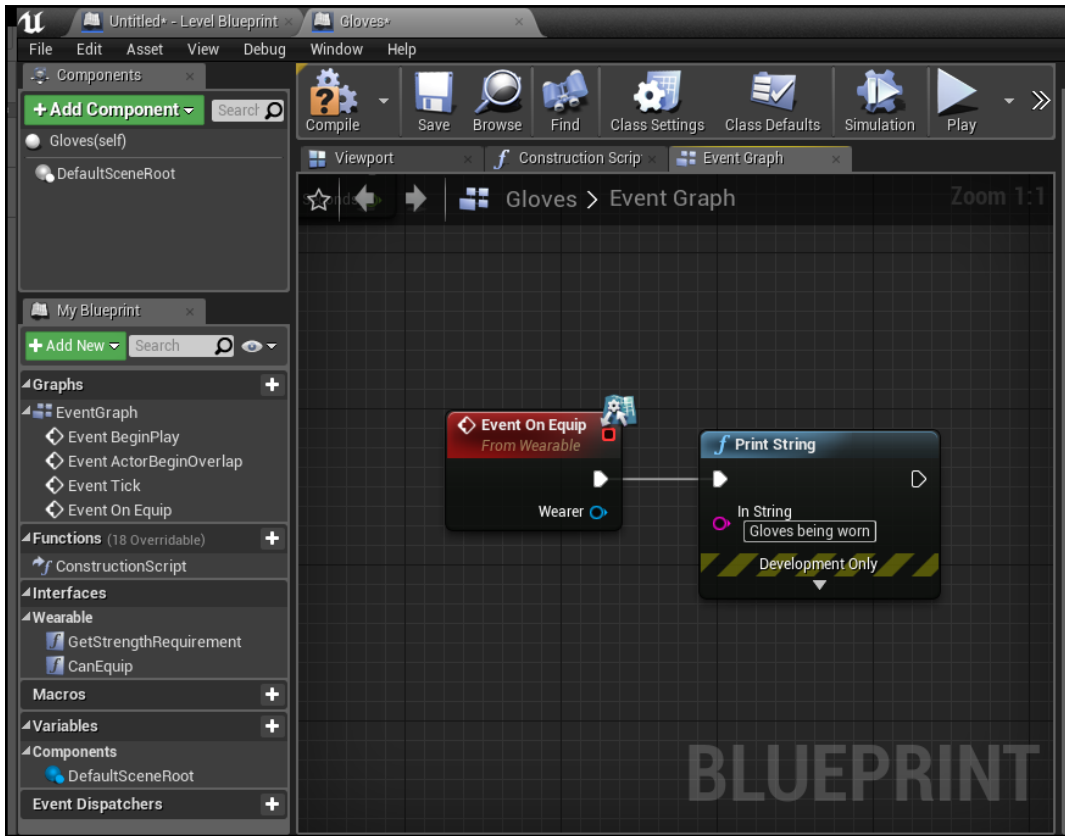


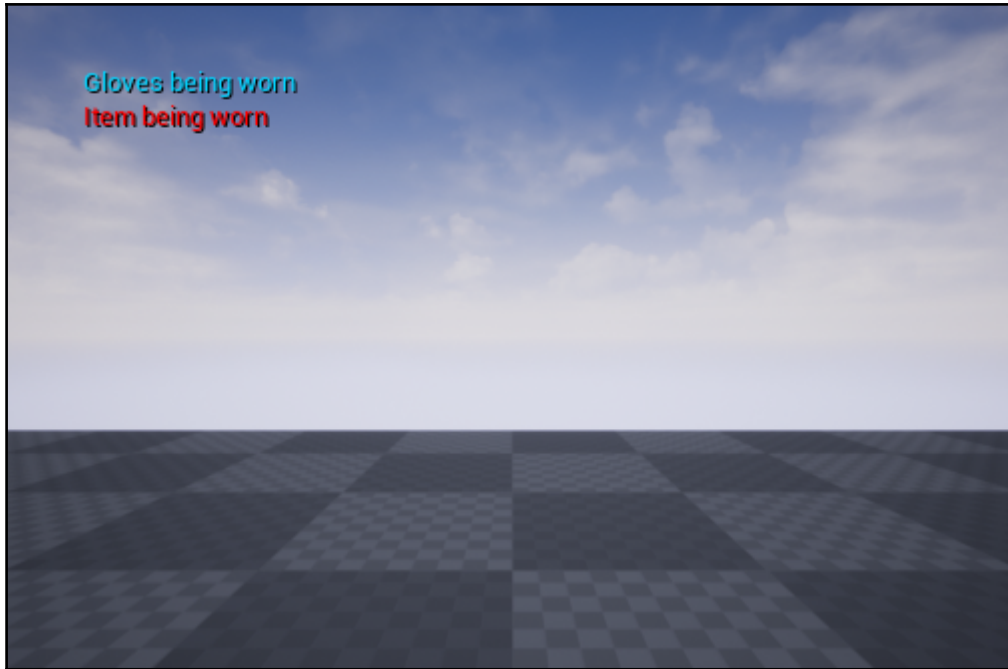


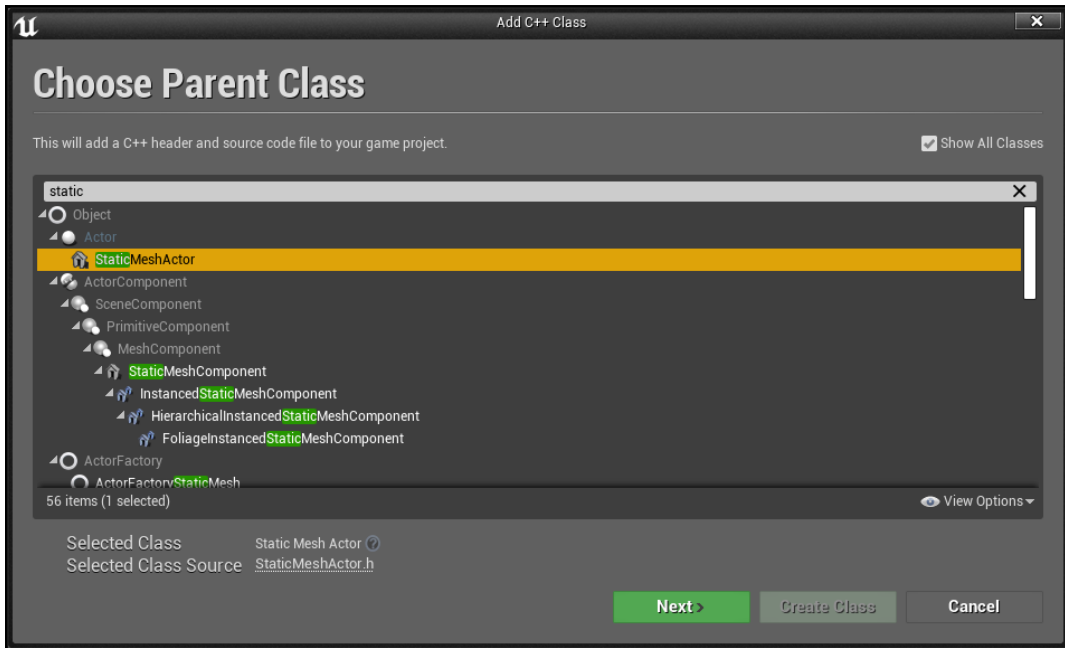


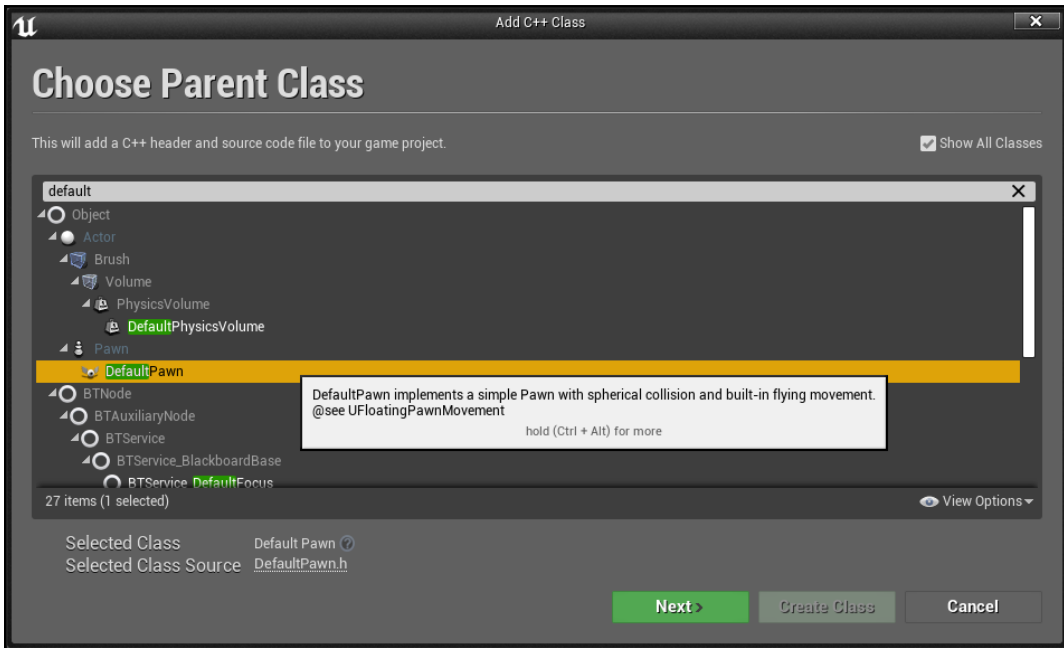




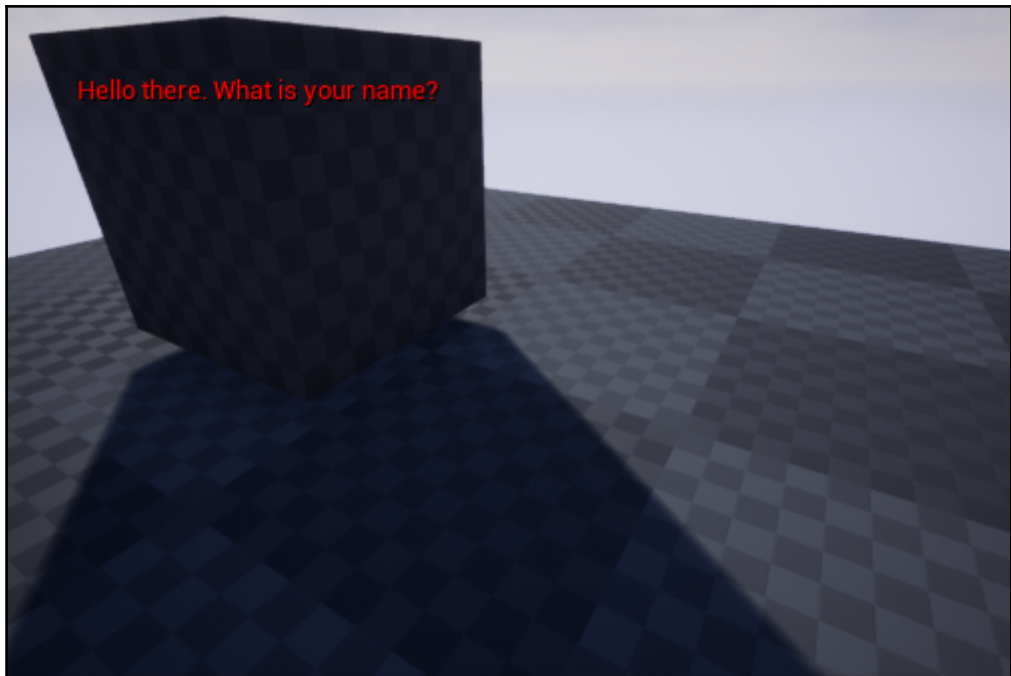


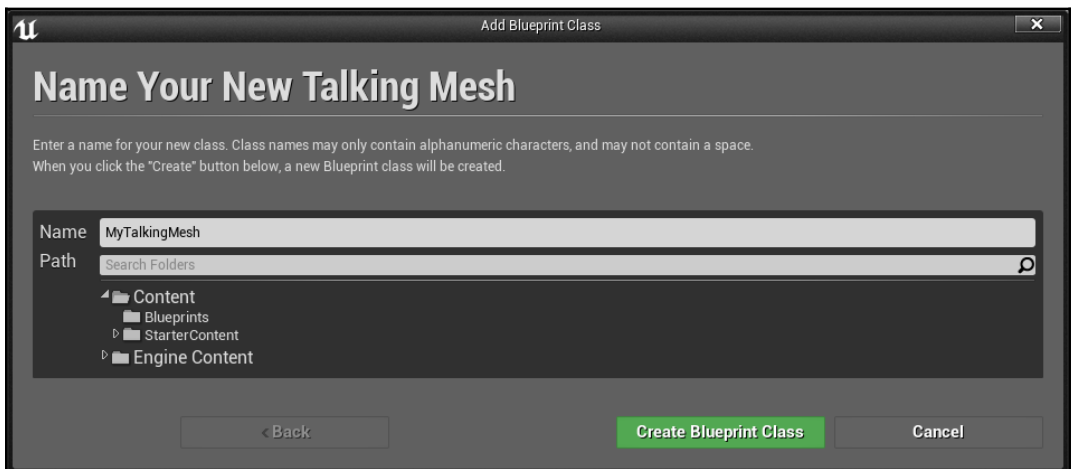
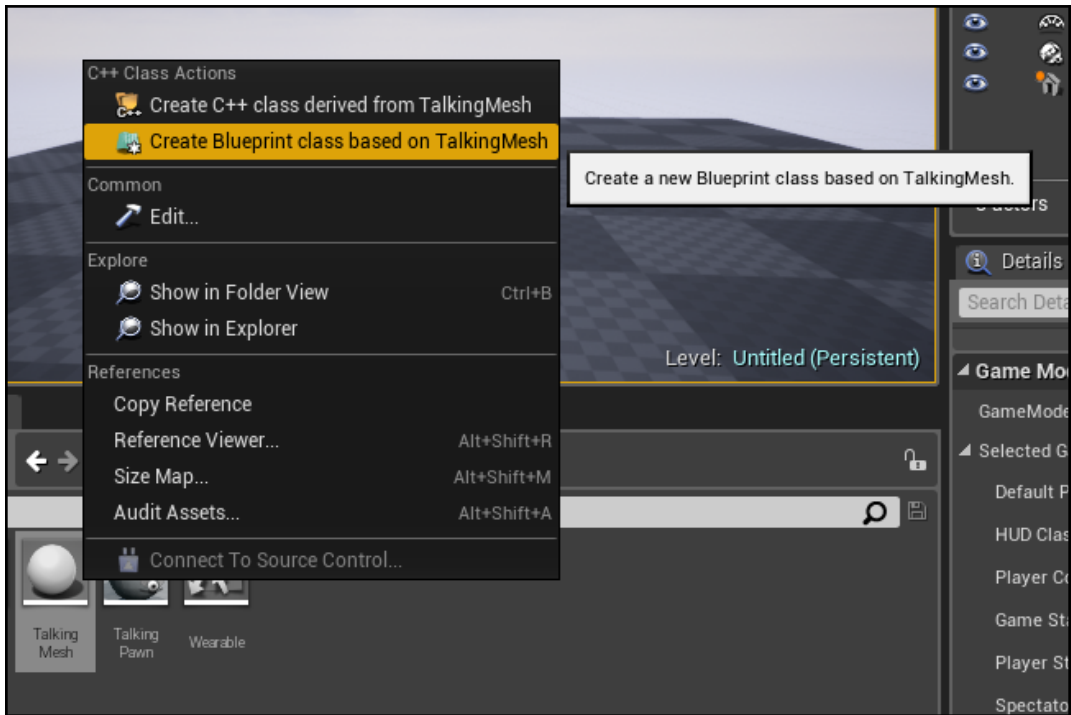




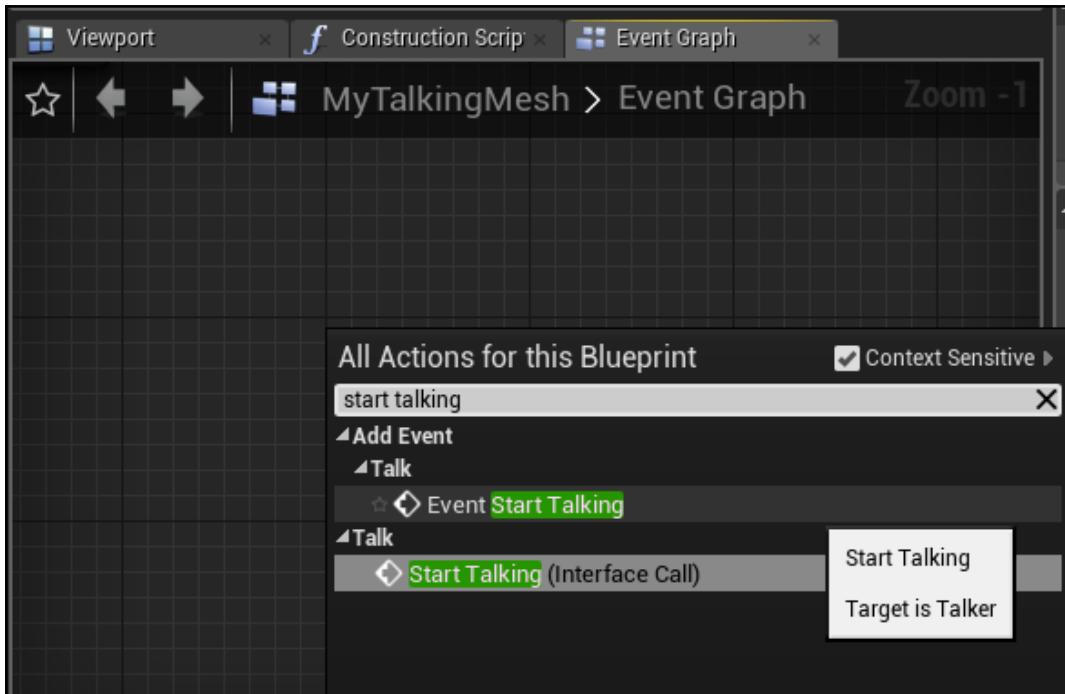


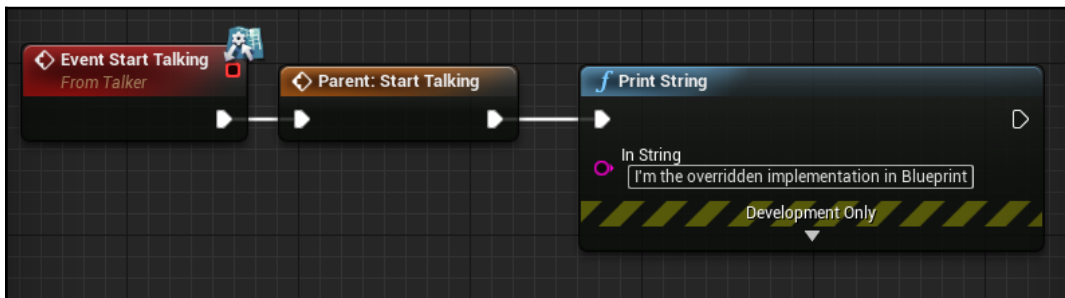
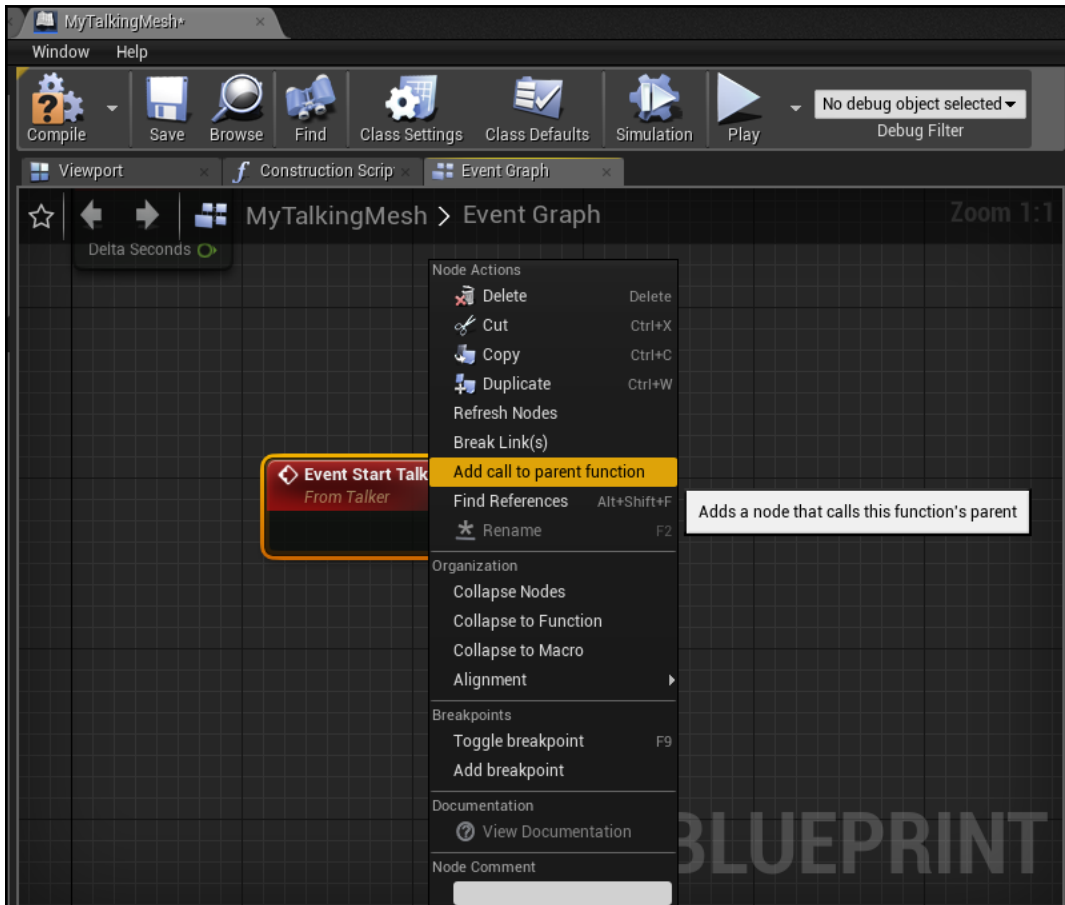


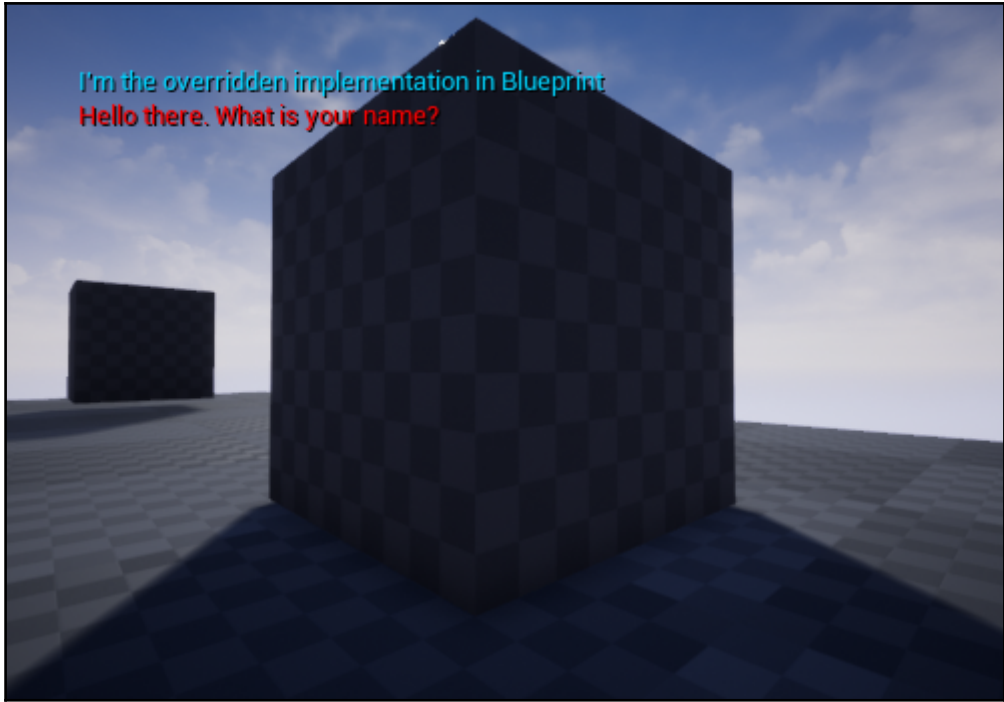




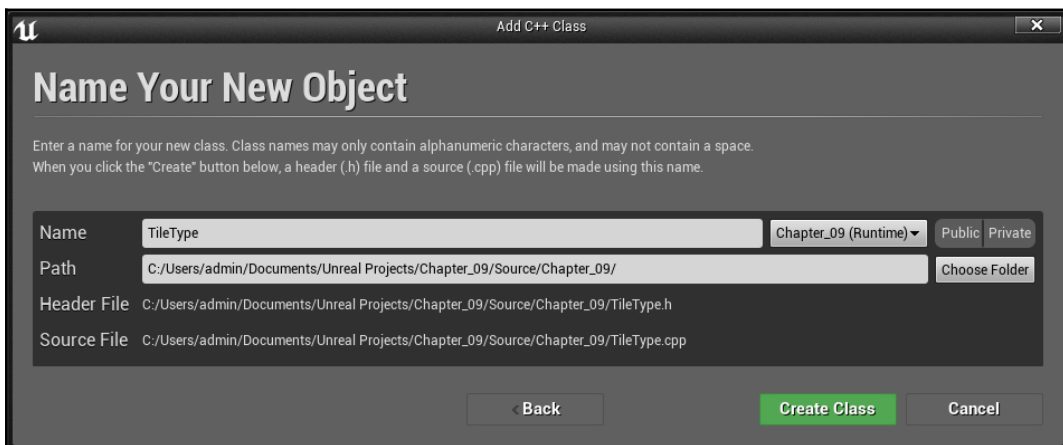
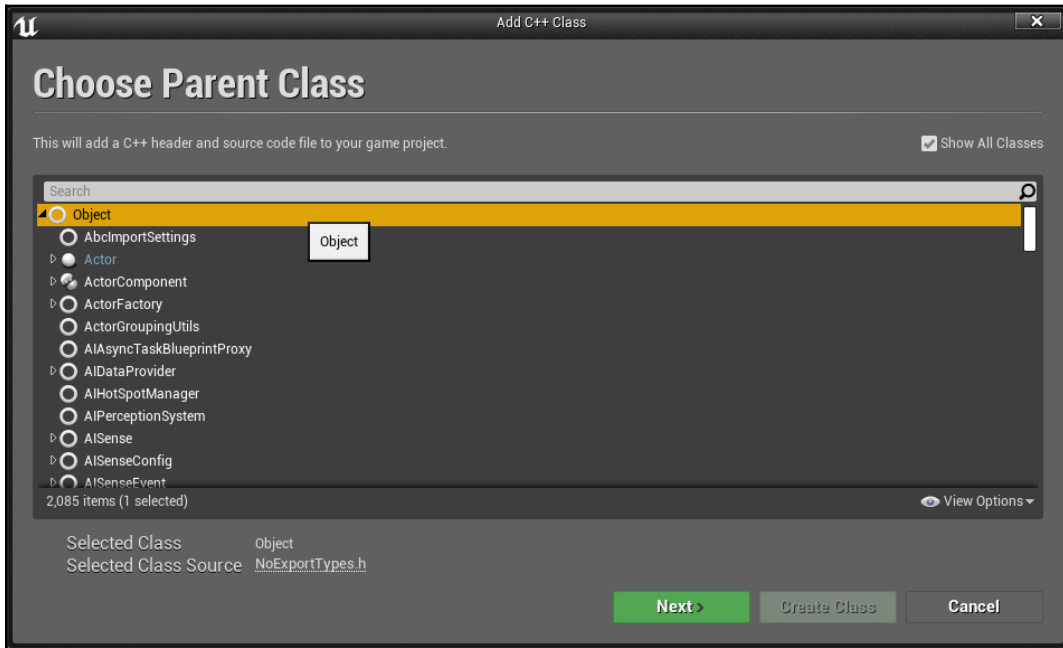


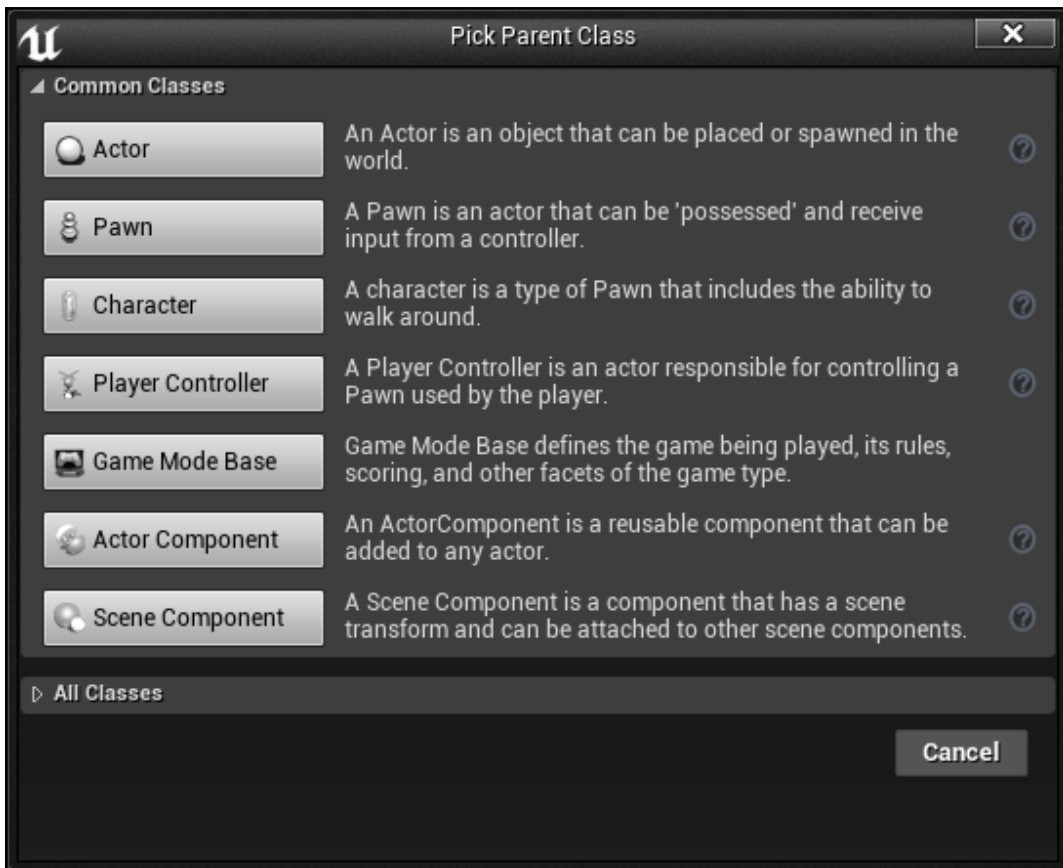


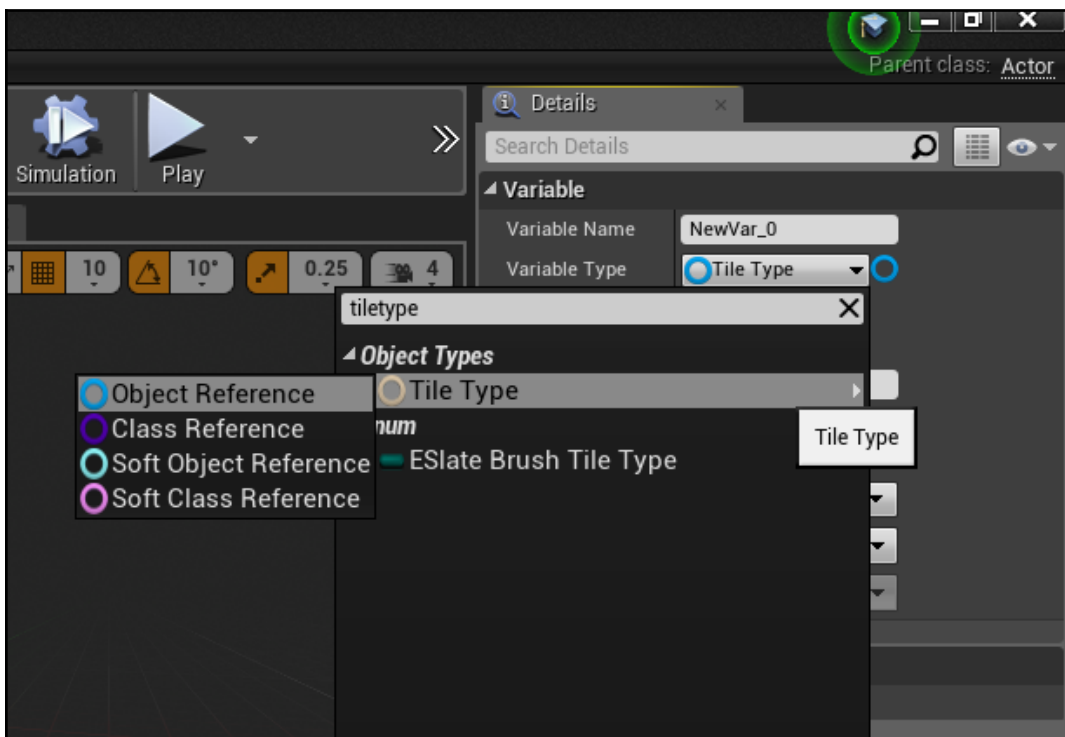
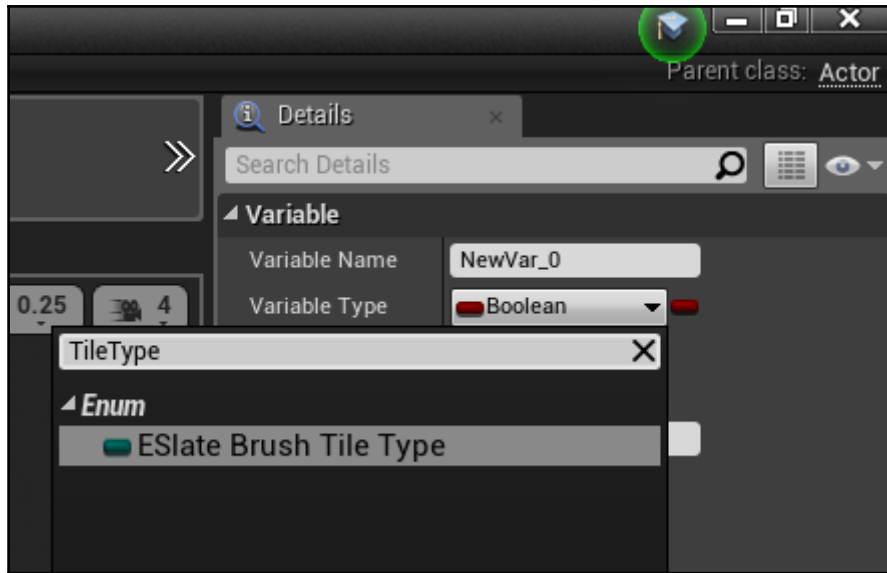


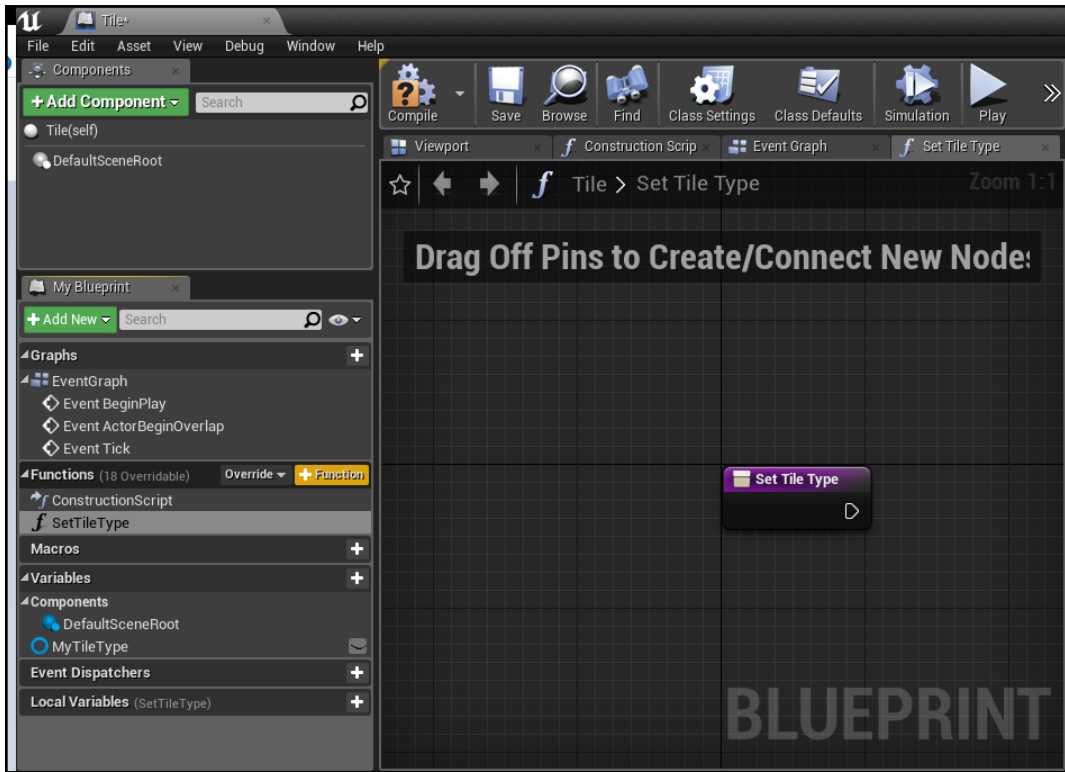


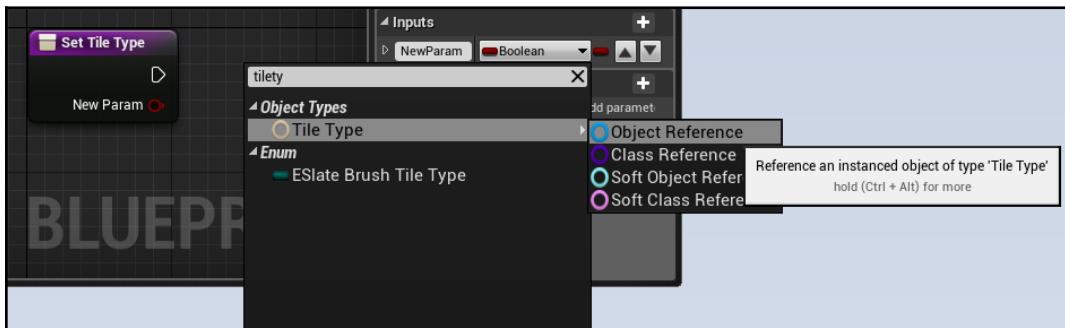
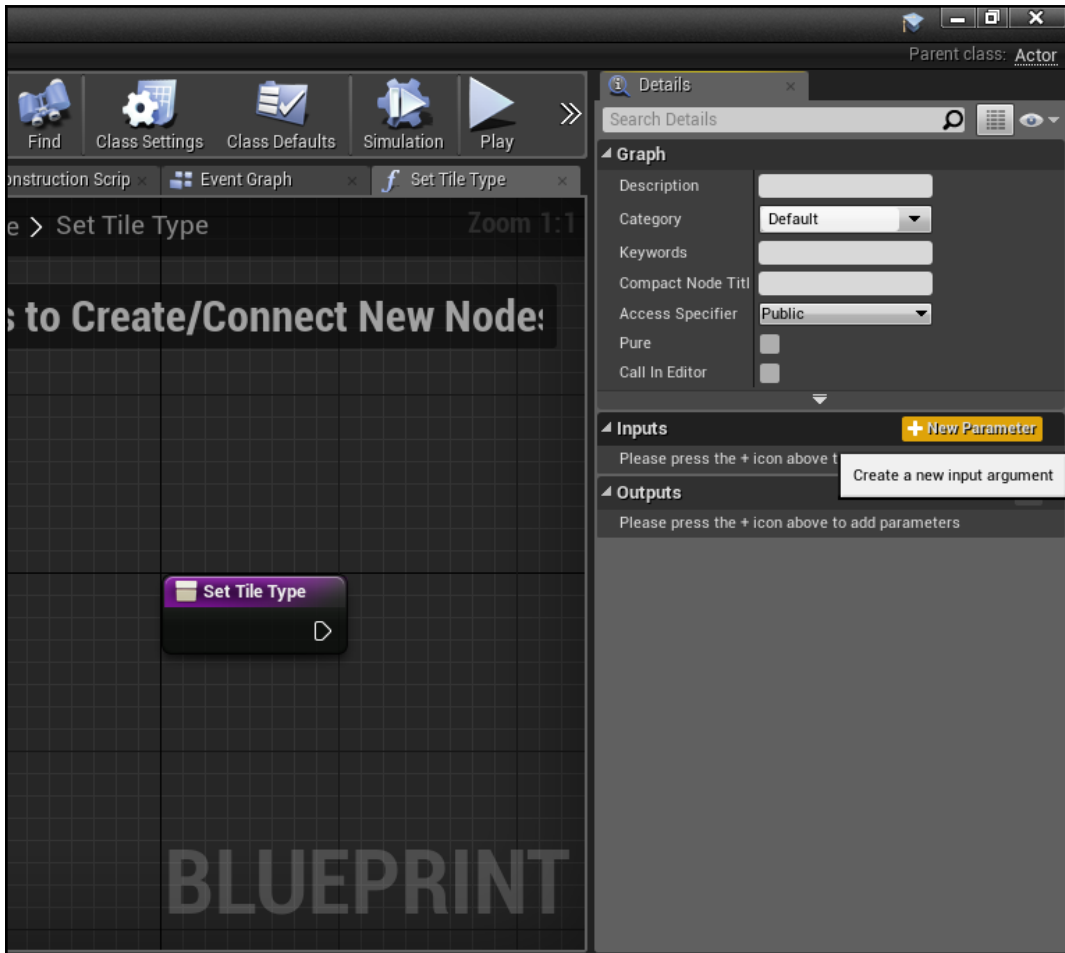
# Chapter 9: Integrating C++ and the Unreal Editor: Part I



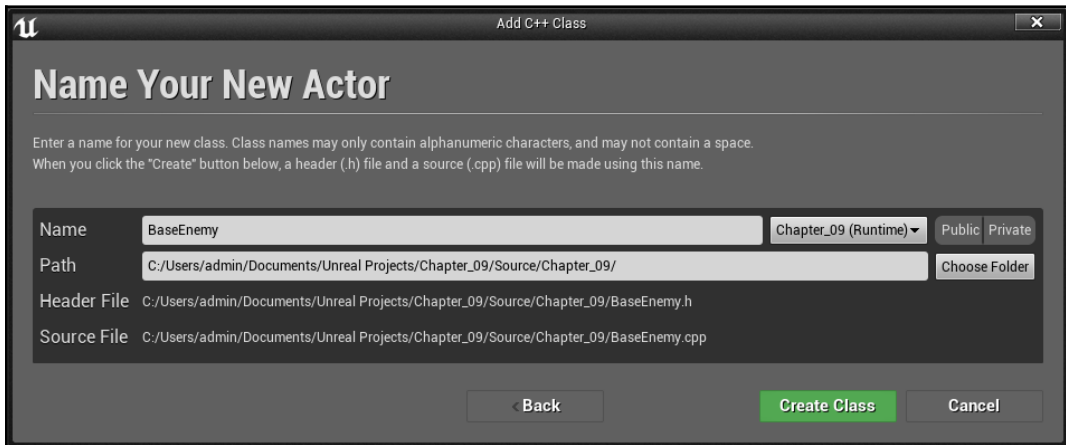
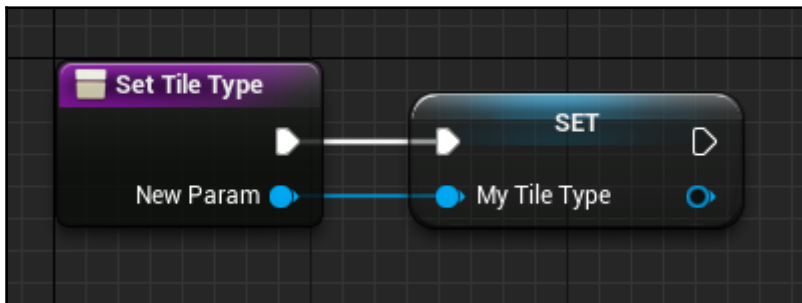
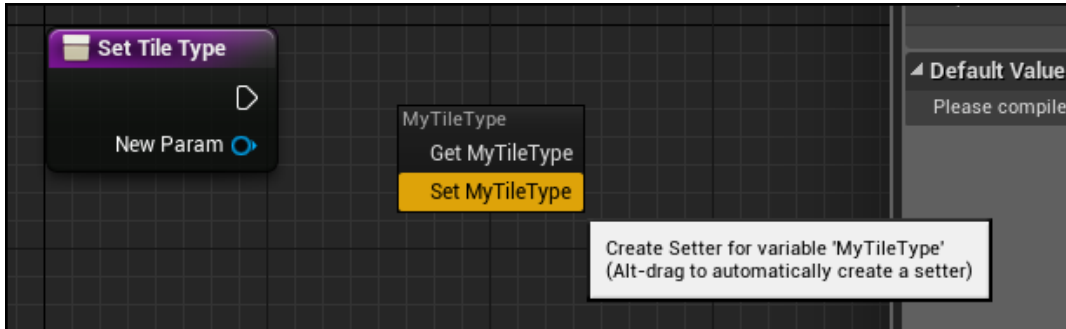
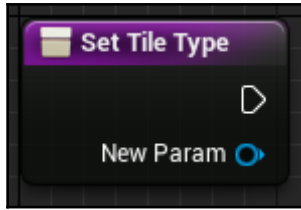


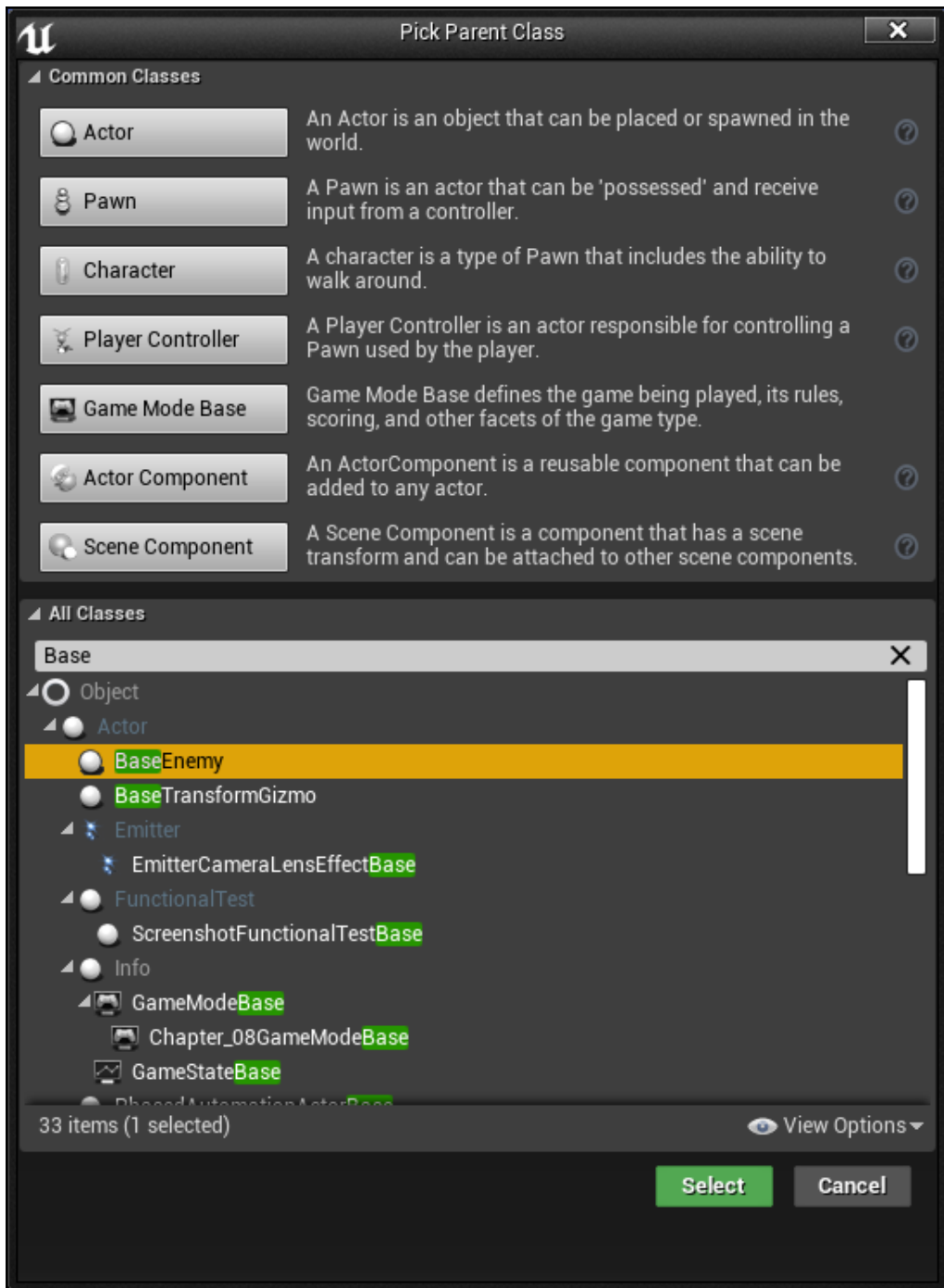


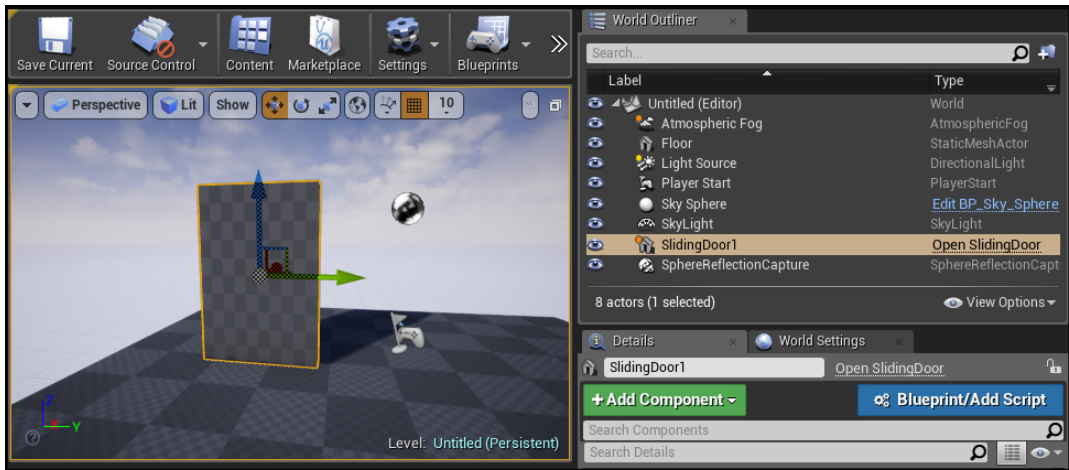












## All Actions for this Blueprint

Search

▷ Add Event for Sliding Door 1

◀ Call Function on Sliding Door 1

▷ Actor

▷ AI

▷ Collision

▷ Door


▷ Game

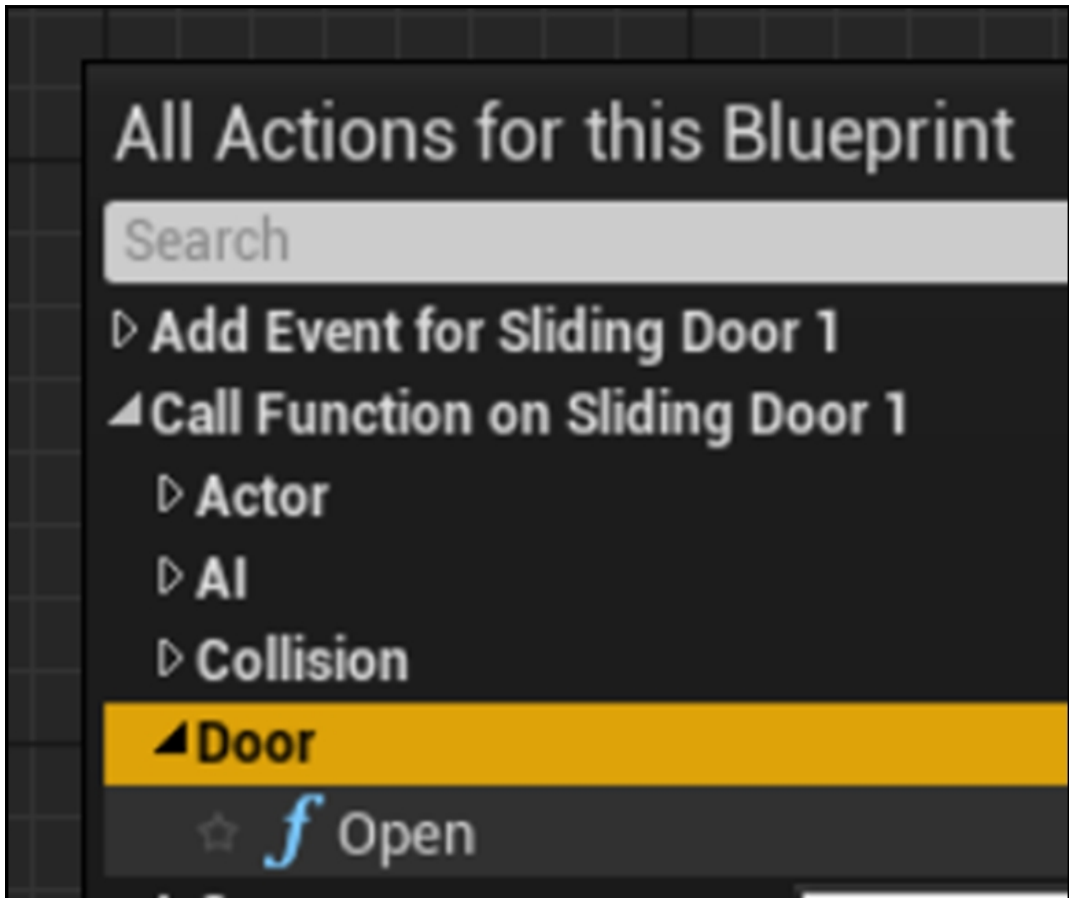
▷ Networking

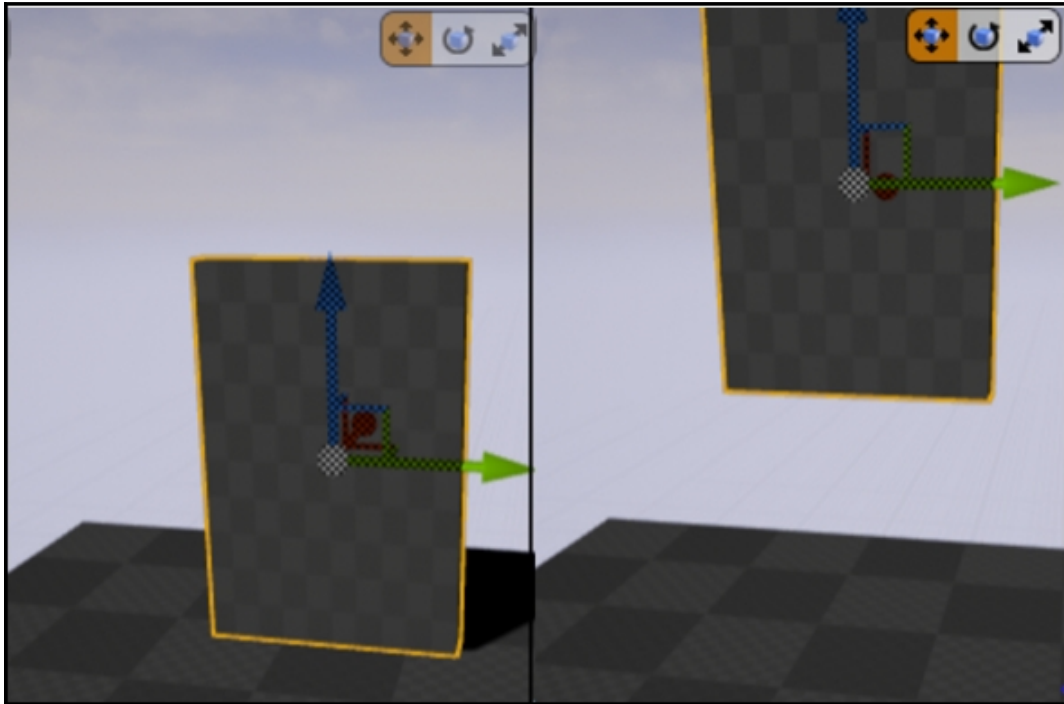
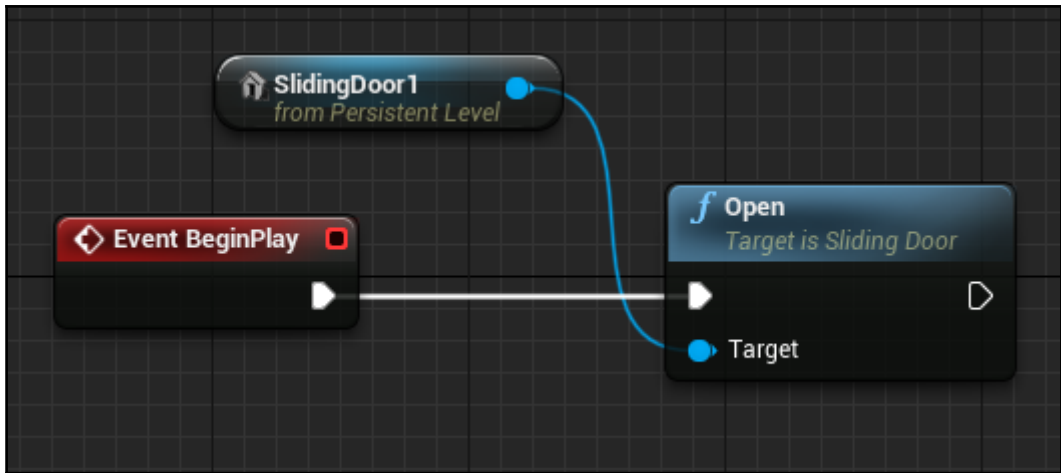
▷ Rendering

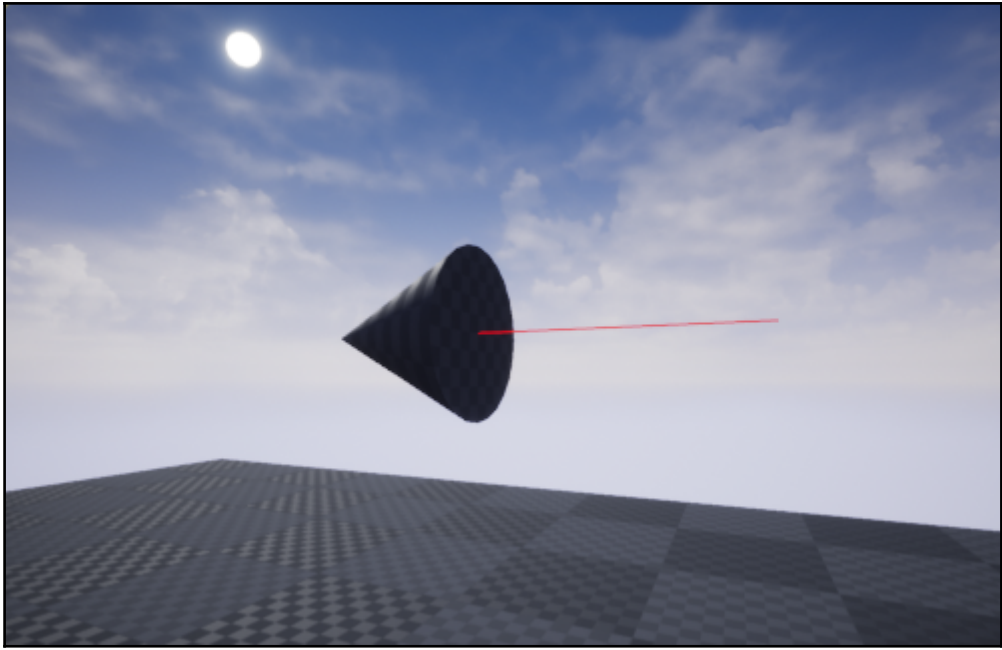
▷ Replication

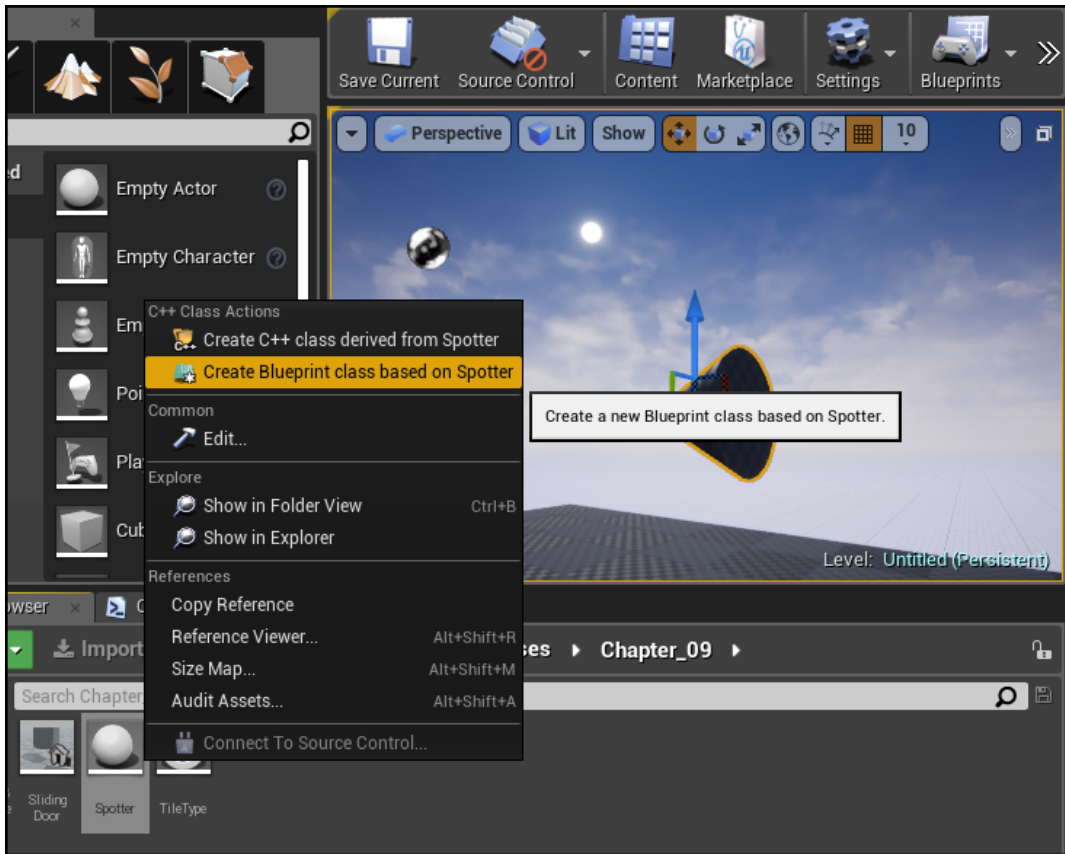
▷ Utilities

 Create a Reference to SlidingDoor

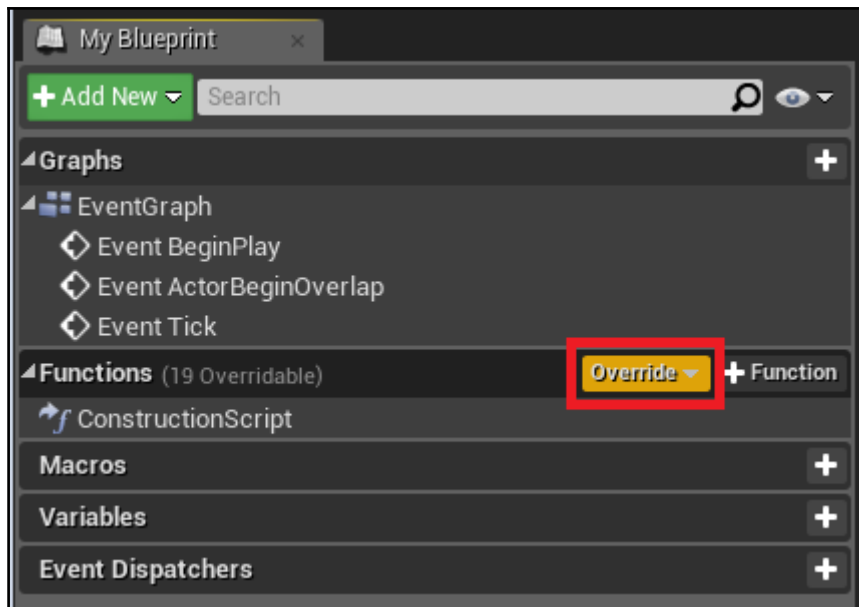


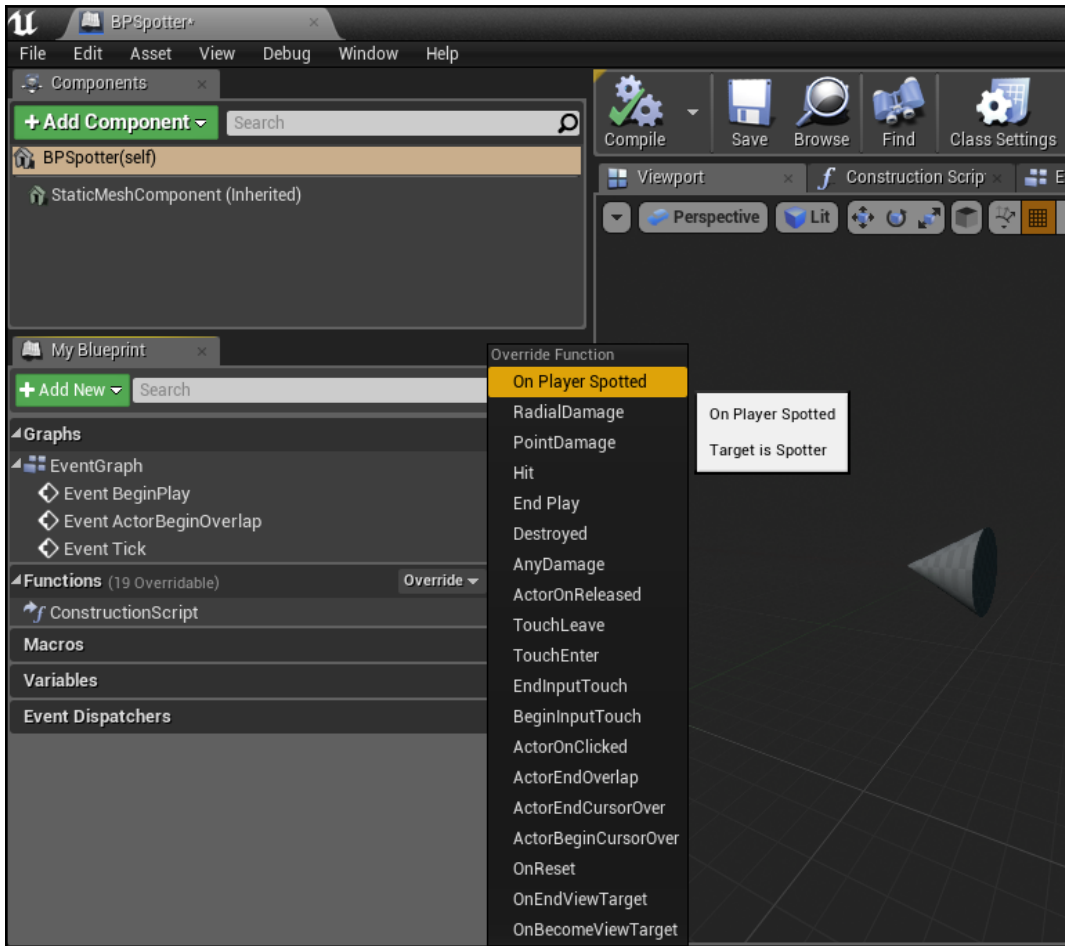


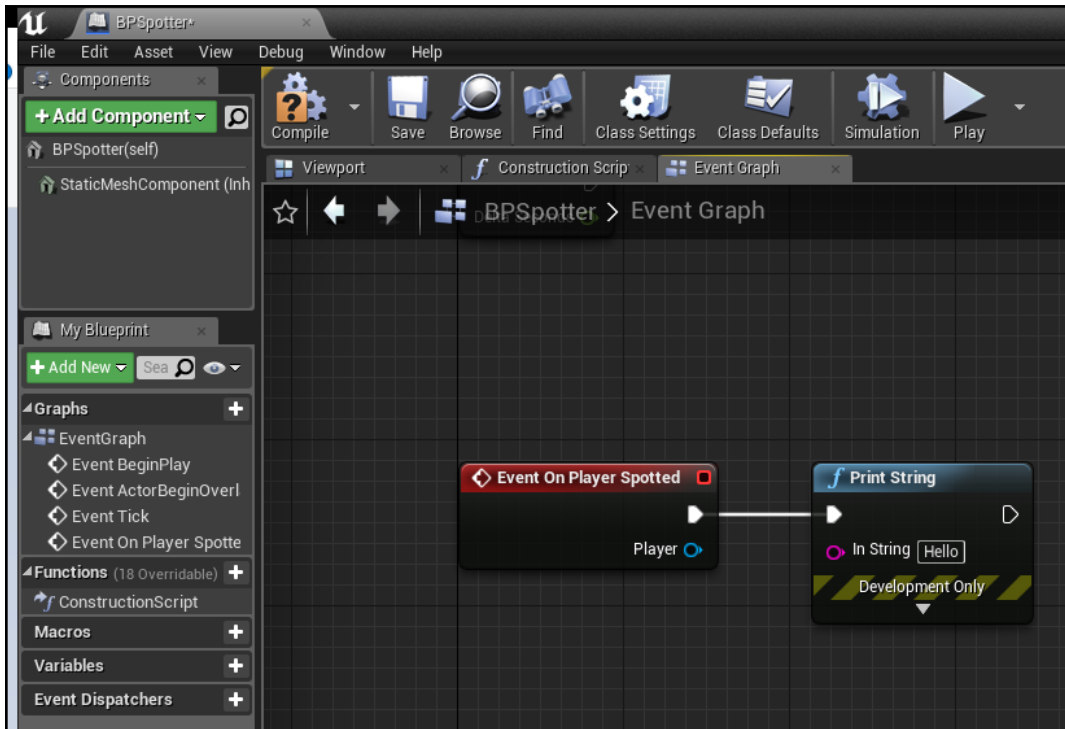


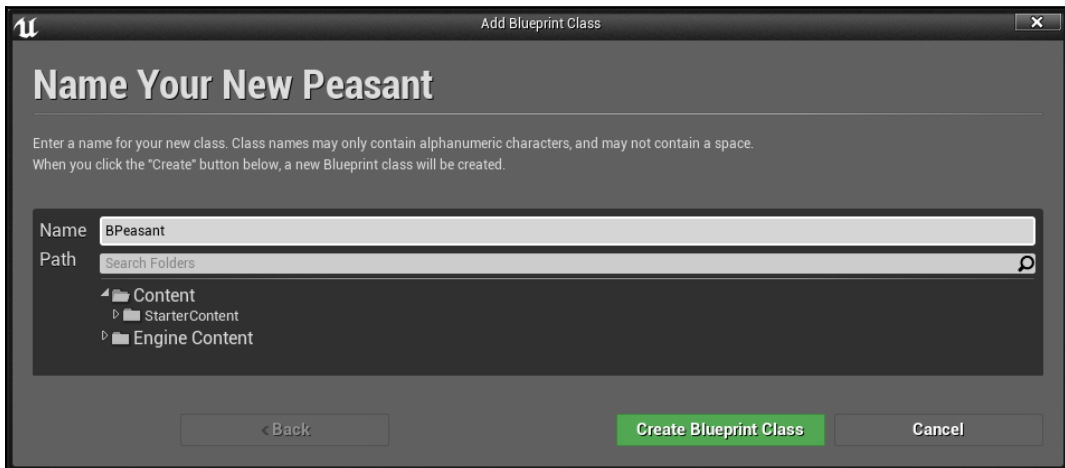
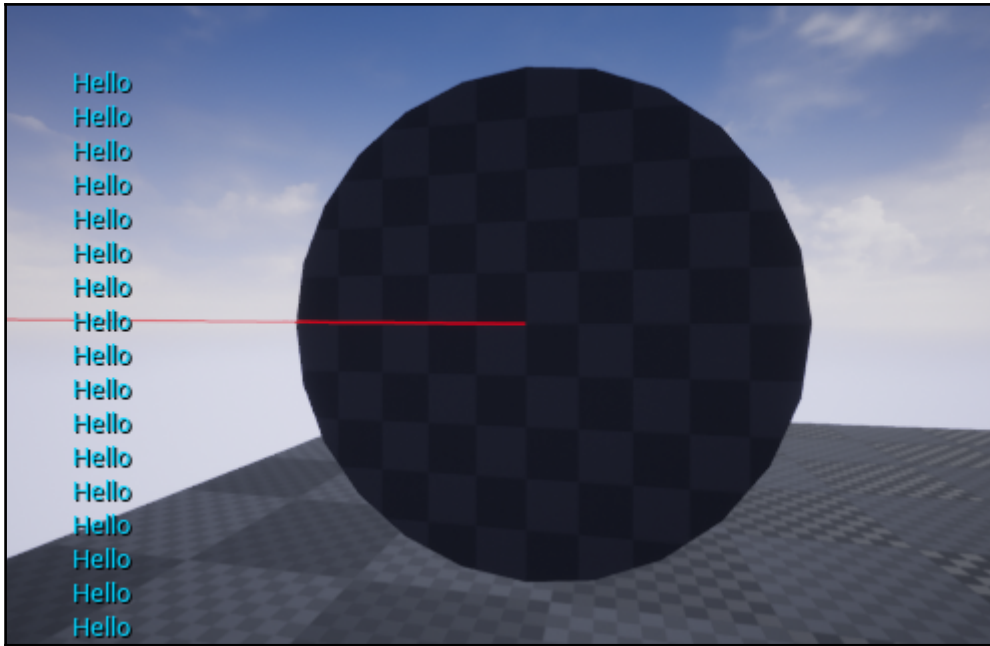


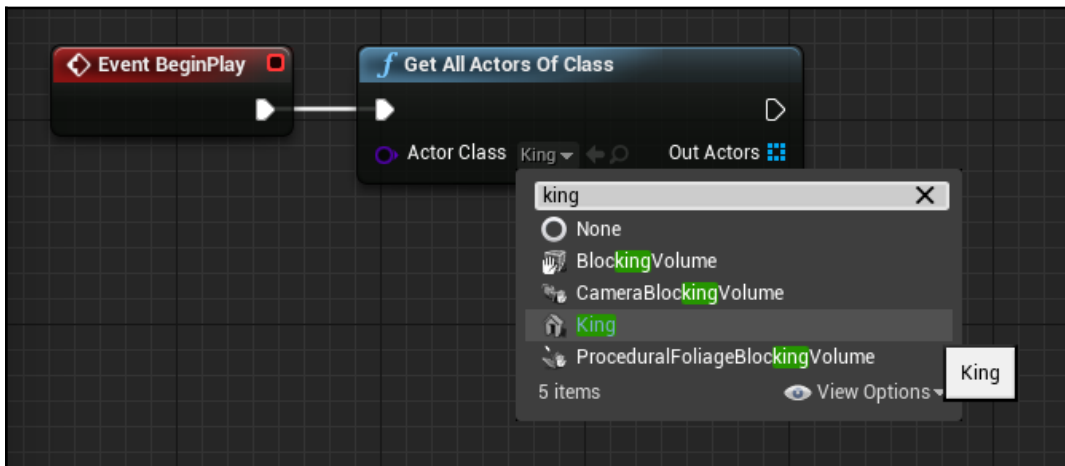
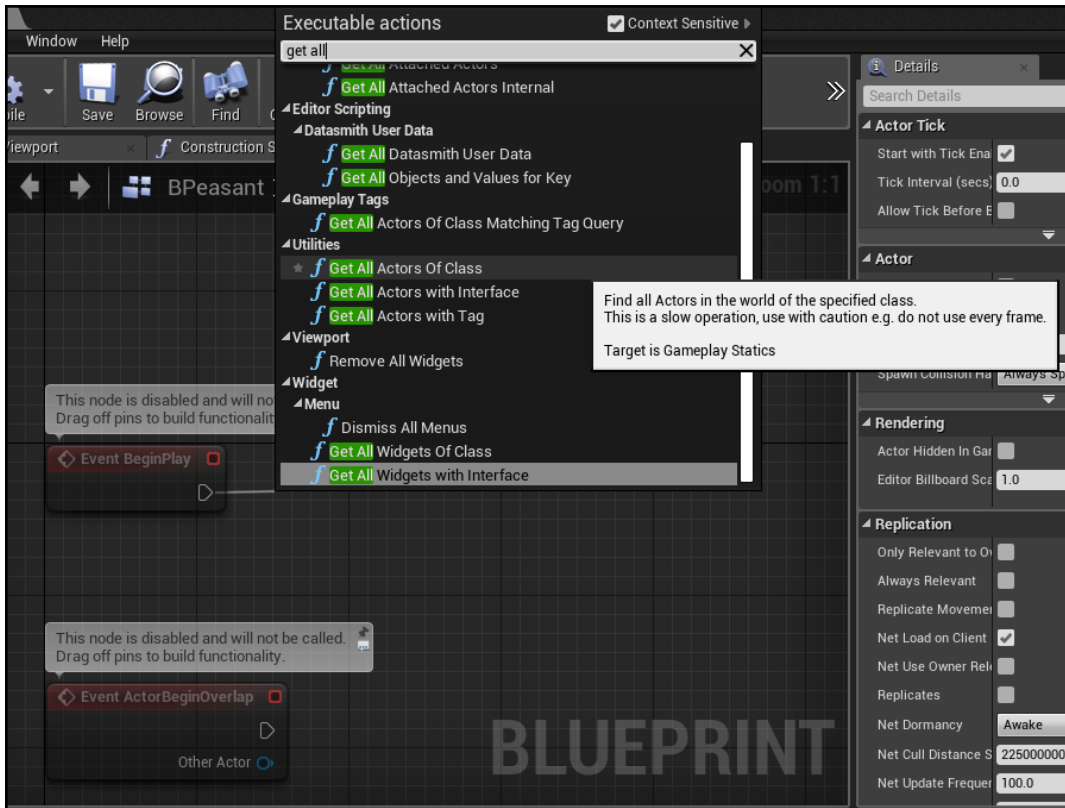


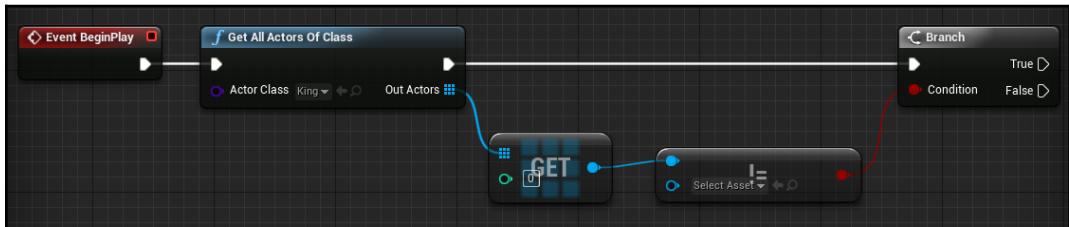
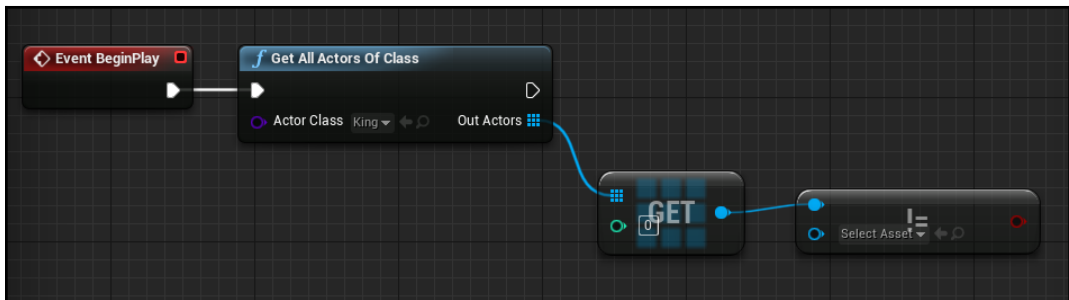
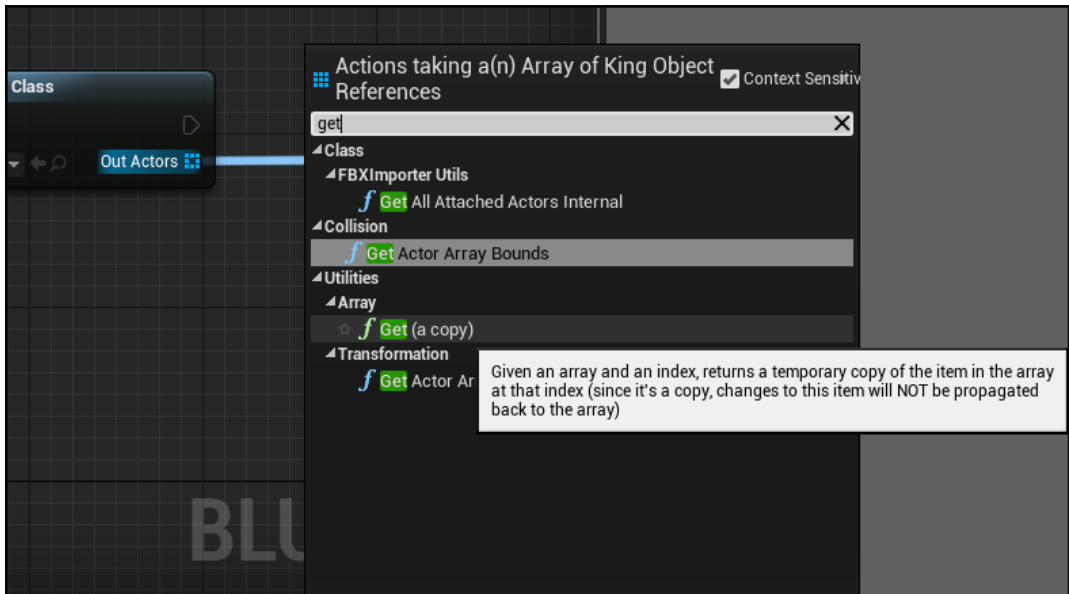


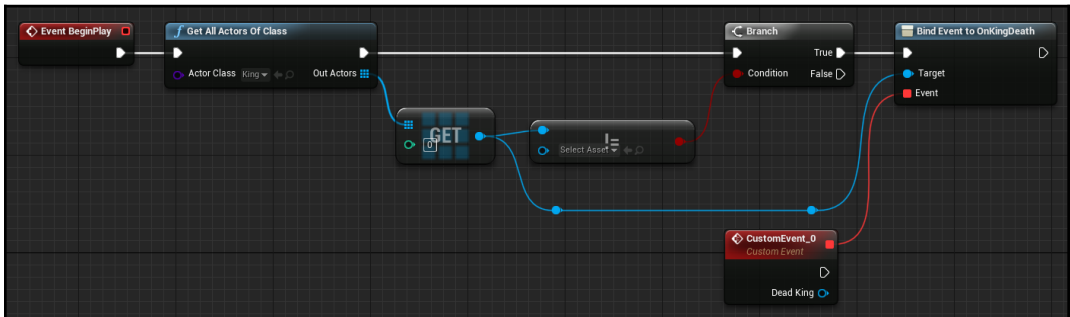
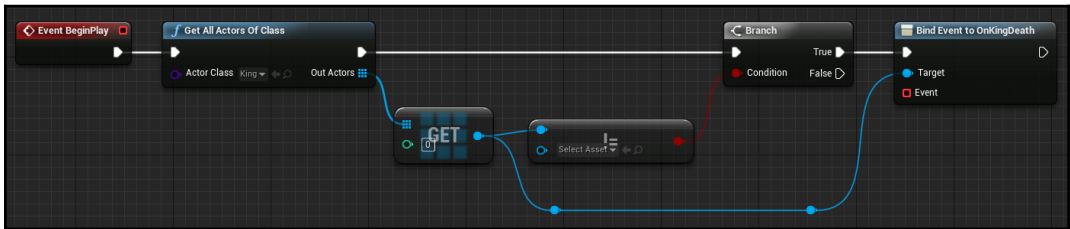
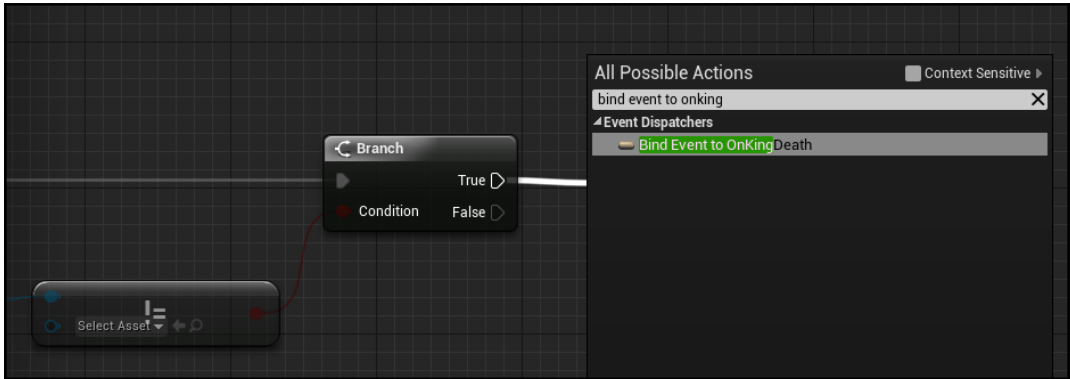


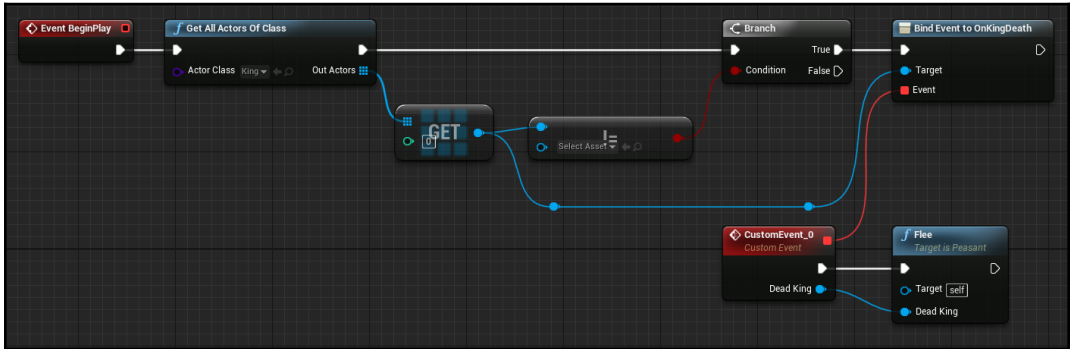
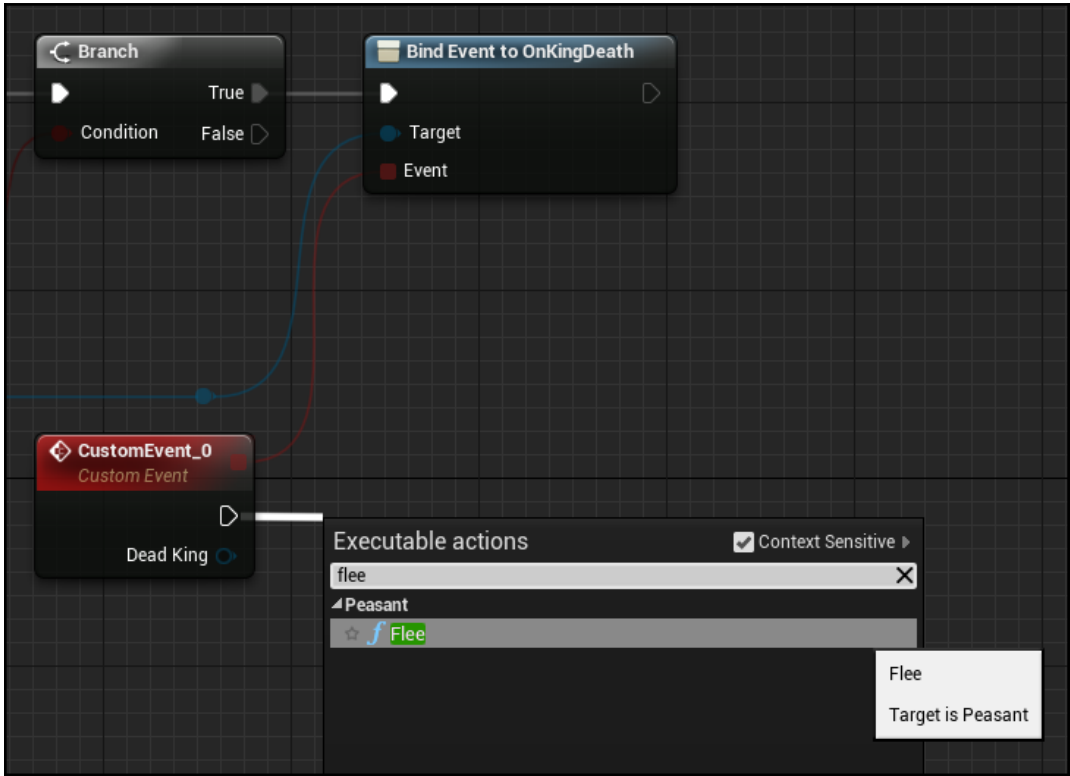




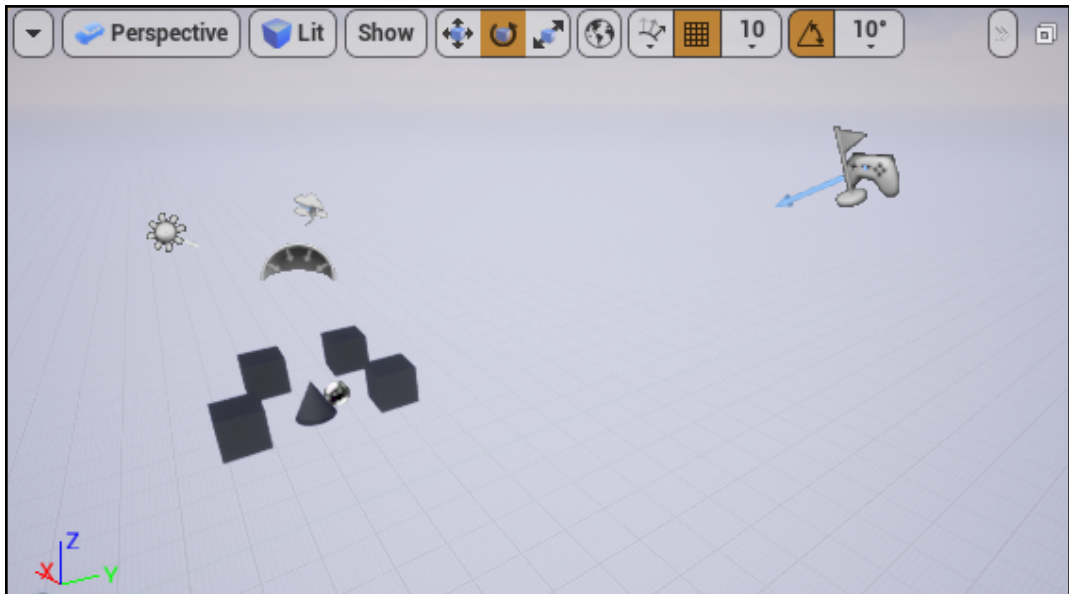


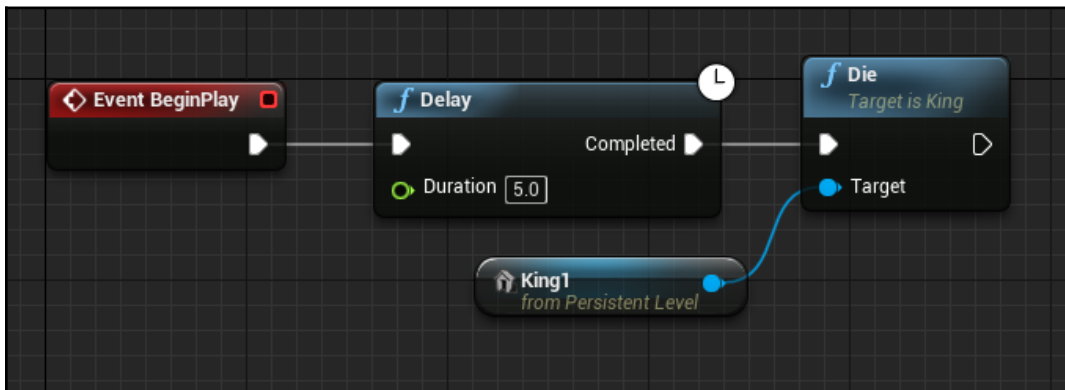
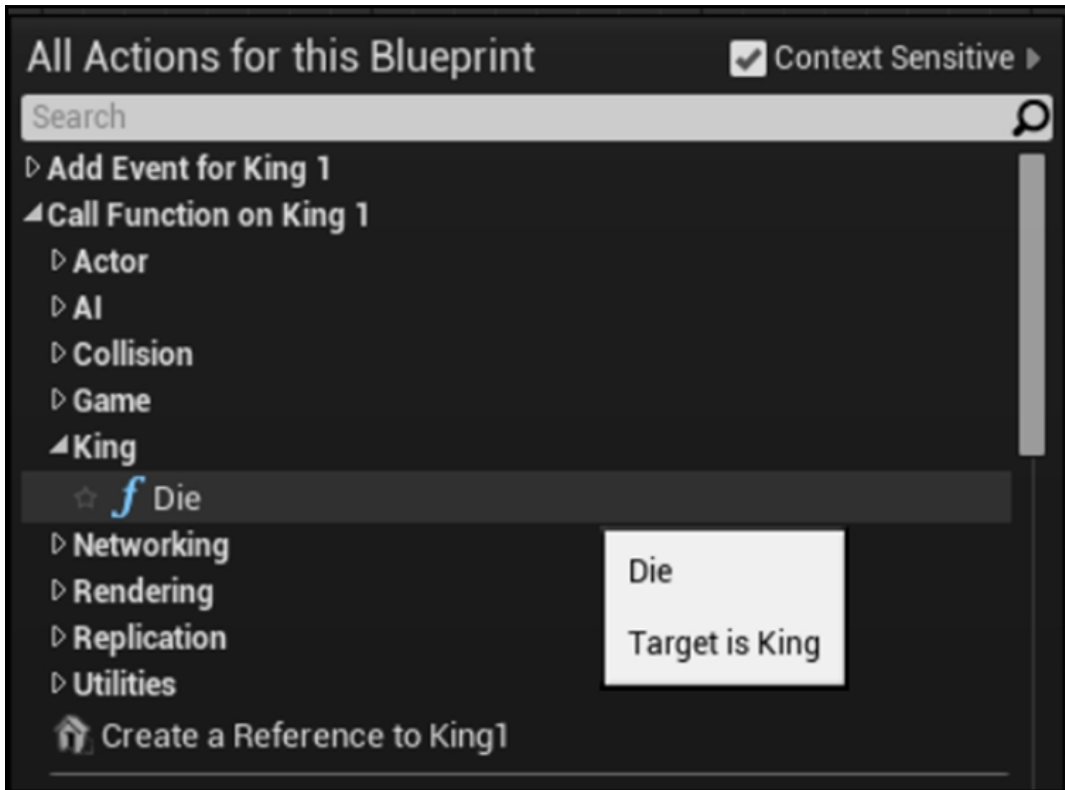










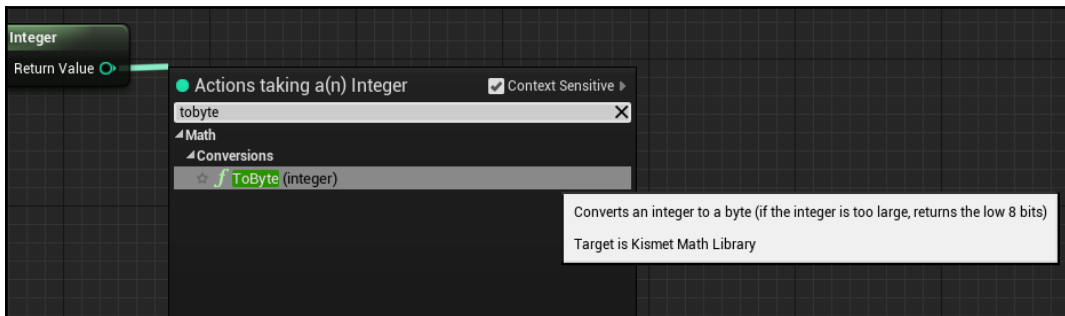
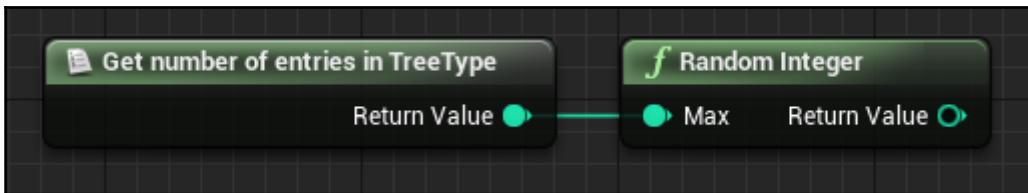
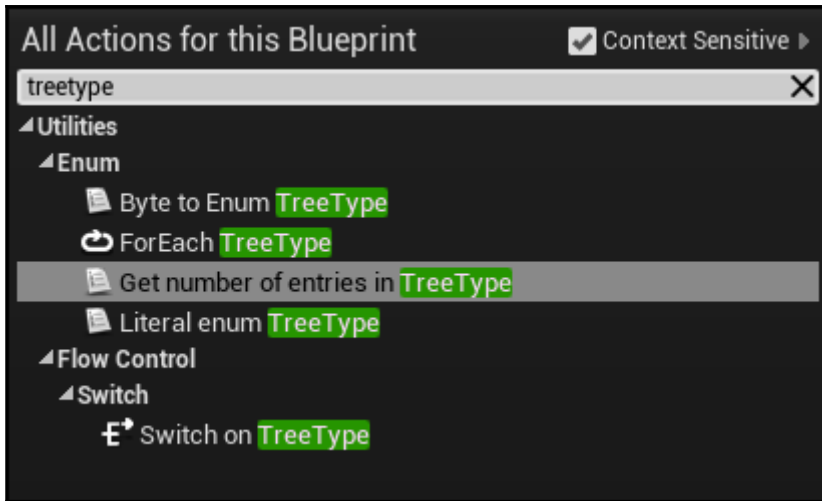


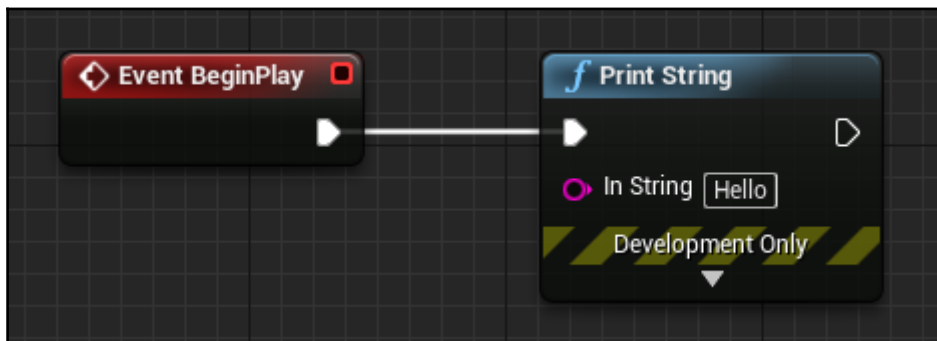
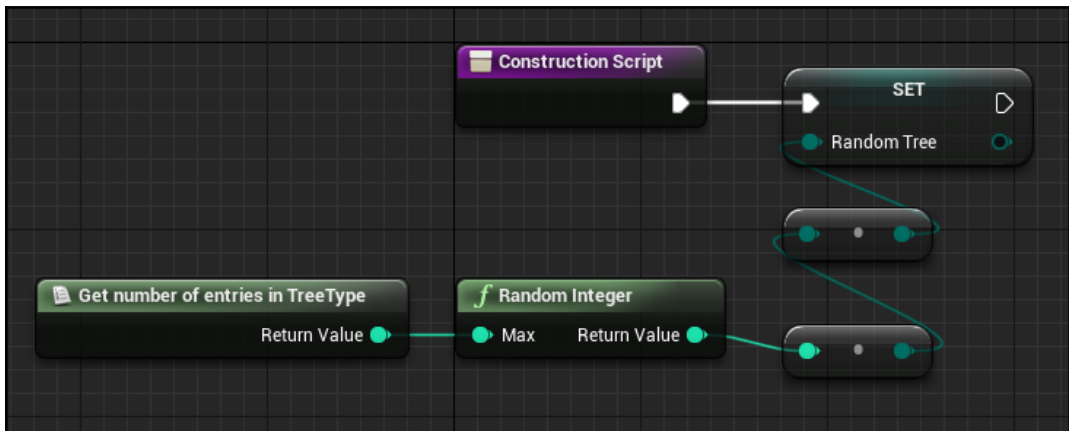
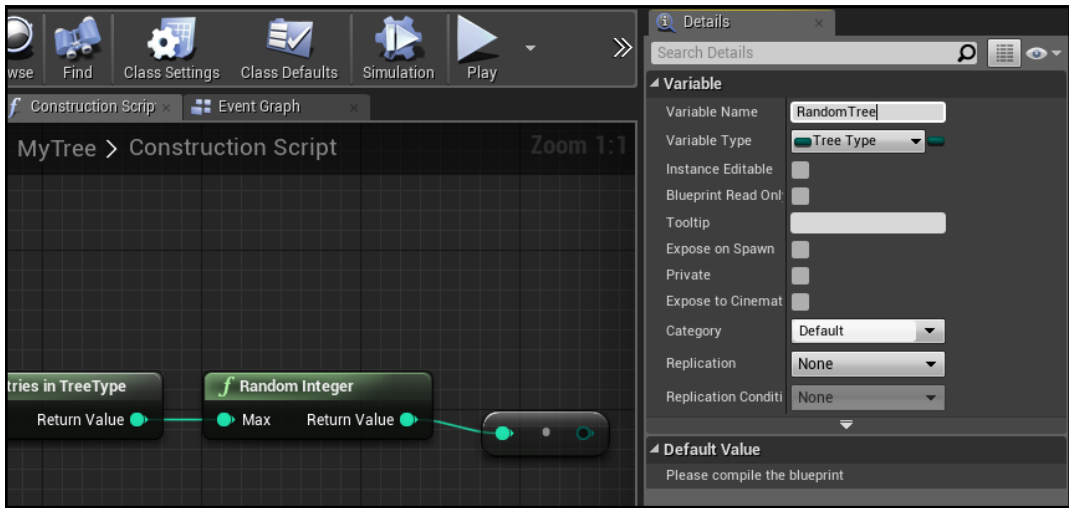
▶ Click for Mouse Control

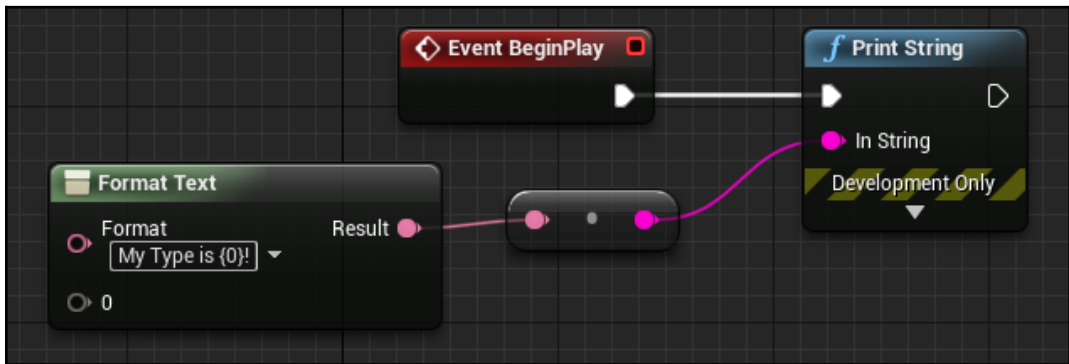


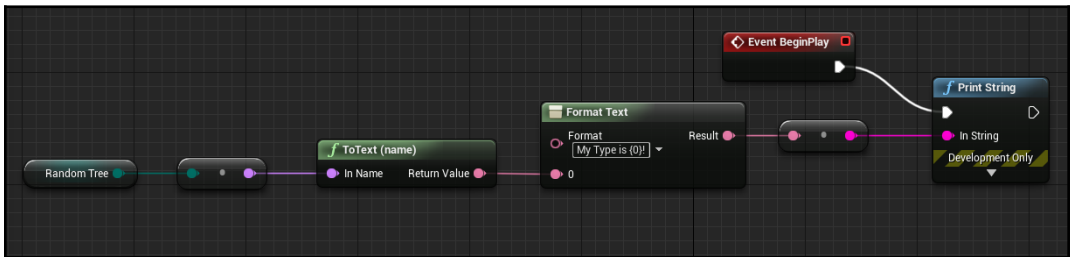
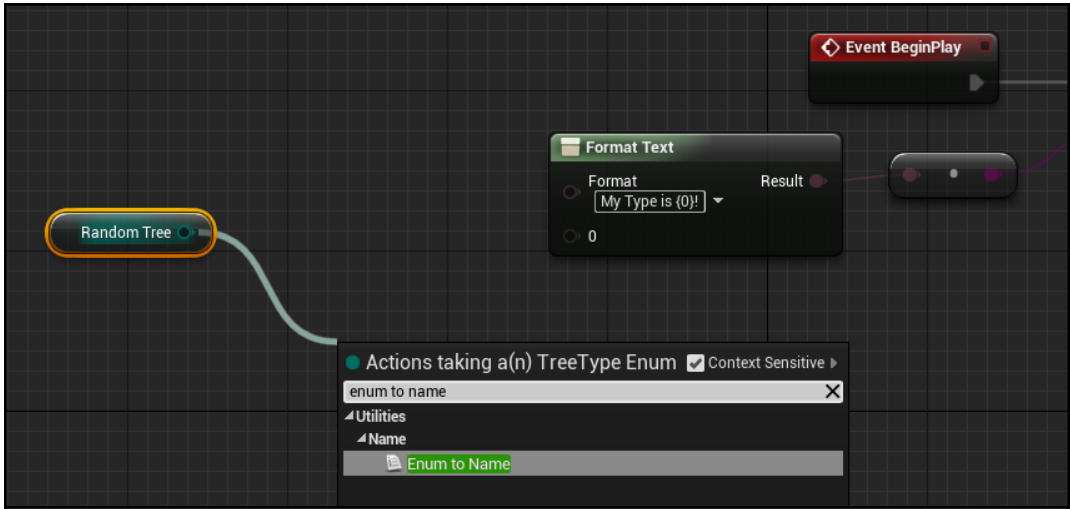
**Waily Waily!**  
**Waily Waily!**  
**Waily Waily!**  
**Waily Waily!**

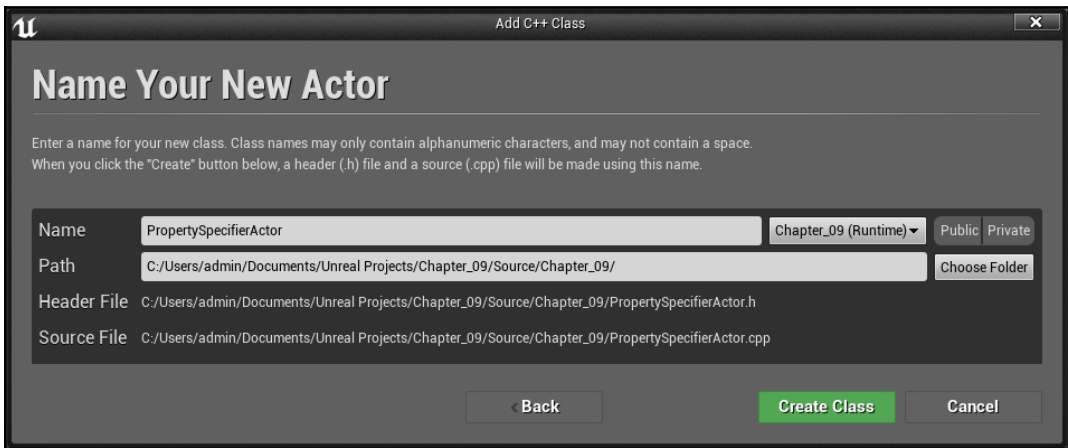
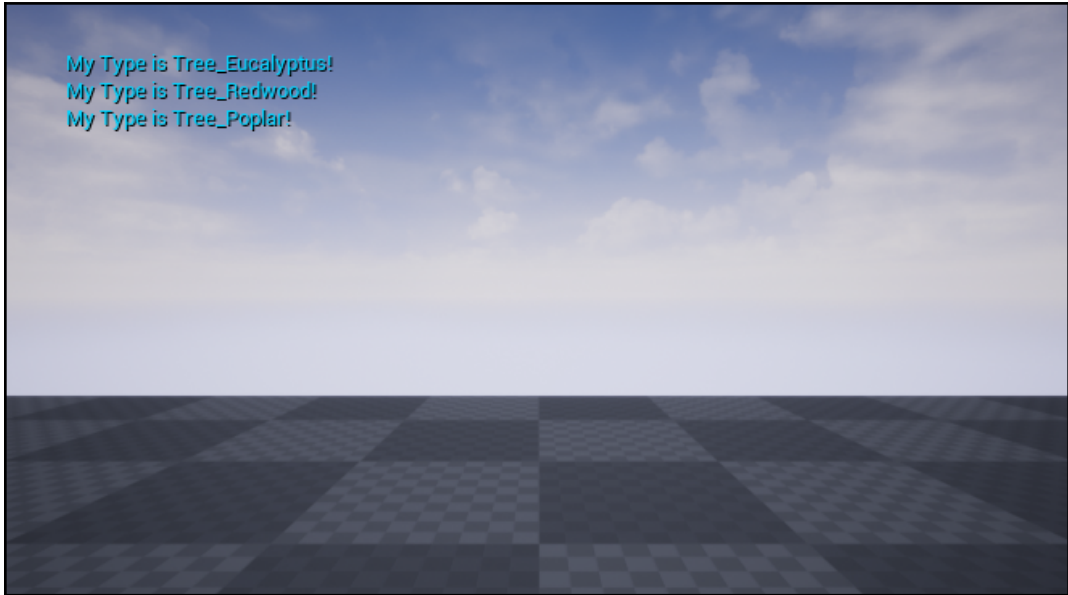




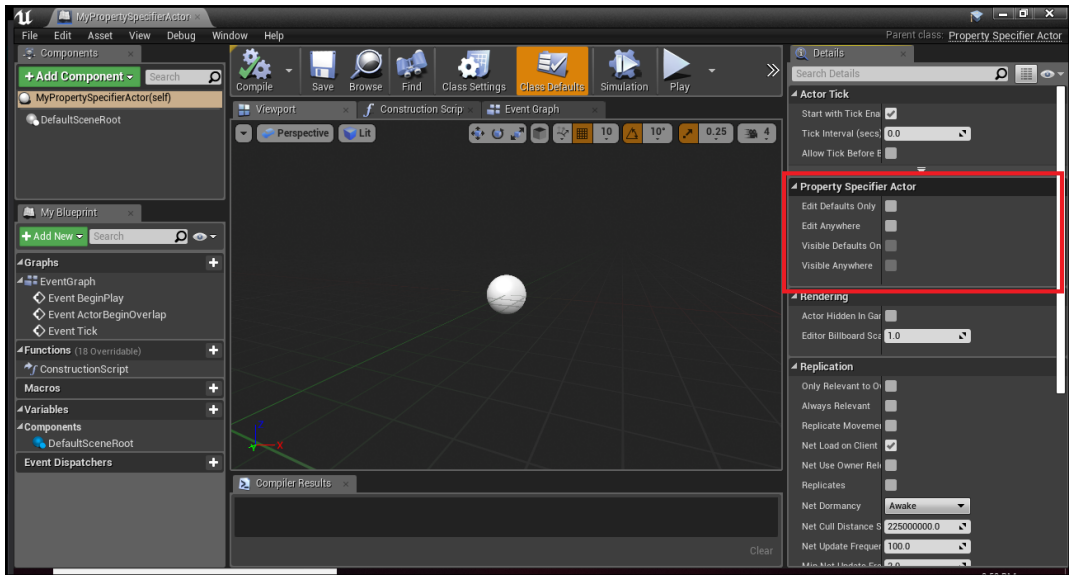


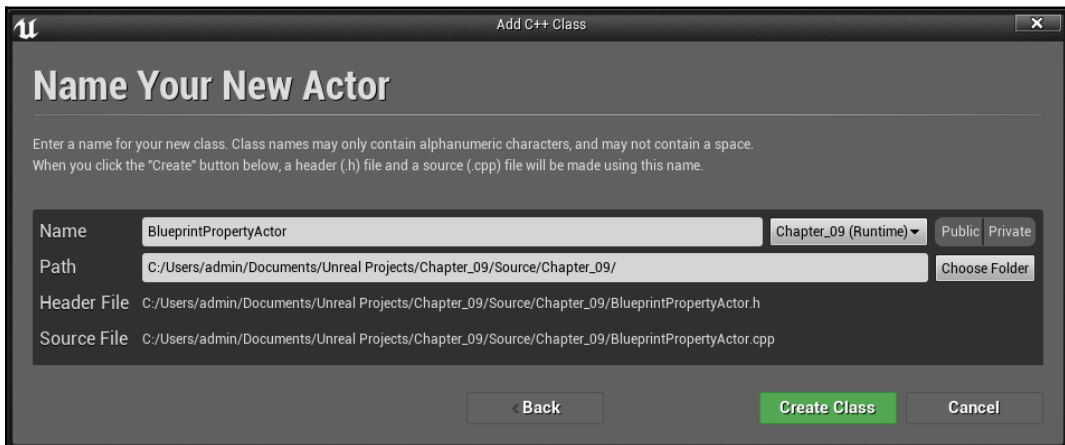
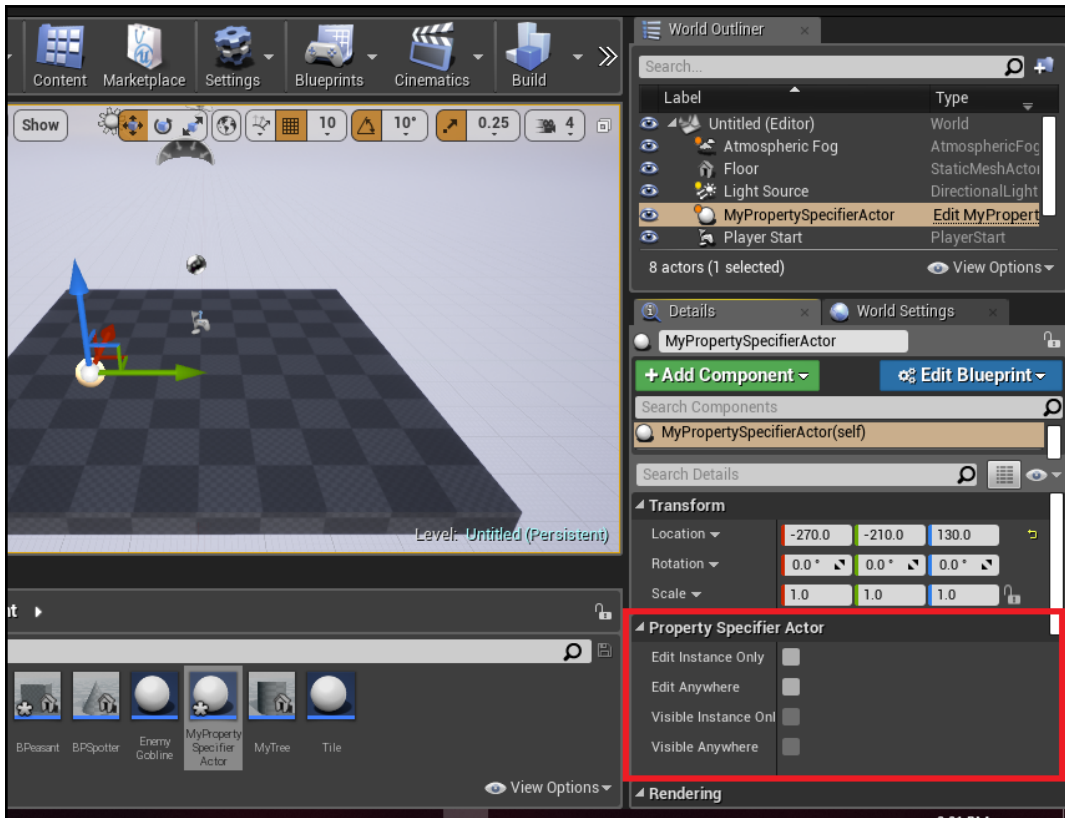


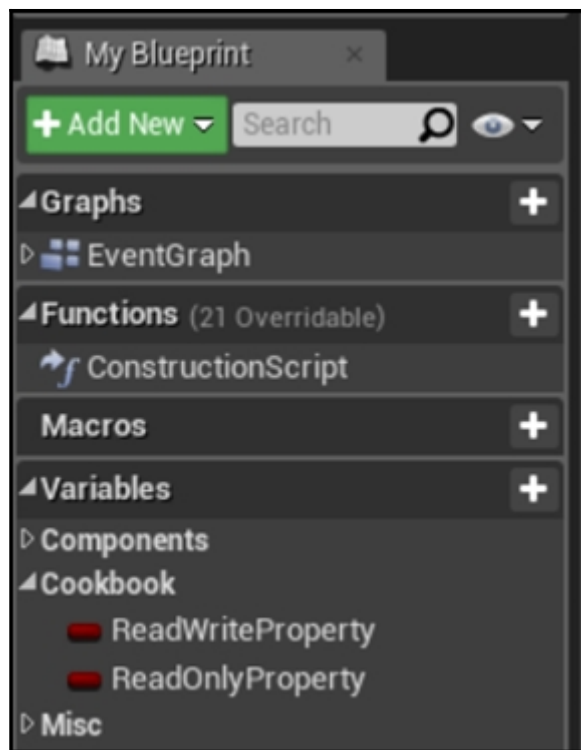
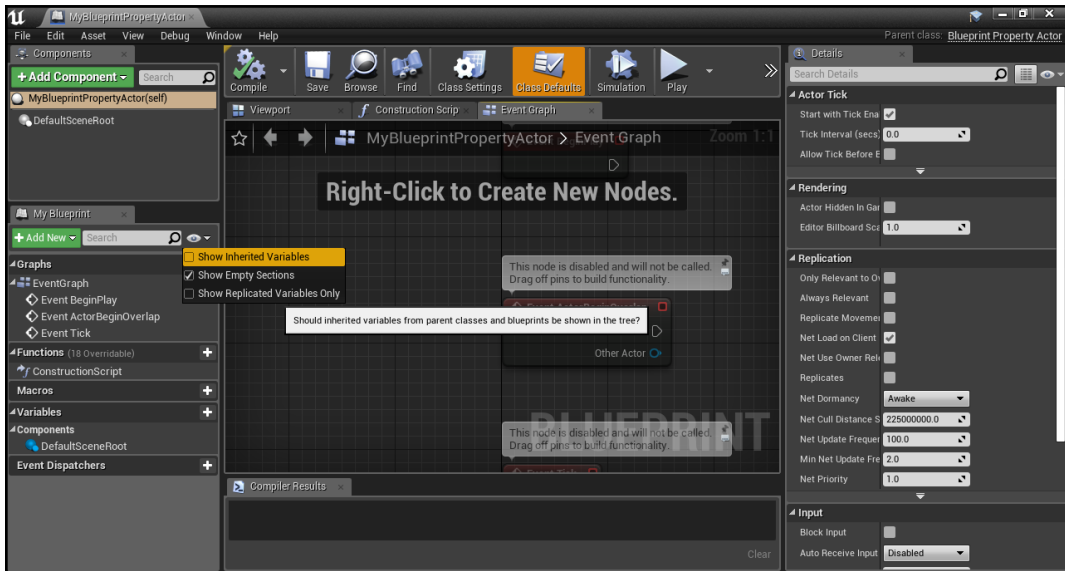


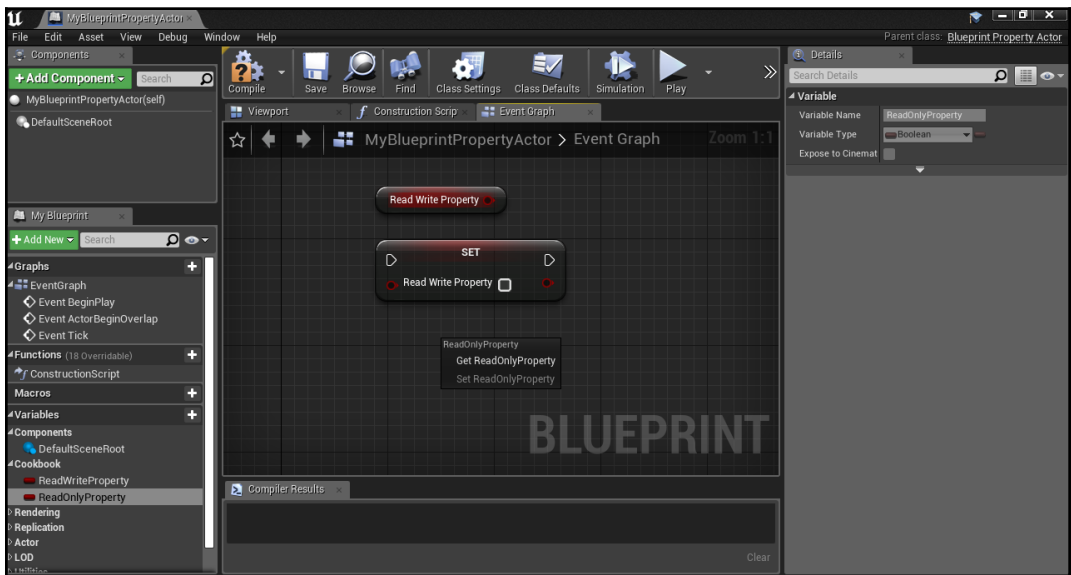
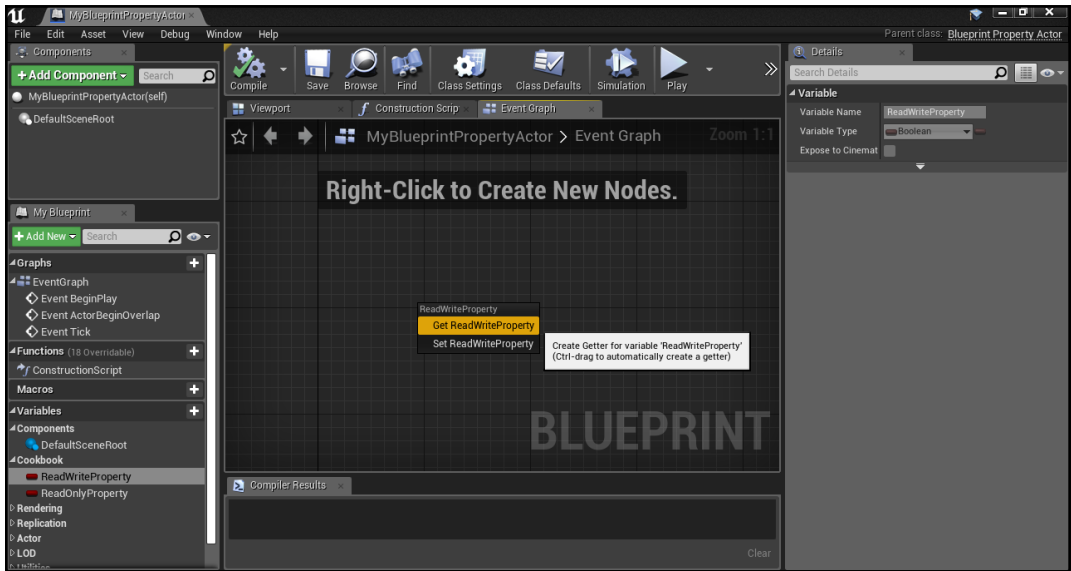


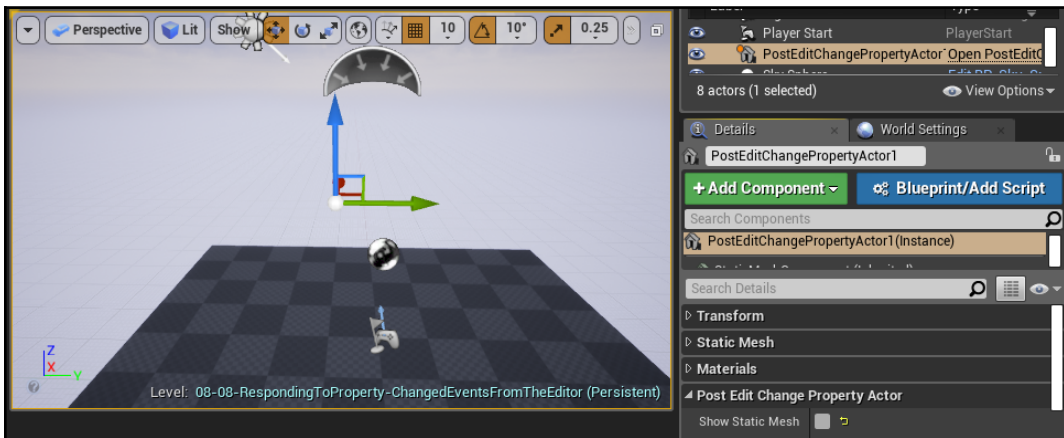
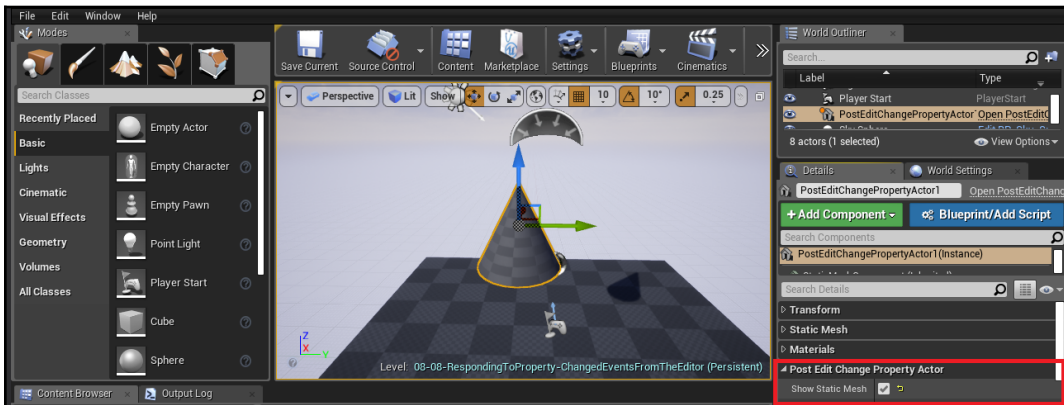
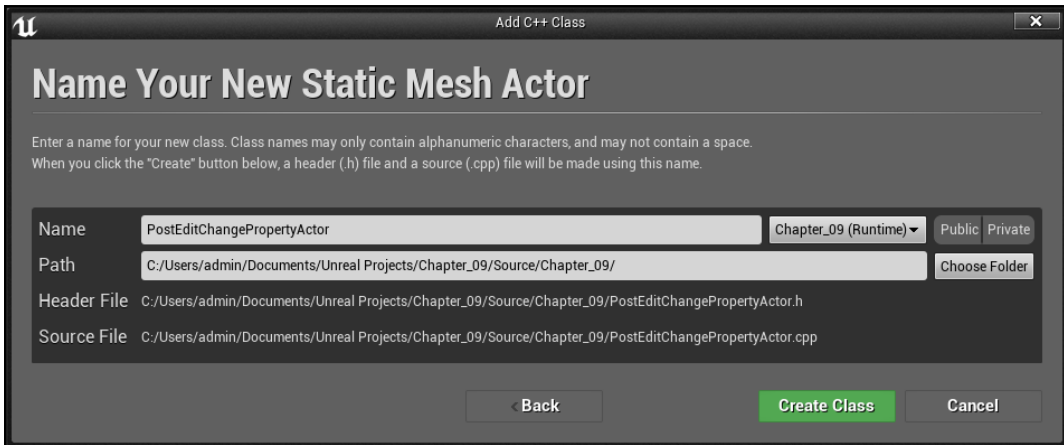


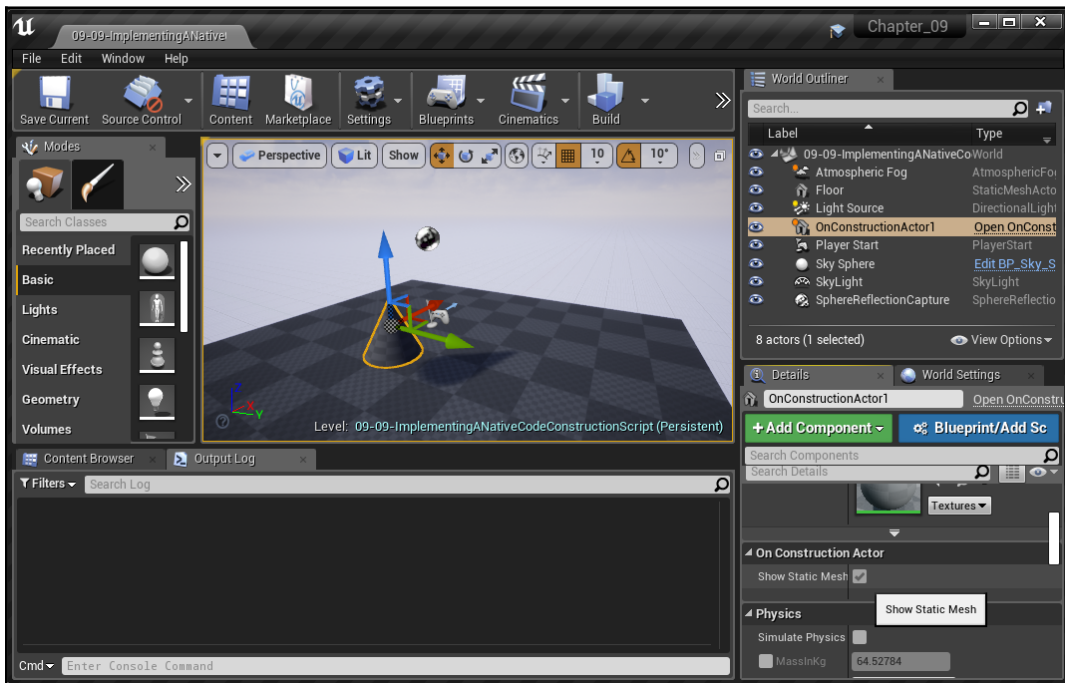
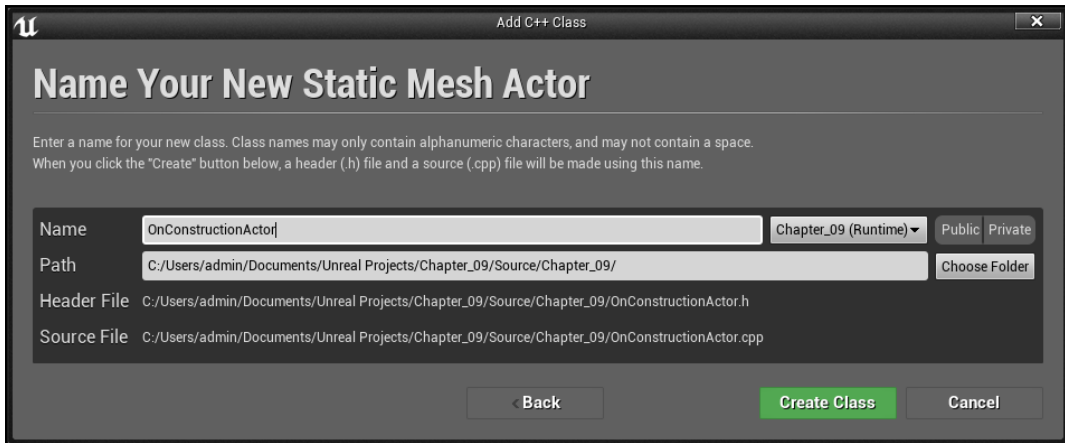




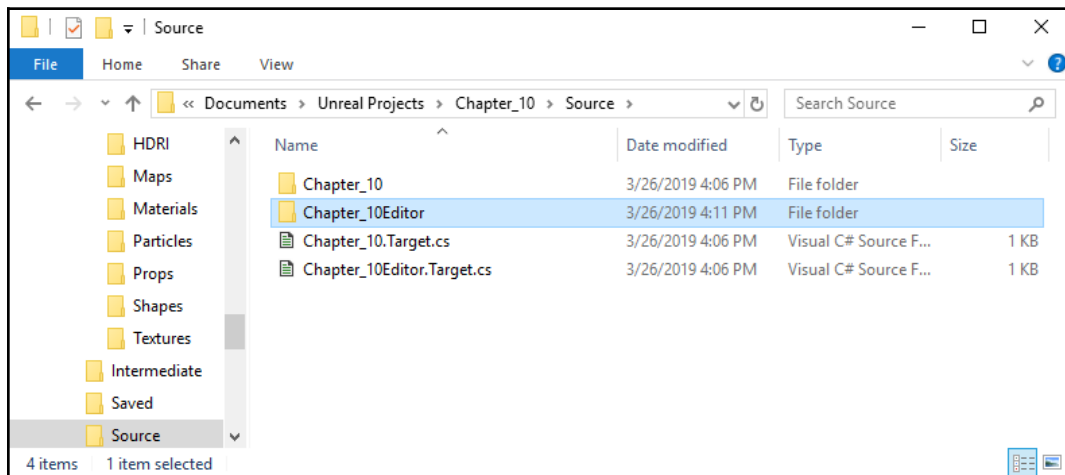
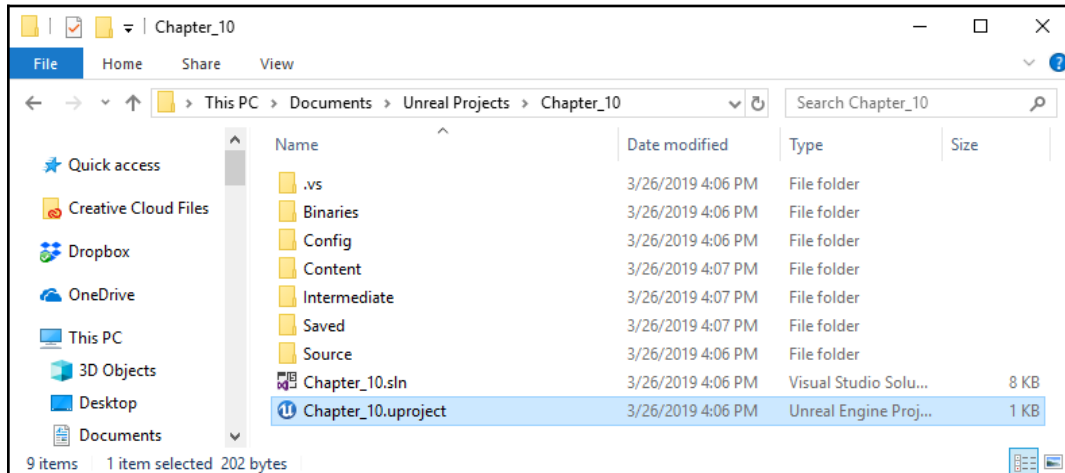


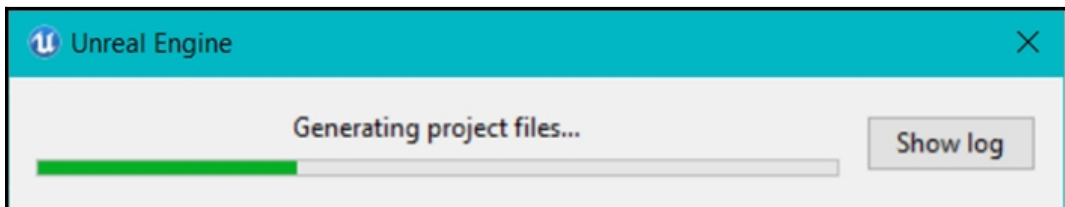
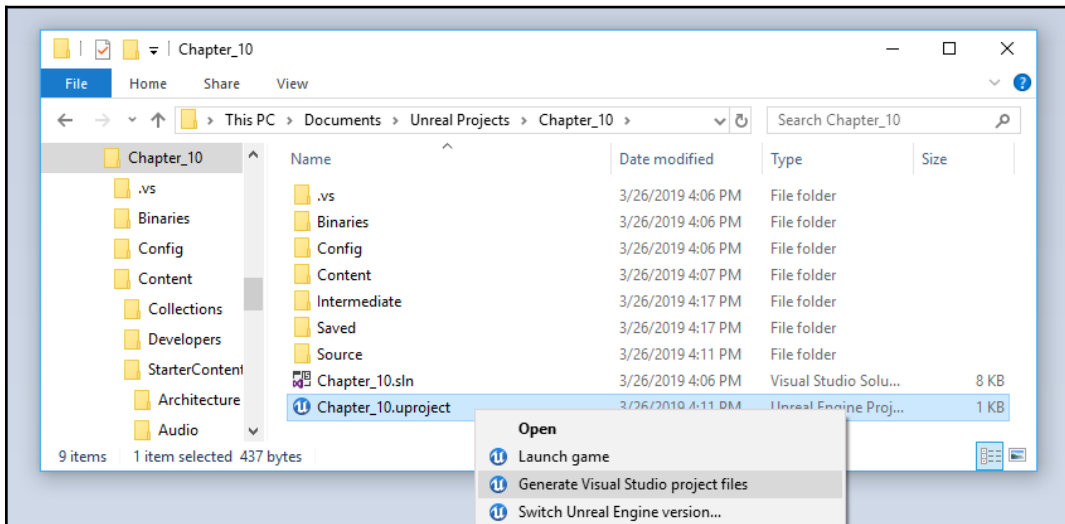
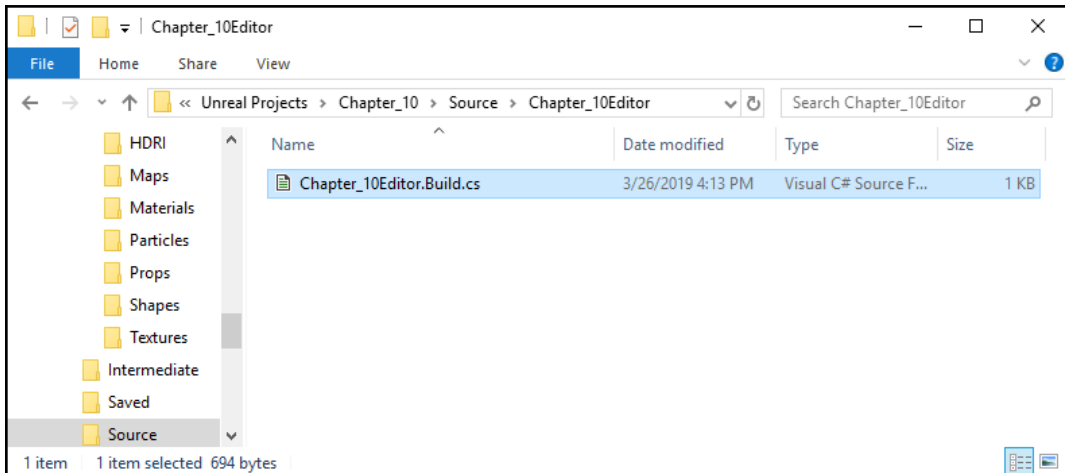




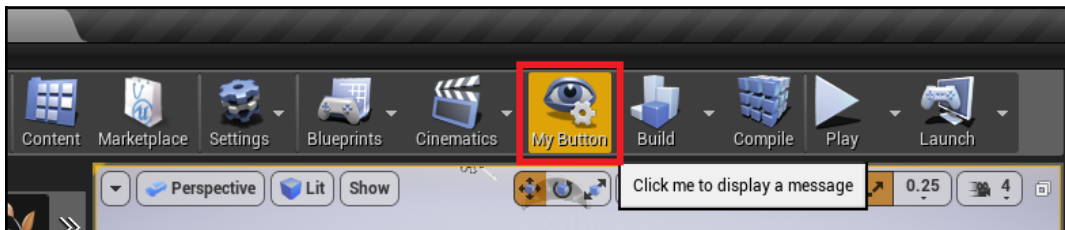
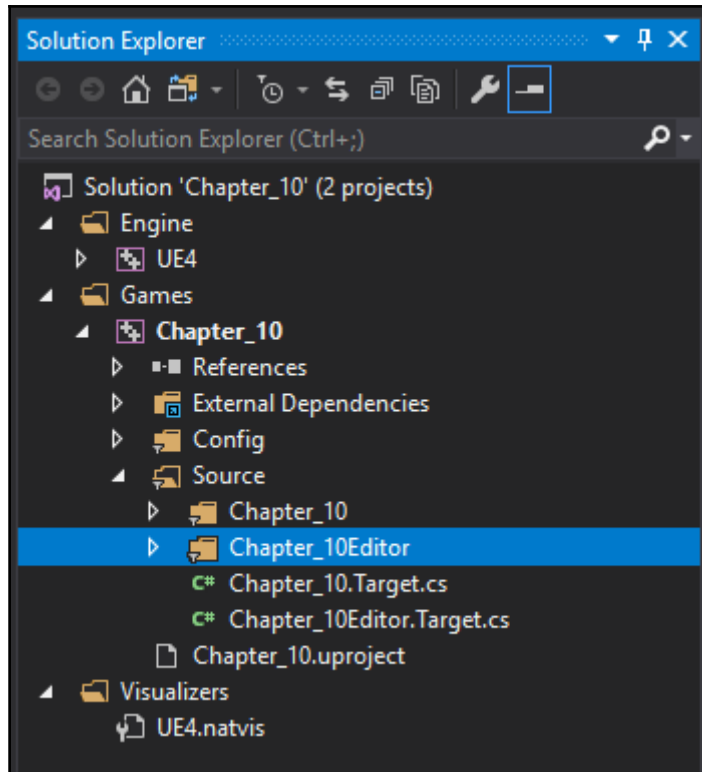


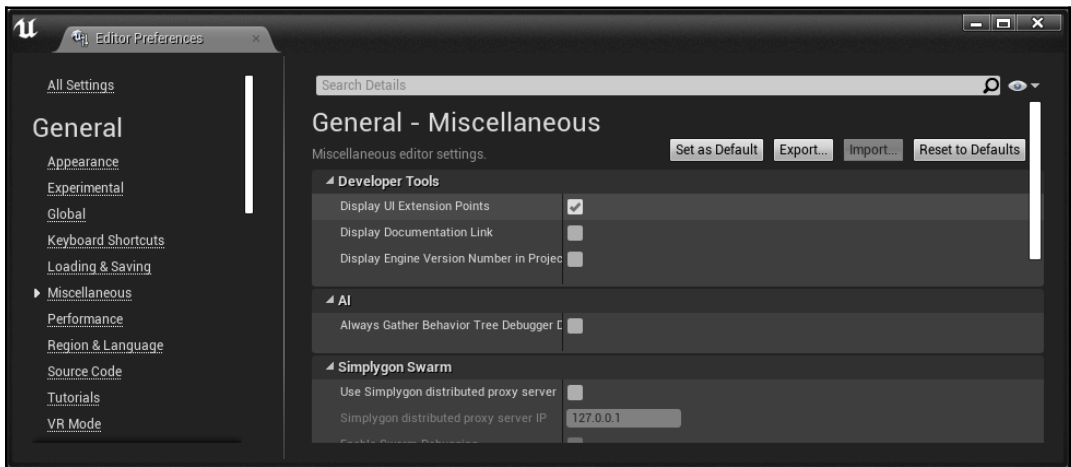
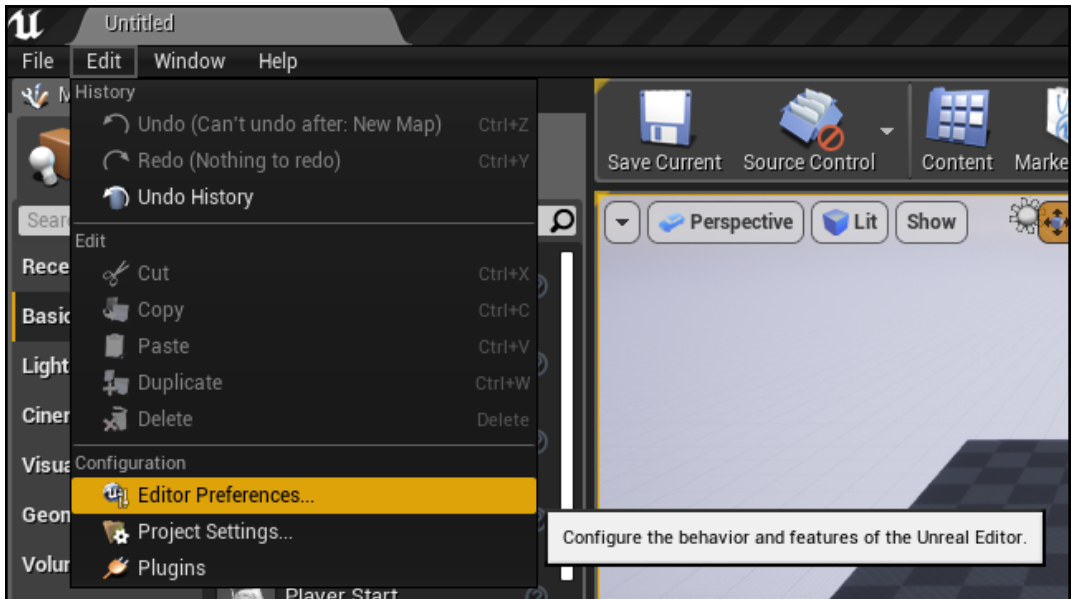
# Chapter 10: Integrating C++ and the Unreal Editor: Part II

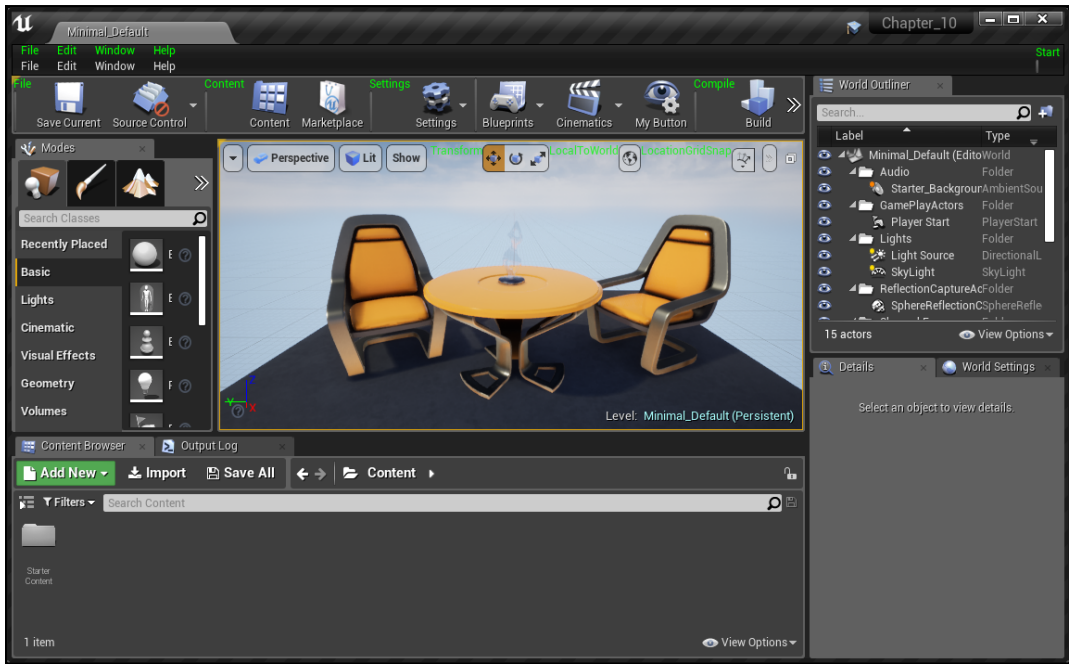


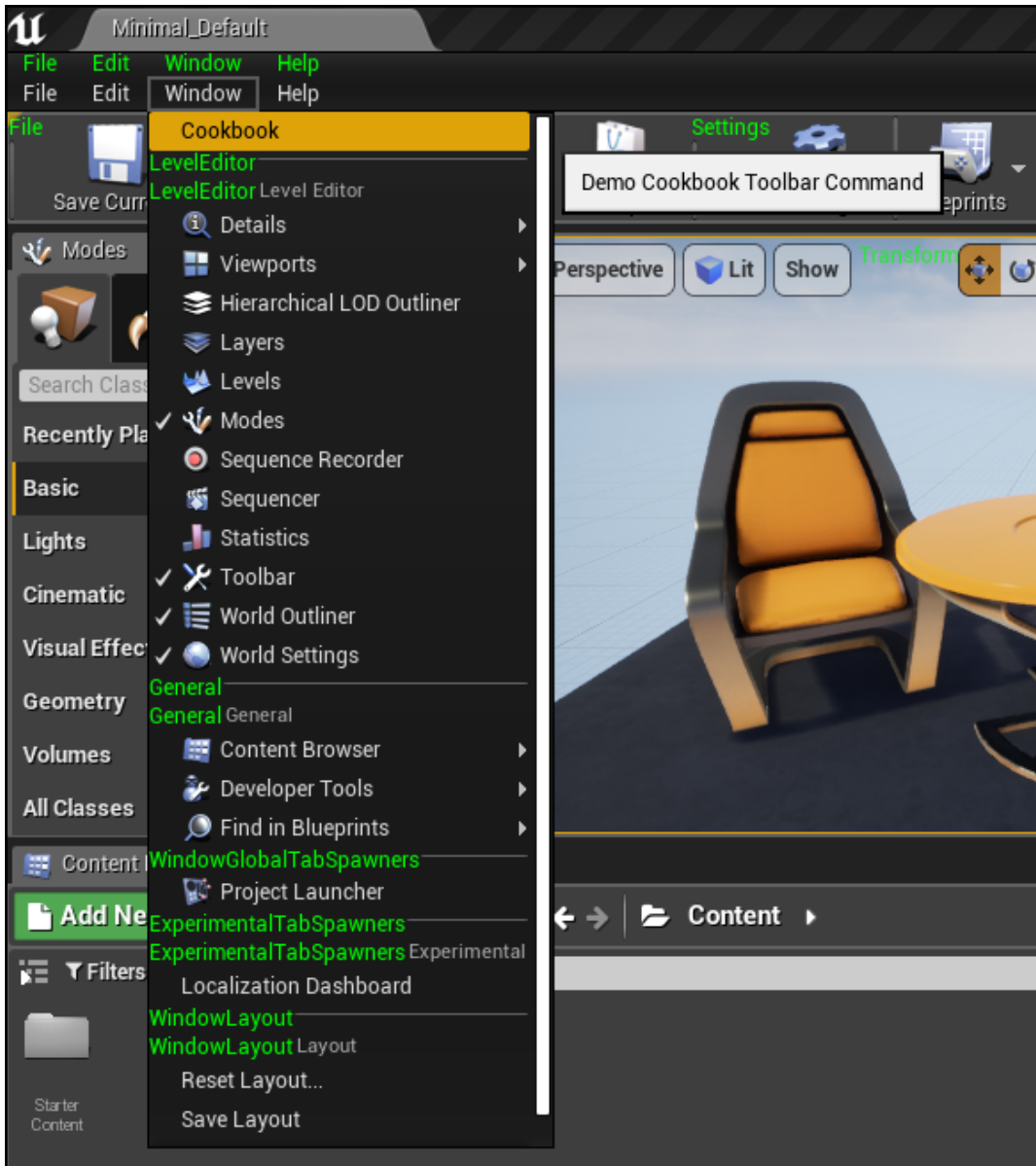


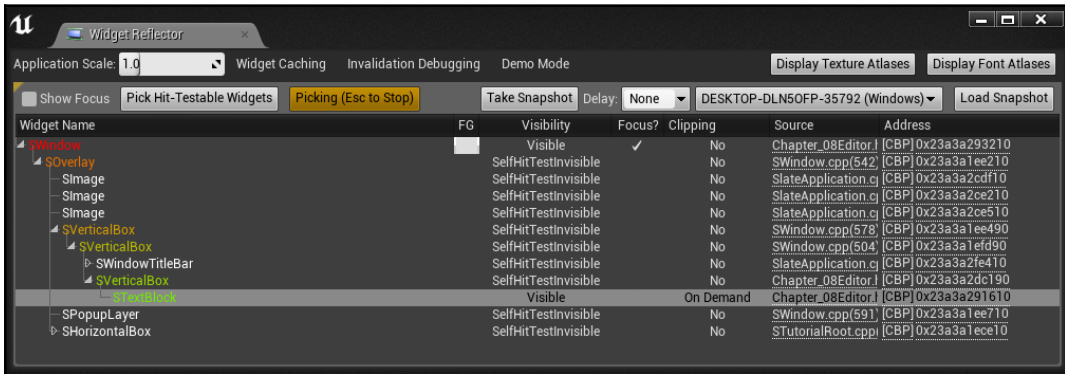
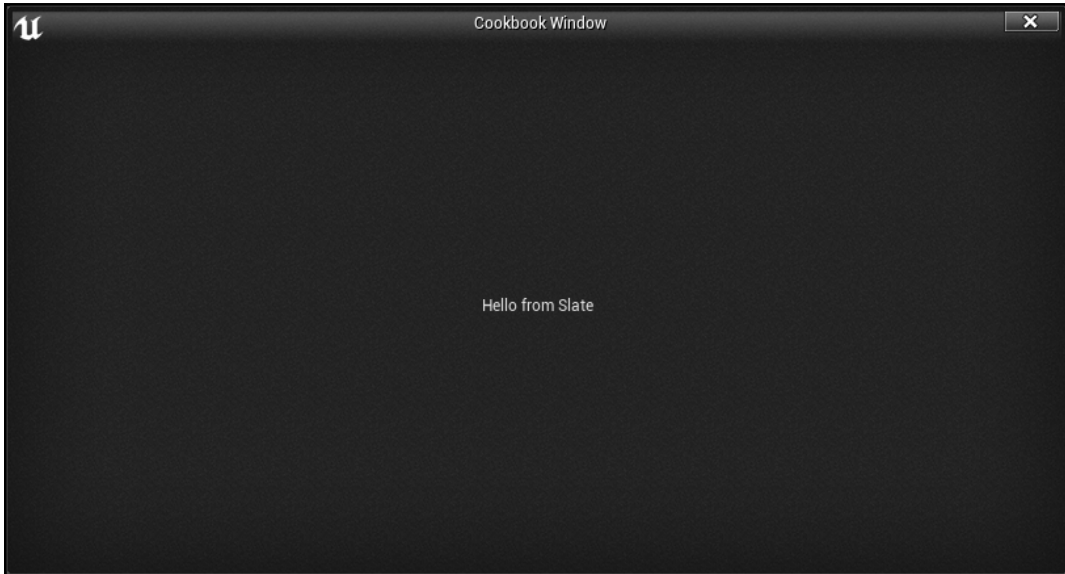


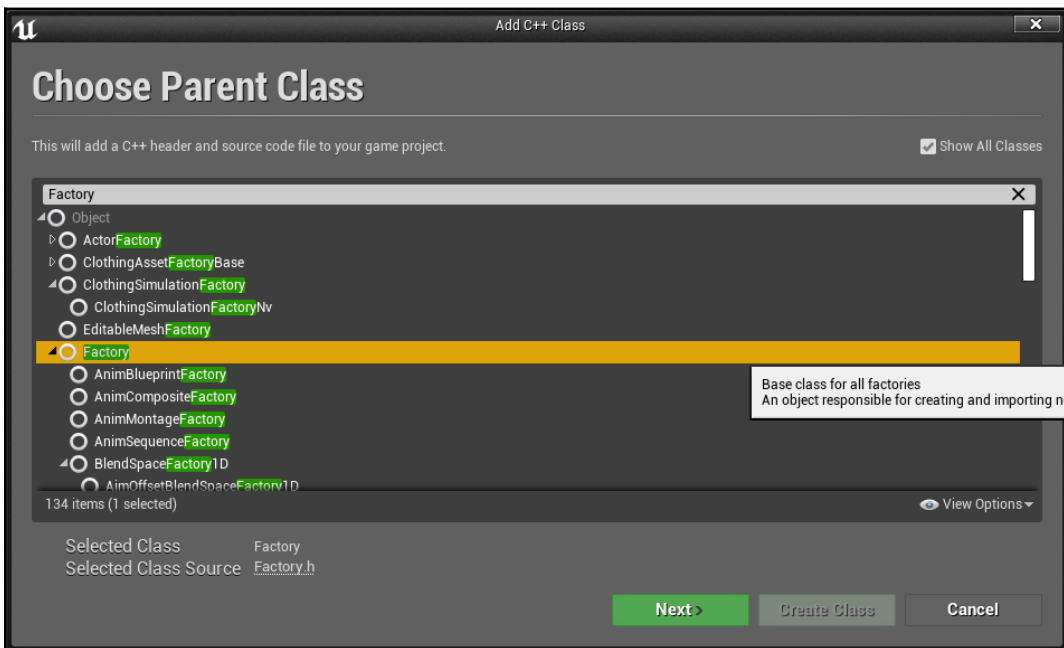
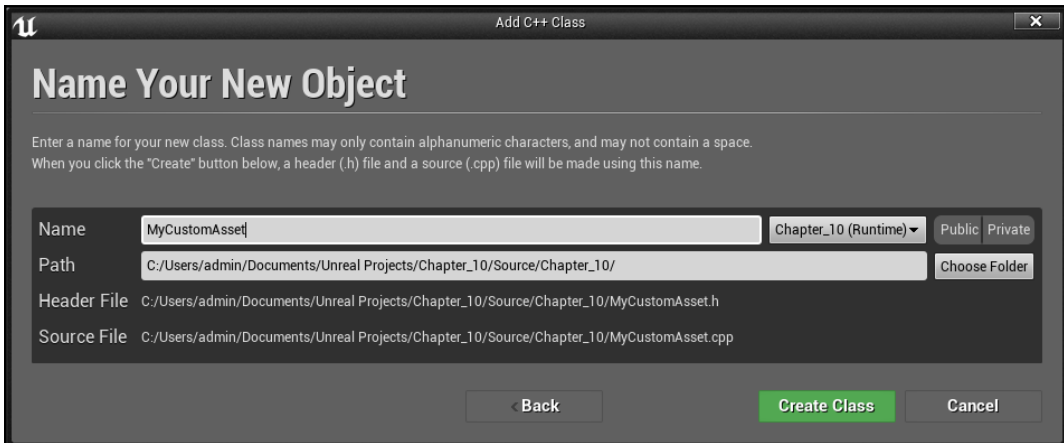


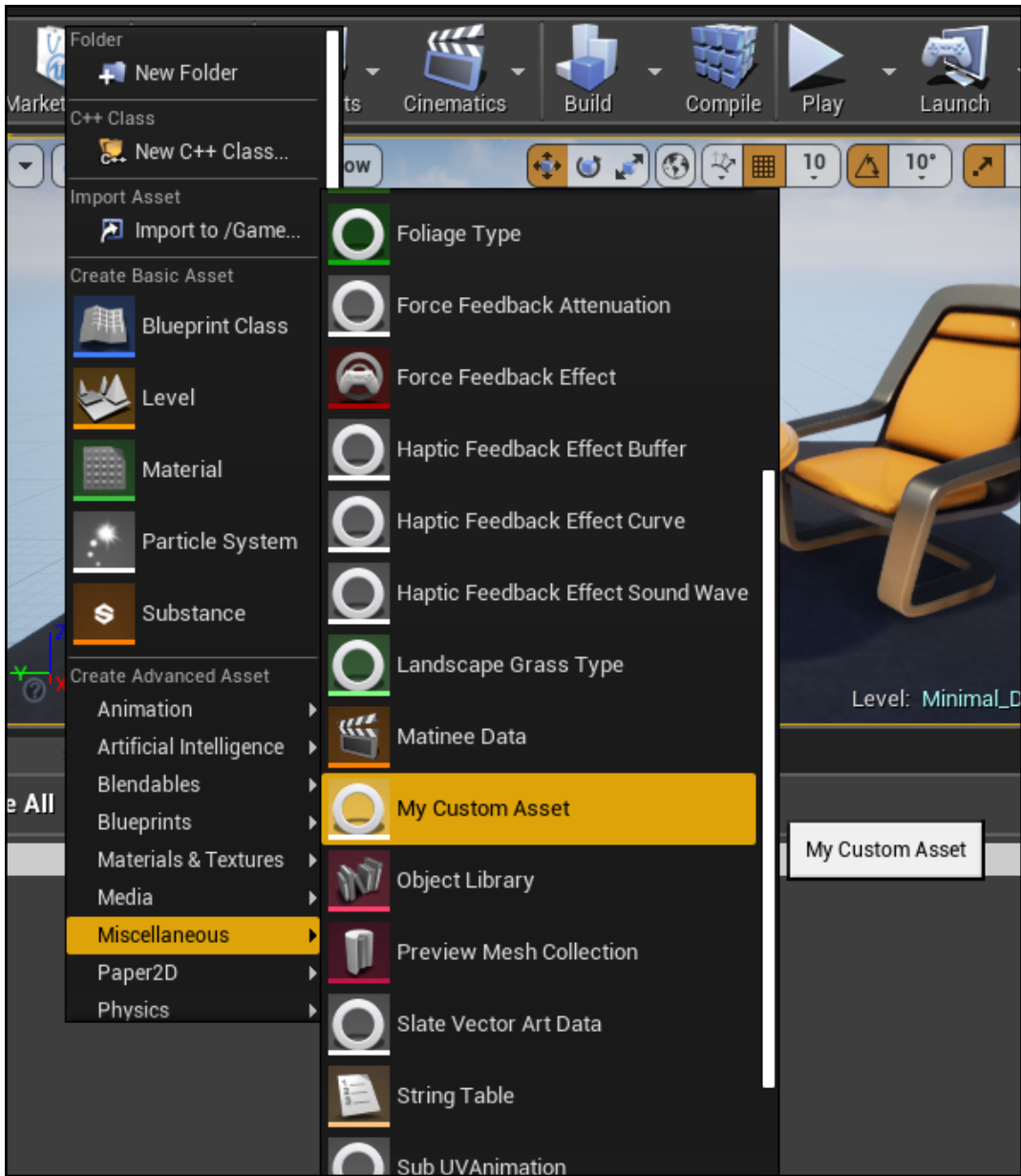


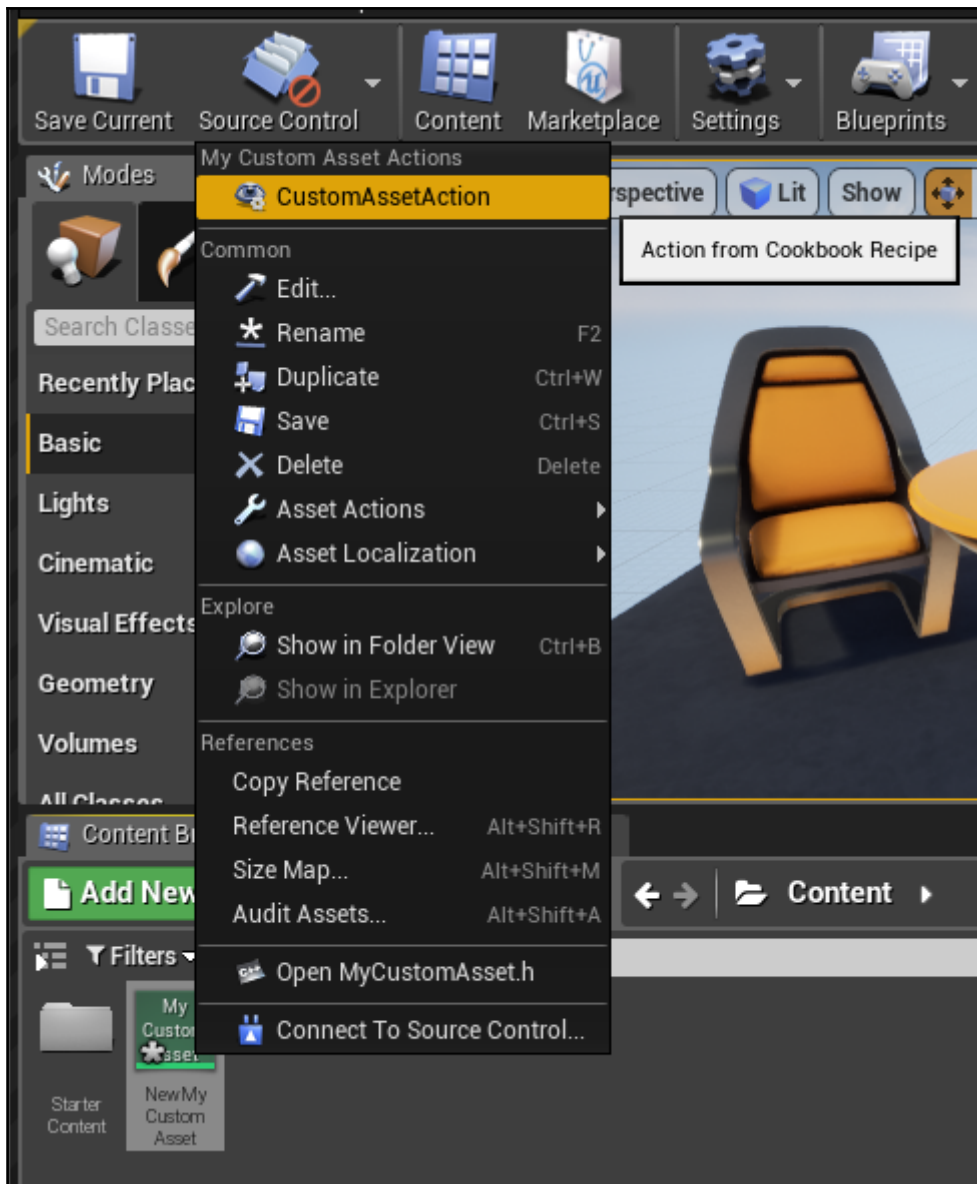






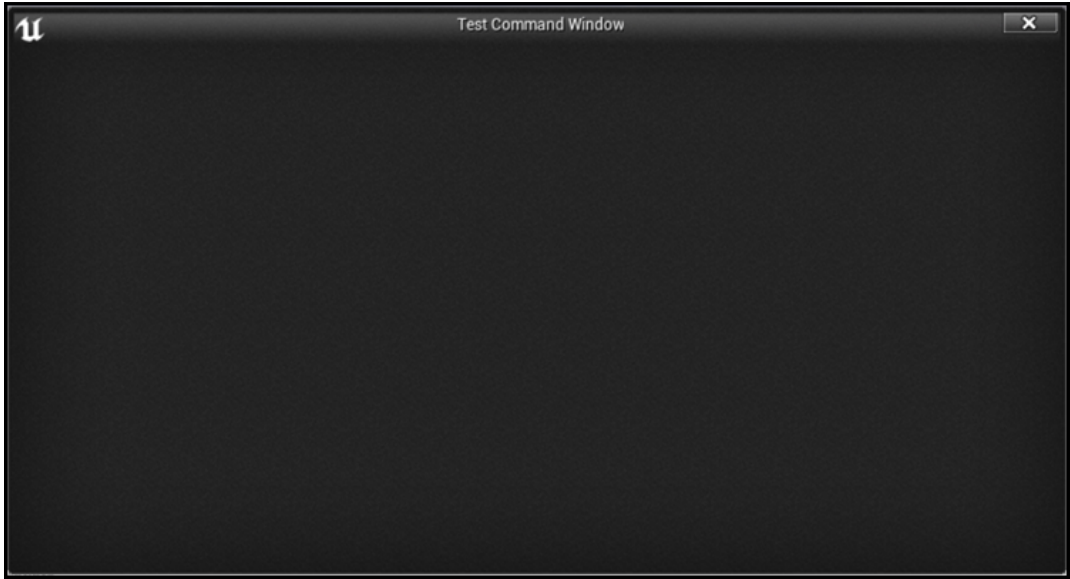


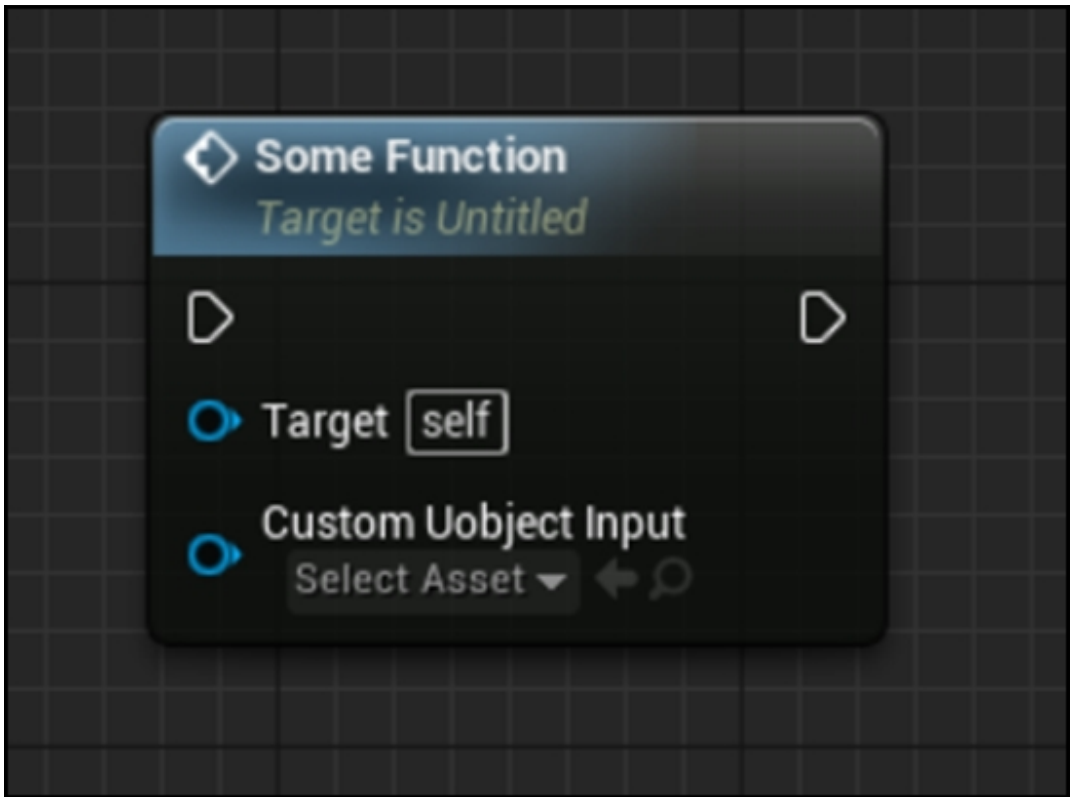


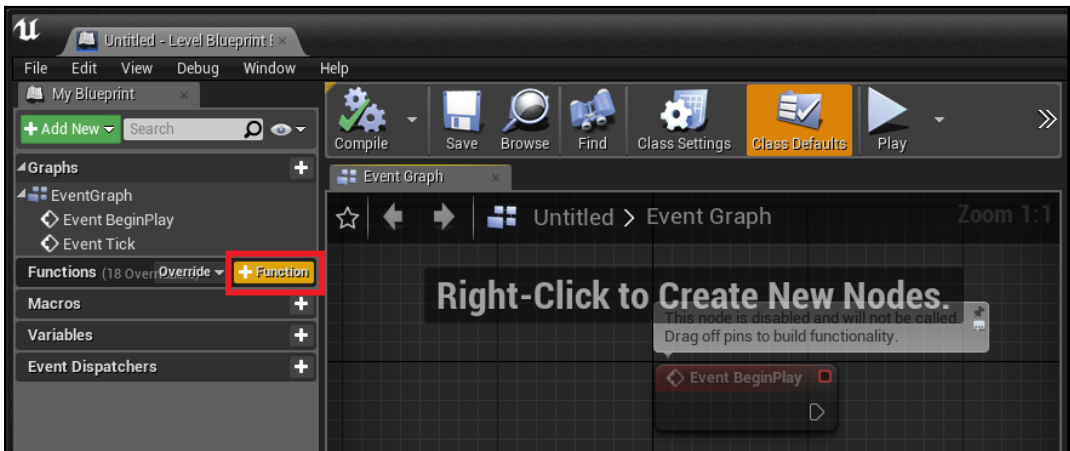
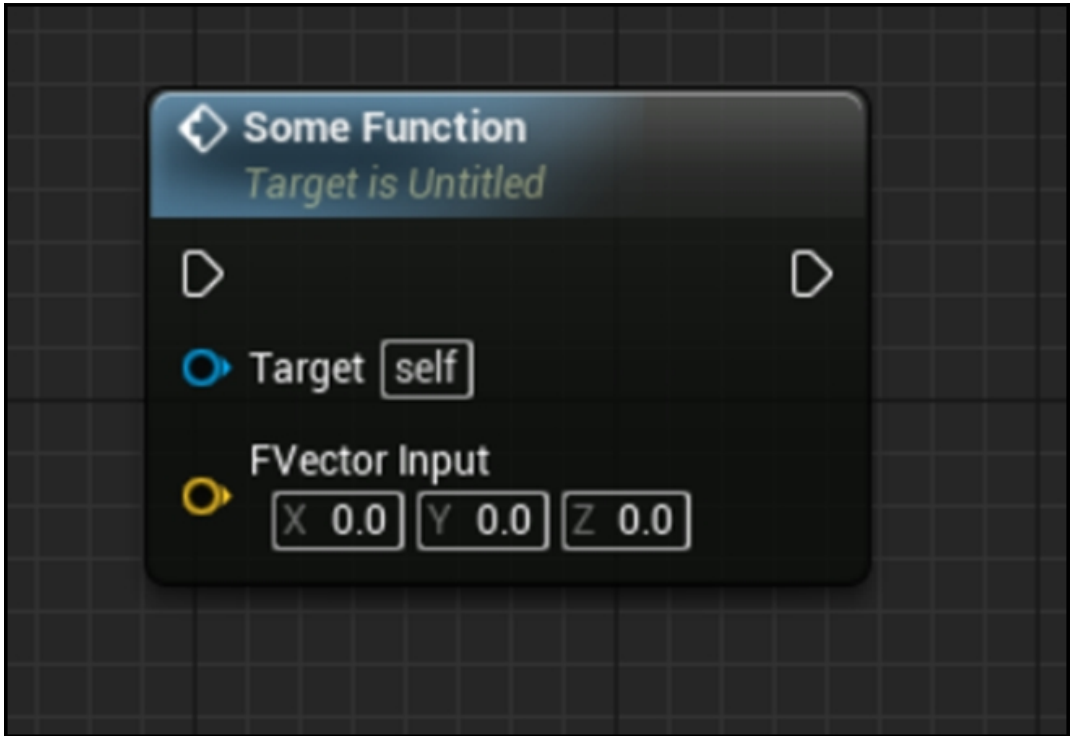


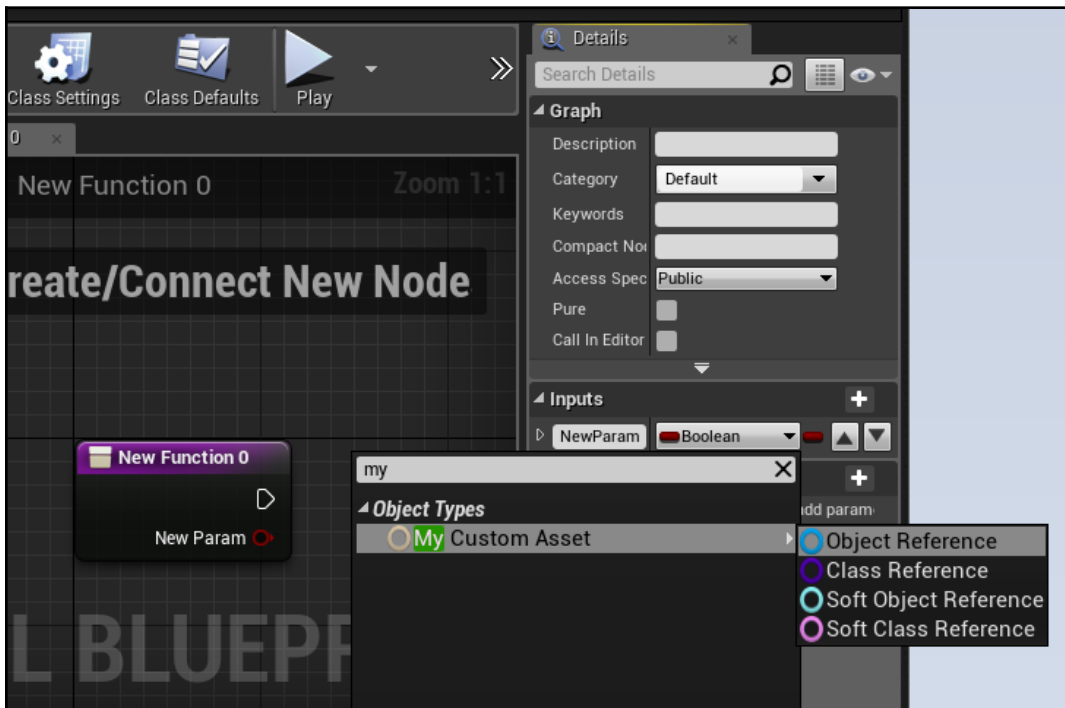
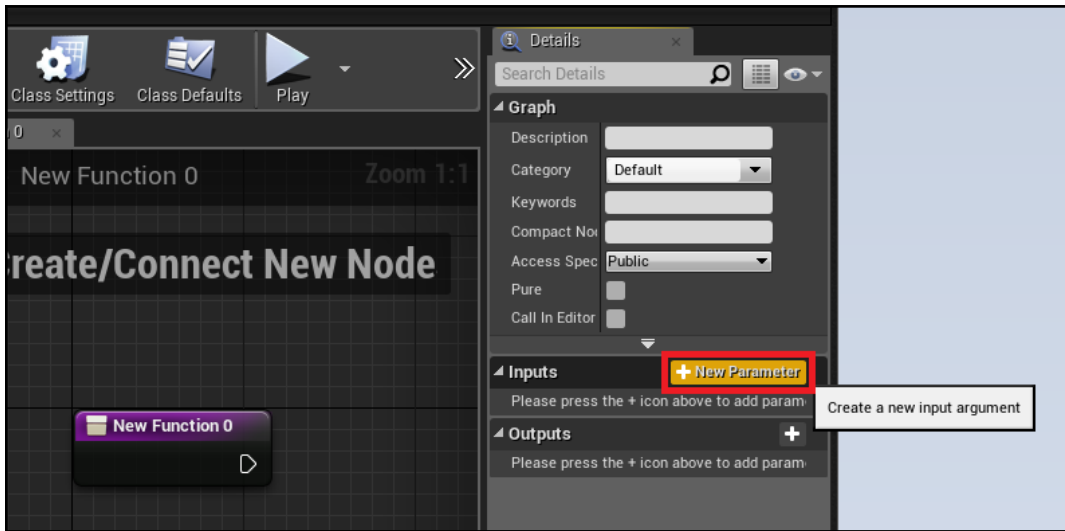


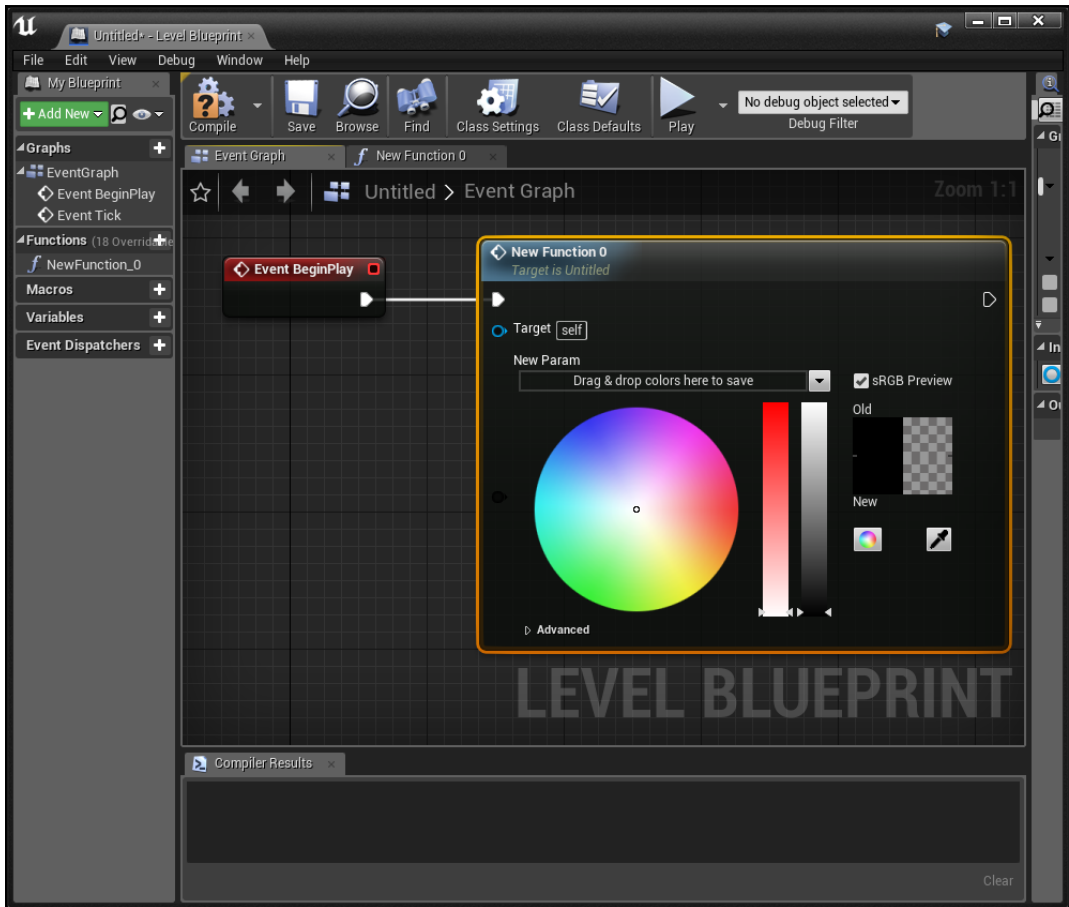


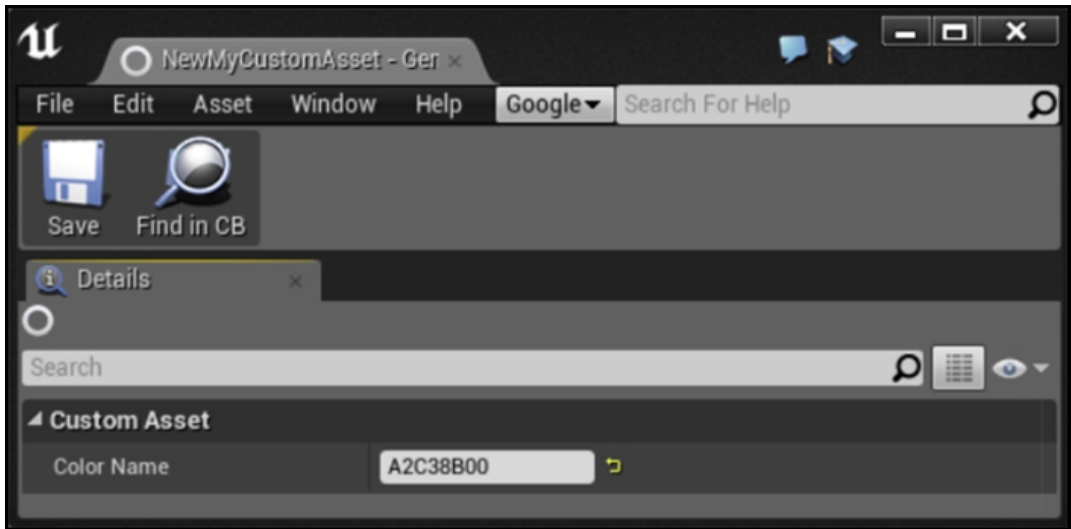


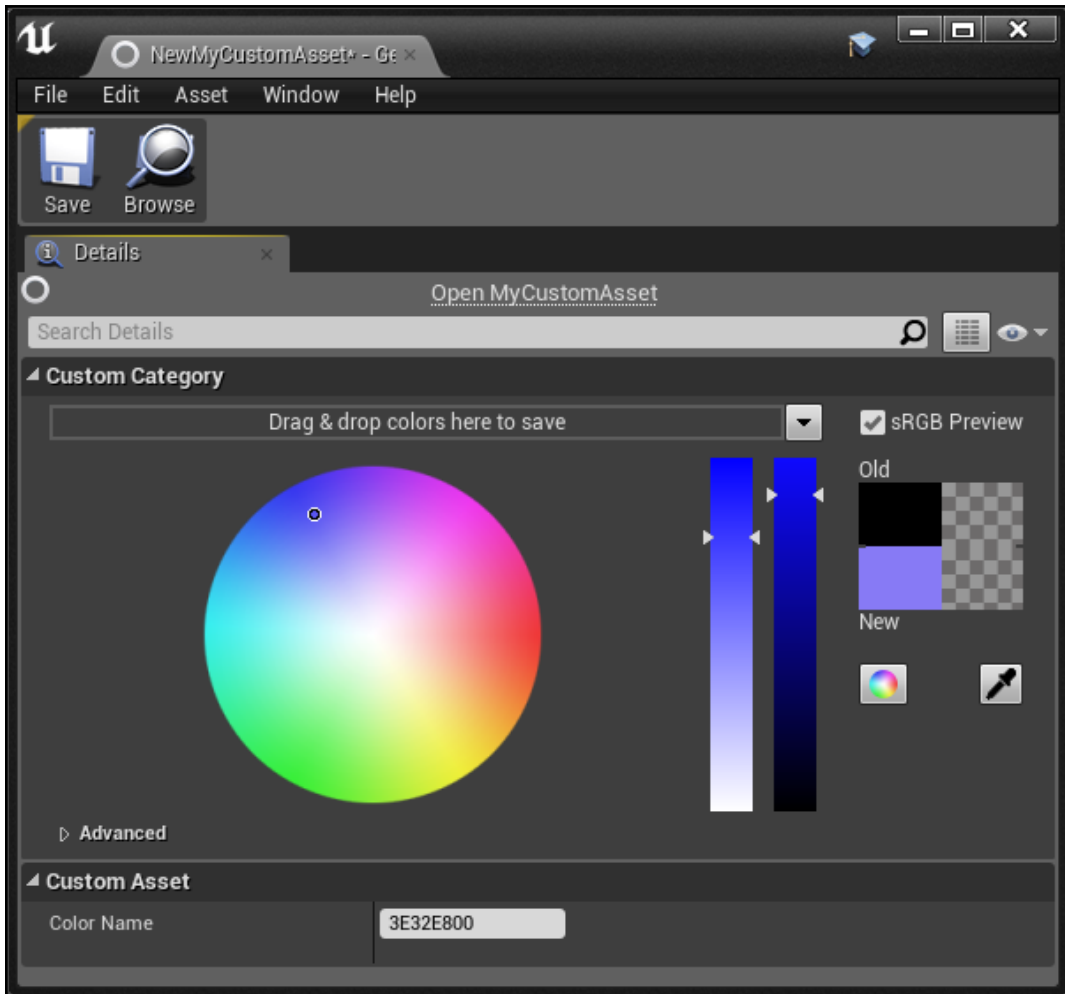






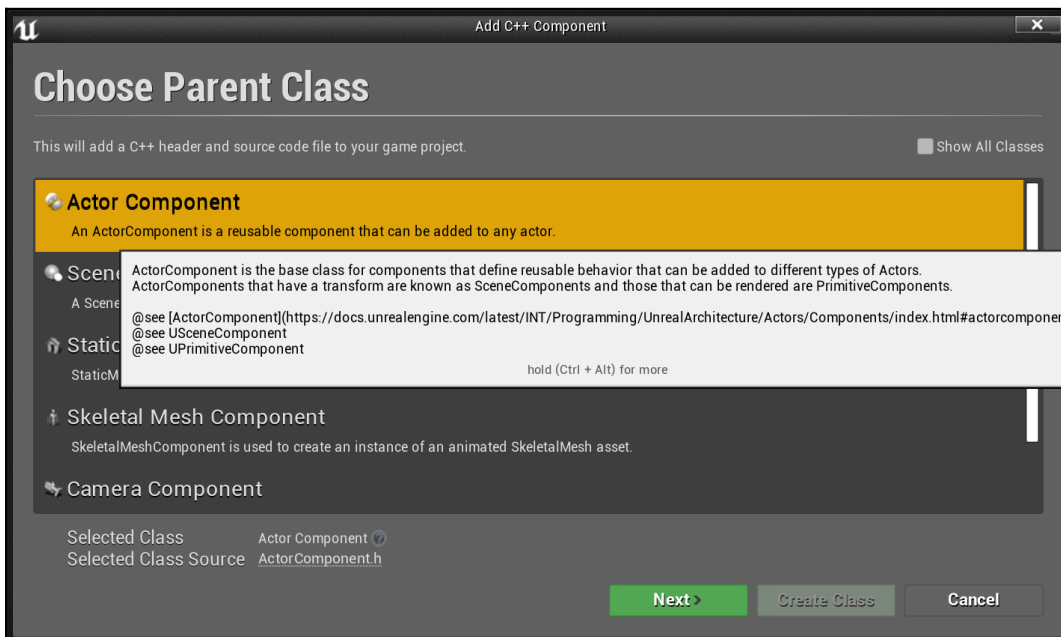
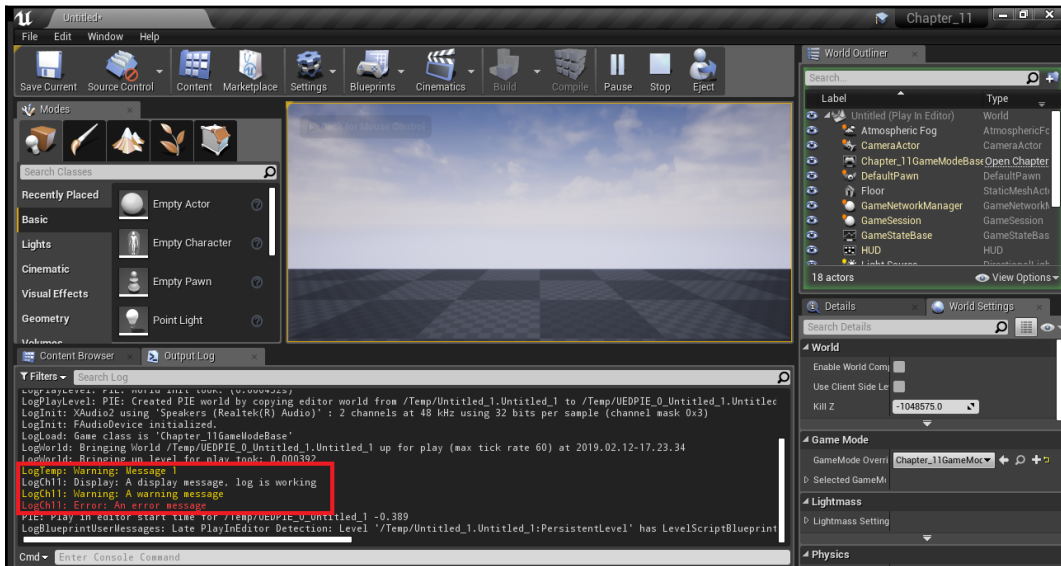


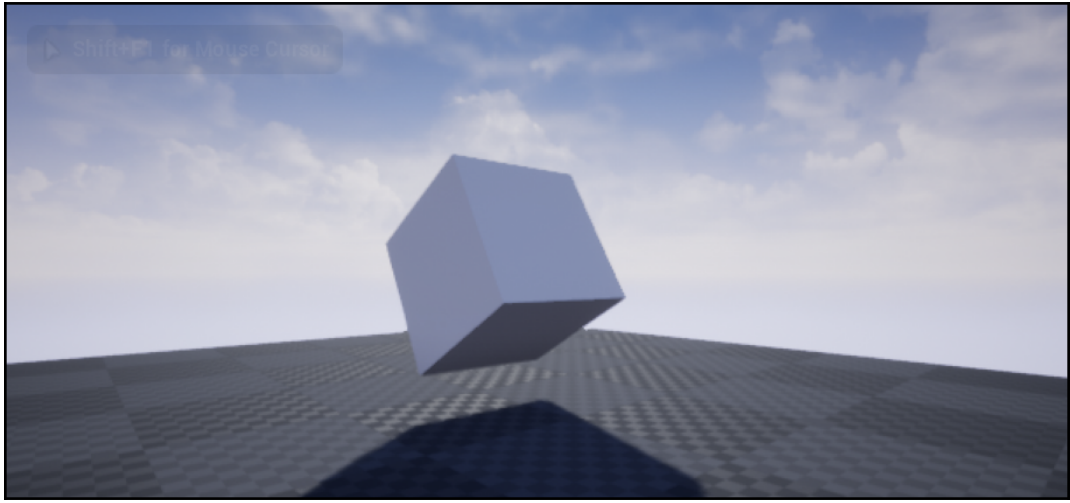






# Chapter 11: Working with UE4 APIs





$\theta$

---

$$x = v_x \sin\left(\frac{\theta}{2}\right)$$

$$y = v_y \sin\left(\frac{\theta}{2}\right)$$

$$z = v_z \sin\left(\frac{\theta}{2}\right)$$

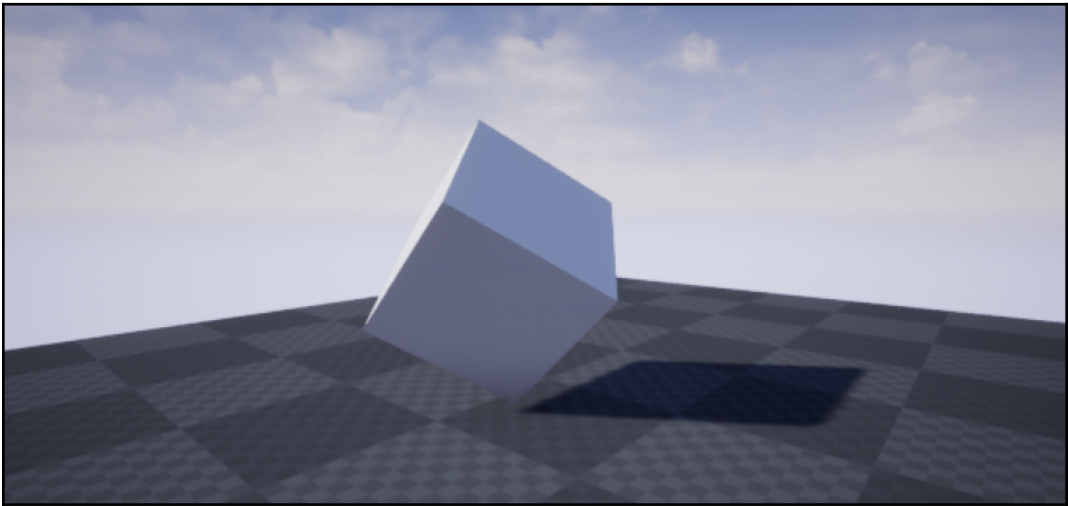
$$w = \cos\left(\frac{\theta}{2}\right)$$

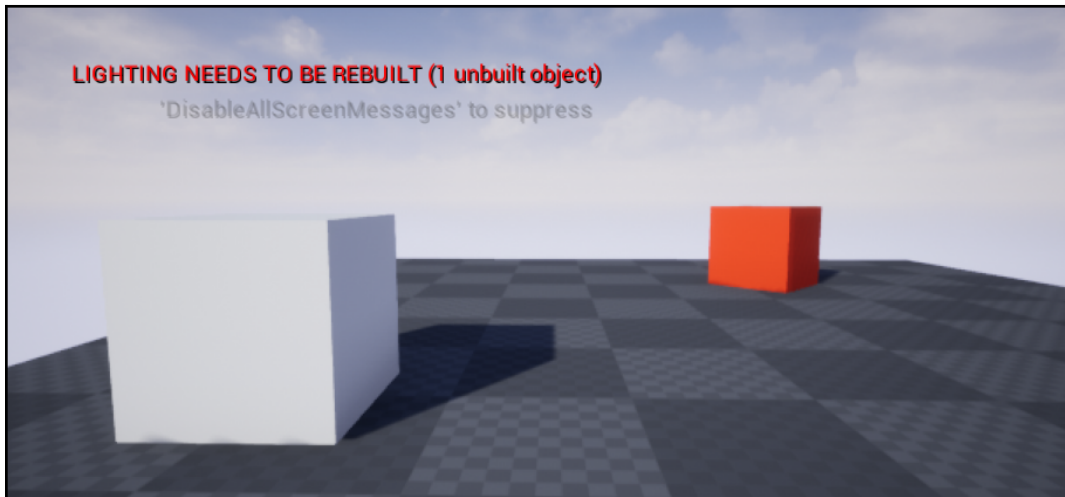
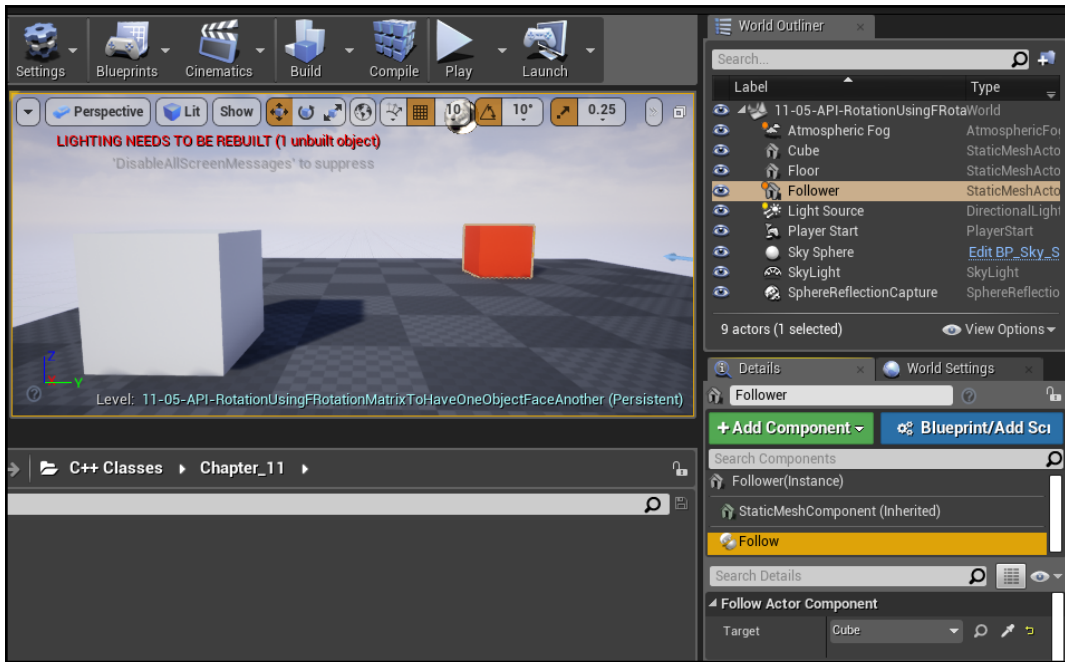
$$v = (1, 2, 1) = \left(\frac{1}{\sqrt{5}}, \frac{2}{\sqrt{5}}, \frac{1}{\sqrt{5}}\right)$$

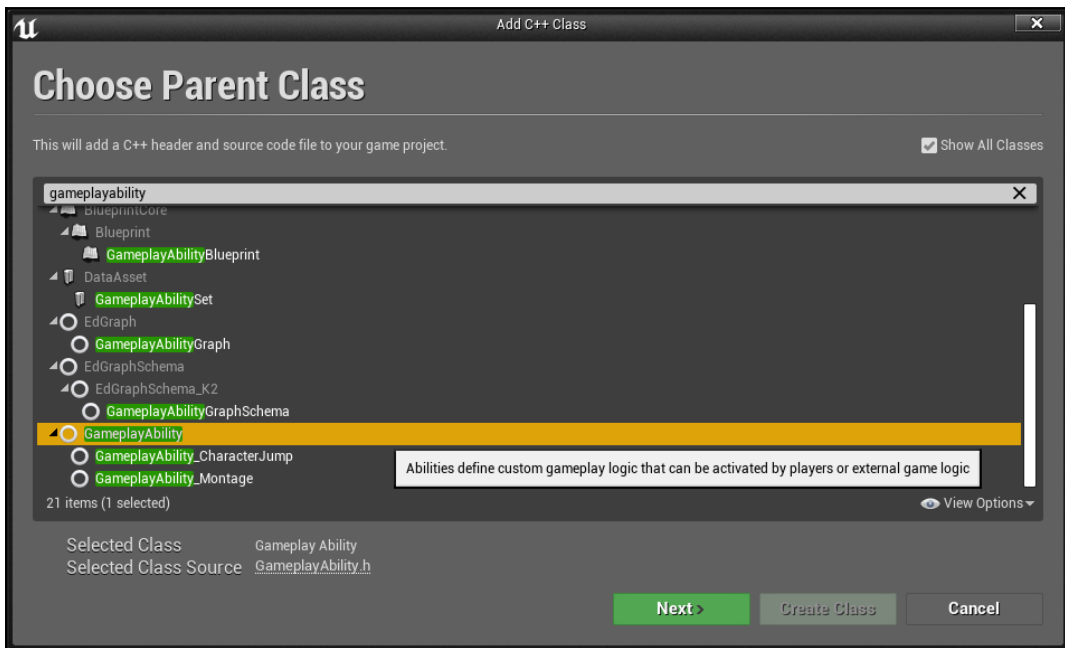
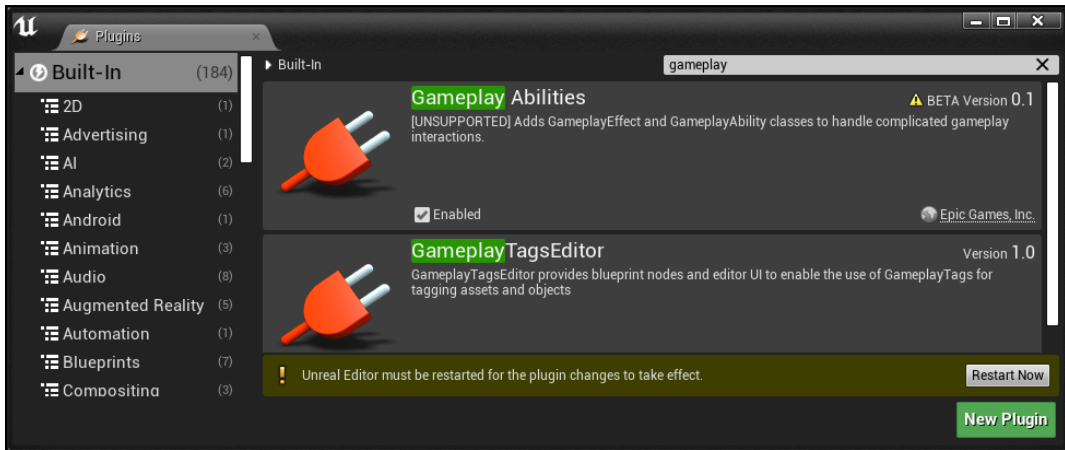
---

$$\frac{\pi}{2}$$

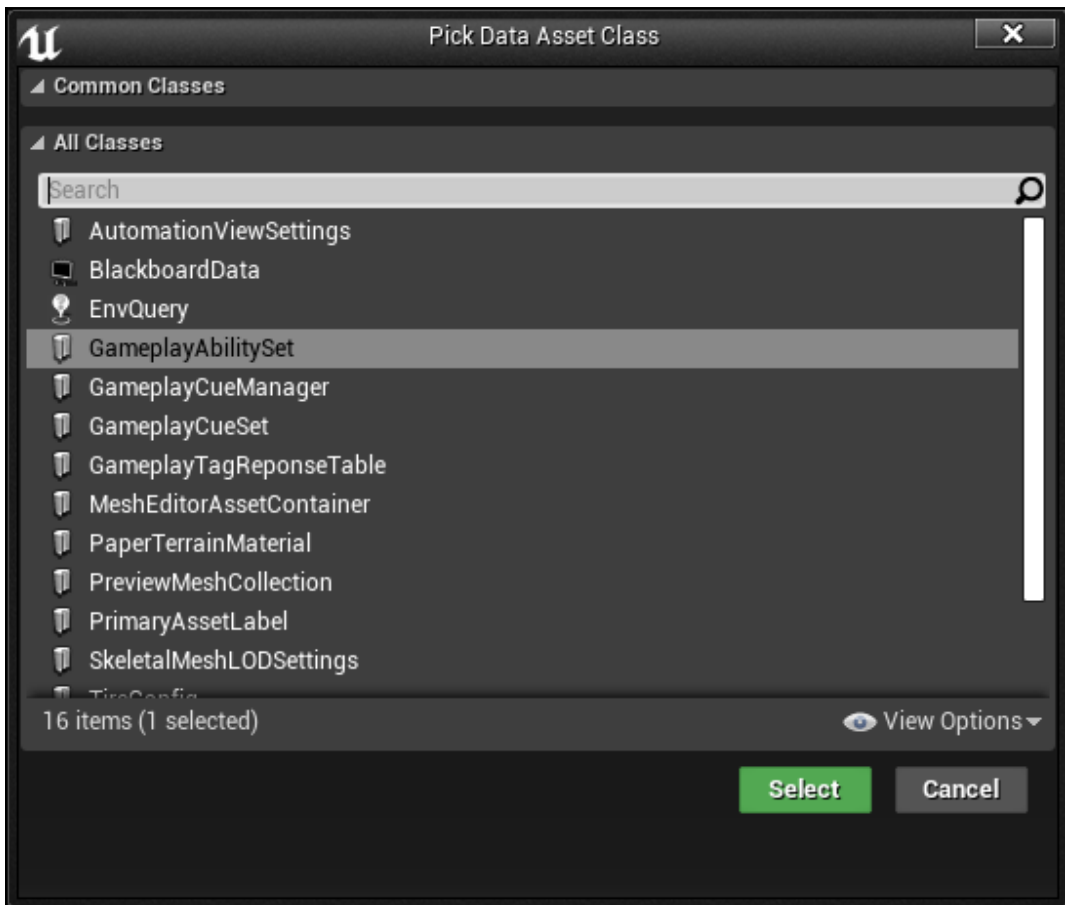
$$(x, y, z, w) = \left( \frac{1}{\sqrt{10}}, \frac{2}{\sqrt{10}}, \frac{1}{\sqrt{10}}, \frac{1}{\sqrt{2}} \right)$$



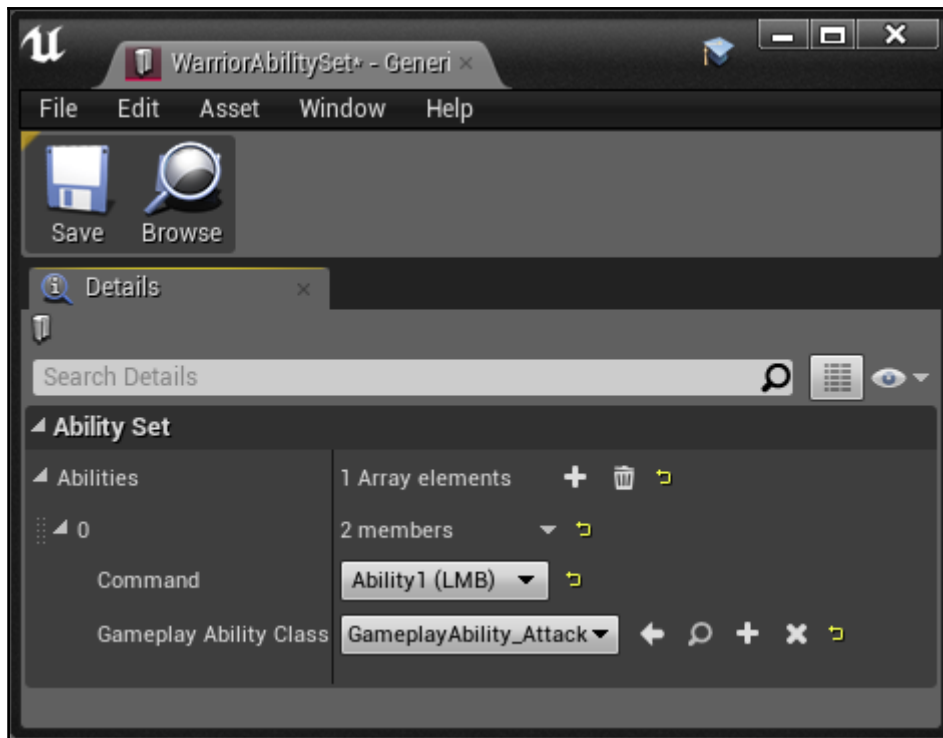


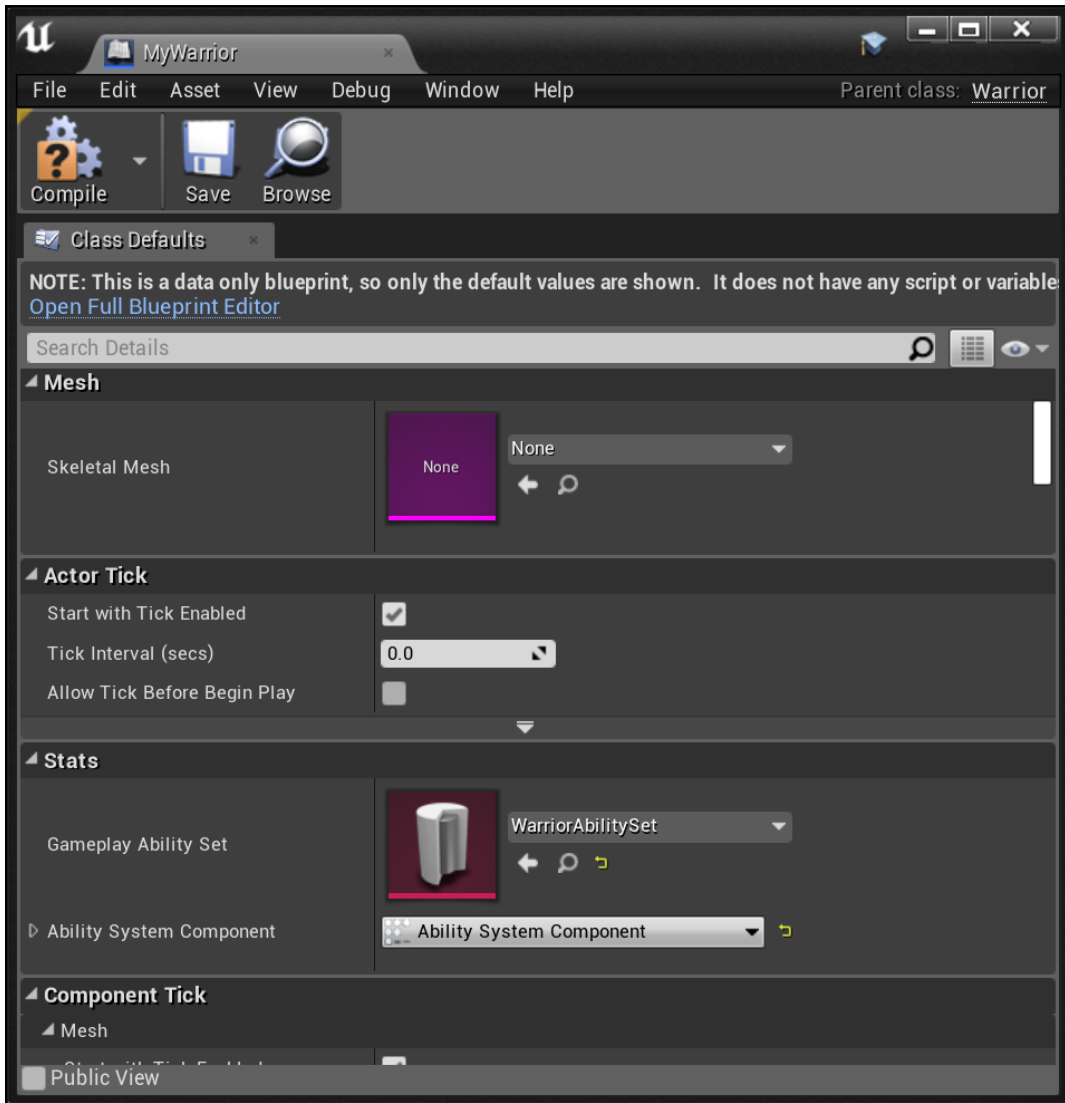












```
Content Browser x Output Log x
Filters Search Log
Triggered for GameplayAbilitiesWithGameControls (0.0022025)
LogInit: XAudio2 using 'Speakers (Realtek(R) Audio)' : 2 channels at 48 kHz usi
LogInit: FAudioDevice initialized.
LogLoad: Game class is 'NewGameMode_C'
LogWorld: Bringing World /Game/UEDPIE_0_11-07-GameplayAbilitiesAPI-TriggeringAn
LogWorld: Bringing up level for play took: 0.000405
LogTemp: Warning: ability_attack CanActivateAbility!
LogTemp: Warning: Activating ugameplayability_attack().. swings weapon!
LogTemp: Warning: ability_attack CheckCost!
PIE: Play in editor start time for /Game/UEDPIE_0_11-07-GameplayAbilitiesAPI-Tr
LogBlueprintUserMessages: Late PlayInEditor Detection: Level '/Game/11-07-Gamep
GameplayAbilitiesAPI-TriggeringAnActorsGameplayAbilitiesWithGameControls:Persis
h ClassGeneratedBy '/Game/11-07-GameplayAbilitiesAPI-TriggeringAnActorsGameplay
```

u Add C++ Class

## Choose Parent Class

This will add a C++ header and source code file to your game project.  Show All Classes


attr

- Object
  - AttributeSet**
  - AbilitySystemTestAttributeSet
- GameplayTask
  - AbilityTask
    - AbilityTask\_WaitAttributeChange
    - AbilityTask\_WaitAttributeChangeRatioThreshold
    - AbilityTask\_WaitAttributeChangeThreshold
- MaterialExpression
  - MaterialExpressionBlendMaterialAttributes
  - MaterialExpressionBreakMaterialAttributes
  - MaterialExpressionGetMaterialAttributes
  - MaterialExpressionMakeMaterialAttributes

25 items (1 selected)

Selected Class AttributeSet  
Selected Class Source AttributeSet.h

---

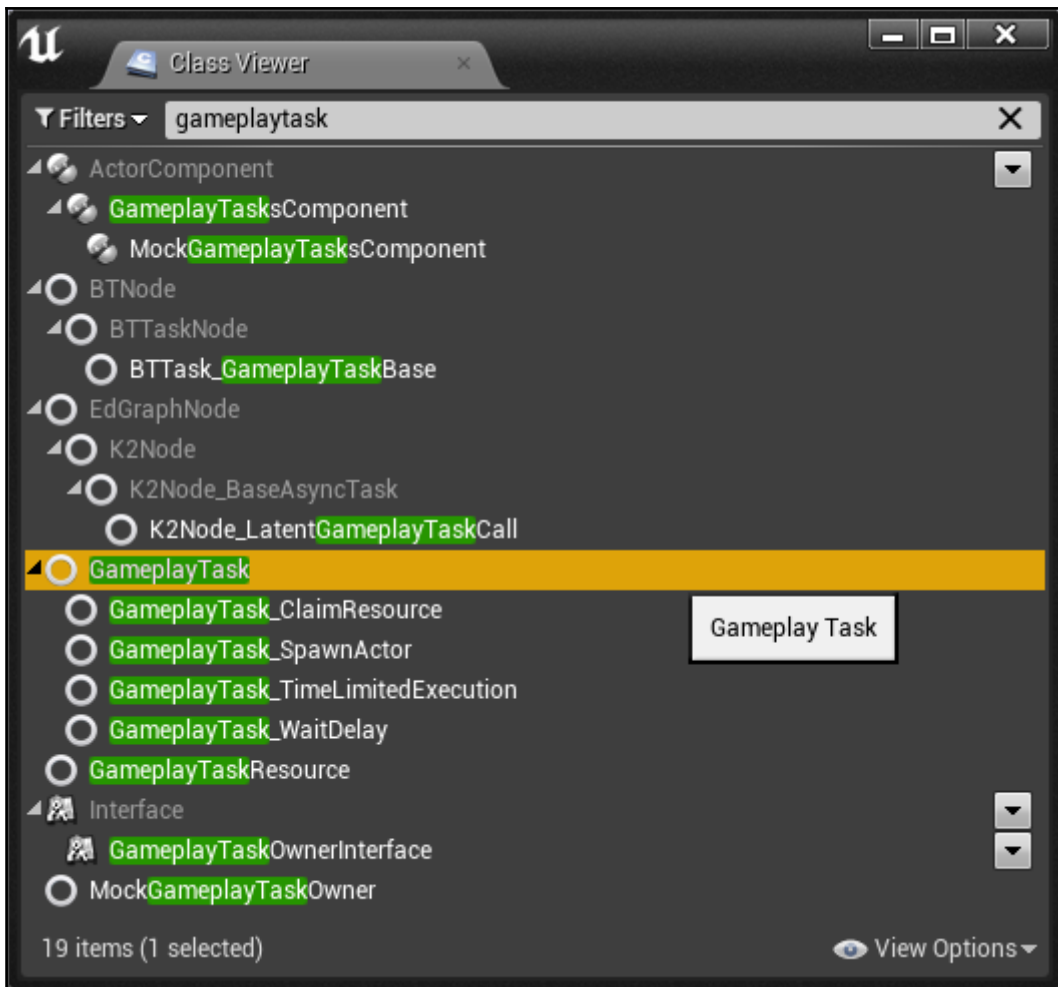
 Add C++ Class ✕

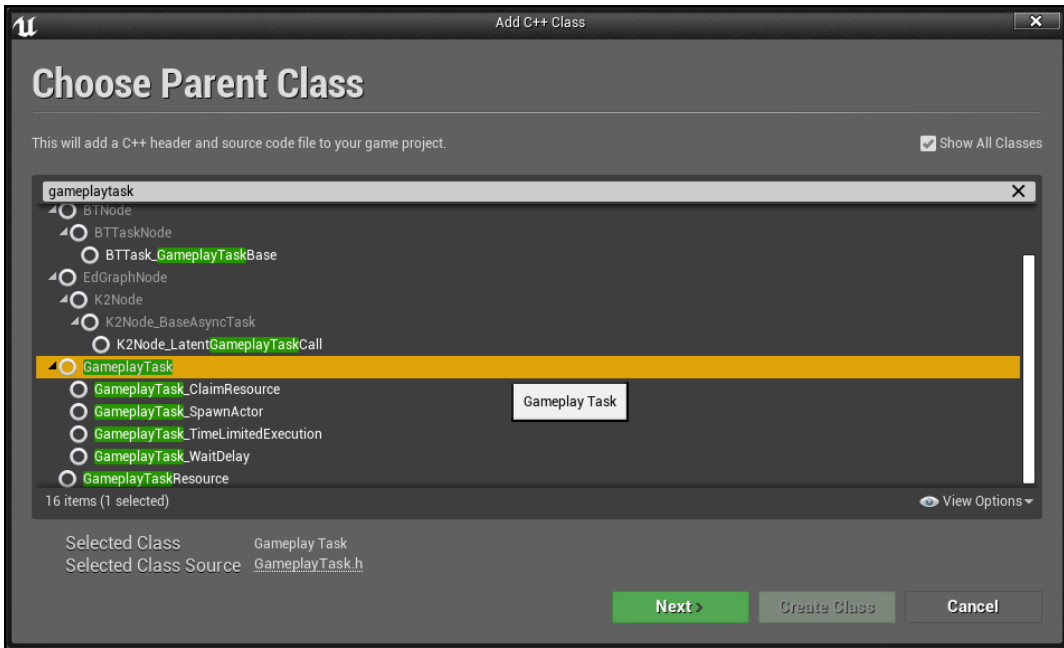
## Name Your New Attribute Set

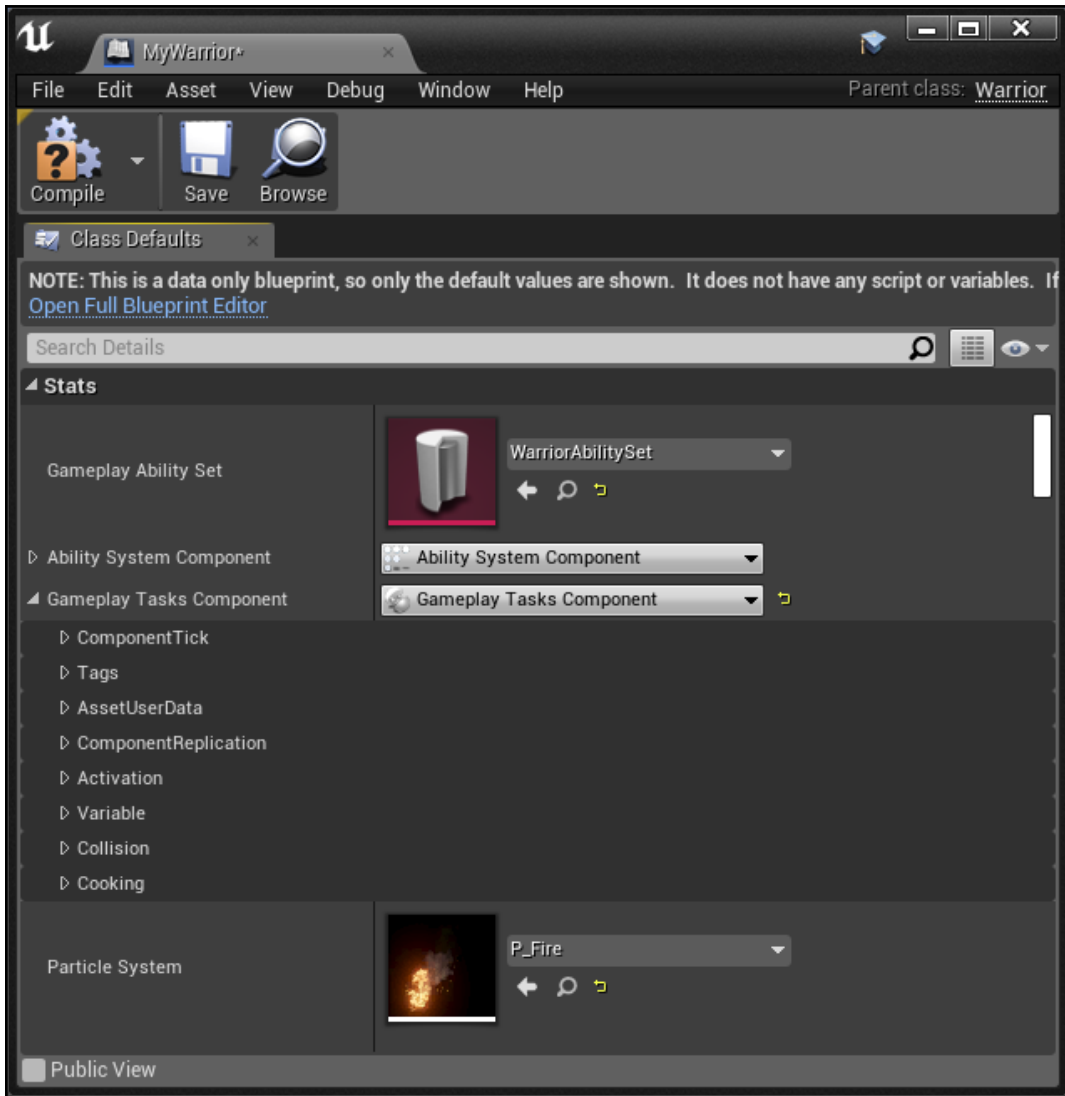
Enter a name for your new class. Class names may only contain alphanumeric characters, and may not contain a space. When you click the "Create" button below, a header (.h) file and a source (.cpp) file will be made using this name.

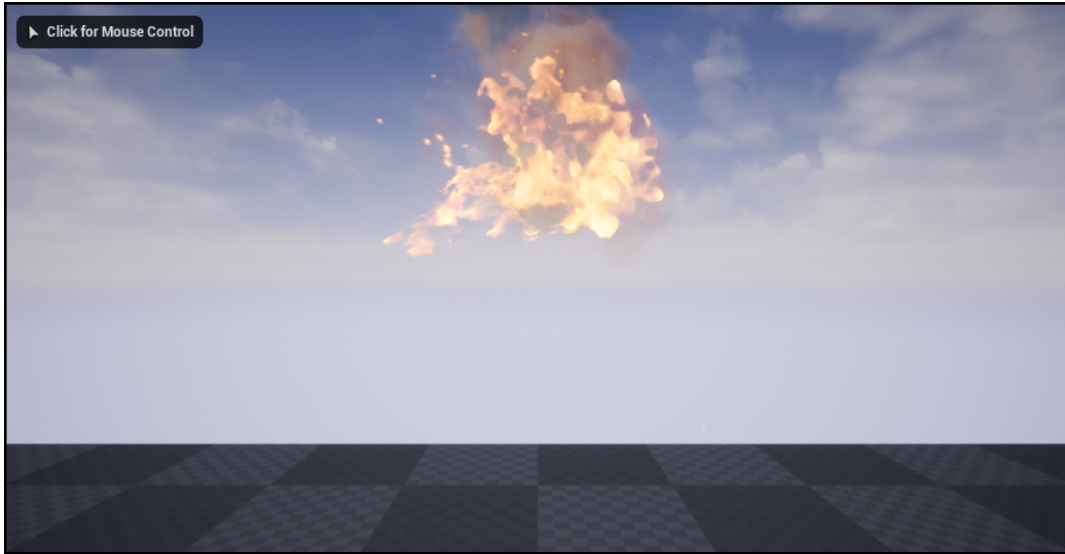
Name	GameUnitAttributeSet	Chapter_11 (Runtime) ▾	Public	Private
Path	C:/Users/admin/Documents/Unreal Projects/Chapter_11/Source/Chapter_11/			Choose Folder
Header File	C:/Users/admin/Documents/Unreal Projects/Chapter_11/Source/Chapter_11/GameUnitAttributeSet.h			
Source File	C:/Users/admin/Documents/Unreal Projects/Chapter_11/Source/Chapter_11/GameUnitAttributeSet.cpp			

< Back Create Class Cancel





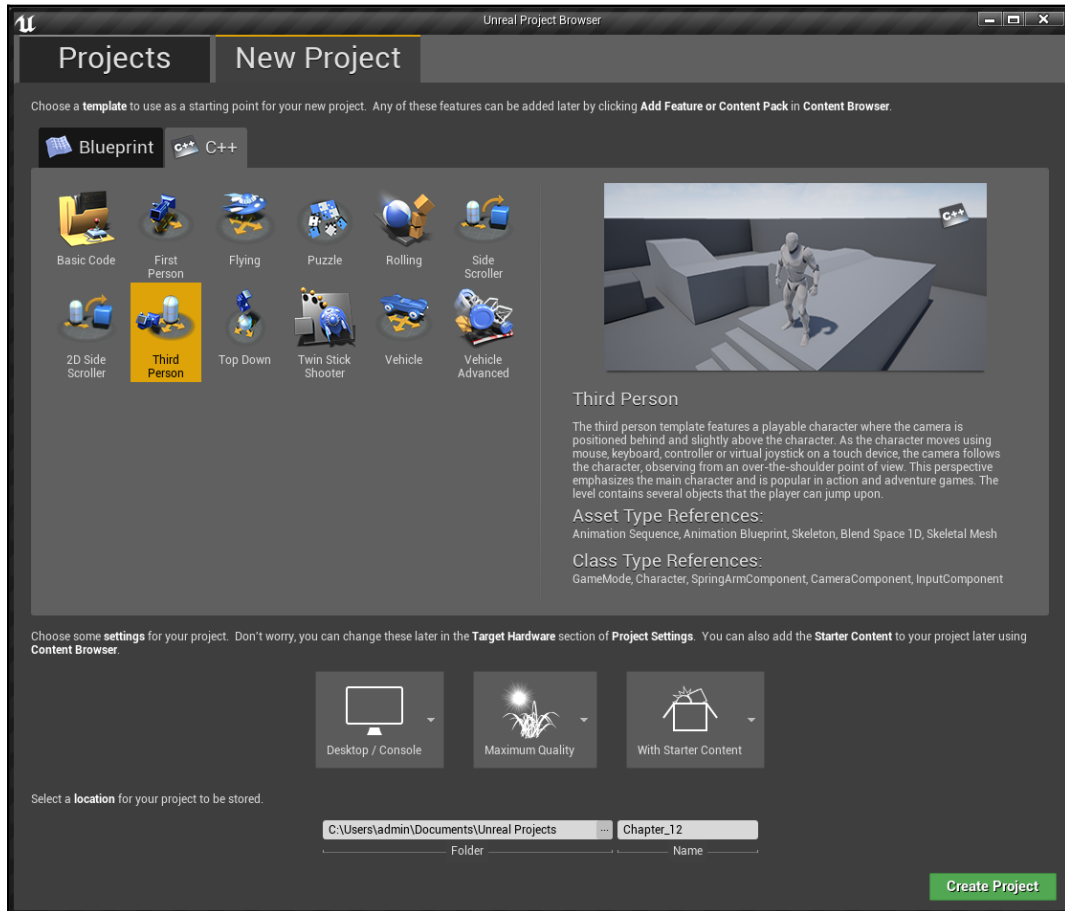


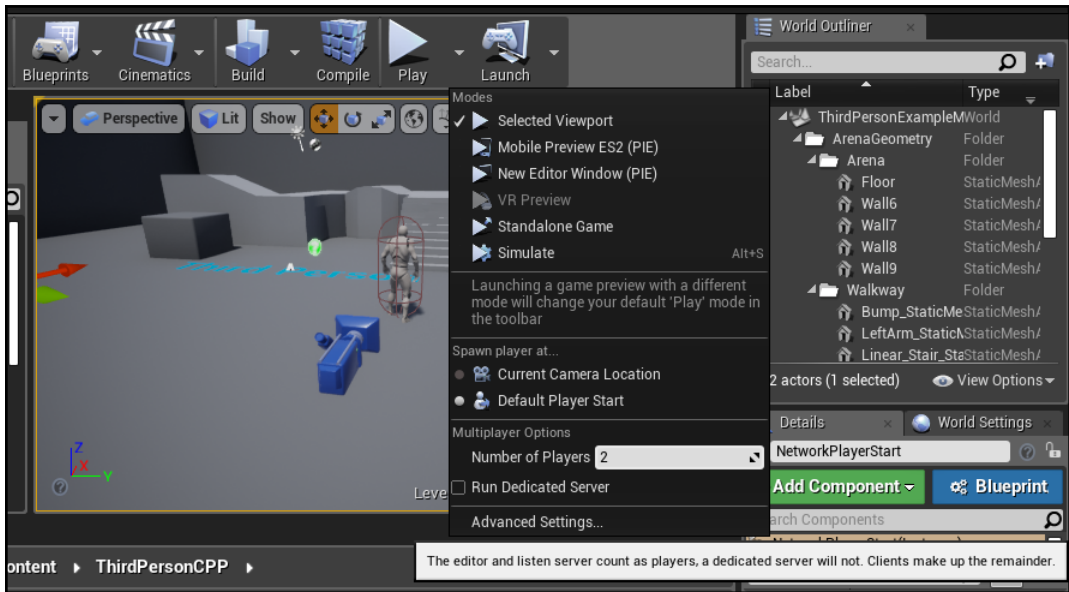


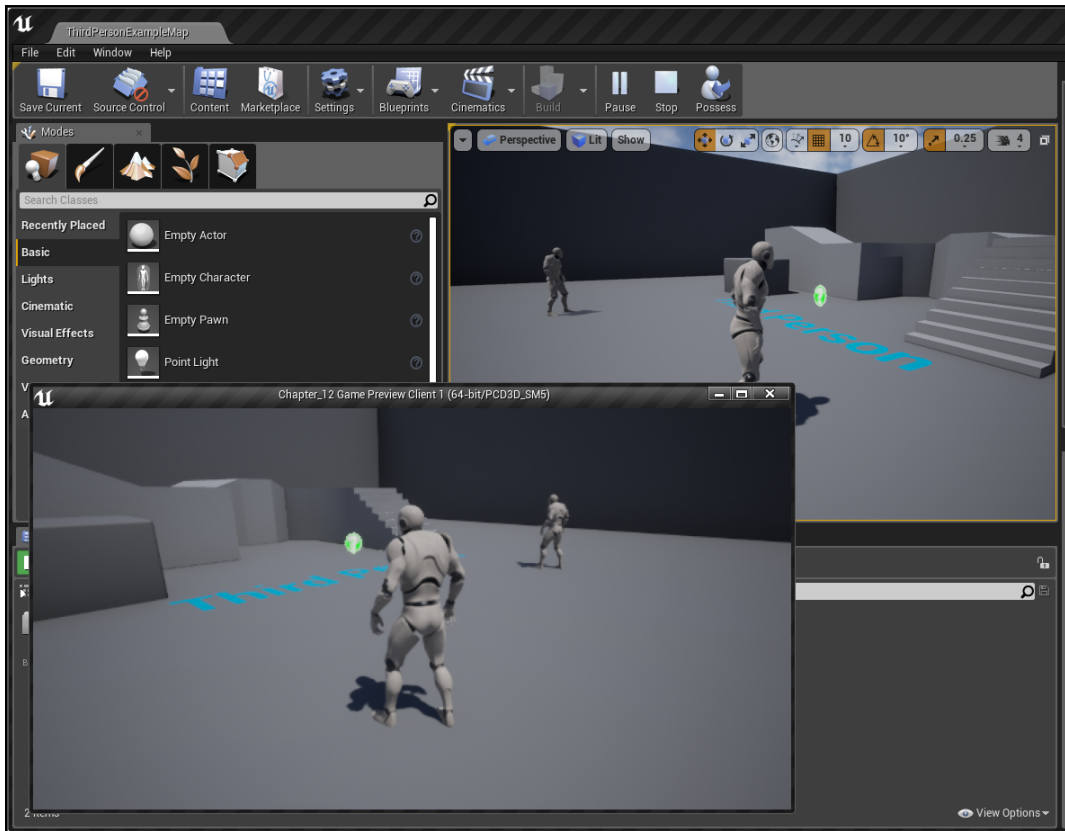
```
Content Browser x Output Log x
Filters Search Log
MessageLogChapter11: Warning: Warning text to log
MessageLogChapter11: Error: Error text to log
PIE: Play in editor start time for /Game/StarterContent/Maps/UEDPiE_0_Minimal_Default -0.312
LogBlueprintUserMessages: Late PlayInEditor Detection: Level '/Game/StarterContent/Maps/Minimal_Default.Minimal_Default:P
Game/StarterContent/Maps/Minimal_Default.Minimal_Default:PersistentLevel.Minimal_Default'
LogTemp: Warning: Http response 200, <!DOCTYPE html><html lang="en-US" data-baseurl="https://www.unrealengine.com"><head>
de-prod07-i-00f7fdb47766f2f80"><meta name="worker" content="2"><meta name="template:engine" content="pug"><meta name="nav
pAz40w"><link rel="icon" type="image/png" sizes="16x16" href="/favicon-16x16.png?v=xQdXpAz40w"><link rel="manifest" href=
="msapplication-TileColor" content="#da532c"><meta name="theme-color" content="#ffffff"><title data-react-helmet="true">W
ated tools for game developers to design and build games, simulations, and visualizations."/><script>>window.clientEnvConf
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5/tappy-chicken-unreal-engine-4-eula-android":"/", "/html5/tappy-chicken-unreal-engine-4-eula-android":"/", "/html5/tappy-
demark-usage":"/branding/", "/branding-guidelines-and-trademark-usage":"/branding/", "/awards-accolades":"/awards/", "/awar
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"/previous-versions/", "/udk/udk-licensing-resources":"/previous-versions/udk-licensing-resources/", "/udk/udk-licensing-
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window.unrealEngine_dataPreload = "120,156,236,189,107,143,227,88,150,32,246,87,216,209,59,221,85,61,146,82,164,168,87,78
,121,220,203,135,68,41,36,69,100,118,53,224,70,117,6,69,222,247,61,247,188,207,185,223,31,189,8,82,247,50,139,19,121,244,
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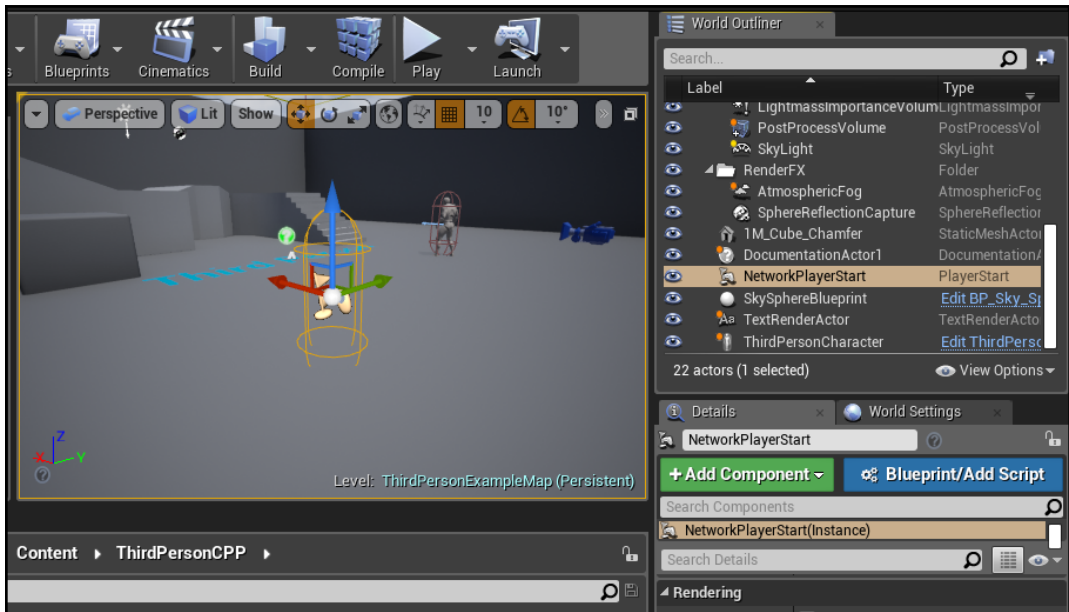


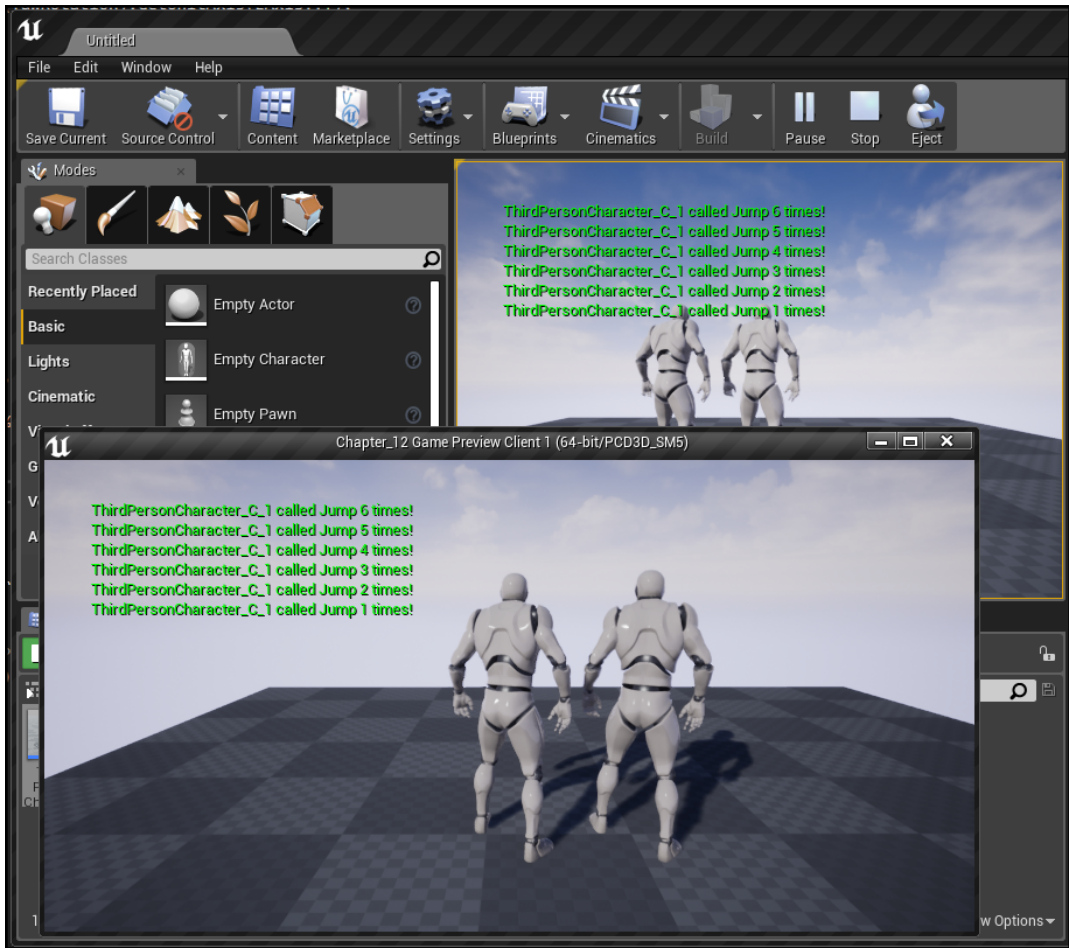
# Chapter 12: Multiplayer Networking in UE4

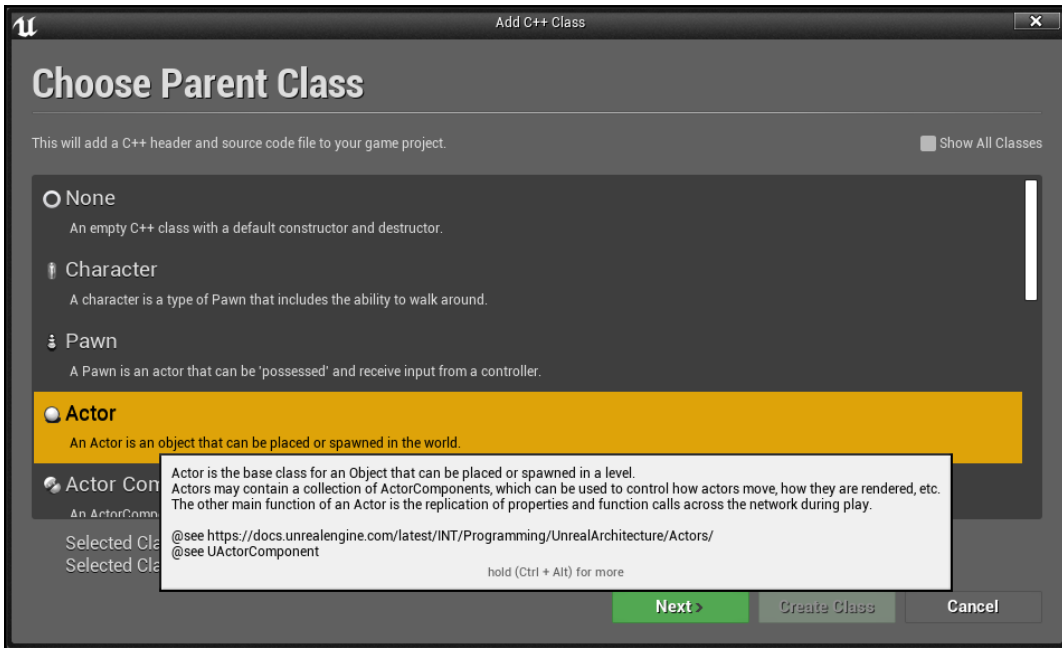


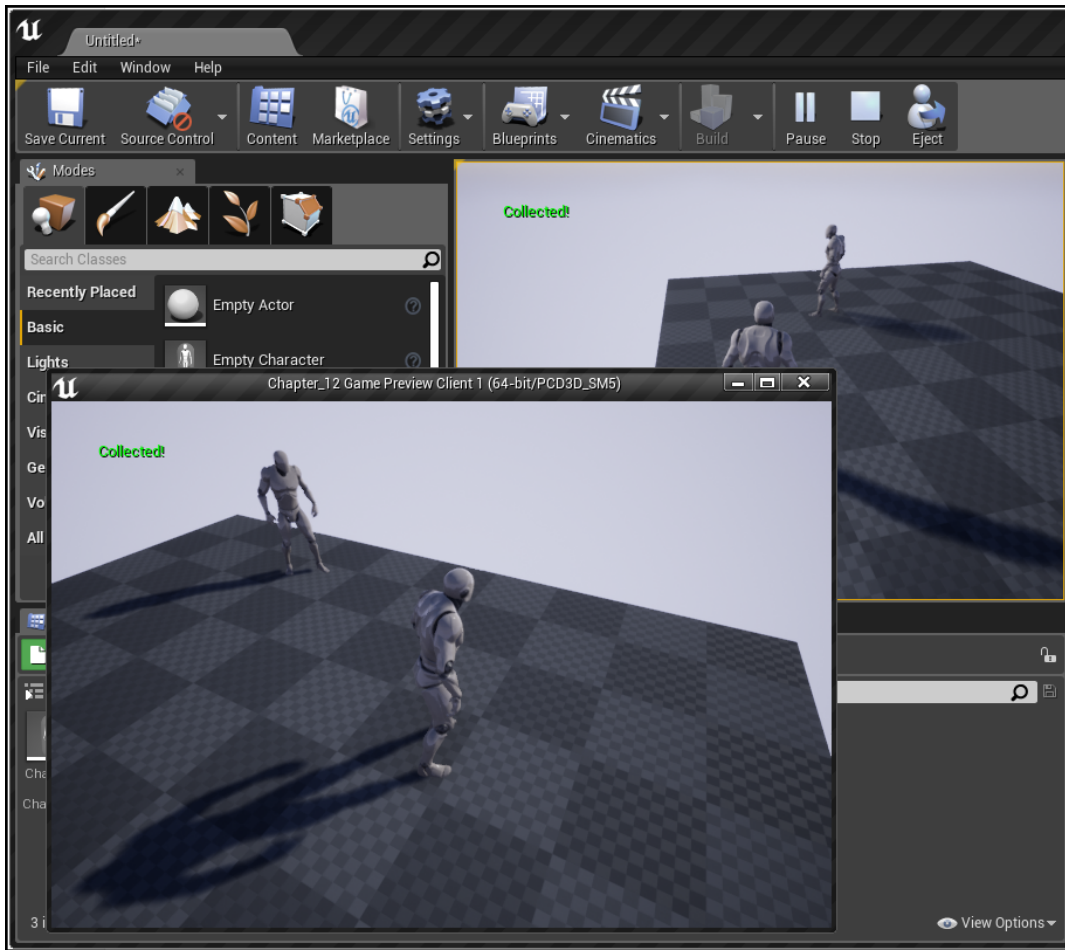


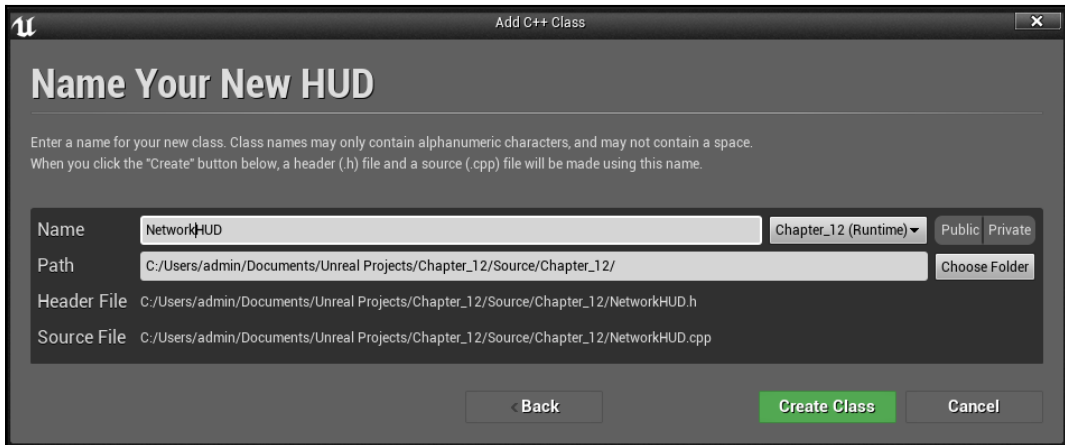
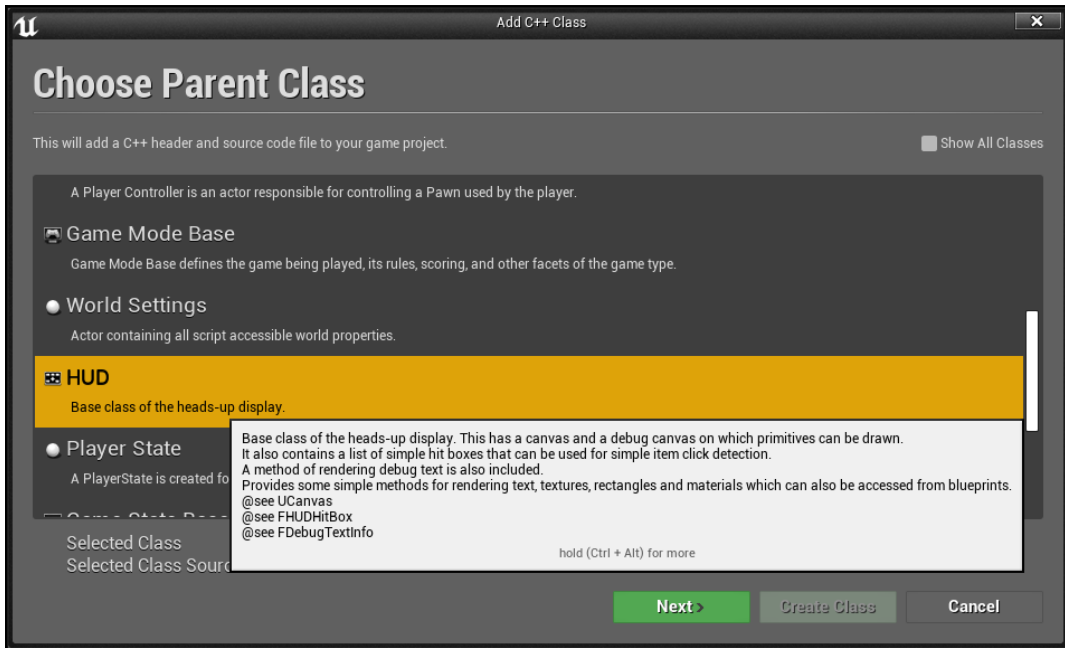






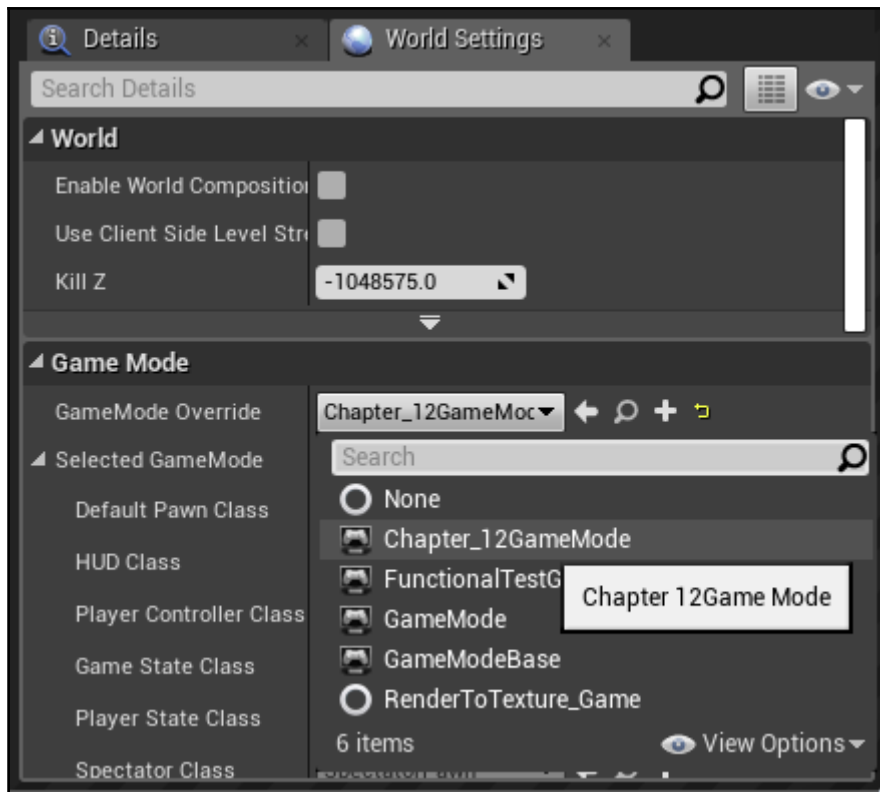






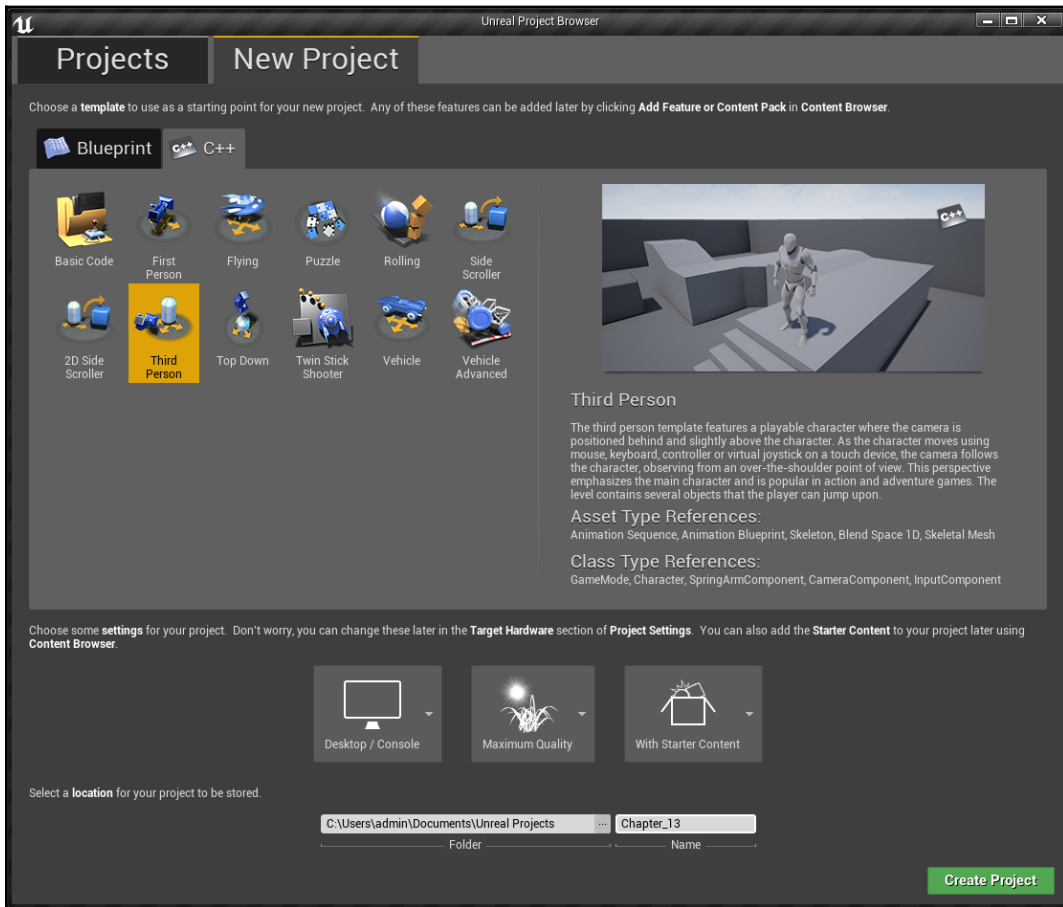


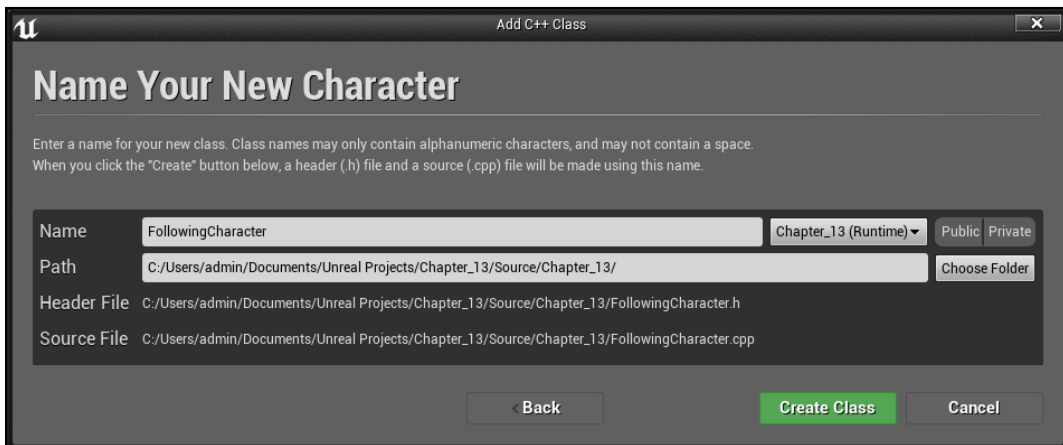
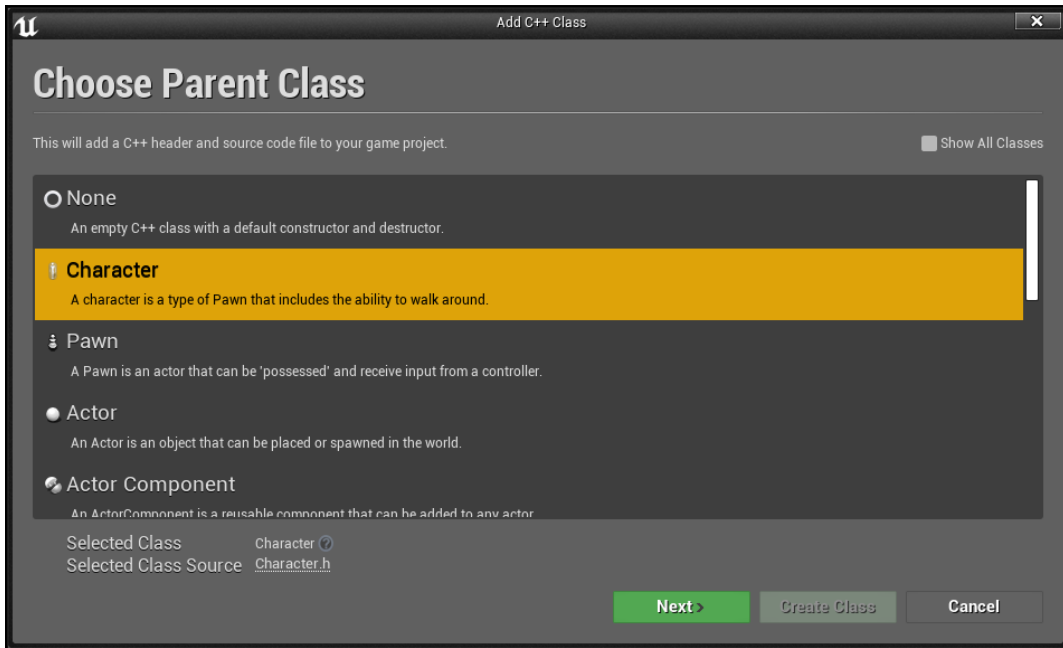


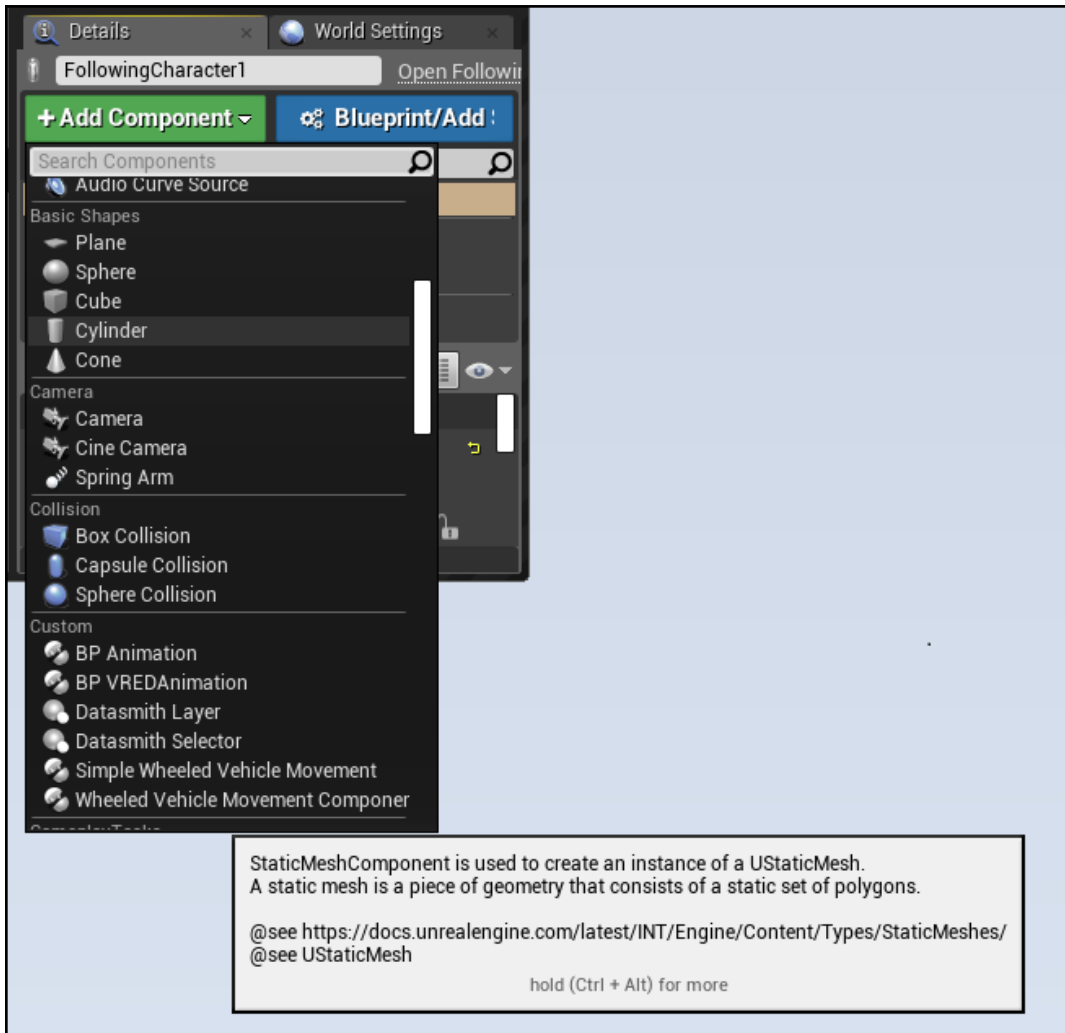




# Chapter 13: AI for Controlling NPCs



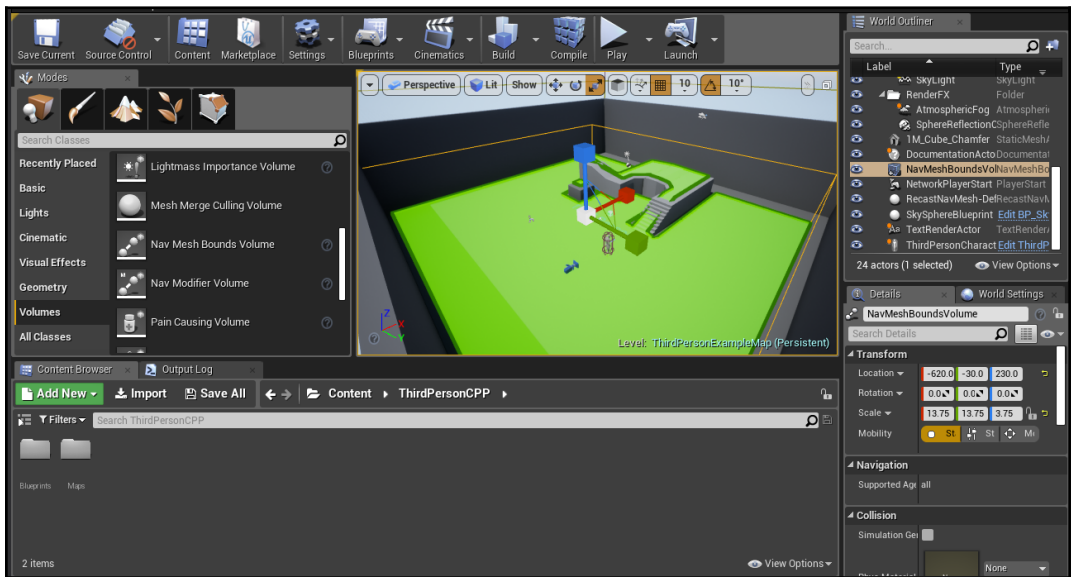
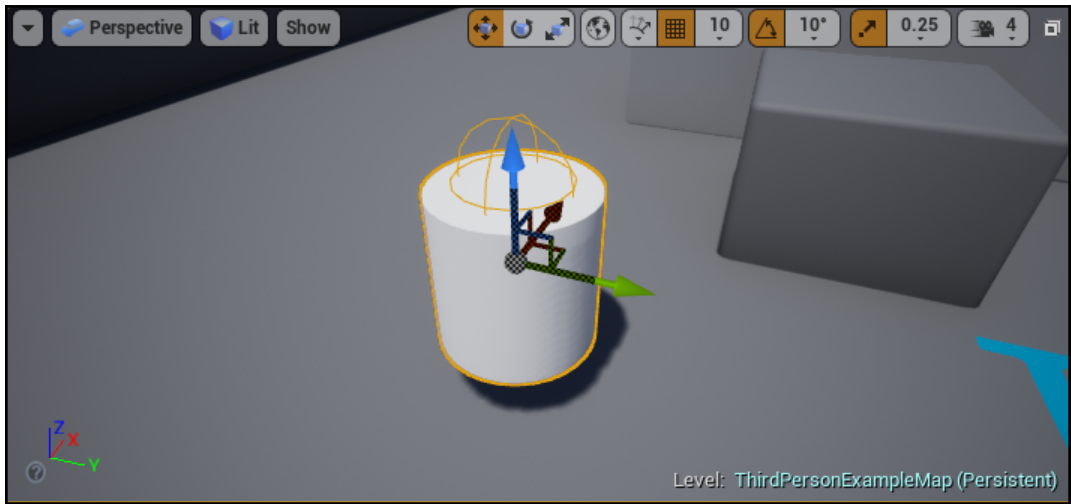


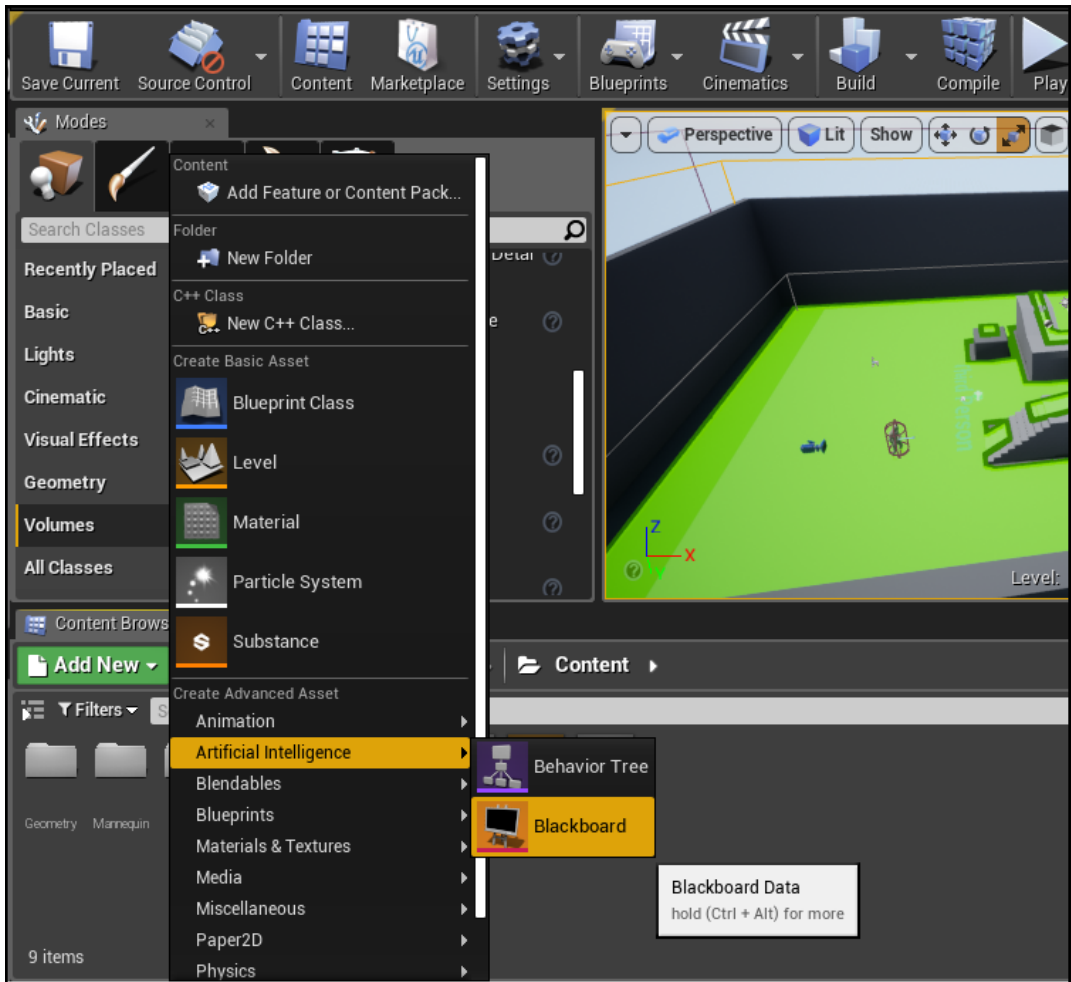


StaticMeshComponent is used to create an instance of a UStaticMesh. A static mesh is a piece of geometry that consists of a static set of polygons.

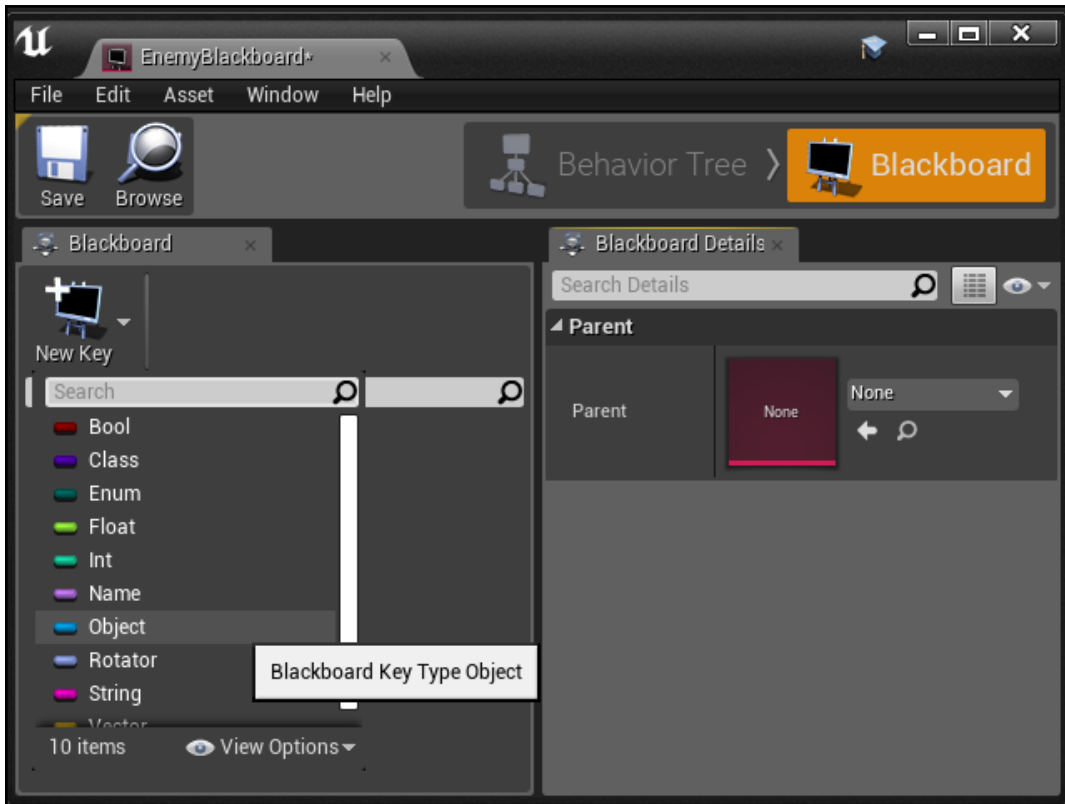
@see <https://docs.unrealengine.com/latest/INT/Engine/Content/Types/StaticMeshes/>  
@see UStaticMesh

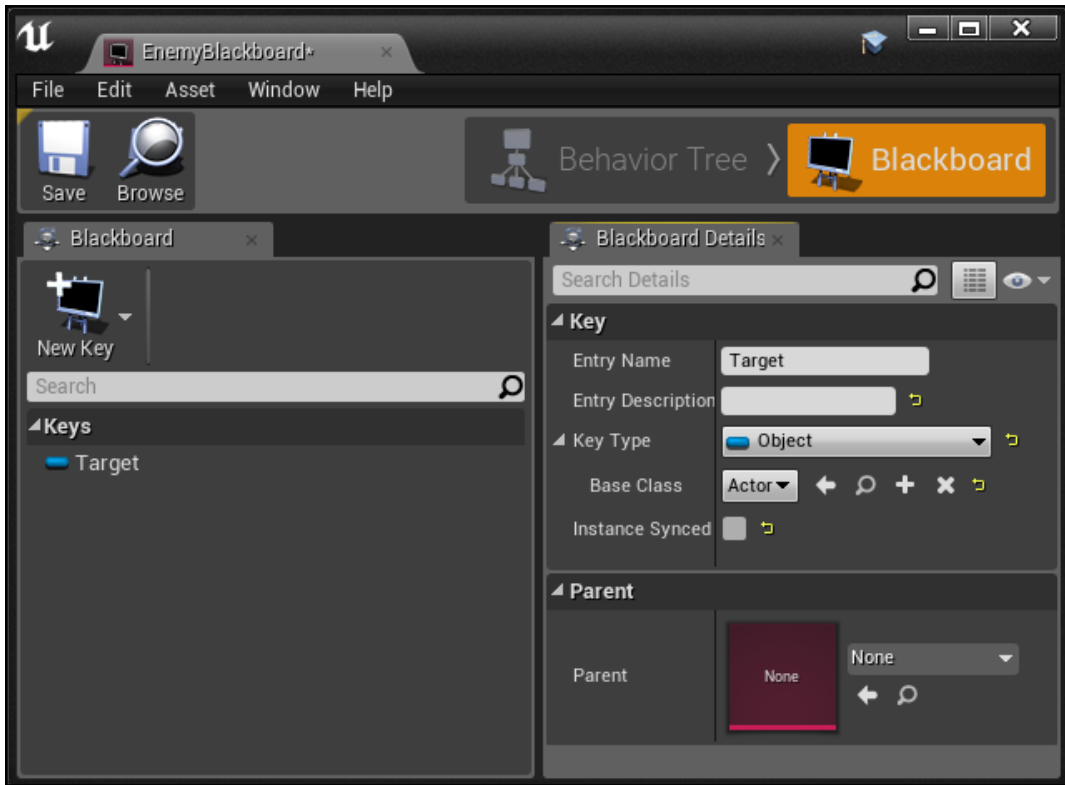
hold (Ctrl + Alt) for more

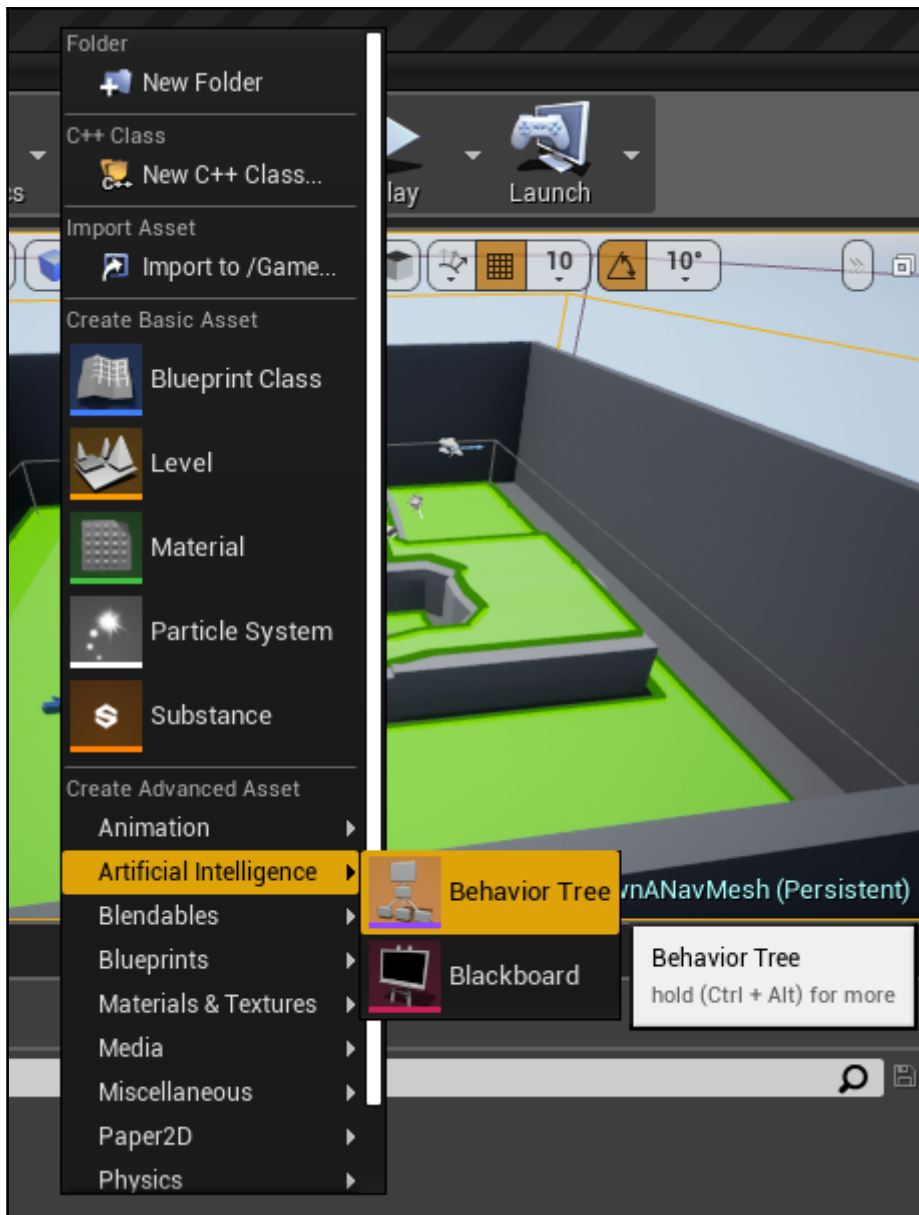


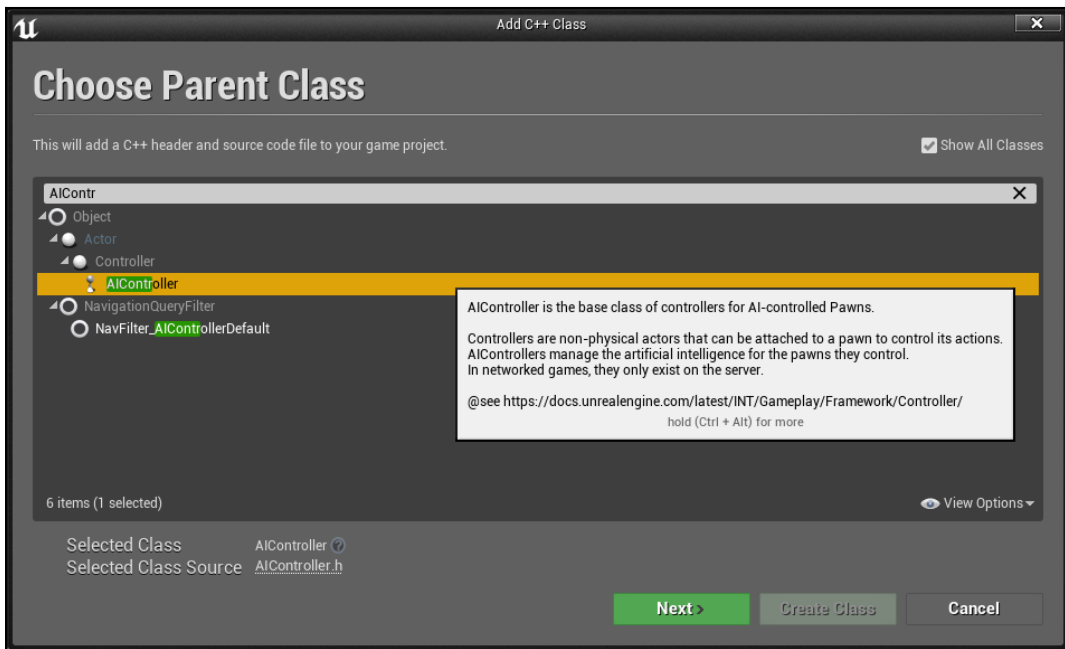
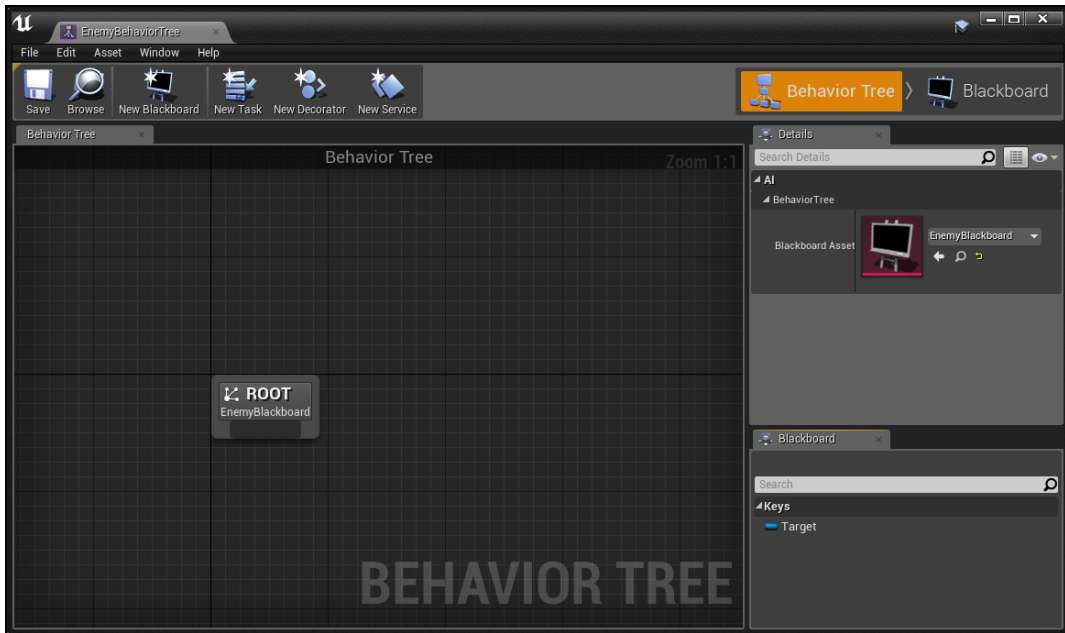


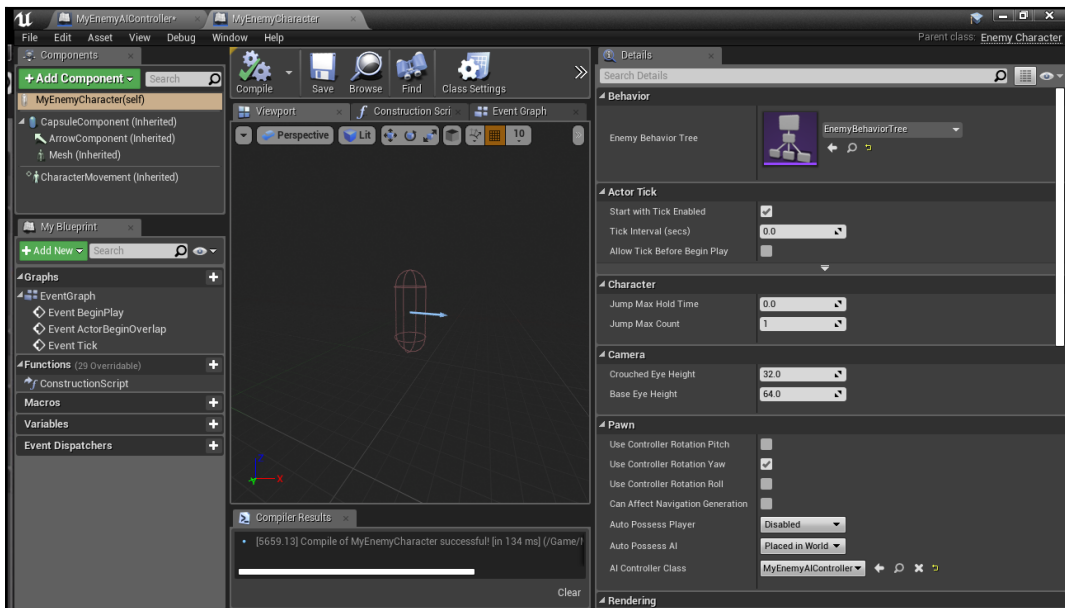
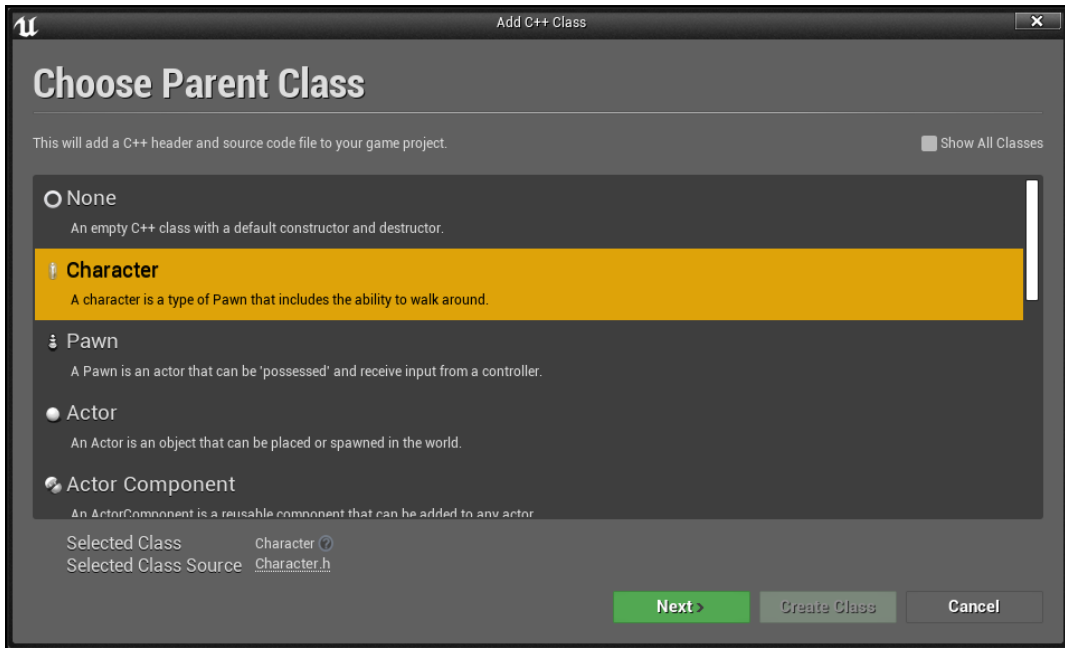


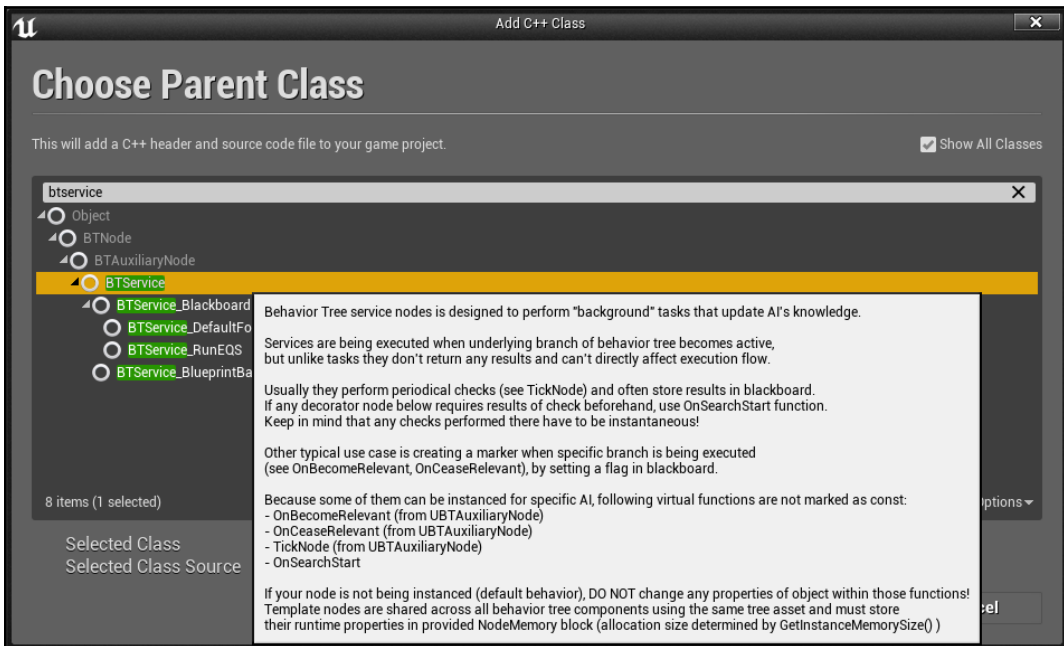
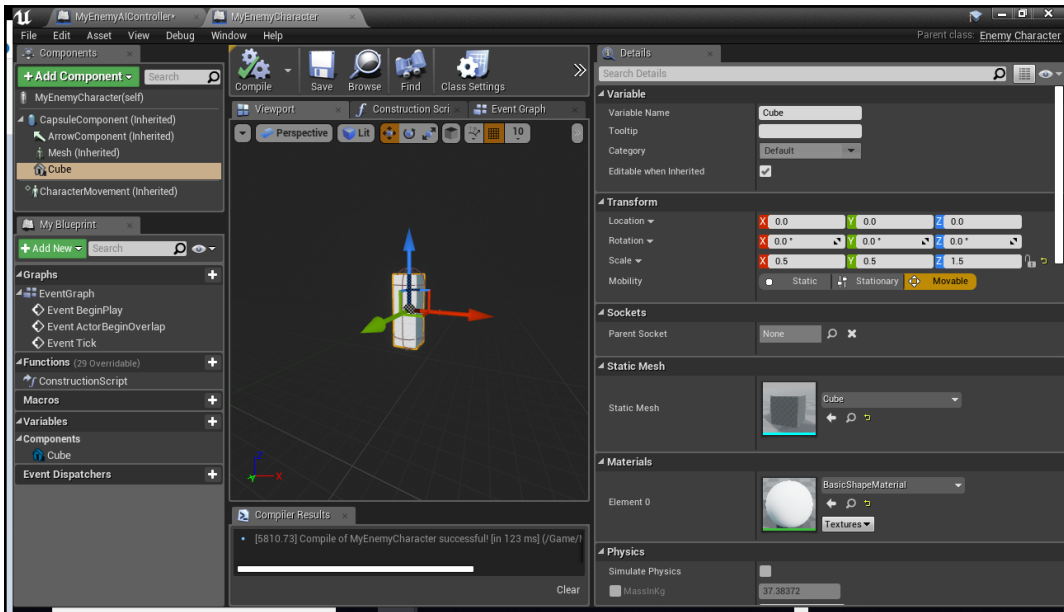


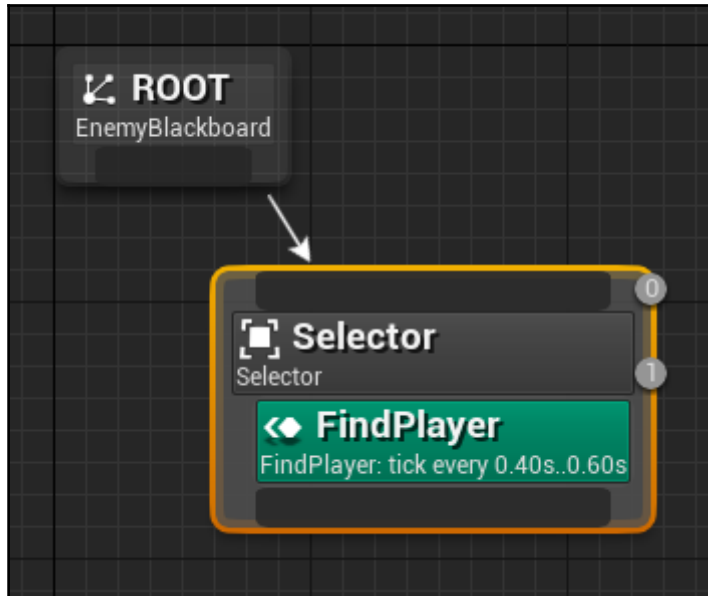
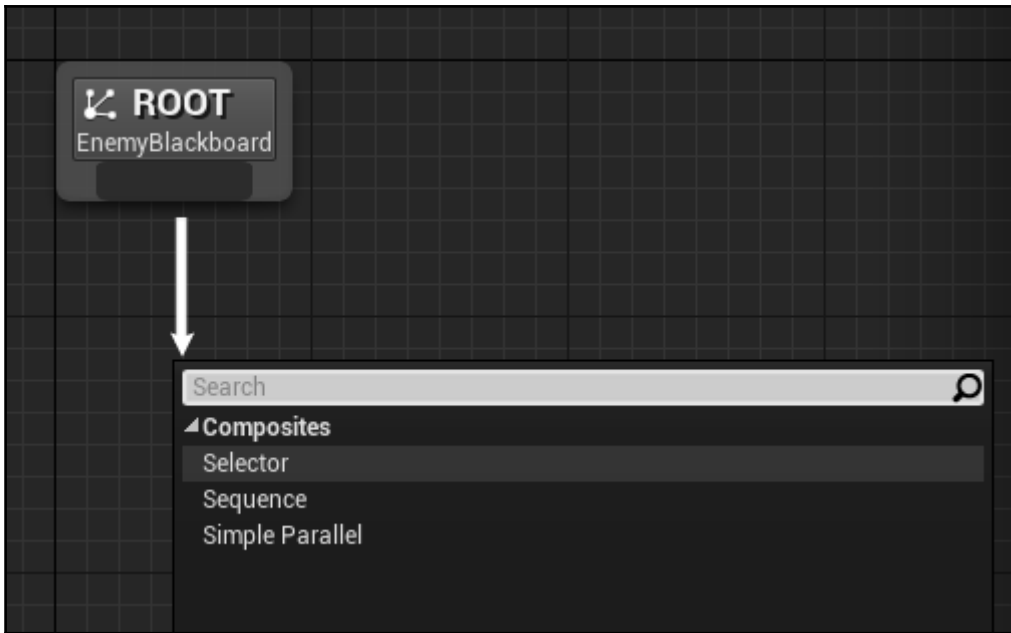


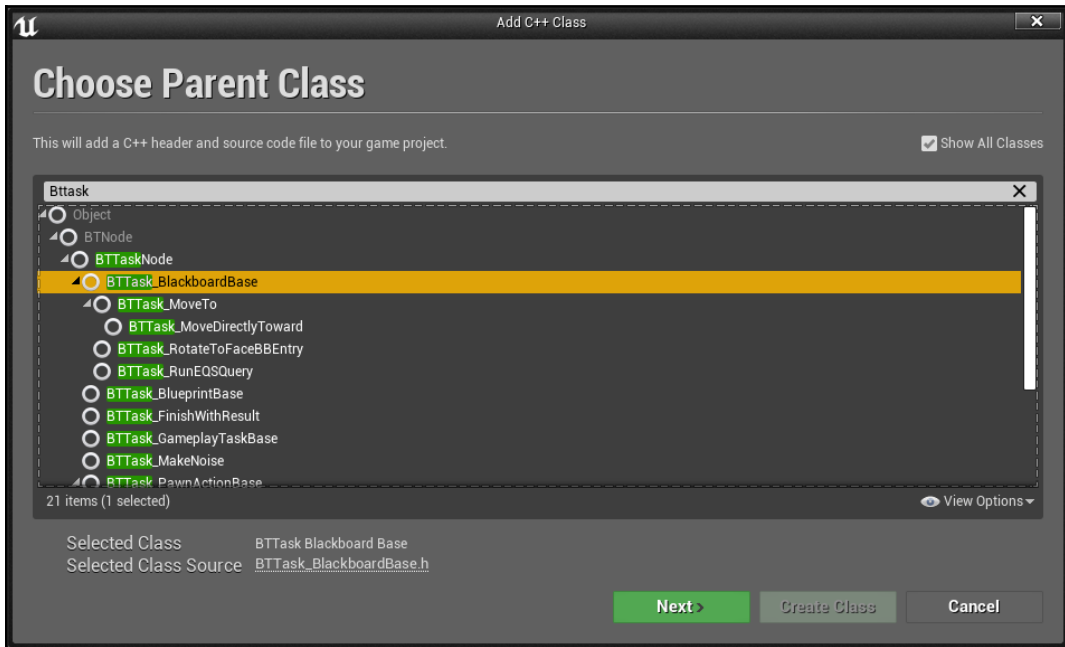
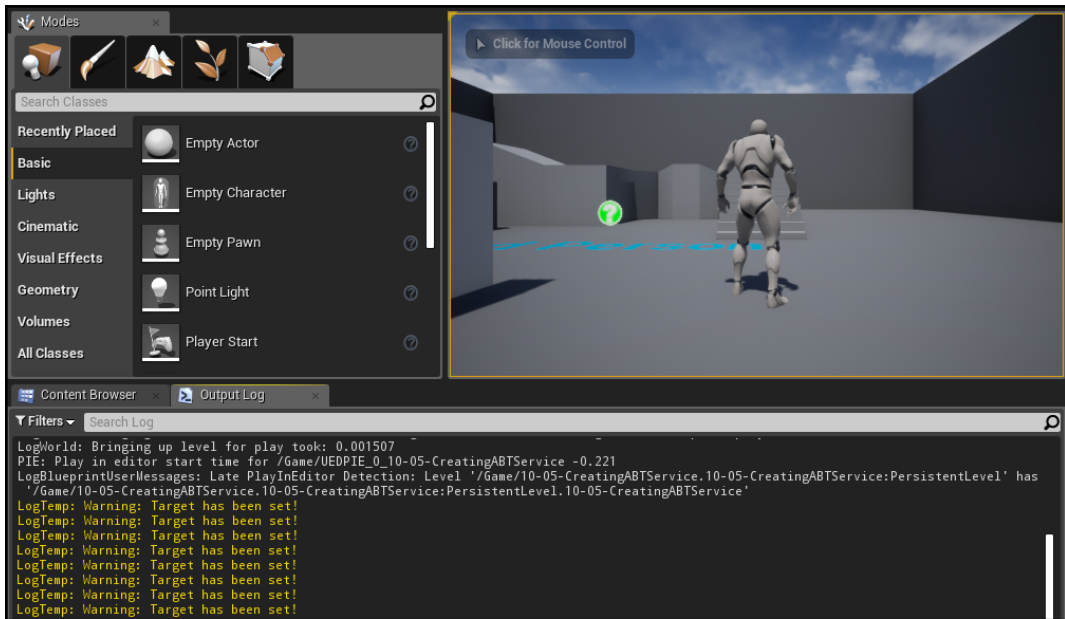




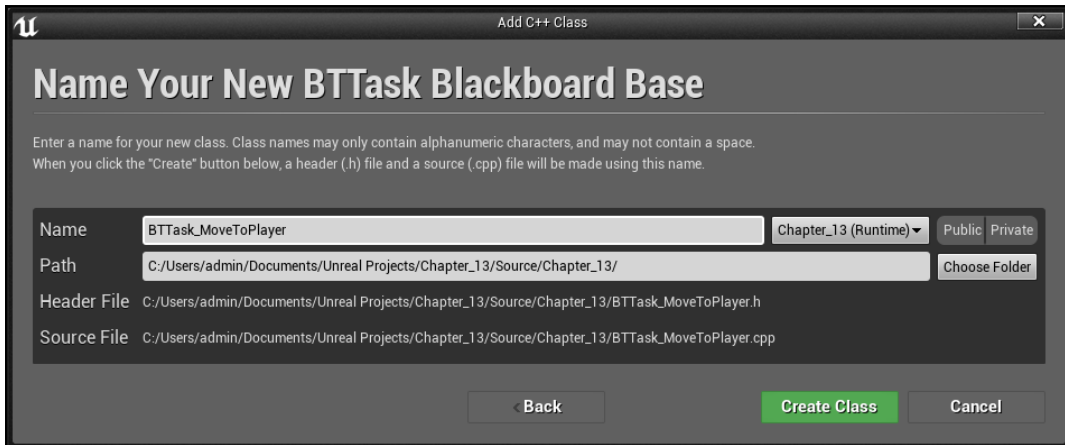


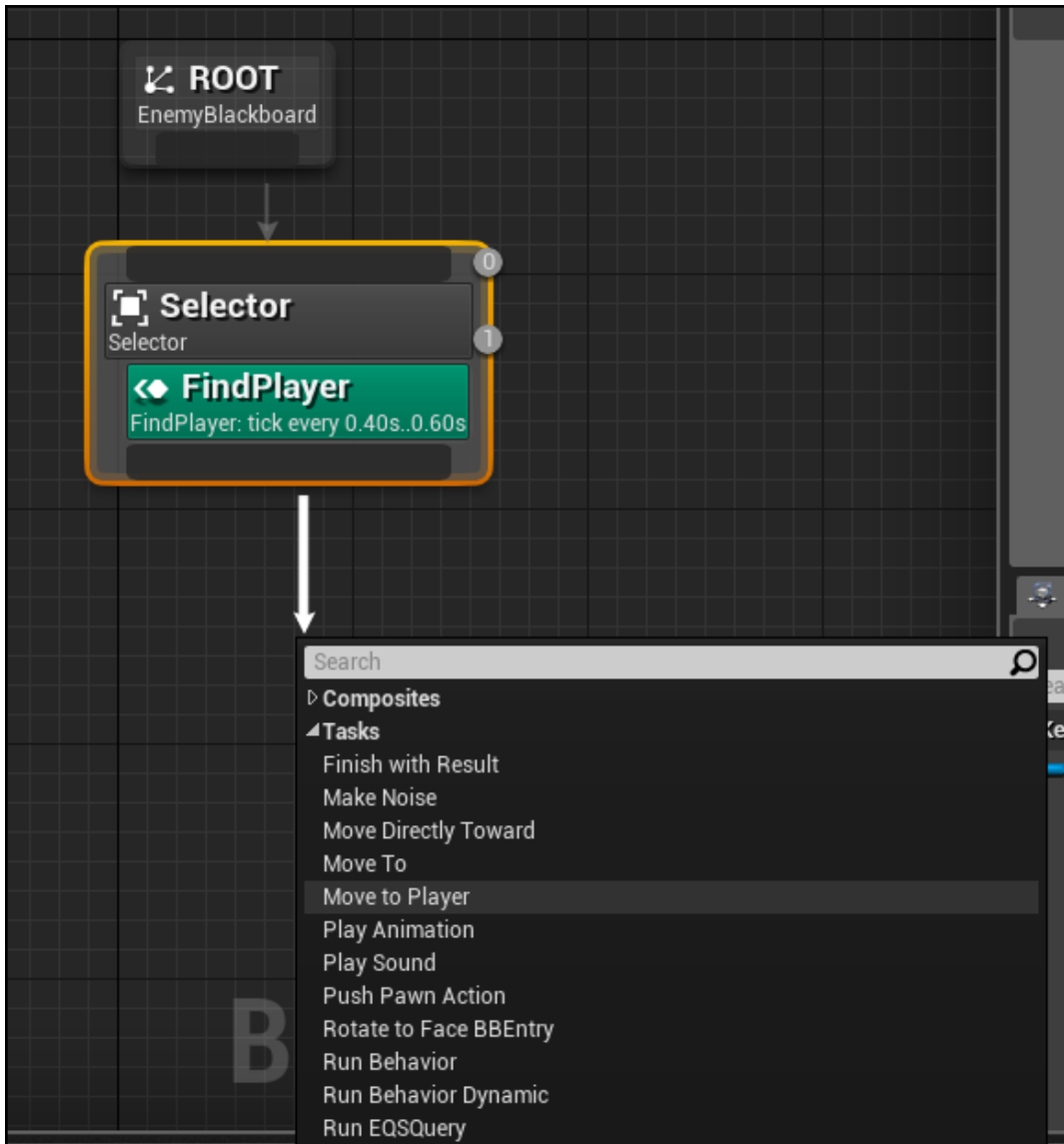


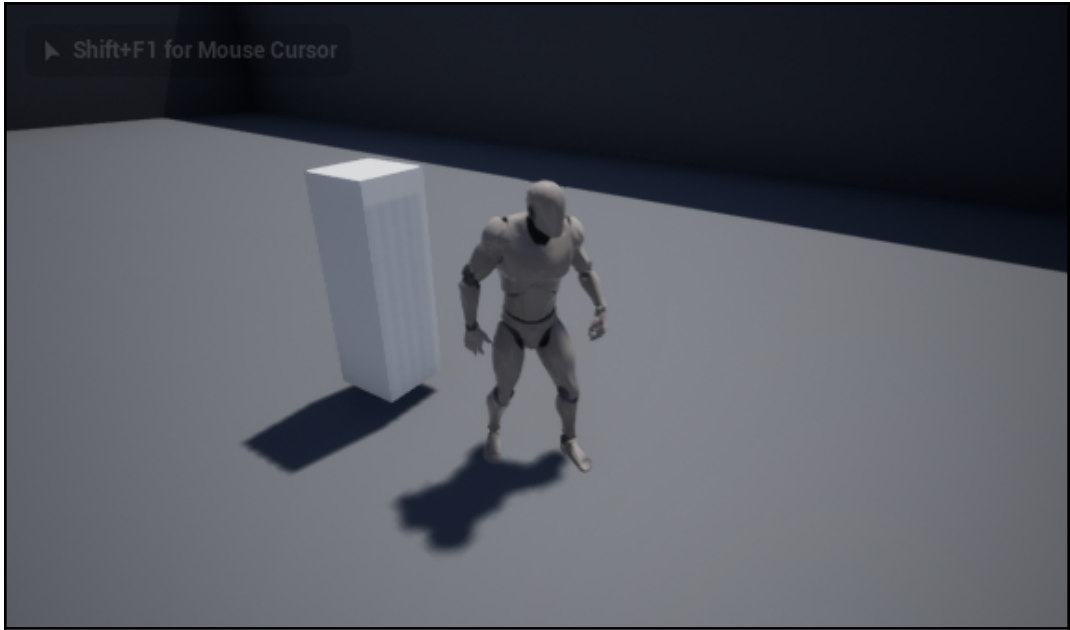












# Chapter 14: User Interfaces - UI and UMG

