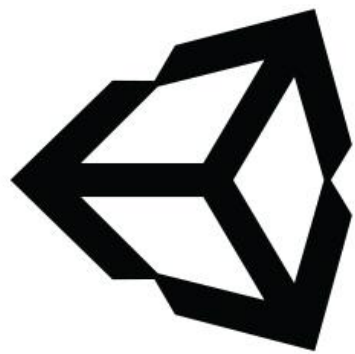




Введение в геймдев

понятие коллайдеров и коллизий

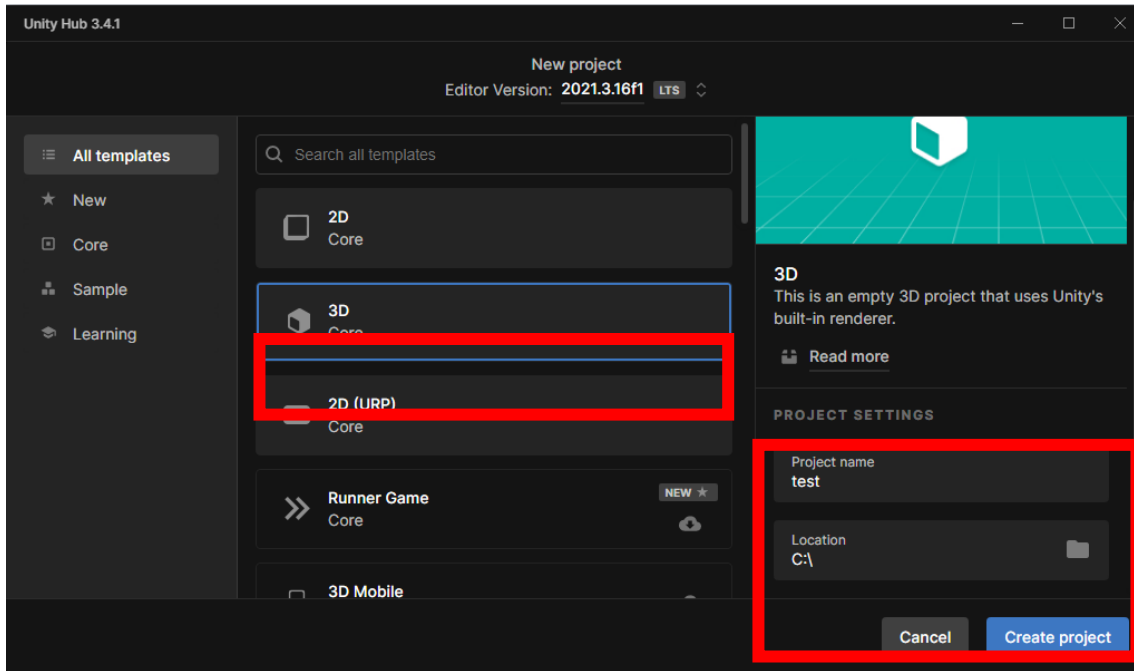




unity

ТЕОРИЯ





Hierarchy # Scene # Game

KK [Icons]

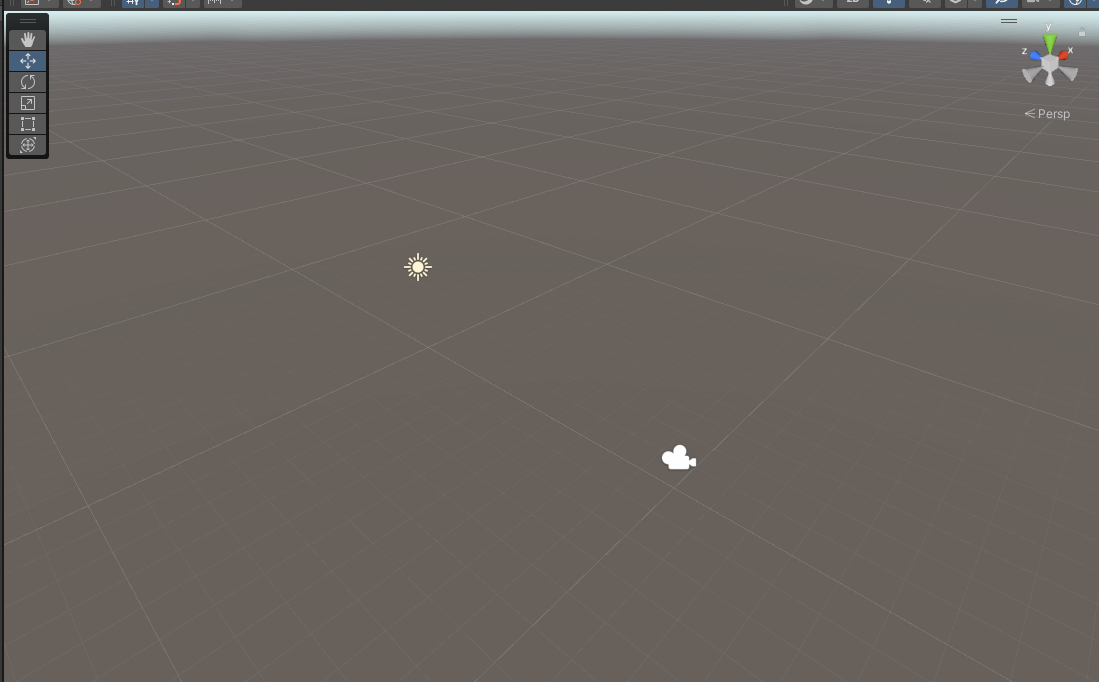
New Scene
Main Camera
Directional Light

[Hand] [Move] [Rotate] [Scale] [Reset] [Zoom]

2D [Light] [Grid] [Grid Size] [Grid Color] [Grid Opacity] [Grid Style]

[Grid] [Grid Size] [Grid Color] [Grid Opacity] [Grid Style]

[X] [Y] [Z] [Persp]



Inspector

[Search] [Layers] [Layout]

Project Console

Assets

Scenes

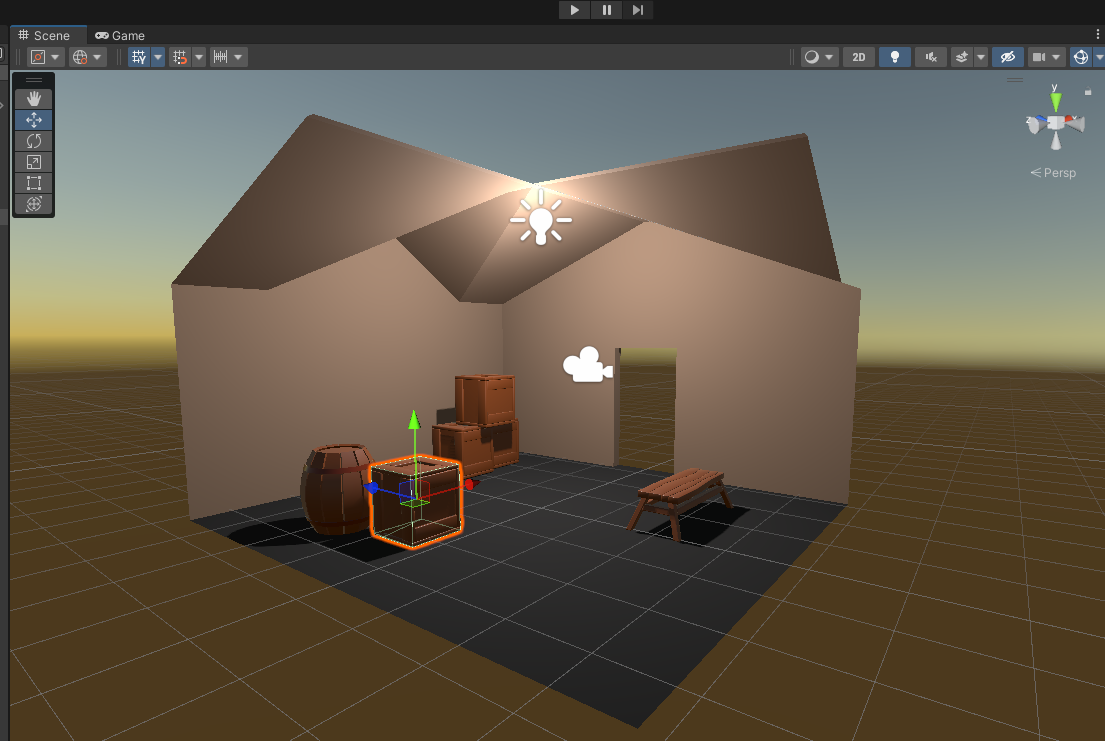
Favorites
All Materials
All Models
All Prefabs

Assets
Scenes
Packages
Code Coverage
Custom NUnit
Editor Coroutines
JetBrains Rider Editor

[Search] [Icons]

Hierarchy

- SampleScene
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3) Static

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X	-1.91	Y	0.47	Z	0.65
Rotation	X	-89.98	Y	0	Z	0
Scale	X	100	Y	100	Z	100

BOX (Mesh Filter)

Mesh Renderer

Materials 1

Lighting

- Cast Shadows On
- Receive Shadows
- Contribute Global Illumination
- Receive Global Illumination Light Probes

Probes

- Light Probes Blend Probes
- Reflection Probes Blend Probes
- Anchor Override None (Transform)

Additional Settings

- Motion Vectors Per Object Motion
- Dynamic Occlusion

Rigidbody

- Mass 1
- Drag 0
- Angular Drag 0.05
- Use Gravity
- Is Kinematic
- Interpolate None
- Collision Detection Discrete

Constraints

Info

Mesh Collider

- Convex
- Is Trigger
- Cooking Options Everything
- Material None (Physics Material)
- Mesh BOX

Material: Материал.007 (Material)

Shader Standard

Add Component

Project

- Favorites
 - All Materials
 - All Models
 - All Prefabs
- Assets
 - MODELS
 - ModularFir...
 - Scenes

Assets

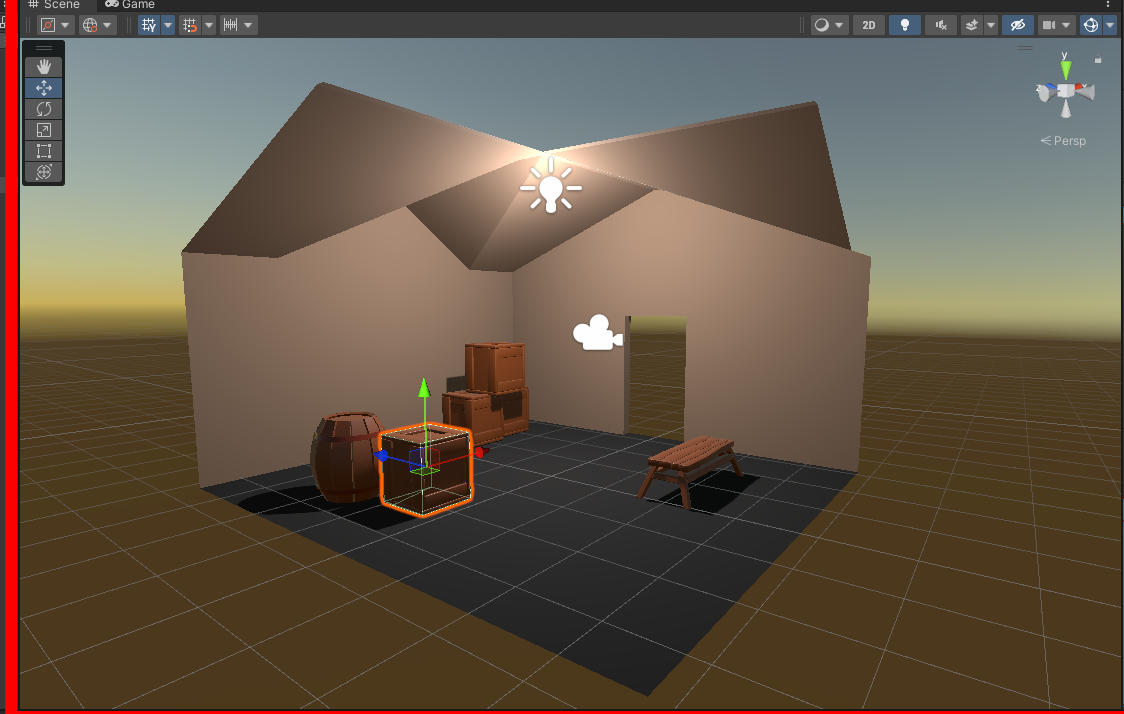
MODELS ModularFir... Scenes

Assets

- MODELS
- ModularFirstPersonContr
 - DemoScene
 - FirstPersonController
 - Scenes
- Packages

Hierarchy

- SampleScene
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3) Static

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X	-1.91	Y	0.47	Z	0.65
Rotation	X	-89.98	Y	0	Z	0
Scale	X	100	Y	100	Z	100

BOX (Mesh Filter)

Mesh Renderer

Materials 1

Lighting

Cast Shadows On

Receive Shadows

Contribute Global Illumination

Receive Global Illumination Light Probes

Probes

Light Probes Blend Probes

Reflection Probes Blend Probes

Anchor Override None (Transform)

Additional Settings

Motion Vectors Per Object Motion

Dynamic Occlusion

Rigidbody

Mass 1

Drag 0

Angular Drag 0.05

Use Gravity

Is Kinematic

Interpolate None

Collision Detection Discrete

Constraints

Info

Mesh Collider

Convex

Is Trigger

Cooking Options Everything

Material None (Physics Material)

Mesh BOX

Material Matériau.007 (Material)

Shader Standard

Add Component

Project Console

Assets

Assets

- MODELS
- ModularFir...
- Scenes

Assets

- Assets
 - MODELS
 - ModularFirstPersonContr
 - DemoScene
 - FirstPersonController
 - Scenes
 - Packages

- Hierarchy
- SampleScene*
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



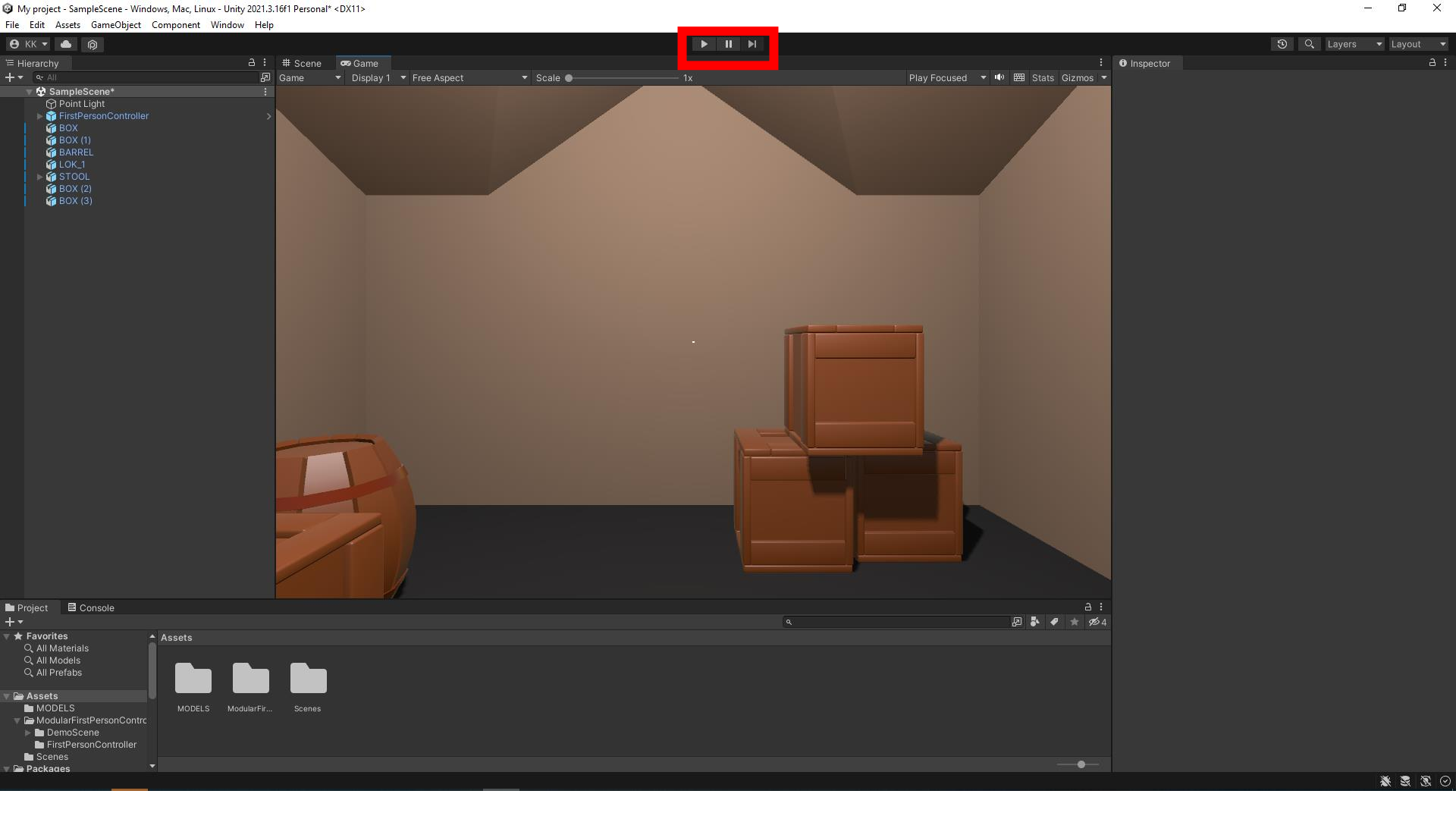
Inspector

[Icons]

Project Console

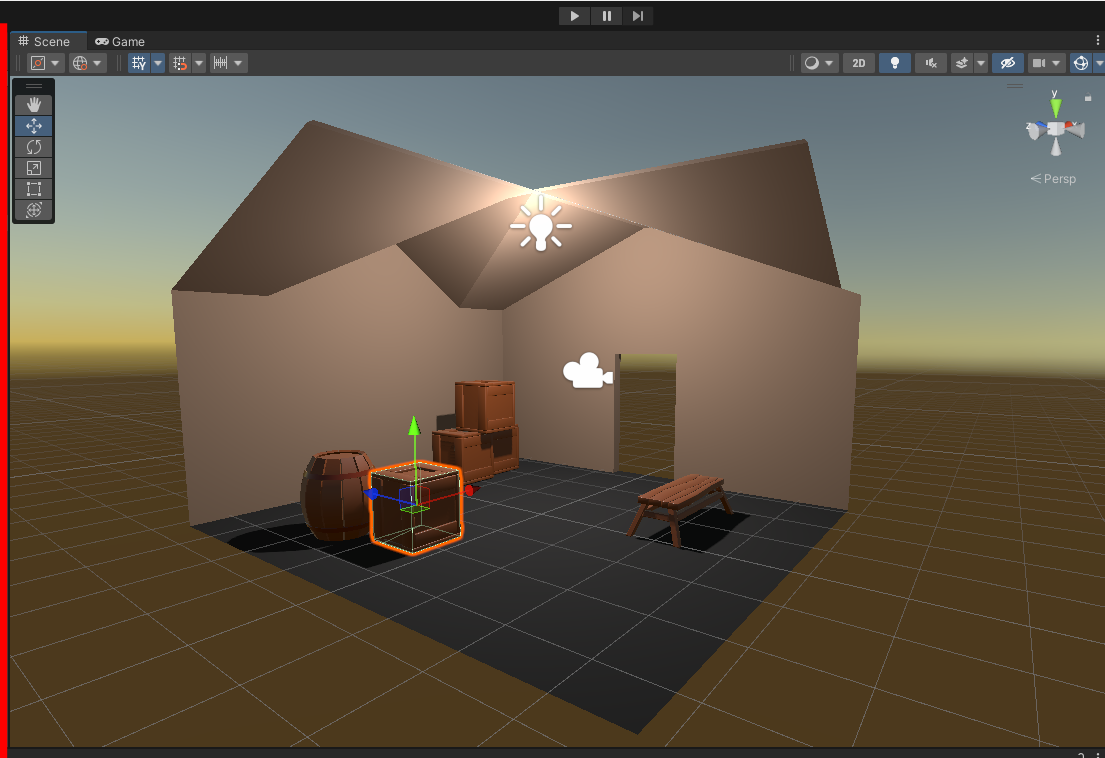
Assets

- Assets
 - MODELS
 - ModularFir...
 - Scenes
- Assets
 - MODULARFirstPersonContrc
 - DemoScene
 - FirstPersonController
 - Scenes
- Packages



Hierarchy

- SampleScene
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3) Static

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X	-1.91	Y	0.47	Z	0.65
Rotation	X	-89.98	Y	0	Z	0
Scale	X	100	Y	100	Z	100

BOX (Mesh Filter)

Mesh Renderer

Materials 1

Lighting

Cast Shadows On

Receive Shadows

Contribute Global Illumination

Receive Global Illumination Light Probes

Probes

Light Probes Blend Probes

Reflection Probes Blend Probes

Anchor Override None (Transform)

Additional Settings

Motion Vectors Per Object Motion

Dynamic Occlusion

Rigidbody

Mass 1

Drag 0

Angular Drag 0.05

Use Gravity

Is Kinematic

Interpolate None

Collision Detection Discrete

Constraints

Info

Mesh Collider

Convex

Is Trigger

Cooking Options Everything

Material None (Physics Material)

Mesh BOX

Material Matériau.007 (Material)

Shader Standard

Add Component

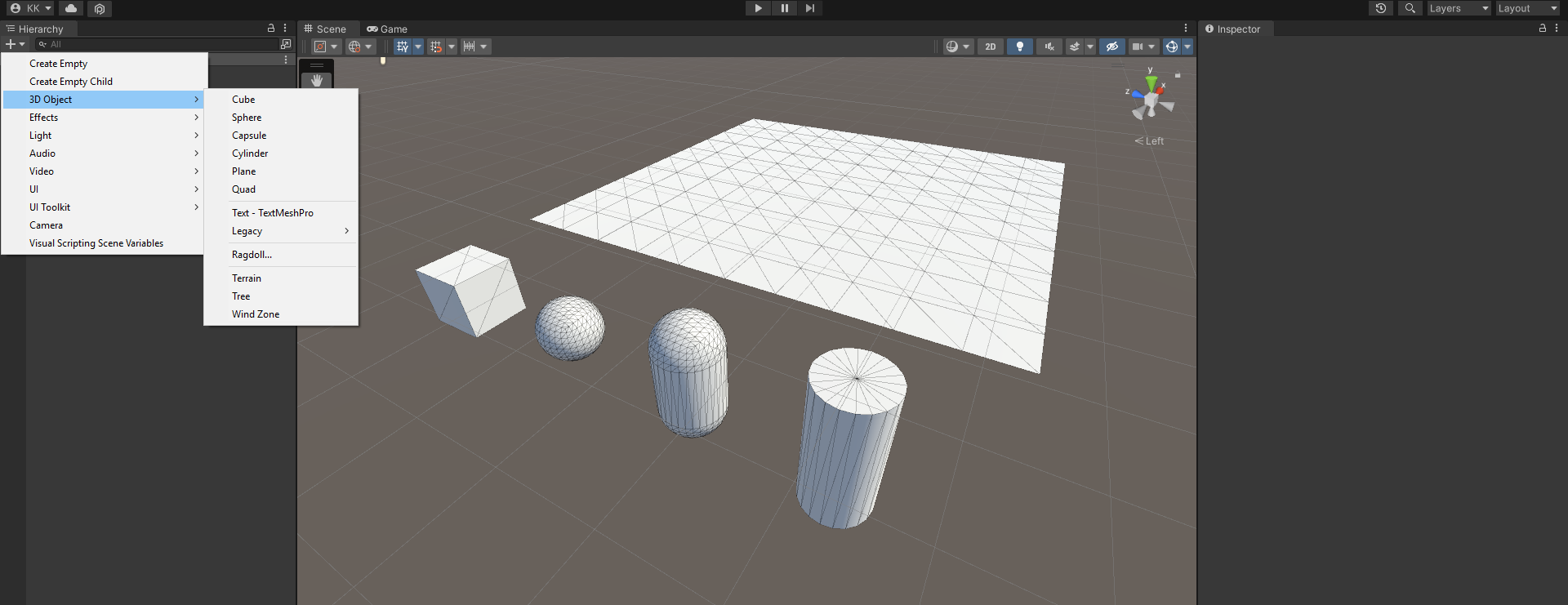
Project Console

Assets

MODELS ModularFir... Scenes

Assets

- MODELS
- ModularFirstPersonContr
 - DemoScene
 - FirstPersonController
 - Scenes
- Packages



- Create Empty
- Create Empty Child
- 3D Object
- Effects
- Light
- Audio
- Video
- UI
- UI Toolkit
- Camera
- Visual Scripting Scene Variables

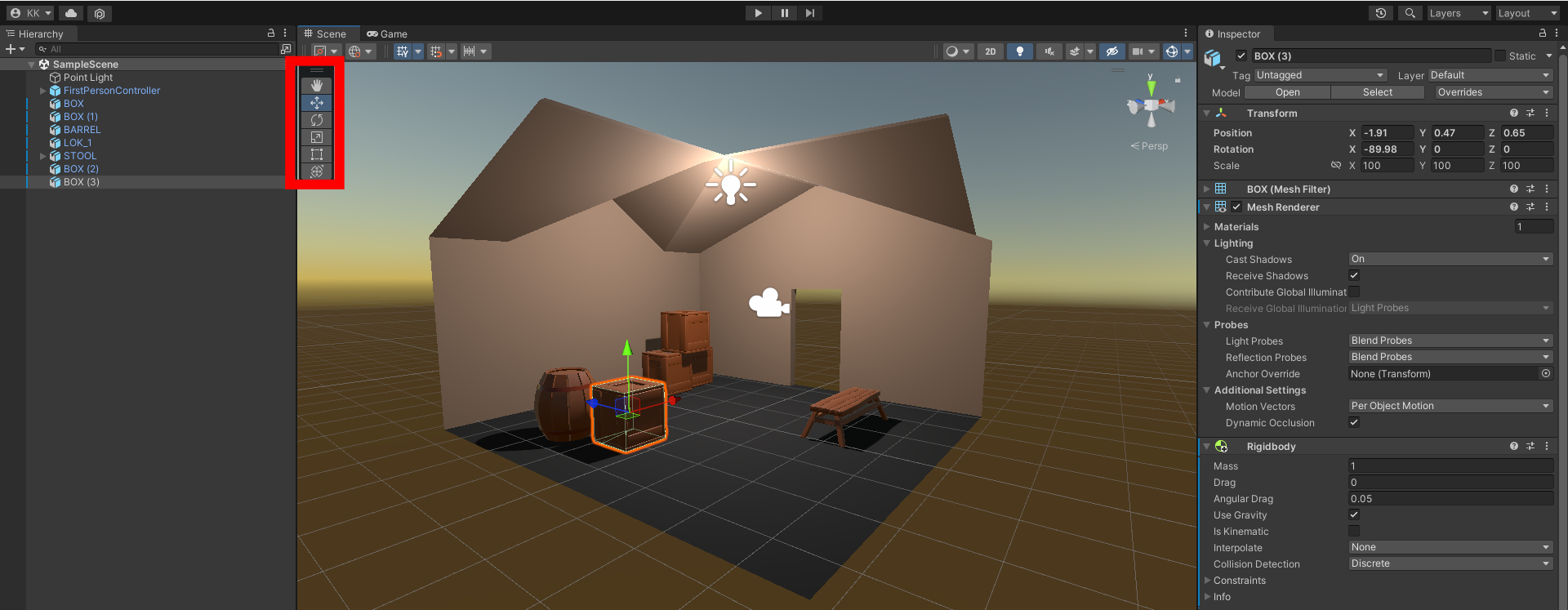
- Cube
- Sphere
- Capsule
- Cylinder
- Plane
- Quad
- Text - TextMeshPro
- Legacy
- Ragdoll...
- Terrain
- Tree
- Wind Zone

Project Console

Assets

- Assets
 - MODELS
 - ModularFirstPersonContrc
 - DemoScene
 - FirstPersonController
 - Scenes
 - Packages

MODELS ModularFir... Scenes



Hierarchy

- SampleScene
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)

Inspector

BOX (3) Static

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X	-1.91	Y	0.47	Z	0.65
Rotation	X	-89.98	Y	0	Z	0
Scale	X	100	Y	100	Z	100

BOX (Mesh Filter)

Mesh Renderer

Materials

1

Lighting

- Cast Shadows On
- Receive Shadows
- Contribute Global Illumination
- Receive Global Illumination Light Probes

Probes

- Light Probes Blend Probes
- Reflection Probes Blend Probes
- Anchor Override None (Transform)

Additional Settings

- Motion Vectors Per Object Motion
- Dynamic Occlusion

Rigidbody

- Mass 1
- Drag 0
- Angular Drag 0.05
- Use Gravity
- Is Kinematic
- Interpolate None
- Collision Detection Discrete

Constraints

Info

Mesh Collider

- Convex
- Is Trigger
- Cooking Options Everything
- Material None (Physics Material)
- Mesh BOX

Material: Материал.007 (Material)

Shader Standard

Add Component

Project Console

Assets

- Assets
 - MODELS
 - ModularFir...
 - Scenes

Assets

- Assets
 - MODELS
 - ModularFir...
 - Scenes

The screenshot displays the Unity 2021.3.16f1 Personal* interface. The central 3D view shows a scene with a wooden barrel and a brown cube on a dark tiled floor. A red box highlights the interaction toolbar in the top-left corner, with a callout box showing a magnified view of the move tool icon (a blue square with four white arrows). The Hierarchy panel on the left lists the scene's objects: SampleScene*, Point Light, FirstPersonController, BOX, BOX (1), BARREL, LOK_1, STOOL, BOX (2), and BOX (3). The Inspector panel on the right shows the properties for the selected 'BOX (3)' object, including Transform, Mesh Renderer, Rigidbody, and Mesh Collider components. The Project panel at the bottom left shows the Assets folder structure, including Models, ModularFirstPersonContr, DemoScene, FirstPersonController, and Scenes. The Console panel is also visible at the bottom left.

Hierarchy Panel:

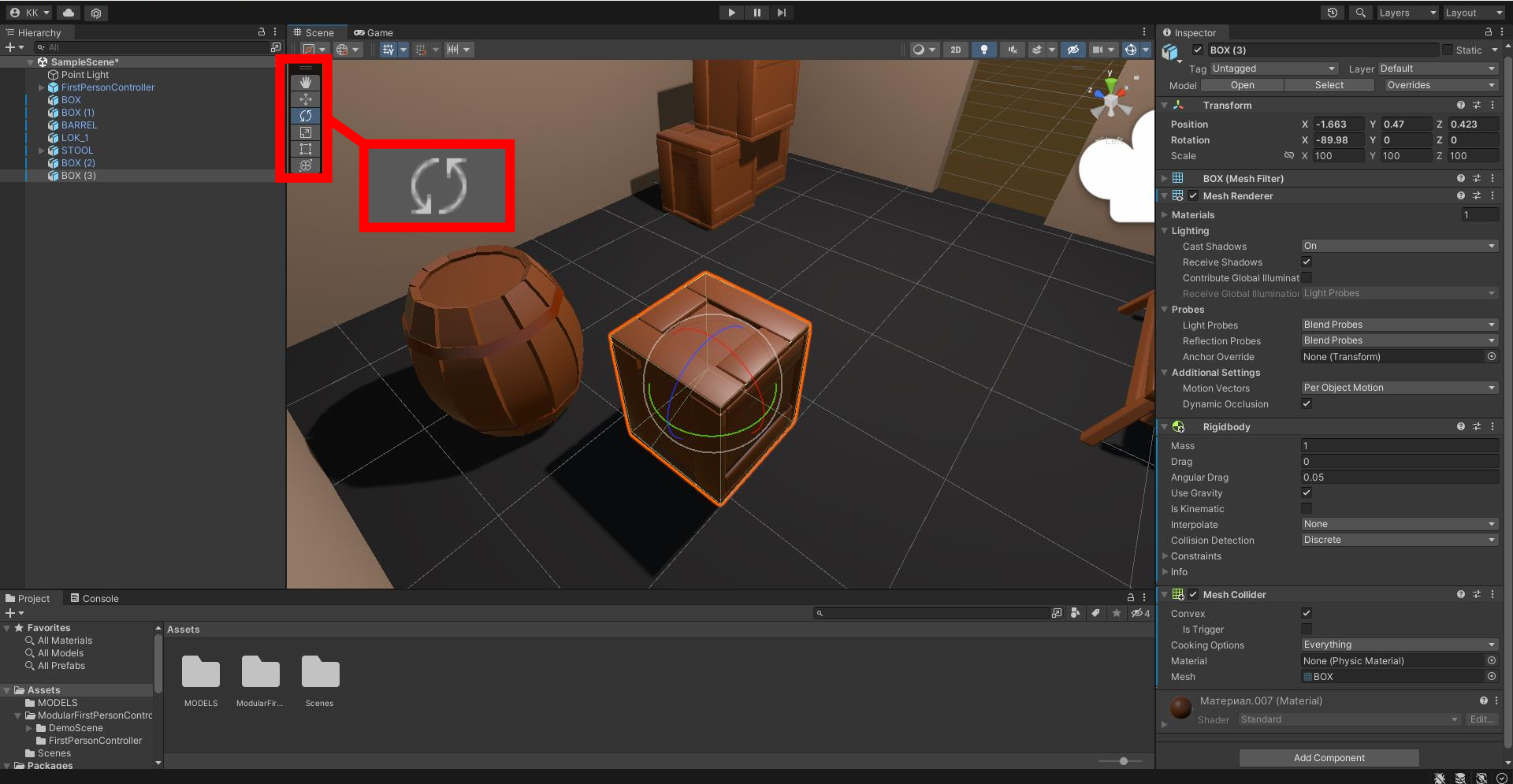
- SampleScene*
- Point Light
- FirstPersonController
- BOX
- BOX (1)
- BARREL
- LOK_1
- STOOL
- BOX (2)
- BOX (3)

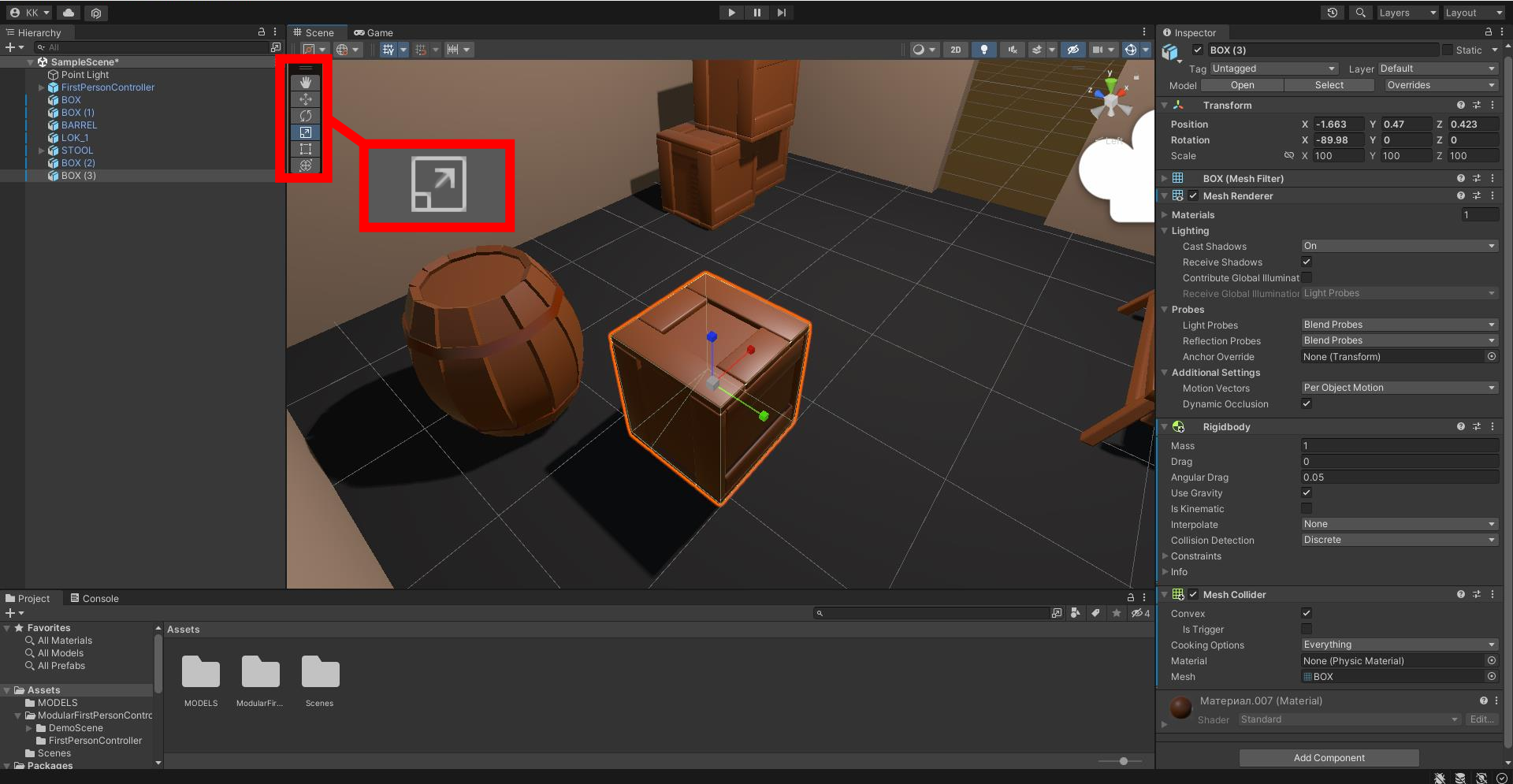
Inspector Panel (BOX (3)):

- Tag: Untagged
- Layer: Default
- Model: Open
- Select: Select
- Overrides: Overrides
- Transform: Position (X: -1.663, Y: 0.47, Z: 0.423), Rotation (X: -89.98, Y: 0, Z: 0), Scale (X: 100, Y: 100, Z: 100)
- BOX (Mesh Filter)
- Mesh Renderer
- Materials: 1
- Lighting: Cast Shadows (On), Receive Shadows (checked), Contribute Global Illuminat, Receive Global Illuminator (Light Probes)
- Probes: Light Probes (Blend Probes), Reflection Probes (Blend Probes), Anchor Override (None (Transform))
- Additional Settings: Motion Vectors (Per Object Motion), Dynamic Occlusion (checked)
- Rigidbody: Mass (1), Drag (0), Angular Drag (0.05), Use Gravity (checked), Is Kinematic, Interpolate (None), Collision Detection (Discrete)
- Constraints
- Info
- Mesh Collider: Convex (checked), Is Trigger, Cooking Options (Everything), Material (None (Physic Material)), Mesh (BOX)
- Material: Материал.007 (Material)
- Shader: Standard
- Add Component

Project Panel:

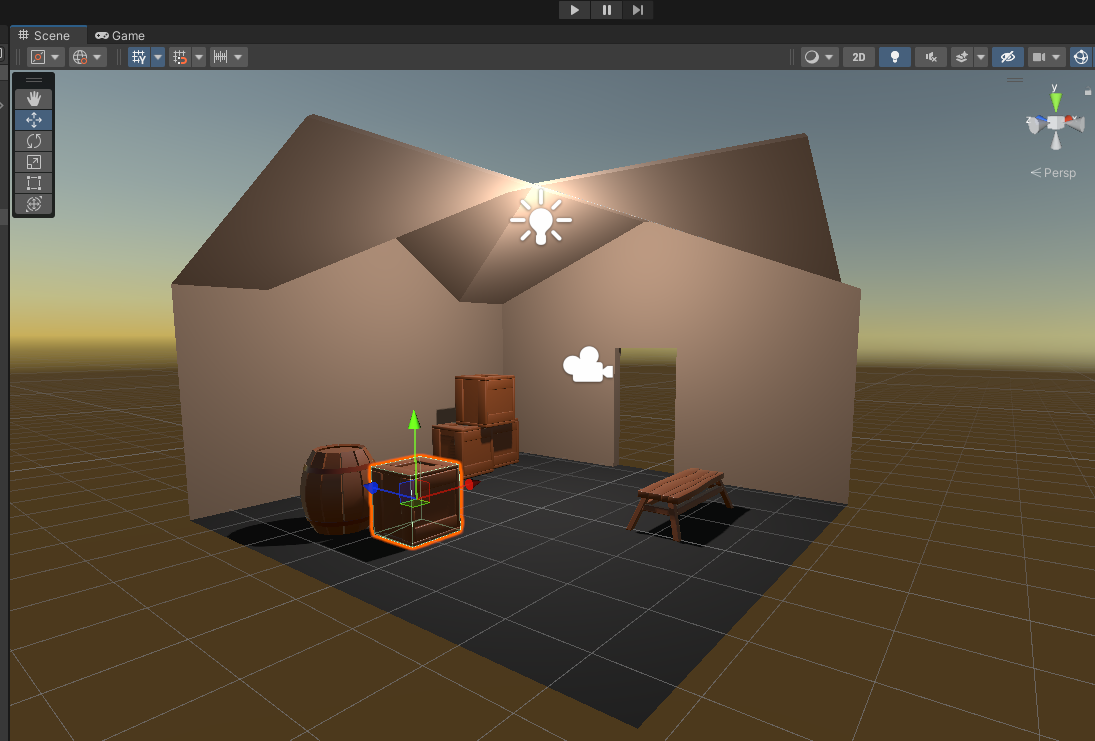
- Assets
- Models
- ModularFir...
- Scenes





Hierarchy

- SampleScene
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Project Console

Favorites

- All Materials
- All Models
- All Prefabs

Assets

- MODELS
- ModularFir...
- Scenes

Assets

- MODELS
- ModularFir...
- Scenes

Inspector

BOX (3) Static

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position X -1.91 Y 0.47 Z 0.65

Rotation X -89.98 Y 0 Z 0

Scale X 100 Y 100 Z 100

BOX (Mesh Filter)

Mesh Renderer

Materials 1

Lighting

Cast Shadows On

Receive Shadows

Contribute Global Illuminat

Receive Global Illuminator Light Probes

Probes

Light Probes Blend Probes

Reflection Probes Blend Probes

Anchor Override None (Transform)

Additional Settings

Motion Vectors Per Object Motion

Dynamic Occlusion

Rigidbody

Mass 1

Drag 0

Angular Drag 0.05

Use Gravity

Is Kinematic

Interpolate None

Collision Detection Discrete

Constraints

Info

Mesh Collider

Convex

Is Trigger

Cooking Options Everything

Material None (Physics Material)

Mesh BOX

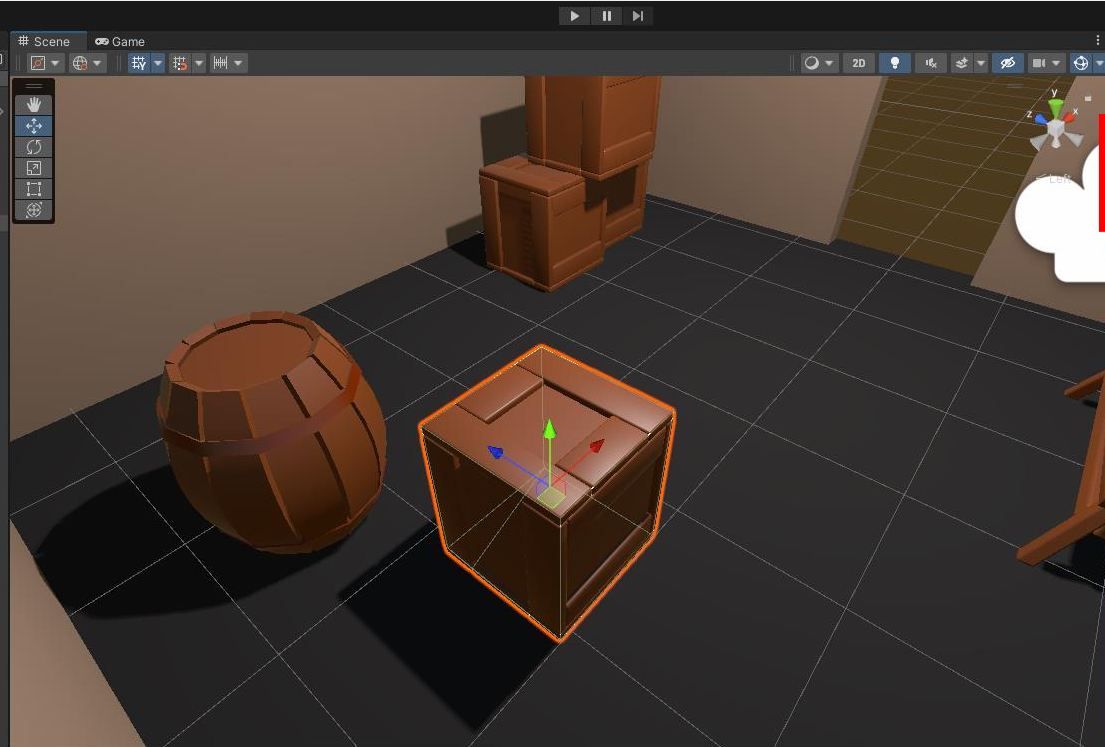
Material Mатериал.007 (Material)

Shader Standard

Add Component

Hierarchy

- SampleScene*
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3)

Tag Untagged Layer Default Static

Model Open Select Overrides

Transform

Position	X	-1.663	Y	0.47	Z	0.423
Rotation	X	-89.98	Y	0	Z	0
Scale	X	100	Y	100	Z	100

Mesh Renderer

Materials 1

Lighting

- Cast Shadows On
- Receive Shadows
- Contribute Global Illuminat
- Receive Global Illuminator Light Probes

Probes

- Light Probes Blend Probes
- Reflection Probes Blend Probes
- Anchor Override None (Transform)

Additional Settings

- Motion Vectors Per Object Motion
- Dynamic Occlusion

Rigidbody

- Mass 1
- Drag 0
- Angular Drag 0.05
- Use Gravity
- Is Kinematic
- Interpolate None
- Collision Detection Discrete

Constraints

Info

Mesh Collider

- Convex
- Is Trigger
- Cooking Options Everything
- Material None (Physic Material)
- Mesh BOX

Материал.007 (Material)

Shader Standard

Add Component

Assets

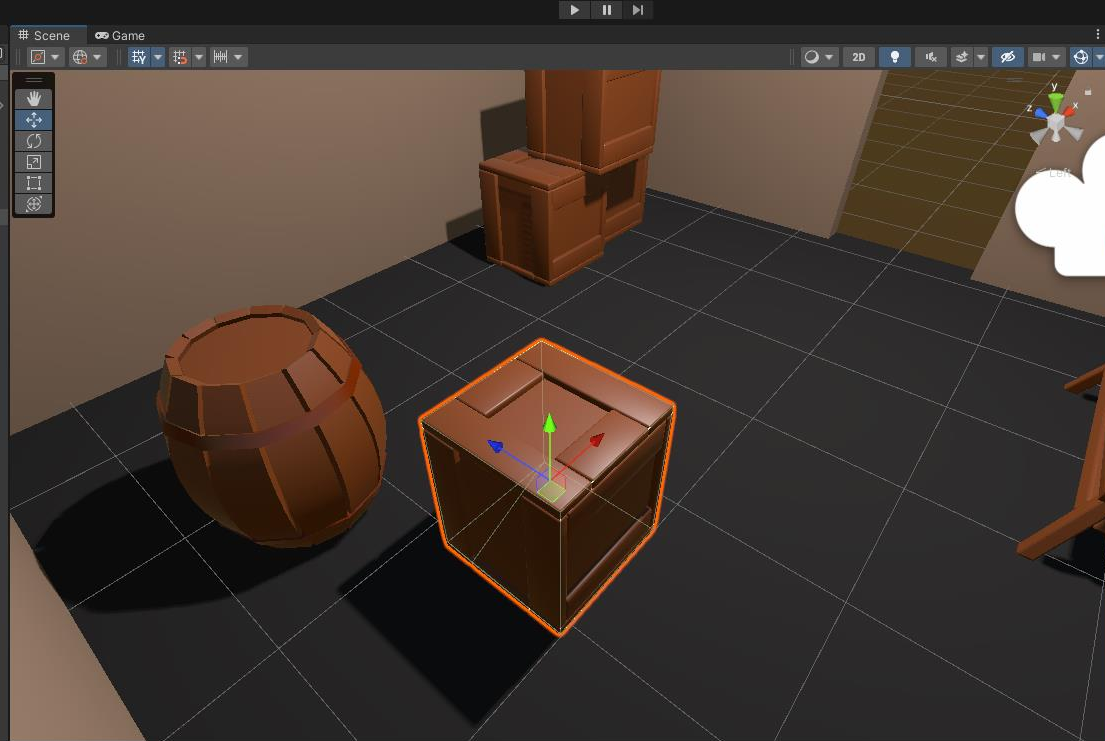
- Assets
 - MODELS
 - ModularFir...
 - Scenes

Assets

- Assets
 - MODELS
 - ModularFir...
 - Scenes

Hierarchy

- SampleScene*
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3)

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X -1.663	Y 0.47	Z 0.423
Rotation	X -89.98	Y 0	Z 0
Scale	X 100	Y 100	Z 100

BOX (Mesh Filter)

Mesh Renderer

Materials 1

Lighting

Cast Shadows On

Receive Shadows

Contribute Global Illuminat

Receive Global Illuminator Light Probes

Probes

Light Probes Blend Probes

Reflection Probes Blend Probes

Anchor Override None (Transform)

Additional Settings

Motion Vectors Per Object Motion

Dynamic Occlusion

Rigidbody

Mass 1

Drag 0

Angular Drag 0.05

Use Gravity

Is Kinematic

Interpolate None

Collision Detection Discrete

Constraints

Info

Mesh Collider

Convex

Is Trigger

Cooking Options Everything

Material None (Physic Material)

Mesh BOX

Материал.007 (Material)

Shader Standard

Project Console

Assets

Assets

- MODELS
- ModularFir...
- Scenes

Project Hierarchy

- Favorites
 - All Materials
 - All Models
 - All Prefabs
- Assets
 - MODELS
 - ModularFir...
 - Scenes
- ModularFirstPersonContrc
 - DemoScene
 - FirstPersonController
 - Scenes
- Packages

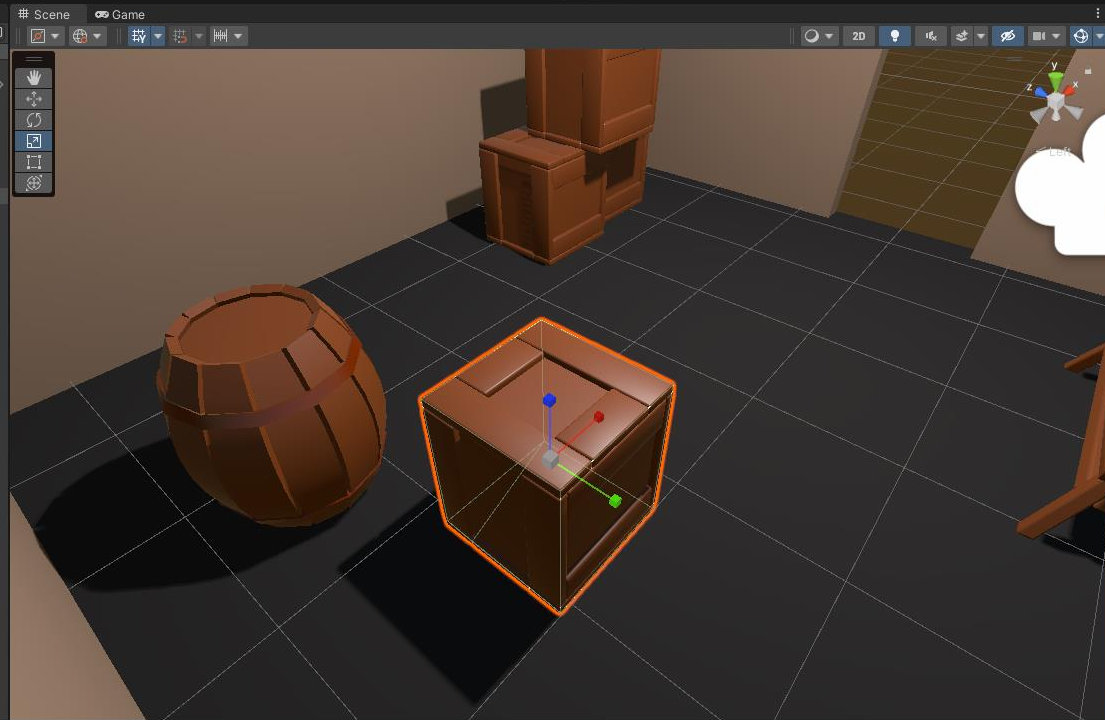
Console

4

Add Component

Hierarchy

- SampleScene*
 - Point Light
 - FirstPersonController
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - STOOL
 - BOX (2)
 - BOX (3)



Inspector

BOX (3)

Tag: Untagged Layer: Default

Model: Open Select Overrides

Transform

Position X: -1.663 Y: 0.47 Z: 0.423

Rotation X: -89.98 Y: 0 Z: 0

Scale X: 100 Y: 100 Z: 100

BOX (Mesh Filter)

Mesh Renderer

Materials: 1

Lighting

Cast Shadows: On

Receive Shadows:

Contribute Global Illumination:

Receive Global Illumination: Light Probes

Probes

Light Probes: Blend Probes

Reflection Probes: Blend Probes

Anchor Override: None (Transform)

Additional Settings

Motion Vectors: Per Object Motion

Dynamic Occlusion:

Rigidbody

Mass: 1

Drag: 0

Angular Drag: 0.05

Use Gravity:

Is Kinematic:

Interpolate: None

Collision Detection: Discrete

Project Console

Favorites

- All Materials
- All Models
- All Prefabs

Assets

- MODELS
- ModularFir...
- Scenes

Assets

- MODELS
- ModularFirstPersonContr
- DemoScene
- FirstPersonController
- Scenes

Packages

Search

Mesh

Convex

Is Trigger

Cooking Opti

Material

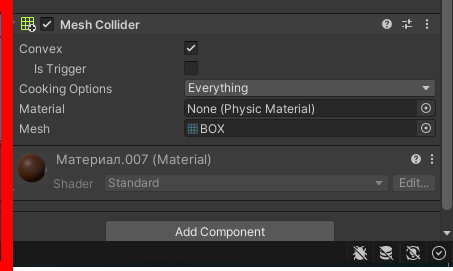
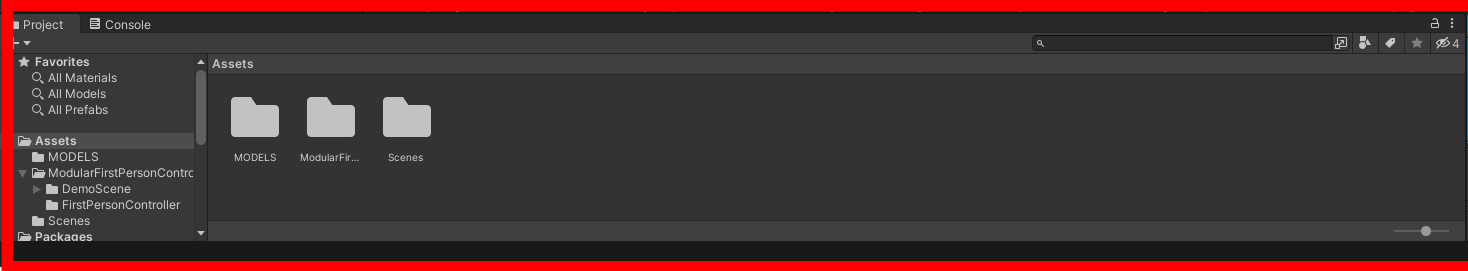
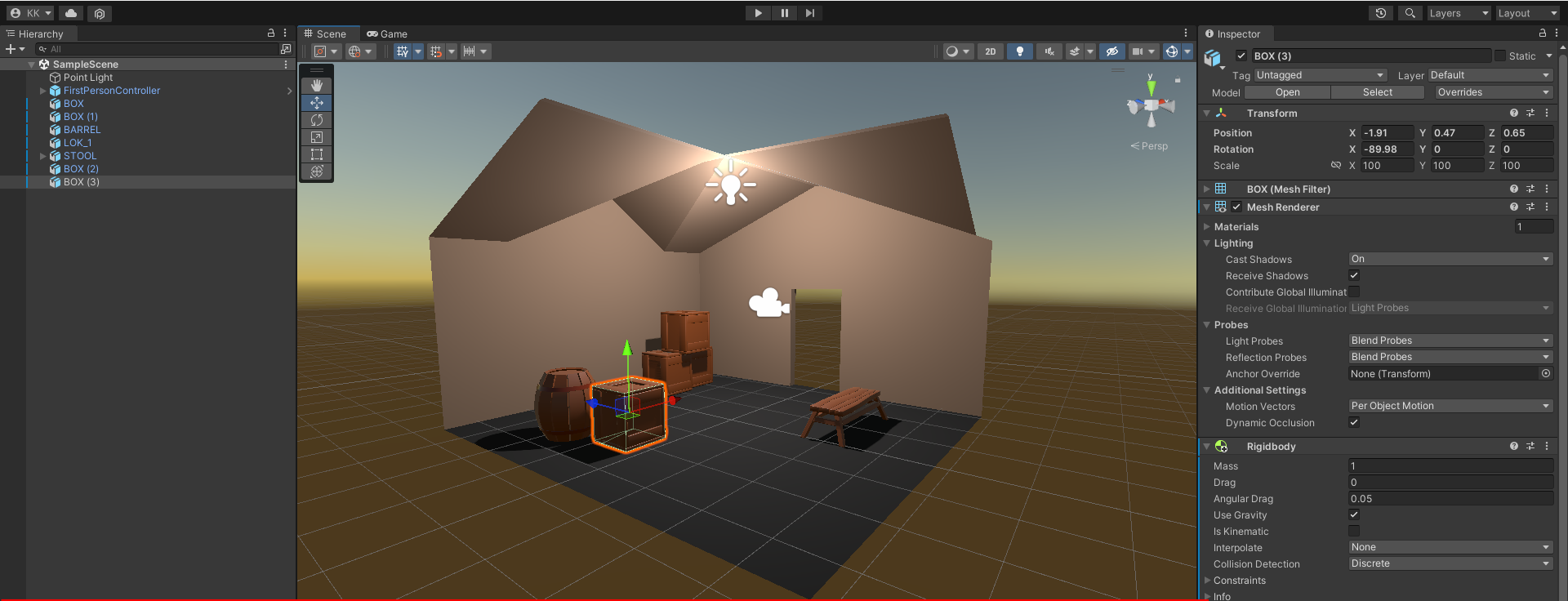
Mesh

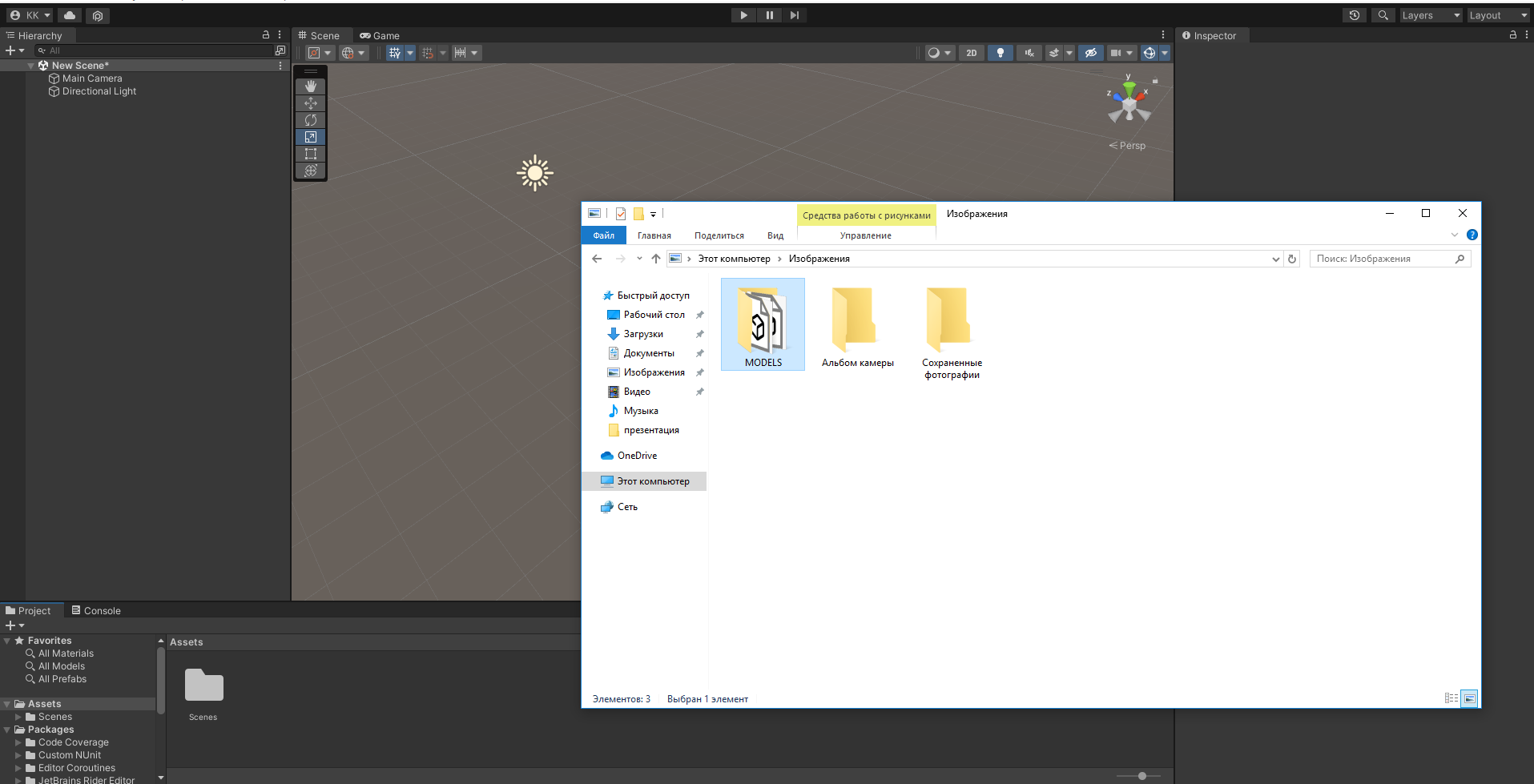
Material

Shader

Component

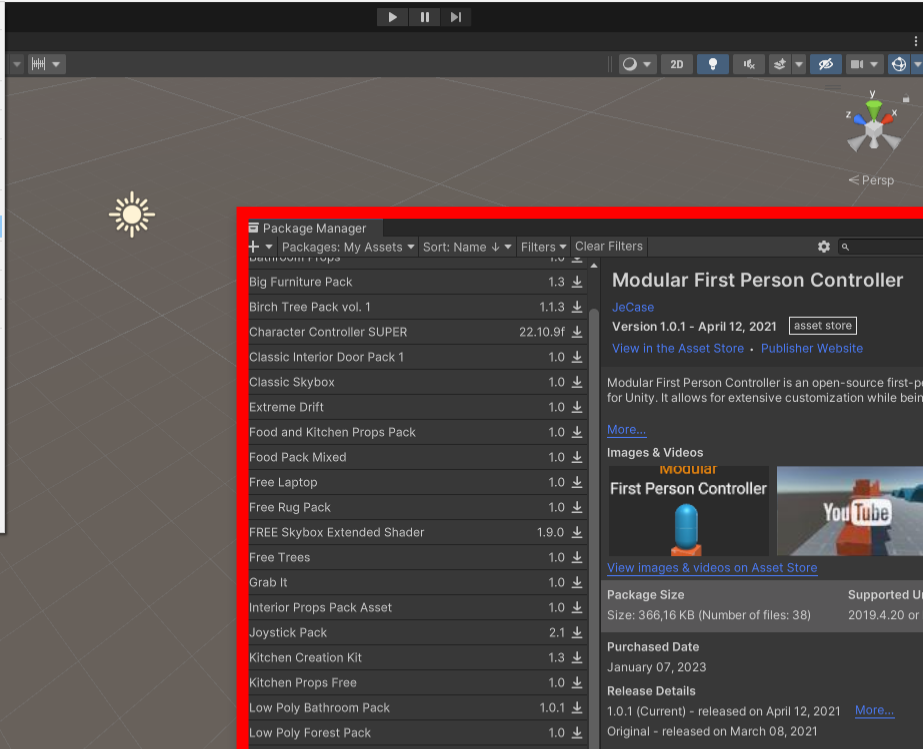
- Audio
- Effects
- Event
- Layout
- Mesh
- Miscellaneous
- Navigation
- Physics 2D
- Physics**
- Playables
- Rendering
- Scripts
- Tilemap





Windows menu:

- Panels
- Next Window Ctrl+Tab
- Previous Window Ctrl+Shift+Tab
- Layouts
- Search
- Collaborate
- Plastic SCM
- Asset Store
- Package Manager**
- Asset Management
- Text
- TextMeshPro
- General
- Rendering
- Animation
- Audio
- Sequencing
- Analysis
- AI
- UI Toolkit
- Visual Scripting



Inspector window:

Package 'Modular First Person Controller' Manifest

Information

- Display name: Modular First Person Controller
- Version: 1.0.1
- Category: 3D/Characters

Package Manager window:

26 of 54 Load 25

Package Name	Version	Actions
Big Furniture Pack	1.3	↓
Birch Tree Pack vol. 1	1.1.3	↓
Character Controller SUPER	22.10.9f	↓
Classic Interior Door Pack 1	1.0	↓
Classic Skybox	1.0	↓
Extreme Drift	1.0	↓
Food and Kitchen Props Pack	1.0	↓
Food Pack Mixed	1.0	↓
Free Laptop	1.0	↓
Free Rug Pack	1.0	↓
FREE Skybox Extended Shader	1.9.0	↓
Free Trees	1.0	↓
Grab It	1.0	↓
Interior Props Pack Asset	1.0	↓
Joystick Pack	2.1	↓
Kitchen Creation Kit	1.3	↓
Kitchen Props Free	1.0	↓
Low Poly Bathroom Pack	1.0.1	↓
Low Poly Forest Pack	1.0	↓
Low Poly Tree Pack	1.3	↓
Magic Mirror Lite - Reflection for Unity	1.2.0	↓
Medieval house 3D	1.0	↓
Milky Way Skybox	1.0	↓
Modular First Person Controller	1.0.1	📦

26 of 54 Load 25

Last update Jan 7, 2021 🔄

Modular First Person Controller

JeCase

Version 1.0.1 - April 12, 2021 asset store

[View in the Asset Store](#) - [Publisher Website](#)

Modular First Person Controller is an open-source first-person controller for Unity. It allows for extensive customization while being simple to use.

[More...](#)

Images & Videos

First Person Controller

[View images & videos on Asset Store](#)

Package Size: 366,16 KB (Number of files: 38)

Supported Unity Versions: 2019.4.20 or higher

Purchased Date: January 07, 2023

Release Details: 1.0.1 (Current) - released on April 12, 2021 [More...](#)

Original - released on March 08, 2021

Assigned Labels: (None)

Import Re-Download

Project and Assets panels:

- Project: Favorites (All Materials, All Models, All Prefabs)
- Assets: Scenes
- Package Manager: Code Coverage, Custom NUnit, Editor Coroutines, JetBrains Rider Editor

ПРАКТИКА



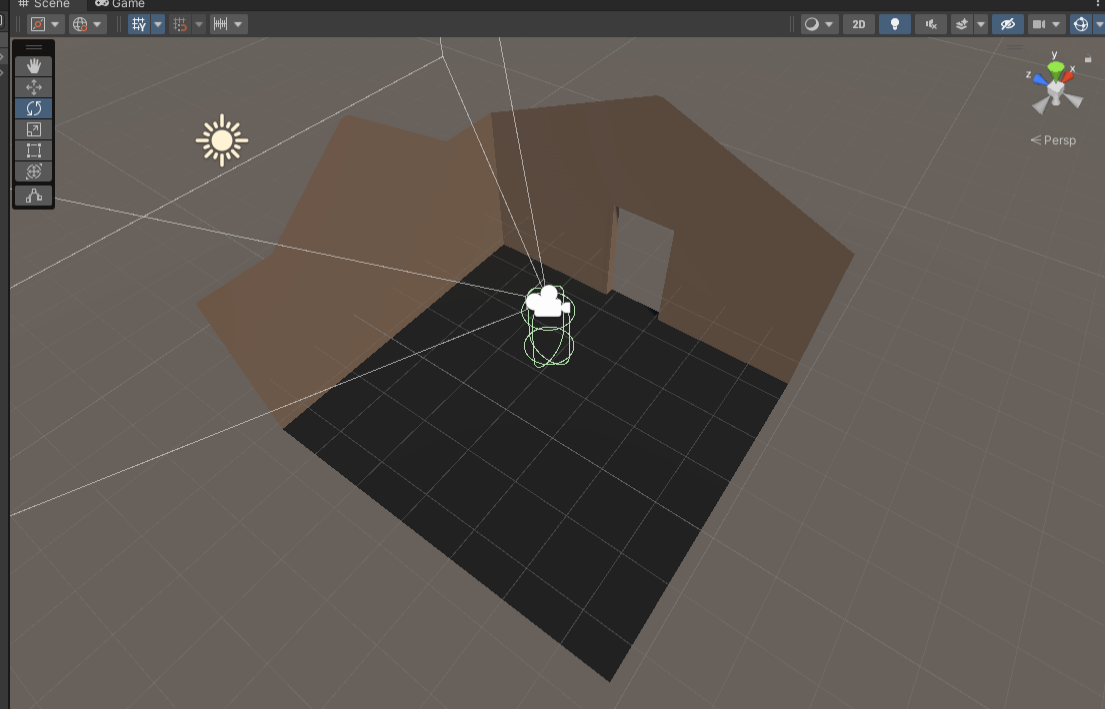
1. Добавляем в проект ассеты:
 - папку «MODELS» через проводник
 - ассет «Modular First Person Controller» через Package Manager
2. Переносим в сцену файлы с расширением .prefab из папки «MODELS» и «Modular First Person Controller\ FirstPersonController»
3. Удаляем дефолтную камеру из сцены

KK [Icons]

Scene # Game [Icons]

Hierarchy

- New Scene 1*
 - FirstPersonController
 - LOK_1_PREFAB
 - Directional Light



Inspector [Icons] Layers Layout

Inspector

FirstPersonController

Tag: Player Layer: Default Static

Prefab: Open Select Overrides

Transform

Position	X	1.973093	Y	0	Z	-5.466142
Rotation	X	0	Y	0	Z	0
Scale	X	1	Y	1	Z	1

- Capsule (Mesh Filter)
- Mesh Renderer
- Capsule Collider
- Rigidbody
- First Person Controller (Script)
- Default-Material (Material)

Project Console

Assets > MODELS

- BARREL
- BOX
- LOK_1
- LOK_1_PR...
- LOK_2
- LOK_3
- STOOL

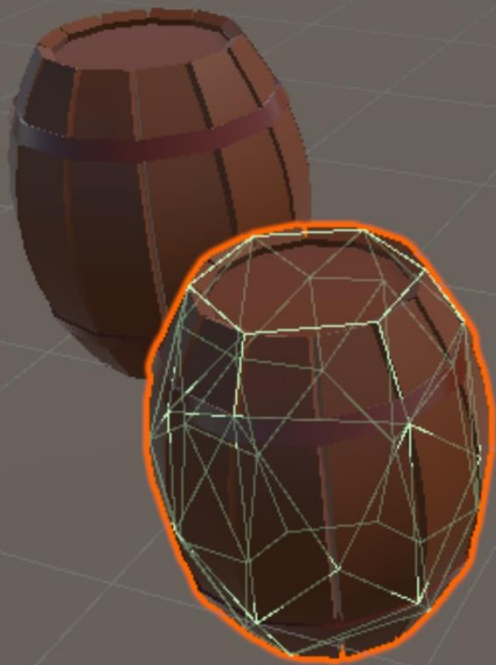
Assets > MODELS

[Icons]

Add Component

КОЛЛАЙДЕРЫ И КОЛЛИЗИИ

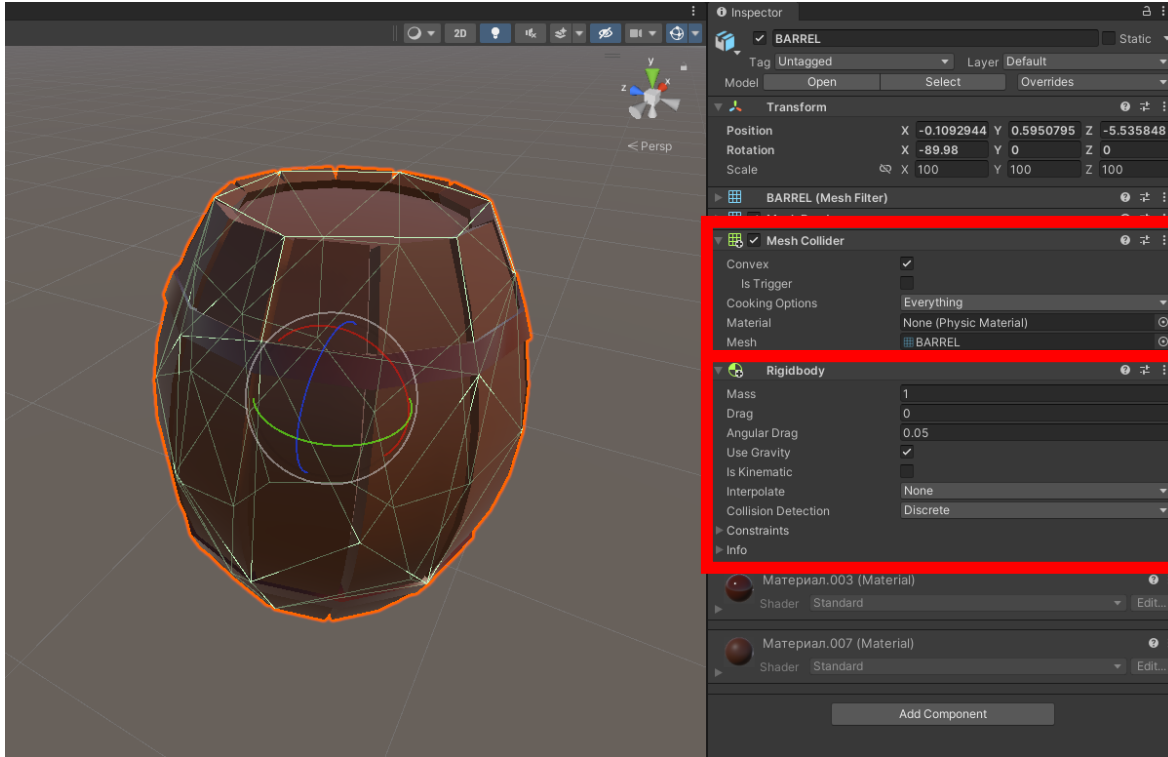




3D ассет – графика, не имеющая твердотельности и веса. Он не может взаимодействовать с окружением и участвовать в симуляциях.

Коллайдер – геометрическая фигура, с которой могут взаимодействовать другие объекты и действовать физика.

Коллизии – (столкновения) просчитанные движком любые взаимодействия между коллайдерами.



компонты из раздела
«Physics»:

Mesh Collider
задает объекту коллайдер.

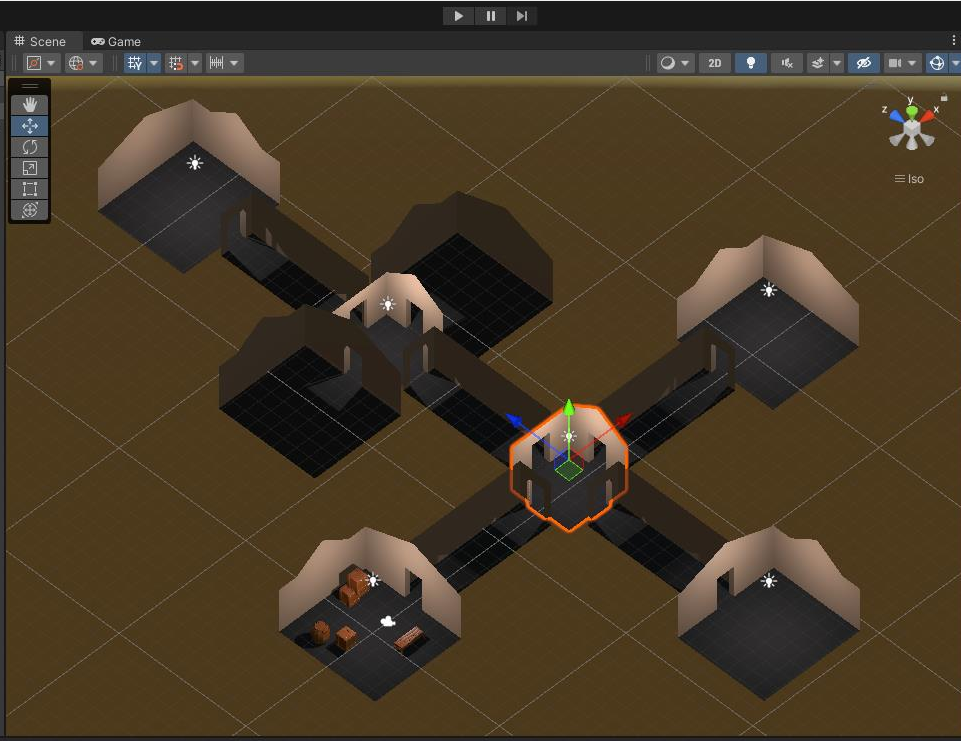
Rigidbody
позволяет движку
просчитывать последствия
столкновений а так же
включать гравитацию.



**САМОСТОЯТЕЛЬНАЯ
РАБОТА**

Hierarchy

- SampleScene*
 - Point Light
 - LOK_3
 - FirstPersonController
 - Joint
 - PlayerCamera
 - CrosshairAndStamina
 - BOX
 - BOX (1)
 - BARREL
 - LOK_1
 - LOK_2
 - STOOL
 - BOX (2)
 - BOX (3)
 - LOK_2 (1)
 - LOK_2 (2)
 - LOK_2 (3)
 - LOK_3 (1)
 - LOK_1 (1)
 - LOK_1 (2)
 - LOK_1 (3)
 - LOK_2 (4)
 - LOK_1 (4)
 - LOK_1 (5)
 - Point Light (1)
 - Point Light (2)
 - Point Light (3)
 - Point Light (4)
 - Point Light (5)



Inspector

LOK_3

Tag Untagged Layer Default

Model Open Select Overrides

Transform

Position	X 15.51	Y 1.7	Z 0
Rotation	X -89.98	Y 0	Z 0
Scale	X 100	Y 100	Z 100

LOK_3 (Mesh Filter)

Mesh Renderer

Mesh Collider

Convex

Is Trigger

Cooking Options Everything

Material None (Physic Material)

Mesh LOK_3

Material.004 (Material)

Shader Standard

Material.008 (Material)

Shader Standard

Add Component

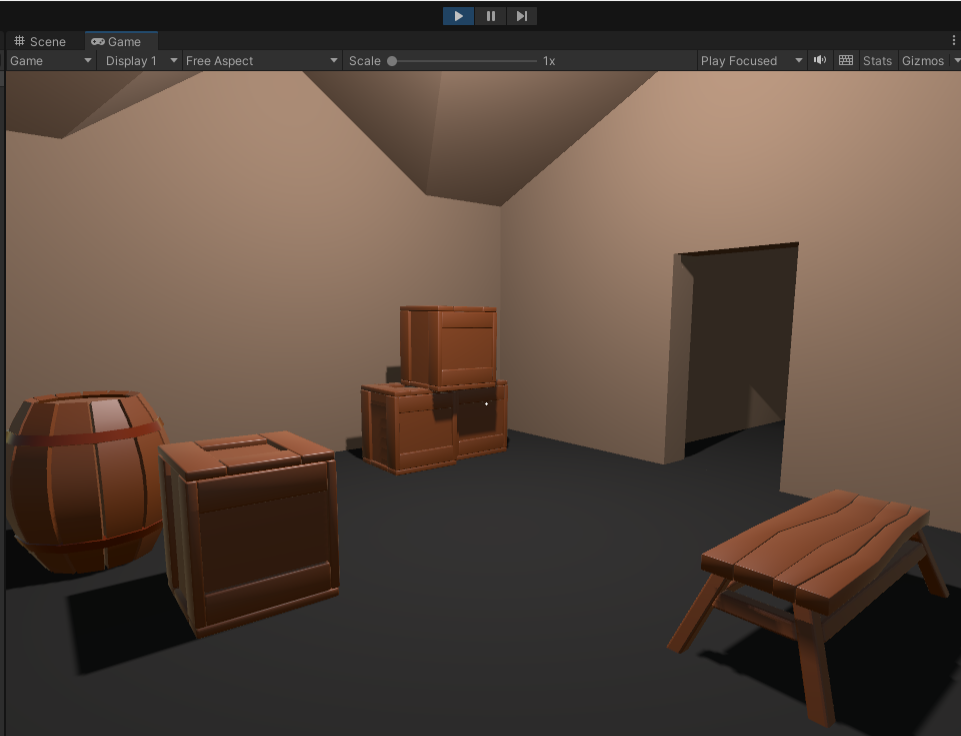
All Prefabs

Assets > MODELS

BARREL BOX LOK_1 LOK_1_PR... LOK_2 LOK_3 STOOL

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Inspector

Game | Display 1 | Free Aspect | Scale 1x | Play Focused | Stats | Gizmos

Project | Console

Assets

- Assets
 - MODELS
 - ModularFirstPersonControc
 - DemoScene
 - FirstPersonController
 - Scenes
- Packages
 - Code Coverage
 - Custom NUnit
 - Editor Coroutines

Assets view showing folders: MODELS, ModularFir..., Scenes

Спасибо за внимание!

