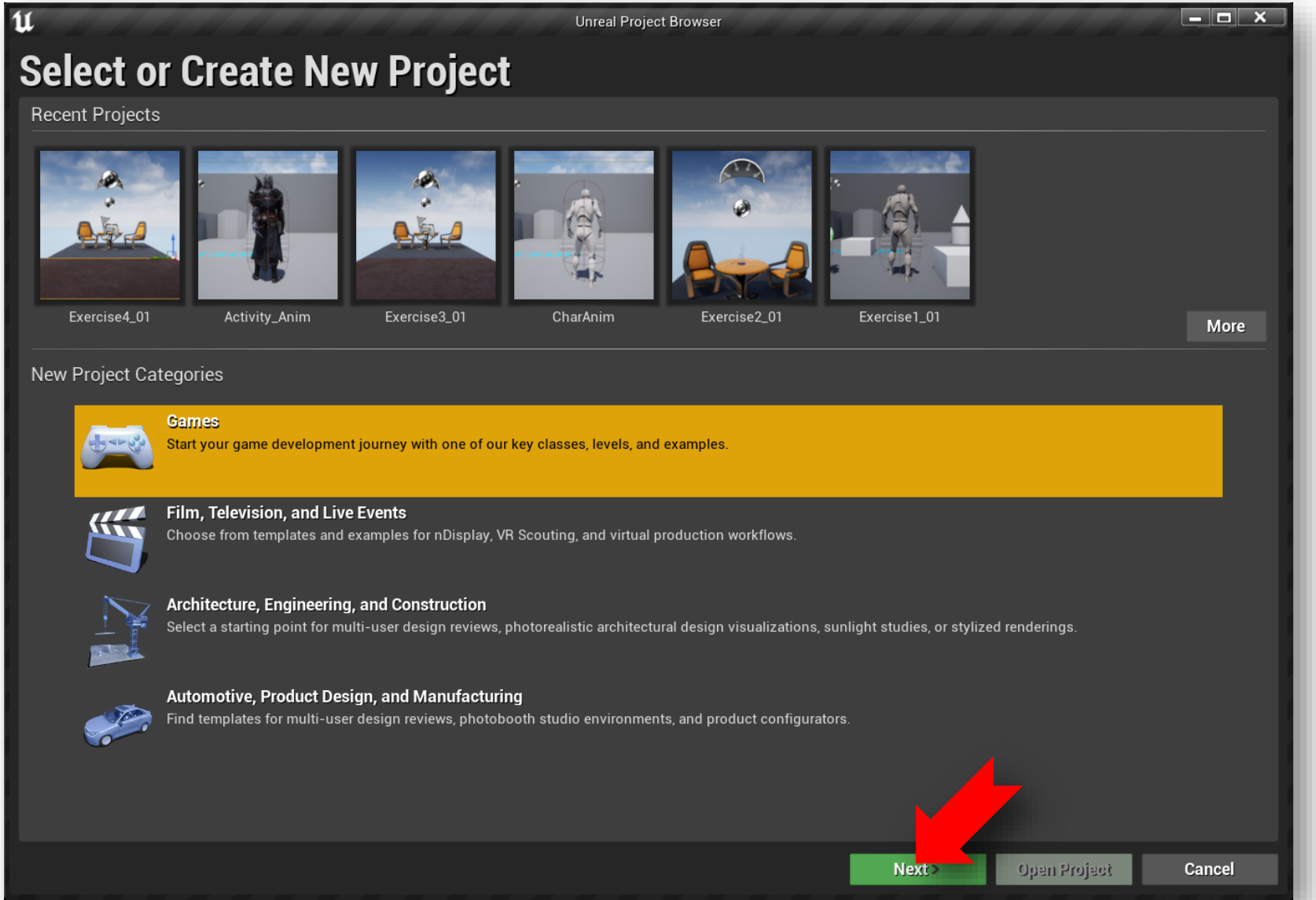
# Line Traces

5th Week, 2021


# Collision

- A point at which two objects come into contact with each other
- A **Physics Engine**
  - Responsible for everything related to collisions
  - Responsible for executing Line Traces, checking whether two objects are overlapping each other, blocking each other's movement, bouncing off of a wall, and much more
- The game is essentially asking the Physics Engine to execute it and then show us the results of these collision events.

# Project Setup

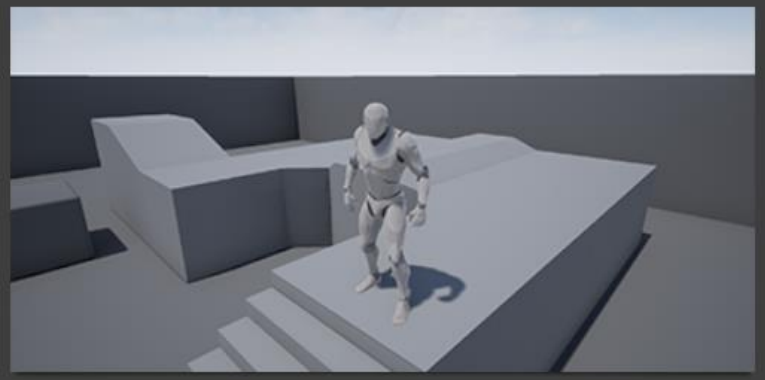


Unreal Project Browser

# Select Template

Blank | First Person | Flying | Puzzle | Rolling | Third Person | Top Down

Twin Stick Shooter | Handheld AR | Side Scroller | 2D Side Scroller | Vehicle | Virtual Reality | Vehicle Advanced



## 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 the character, observing from an over-the-shoulder point of view. This perspective emphasizes the main character and is popular in action and adventure games. The level contains several objects that the player can jump upon.

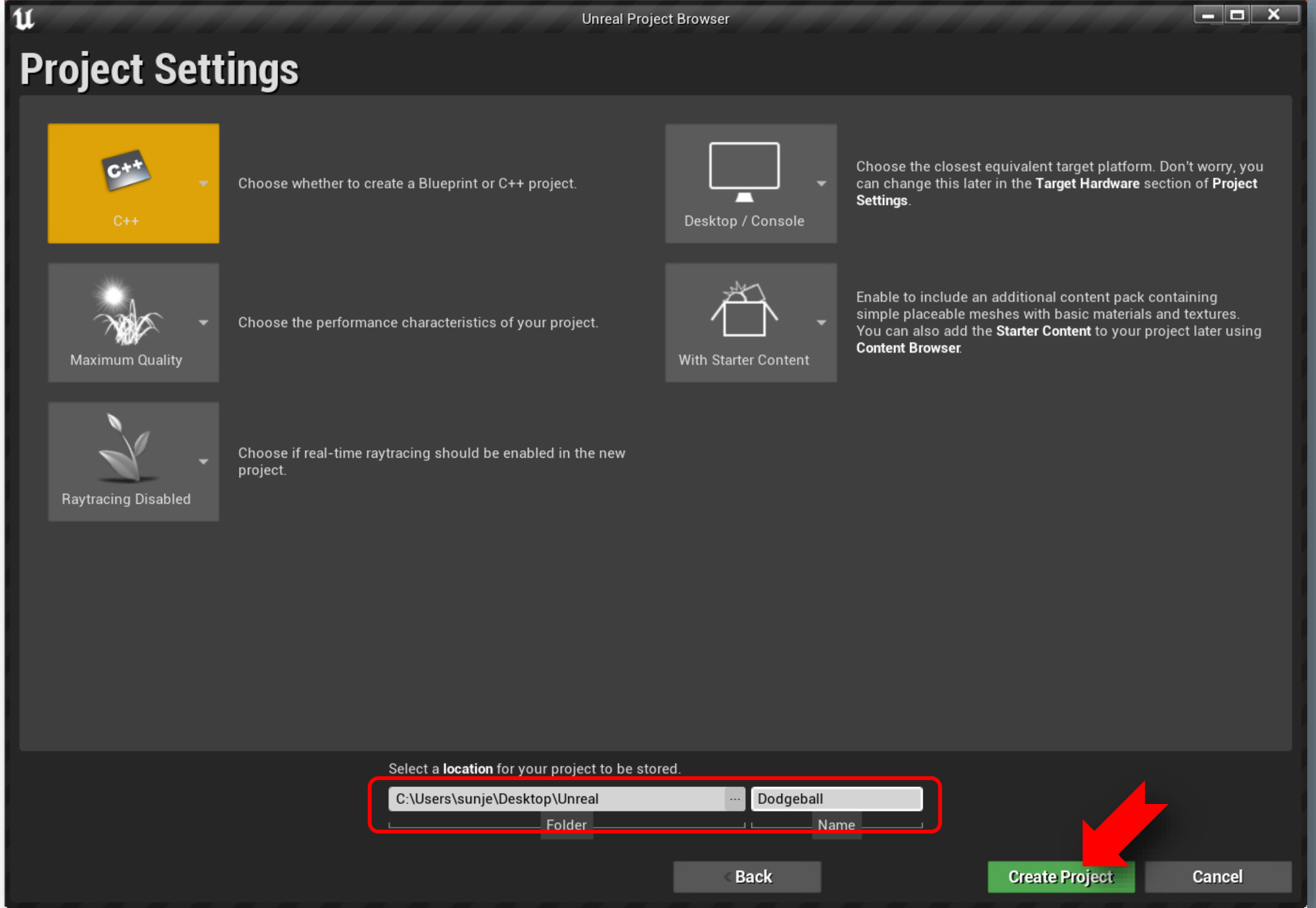
### Asset Type References:

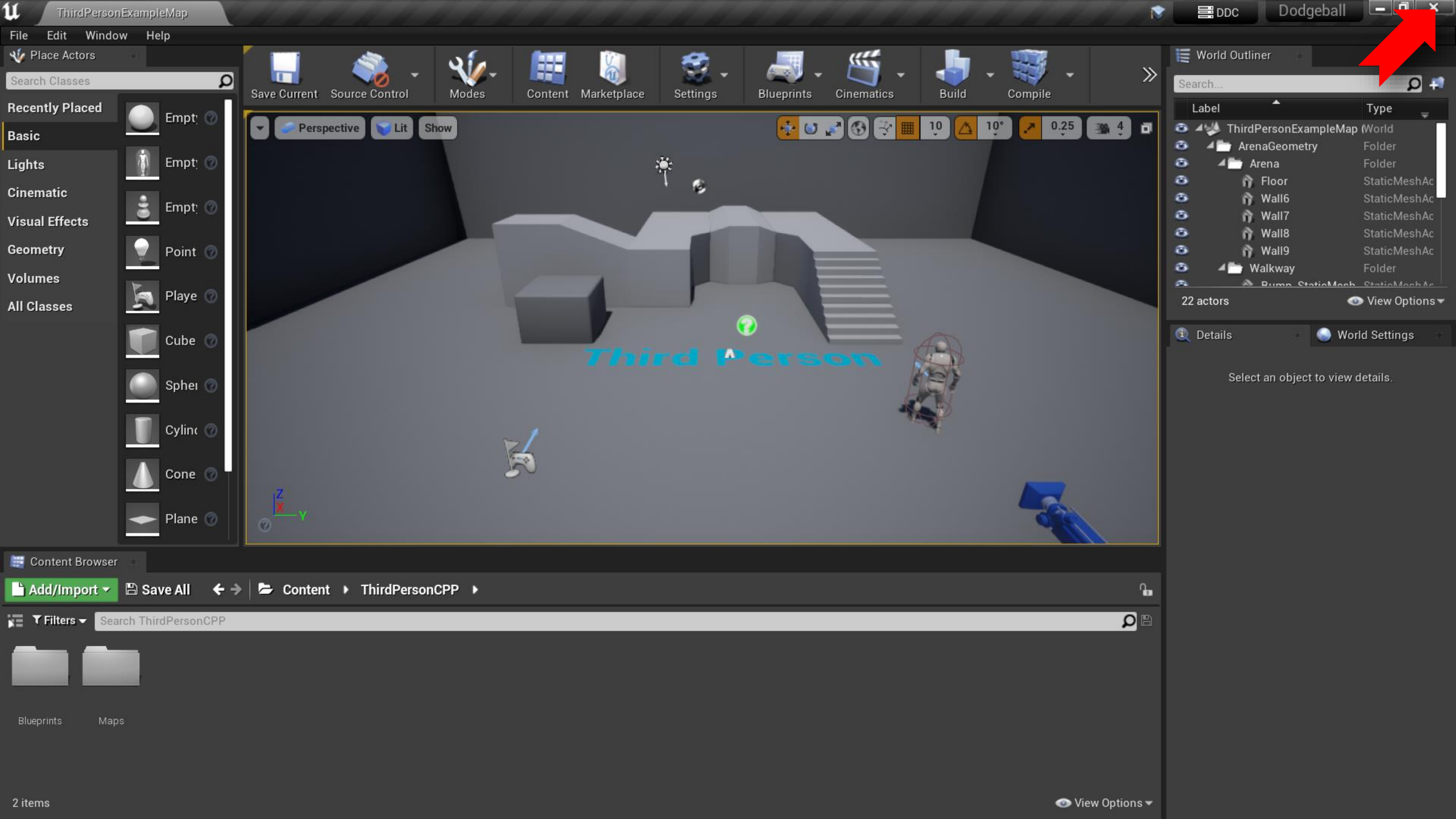
Animation Sequence, Animation Blueprint, Skeleton, Blend Space 1D, Skeletal Mesh

### Class Type References:

GameMode, Character, SpringArmComponent, CameraComponent, InputComponent

Back | Next | Create Project | Cancel


Unreal Project Browser
Project Settings
C++
Choose whether to create a Blueprint or C++ project.
Desktop / Console
Choose the closest equivalent target platform. Don't worry, you can change this later in the Target Hardware section of Project Settings.
Maximum Quality
Choose the performance characteristics of your project.
With Starter Content
Enable to include an additional content pack containing simple placeable meshes with basic materials and textures. You can also add the Starter Content to your project later using Content Browser.
Raytracing Disabled
Choose if real-time raytracing should be enabled in the new project.
Select a location for your project to be stored.
C:\Users\sunje\Desktop\Unreal
Folder
Dodgeball
Name
Back
Create Project
Cancel


ThirdPersonExampleMap
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File
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Search Classes
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Visual Effects
Geometry
Volumes
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Select an object to view details.
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Maps
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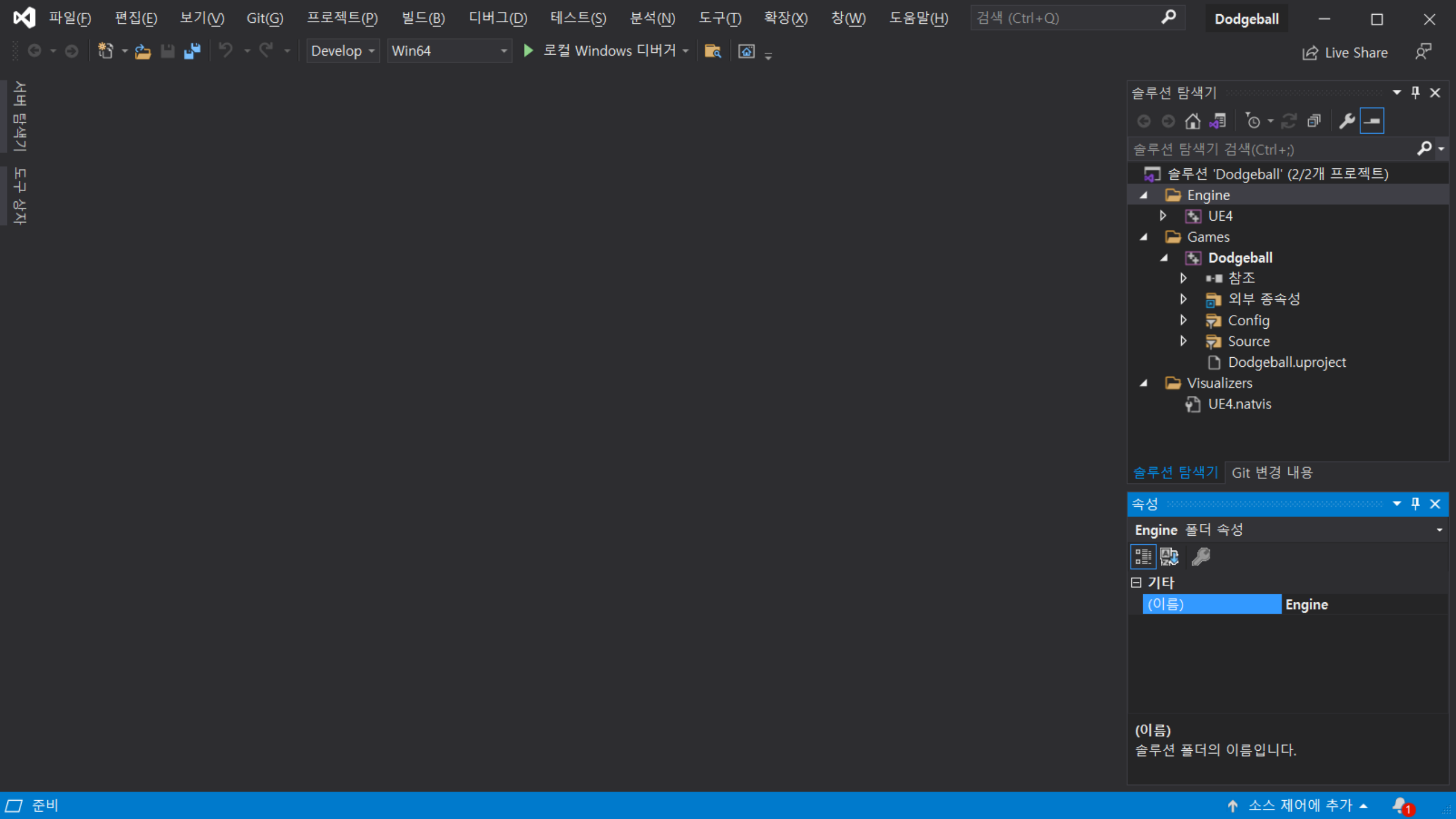
파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
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도구 상자
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솔루션 탐색기 검색(Ctrl+;)
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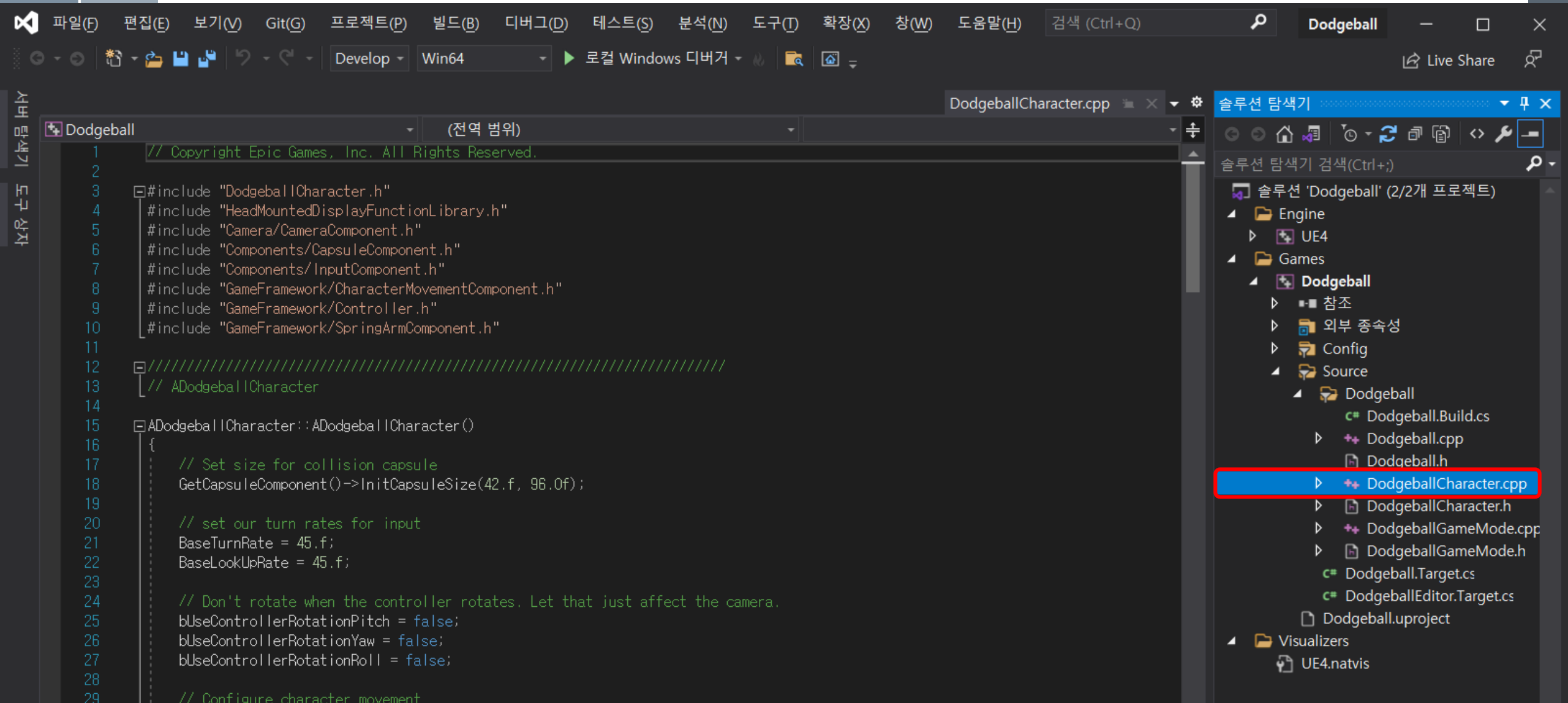
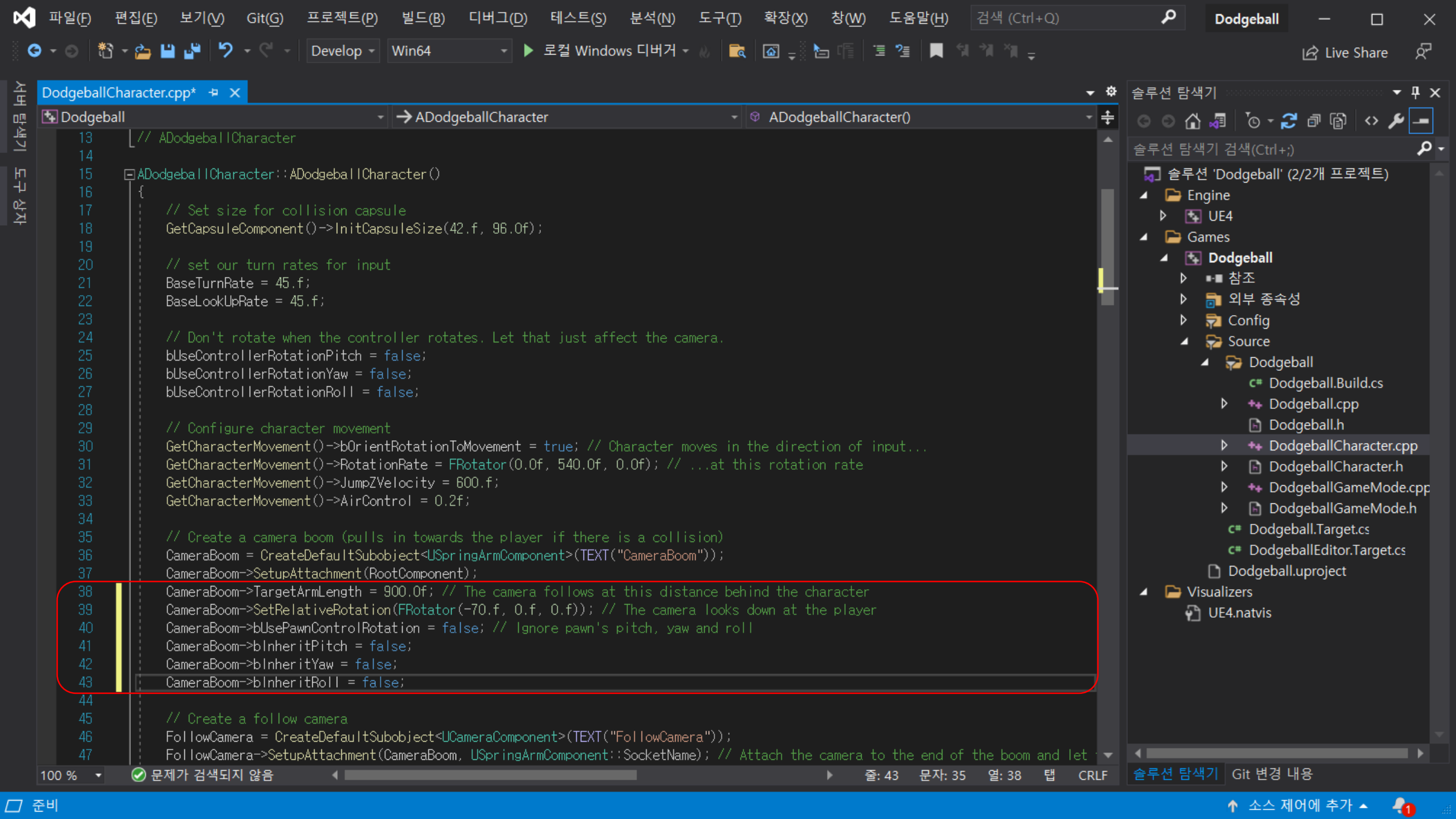
속성
Engine 폴더 속성
기타
(이름)
Engine
(이름)
솔루션 폴더의 이름입니다.
준비
소스 제어에 추가

# Exercise 5.01: Converting DodgeballCharacter To a Top-Down Perspective

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DodgeballCharacter.cpp*
Dodgeball
ADodgeballCharacter
ADodgeballCharacter()
13 // ADodgeballCharacter
14
15 ADodgeballCharacter::ADodgeballCharacter()
16 {
17 // Set size for collision capsule
18 GetCapsuleComponent()->InitCapsuleSize(42.f, 96.0f);
19
20 // set our turn rates for input
21 BaseTurnRate = 45.f;
22 BaseLookUpRate = 45.f;
23
24 // Don't rotate when the controller rotates. Let that just affect the camera.
25 bUseControllerRotationPitch = false;
26 bUseControllerRotationYaw = false;
27 bUseControllerRotationRoll = false;
28
29 // Configure character movement
30 GetCharacterMovement()->bOrientRotationToMovement = true; // Character moves in the direction of input...
31 GetCharacterMovement()->RotationRate = FRotator(0.0f, 540.0f, 0.0f); // ...at this rotation rate
32 GetCharacterMovement()->JumpZVelocity = 600.f;
33 GetCharacterMovement()->AirControl = 0.2f;
34
35 // Create a camera boom (pulls in towards the player if there is a collision)
36 CameraBoom = CreateDefaultSubobject<USpringArmComponent>(TEXT("CameraBoom"));
37 CameraBoom->SetupAttachment(RootComponent);
38 CameraBoom->TargetArmLength = 900.0f; // The camera follows at this distance behind the character
39 CameraBoom->SetRelativeRotation(FRotator(-70.f, 0.f, 0.f)); // The camera looks down at the player
40 CameraBoom->bUsePawnControlRotation = false; // Ignore pawn's pitch, yaw and roll
41 CameraBoom->bInheritPitch = false;
42 CameraBoom->bInheritYaw = false;
43 CameraBoom->bInheritRoll = false;
44
45 // Create a follow camera
46 FollowCamera = CreateDefaultSubobject<UCameraComponent>(TEXT("FollowCamera"));
47 FollowCamera->SetupAttachment(CameraBoom, USpringArmComponent::SocketName); // Attach the camera to the end of the boom and let
100 %
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솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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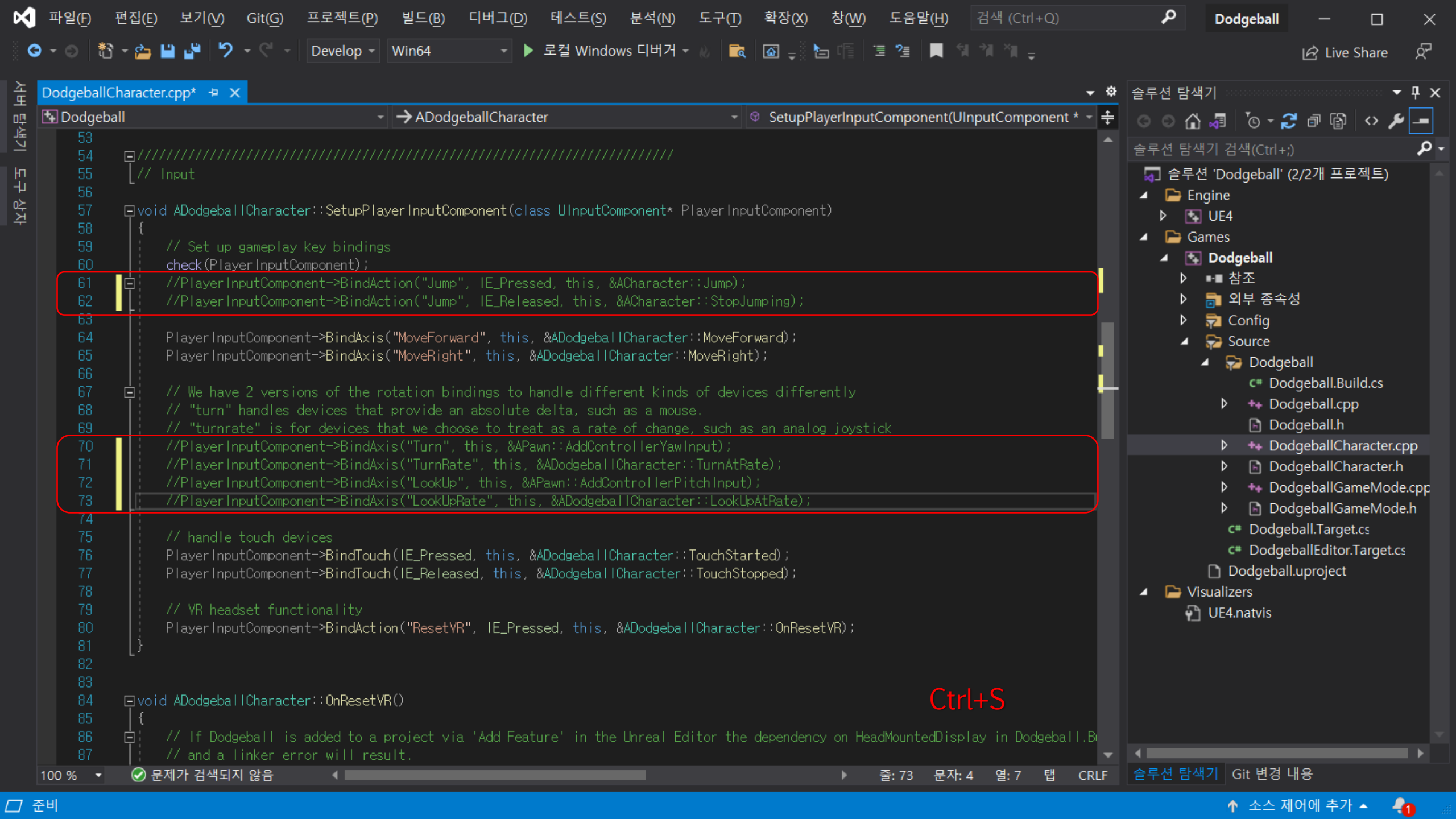
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도구 상자
DodgeballCharacter.cpp*
Dodgeball
ADodgeballCharacter
SetupPlayerInputComponent(UInputComponent *
53
54 ////////////////////////////////////////////////////////////////////////
55 // Input
56
57 void ADodgeballCharacter::SetupPlayerInputComponent(class UInputComponent* PlayerInputComponent)
58 {
59 // Set up gameplay key bindings
60 check(PlayerInputComponent);
61 //PlayerInputComponent->BindAction("Jump", IE_Pressed, this, &ACharacter::Jump);
62 //PlayerInputComponent->BindAction("Jump", IE_Released, this, &ACharacter::StopJumping);
63
64 PlayerInputComponent->BindAxis("MoveForward", this, &ADodgeballCharacter::MoveForward);
65 PlayerInputComponent->BindAxis("MoveRight", this, &ADodgeballCharacter::MoveRight);
66
67 // We have 2 versions of the rotation bindings to handle different kinds of devices differently
68 // "turn" handles devices that provide an absolute delta, such as a mouse.
69 // "turnrate" is for devices that we choose to treat as a rate of change, such as an analog joystick
70 //PlayerInputComponent->BindAxis("Turn", this, &APawn::AddControllerYawInput);
71 //PlayerInputComponent->BindAxis("TurnRate", this, &ADodgeballCharacter::TurnAtRate);
72 //PlayerInputComponent->BindAxis("LookUp", this, &APawn::AddControllerPitchInput);
73 //PlayerInputComponent->BindAxis("LookUpRate", this, &ADodgeballCharacter::LookUpAtRate);
74
75 // handle touch devices
76 PlayerInputComponent->BindTouch(IE_Pressed, this, &ADodgeballCharacter::TouchStarted);
77 PlayerInputComponent->BindTouch(IE_Released, this, &ADodgeballCharacter::TouchStopped);
78
79 // VR headset functionality
80 PlayerInputComponent->BindAction("ResetVR", IE_Pressed, this, &ADodgeballCharacter::OnResetVR);
81 }
82
83
84 void ADodgeballCharacter::OnResetVR()
85 {
86 // If Dodgeball is added to a project via 'Add Feature' in the Unreal Editor the dependency on HeadMountedDisplay in Dodgeball.B
87 // and a linker error will result.
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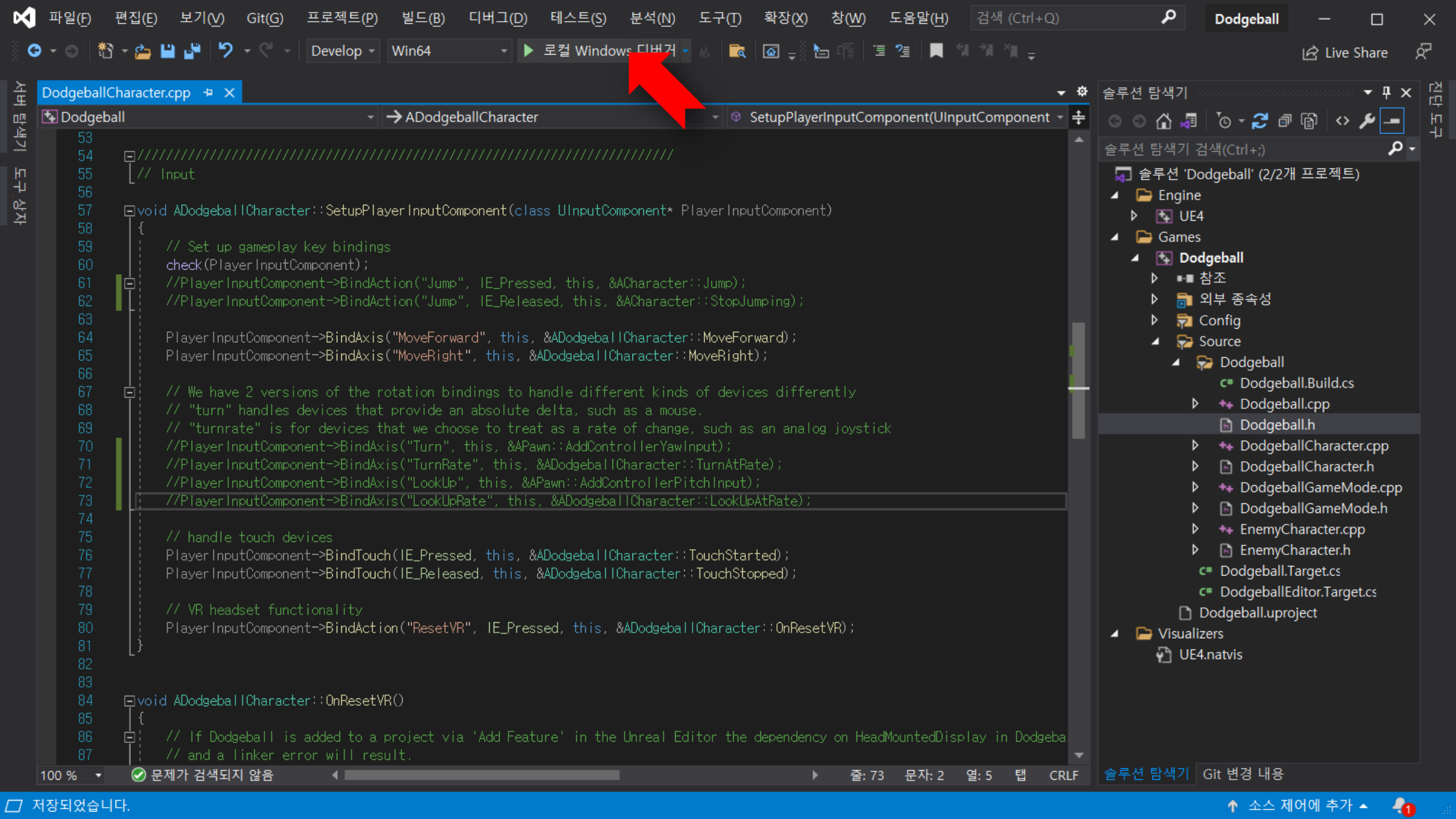
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저장되었습니다.
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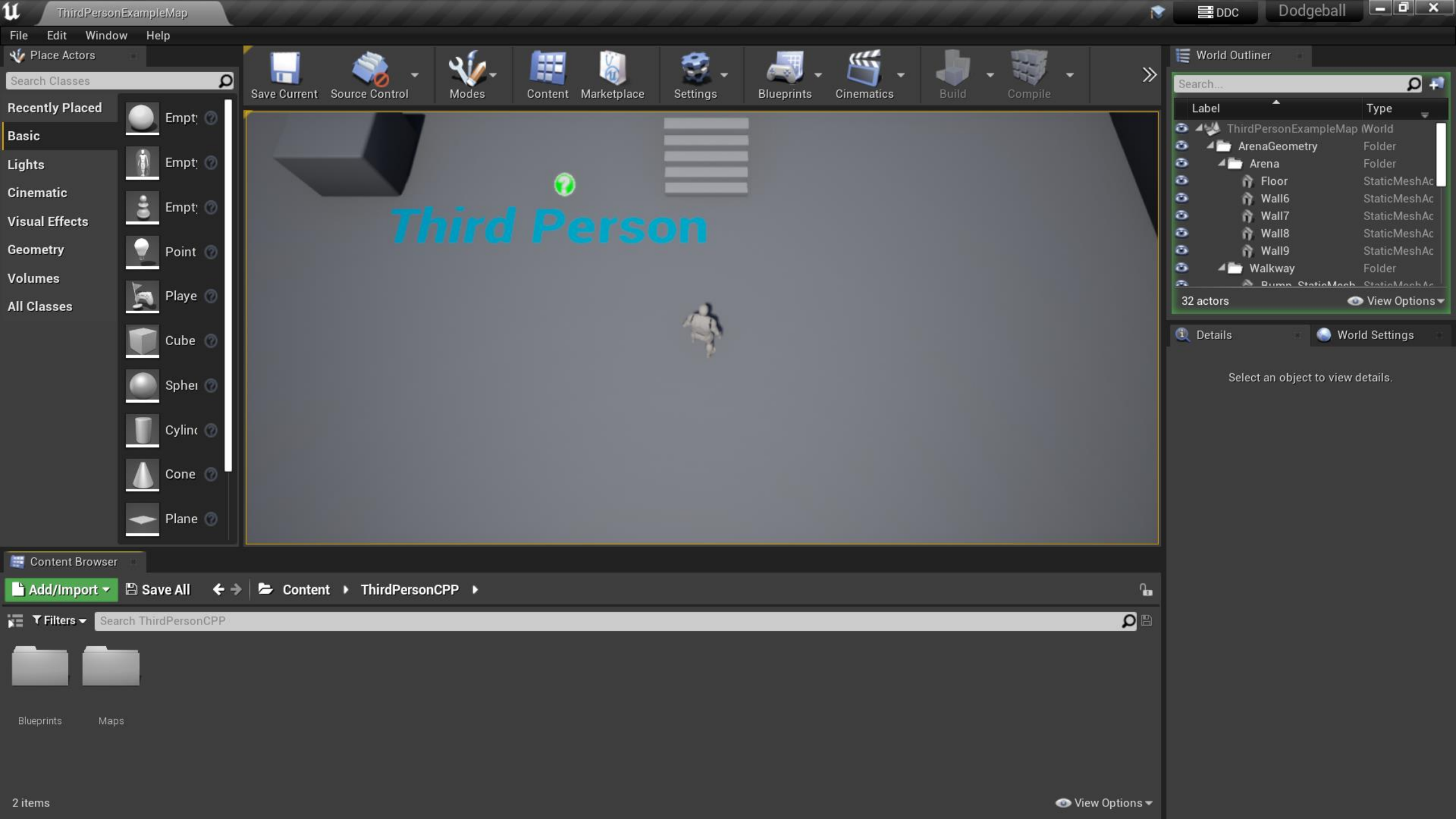
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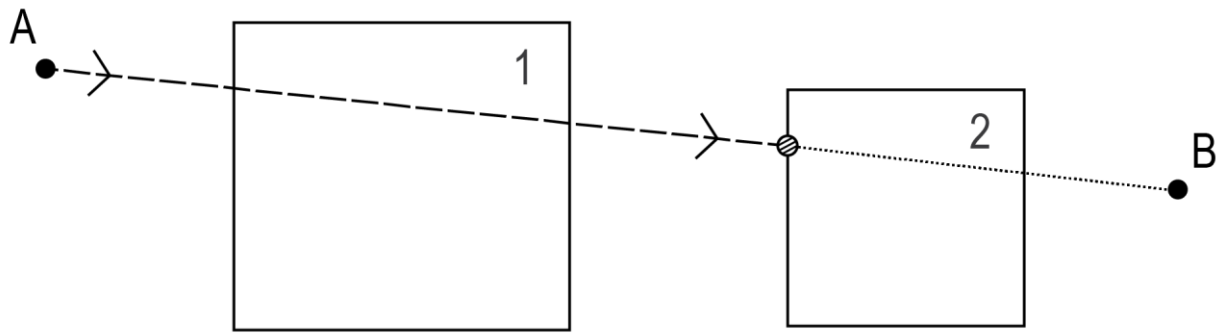
# Line Traces (1)

- A way of asking the game to tell you whether anything stands between two points in the game world
  - The game will *shoot a ray* between those two points, specified by you, and return the objects that were hit (if any), where they were hit, at what angle, and much more.




< A Line Trace being executed from point A to point B >

# Line Traces (2)

- In the figure:
  - The dashed line represents the Line Trace before it hits an object.
  - The arrows represent the direction of the Line Trace.
  - The dotted line represents the Line Trace after it hits an object.
  - The striped circle represents the Line Trace's impact point.
  - The big squares represent two objects that are in the path of the Line Trace (object 1 and 2)
- Due to assumptions made about object 1's Trace Channel properties, only object 2 was hit by the Line Trace and not object 1.

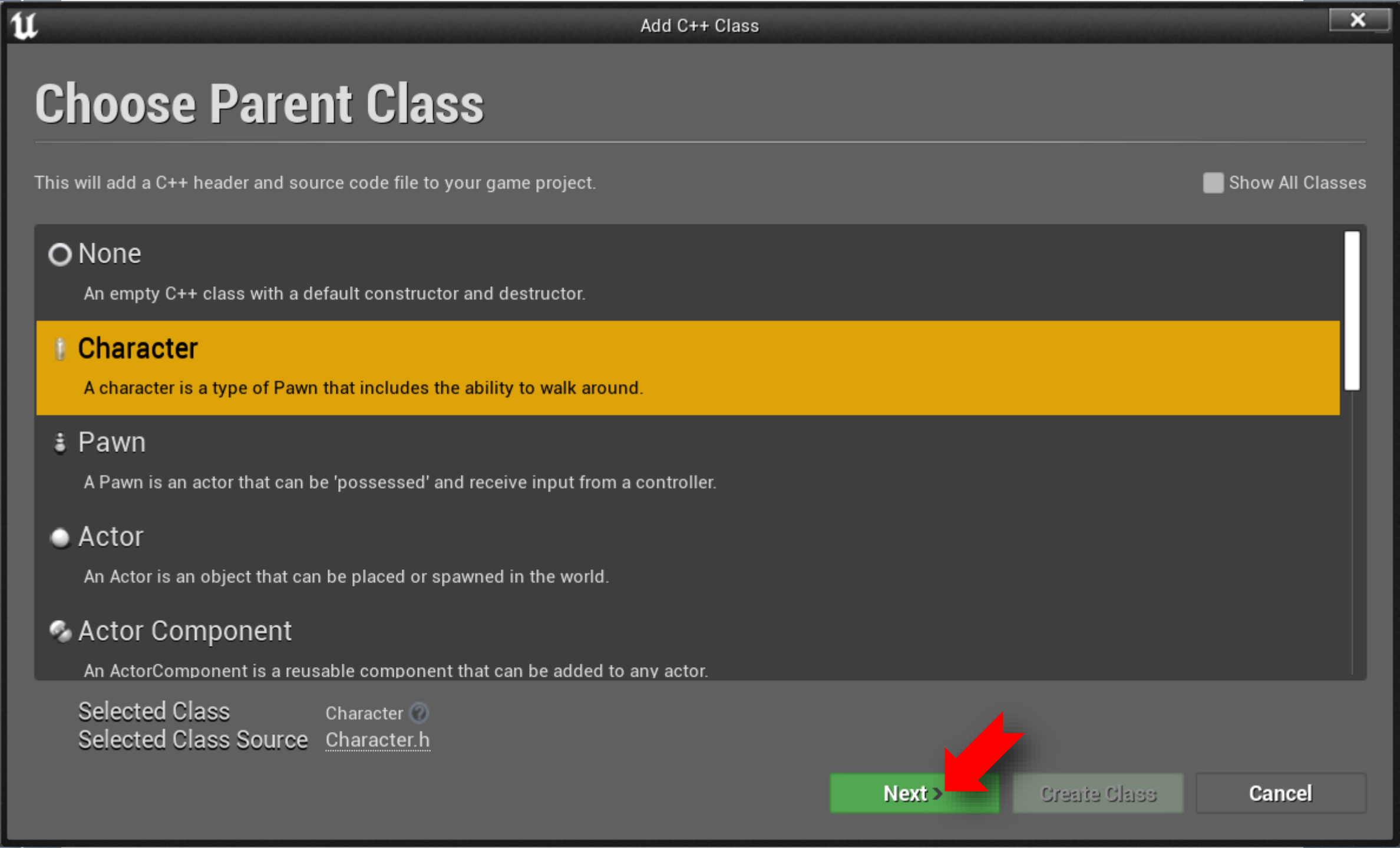

# Line Traces (3)

- Line Traces are used for many game features, such as:
  - Checking whether a weapon hits an object when it fires
  - Highlighting an item that the player can interact with when the character looks at it
  - Rotating the camera around the player character automatically as it goes around corners
- **Trace Channels**
  - A common and important feature of Line Traces
  - When you execute a Line Trace, you may want to check only specific types of objects, which is what Trace Channels are for.
  - To specify filters to be used when executing a Line Trace so that it doesn't get blocked by unwanted objects


# Line Traces (4)

- Trace Channels
  - To execute a Line Trace only to check for objects that are visible, these objects would block the **Visibility** Trace Channel.
  - To execute a Line Trace only to check objects that can be interacted with, these objects would block the **Interaction** Trace Channel.
  - To execute a Line Trace only to check for pawns that can move around the game world, these objects would block the **Pawn** Trace Channel.

# Creating The EnemyCharacter C++ Class


Add C++ Class
Choose Parent Class
This will add a C++ header and source code file to your game project.
Show All Classes
None
An empty C++ class with a default constructor and destructor.
Character
A character is a type of Pawn that includes the ability to walk around.
Pawn
A Pawn is an actor that can be 'possessed' and receive input from a controller.
Actor
An Actor is an object that can be placed or spawned in the world.
Actor Component
An ActorComponent is a reusable component that can be added to any actor.
Selected Class
Character
Selected Class Source
Character.h
Next >
Create Class
Cancel

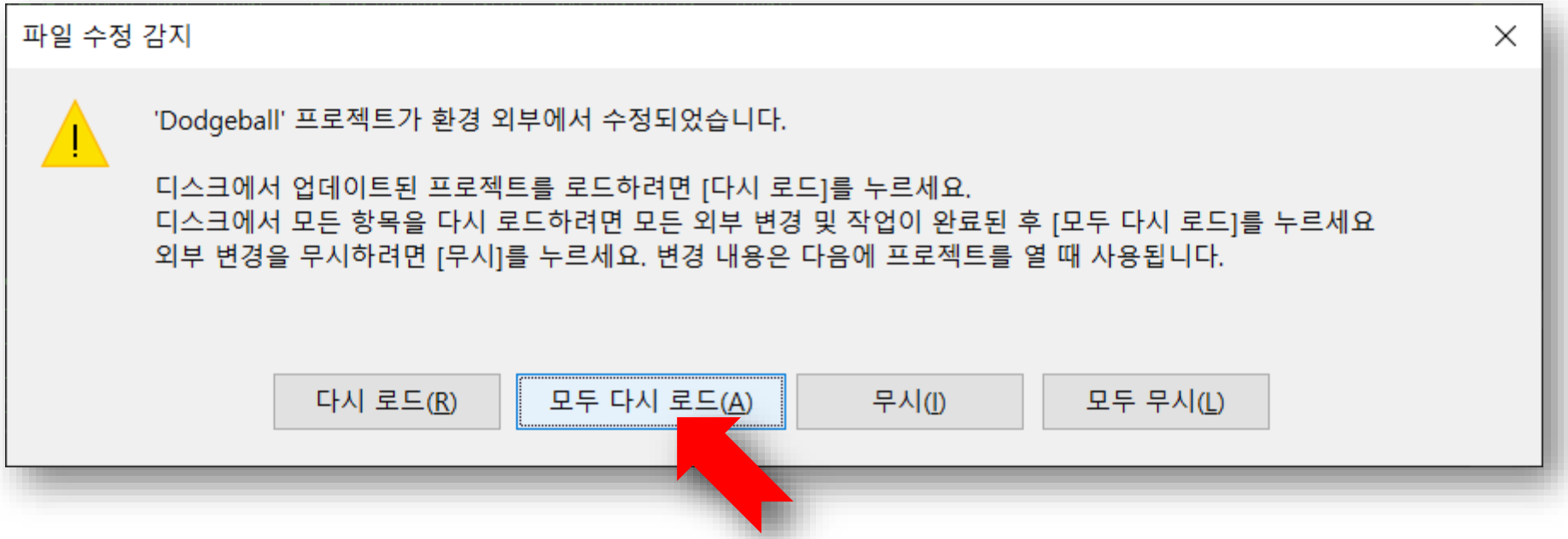
Add C++ Class

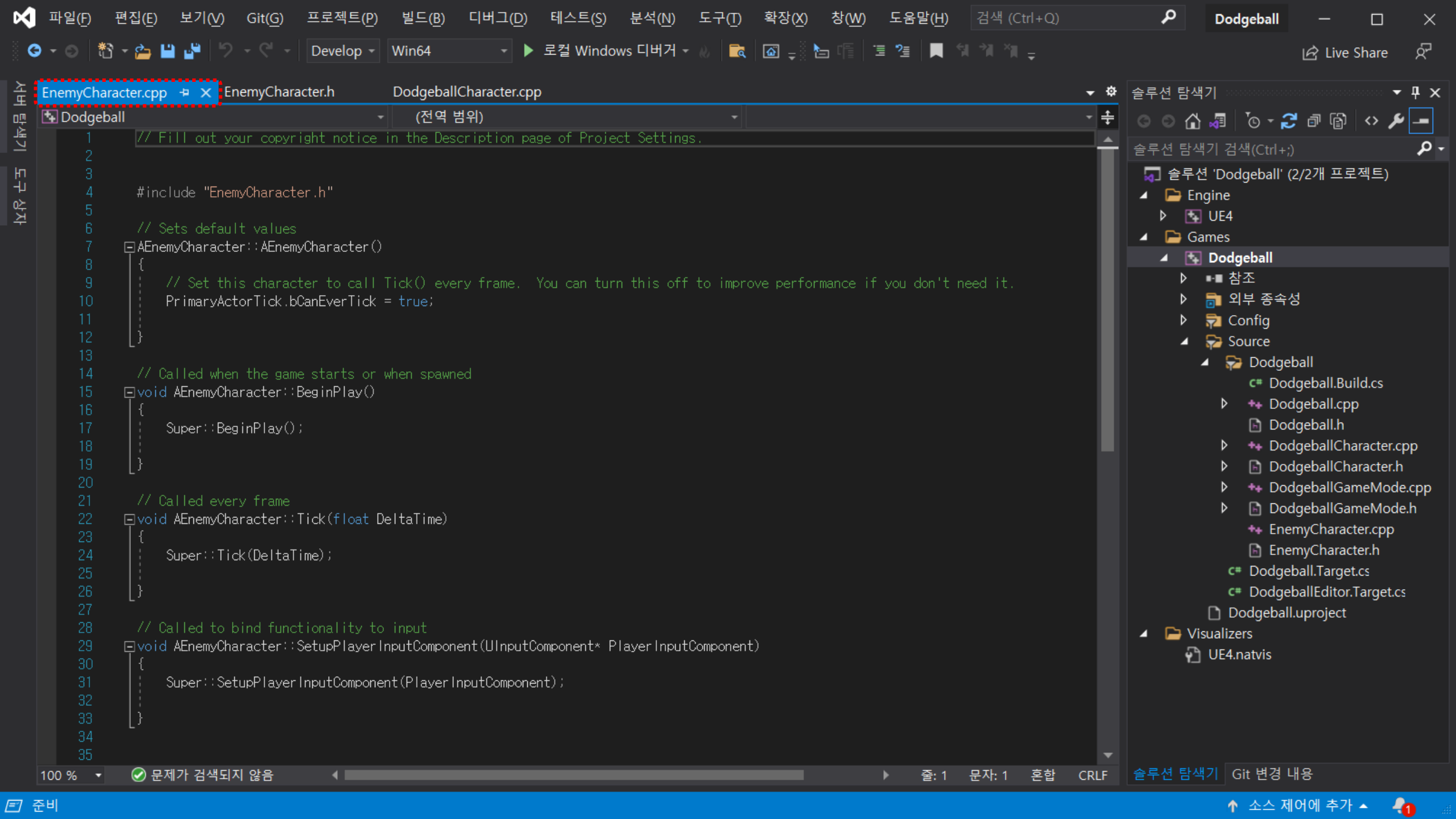
# Name Your New Character

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 | EnemyCharacter | Dodgeball (Runtime) | Public / Private |
| Path | C:/Users/sunje/Desktop/Unreal/Dodgeball/Source/Dodgeball/ | | Choose Folder |
| Header File | C:/Users/sunje/Desktop/Unreal/Dodgeball/Source/Dodgeball/EnemyCharacter.h | | |
| Source File | C:/Users/sunje/Desktop/Unreal/Dodgeball/Source/Dodgeball/EnemyCharacter.cpp | | |

Back | Create Class | Cancel


파일 수정 감지
'Dodgeball' 프로젝트가 환경 외부에서 수정되었습니다.
디스크에서 업데이트된 프로젝트를 로드하려면 [다시 로드]를 누르세요.
디스크에서 모든 항목을 다시 로드하려면 모든 외부 변경 및 작업이 완료된 후 [모두 다시 로드]를 누르세요
외부 변경을 무시하려면 [무시]를 누르세요. 변경 내용은 다음에 프로젝트를 열 때 사용됩니다.
다시 로드(R)
모두 다시 로드(A)
무시(I)
모두 무시(L)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검색 (Ctrl+Q)
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Live Share
EnemyCharacter.cpp
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
(전역 범위)
// Fill out your copyright notice in the Description page of Project Settings.
#include "EnemyCharacter.h"
// Sets default values
AEnemyCharacter::AEnemyCharacter()
{
// Set this character to call Tick() every frame. You can turn this off to improve performance if you don't need it.
PrimaryActorTick.bCanEverTick = true;
}
// Called when the game starts or when spawned
void AEnemyCharacter::BeginPlay()
{
Super::BeginPlay();
}
// Called every frame
void AEnemyCharacter::Tick(float DeltaTime)
{
Super::Tick(DeltaTime);
}
// Called to bind functionality to input
void AEnemyCharacter::SetupPlayerInputComponent(UInputComponent* PlayerInputComponent)
{
Super::SetupPlayerInputComponent(PlayerInputComponent);
}
100 %
문제가 검색되지 않음
줄: 1
문자: 1
혼합
CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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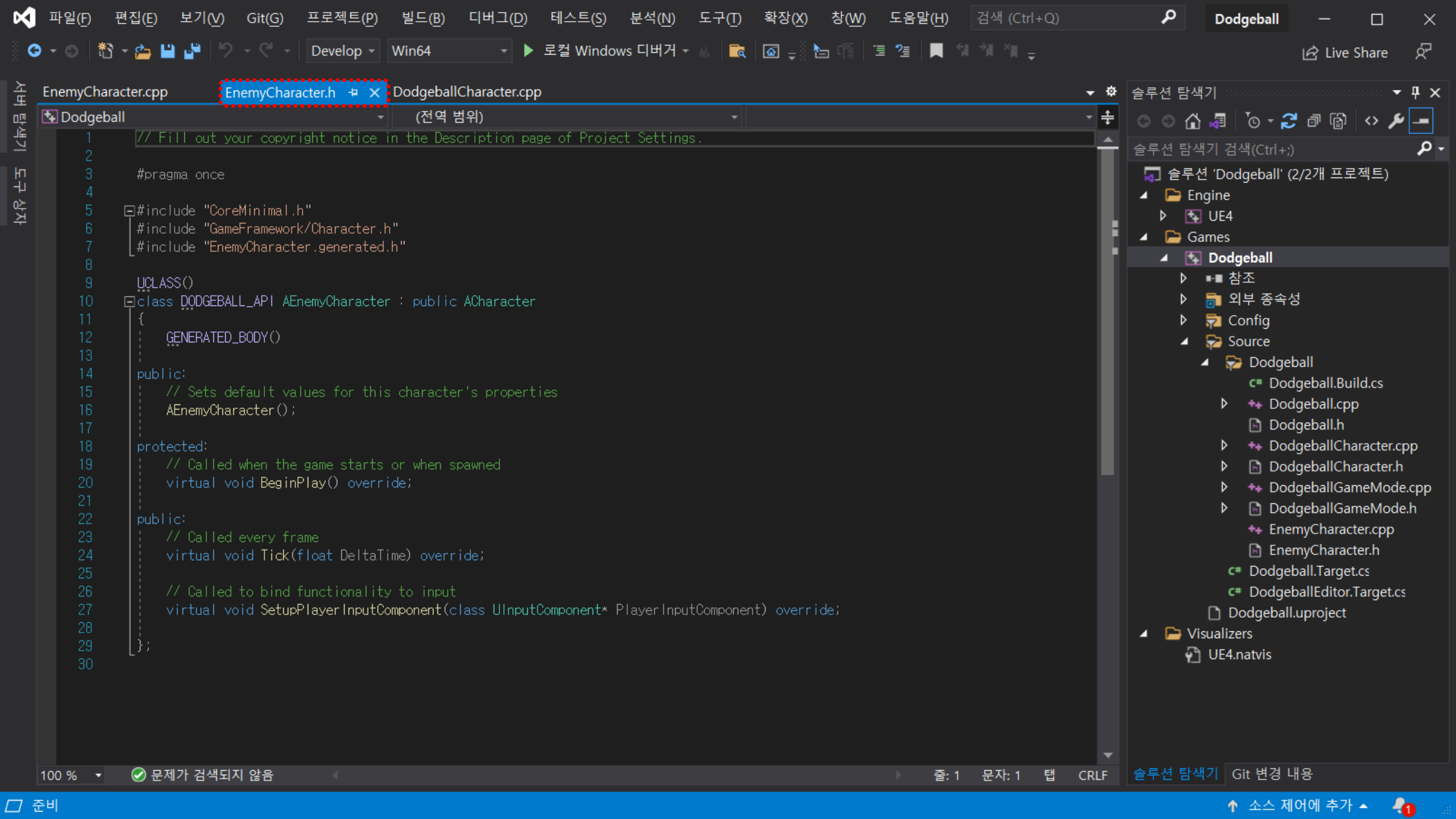
도구 상자
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
서버 탐색기
도구 상자
EnemyCharacter.cpp
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
(전역 범위)
// Fill out your copyright notice in the Description page of Project Settings.
#pragma once
#include "CoreMinimal.h"
#include "GameFramework/Character.h"
#include "EnemyCharacter.generated.h"
UCLASS()
class DODGEBALL_API AEnemyCharacter : public ACharacter
{
GENERATED_BODY()
public:
// Sets default values for this character's properties
AEnemyCharacter();
protected:
// Called when the game starts or when spawned
virtual void BeginPlay() override;
public:
// Called every frame
virtual void Tick(float DeltaTime) override;
// Called to bind functionality to input
virtual void SetupPlayerInputComponent(class UInputComponent* PlayerInputComponent) override;
};
100 %
문제가 검색되지 않음
줄: 1
문자: 1
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솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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DodgeballCharacter.h
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EnemyCharacter.h
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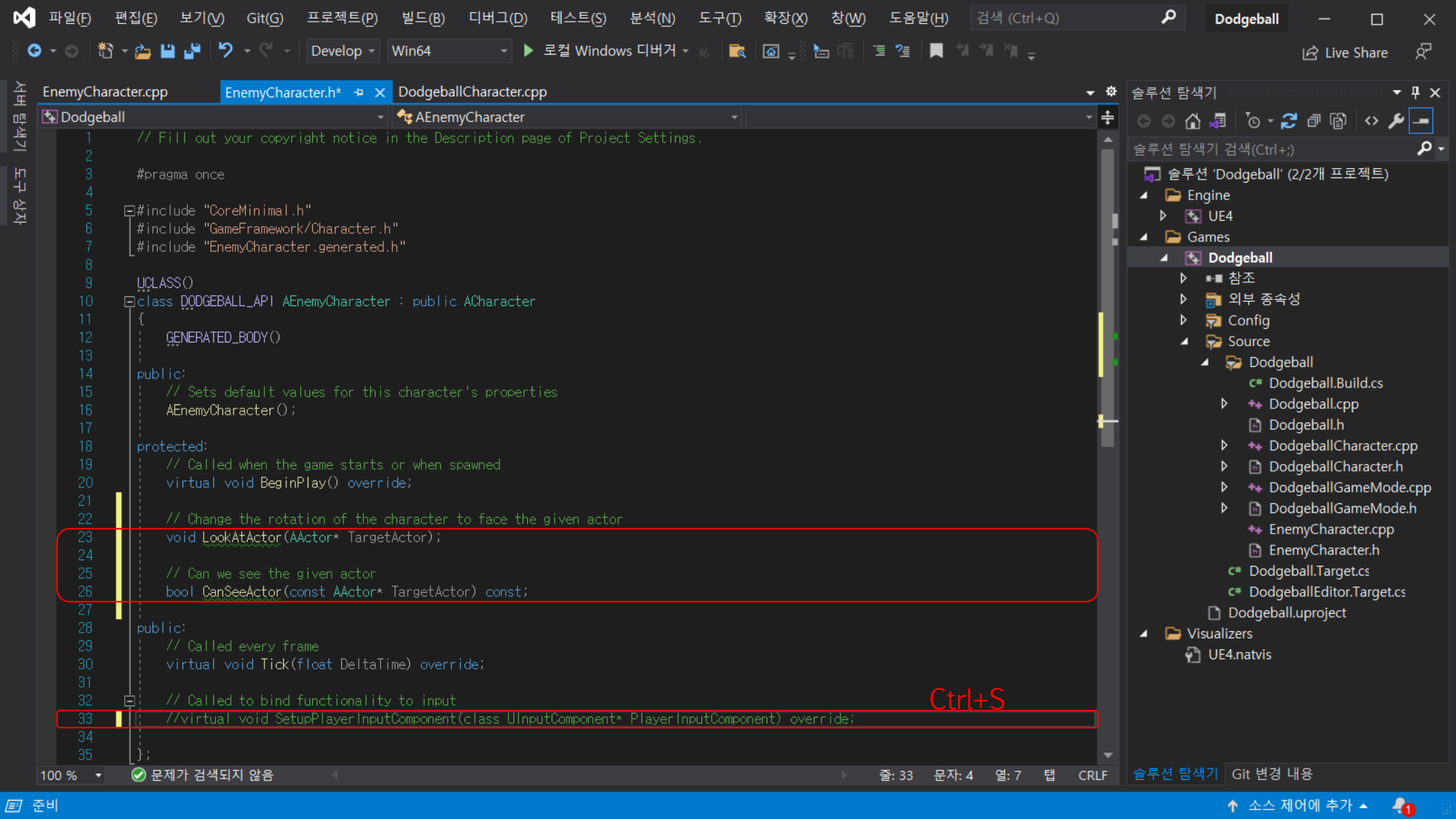
솔루션 탐색기
Git 변경 내용
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
EnemyCharacter.cpp
EnemyCharacter.h*
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
1 // Fill out your copyright notice in the Description page of Project Settings.
2
3 #pragma once
4
5 #include "CoreMinimal.h"
6 #include "GameFramework/Character.h"
7 #include "EnemyCharacter.generated.h"
8
9 UCLASS()
10 class DODGEBALL_API AEnemyCharacter : public ACharacter
11 {
12 GENERATED_BODY()
13
14 public:
15 // Sets default values for this character's properties
16 AEnemyCharacter();
17
18 protected:
19 // Called when the game starts or when spawned
20 virtual void BeginPlay() override;
21
22 // Change the rotation of the character to face the given actor
23 void LookAtActor(AActor* TargetActor);
24
25 // Can we see the given actor
26 bool CanSeeActor(const AActor* TargetActor) const;
27
28 public:
29 // Called every frame
30 virtual void Tick(float DeltaTime) override;
31
32 // Called to bind functionality to input
33 //virtual void SetupPlayerInputComponent(class UInputComponent* PlayerInputComponent) override;
34
35 };
Ctrl+S
100 %
문제가 검색되지 않음
줄: 33 문자: 4 열: 7 탭 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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Dodgeball.cpp
Dodgeball.h
DodgeballCharacter.cpp
DodgeballCharacter.h
DodgeballGameMode.cpp
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
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Visualizers
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서버 탐색기
도구 상자
준비
소스 제어에 추가

# Exercise 5.02 Creating The CanSeeActor Function, Which Executes Line Traces

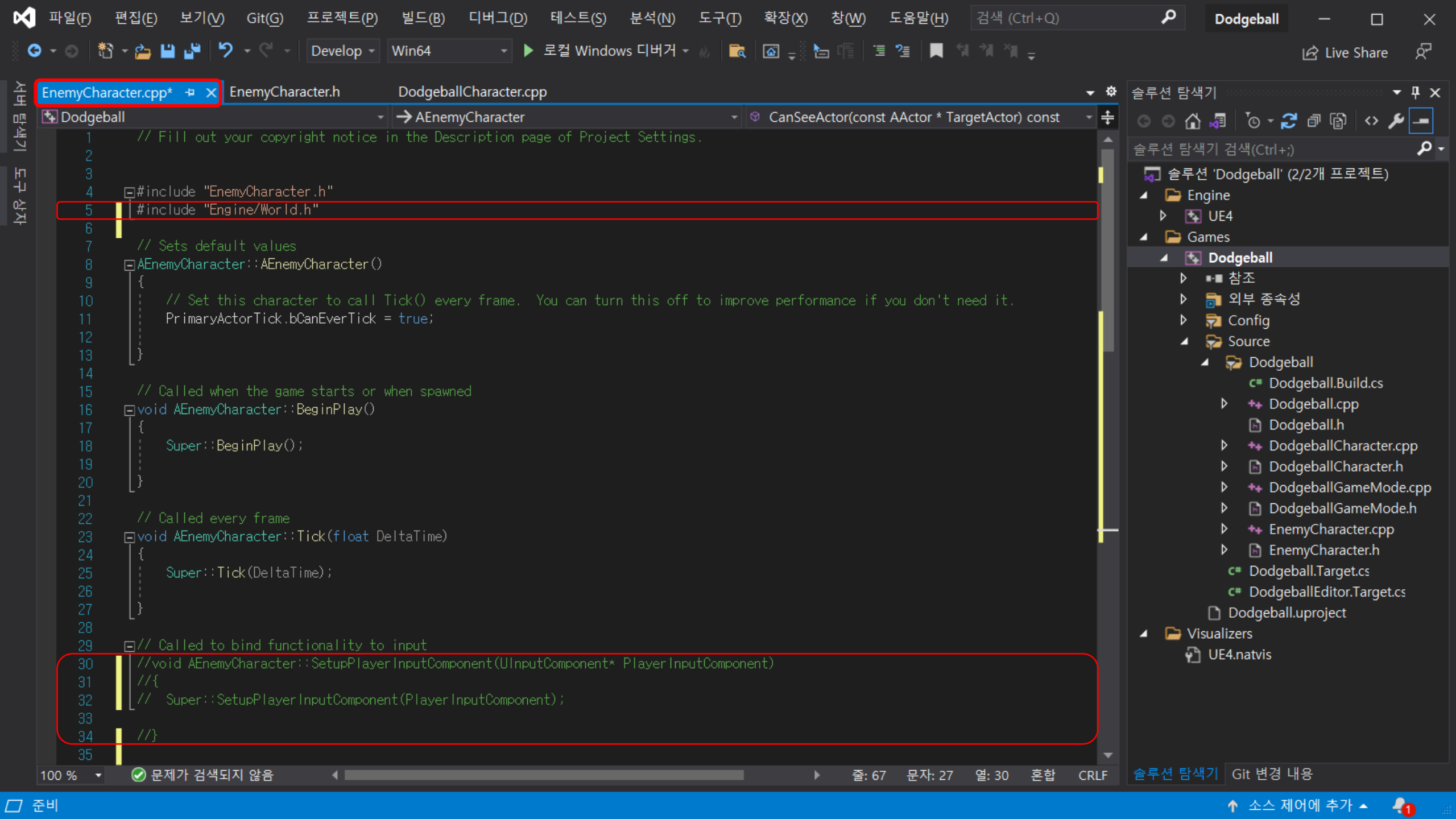
```
#pragma once

#include "CoreMinimal.h"
#include "GameFramework/Character.h"
#include "EnemyCharacter.generated.h"

UCLASS()
class DODGEBALL_API AEnemyCharacter : public ACharacter
{
    GENERATED_BODY()

public:
    // Sets default values for this character's properties
    AEnemyCharacter();

protected:
    // Called when the game starts or when spawned
    virtual void BeginPlay() override;

    // Change the rotation of the character to face the given actor
    void LookAtActor(AActor* TargetActor);

    // Can we see the given actor
    bool CanSeeActor(const AActor* TargetActor) const;

public:
    // Called every frame
    virtual void Tick(float DeltaTime) override;

    // Called to bind functionality to input
    //virtual void SetupPlayerInputComponent(class UInputComponent* PlayerInputComponent) override;

};
```

솔루션 'Dodgeball' (2/2개 프로젝트)
- Engine
  - UE4
- Games
  - Dodgeball
    - 참조
    - 외부 종속성
    - Config
    - Source
      - Dodgeball
        - Dodgeball.Build.cs
        - Dodgeball.cpp
        - Dodgeball.h
        - DodgeballCharacter.cpp
        - DodgeballCharacter.h
        - DodgeballGameMode.cpp
        - DodgeballGameMode.h
        - EnemyCharacter.cpp
        - EnemyCharacter.h
      - Dodgeball.Target.cs
      - DodgeballEditor.Target.cs
    - Dodgeball.uproject
- Visualizers
  - UE4.natvis

100 % 문제가 검색되지 않음 줄: 26 문자: 52 열: 55 탭 CRLF

솔루션 탐색기 Git 변경 내용

저장되었습니다. 소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
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로컬 Windows 디버거
Live Share
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
// Fill out your copyright notice in the Description page of Project Settings.
#include "EnemyCharacter.h"
#include "Engine/World.h"
// Sets default values
AEnemyCharacter::AEnemyCharacter()
{
// Set this character to call Tick() every frame. You can turn this off to improve performance if you don't need it.
PrimaryActorTick.bCanEverTick = true;
}
// Called when the game starts or when spawned
void AEnemyCharacter::BeginPlay()
{
Super::BeginPlay();
}
// Called every frame
void AEnemyCharacter::Tick(float DeltaTime)
{
Super::Tick(DeltaTime);
}
// Called to bind functionality to input
//void AEnemyCharacter::SetupPlayerInputComponent(UInputComponent* PlayerInputComponent)
//{
// Super::SetupPlayerInputComponent(PlayerInputComponent);
//}
100 %
문제가 검색되지 않음
줄: 67 문자: 27 열: 30 혼합 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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참조
외부 종속성
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Dodgeball.cpp
Dodgeball.h
DodgeballCharacter.cpp
DodgeballCharacter.h
DodgeballGameMode.cpp
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
Dodgeball.uproject
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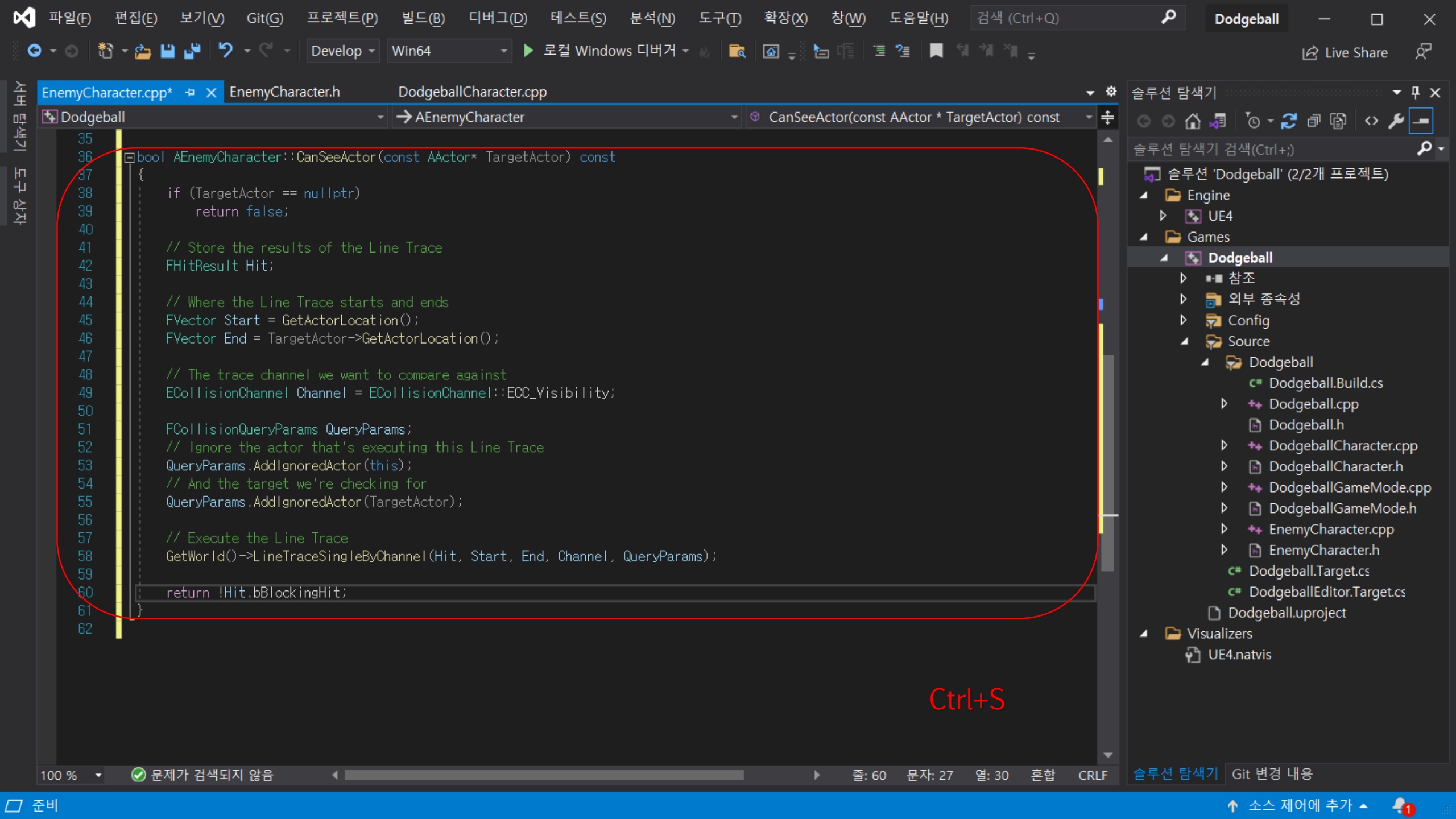
UE4.natvis
솔루션 탐색기
Git 변경 내용
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
35
36 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
37 {
38 if (TargetActor == nullptr)
39 return false;
40
41 // Store the results of the Line Trace
42 FHitResult Hit;
43
44 // Where the Line Trace starts and ends
45 FVector Start = GetActorLocation();
46 FVector End = TargetActor->GetActorLocation();
47
48 // The trace channel we want to compare against
49 ECollisionChannel Channel = ECollisionChannel::ECC_Visibility;
50
51 FCollisionQueryParams QueryParams;
52 // Ignore the actor that's executing this Line Trace
53 QueryParams.AddIgnoredActor(this);
54 // And the target we're checking for
55 QueryParams.AddIgnoredActor(TargetActor);
56
57 // Execute the Line Trace
58 GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
59
60 return !Hit.bBlockingHit;
61 }
62
Ctrl+S
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
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DodgeballEditor.Target.cs
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Visualizers
UE4.natvis
100 %
문제가 검색되지 않음
줄: 60 문자: 27 열: 30 혼합 CRLF
솔루션 탐색기 Git 변경 내용
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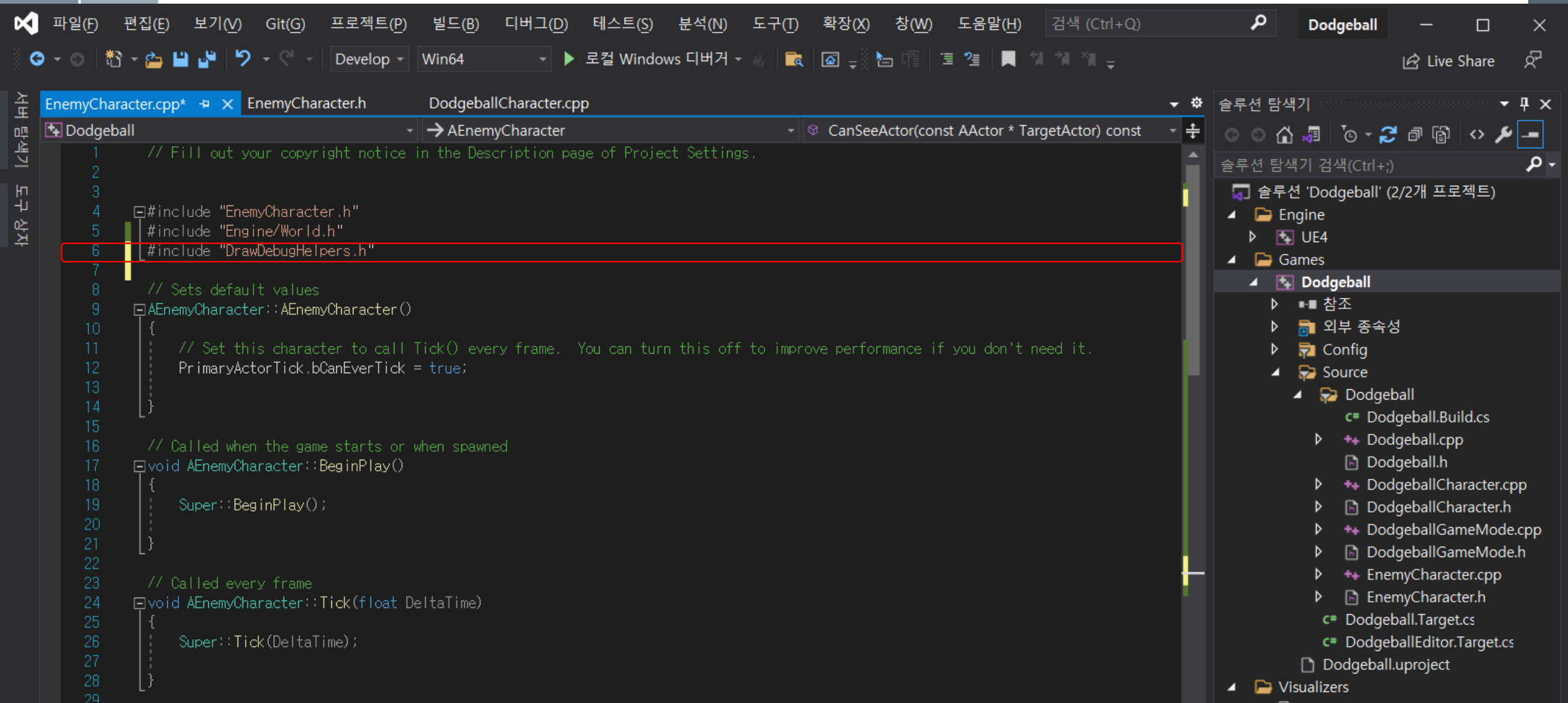
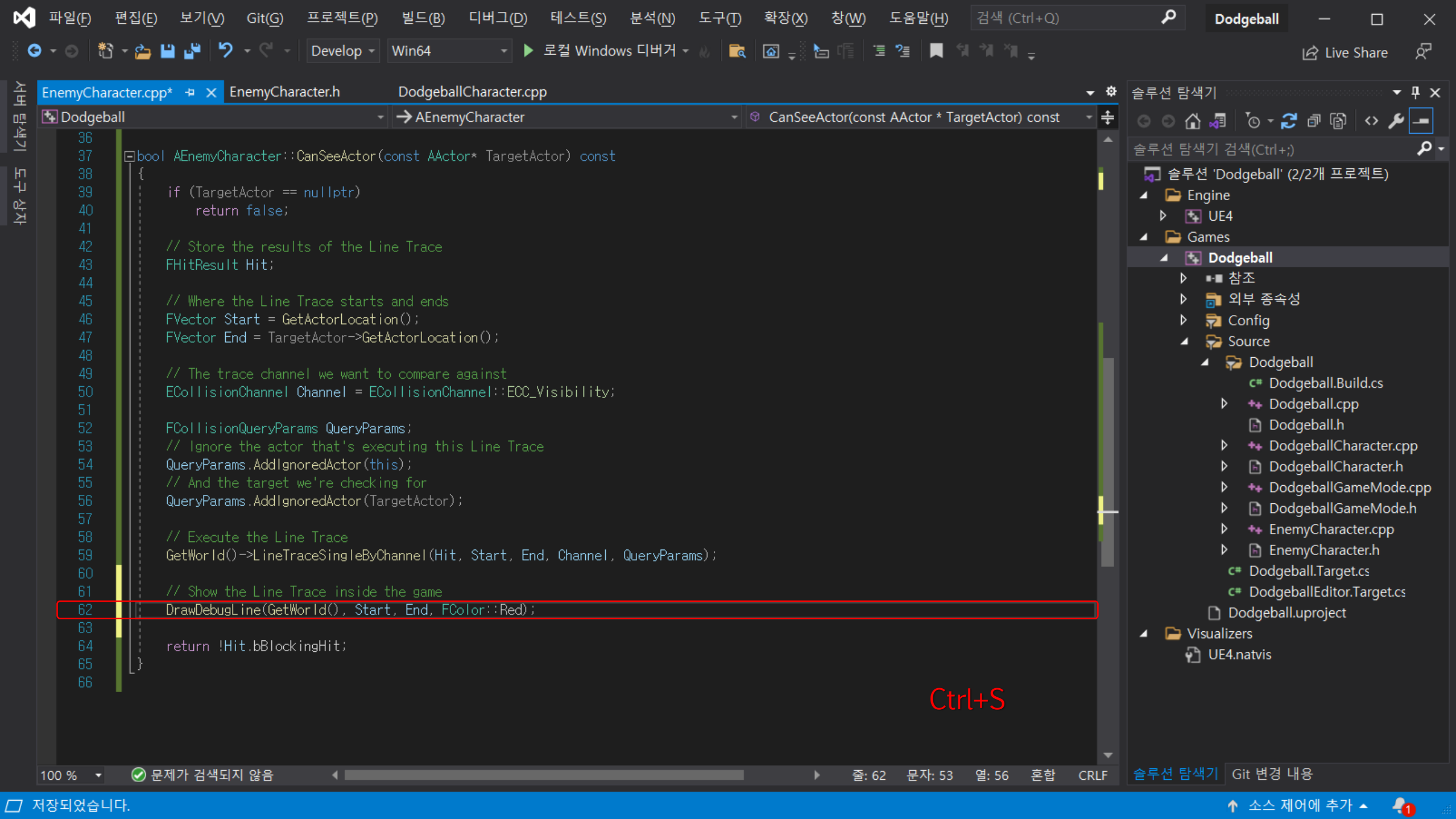
소스 제어에 추가

# Visualizing The Line Trace




파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
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EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
36
37 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
38 {
39 if (TargetActor == nullptr)
40 return false;
41
42 // Store the results of the Line Trace
43 FHitResult Hit;
44
45 // Where the Line Trace starts and ends
46 FVector Start = GetActorLocation();
47 FVector End = TargetActor->GetActorLocation();
48
49 // The trace channel we want to compare against
50 ECollisionChannel Channel = ECollisionChannel::ECC_Visibility;
51
52 FCollisionQueryParams QueryParams;
53 // Ignore the actor that's executing this Line Trace
54 QueryParams.AddIgnoredActor(this);
55 // And the target we're checking for
56 QueryParams.AddIgnoredActor(TargetActor);
57
58 // Execute the Line Trace
59 GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
60
61 // Show the Line Trace inside the game
62 DrawDebugLine(GetWorld(), Start, End, FColor::Red);
63
64 return !Hit.bBlockingHit;
65 }
66
Ctrl+S
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
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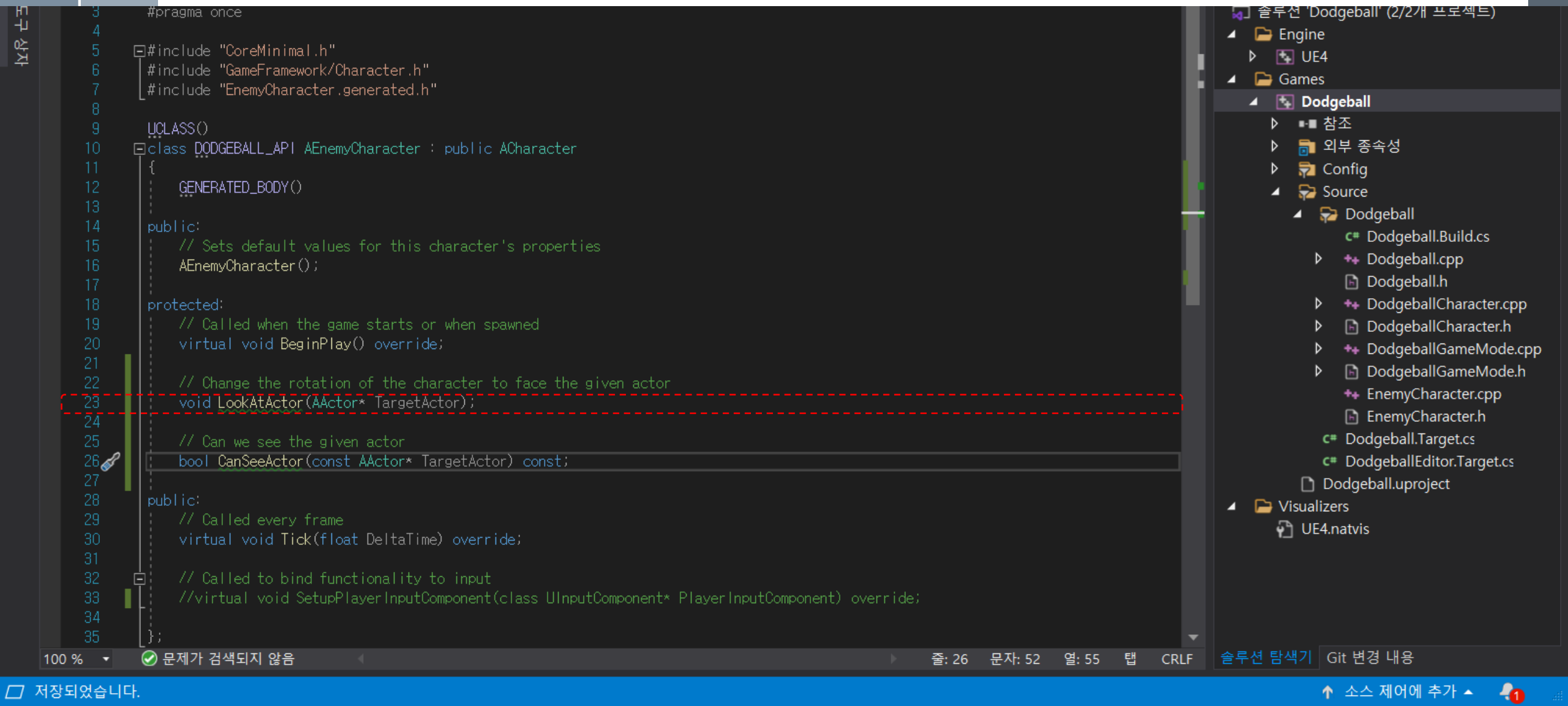
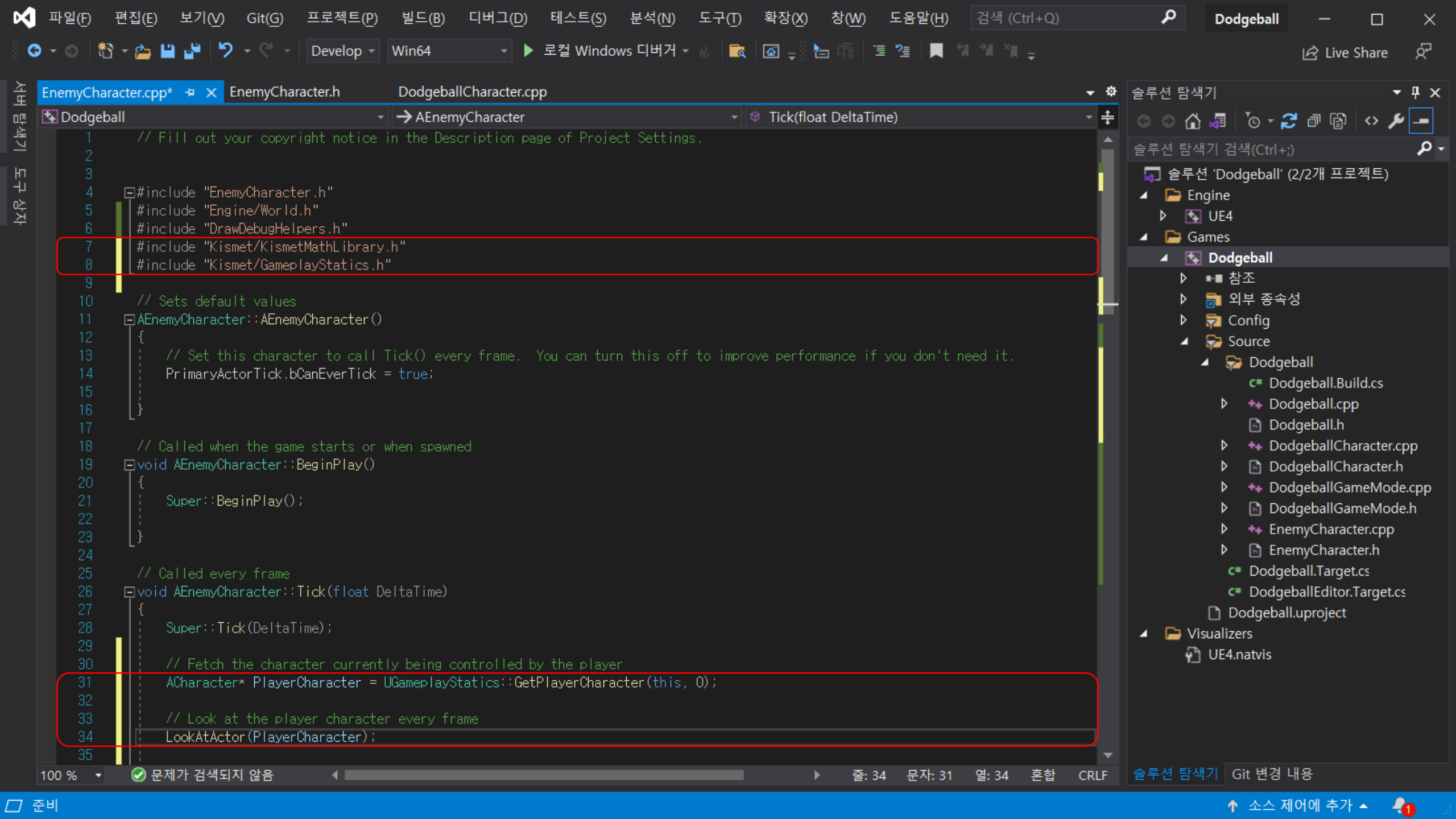
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
Dodgeball.uproject
Visualizers
UE4.natvis
100 %
문제가 검색되지 않음
줄: 62 문자: 53 열: 56 혼합 CRLF
솔루션 탐색기 Git 변경 내용
저장되었습니다.
소스 제어에 추가

# Exercise 5.03: Creating The LookAtActor Function




파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
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Win64
로컬 Windows 디버거
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도구 상자
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
Tick(float DeltaTime)
// Fill out your copyright notice in the Description page of Project Settings.
#include "EnemyCharacter.h"
#include "Engine/World.h"
#include "DrawDebugHelpers.h"
#include "Kismet/KismetMathLibrary.h"
#include "Kismet/GameplayStatics.h"
// Sets default values
AEnemyCharacter::AEnemyCharacter()
{
// Set this character to call Tick() every frame. You can turn this off to improve performance if you don't need it.
PrimaryActorTick.bCanEverTick = true;
}
// Called when the game starts or when spawned
void AEnemyCharacter::BeginPlay()
{
Super::BeginPlay();
}
// Called every frame
void AEnemyCharacter::Tick(float DeltaTime)
{
Super::Tick(DeltaTime);
// Fetch the character currently being controlled by the player
ACharacter* PlayerCharacter = UGameplayStatics::GetPlayerCharacter(this, 0);
// Look at the player character every frame
LookAtActor(PlayerCharacter);
100 %
문제가 검색되지 않음
줄: 34 문자: 31 열: 34 혼합 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
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Dodgeball.h
DodgeballCharacter.cpp
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DodgeballGameMode.cpp
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
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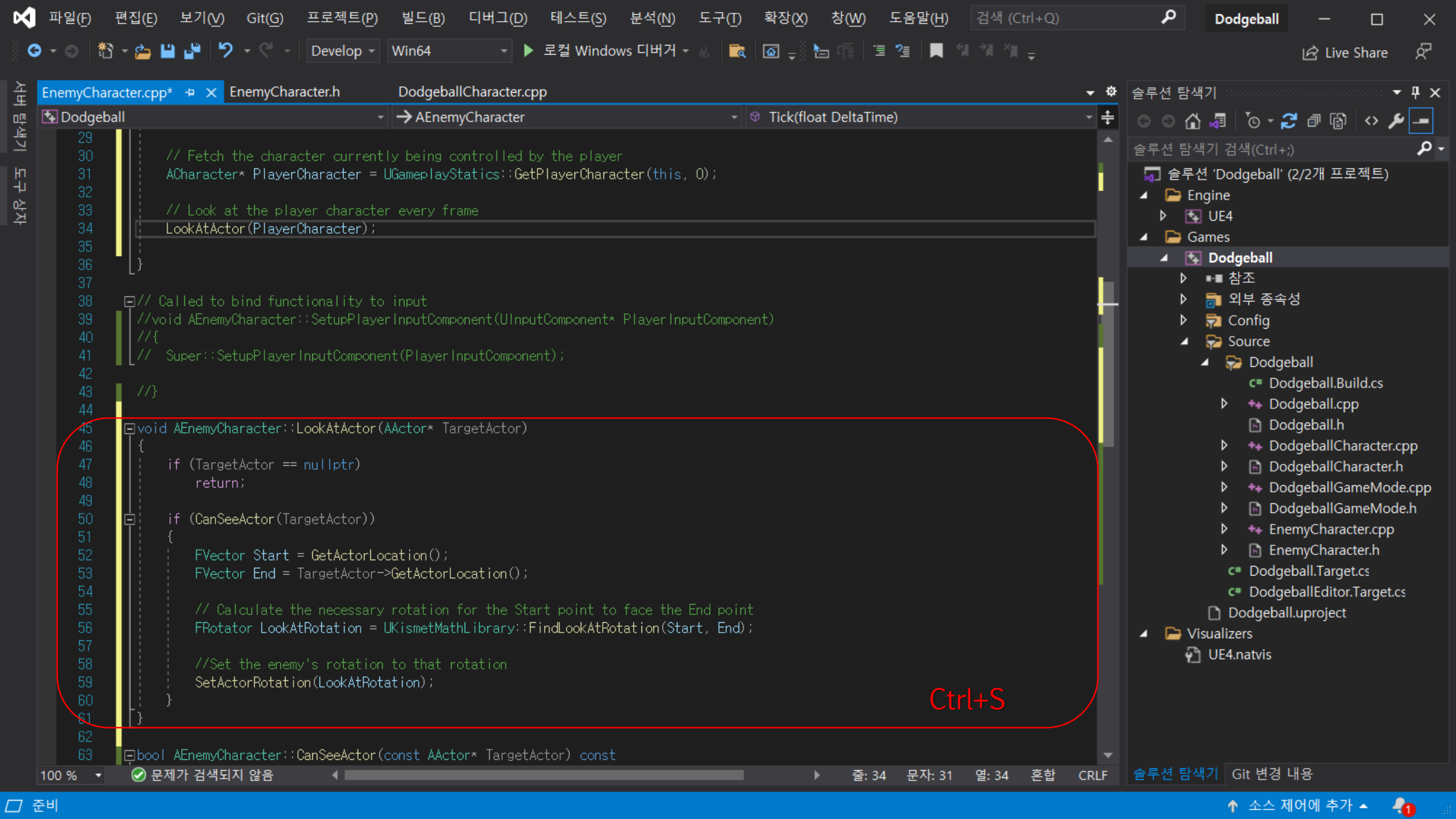
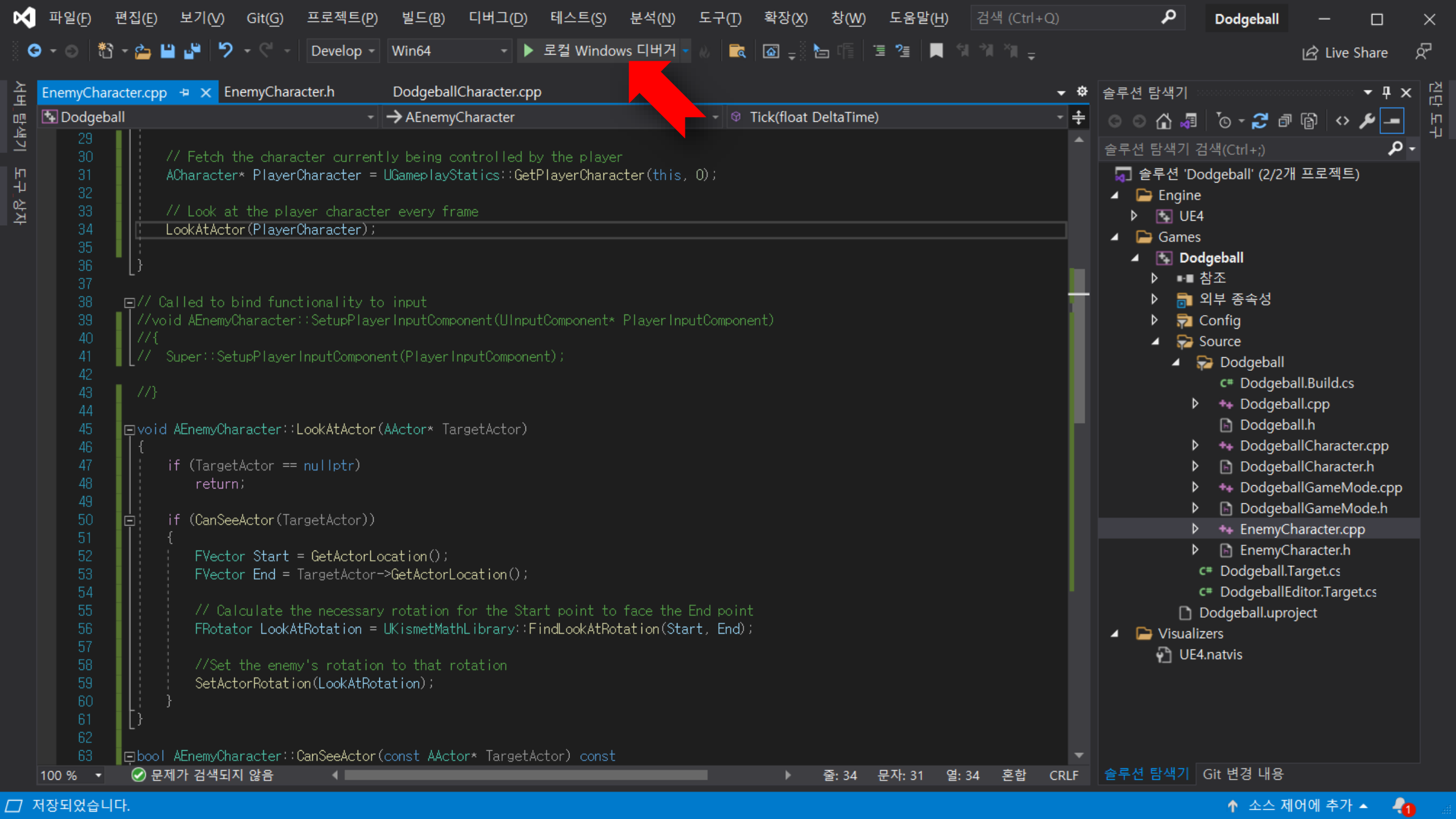
솔루션 탐색기
Git 변경 내용
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
Tick(float DeltaTime)
29 // Fetch the character currently being controlled by the player
30 ACharacter* PlayerCharacter = UGameplayStatics::GetPlayerCharacter(this, 0);
31
32 // Look at the player character every frame
33 LookAtActor(PlayerCharacter);
34
35 }
36
37 // Called to bind functionality to input
38 //void AEnemyCharacter::SetupPlayerInputComponent(UInputComponent* PlayerInputComponent)
39 //{
40 // Super::SetupPlayerInputComponent(PlayerInputComponent);
41
42 //}
43
44 void AEnemyCharacter::LookAtActor(AActor* TargetActor)
45 {
46 if (TargetActor == nullptr)
47 return;
48
49 if (CanSeeActor(TargetActor))
50 {
51 FVector Start = GetActorLocation();
52 FVector End = TargetActor->GetActorLocation();
53
54 // Calculate the necessary rotation for the Start point to face the End point
55 FRotator LookAtRotation = UKismetMathLibrary::FindLookAtRotation(Start, End);
56
57 //Set the enemy's rotation to that rotation
58 SetActorRotation(LookAtRotation);
59 }
60 }
61
62 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
Ctrl+S
100 %
문제가 검색되지 않음
줄: 34 문자: 31 열: 34 혼합 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
Engine
UE4
Games
Dodgeball
참조
외부 종속성
Config
Source
Dodgeball
Dodgeball.Build.cs
Dodgeball.cpp
Dodgeball.h
DodgeballCharacter.cpp
DodgeballCharacter.h
DodgeballGameMode.cpp
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
Dodgeball.uproject
Visualizers
UE4.natvis
솔루션 탐색기
Git 변경 내용
서버 탐색기
도구 상자
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
EnemyCharacter.cpp
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
Tick(float DeltaTime)
// Fetch the character currently being controlled by the player
ACharacter* PlayerCharacter = UGameplayStatics::GetPlayerCharacter(this, 0);
// Look at the player character every frame
LookAtActor(PlayerCharacter);
}
// Called to bind functionality to input
//void AEnemyCharacter::SetupPlayerInputComponent(UInputComponent* PlayerInputComponent)
//{
// Super::SetupPlayerInputComponent(PlayerInputComponent);
//}
void AEnemyCharacter::LookAtActor(AActor* TargetActor)
{
if (TargetActor == nullptr)
return;
if (CanSeeActor(TargetActor))
{
FVector Start = GetActorLocation();
FVector End = TargetActor->GetActorLocation();
// Calculate the necessary rotation for the Start point to face the End point
FRotator LookAtRotation = UKismetMathLibrary::FindLookAtRotation(Start, End);
//Set the enemy's rotation to that rotation
SetActorRotation(LookAtRotation);
}
}
bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
100 %
문제가 검색되지 않음
줄: 34 문자: 31 열: 34 혼합 CRLF
솔루션 탐색기
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솔루션 'Dodgeball' (2/2개 프로젝트)
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UE4
Games
Dodgeball
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외부 종속성
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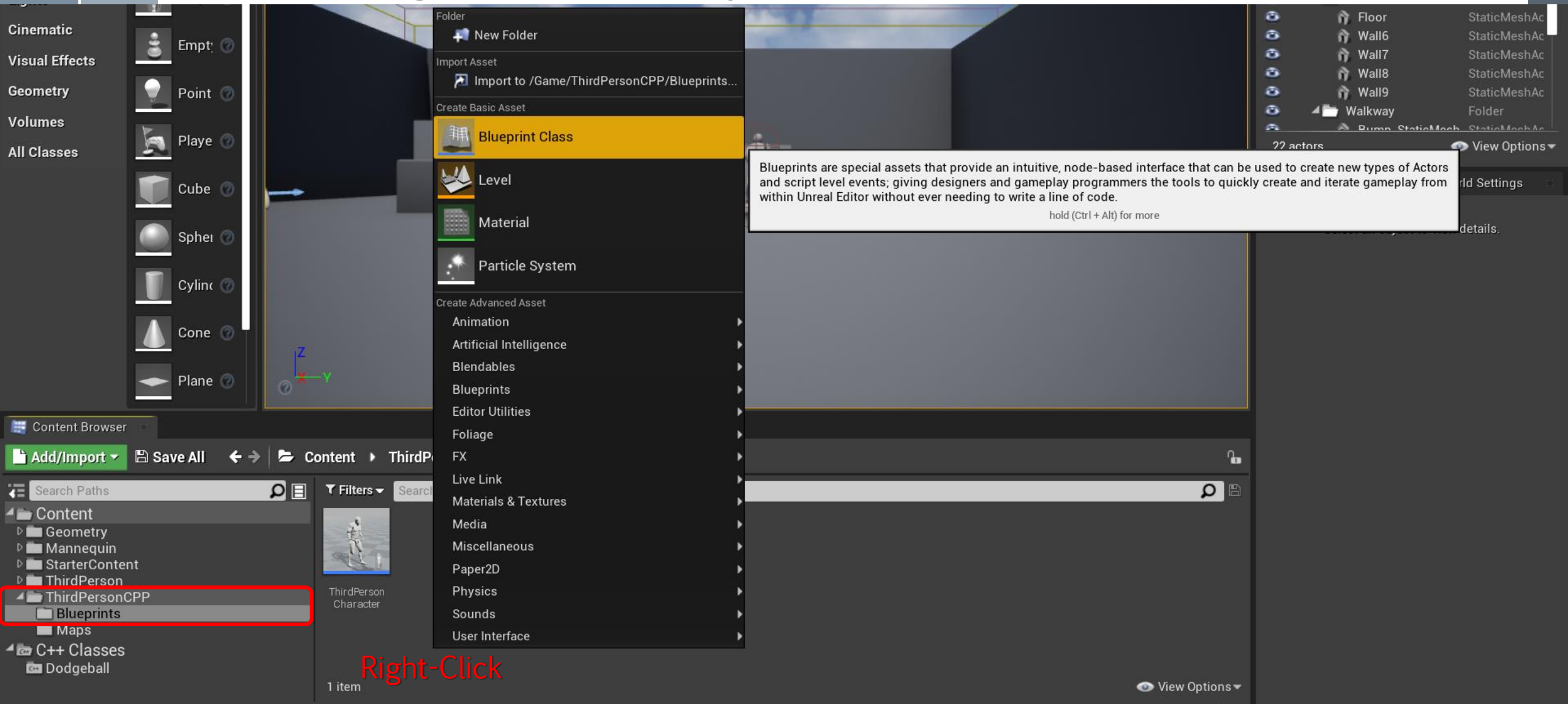
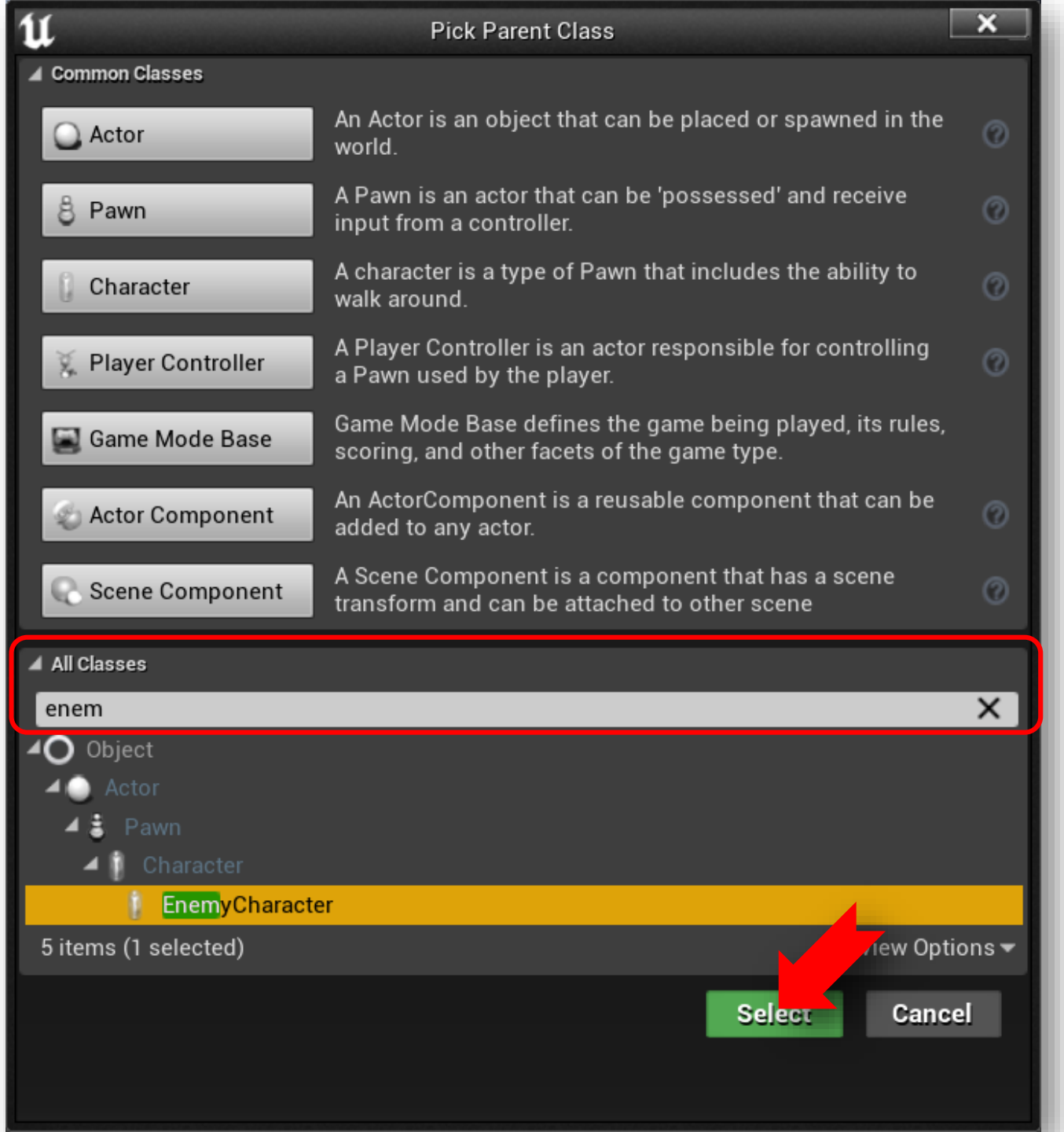
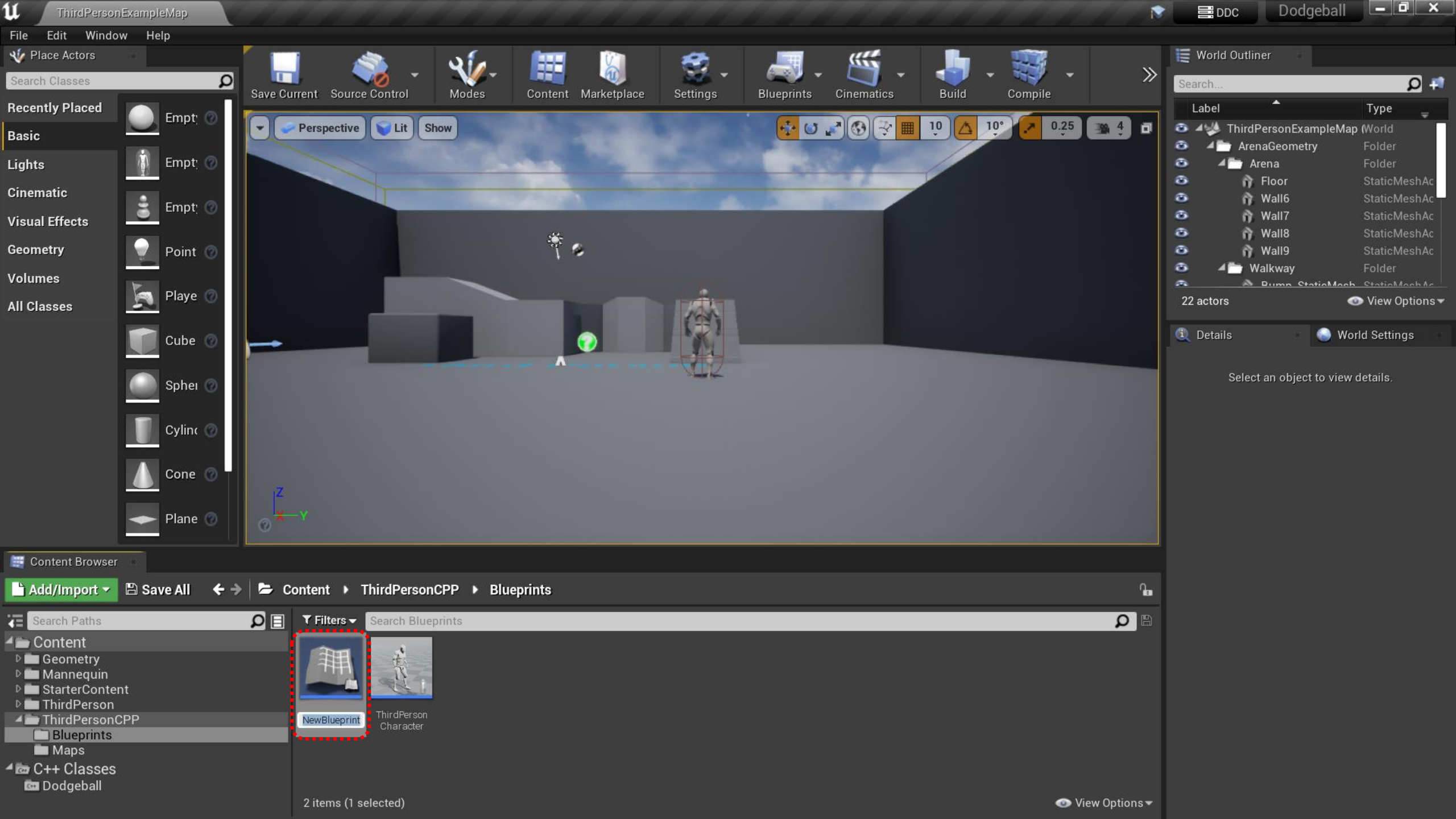
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
Dodgeball.uproject
Visualizers
UE4.natvis
솔루션 탐색기
Git 변경 내용
저장되었습니다.
소스 제어에 추가

# Creating The EnemyCharacter Blueprint Class




Pick Parent Class
Common Classes
Actor
An Actor is an object that can be placed or spawned in the world.
Pawn
A Pawn is an actor that can be 'possessed' and receive input from a controller.
Character
A character is a type of Pawn that includes the ability to walk around.
Player Controller
A Player Controller is an actor responsible for controlling a Pawn used by the player.
Game Mode Base
Game Mode Base defines the game being played, its rules, scoring, and other facets of the game type.
Actor Component
An ActorComponent is a reusable component that can be added to any actor.
Scene Component
A Scene Component is a component that has a scene transform and can be attached to other scene
All Classes
enem
Object
Actor
Pawn
Character
EnemyCharacter
5 items (1 selected)
Select
Cancel


ThirdPersonExampleMap
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Dodgeball
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Visual Effects
Geometry
Volumes
All Classes
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Source Control
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Marketplace
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Blueprints
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World Outliner
Search...
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Folder
Arena
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Floor
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
Walkway
Folder
22 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Filters
Search Blueprints
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
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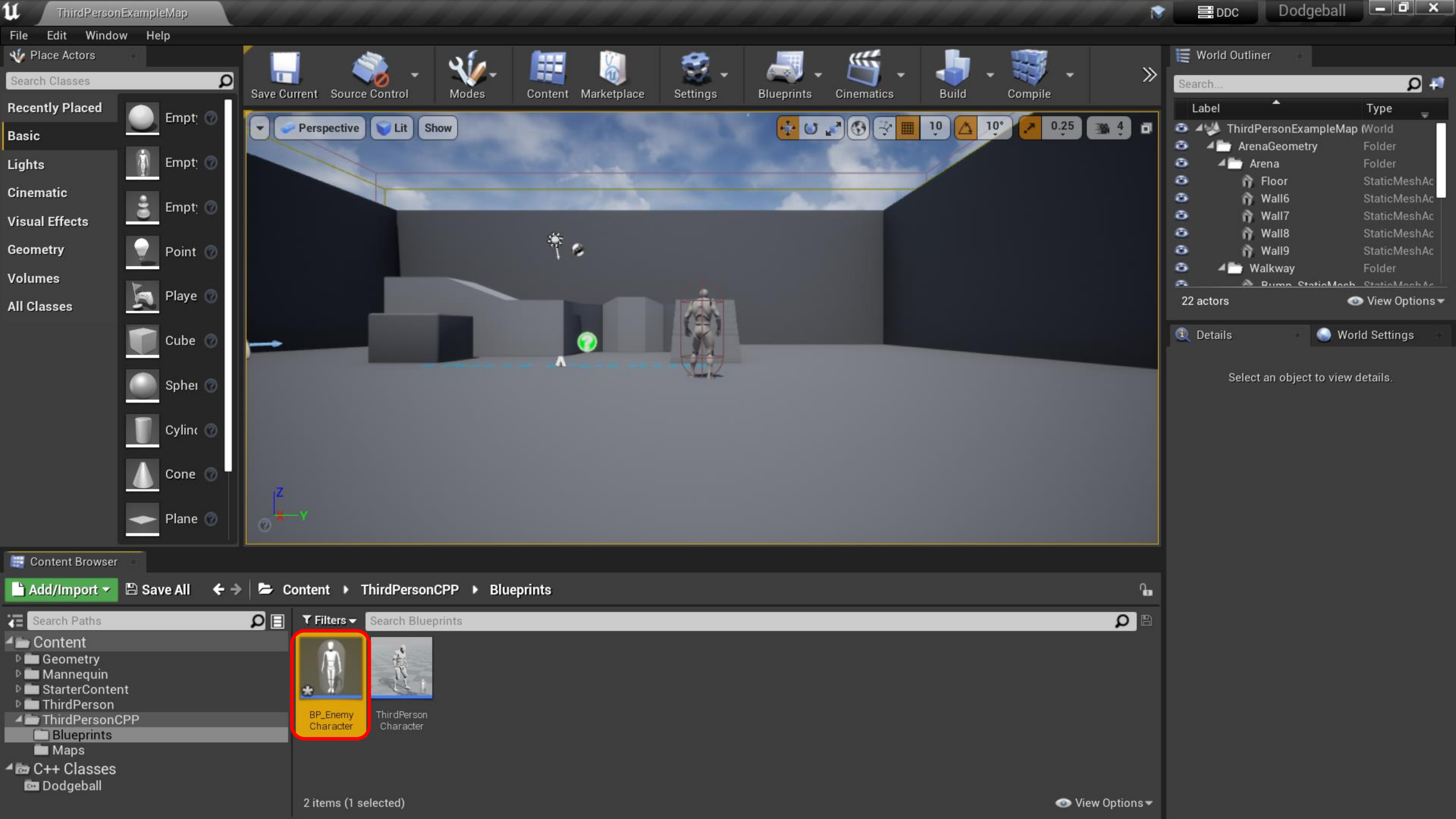
Dodgeball
NewBlueprint
ThirdPerson Character
2 items (1 selected)
View Options


ThirdPersonExampleMap
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Floor
StaticMeshAc
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Wall9
StaticMeshAc
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World Settings
Select an object to view details.
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Add/Import
Save All
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Blueprints
Search Paths
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Mannequin
StarterContent
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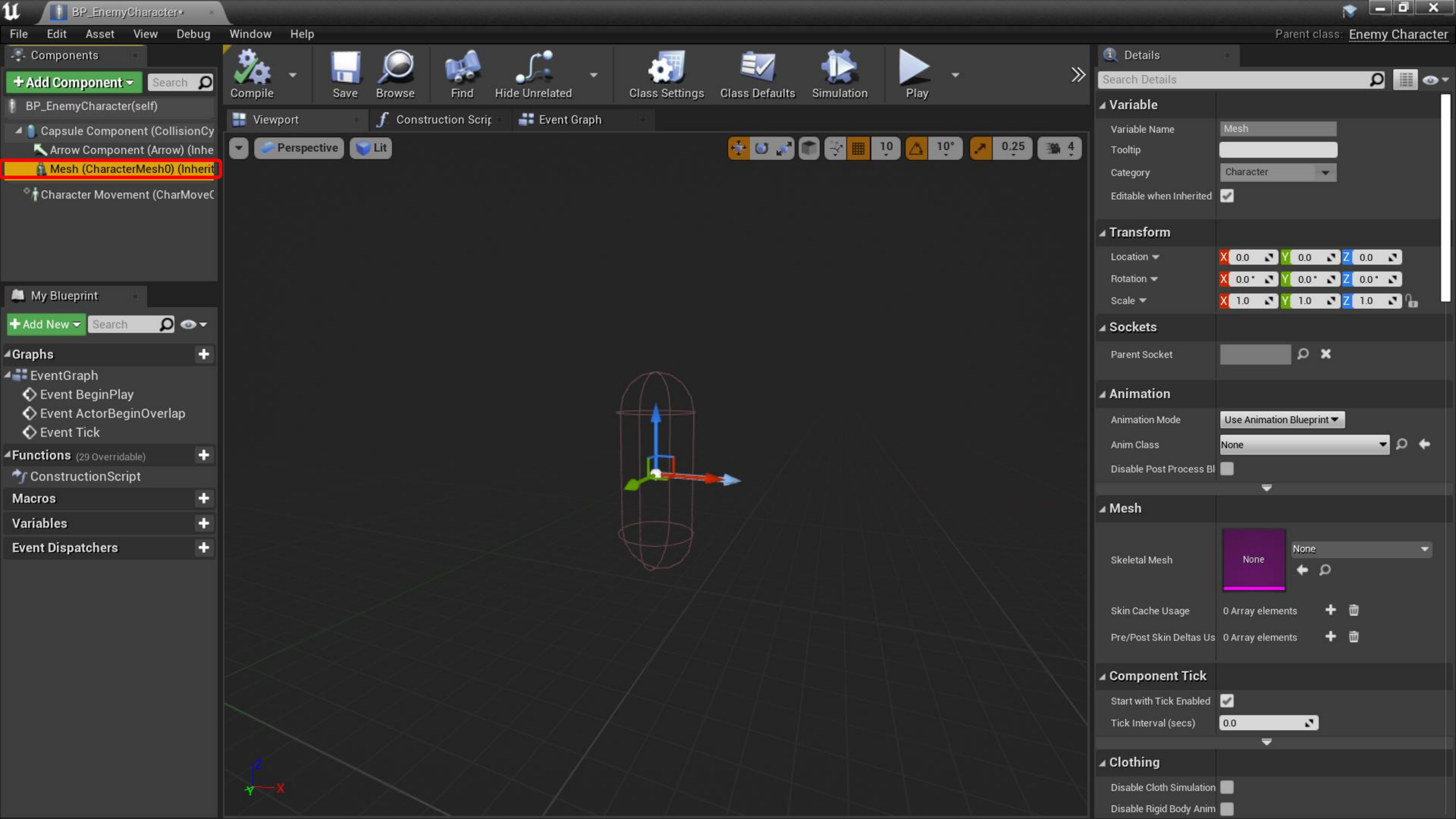
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Dodgeball
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options


BP_EnemyCharacter
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Window
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Parent class: Enemy Character
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Search
BP_EnemyCharacter(self)
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Arrow Component (Arrow) (Inhe
Mesh (CharacterMesh0) (Inherit
Character Movement (CharMoveC
My Blueprint
+ Add New
Search
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EventGraph
Event BeginPlay
Event ActorBeginOverlap
Event Tick
Functions (29 Overridable)
ConstructionScript
Macros
Variables
Event Dispatchers
Compile
Save
Browse
Find
Hide Unrelated
Class Settings
Class Defaults
Simulation
Play
Viewport
Construction Scrip
Event Graph
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Search Details
Variable
Variable Name
Mesh
Tooltip
Category
Character
Editable when Inherited
Transform
Location
Rotation
Scale
X 0.0
Y 0.0
Z 0.0
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Y 0.0 °
Z 0.0 °
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Y 1.0
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Sockets
Parent Socket
Animation
Animation Mode
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Skeletal Mesh
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Skin Cache Usage
0 Array elements
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Component Tick
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Clothing
Disable Cloth Simulation
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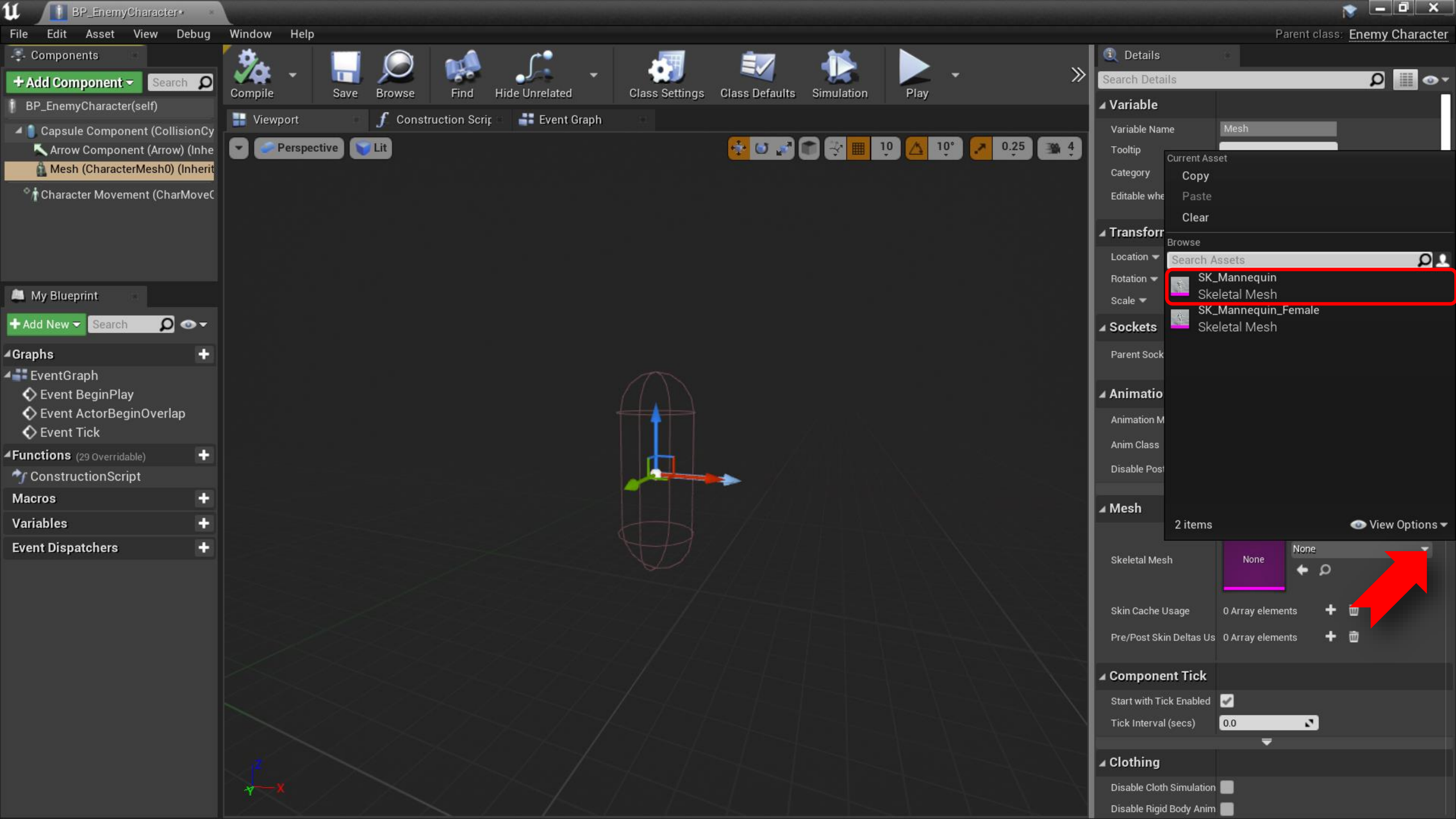
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Disable Cloth Simulation
Disable Rigid Body Anim
Current Asset
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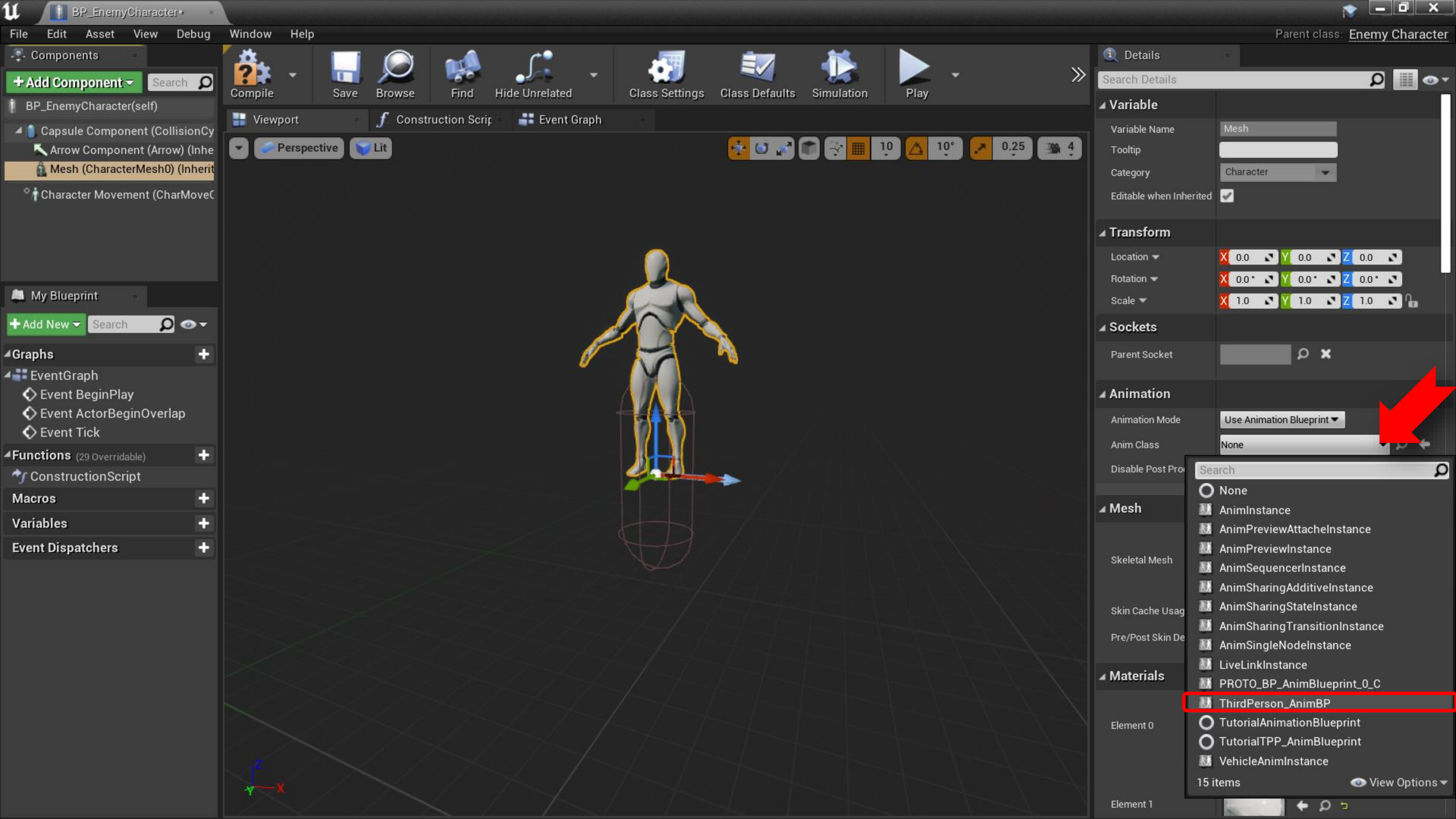
Browse
Search Assets
SK_Mannequin
Skeletal Mesh
SK_Mannequin_Female
Skeletal Mesh
2 items
View Options


BP_EnemyCharacter
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Class Settings
Class Defaults
Simulation
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Tooltip
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Transform
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Use Animation Blueprint
Anim Class
None
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Pre/Post Skin De
Materials
Element 0
Element 1
Search
None
AnimInstance
AnimPreviewAttacheInstance
AnimPreviewInstance
AnimSequencerInstance
AnimSharingAdditiveInstance
AnimSharingStateInstance
AnimSharingTransitionInstance
AnimSingleNodeInstance
LiveLinkInstance
PROTO_BP_AnimBlueprint_0_C
ThirdPerson_AnimBP
TutorialAnimationBlueprint
TutorialTPP_AnimBlueprint
VehicleAnimInstance
15 items
View Options

BP_EnemyCharacter

File Edit Asset View Debug Window Help

Parent class: Enemy Character

## Components

+ Add Component | Search

BP_EnemyCharacter(self)

- Capsule Component (CollisionCy
- Arrow Component (Arrow) (Inhe
- Mesh (CharacterMesh0) (Inherit
- Character Movement (CharMoveC

## My Blueprint

+ Add New | Search

**Graphs**

- EventGraph
  - Event BeginPlay
  - Event ActorBeginOverlap
  - Event Tick

**Functions** (29 Overridable)

- ConstructionScript

**Macros**

**Variables**

**Event Dispatchers**

Compile | Save | Browse | Find | Hide Unrelated | Class Settings | Class Defaults | Simulation | Play

needs to be recompiled

(Ctrl + Alt) for more

Event Graph

## Details

Search Details

**Variable**

| | |
|---|---|
| Variable Name | Mesh |
| Tooltip | |
| Category | Character |
| Editable when Inherited | ☑ |

**Transform**

| | | | |
|---|---|---|---|
| Location | X 0.0 | Y 0.0 | Z -83.0 |
| Rotation | X 0.0° | Y 0.0° | Z -90.0° |
| Scale | X 1.0 | Y 1.0 | Z 1.0 |

**Sockets**

| | |
|---|---|
| Parent Socket | |

**Animation**

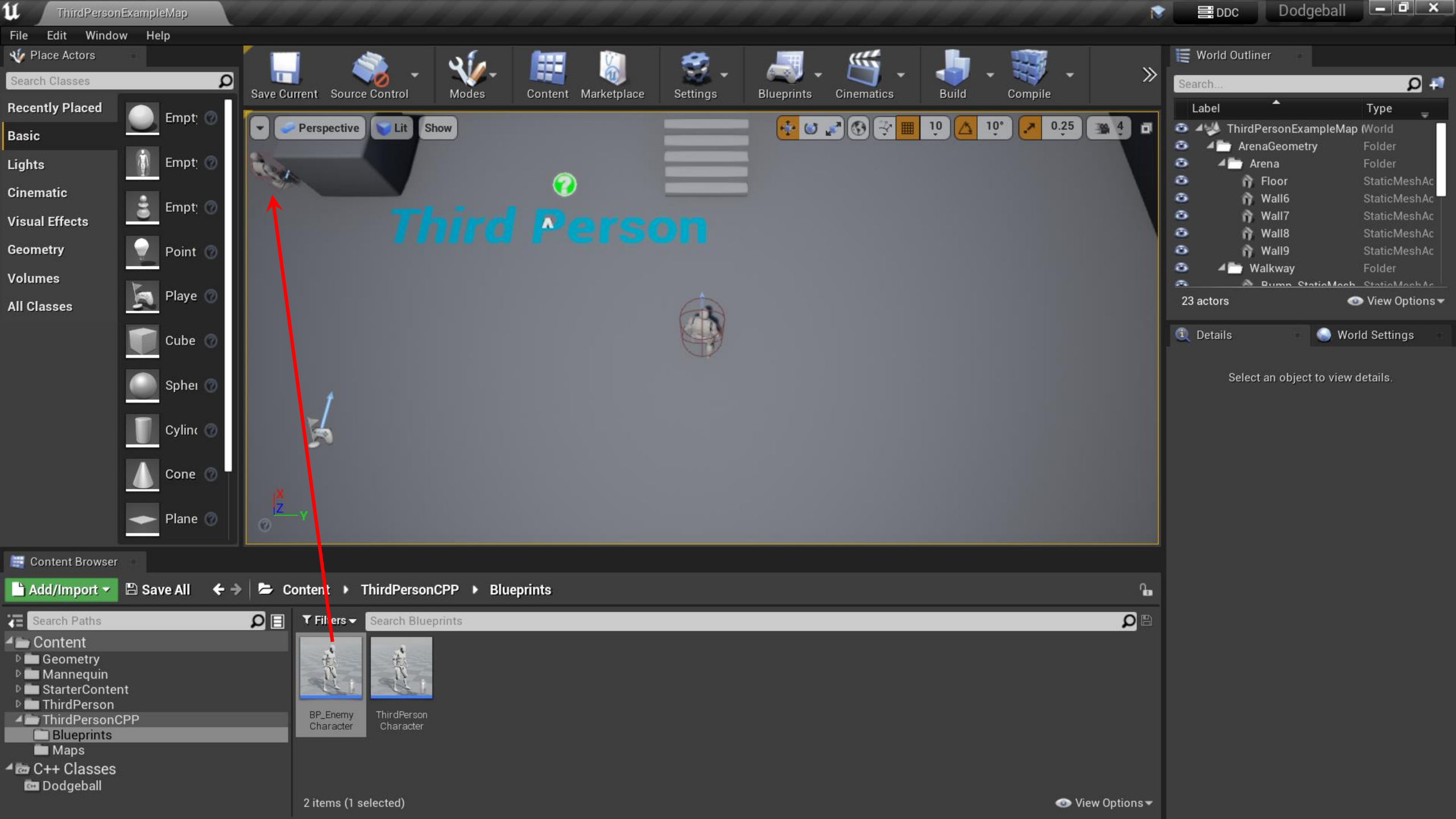
| | |
|---|---|
| Animation Mode | Use Animation Blueprint |
| Anim Class | ThirdPerson_AnimBP_C |
| Disable Post Process Bl | ☐ |

**Mesh**

| | |
|---|---|
| Skeletal Mesh | SK_Mannequin |
| Skin Cache Usage | 0 Array elements |
| Pre/Post Skin Deltas Us | 0 Array elements |

**Materials**

| | |
|---|---|
| Element 0 | M_Male_Body |
| | Textures |
| Element 1 | M_UE4Man_ChestLogo |


ThirdPersonExampleMap
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23 actors
View Options
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World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
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ThirdPersonCPP
Blueprints
Search Paths
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Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
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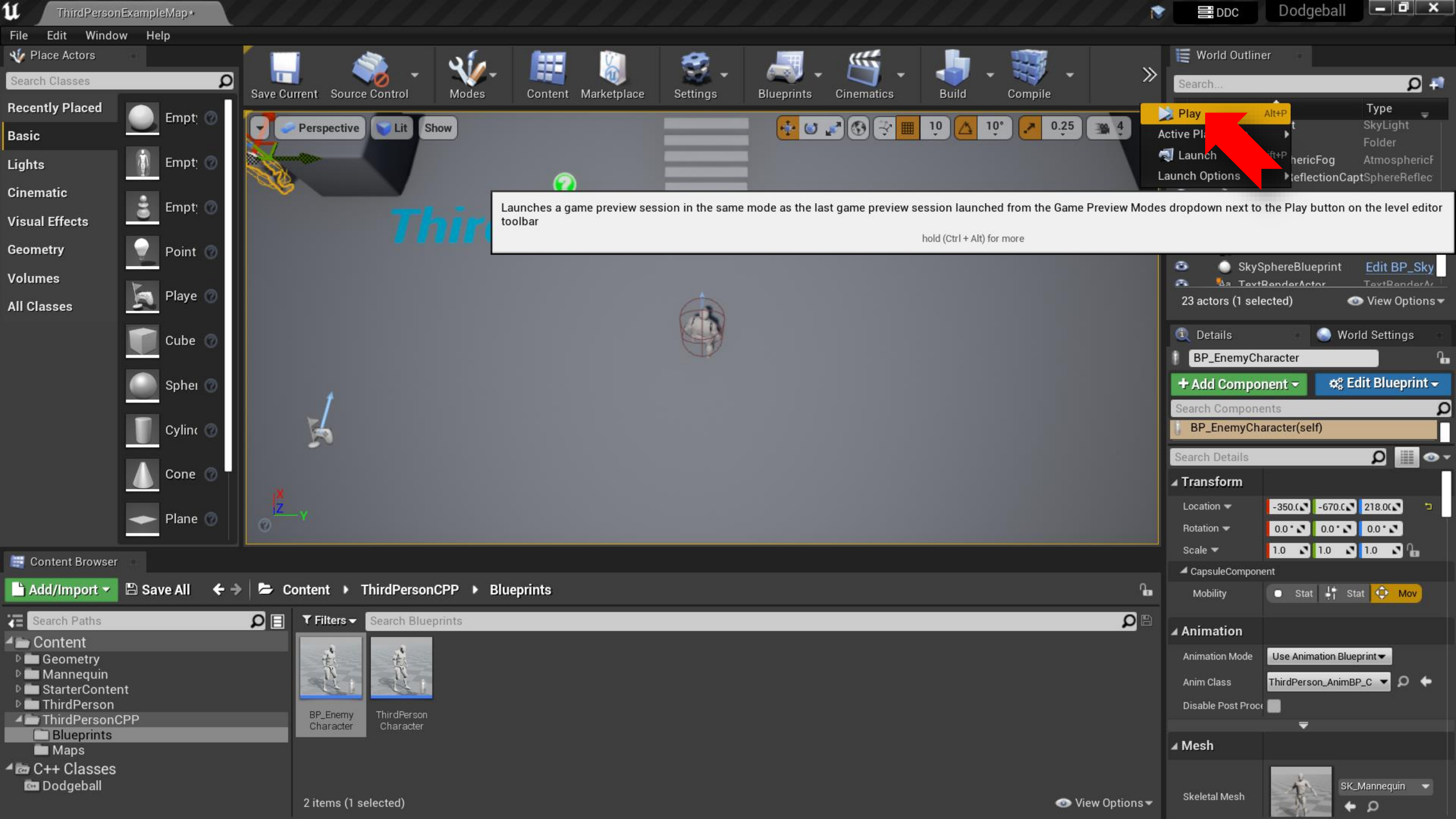
Maps
C++ Classes
Dodgeball
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options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Save Current
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Marketplace
Settings
Blueprints
Cinematics
Build
Compile
Perspective
Lit
Show
Play Alt+P
Launch
Launch Options
Launches a game preview session in the same mode as the last game preview session launched from the Game Preview Modes dropdown next to the Play button on the level editor toolbar
hold (Ctrl + Alt) for more
World Outliner
Search...
Type
SkyLight
Folder
SkySphereBlueprint
Edit BP_Sky
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BP_EnemyCharacter
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Rotation
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Mobility
Animation
Animation Mode
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Skeletal Mesh
SK_Mannequin
Content Browser
Add/Import
Save All
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ThirdPersonCPP
Blueprints
Search Paths
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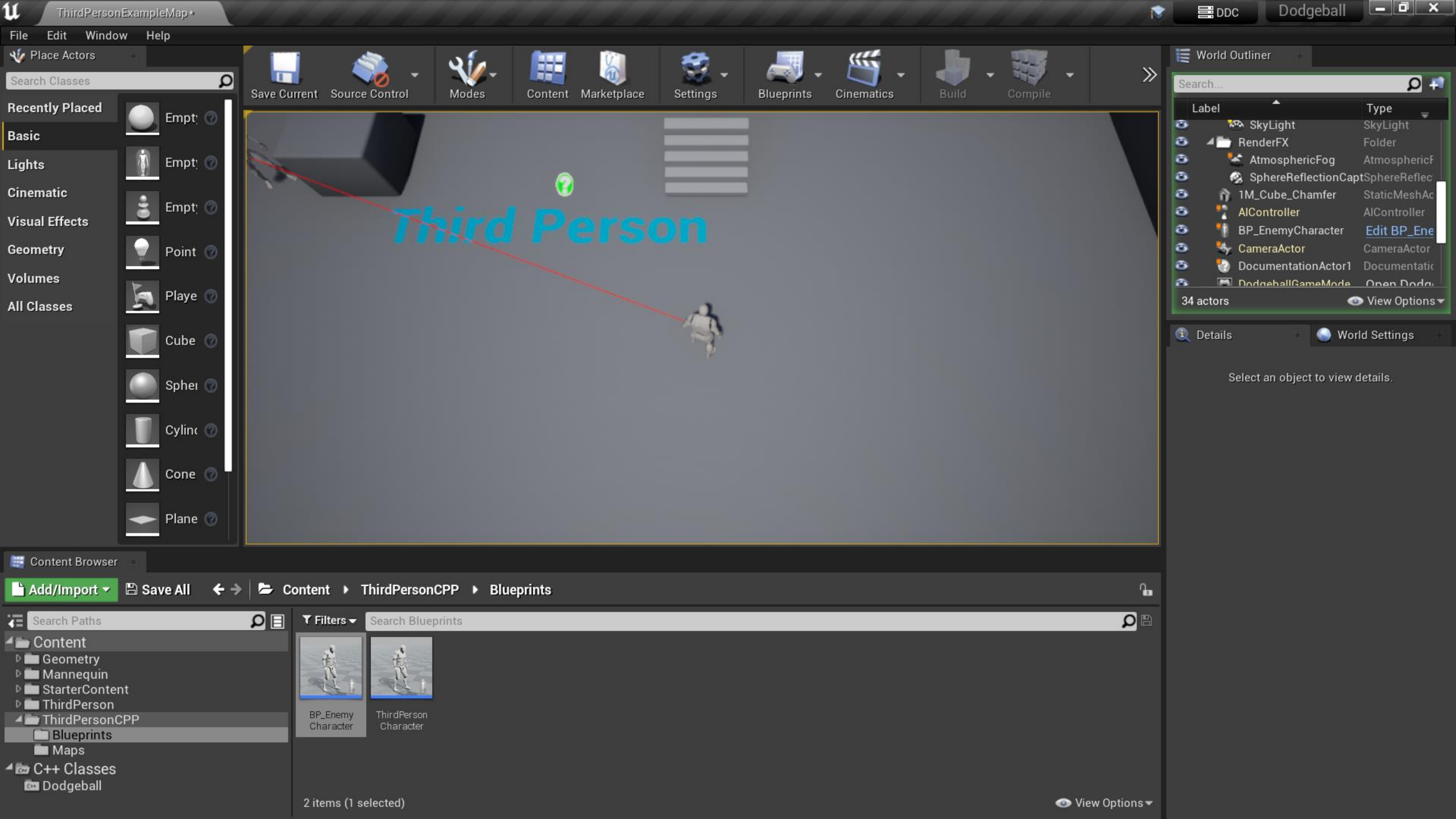
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Dodgeball
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options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Maps
C++ Classes
Dodgeball
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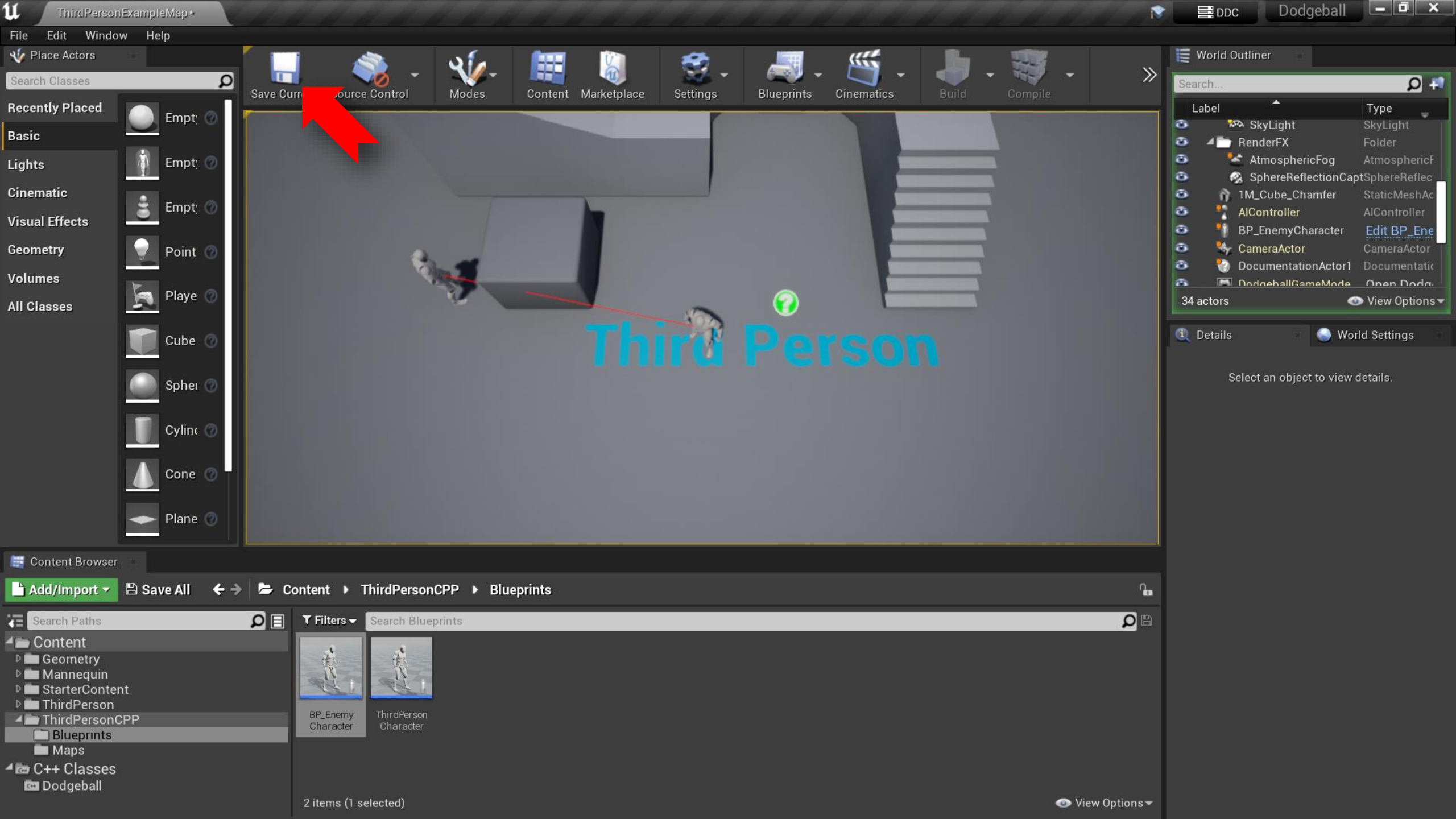
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options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Blueprints
Search Paths
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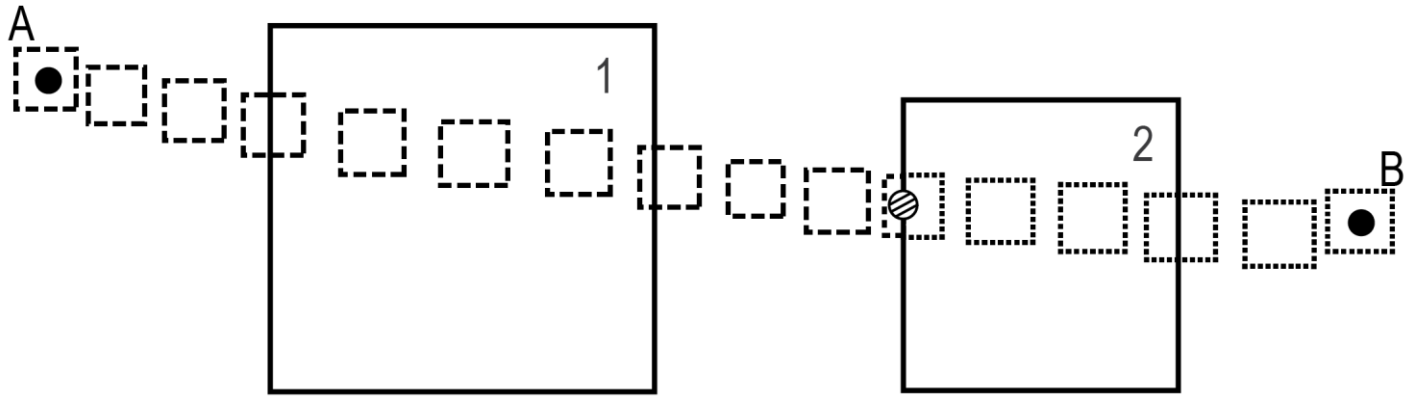
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Dodgeball
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options

# Sweep Traces (1)

- A variant of the Line Traces
- To simulate *throwing an object* between two points in a straight line
  - The **Hit** location will be the first point at which the virtual object (which we will call **Shape**) hits another object.



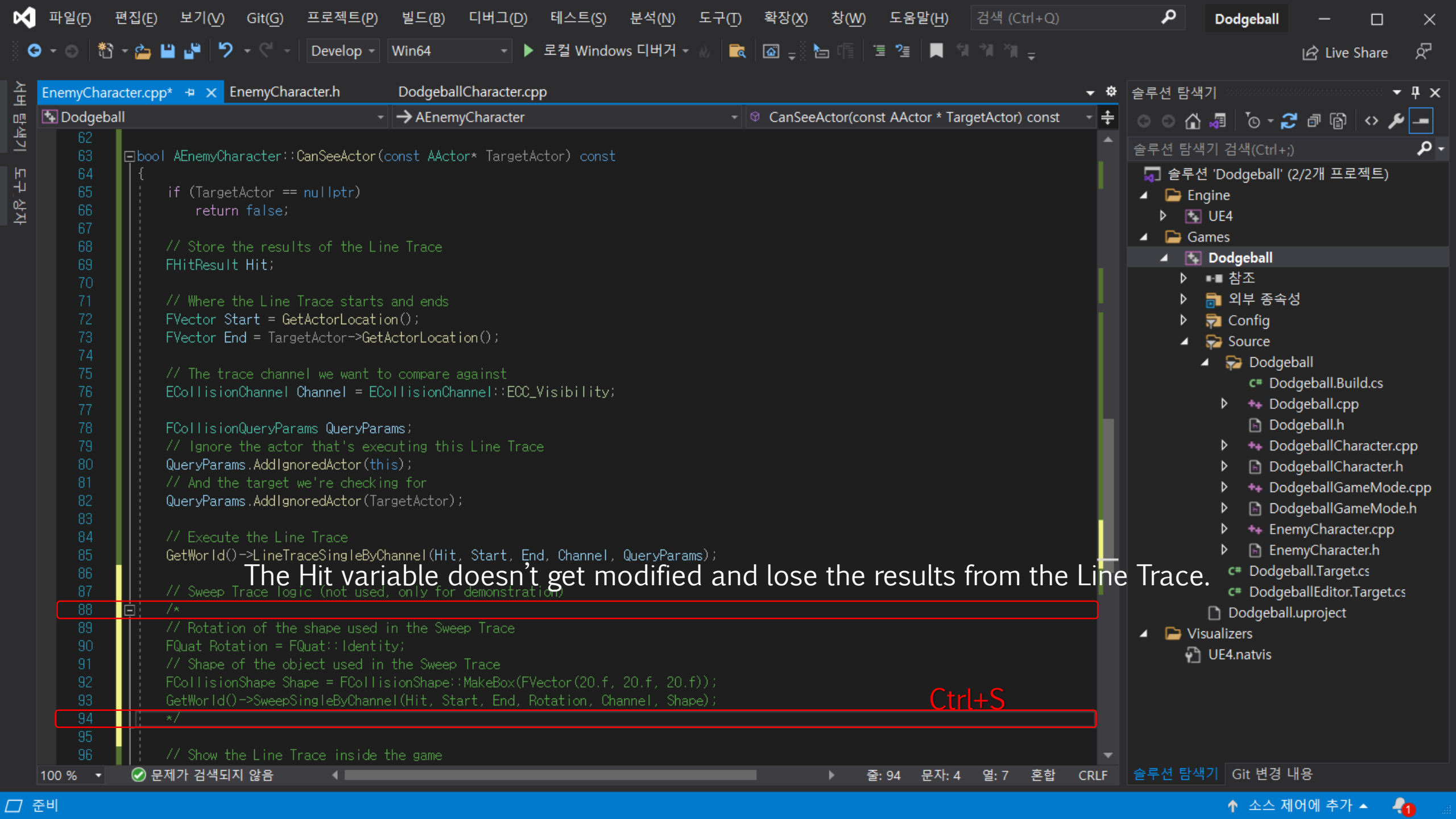

< Representation of a Sweep Trace >

# Sweep Traces (2)

- In the figure:
  - A Sweep Trace, using a box shape, being executed from point A to point B
  - The dashed boxes represent the Sweep Trace before it hits an object.
  - The dotted boxes represent the Sweep Trace after it hits an object.
  - The striped circle represents the Sweep Trace's impact point with object 2.
- If the Sweep Trace hits a wall or a corner somewhere, the player would know that, if the enemy were to throw a dodgeball at that moment, that's where it would hit first.

# Exercise 5.04: Executing a Sweep Trace

```cpp
bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
{
    if (TargetActor == nullptr)
        return false;

    // Store the results of the Line Trace
    FHitResult Hit;

    // Where the Line Trace starts and ends
    FVector Start = GetActorLocation();
    FVector End = TargetActor->GetActorLocation();

    // The trace channel we want to compare against
    ECollisionChannel Channel = ECollisionChannel::ECC_Visibility;

    FCollisionQueryParams QueryParams;
    // Ignore the actor that's executing this Line Trace
    QueryParams.AddIgnoredActor(this);
    // And the target we're checking for
    QueryParams.AddIgnoredActor(TargetActor);

    // Execute the Line Trace
    GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);

    // Sweep Trace logic (not used, only for demonstration)
    // Rotation of the shape used in the Sweep Trace
    FQuat Rotation = FQuat::Identity;
    // Shape of the object used in the Sweep Trace
    FCollisionShape Shape = FCollisionShape::MakeBox(FVector(20.f, 20.f, 20.f));
    GetWorld()->SweepSingleByChannel(Hit, Start, End, Rotation, Channel, Shape);

    // Show the Line Trace inside the game
    DrawDebugLine(GetWorld(), Start, End, FColor::Red);
```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로컬 Windows 디버거
Live Share
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
62
63 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
64 {
65 if (TargetActor == nullptr)
66 return false;
67
68 // Store the results of the Line Trace
69 FHitResult Hit;
70
71 // Where the Line Trace starts and ends
72 FVector Start = GetActorLocation();
73 FVector End = TargetActor->GetActorLocation();
74
75 // The trace channel we want to compare against
76 ECollisionChannel Channel = ECollisionChannel::ECC_Visibility;
77
78 FCollisionQueryParams QueryParams;
79 // Ignore the actor that's executing this Line Trace
80 QueryParams.AddIgnoredActor(this);
81 // And the target we're checking for
82 QueryParams.AddIgnoredActor(TargetActor);
83
84 // Execute the Line Trace
85 GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
86
87 // Sweep Trace logic (not used, only for demonstration)
88 /*
89 // Rotation of the shape used in the Sweep Trace
90 FQuat Rotation = FQuat::Identity;
91 // Shape of the object used in the Sweep Trace
92 FCollisionShape Shape = FCollisionShape::MakeBox(FVector(20.f, 20.f, 20.f));
93 GetWorld()->SweepSingleByChannel(Hit, Start, End, Rotation, Channel, Shape);
94 */
95
96 // Show the Line Trace inside the game
The Hit variable doesn't get modified and lose the results from the Line Trace.
Ctrl+S
100 %
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솔루션 탐색기 검색(Ctrl+;)
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Dodgeball
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외부 종속성
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Dodgeball.Build.cs
Dodgeball.cpp
Dodgeball.h
DodgeballCharacter.cpp
DodgeballCharacter.h
DodgeballGameMode.cpp
DodgeballGameMode.h
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
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Git 변경 내용
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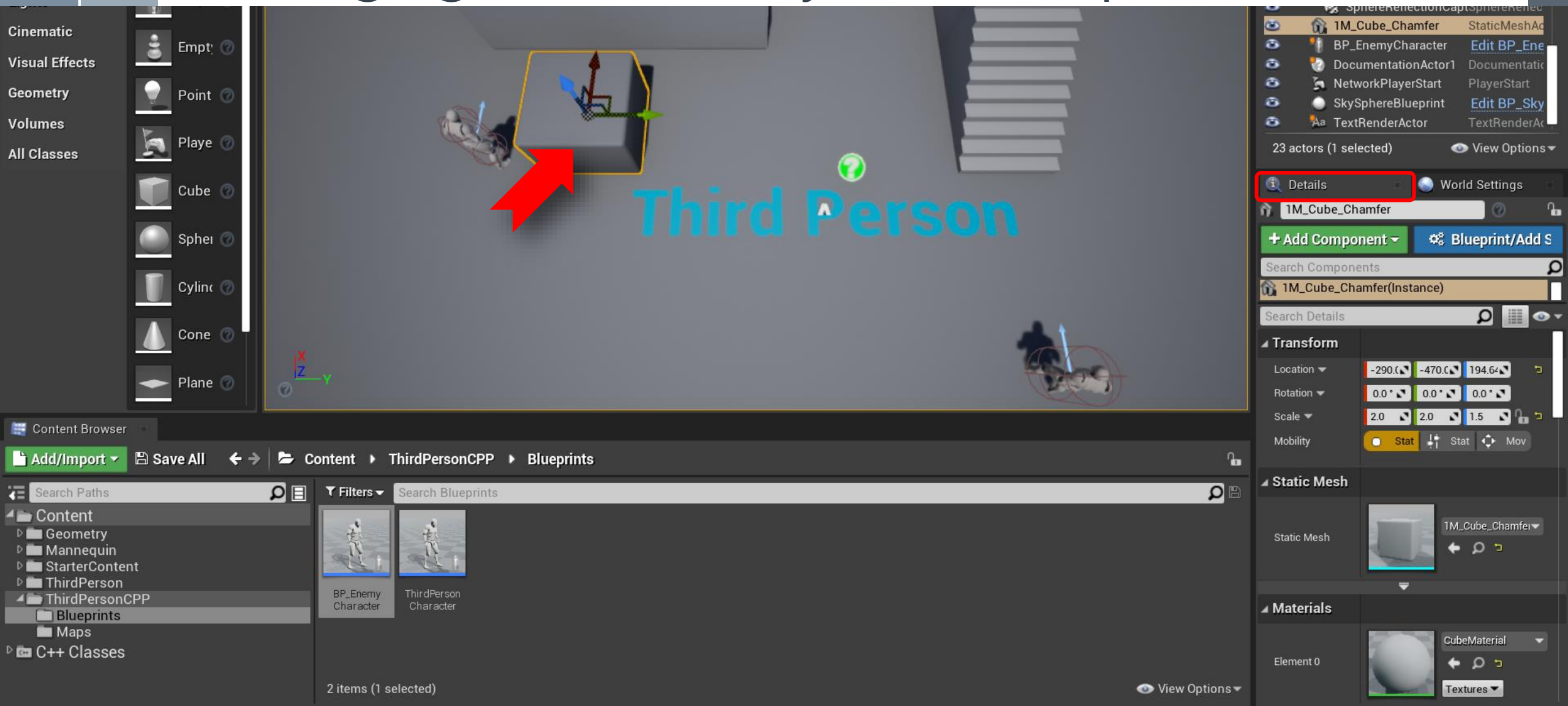
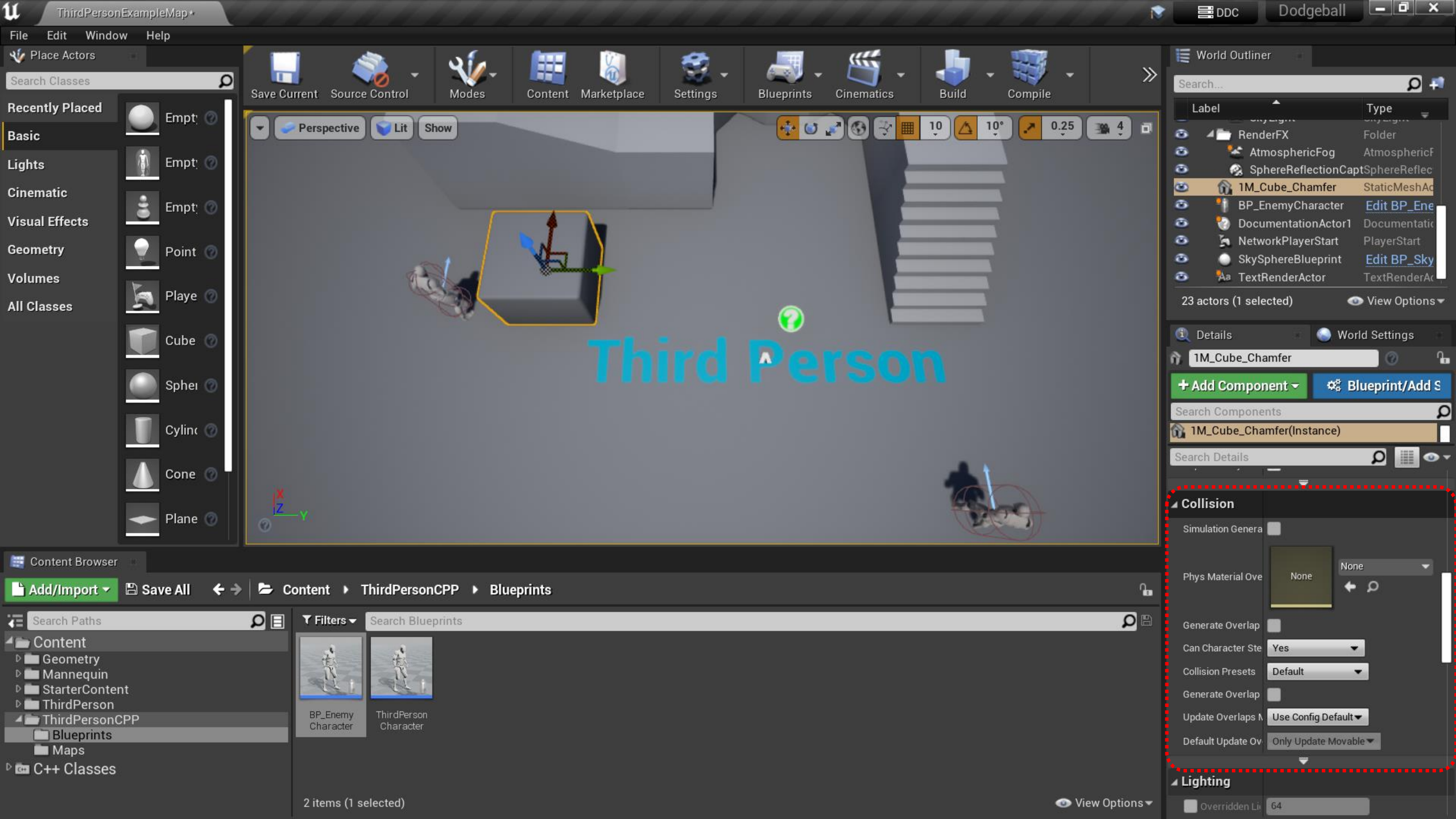
도구 상자
준비
소스 제어에 추가

# Changing The Visibility Trace Response

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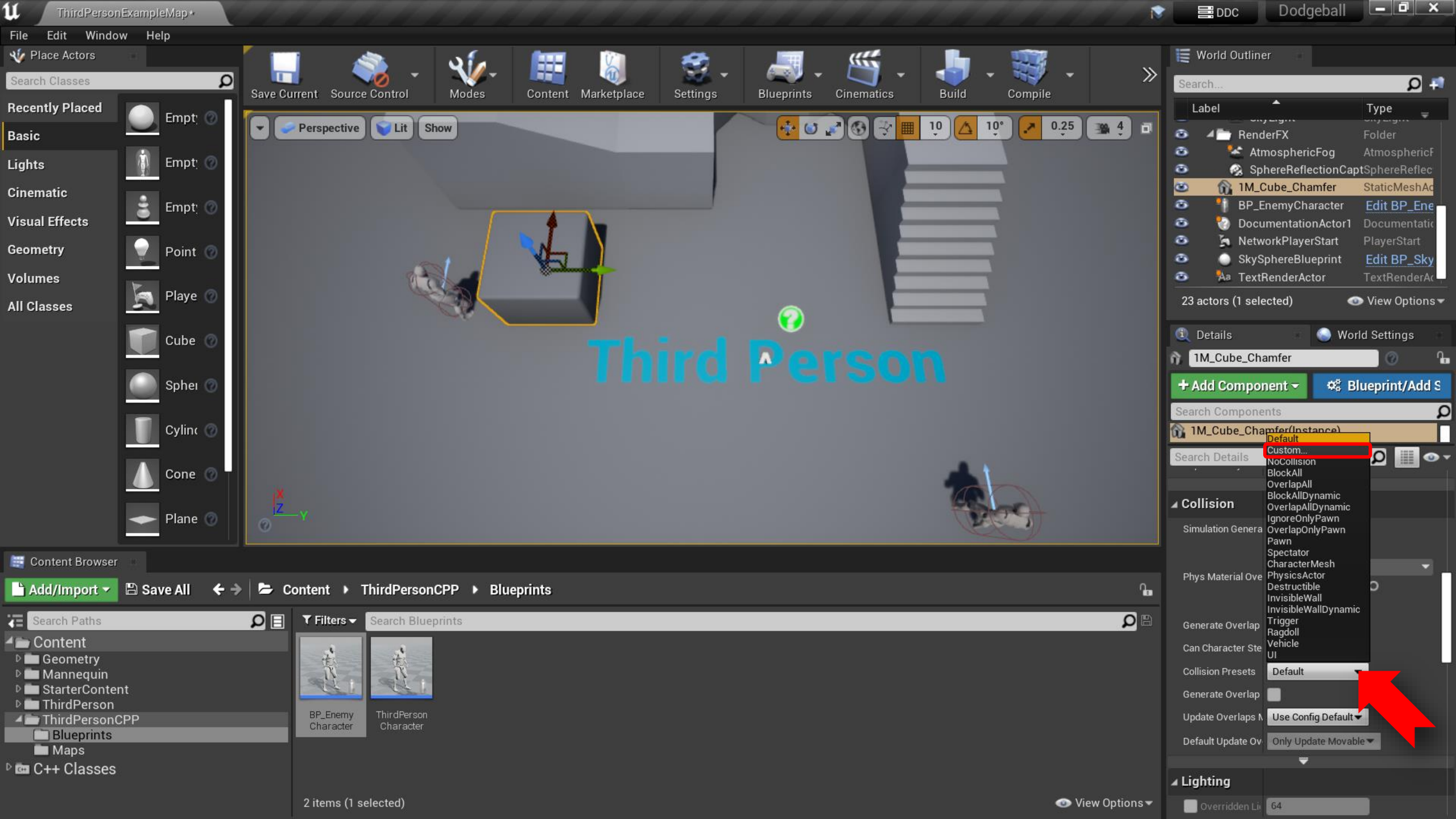
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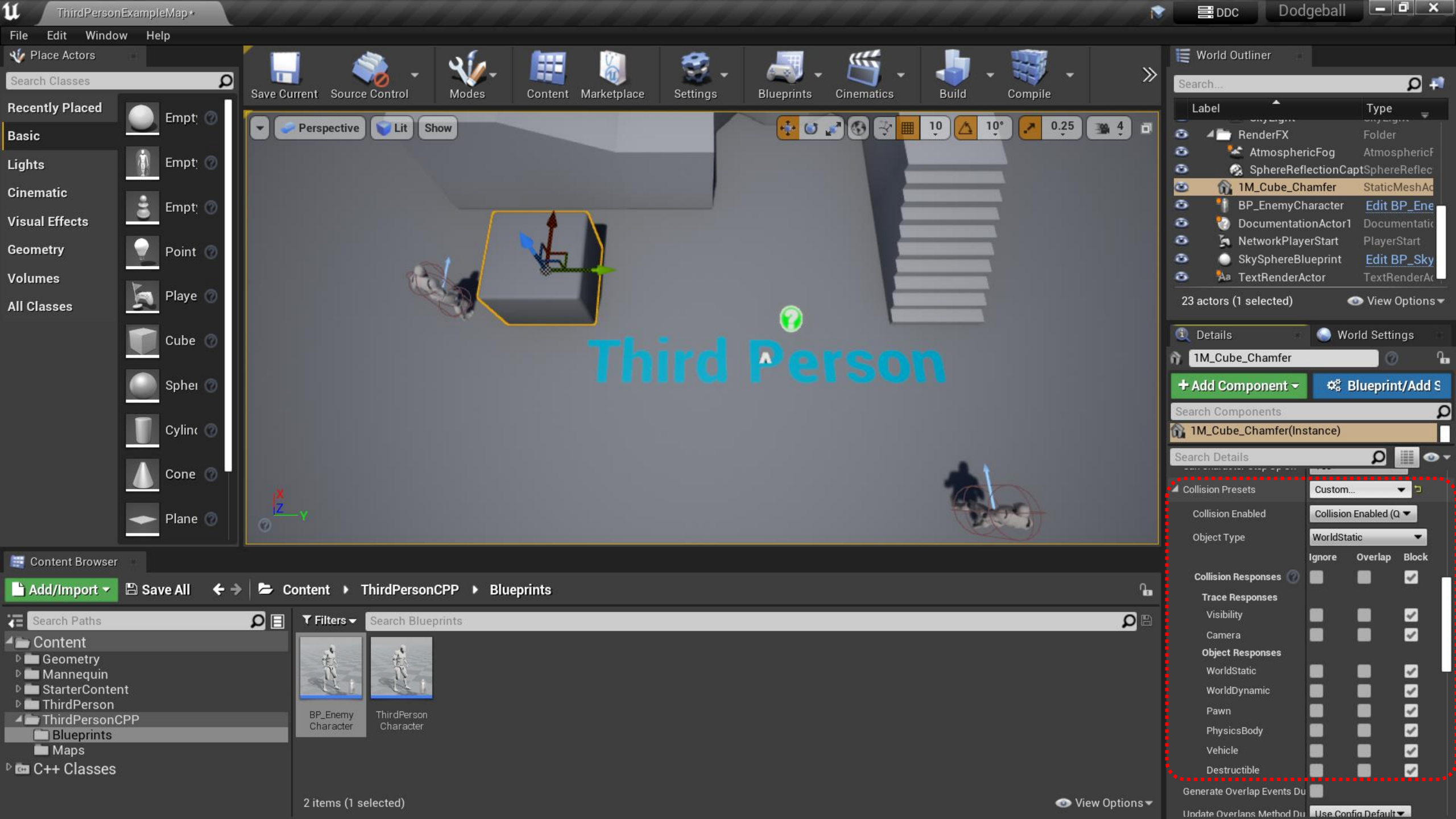
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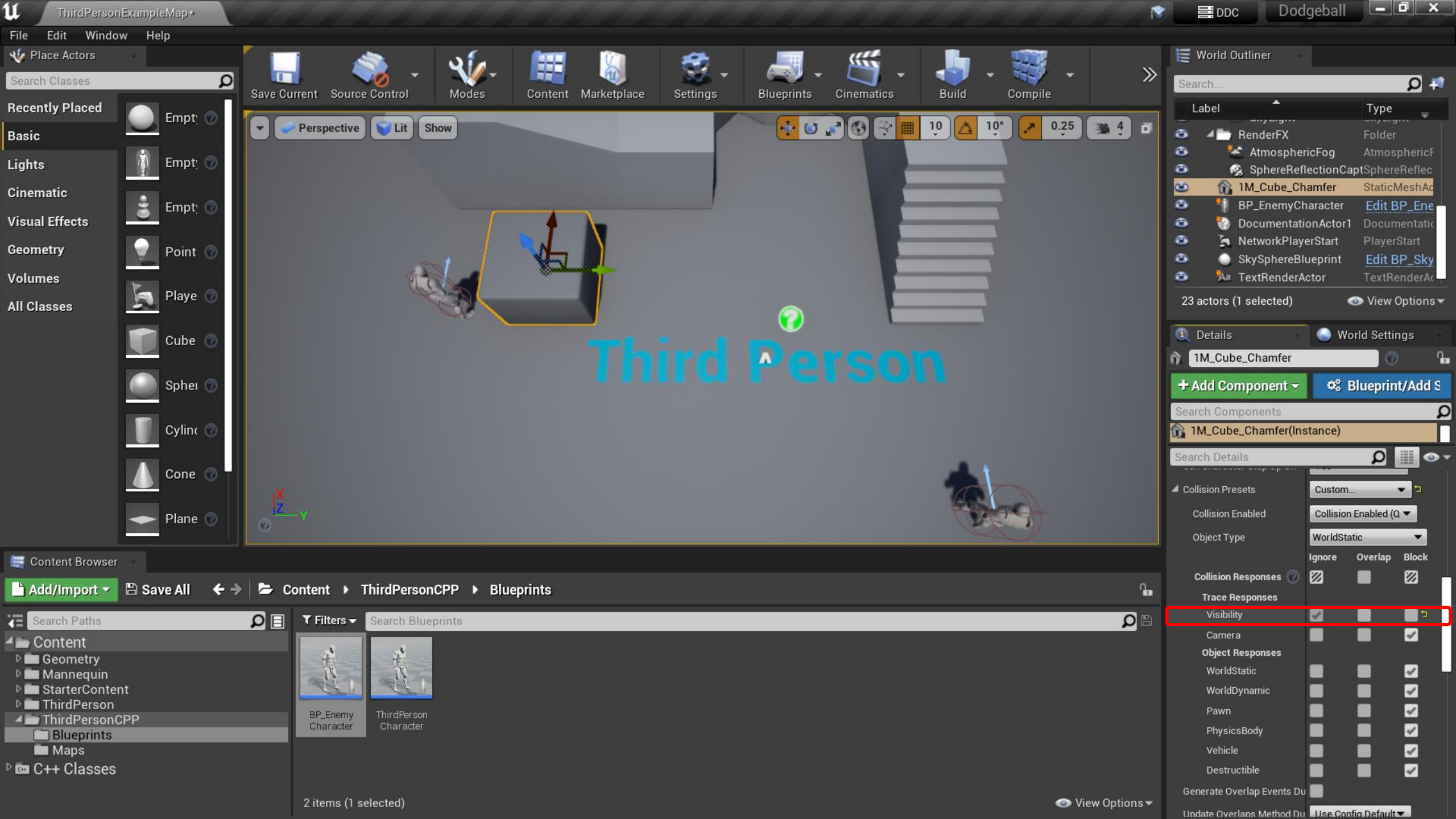
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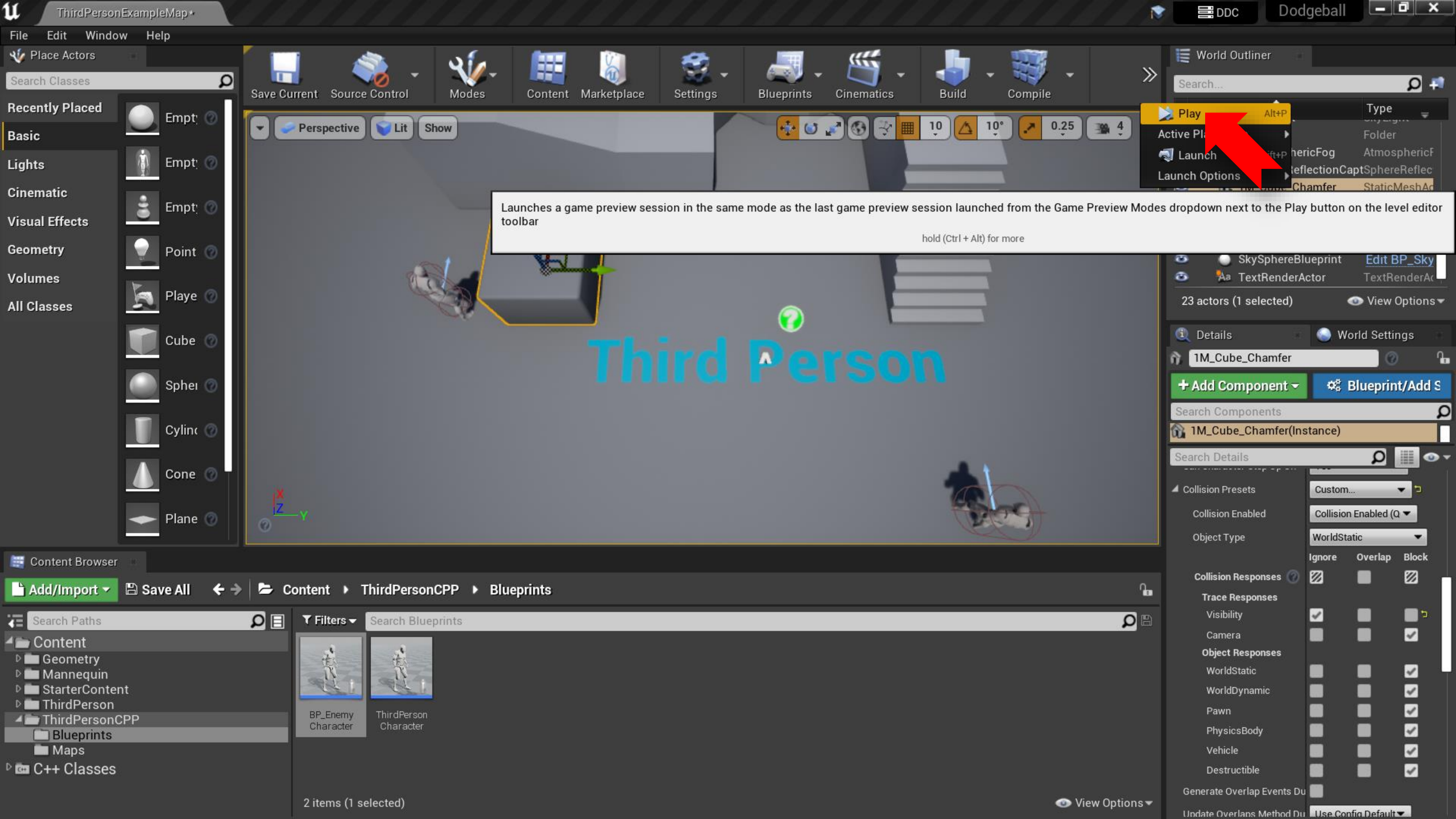
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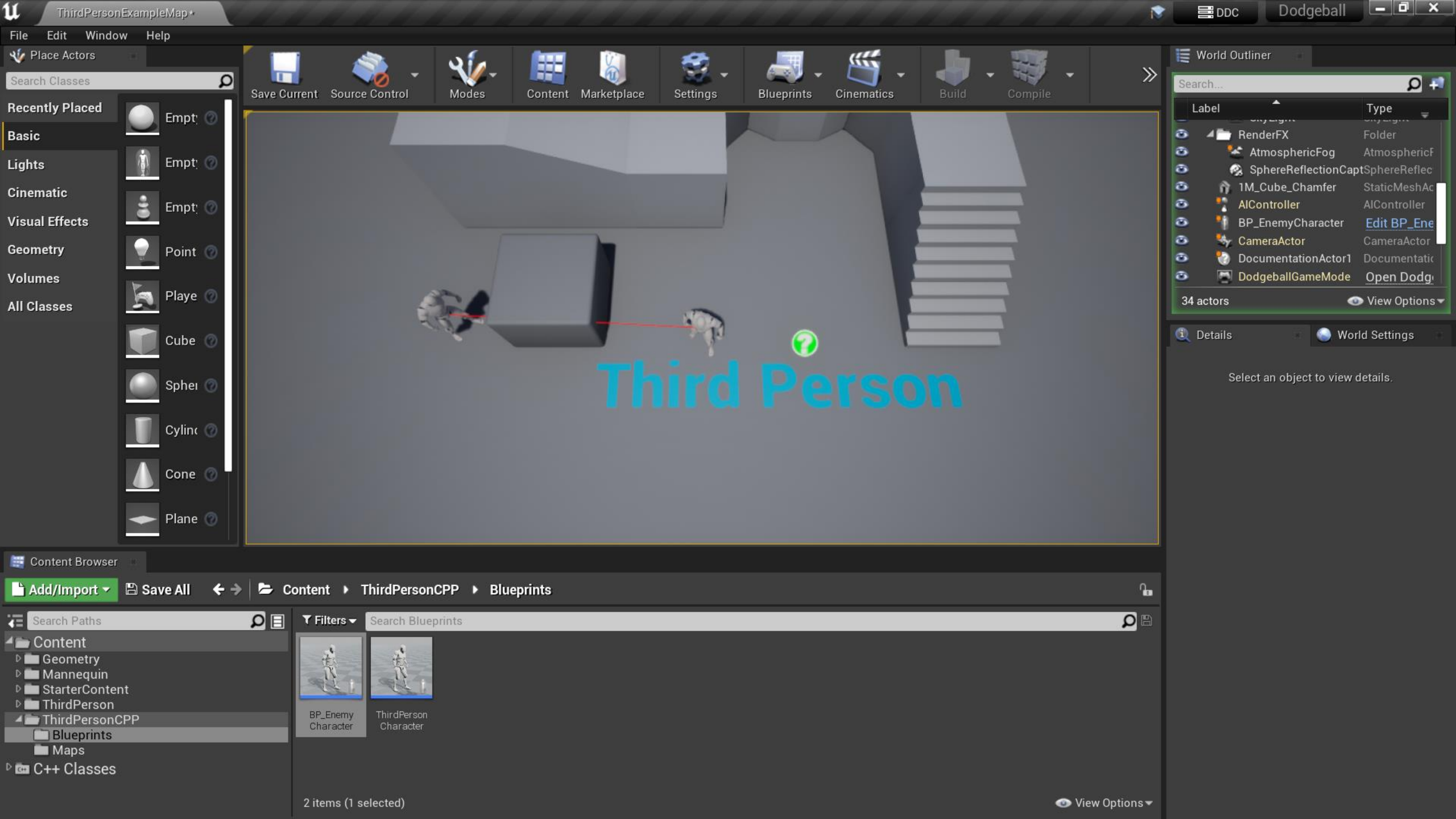
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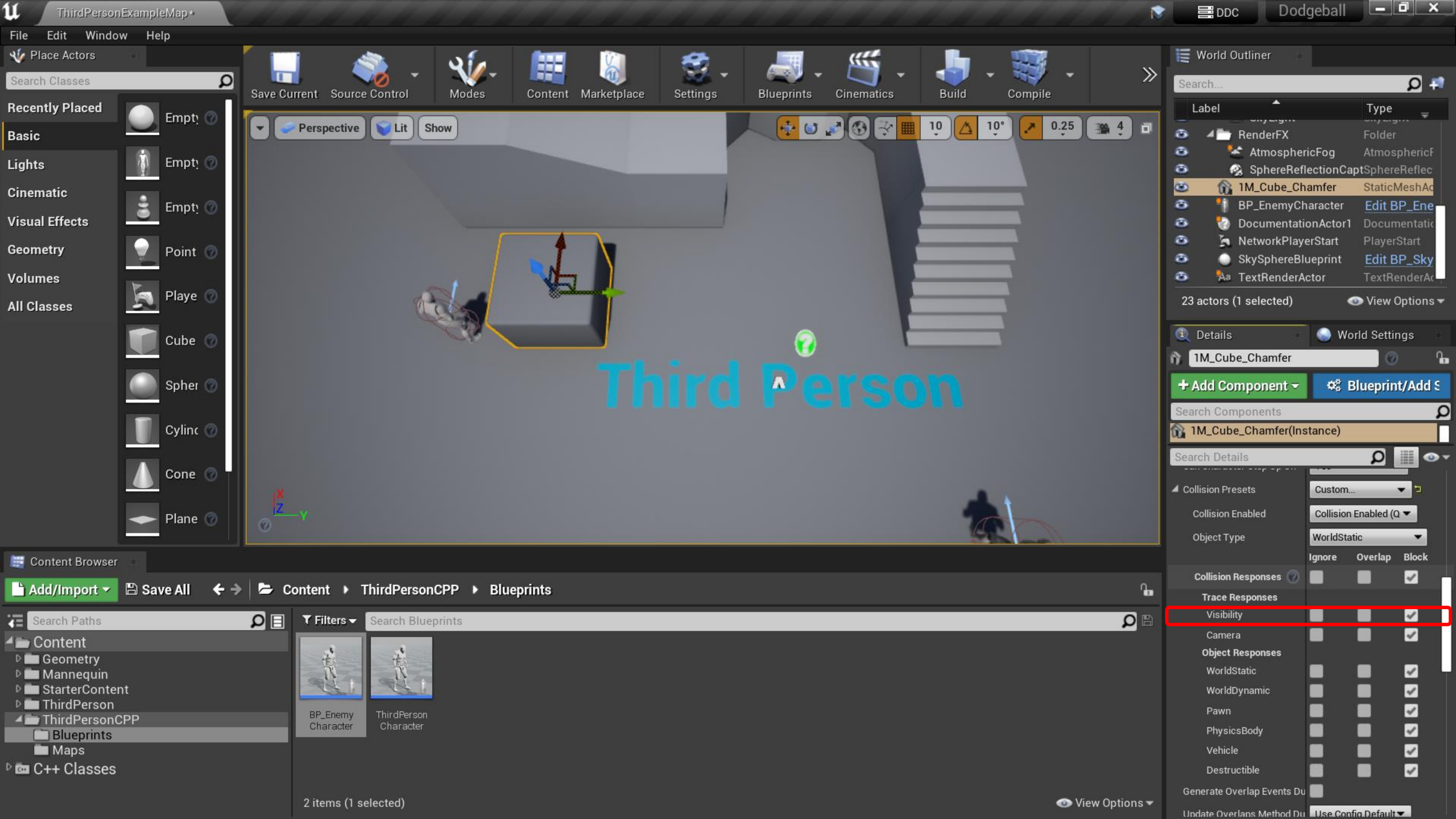
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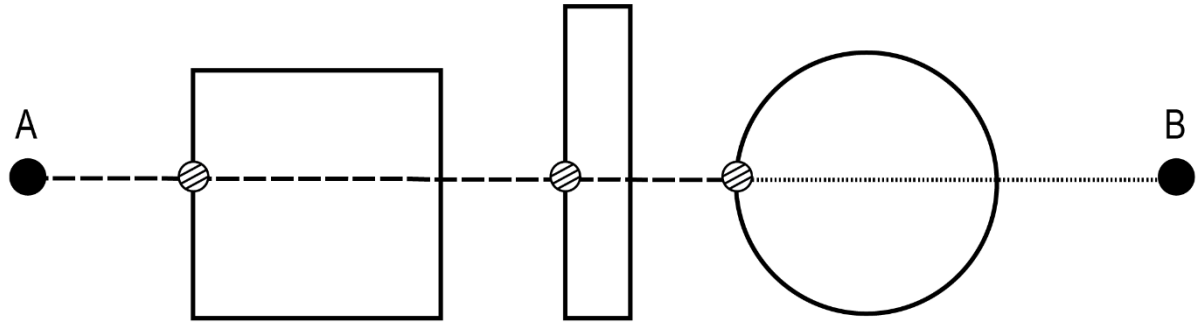
# Multi Line Traces (1)

- To check for any objects that are hit by the same Line Trace
  - The Single Line Trace will stop checking for objects that block it after it hits any object.
- The Single Line Trace will:
  - Ignore the objects that have their response set to either **Ignore** or **Overlap** on the Trace Channel being used by the Line Trace
  - Stop when it finds an object that has its response set to **Block**

# Multi Line Traces (2)

- Instead of ignoring objects that have their response set to **Overlap**, the Multi Line Trace will add them as objects that were found during the Line Trace.
- The Multi Line Trace will only stop when it finds an object that blocks the desired Trace Channel (or when it reaches the end point).

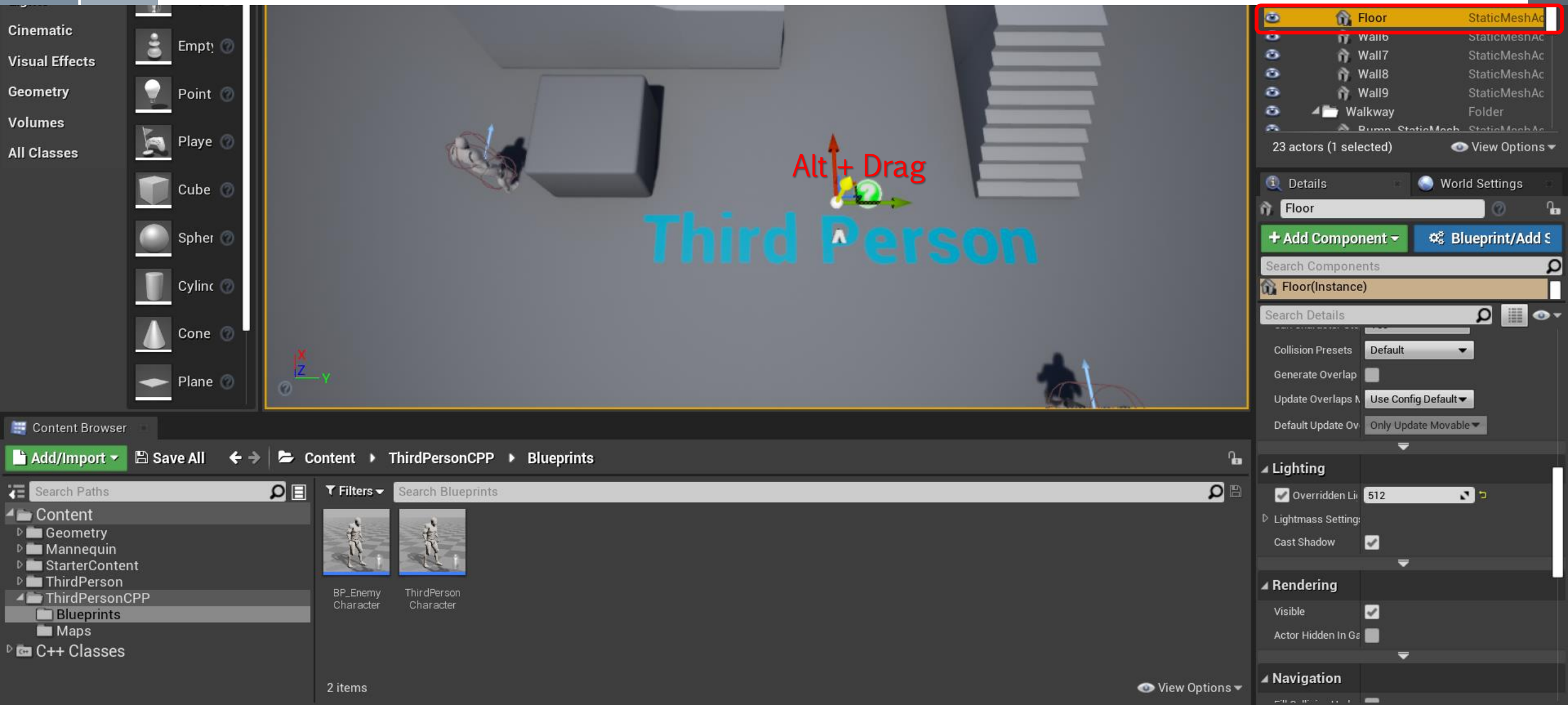


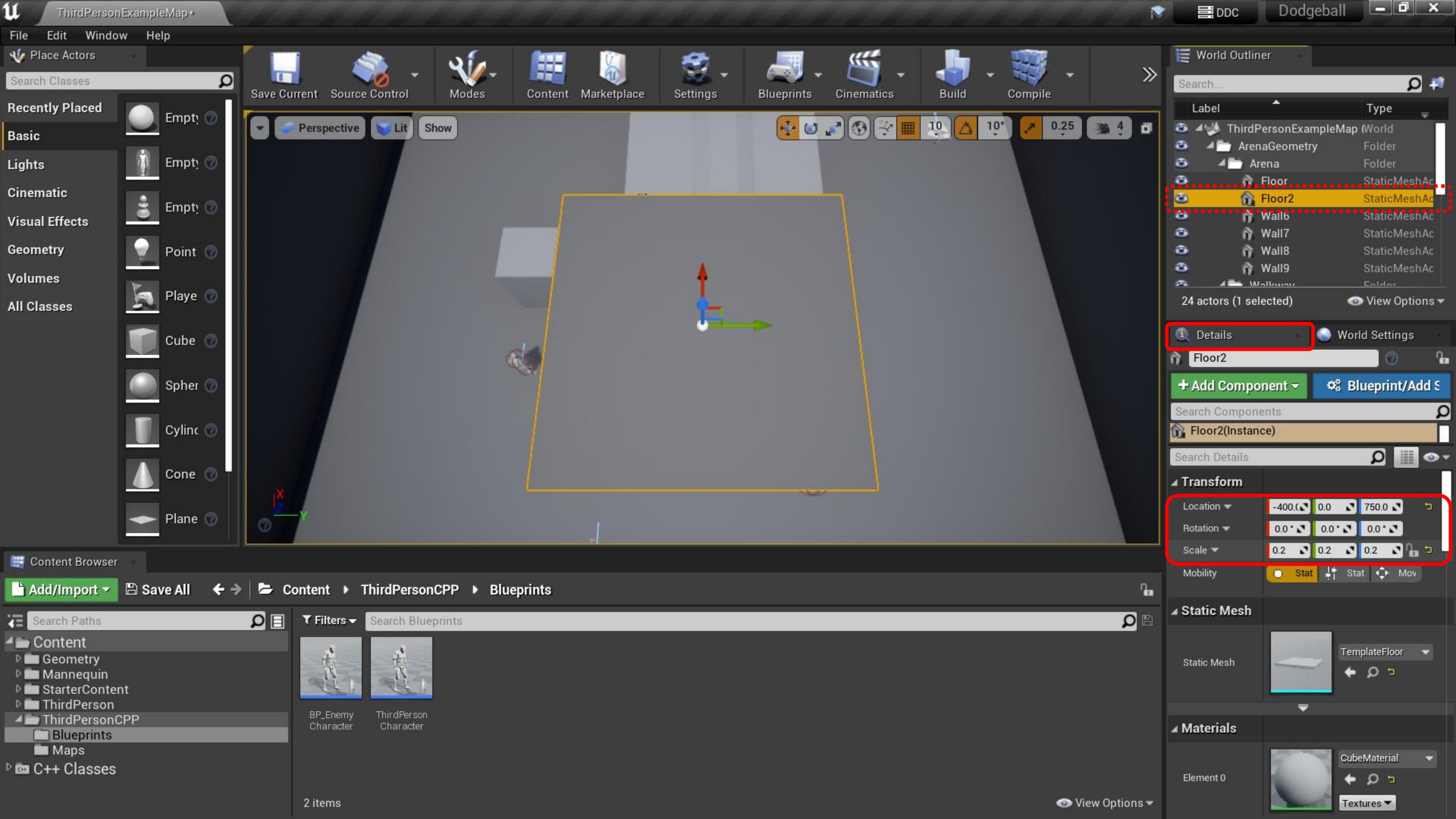

< A Multi Line Trace being executed from point A to point B >

# Multi Line Traces (3)

- In the figure:
  - The dashed line represents the Line Trace before it hits an object that blocks it.
  - The dotted line represents the Line Trace after it hits an object that blocks it.
  - The striped circles represent the Line Trace's impact points, only the last one of which is blocking hit in this case.
- Multi Line Traces are very useful when simulating the behavior of bullets with strong penetration that can go through several objects before stopping completely.

# The Camera Trace Channel

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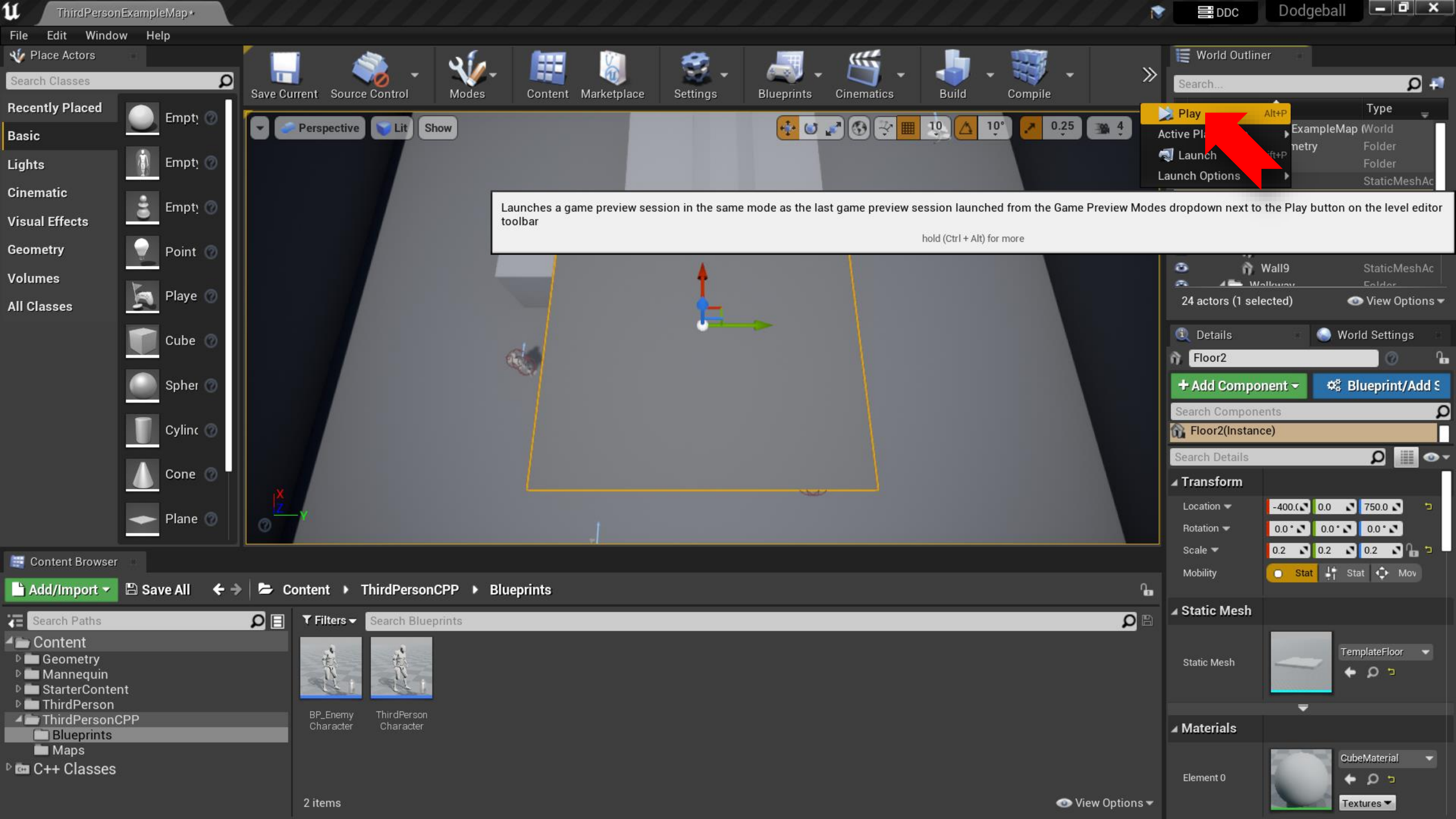
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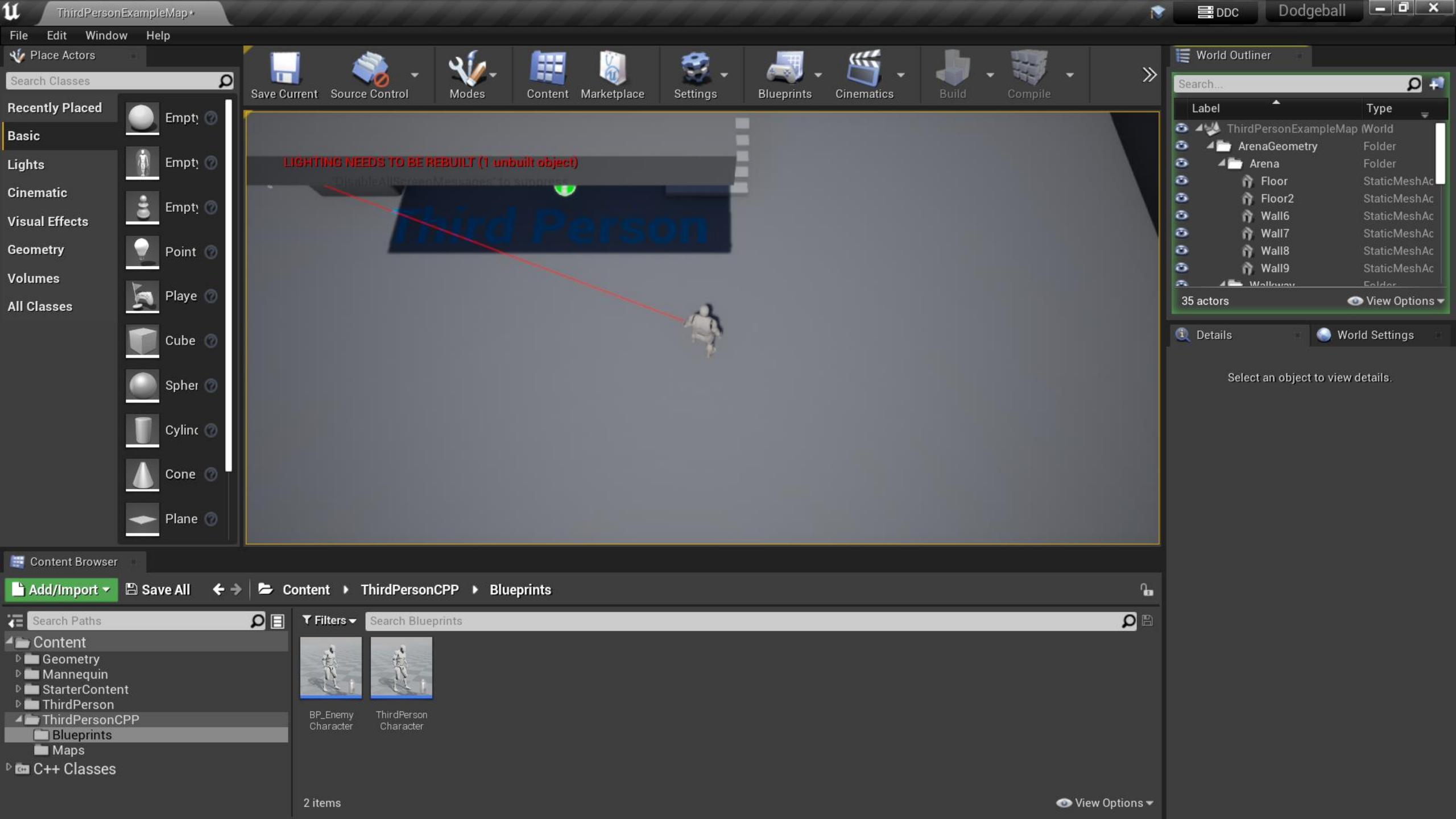
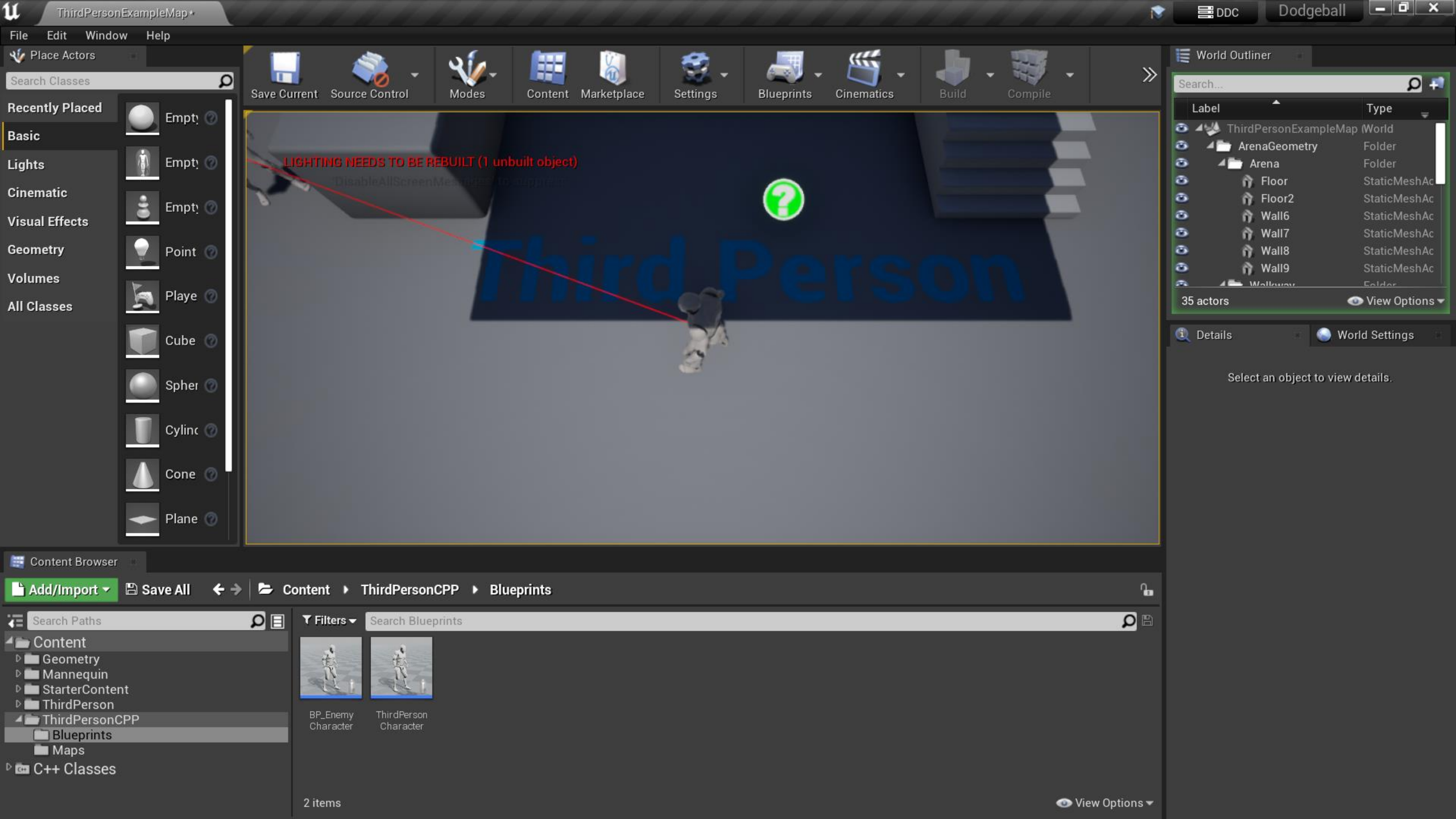
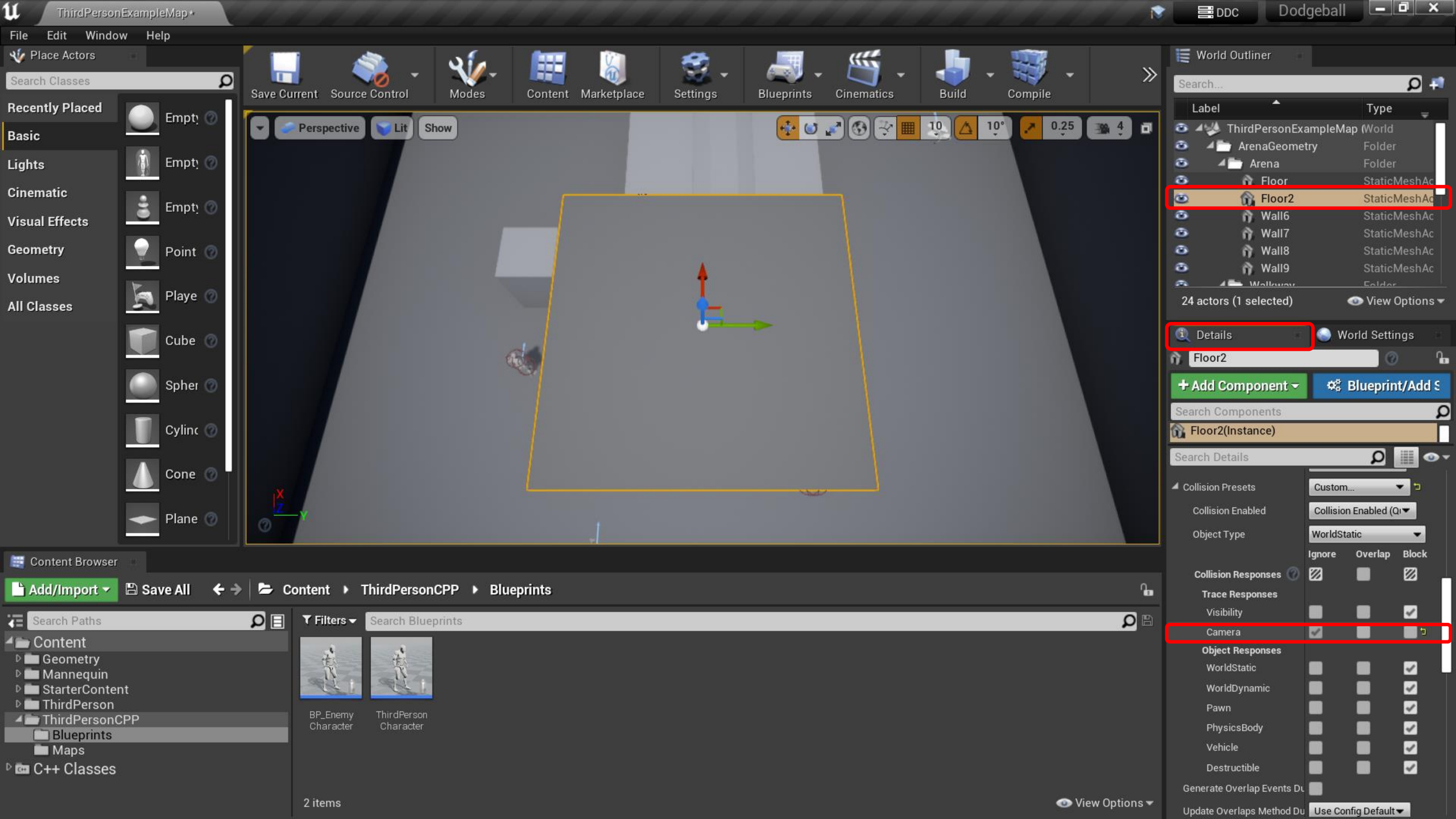
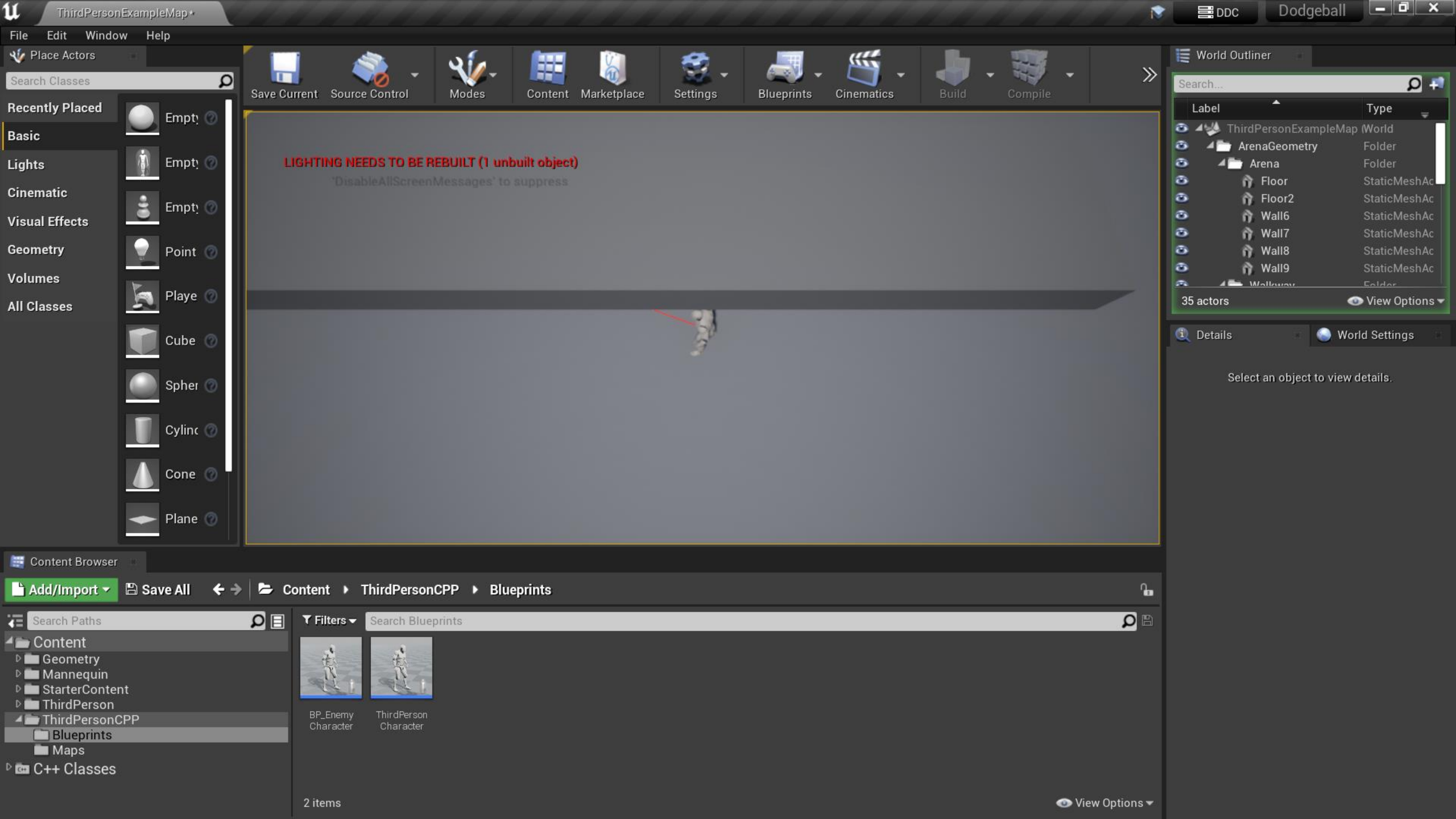
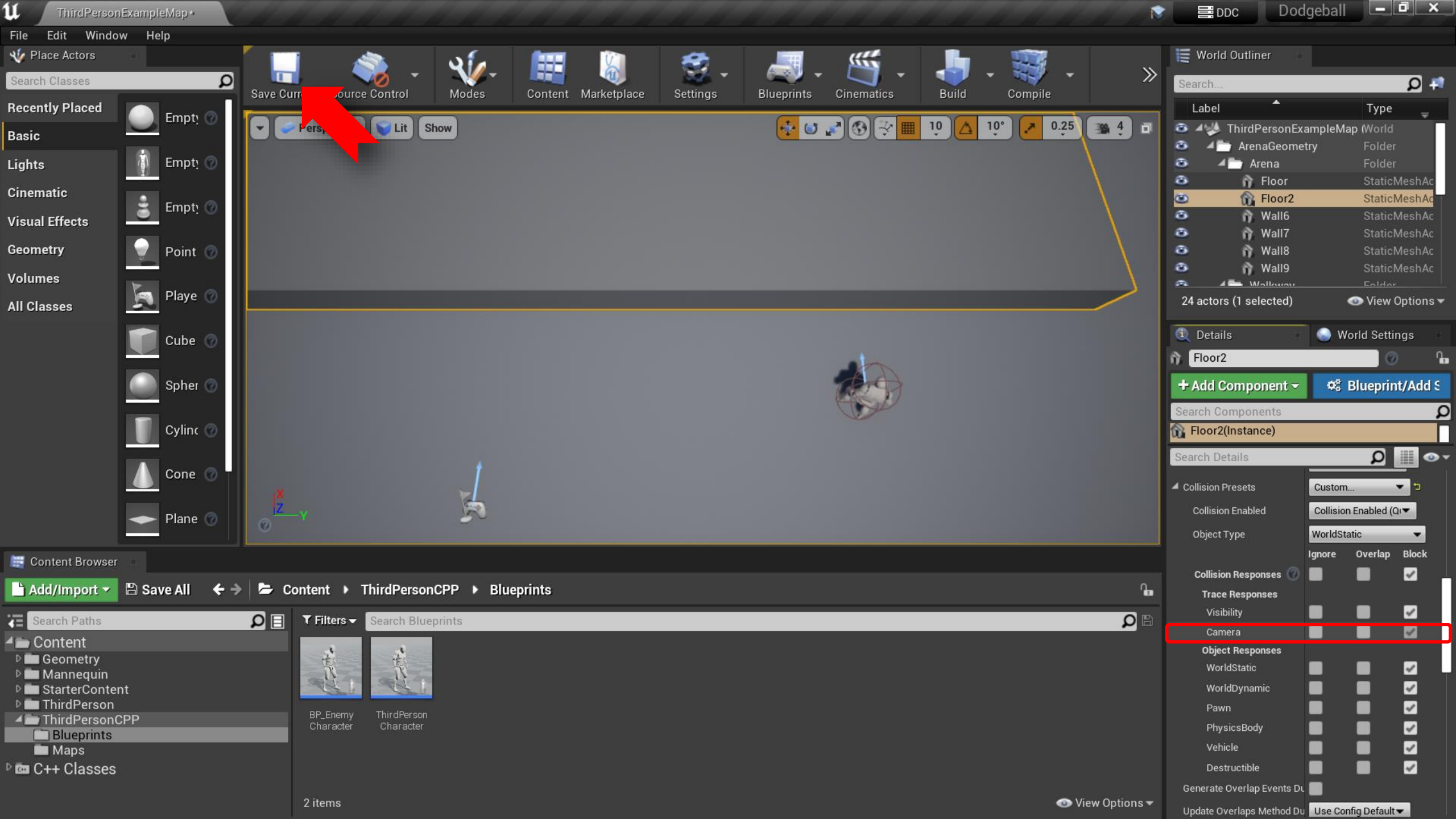
ThirdPerson Character
2 items
View Options


ThirdPersonExampleMap*
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Current
Source Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
LIGHTING NEEDS TO BE REBUILT (1 unbuilt object)
Third Person
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
35 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options

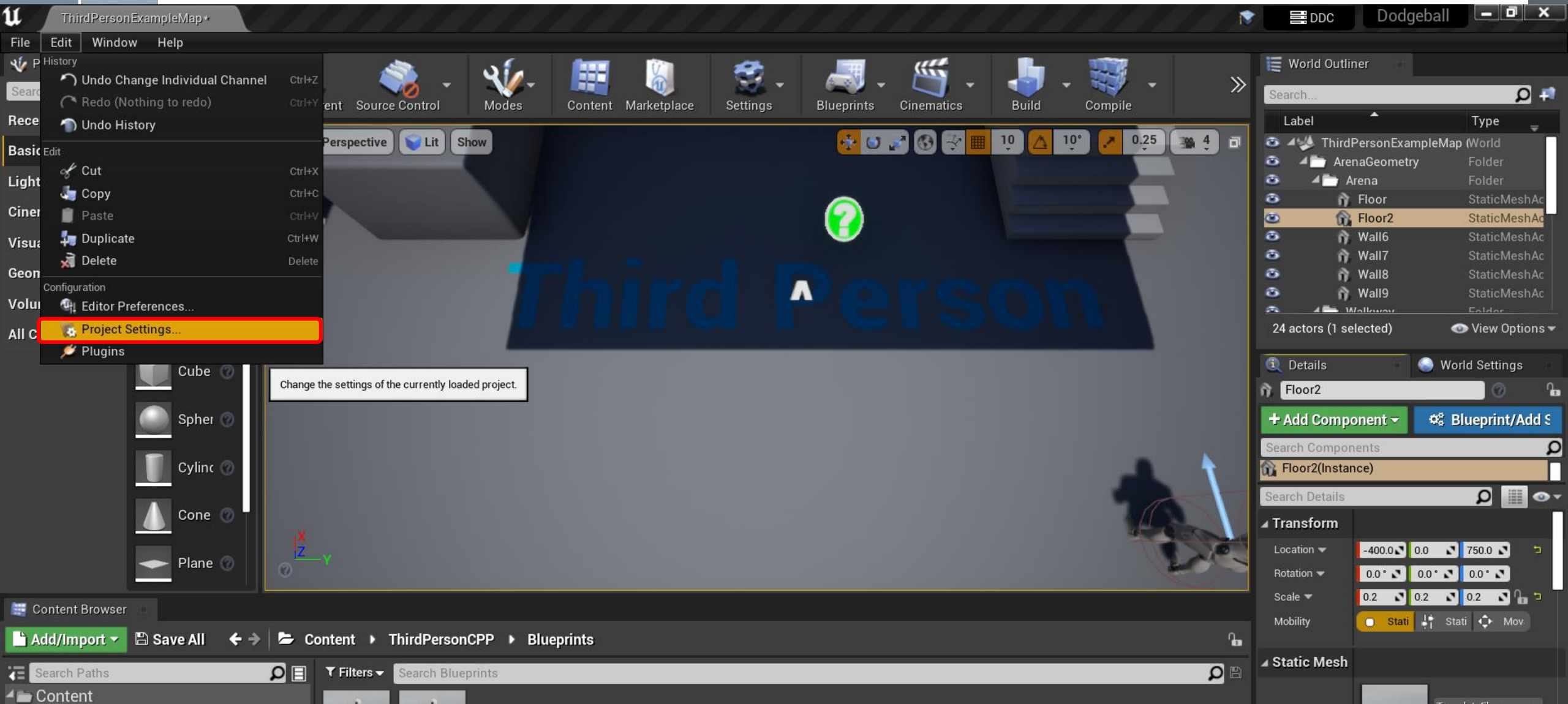

ThirdPersonExampleMap*
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Current
Source Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
LIGHTING NEEDS TO BE REBUILT (1 unbuilt object)
Third Person
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
35 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options

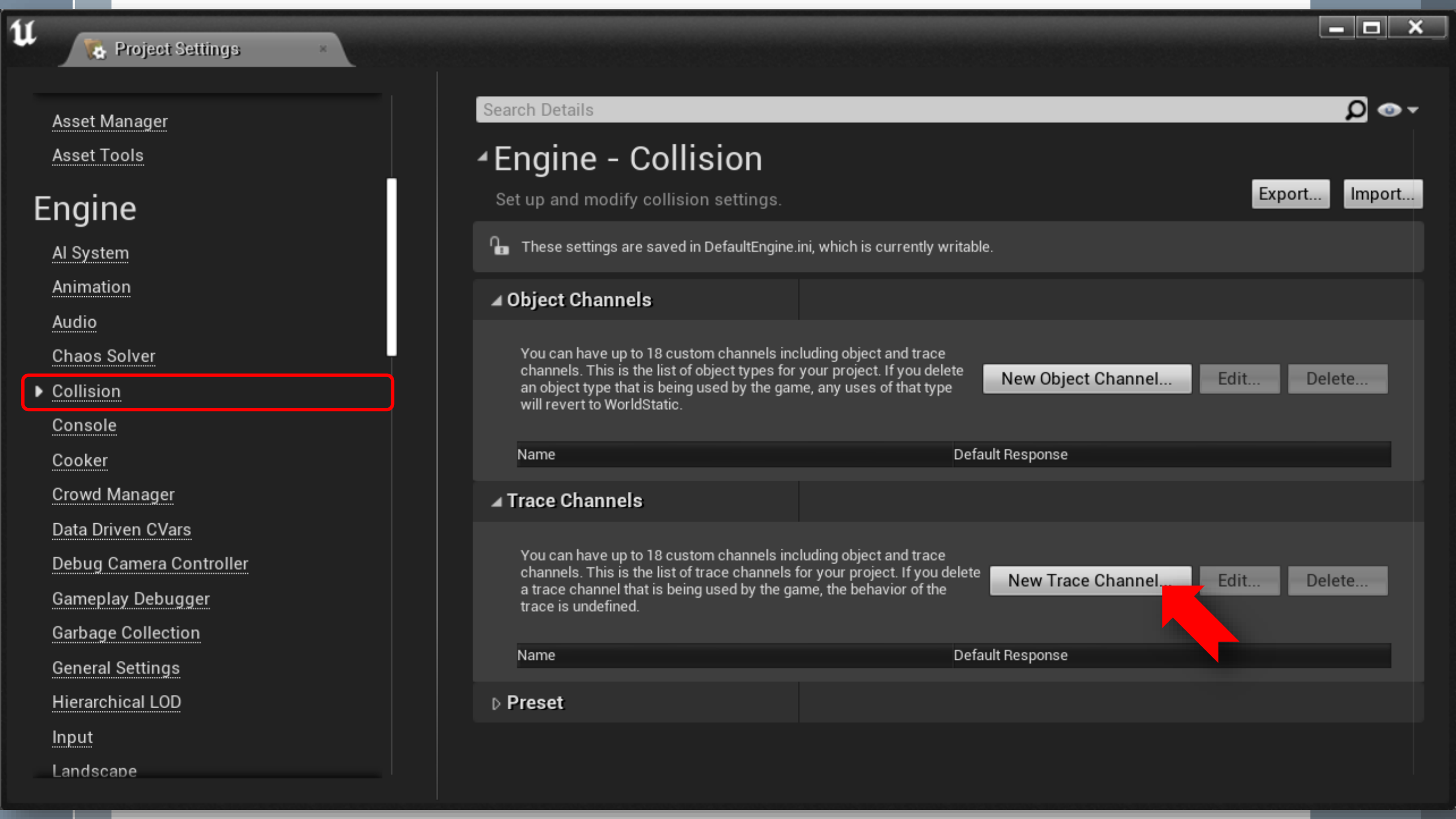

ThirdPersonExampleMap*
DDC
Dodgeball
File Edit Window Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Current
Source Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
Perspective
Lit
Show
10
10°
0.25
4
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry Folder
Arena Folder
Floor StaticMeshAc
Floor2 StaticMeshAc
Wall6 StaticMeshAc
Wall7 StaticMeshAc
Wall8 StaticMeshAc
Wall9 StaticMeshAc
24 actors (1 selected)
View Options
Details
World Settings
Floor2
+ Add Component
Blueprint/Add S
Search Components
Floor2(Instance)
Search Details
Collision Presets
Custom...
Collision Enabled
Collision Enabled (Q
Object Type
WorldStatic
Ignore
Overlap
Block
Collision Responses
Trace Responses
Visibility
Camera
Object Responses
WorldStatic
WorldDynamic
Pawn
PhysicsBody
Vehicle
Destructible
Generate Overlap Events Du
Update Overlaps Method Du
Use Config Default
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options


ThirdPersonExampleMap*
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Current
Source Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
LIGHTING NEEDS TO BE REBUILT (1 unbuilt object)
'DisableAllScreenMessages' to suppress
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
35 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options

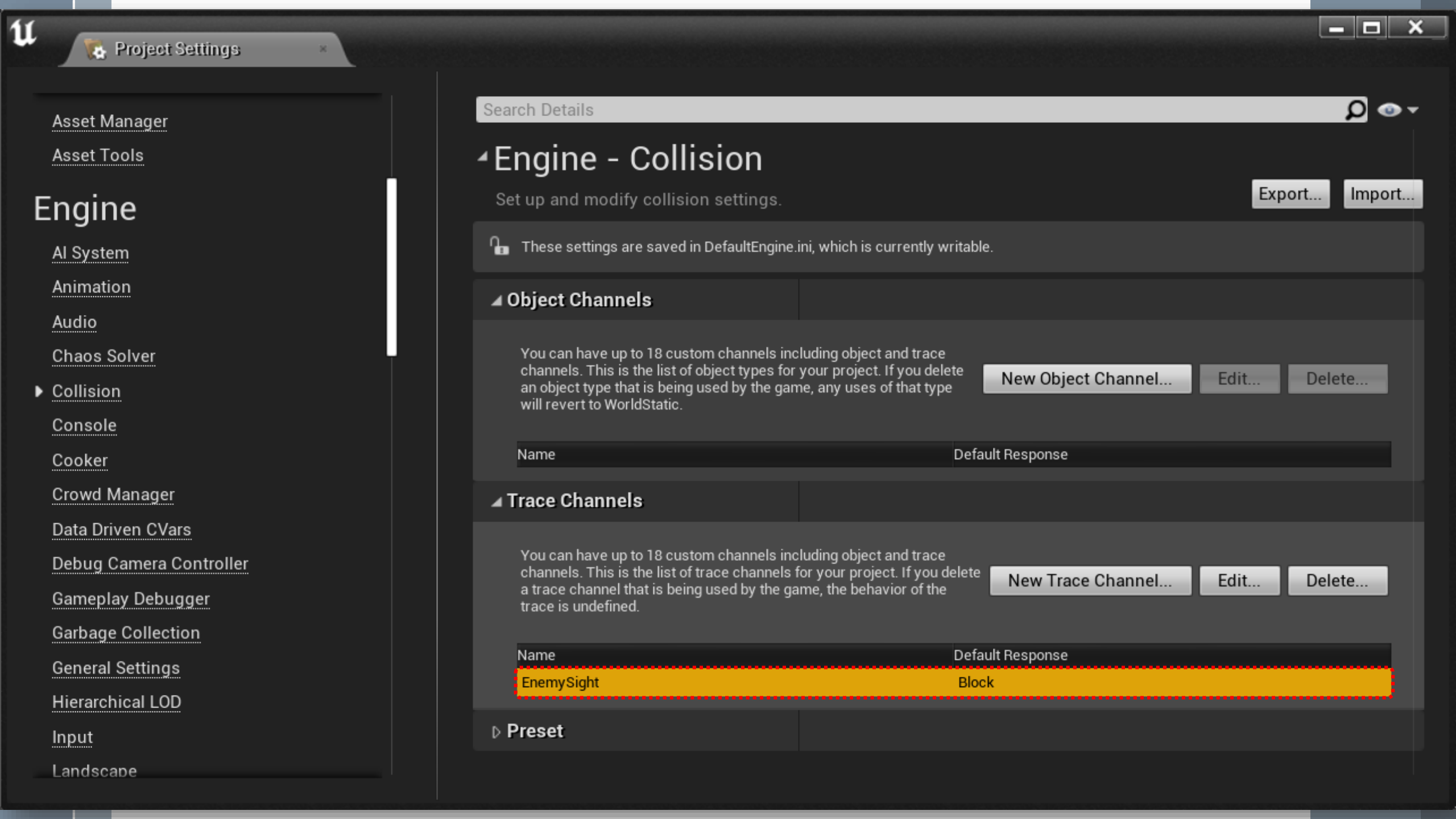

ThirdPersonExampleMap*
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Curr
ource Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
Persp
Lit
Show
10
10°
0.25
4
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
24 actors (1 selected)
View Options
Details
World Settings
Floor2
+ Add Component
Blueprint/Add S
Search Components
Floor2(Instance)
Search Details
Collision Presets
Custom...
Collision Enabled
Collision Enabled (Q
Object Type
WorldStatic
Ignore
Overlap
Block
Collision Responses
Trace Responses
Visibility
Camera
Object Responses
WorldStatic
WorldDynamic
Pawn
PhysicsBody
Vehicle
Destructible
Generate Overlap Events Du
Update Overlaps Method Du
Use Config Default
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options

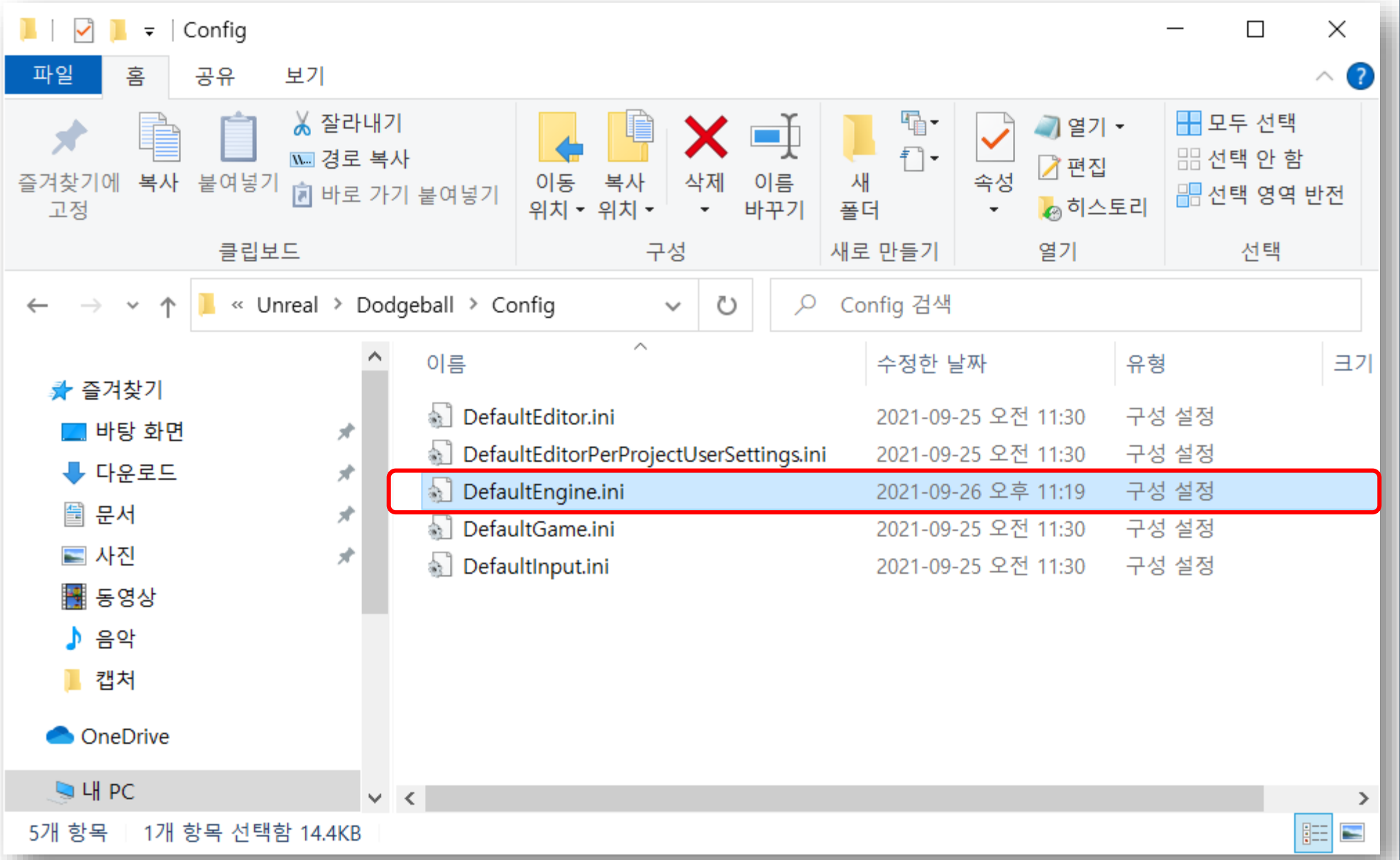
# Exercise 5.05: Creating a Custom EnemySight Trace Channel

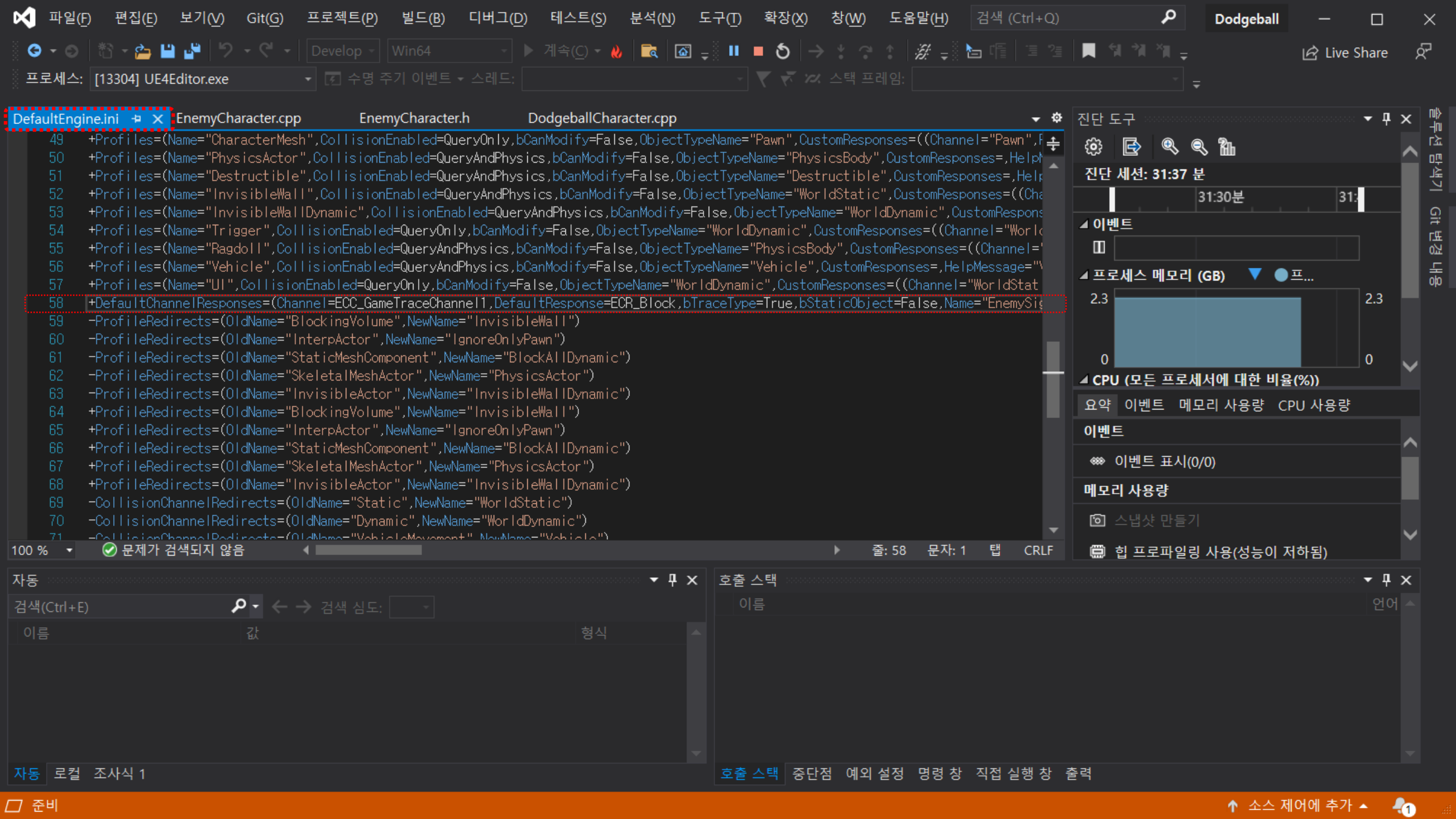


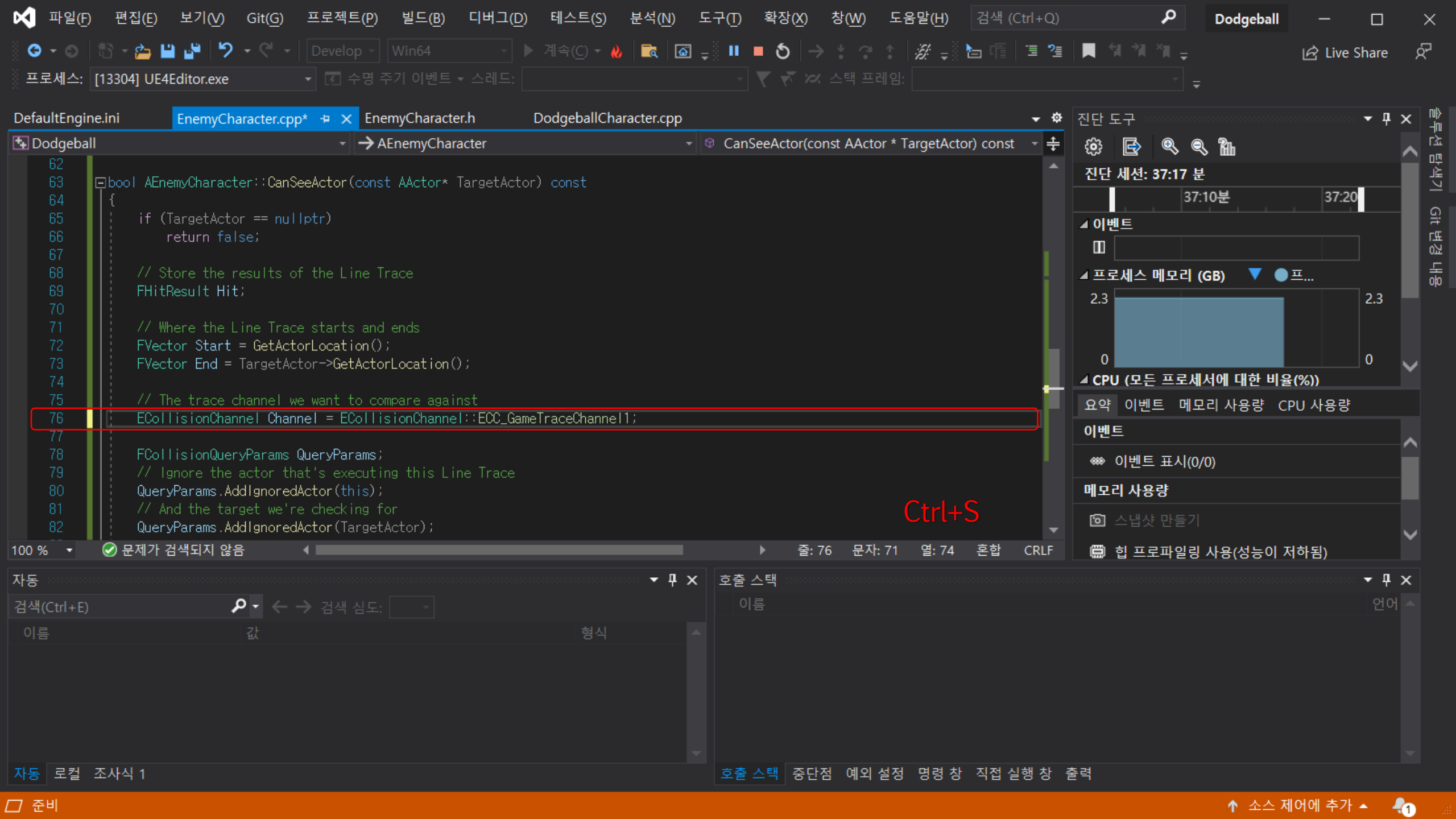

Project Settings
Asset Manager
Asset Tools
Engine
AI System
Animation
Audio
Chaos Solver
Collision
Console
Cooker
Crowd Manager
Data Driven CVars
Debug Camera Controller
Gameplay Debugger
Garbage Collection
General Settings
Hierarchical LOD
Input
Landscape
Search Details
Engine - Collision
Set up and modify collision settings.
Export...
Import...
These settings are saved in DefaultEngine.ini, which is currently writable.
Object Channels
You can have up to 18 custom channels including object and trace channels. This is the list of object types for your project. If you delete an object type that is being used by the game, any uses of that type will revert to WorldStatic.
New Object Channel...
Edit...
Delete...
Name
Default Response
Trace Channels
You can have up to 18 custom channels including object and trace channels. This is the list of trace channels for your project. If you delete a trace channel that is being used by the game, the behavior of the trace is undefined.
New Trace Channel...
Edit...
Delete...
Name
Default Response
Preset

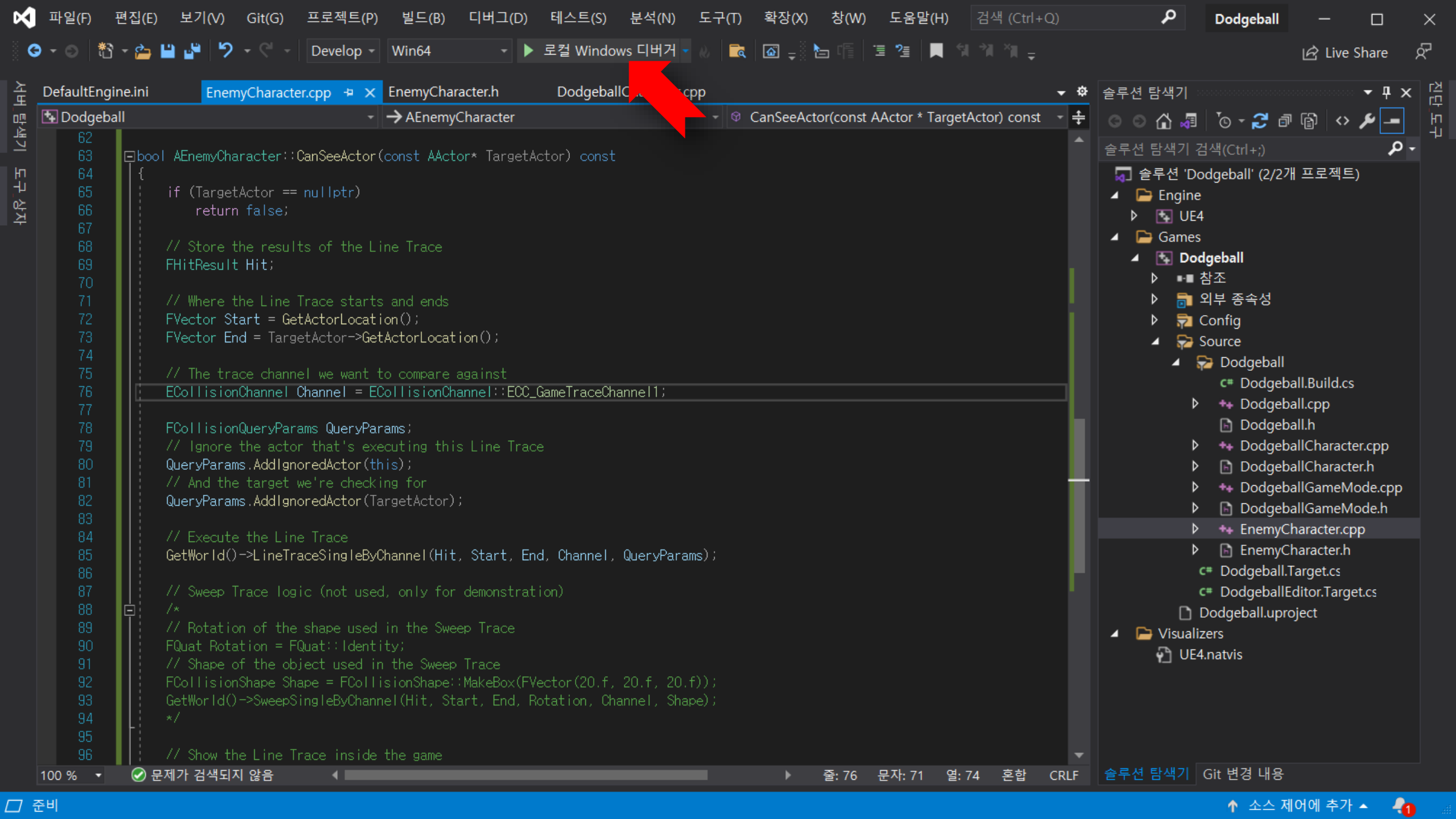

New Channel
Name
EnemySight
Default Response
Block
Accept
Cancel


Project Settings
Asset Manager
Asset Tools
Engine
AI System
Animation
Audio
Chaos Solver
Collision
Console
Cooker
Crowd Manager
Data Driven CVars
Debug Camera Controller
Gameplay Debugger
Garbage Collection
General Settings
Hierarchical LOD
Input
Landscape
Search Details
Engine - Collision
Set up and modify collision settings.
Export...
Import...
These settings are saved in DefaultEngine.ini, which is currently writable.
Object Channels
You can have up to 18 custom channels including object and trace channels. This is the list of object types for your project. If you delete an object type that is being used by the game, any uses of that type will revert to WorldStatic.
New Object Channel...
Edit...
Delete...
Name
Default Response
Trace Channels
You can have up to 18 custom channels including object and trace channels. This is the list of trace channels for your project. If you delete a trace channel that is being used by the game, the behavior of the trace is undefined.
New Trace Channel...
Edit...
Delete...
Name
Default Response
EnemySight
Block
Preset


Config
파일
홈
공유
보기
즐겨찾기에 고정
복사
붙여넣기
잘라내기
경로 복사
바로 가기 붙여넣기
클립보드
이동 위치
복사 위치
삭제
이름 바꾸기
구성
새 폴더
새로 만들기
속성
열기
편집
히스토리
열기
모두 선택
선택 안 함
선택 영역 반전
선택
« Unreal › Dodgeball › Config
Config 검색
즐겨찾기
바탕 화면
다운로드
문서
사진
동영상
음악
캡처
OneDrive
내 PC
이름
수정한 날짜
유형
크기
DefaultEditor.ini 2021-09-25 오전 11:30 구성 설정
DefaultEditorPerProjectUserSettings.ini 2021-09-25 오전 11:30 구성 설정
DefaultEngine.ini 2021-09-26 오후 11:19 구성 설정
DefaultGame.ini 2021-09-25 오전 11:30 구성 설정
DefaultInput.ini 2021-09-25 오전 11:30 구성 설정
5개 항목
1개 항목 선택함 14.4KB


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
계속(C)
Live Share
프로세스: [13304] UE4Editor.exe
수명 주기 이벤트
스레드:
스택 프레임:
DefaultEngine.ini
EnemyCharacter.cpp
EnemyCharacter.h
DodgeballCharacter.cpp
+Profiles=(Name="CharacterMesh",CollisionEnabled=QueryOnly,bCanModify=False,ObjectTypeName="Pawn",CustomResponses=((Channel="Pawn",
+Profiles=(Name="PhysicsActor",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="PhysicsBody",CustomResponses=,Help
+Profiles=(Name="Destructible",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="Destructible",CustomResponses=,Help
+Profiles=(Name="InvisibleWall",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="WorldStatic",CustomResponses=((Cha
+Profiles=(Name="InvisibleWallDynamic",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="WorldDynamic",CustomRespons
+Profiles=(Name="Trigger",CollisionEnabled=QueryOnly,bCanModify=False,ObjectTypeName="WorldDynamic",CustomResponses=((Channel="Worl
+Profiles=(Name="Ragdoll",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="PhysicsBody",CustomResponses=((Channel="
+Profiles=(Name="Vehicle",CollisionEnabled=QueryAndPhysics,bCanModify=False,ObjectTypeName="Vehicle",CustomResponses=,HelpMessage="
+Profiles=(Name="UI",CollisionEnabled=QueryOnly,bCanModify=False,ObjectTypeName="WorldDynamic",CustomResponses=((Channel="WorldStat
+DefaultChannelResponses=(Channel=ECC_GameTraceChannel1,DefaultResponse=ECR_Block,bTraceType=True,bStaticObject=False,Name="EnemySig
-ProfileRedirects=(OldName="BlockingVolume",NewName="InvisibleWall")
-ProfileRedirects=(OldName="InterpActor",NewName="IgnoreOnlyPawn")
-ProfileRedirects=(OldName="StaticMeshComponent",NewName="BlockAllDynamic")
-ProfileRedirects=(OldName="SkeletalMeshActor",NewName="PhysicsActor")
-ProfileRedirects=(OldName="InvisibleActor",NewName="InvisibleWallDynamic")
+ProfileRedirects=(OldName="BlockingVolume",NewName="InvisibleWall")
+ProfileRedirects=(OldName="InterpActor",NewName="IgnoreOnlyPawn")
+ProfileRedirects=(OldName="StaticMeshComponent",NewName="BlockAllDynamic")
+ProfileRedirects=(OldName="SkeletalMeshActor",NewName="PhysicsActor")
+ProfileRedirects=(OldName="InvisibleActor",NewName="InvisibleWallDynamic")
-CollisionChannelRedirects=(OldName="Static",NewName="WorldStatic")
-CollisionChannelRedirects=(OldName="Dynamic",NewName="WorldDynamic")
100 %
문제가 검색되지 않음
줄: 58
문자: 1
탭
CRLF
진단 도구
진단 세션: 31:37 분
31:30분
이벤트
프로세스 메모리 (GB)
2.3
0
CPU (모든 프로세서에 대한 비율(%))
요약
이벤트
메모리 사용량
CPU 사용량
이벤트 표시(0/0)
스냅샷 만들기
힙 프로파일링 사용(성능이 저하됨)
자동
검색(Ctrl+E)
검색 심도:
이름
값
형식
자동
로컬
조사식 1
호출 스택
이름
언어
호출 스택
중단점
예외 설정
명령 창
직접 실행 창
출력
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
계속(C)
Live Share
프로세스: [13304] UE4Editor.exe
수명 주기 이벤트
스레드:
스택 프레임:
DefaultEngine.ini
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
62
63 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
64 {
65 if (TargetActor == nullptr)
66 return false;
67
68 // Store the results of the Line Trace
69 FHitResult Hit;
70
71 // Where the Line Trace starts and ends
72 FVector Start = GetActorLocation();
73 FVector End = TargetActor->GetActorLocation();
74
75 // The trace channel we want to compare against
76 ECollisionChannel Channel = ECollisionChannel::ECC_GameTraceChannel1;
77
78 FCollisionQueryParams QueryParams;
79 // Ignore the actor that's executing this Line Trace
80 QueryParams.AddIgnoredActor(this);
81 // And the target we're checking for
82 QueryParams.AddIgnoredActor(TargetActor);
Ctrl+S
100 %
문제가 검색되지 않음
줄: 76
문자: 71
열: 74
혼합
CRLF
진단 도구
진단 세션: 37:17 분
37:10분
37:20
이벤트
프로세스 메모리 (GB)
2.3
0
CPU (모든 프로세서에 대한 비율(%))
요약
이벤트
메모리 사용량
CPU 사용량
이벤트
이벤트 표시(0/0)
메모리 사용량
스냅샷 만들기
힙 프로파일링 사용(성능이 저하됨)
자동
검색(Ctrl+E)
검색 심도:
이름
값
형식
자동
로컬
조사식 1
호출 스택
이름
언어
호출 스택
중단점
예외 설정
명령 창
직접 실행 창
출력
준비
소스 제어에 추가


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
DefaultEngine.ini
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
62
63 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
64 {
65 if (TargetActor == nullptr)
66 return false;
67
68 // Store the results of the Line Trace
69 FHitResult Hit;
70
71 // Where the Line Trace starts and ends
72 FVector Start = GetActorLocation();
73 FVector End = TargetActor->GetActorLocation();
74
75 // The trace channel we want to compare against
76 ECollisionChannel Channel = ECollisionChannel::ECC_GameTraceChannel1;
77
78 FCollisionQueryParams QueryParams;
79 // Ignore the actor that's executing this Line Trace
80 QueryParams.AddIgnoredActor(this);
81 // And the target we're checking for
82 QueryParams.AddIgnoredActor(TargetActor);
83
84 // Execute the Line Trace
85 GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
86
87 // Sweep Trace logic (not used, only for demonstration)
88 /*
89 // Rotation of the shape used in the Sweep Trace
90 FQuat Rotation = FQuat::Identity;
91 // Shape of the object used in the Sweep Trace
92 FCollisionShape Shape = FCollisionShape::MakeBox(FVector(20.f, 20.f, 20.f));
93 GetWorld()->SweepSingleByChannel(Hit, Start, End, Rotation, Channel, Shape);
94 */
95
96 // Show the Line Trace inside the game
100 %
문제가 검색되지 않음
줄: 76 문자: 71 열: 74 혼합 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
솔루션 'Dodgeball' (2/2개 프로젝트)
Engine
UE4
Games
Dodgeball
참조
외부 종속성
Config
Source
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Dodgeball.cpp
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EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball.Target.cs
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Visualizers
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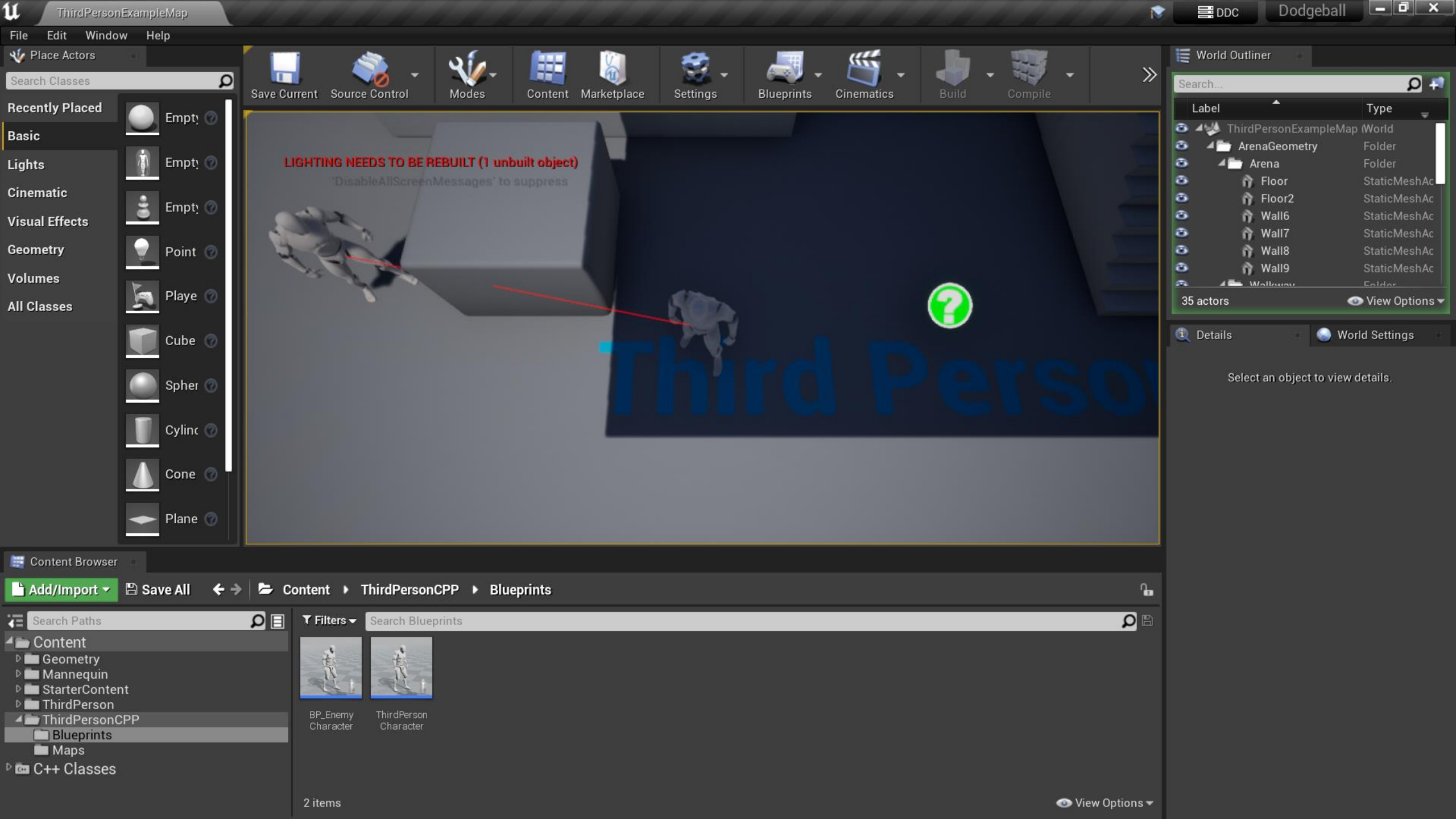
솔루션 탐색기
Git 변경 내용
준비
소스 제어에 추가


ThirdPersonExampleMap
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
Empty
Point
Playe
Cube
Spher
Cylinc
Cone
Plane
Save Current
Source Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
LIGHTING NEEDS TO BE REBUILT (1 unbuilt object)
'DisableAllScreenMessages' to suppress
Third Perso
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
35 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
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ThirdPersonCPP
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Search Paths
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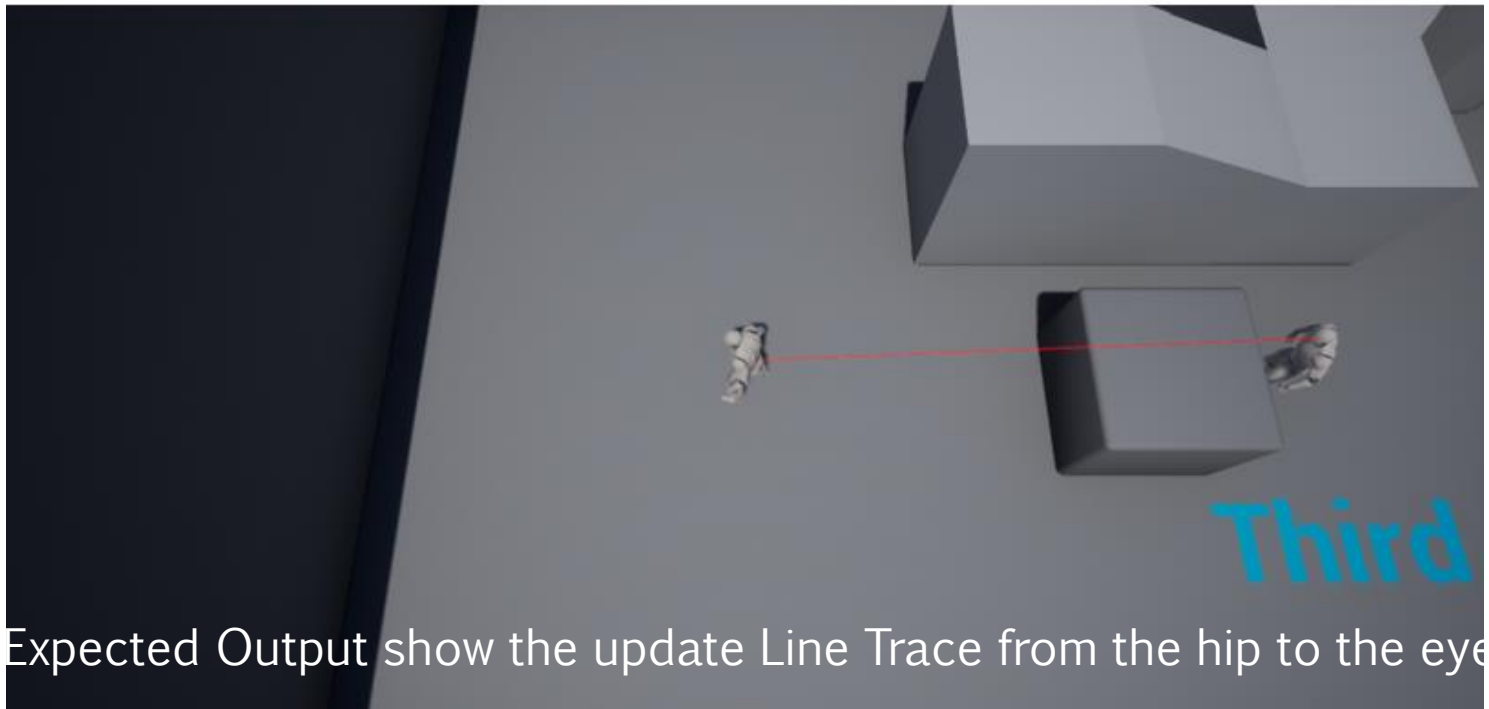
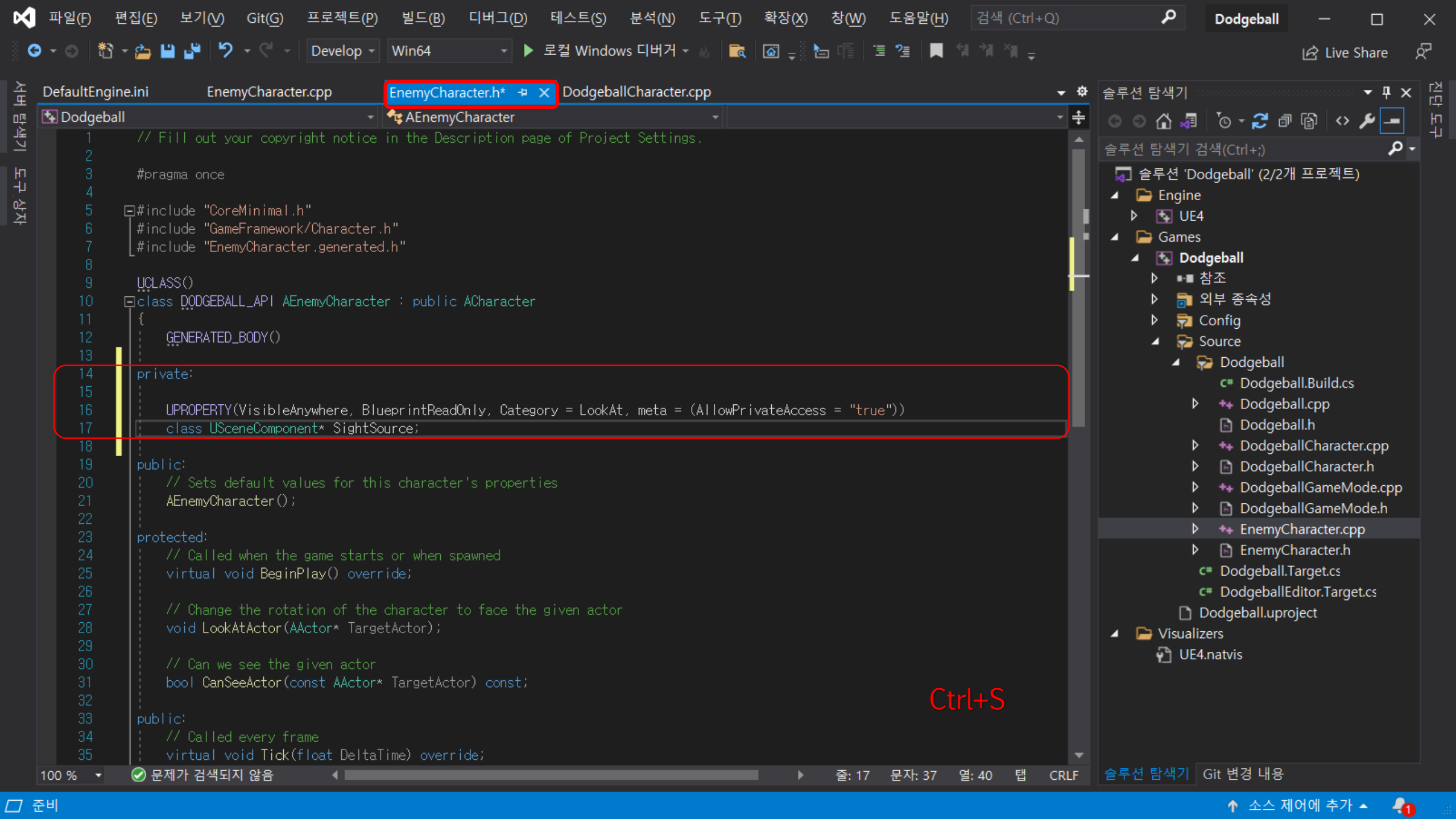
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items
View Options


# Activity 5.01: Creating The SightSource Property

- We'll make a bit more sense so that the Line Trace starts somewhere close to our enemy's eyes.
  - 1) Declare a new **SceneComponent** in our **EmenyCharacter** C++ class called **SightSource**.
  - 2) Create this component in the **EnemyCharacter** constructor by using the **CreateDefaultSubojbect** function, and attach it to the **RootComponent**.
  - 3) Change the start location of the Line Trace in the **CanSeeActor** function to the **SightSource** component's location.
  - 4) Open the **BP_EnemyCharacter** Blueprint class and change the SightSource component's location to the location the enemy's head, (10, 0, 80).


Expected Output show the update Line Trace from the hip to the eye


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
DefaultEngine.ini
EnemyCharacter.cpp
EnemyCharacter.h*
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
1 // Fill out your copyright notice in the Description page of Project Settings.
2
3 #pragma once
4
5 #include "CoreMinimal.h"
6 #include "GameFramework/Character.h"
7 #include "EnemyCharacter.generated.h"
8
9 UCLASS()
10 class DODGEBALL_API AEnemyCharacter : public ACharacter
11 {
12 GENERATED_BODY()
13
14 private:
15
16 UPROPERTY(VisibleAnywhere, BlueprintReadOnly, Category = LookAt, meta = (AllowPrivateAccess = "true"))
17 class USceneComponent* SightSource;
18
19 public:
20 // Sets default values for this character's properties
21 AEnemyCharacter();
22
23 protected:
24 // Called when the game starts or when spawned
25 virtual void BeginPlay() override;
26
27 // Change the rotation of the character to face the given actor
28 void LookAtActor(AActor* TargetActor);
29
30 // Can we see the given actor
31 bool CanSeeActor(const AActor* TargetActor) const;
32
33 public:
34 // Called every frame
35 virtual void Tick(float DeltaTime) override;
Ctrl+S
100 %
문제가 검색되지 않음
줄: 17 문자: 37 열: 40 탭 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
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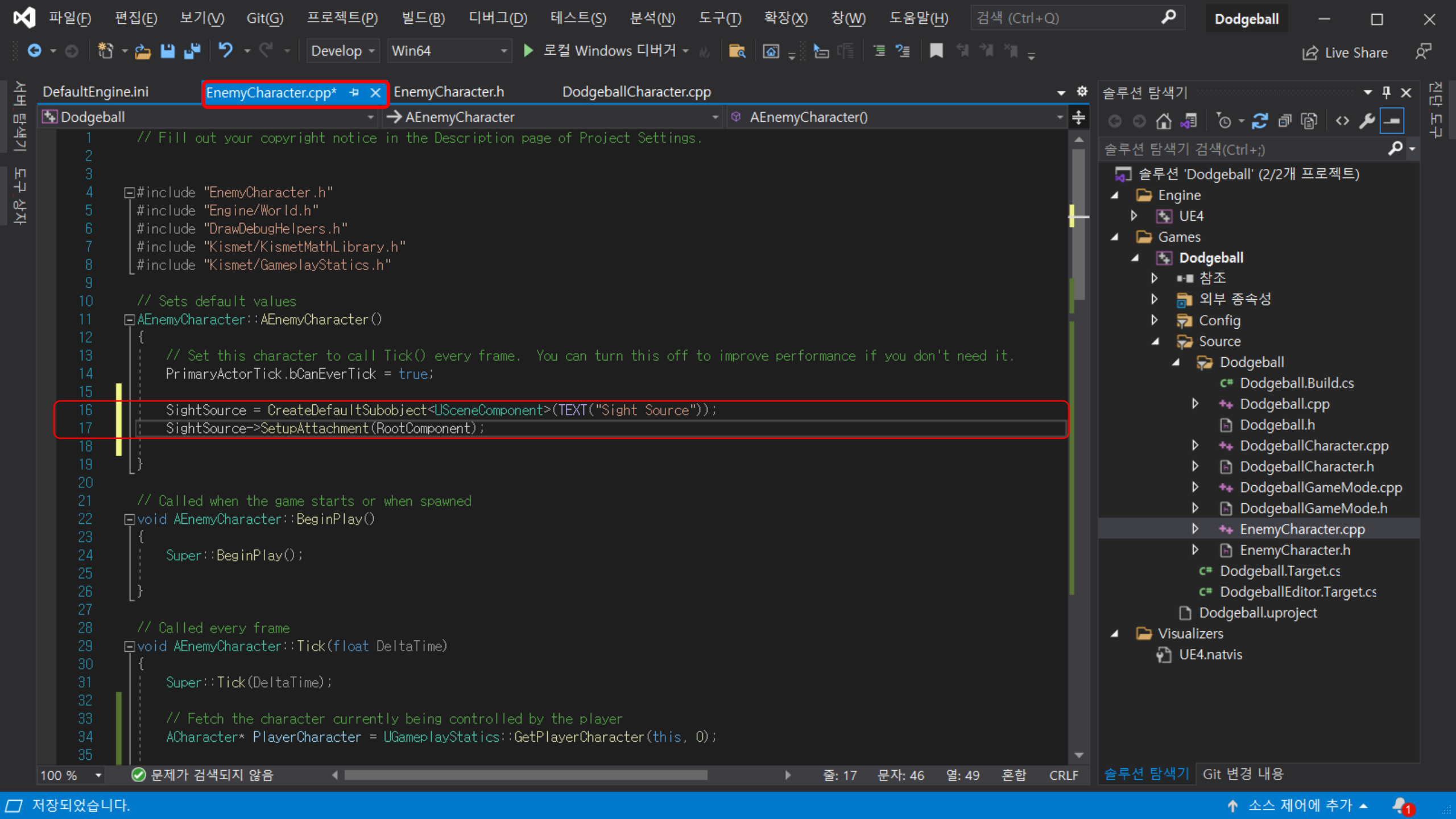
소스 제어에 추가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검색 (Ctrl+Q)
Dodgeball
Develop
Win64
로컬 Windows 디버거
Live Share
DefaultEngine.ini
EnemyCharacter.cpp*
EnemyCharacter.h
DodgeballCharacter.cpp
Dodgeball
AEnemyCharacter
AEnemyCharacter()
// Fill out your copyright notice in the Description page of Project Settings.
#include "EnemyCharacter.h"
#include "Engine/World.h"
#include "DrawDebugHelpers.h"
#include "Kismet/KismetMathLibrary.h"
#include "Kismet/GameplayStatics.h"
// Sets default values
AEnemyCharacter::AEnemyCharacter()
{
// Set this character to call Tick() every frame. You can turn this off to improve performance if you don't need it.
PrimaryActorTick.bCanEverTick = true;
SightSource = CreateDefaultSubobject<USceneComponent>(TEXT("Sight Source"));
SightSource->SetupAttachment(RootComponent);
}
// Called when the game starts or when spawned
void AEnemyCharacter::BeginPlay()
{
Super::BeginPlay();
}
// Called every frame
void AEnemyCharacter::Tick(float DeltaTime)
{
Super::Tick(DeltaTime);
// Fetch the character currently being controlled by the player
ACharacter* PlayerCharacter = UGameplayStatics::GetPlayerCharacter(this, 0);
100 %
문제가 검색되지 않음
줄: 17 문자: 46 열: 49 혼합 CRLF
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DodgeballGameMode.h
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EnemyCharacter.h
Dodgeball.Target.cs
DodgeballEditor.Target.cs
Dodgeball.uproject
Visualizers
UE4.natvis
솔루션 탐색기
Git 변경 내용
저장되었습니다.
소스 제어에 추가

DefaultEngine.ini | EnemyCharacter.cpp* | EnemyCharacter.h | DodgeballCharacter.cpp

Dodgeball > AEnemyCharacter > CanSeeActor(const AActor * TargetActor) const

```
65
66  bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
67  {
68      if (TargetActor == nullptr)
69          return false;
70
71      // Store the results of the Line Trace
72      FHitResult Hit;
73
74      // Where the Line Trace starts and ends
75      FVector Start = SightSource->GetComponentLocation();
76      FVector End = TargetActor->GetActorLocation();
77
78      // The trace channel we want to compare against
79      ECollisionChannel Channel = ECollisionChannel::ECC_GameTraceChannel1;
80
81      FCollisionQueryParams QueryParams;
82      // Ignore the actor that's executing this Line Trace
83      QueryParams.AddIgnoredActor(this);
84      // And the target we're checking for
85      QueryParams.AddIgnoredActor(TargetActor);
86
87      // Execute the Line Trace
88      GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
89
90      // Sweep Trace logic (not used, only for demonstration)
91      /*
92      // Rotation of the shape used in the Sweep Trace
93      FQuat Rotation = FQuat::Identity;
94      // Shape of the object used in the Sweep Trace
95      FCollisionShape Shape = FCollisionShape::MakeBox(FVector(20.f, 20.f, 20.f));
96      GetWorld()->SweepSingleByChannel(Hit, Start, End, Rotation, Channel, Shape);
97      */
98
99      // Show the Line Trace inside the game
```

Ctrl+S

100 % 문제가 검색되지 않음 줄: 75 문자: 53 열: 56 혼합 CRLF

솔루션 탐색기 검색(Ctrl+;)

- 솔루션 'Dodgeball' (2/2개 프로젝트)
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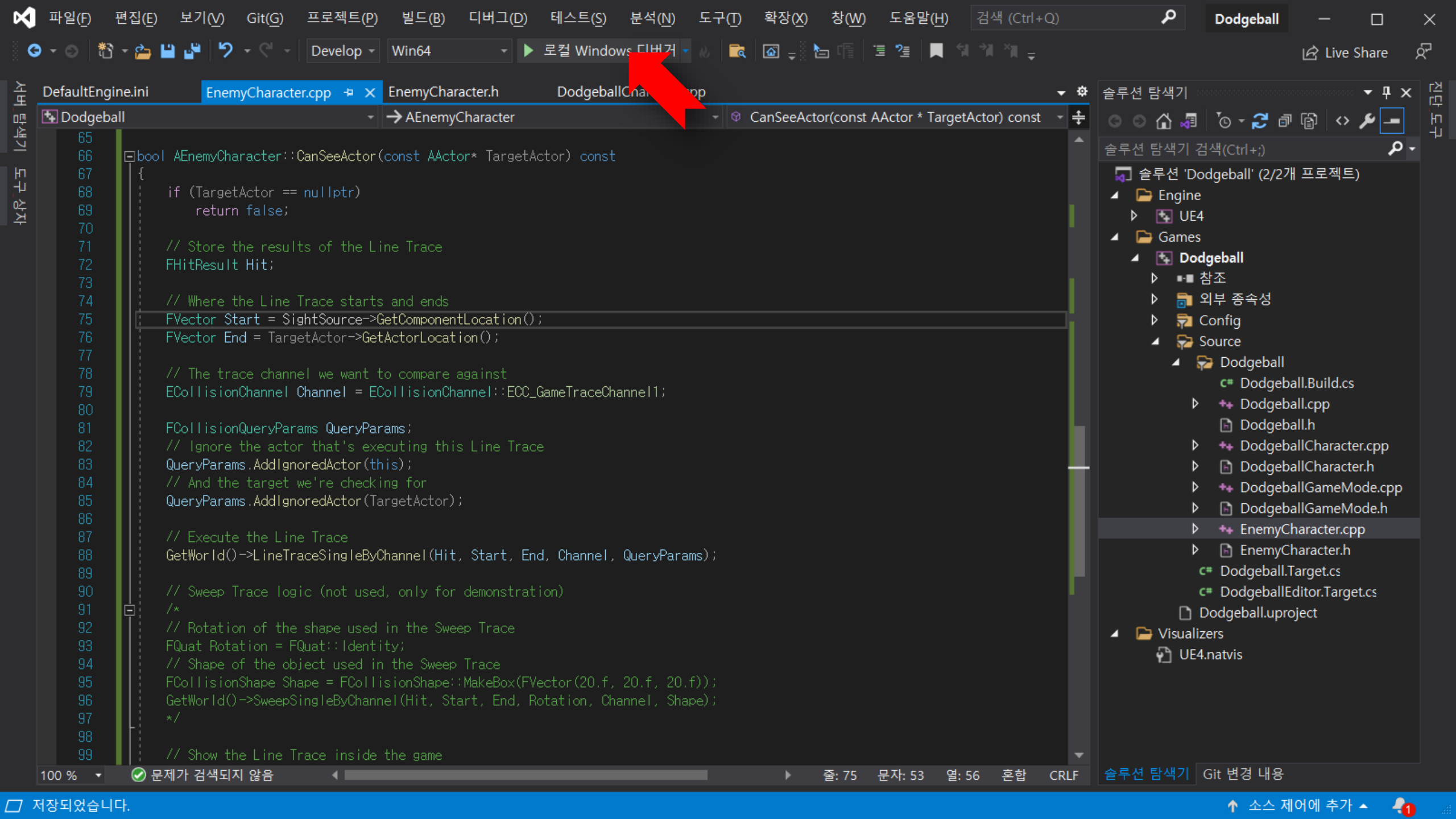
  - Games
    - Dodgeball
      - 참조
      - 외부 종속성
      - Config
      - Source
        - Dodgeball
          - Dodgeball.Build.cs
          - Dodgeball.cpp
          - Dodgeball.h
          - DodgeballCharacter.cpp
          - DodgeballCharacter.h
          - DodgeballGameMode.cpp
          - DodgeballGameMode.h
          - EnemyCharacter.cpp
          - EnemyCharacter.h
        - Dodgeball.Target.cs
        - DodgeballEditor.Target.cs
      - Dodgeball.uproject
  - Visualizers
    - UE4.natvis


파일(F) 편집(E) 보기(V) Git(G) 프로젝트(P) 빌드(B) 디버그(D) 테스트(S) 분석(N) 도구(T) 확장(X) 창(W) 도움말(H)
검색 (Ctrl+Q)
Dodgeball
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Win64
로컬 Windows 디버거
Live Share
DefaultEngine.ini
EnemyCharacter.cpp
EnemyCharacter.h
Dodgeball
AEnemyCharacter
CanSeeActor(const AActor * TargetActor) const
65
66 bool AEnemyCharacter::CanSeeActor(const AActor* TargetActor) const
67 {
68 if (TargetActor == nullptr)
69 return false;
70
71 // Store the results of the Line Trace
72 FHitResult Hit;
73
74 // Where the Line Trace starts and ends
75 FVector Start = SightSource->GetComponentLocation();
76 FVector End = TargetActor->GetActorLocation();
77
78 // The trace channel we want to compare against
79 ECollisionChannel Channel = ECollisionChannel::ECC_GameTraceChannel1;
80
81 FCollisionQueryParams QueryParams;
82 // Ignore the actor that's executing this Line Trace
83 QueryParams.AddIgnoredActor(this);
84 // And the target we're checking for
85 QueryParams.AddIgnoredActor(TargetActor);
86
87 // Execute the Line Trace
88 GetWorld()->LineTraceSingleByChannel(Hit, Start, End, Channel, QueryParams);
89
90 // Sweep Trace logic (not used, only for demonstration)
91 /*
92 // Rotation of the shape used in the Sweep Trace
93 FQuat Rotation = FQuat::Identity;
94 // Shape of the object used in the Sweep Trace
95 FCollisionShape Shape = FCollisionShape::MakeBox(FVector(20.f, 20.f, 20.f));
96 GetWorld()->SweepSingleByChannel(Hit, Start, End, Rotation, Channel, Shape);
97 */
98
99 // Show the Line Trace inside the game
100 %
문제가 검색되지 않음
줄: 75 문자: 53 열: 56 혼합 CRLF
솔루션 탐색기
솔루션 탐색기 검색(Ctrl+;)
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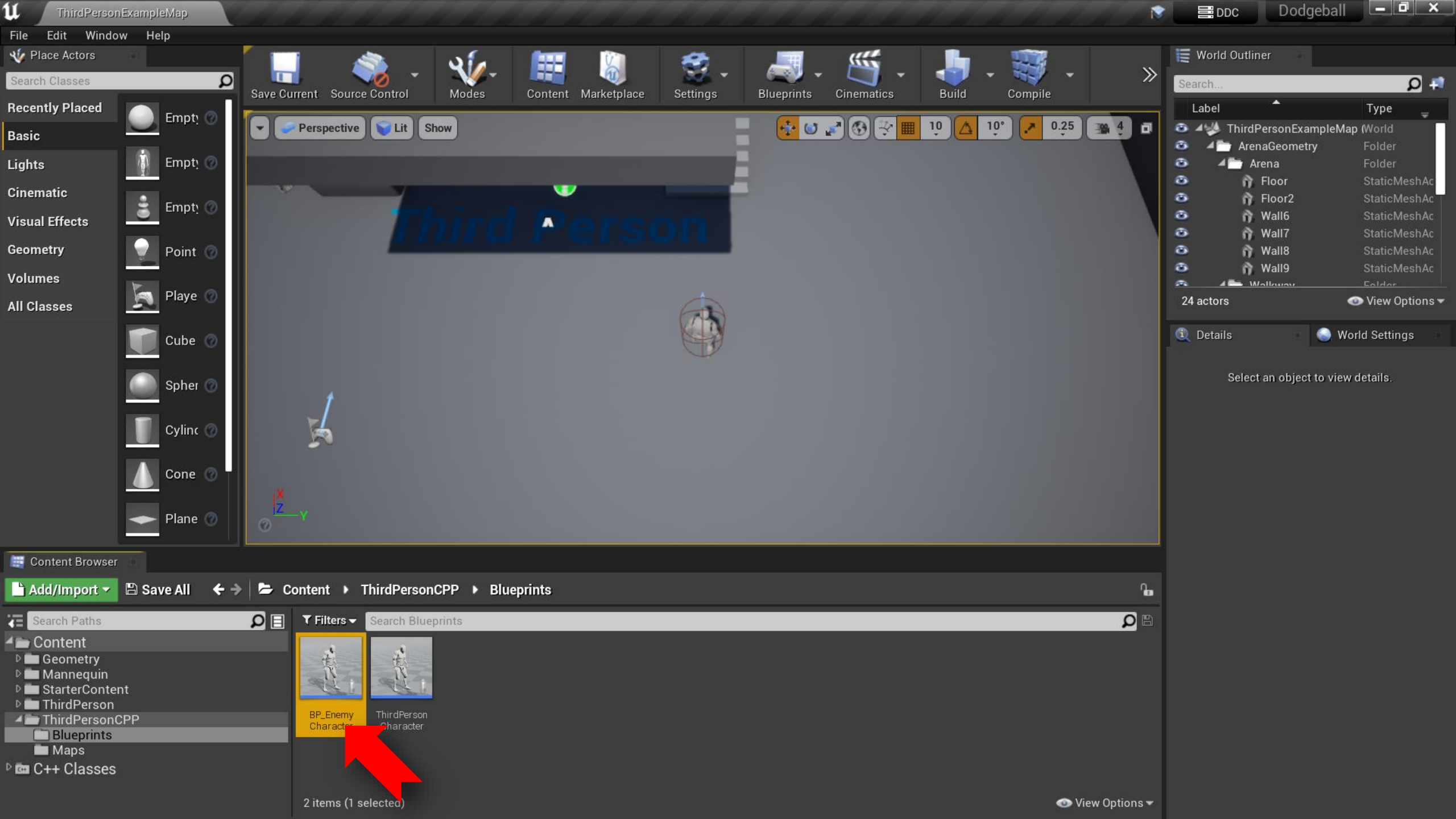
솔루션 탐색기
Git 변경 내용
서버 탐색기
도구 상자
진단 도구
저장되었습니다.
소스 제어에 추가


ThirdPersonExampleMap
DDC
Dodgeball
File
Edit
Window
Help
Place Actors
Search Classes
Recently Placed
Basic
Lights
Cinematic
Visual Effects
Geometry
Volumes
All Classes
Empty
Empty
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Perspective
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Third Person
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Folder
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StaticMeshAc
Wall6
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Wall8
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Wall9
StaticMeshAc
24 actors
View Options
Details
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Select an object to view details.
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StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options

BP_EnemyCharacter

File Edit Asset View Debug Window Help

Parent class: Enemy Character

## Components

+ Add Component | Search

BP_EnemyCharacter(self)

- Capsule Component (CollisionCy
- Arrow Component (Arrow) (Inhe
- Mesh (CharacterMesh0) (Inherit
- Sight Source (Sight Source) (Inl
- Character Movement (CharMoveC

## My Blueprint

+ Add New | Search

**Graphs**
- EventGraph
  - Event BeginPlay
  - Event ActorBeginOverlap
  - Event Tick

**Functions** (29 Overridable)
- ConstructionScript

**Macros**

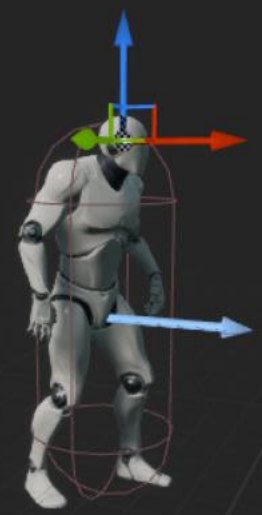
**Variables**

**Event Dispatchers**

Compile | Save | Browse | Find | Hide Unrelated | Class Settings | Class Defaults | Simulation | Play

Viewport | Construction Scrip | Event Graph

Perspective | Lit | 10 | 10° | 0.25 | 4



## Details

Search Details

**Variable**
- Variable Name: SightSource
- Tooltip:
- Category: LookAt
- Editable when Inherited: ☑

**Transform**
- Location: X 10.0 Y 0.0 Z 80.0
- Rotation: X 0.0° Y 0.0° Z 0.0°
- Scale: X 1.0 Y 1.0 Z 1.0
- Mobility: Static | Stationa | Movabl

**Sockets**
- Parent Socket:

**Rendering**
- Visible: ☑
- Hidden in Game: ☐

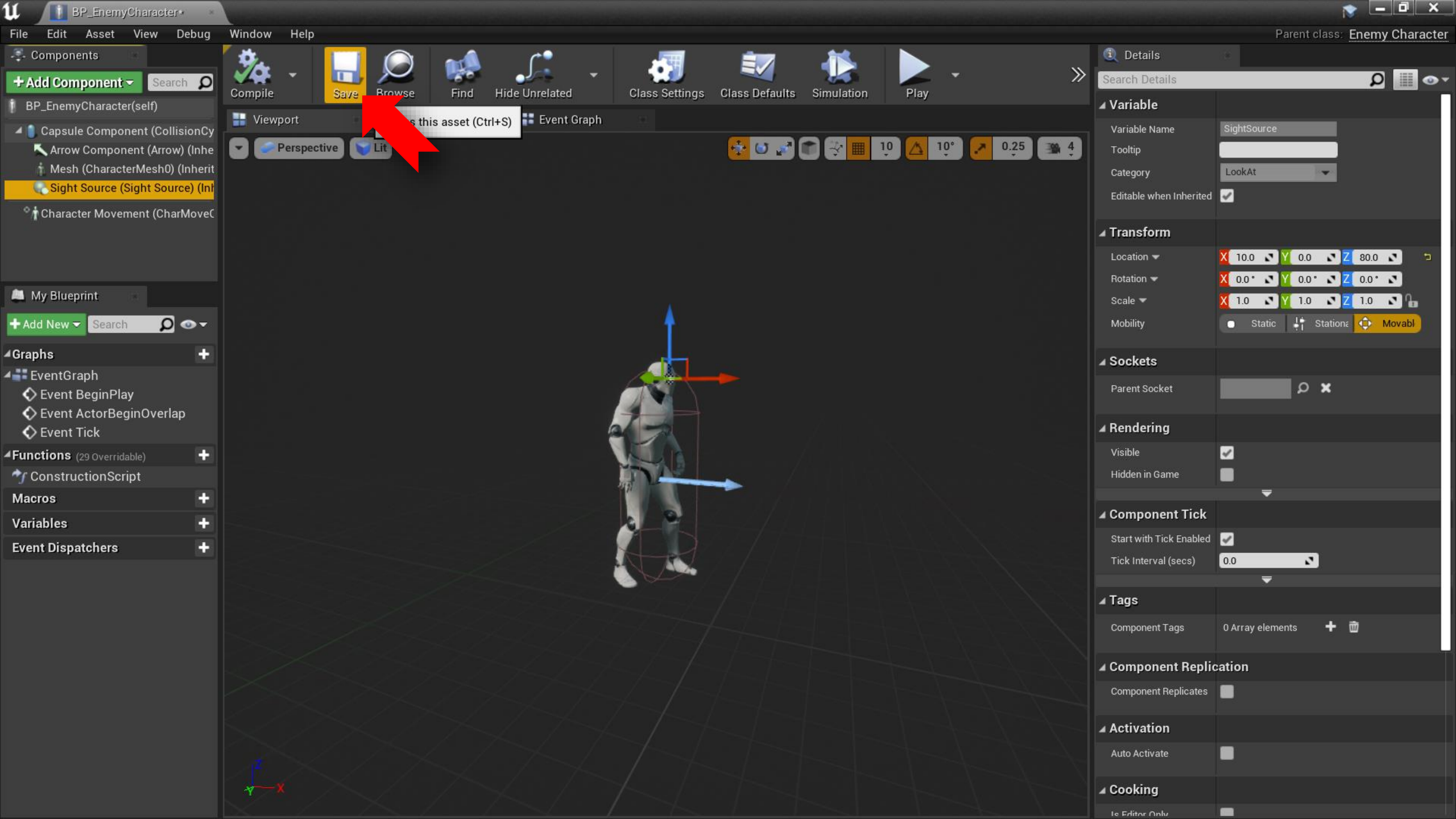
**Component Tick**
- Start with Tick Enabled: ☑
- Tick Interval (secs): 0.0

**Tags**
- Component Tags: 0 Array elements

**Component Replication**
- Component Replicates: ☐

**Activation**
- Auto Activate: ☐

**Cooking**
- Is Editor Only: ☐


BP_EnemyCharacter
File Edit Asset View Debug Window Help
Parent class: Enemy Character
Components
+ Add Component
Search
BP_EnemyCharacter(self)
Capsule Component (CollisionCy
Arrow Component (Arrow) (Inhe
Mesh (CharacterMesh0) (Inherit
Sight Source (Sight Source) (In
Character Movement (CharMoveC
My Blueprint
+ Add New
Search
Graphs
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Event ActorBeginOverlap
Event Tick
Functions (29 Overridable)
ConstructionScript
Macros
Variables
Event Dispatchers
Compile
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Browse
Find
Hide Unrelated
Class Settings
Class Defaults
Simulation
Play
this asset (Ctrl+S)
Viewport
Event Graph
Perspective
Lit
Details
Search Details
Variable
Variable Name
SightSource
Tooltip
Category
LookAt
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Transform
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Rotation
Scale
Mobility
Static
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Parent Socket
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Component Tick
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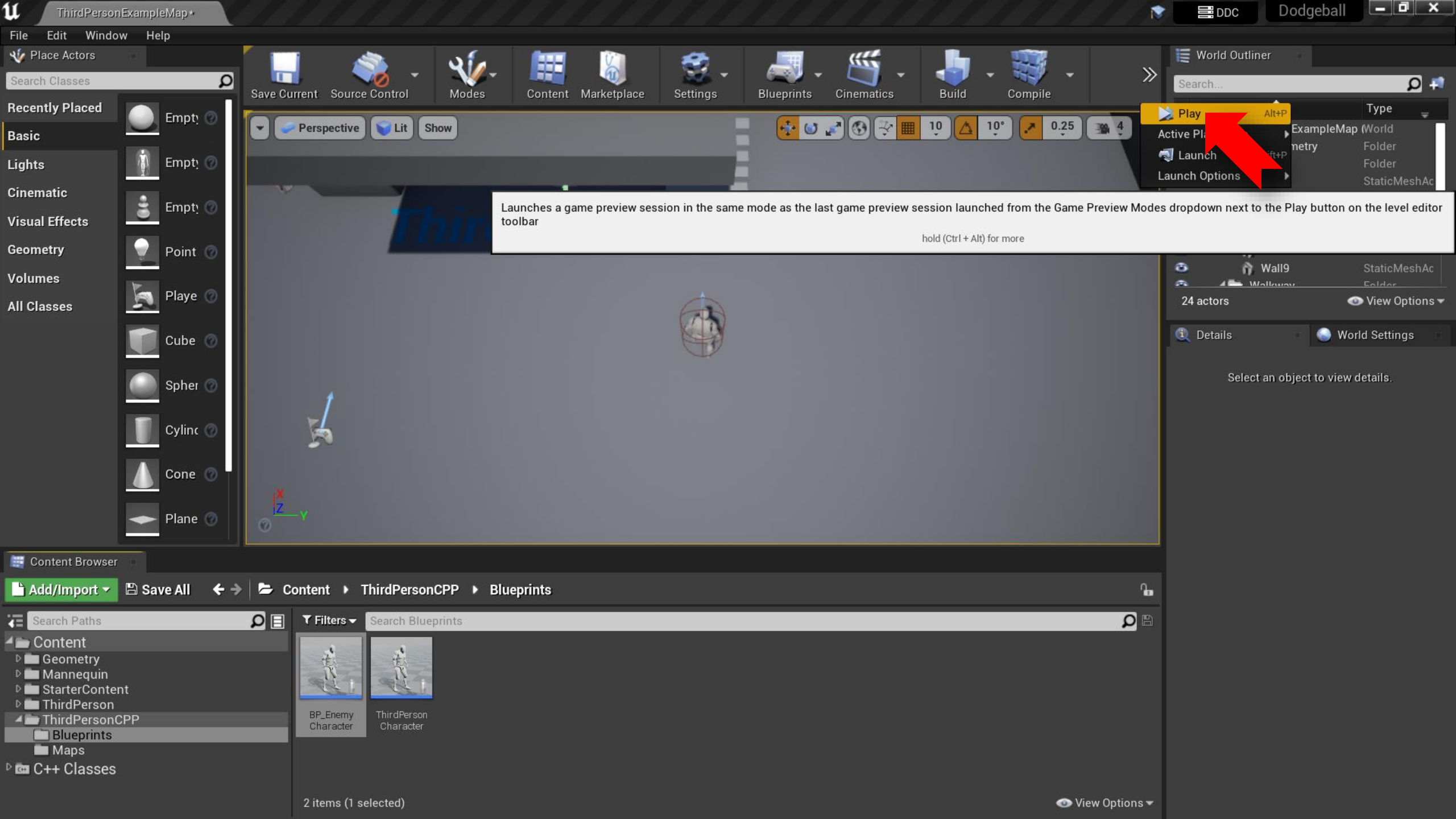
Tick Interval (secs)
Tags
Component Tags
0 Array elements
Component Replication
Component Replicates
Activation
Auto Activate
Cooking


ThirdPersonExampleMap*
DDC
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Launch
Launch Options
Launches a game preview session in the same mode as the last game preview session launched from the Game Preview Modes dropdown next to the Play button on the level editor toolbar
hold (Ctrl + Alt) for more
World Outliner
Search...
Type
ExampleMap (World
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Wall9
StaticMeshAc
24 actors
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BP_Enemy Character
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2 items (1 selected)
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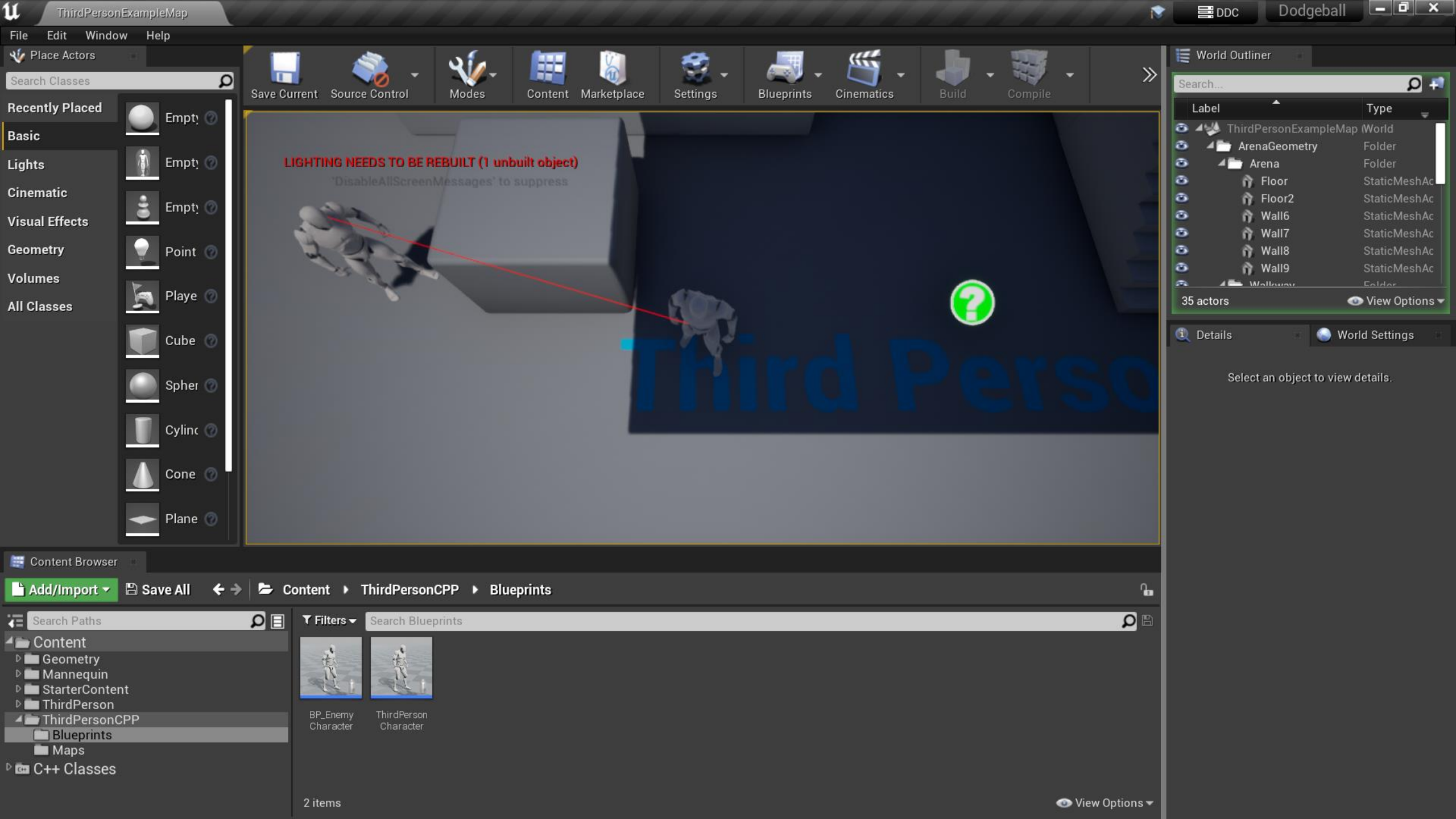
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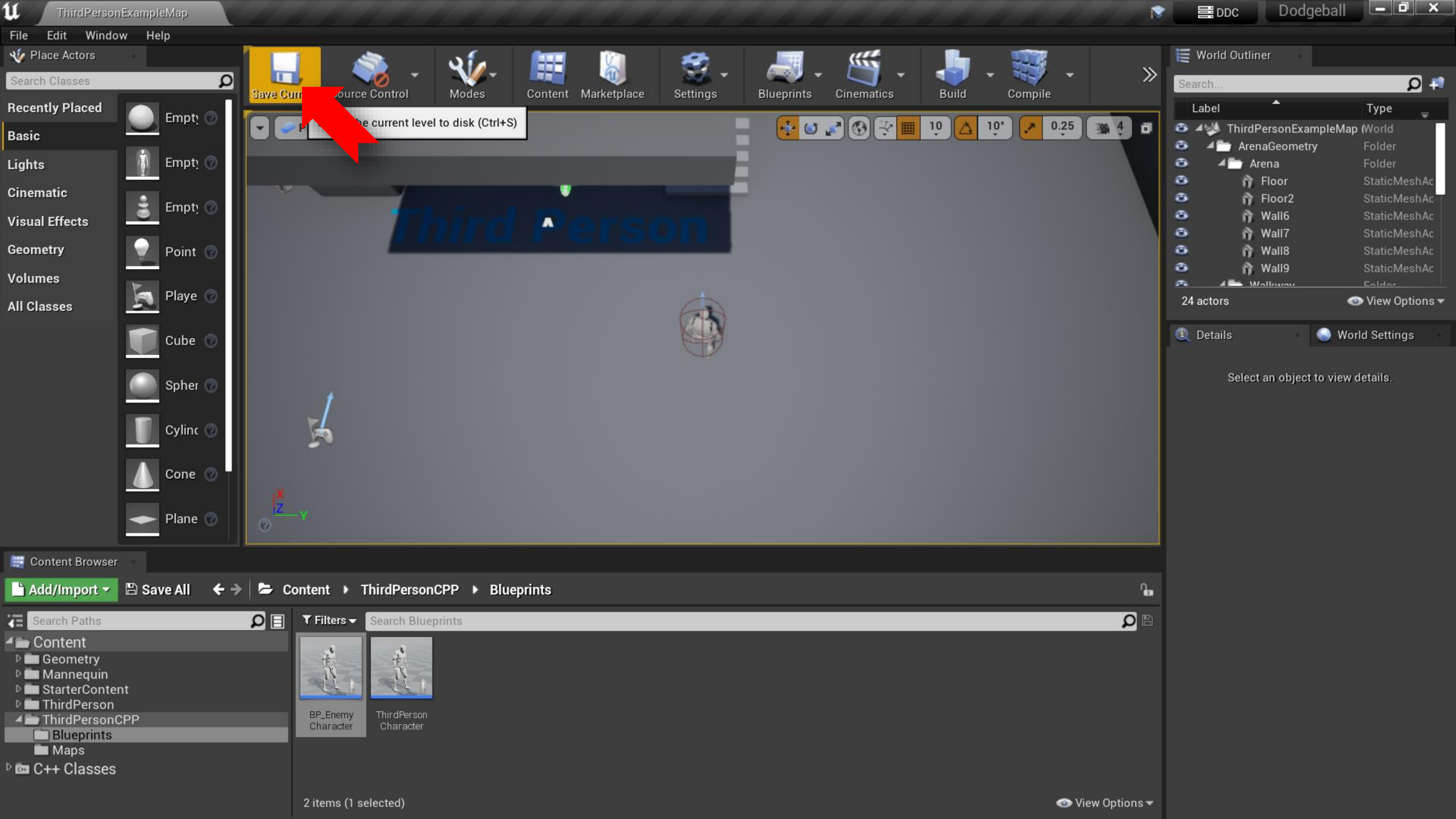
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Cube
Spher
Cylinc
Cone
Plane
Save Curr
ource Control
Modes
Content
Marketplace
Settings
Blueprints
Cinematics
Build
Compile
e current level to disk (Ctrl+S)
Third Person
10
10°
0.25
4
World Outliner
Search...
Label
Type
ThirdPersonExampleMap (World
ArenaGeometry
Folder
Arena
Folder
Floor
StaticMeshAc
Floor2
StaticMeshAc
Wall6
StaticMeshAc
Wall7
StaticMeshAc
Wall8
StaticMeshAc
Wall9
StaticMeshAc
24 actors
View Options
Details
World Settings
Select an object to view details.
Content Browser
Add/Import
Save All
Content
ThirdPersonCPP
Blueprints
Search Paths
Content
Geometry
Mannequin
StarterContent
ThirdPerson
ThirdPersonCPP
Blueprints
Maps
C++ Classes
Filters
Search Blueprints
BP_Enemy Character
ThirdPerson Character
2 items (1 selected)
View Options

# 연습 과제

› Activity 5.01까지 모두 완성한 **Dodgeball** 프로젝트를 제출하시오.

› 제출 방법: “프로젝트 폴더” 전체 압축
→ 압축 파일 내에서 다음 “4개 폴더” 삭제
1) Content 폴더 안 StarterContent 폴더
2) Intermediate 폴더
3) Saved 폴더
4) Binary 폴더
→ 압축파일 업로드