

# Unreal Engine 5

Introduction Workshop.



# What is Unreal Engine 5?

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Unreal Engine 5 is a 3D game engine developed by Epic Games.



The term 'game engine' refers to a software that is used to develop virtual experiences.



Unreal Engine 5 is utilised across several industries including game development, architectural visualisation and immersive installations.



# Workshop Overview

UE5 Interface

Quixel Bridge

Actors

Interactivity



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# Unreal Engine 5

## User Interface



ThirdPersonMap

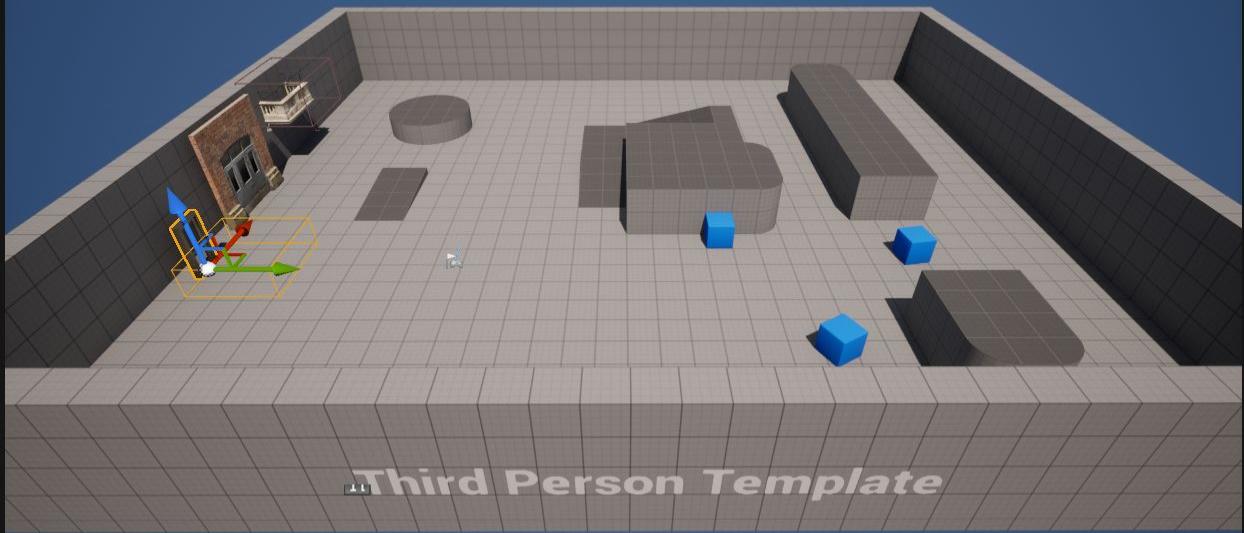
Selection Mode ▾



Platforms ▾

Settings ▾

Perspective Lit Show



Outliner ▾

Search...

Item Label	Type
ThirdPersonMap (Editor)	StaticMeshActor
Playground	StaticMeshActor
SM_Cube3	StaticMeshActor
SM_Cube5	StaticMeshActor
SM_Cube6	StaticMeshActor
Balcony	Edit Balcony
Door	Edit Door
PlayerStart	PlayerStart
SM_ChamferCube	StaticMeshActor

43 actors (1 selected)

Details ▾

Door

Door (Self)

+ Add

Search

General Actor LOD Misc Physics Rendering Streaming

All

Transform

Location	976.0	189.0	0.0
Rotation	0.0°	0.0°	89.99999°
Scale	1.0	1.0	1.0

Rendering

Actor Hidden In Game



File Edit Window Tools Build Select Actor Help

Test1 Minimize Maximize Close

ThirdPersonMap

Selection Mode ▾ Platforms ▾

Settings ▾

Perspective Lit Show

1 10° 0.25 4

# Menu Bar



Outliner

Search...

Item Label

ThirdPersonMap (Editor)

Playground

SM\_Cube3

SM\_Cube5

SM\_Cube6

Balcony

Door

PlayerStart

SM\_ChamferCube

43 actors (1 selected)

Details

Door

Door (Self)

DefaultSceneRoot

Search

General Actor LOD Misc Physics Rendering Streaming

All

Transform

Location 976.0 189.0 0.0

Rotation 0.0° 0.0° 89.999999°

Scale 1.0 1.0 1.0

Rendering

Actor Hidden In Game

Derived Data

1 Unsaved Source Control

Content Drawer

Output Log

Cmd ▾

Enter Console Command

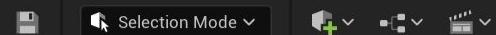


File Edit Window Tools Build Select Actor Help

Test1



ThirdPersonMap



Settings

Perspective Lit Show



Outliner



Search...



Item Label

ThirdPersonMap (Editor)

Playground

SM\_Cube3

SM\_Cube5

SM\_Cube6

Balcony

Door

PlayerStart

SM\_ChamferCube

43 actors (1 selected)



Details



Door



Door (Self)

DefaultSceneRoot



Search

General

Actor

LOD

Misc

Physics

Rendering

Streaming



Transform

Location

976.0 189.0 0.0

Rotation

0.0° 0.0° 89.999999°

Scale

1.0 1.0 1.0

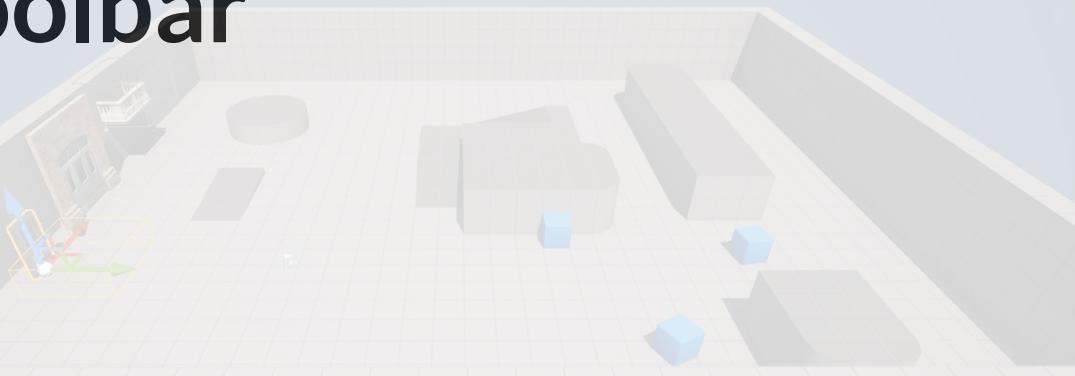
Rendering

Actor Hidden In Game

Content Drawer Output Log Cmd Enter Console Command Derived Data

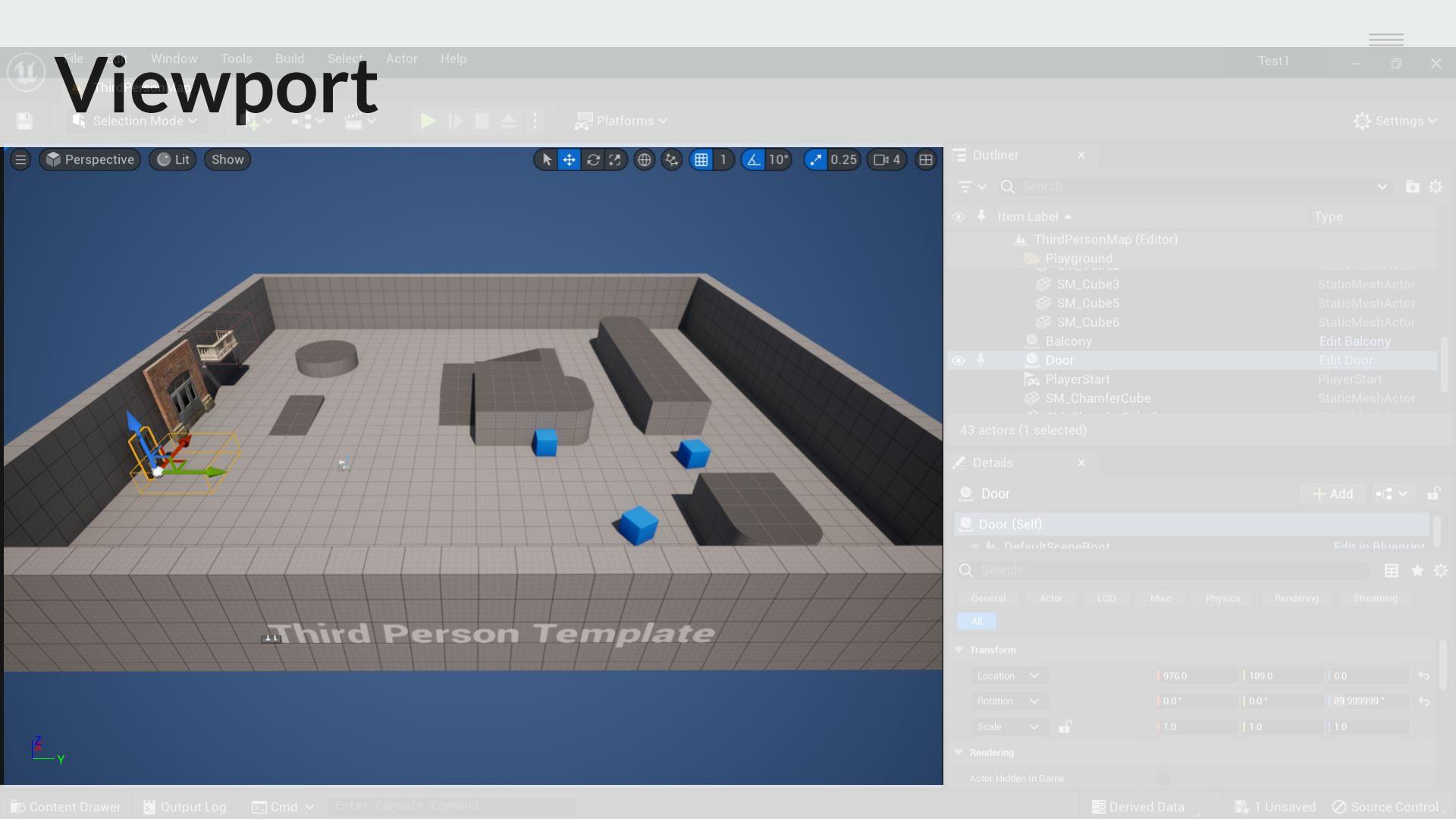
1 Unsaved Source Control

# Toolbar



Third Person Template







File Edit Window Tools Build Select Actor Help

Test1



ThirdPersonMap

Selection Mode Platforms

Settings

Perspective Lit Show

1 10° 0.25 4

# Content Drawer



Third Person Template

Outliner

Search...

Item Label

ThirdPersonMap (Editor)

Playground

SM\_Cube3

SM\_Cube5

SM\_Cube6

Balcony

Door

PlayerStart

SM\_ChamferCube

43 actors (1 selected)

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Door

Door (Self)

DefaultSceneRoot

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Source Control

Content Drawer

Output Log

Cmd

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File Edit Window Tools Build Select Actor Help

Test1



ThirdPersonMap

Selection Mode Platforms

Settings

Perspective Lit Show

1 10° 0.25 4

# Output Log & Cmd



Third Person Template

Outliner

Search...

Item Label

ThirdPersonMap (Editor)

Playground

SM\_Cube3

SM\_Cube5

SM\_Cube6

Balcony

Door

PlayerStart

SM\_ChamferCube

43 actors (1 selected)

Details

Door

Door (Self)

DefaultSceneRoot

Search

General Actor LOD Misc Physics Rendering Streaming

All

Transform

Location 976.0 189.0 0.0

Rotation 0.0° 0.0° 89.999999°

Scale 1.0 1.0 1.0

Rendering

Actor Hidden In Game

Content Drawer

Output Log

Cmd

Enter Console Command

Derived Data

1 Unsaved

Source Control



File Edit Window Tools Build Select Actor Help

Test1



ThirdPersonMap

Selection Mode

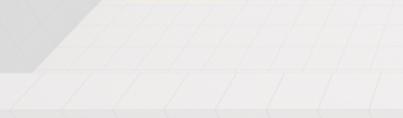


Settings

Perspective Lit Show

1 10° 0.25 4

# Outliner



Third Person Template

Outliner

Search...

Item Label

Type
ThirdPersonMap (Editor)
Playground
SM_Cube3
SM_Cube5
SM_Cube6
Balcony
Door
PlayerStart
SM_ChamberCube
43 actors (1 selected)

Details

Door

Door (Self)

DefaultSceneRoot

Search

General Actor LOD Misc Physics Rendering Streaming

All

Transform

Location 976.0 189.0 0.0

Rotation 0.0° 0.0° 89.999999°

Scale 1.0 1.0 1.0

Rendering

Actor Hidden In Game

Derived Data

1 Unsaved

Source Control

Content Drawer

Output Log

Cmd

Enter Console Command



File Edit Window Tools Build Select Actor Help

Test1



ThirdPersonMap

Selection Mode



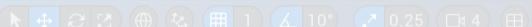
Platforms

Settings

Perspective

Lit

Show



Outliner

Search...

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ThirdPersonMap (Editor)

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SM\_Cube3

SM\_Cube5

SM\_Cube6

Balcony

Door

PlayerStart

SM\_ChamferCube

43 actors (1 selected)

Type

StaticMeshActor

StaticMeshActor

StaticMeshActor

Edit Balcony

Edit Door

PlayerStart

StaticMeshActor

Details

Door

Door (Self)

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General

Actor

LOD

Misc

Physics

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Streaming

All

Transform

Location

976.0 189.0 0.0

Rotation

0.0° 0.0° 89.99999°

Scale

1.0 1.0 1.0

Rendering

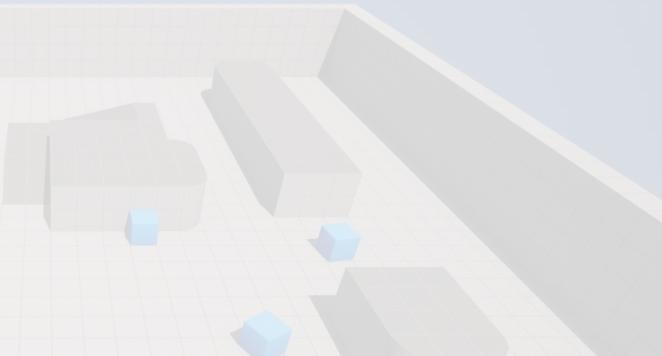
Actor Hidden In Game

Derived Data

1 Unsaved

Source Control

# Details



Third Person Template



Content Drawer

Output Log

Cmd

Enter Console Command



# Unreal Engine 5

## Quixel Bridge



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# What is Quixel Bridge?

1

A plugin that comes installed in the editor.

2

Access the Megascans library - the largest and fastest growing 3D scan library.

3

Browse collections and search for specific assets.

4

Add assets to your Unreal Engine projects.



Home

11,273

All Types



All Sizes



All States



All Environments



All Colors



Collections

100

Free

50

Favorites

1

Local

372

## Megascans

368

3D Assets

3D Plants

Surfaces

Decals

Atlases

Imperfections

Displacements

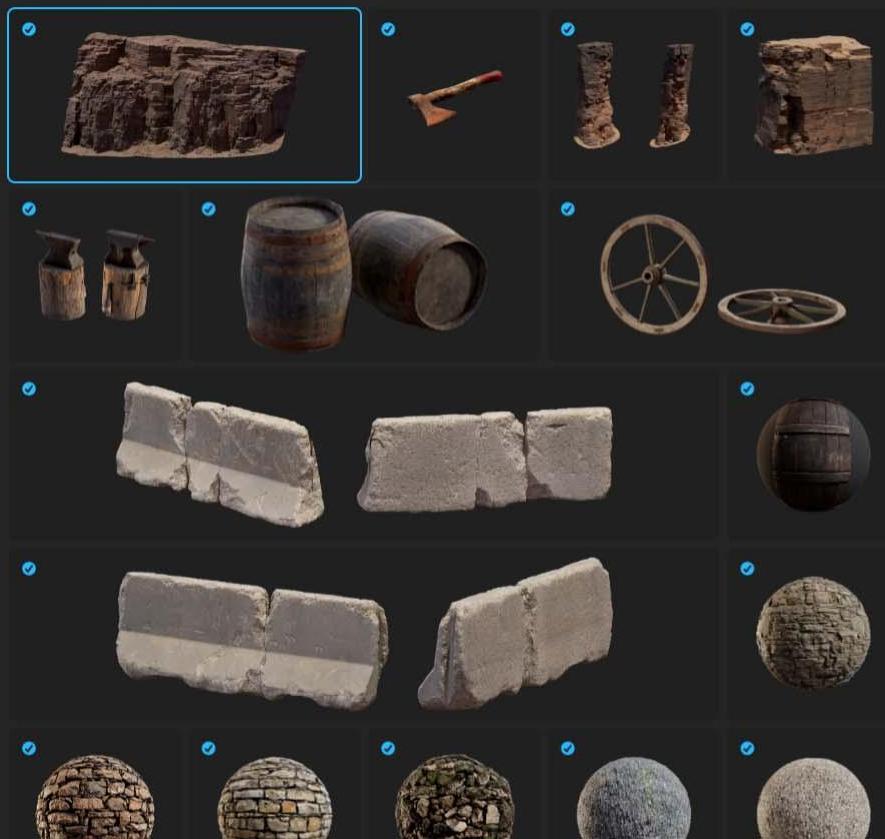
Brushes

## Mixes

4

## External

0



## Quarry Cliff

Report Issue

ASSET INFO

DOWNLOAD SETTINGS

EXPORT SETTINGS

Premium quality 3D scan with meticulous UVs and topology, including LODs and high-poly source, with baked and calibrated PBR maps.



SUBSCRIBE

EXPORT

Home	11,273
Collections	100
Free	50
Favorites	1
Local	372
<b>Megascans</b>	<b>368</b>
3D Assets	
3D Plants	
Surfaces	
Decals	
Atlasses	
Imperfections	
Displacements	
Brushes	
Mixes	4
External	0

# Folders



## Quarry Cliff

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SCALE   OPEN   ASSEMBLY

SUBSCRIBE

EXPORT



# Assets

Free

Favorites

Local

Megascans

50

368

3D Assets

3D Plants

Surfaces

Decals

Atlases

Imperfections

Displacements

Brushes

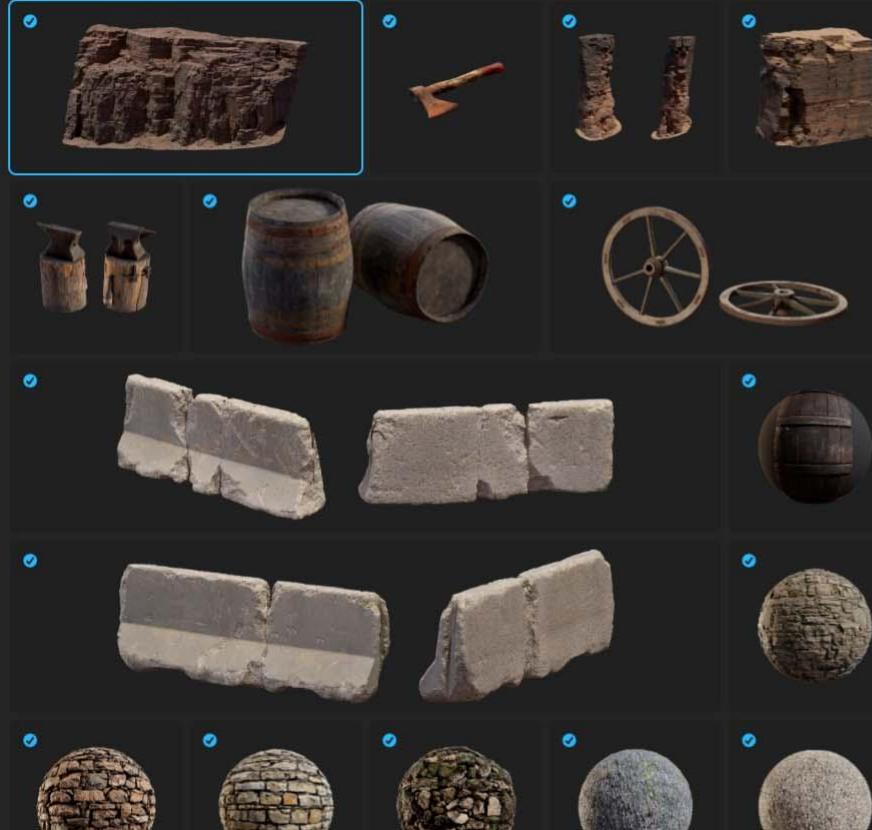
Mixes

4

External

0

All Types | All Sizes | All States | All Environments | All Colors



## Quarry Cliff

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SCALE   OPEN   ASSEMBLY

SUBSCRIBE

EXPORT



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All Types

▼

All Sizes

▼

All States

▼

All Environments

▼

All Colors

Collections

100

▼

Free

50

▼

Favorites

1

▼

Local

372

▼

Megascans

368

▼

3D Assets

3D Plants

Surfaces

Decals

Atlases

Imperfections

Displacements

Brushes

Mixes

4

▼

External

0

▼

# Chosen Asset



PBR  
4K  
LODO

## Quarry Cliff

Report Issue

ASSET INFO

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Premium quality 3D scan with meticulous UVs and topology, including LODs and high-poly source, with baked and calibrated PBR maps.

SCALE  
OPEN  
ASSEMBLY

SUBSCRIBE

EXPORT



Home

11,273

All Types



All Sizes



All States



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3D Assets

3D Plants

Surfaces

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0



## Quarry Cliff

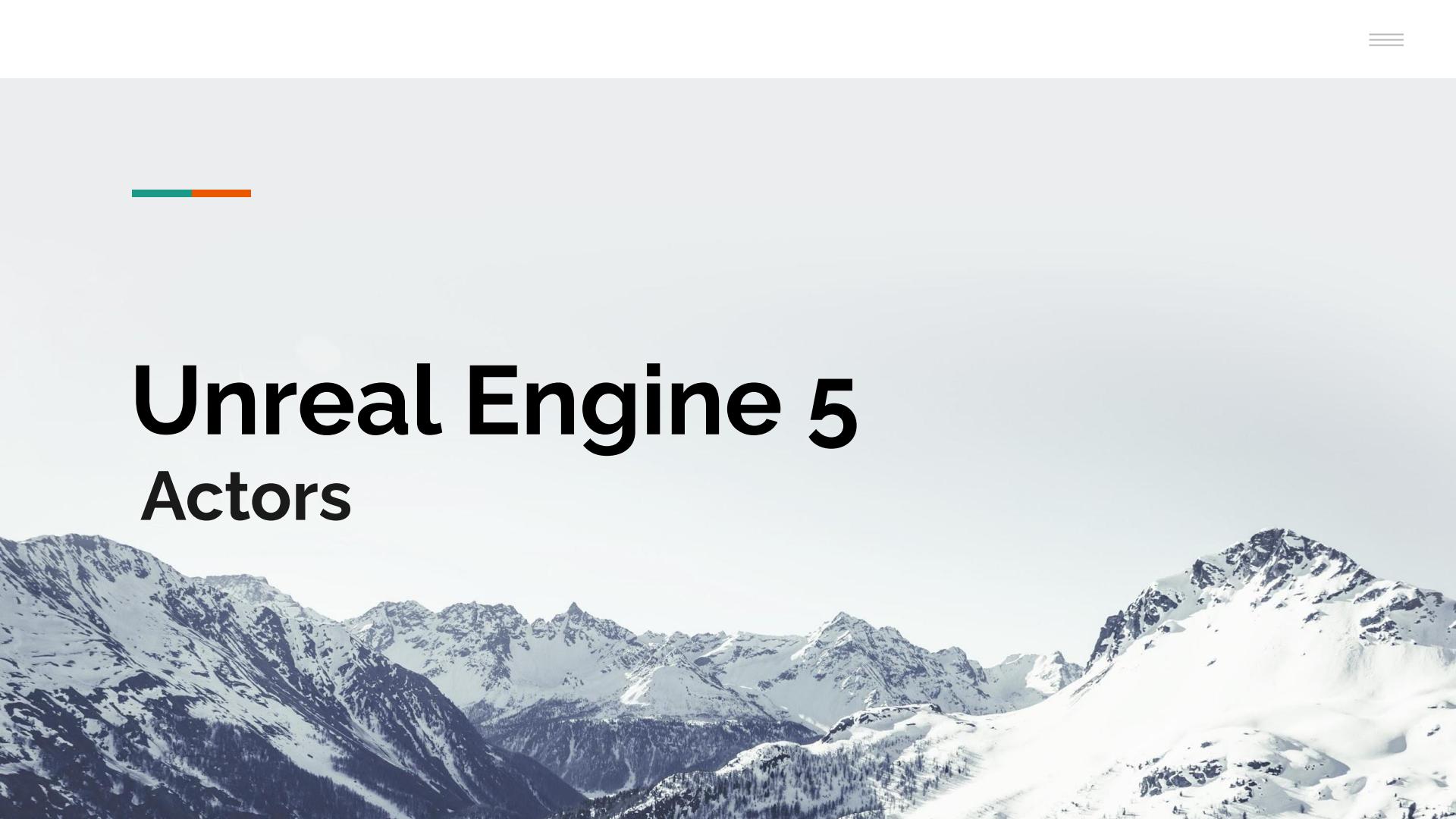
# Download

Premium quality 3D scan with meticulous UVs and topology, including LODs and high-poly source, with baked and calibrated PBR maps.



SUBSCRIBE

EXPORT



# Unreal Engine 5

## Actors

# What is an actor?

1

Any object that can be placed into a level.

2

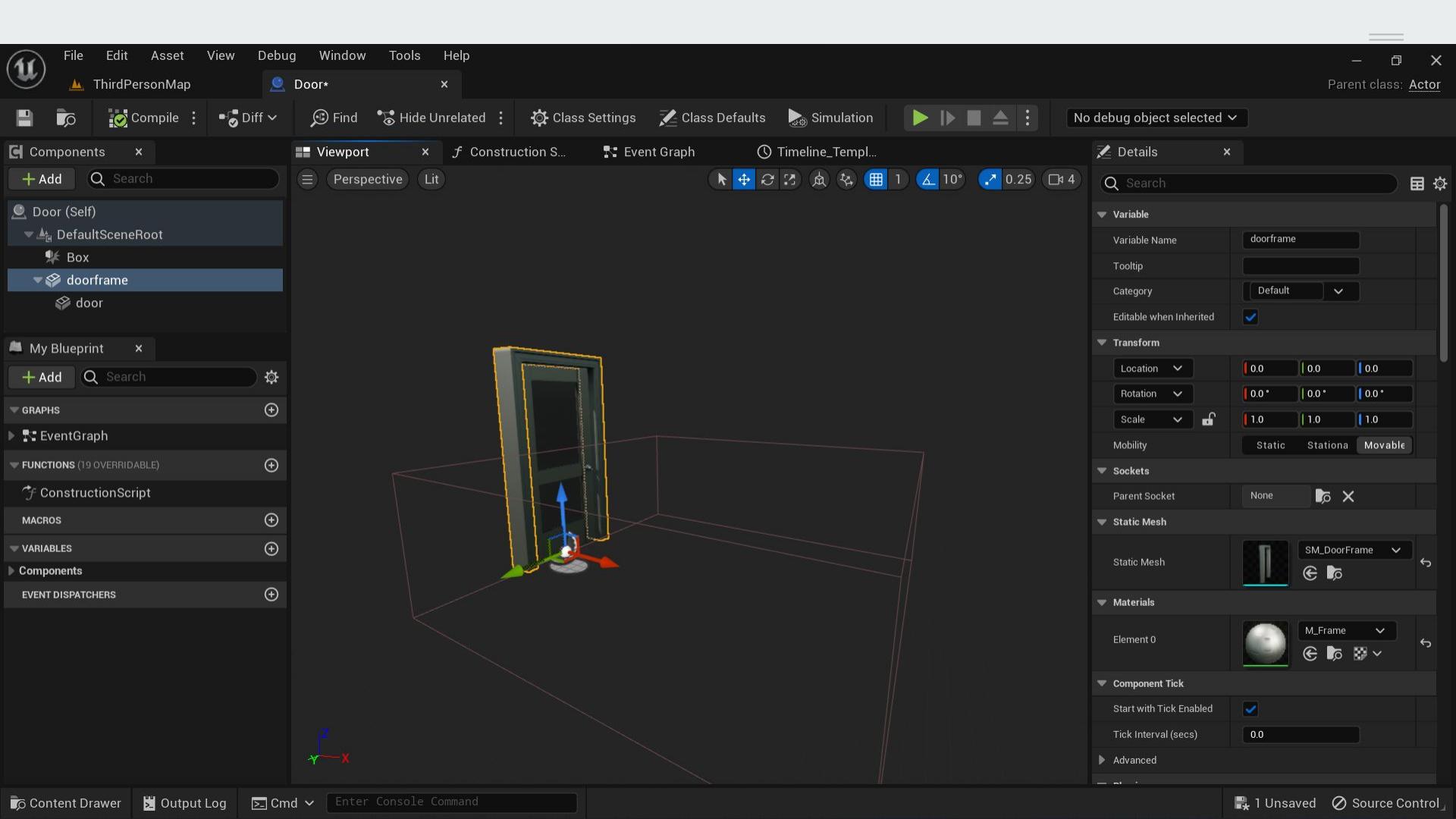
Such as a Camera, static mesh, or player start location.

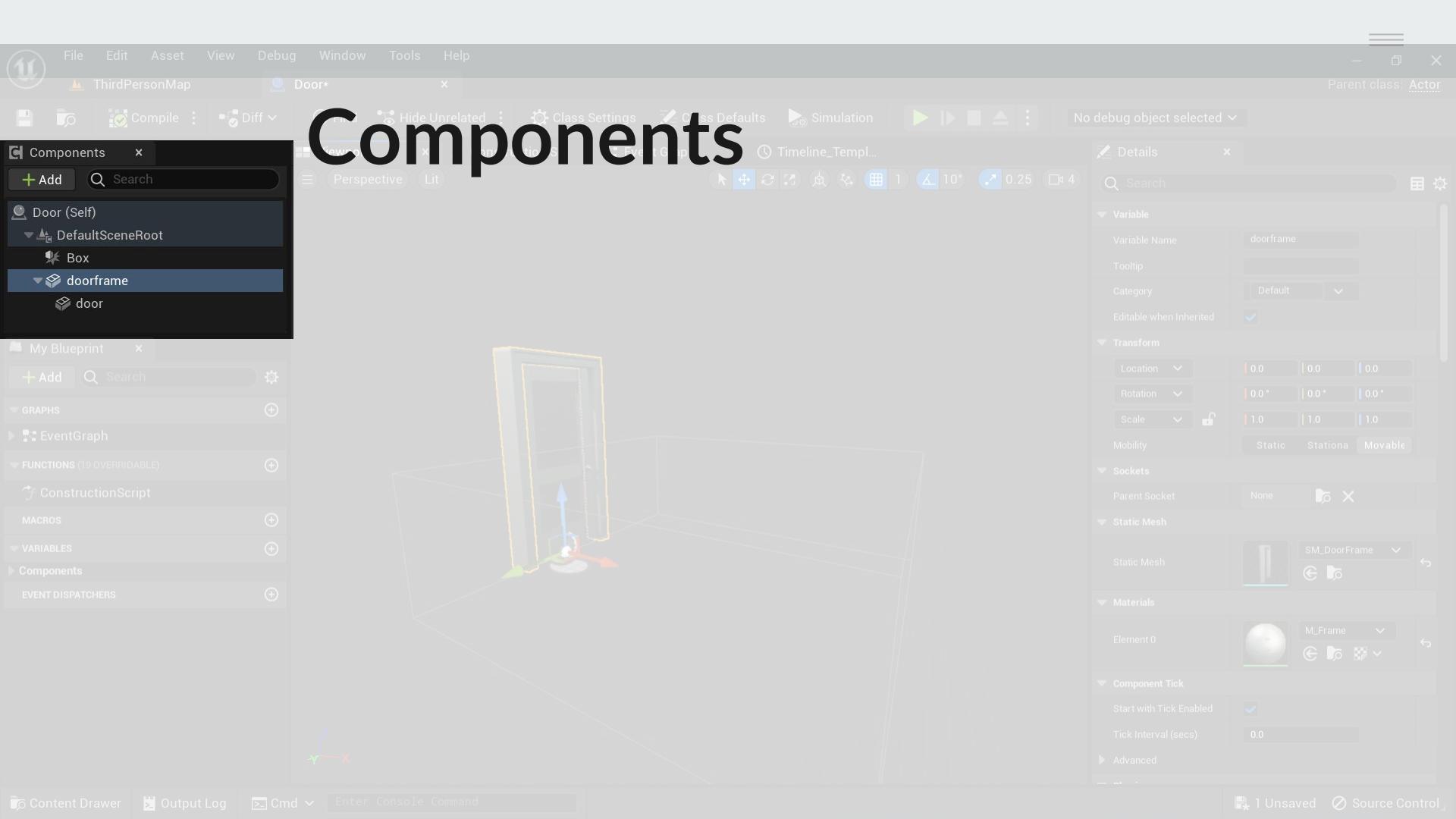
3

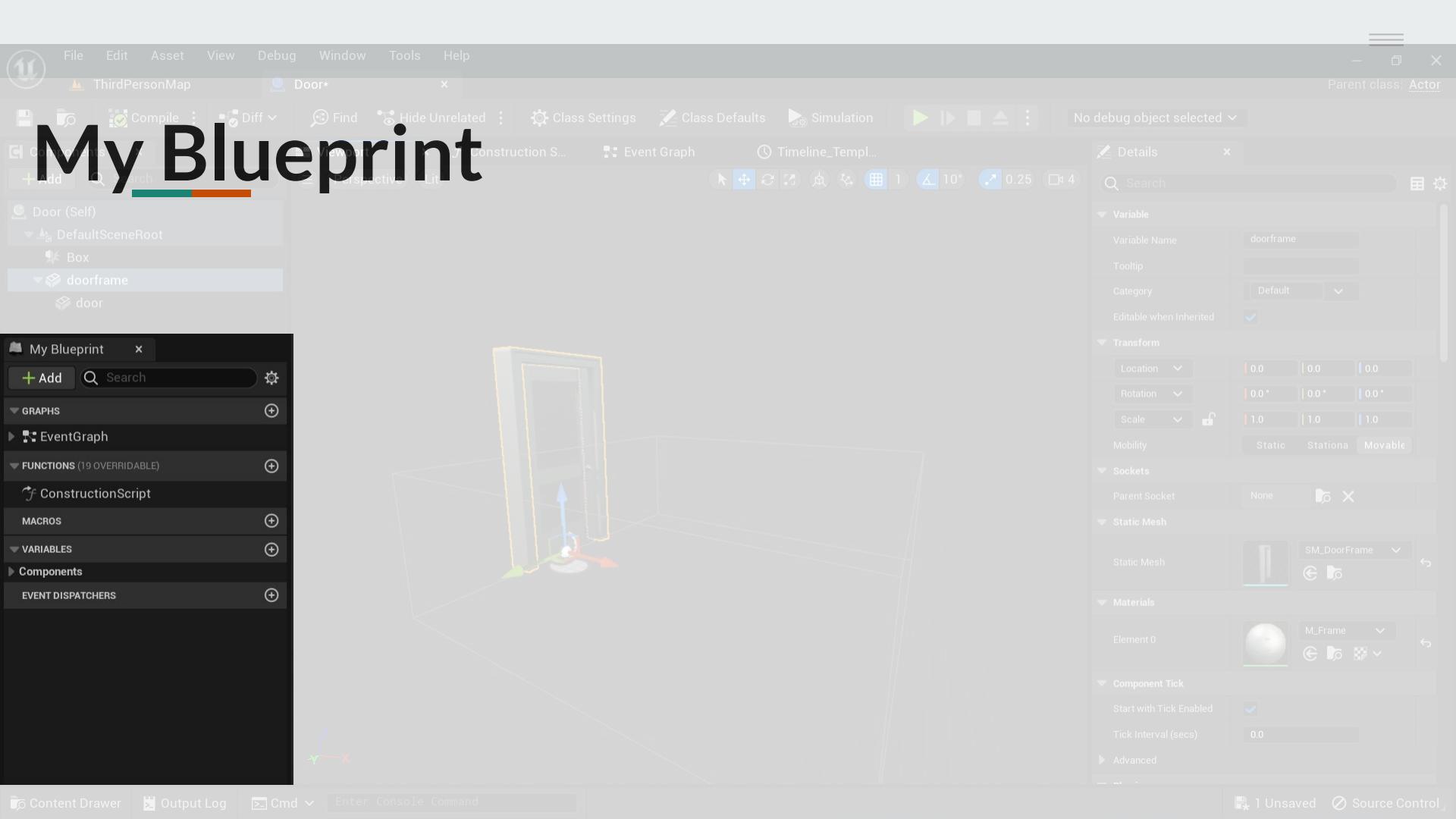
Actors support 3D transformations such as translation, rotation, and scaling.

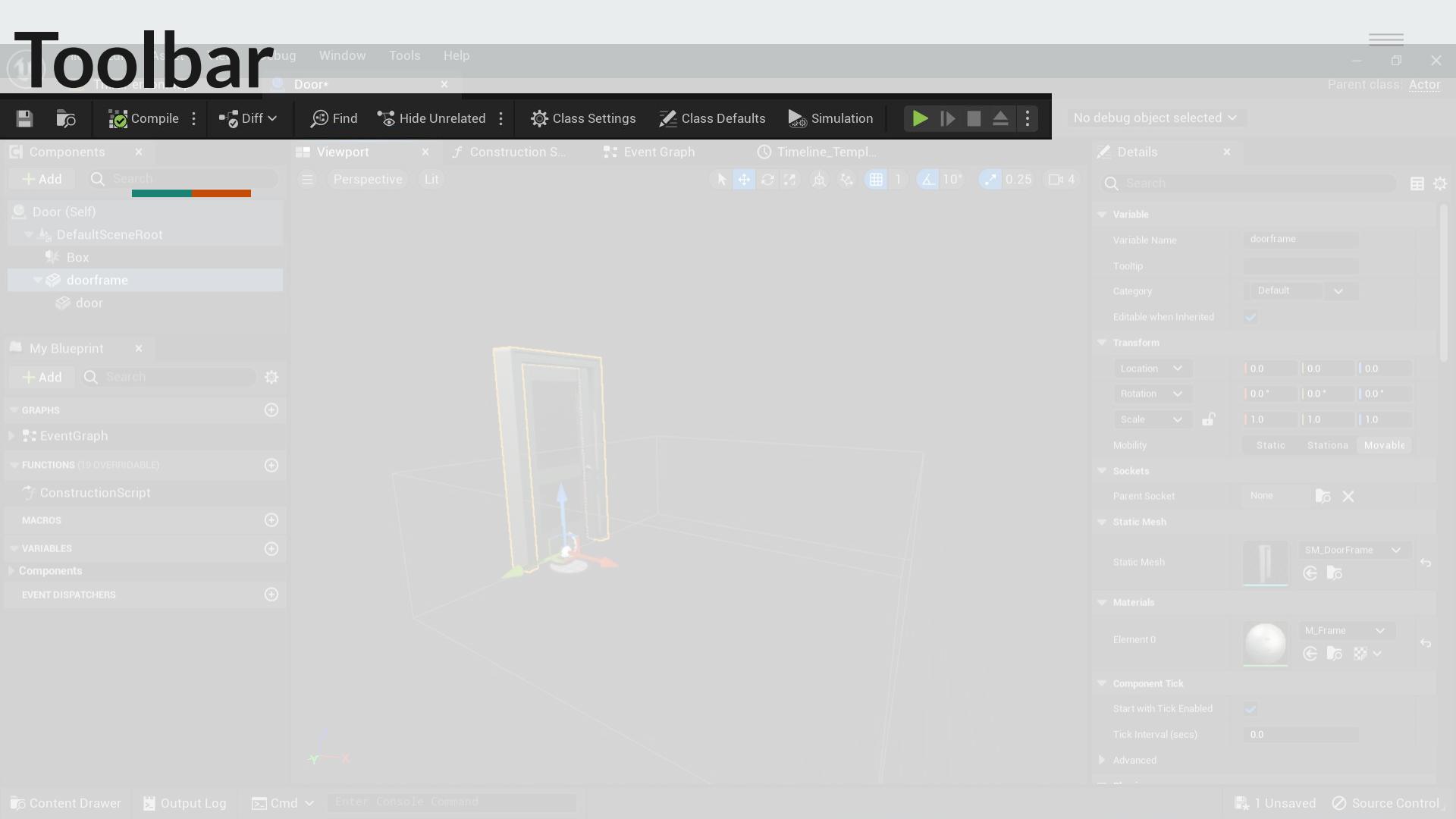
4

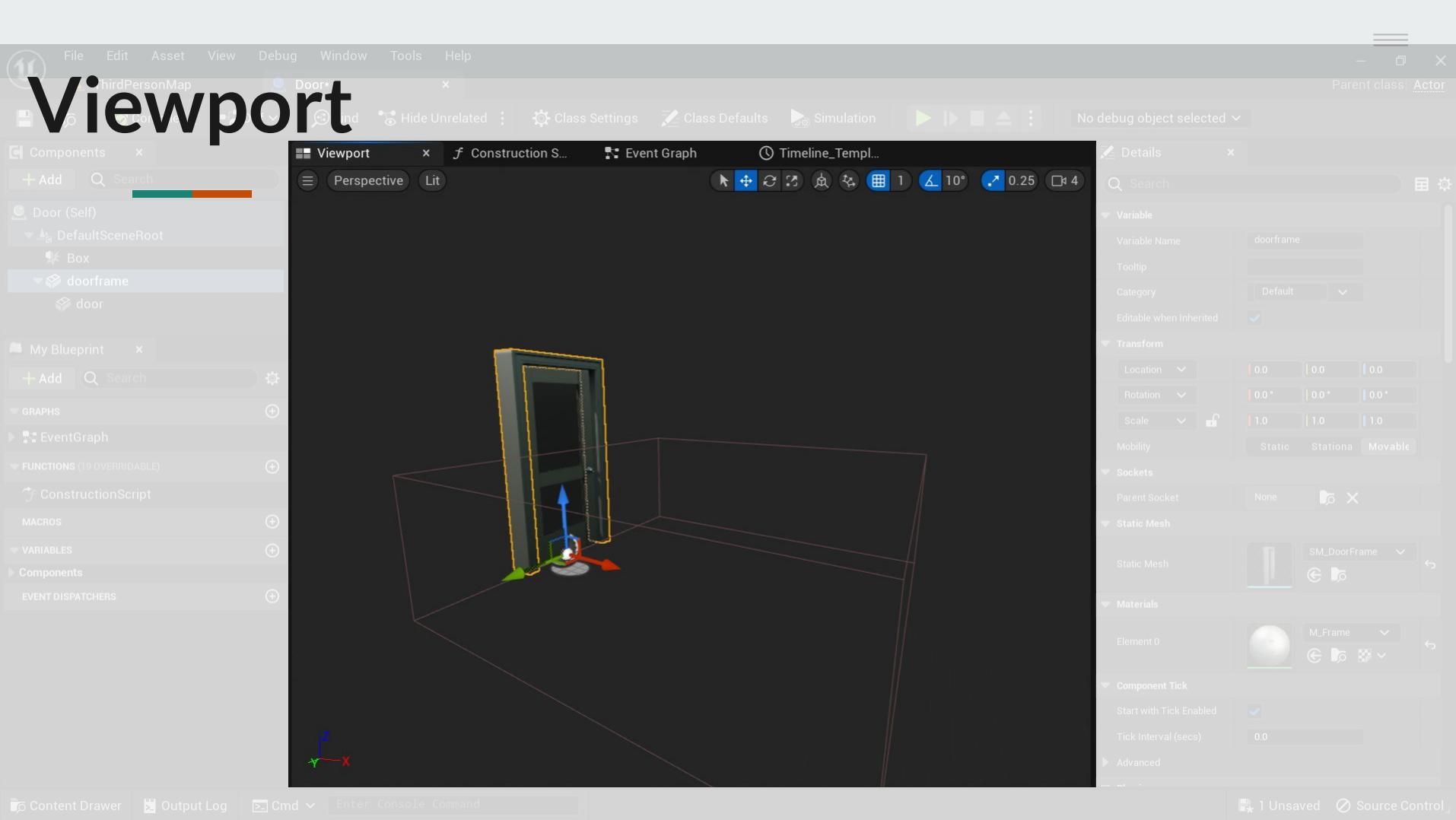
They can be created (spawned) and destroyed through gameplay code.

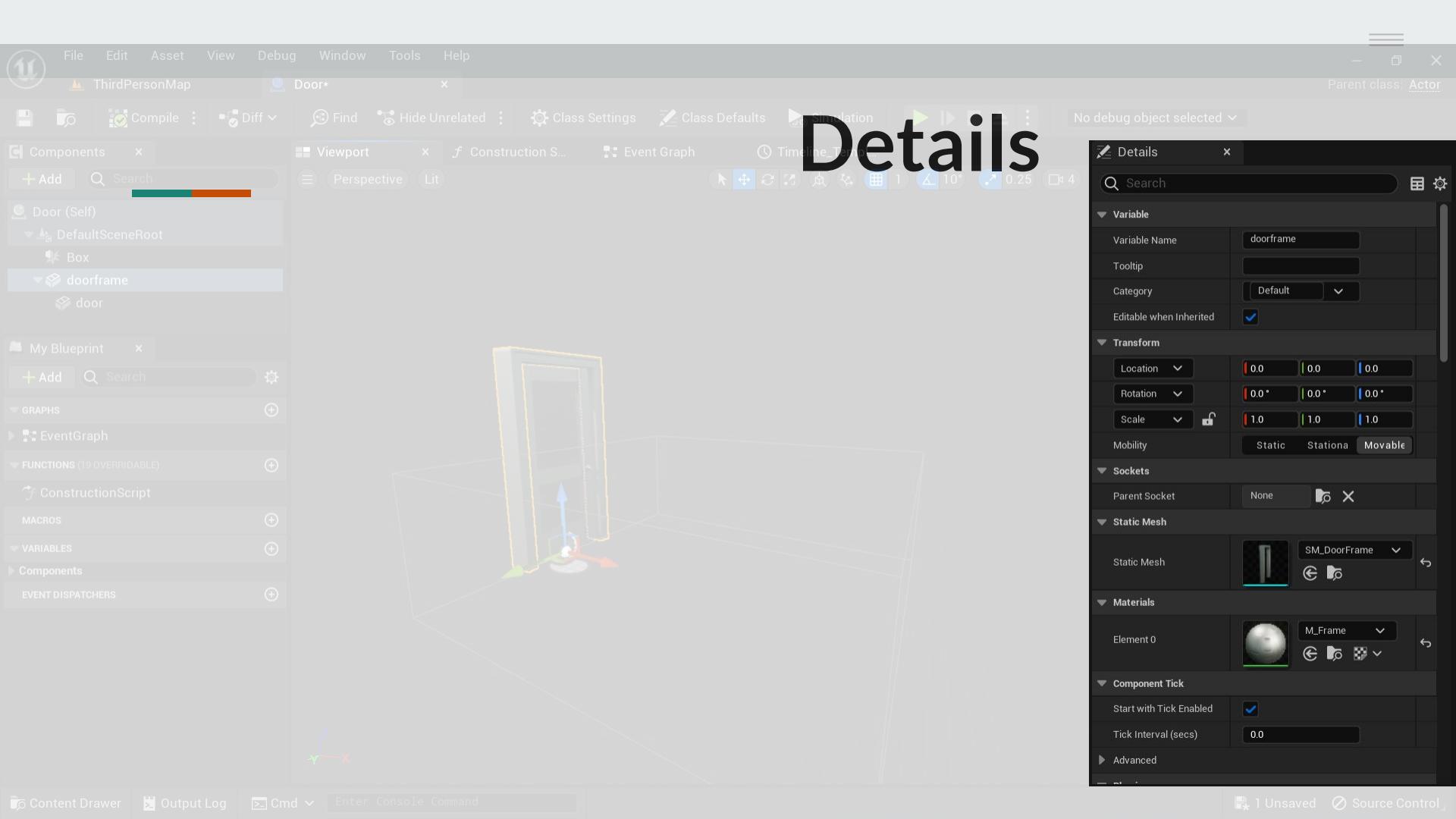














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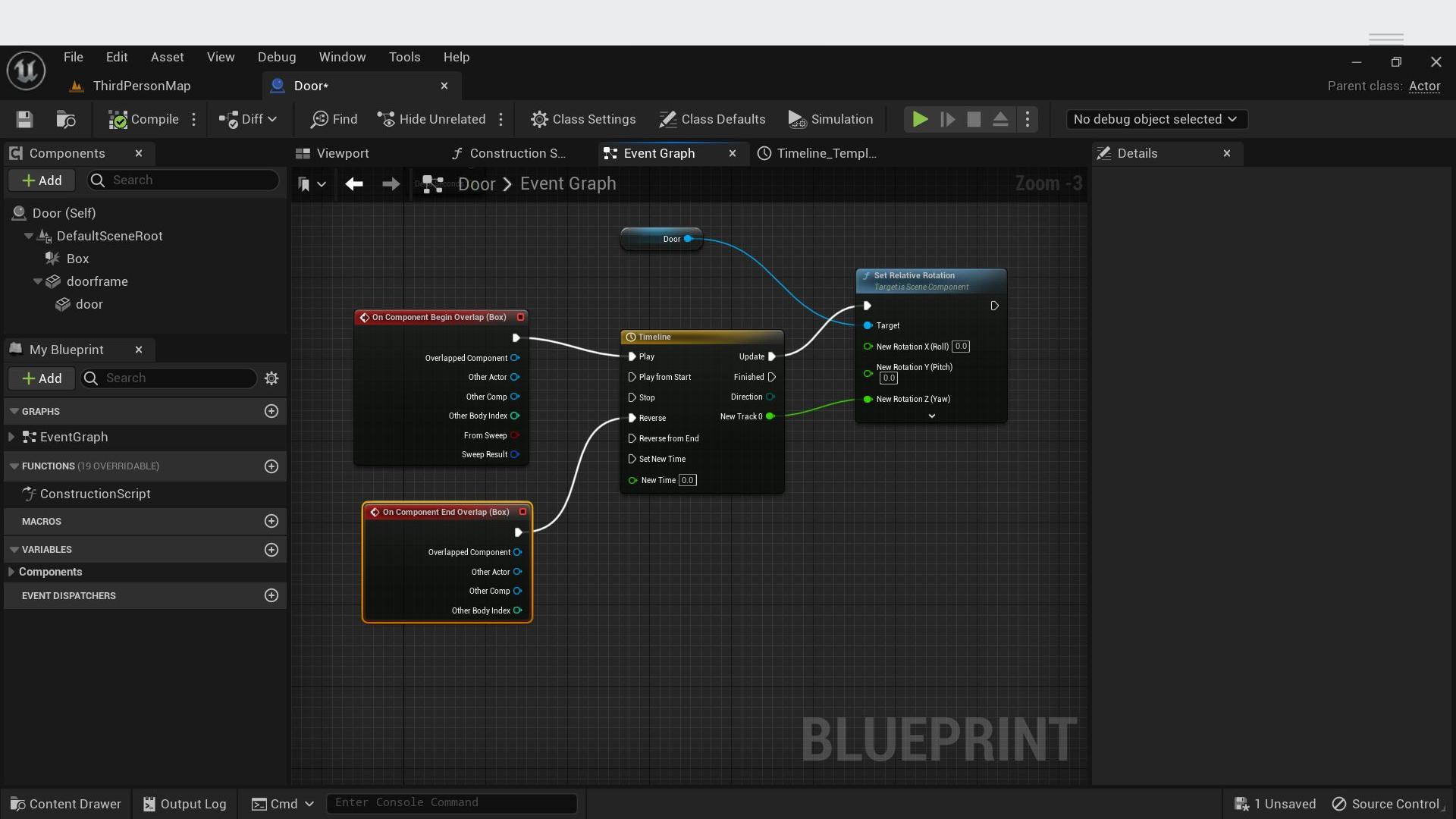
# Unreal Engine 5

## Interactivity



# What is Blueprint?

- 1 Visual scripting language in Unreal Engine 5.
- 2 Node-based interface to create gameplay elements from within Unreal Editor.
- 3 Use blueprint to program events and interactivity.
- 4 Easy to learn for people without a coding background.



# Event Graph

Components x

+ Add Search

Door (Self)  
DefaultSceneRoot  
Box  
doorframe  
door

My Blueprint x

+ Add Search

GRAPHs

EventGraph

FUNCTIONS (19 OVERRIDABLE)

ConstructionScript

MACROS

VARIABLES

Components

EVENT DISPATCHERS

Viewport Construction S... Event Graph Timeline\_Templ...

Class Settings Class Defaults Simulation

No debug object selected

Details

Door > Event Graph

Zoom -3

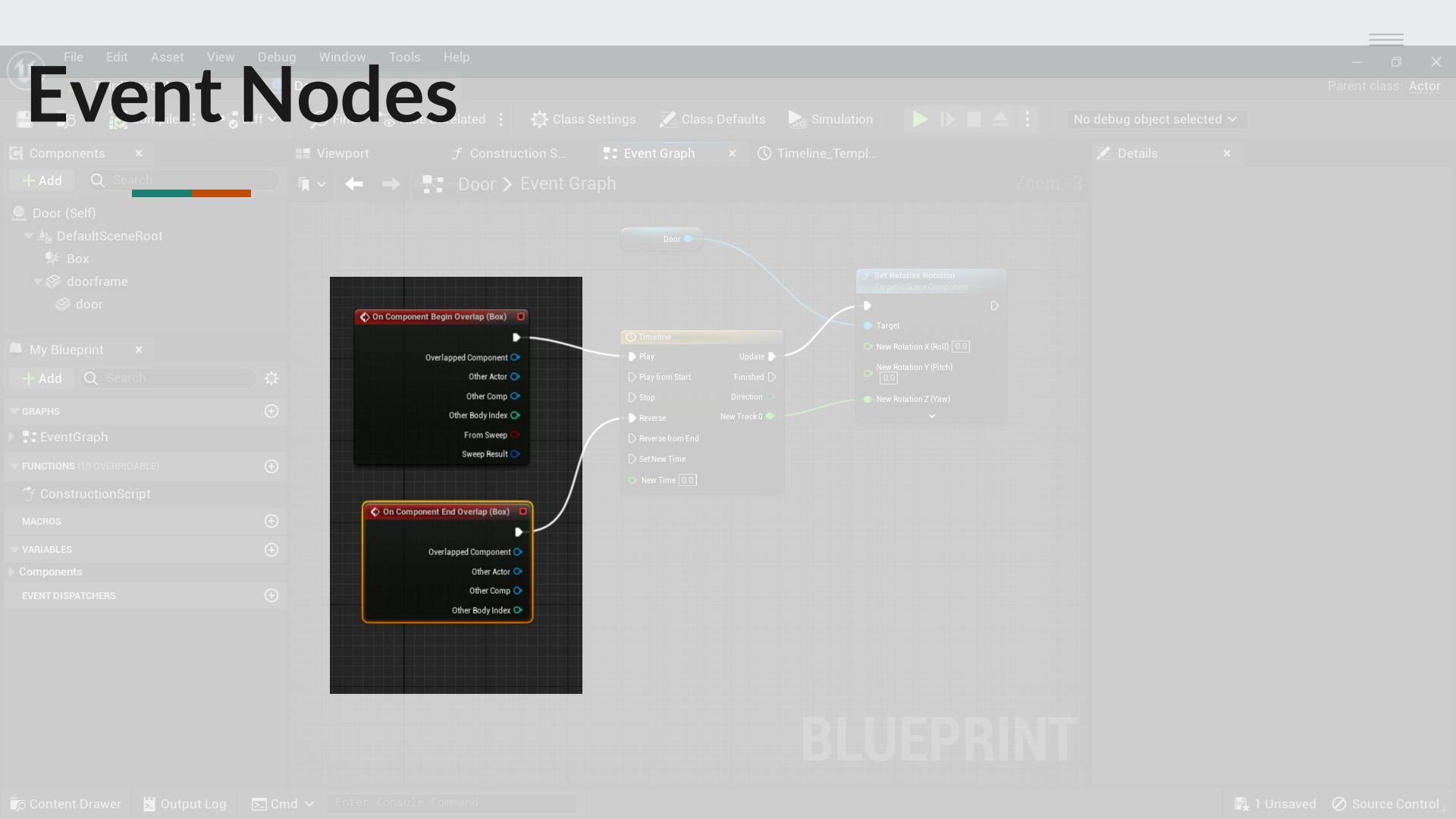
The screenshot shows the Unreal Engine's Event Graph editor. At the top, there are tabs for Viewport, Construction S..., Event Graph (which is active), and Timeline\_Templ.... Below the tabs, the title bar says "Door > Event Graph". The main workspace contains several nodes connected by lines:

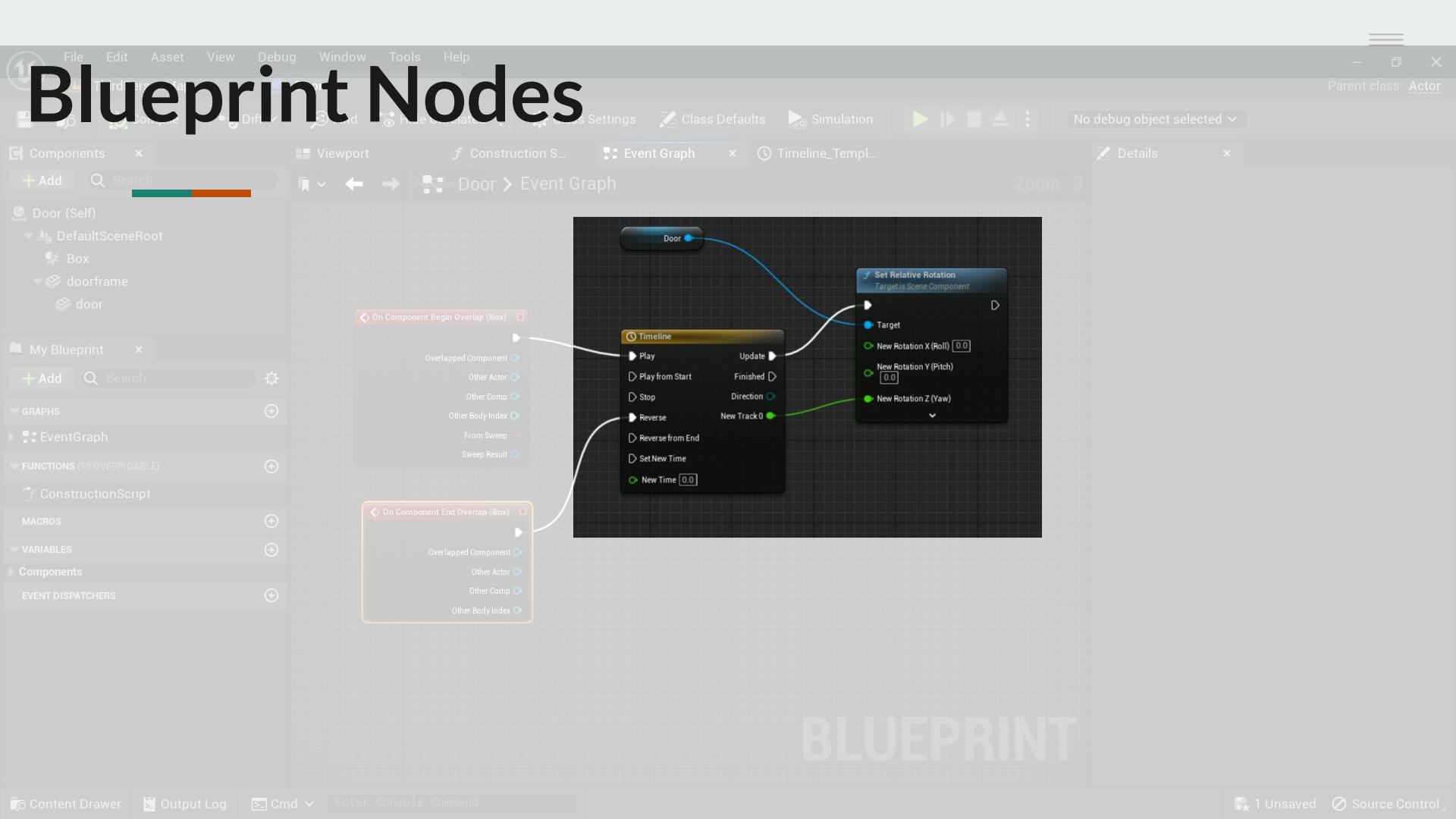
- A "Door" node at the top has a blue line connecting to a "Timeline" node.
- The "Timeline" node has a yellow border and several options:
  - Play
  - Update
  - Play from Start
  - Finished
  - Stop
  - Direction
  - Reverse
  - Reverse from End
  - Set New Time
  - New Time 0.0
- A "Set Relative Rotation" node is connected to the "Timeline" node. It has a "Target" input and three rotation parameters: New Rotation X (Roll) [0.0], New Rotation Y (Pitch) [0.0], and New Rotation Z (Yaw) [0.0].
- Two "On Component Begin Overlap (Box)" nodes are connected to the "Timeline" node. They have inputs: Overlapped Component, Other Actor, Other Comp, Other Body Index, From Sweep, and Sweep Result.
- An "On Component End Overlap (Box)" node is also connected to the "Timeline" node, with similar input parameters.

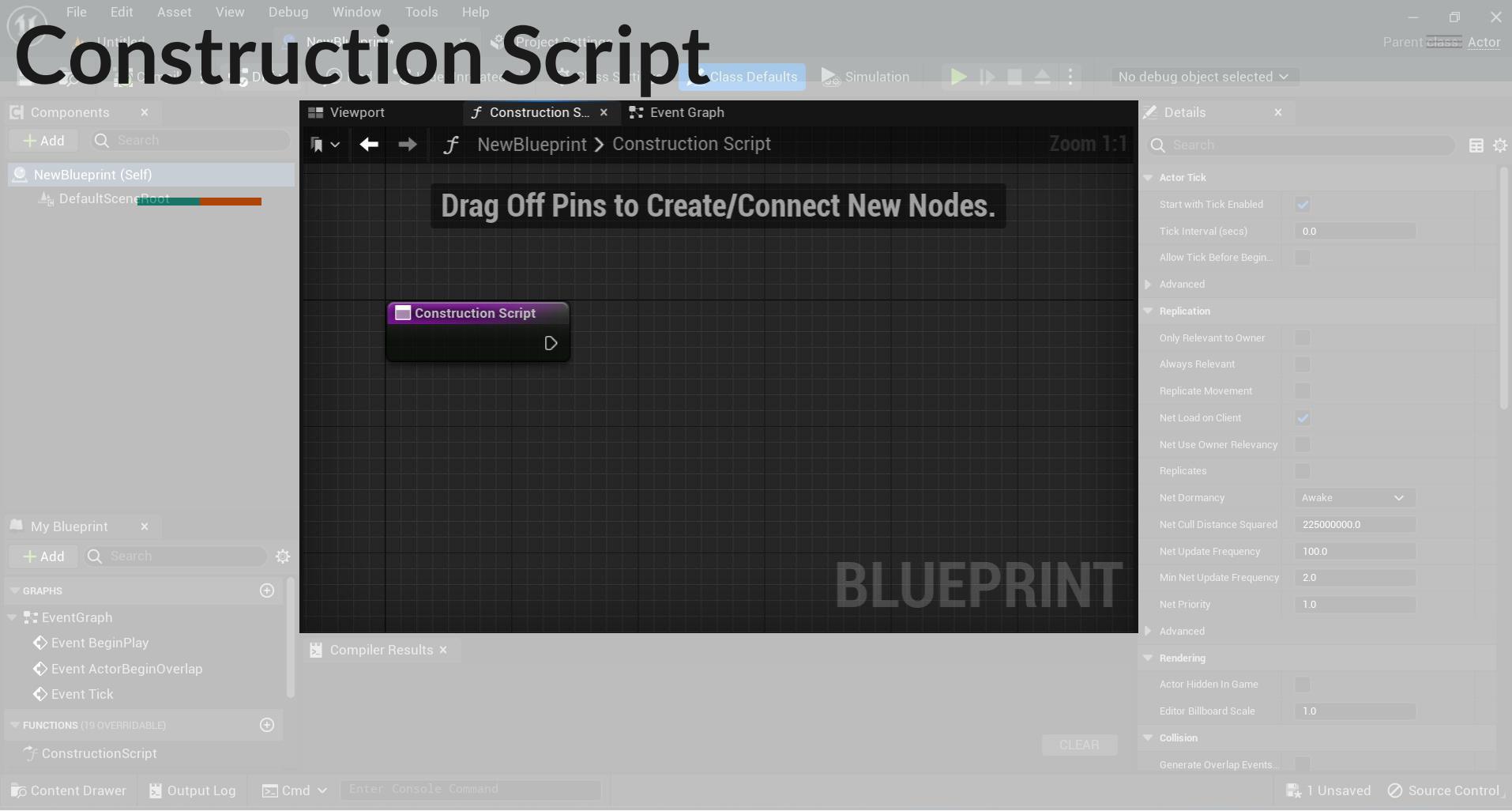
At the bottom right of the workspace, the word "BLUEPRINT" is written in large, bold, white letters.

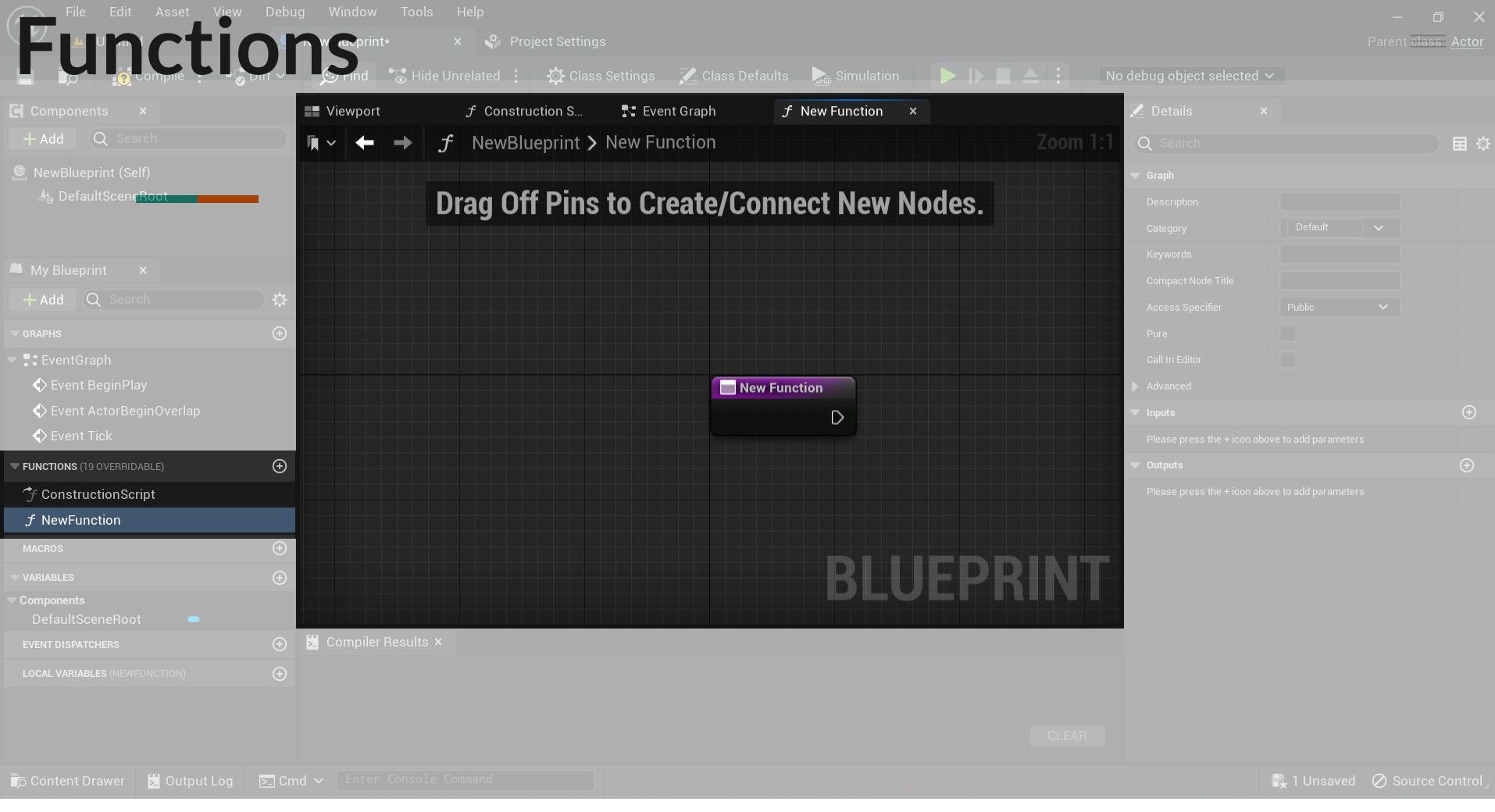
Content Drawer Output Log Cmd Enter Console Command

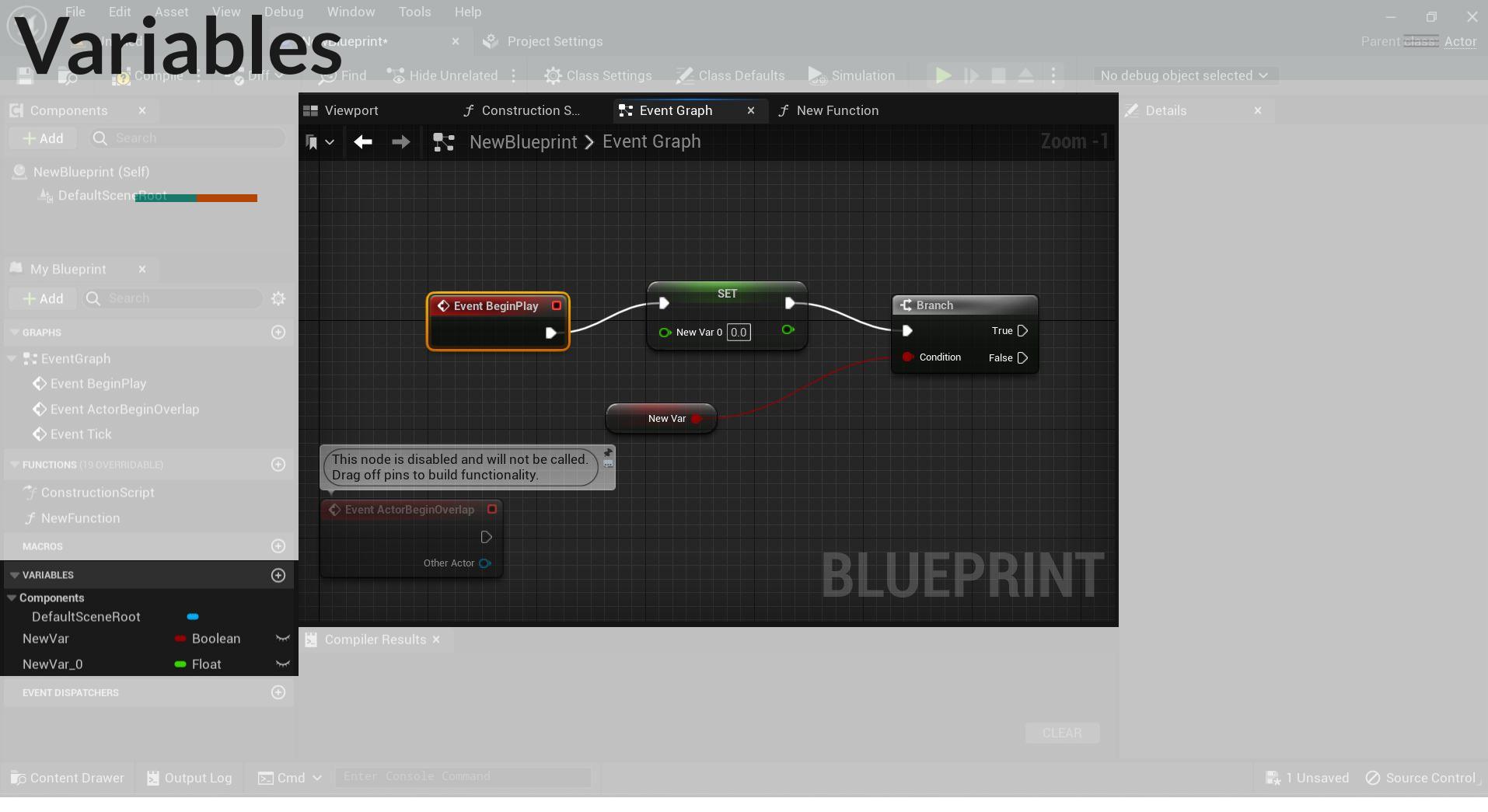
1 Unsaved Source Control













# Unreal Engine 5

Introduction Workshop.

[rian.stephens@rca.ac.uk](mailto:rian.stephens@rca.ac.uk)

Consultations on Moodle - Rian Stephens

