



Introduction to 3D Game Development in Unity

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Agenda

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What is Unity?

03

Unity Examples

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Test Demo



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About The Assembly

- A smart lab & makerspace based out of in5 since 2014
- Over 350 free workshops done
- Focus on Smart Technology & Practical Applications
- Assembly : HACK - Embedded systems, IoT, hardware
- Assembly : CODE - Software - APIs, frameworks, apps
- Assembly: Data Science - Advanced topics in AI/ML
- Audience – Students | Professionals | Entrepreneurs
- Social Media: @makesmartthings
- www.theassembly.ae → Online workshop videos

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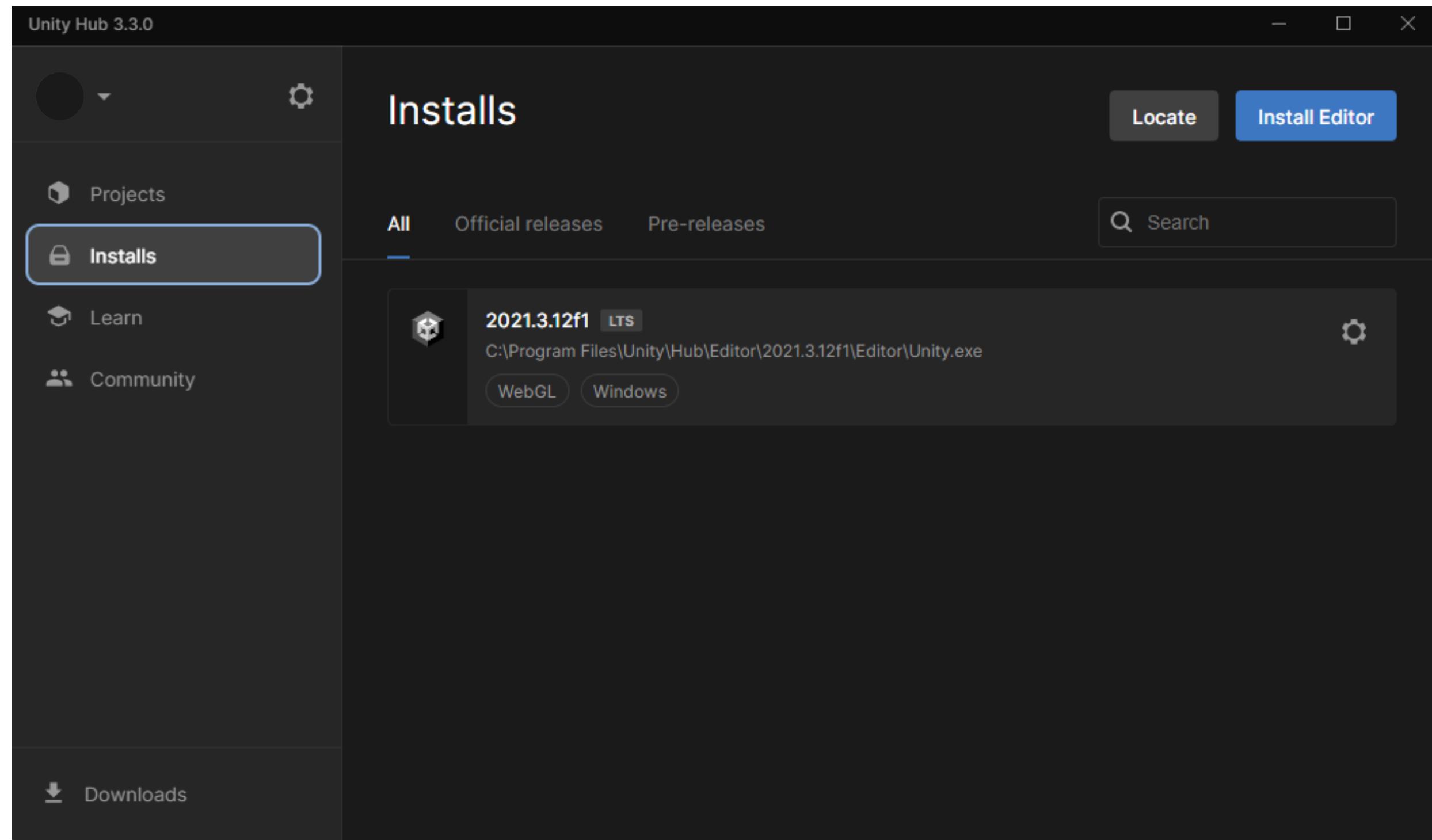
Test Demo



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Quick Note



01 Install Unity Hub at: <https://unity3d.com/get-unity/download>

02 [The-Assembly/UnityWorkshop1](https://github.com/The-Assembly/UnityWorkshop1): Creating a simple 2D game.
(github.com)

GitHub Link



What is Unity?

- 01 Unity is a Game engine
- 02 Uses C# for scripting and other aspects
- 03 Similar softwares: Unreal, Godot and GMS



Unity



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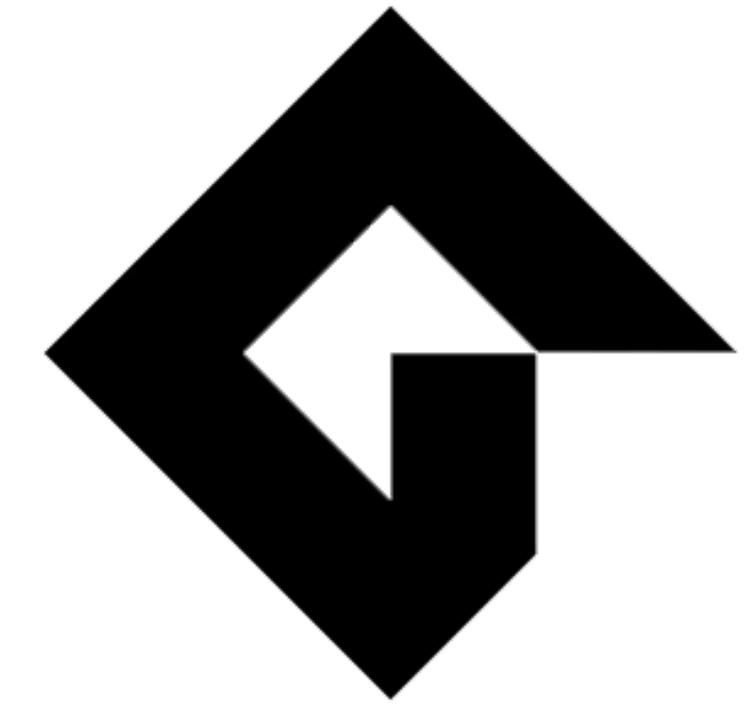
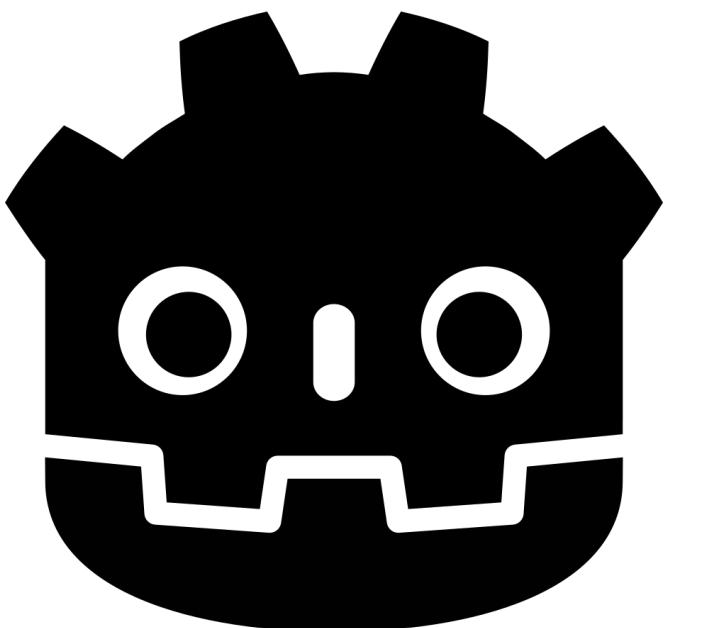
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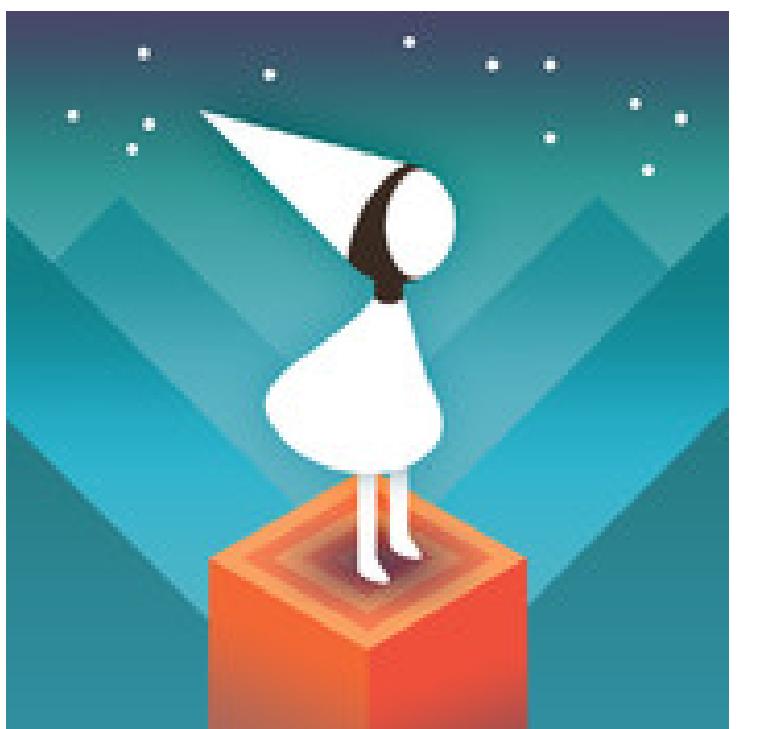


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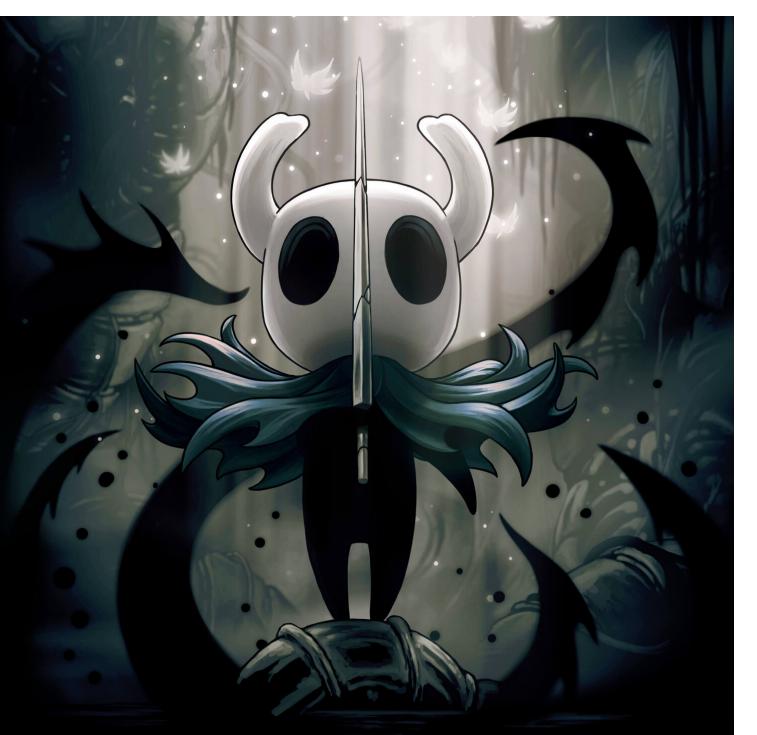
Similar softwares



Games Built with Unity



Monument Valley



Hollow Knight



Remnant: From the Ashes

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Unity Hub Overview

01 Downloading Stable Unity Editor

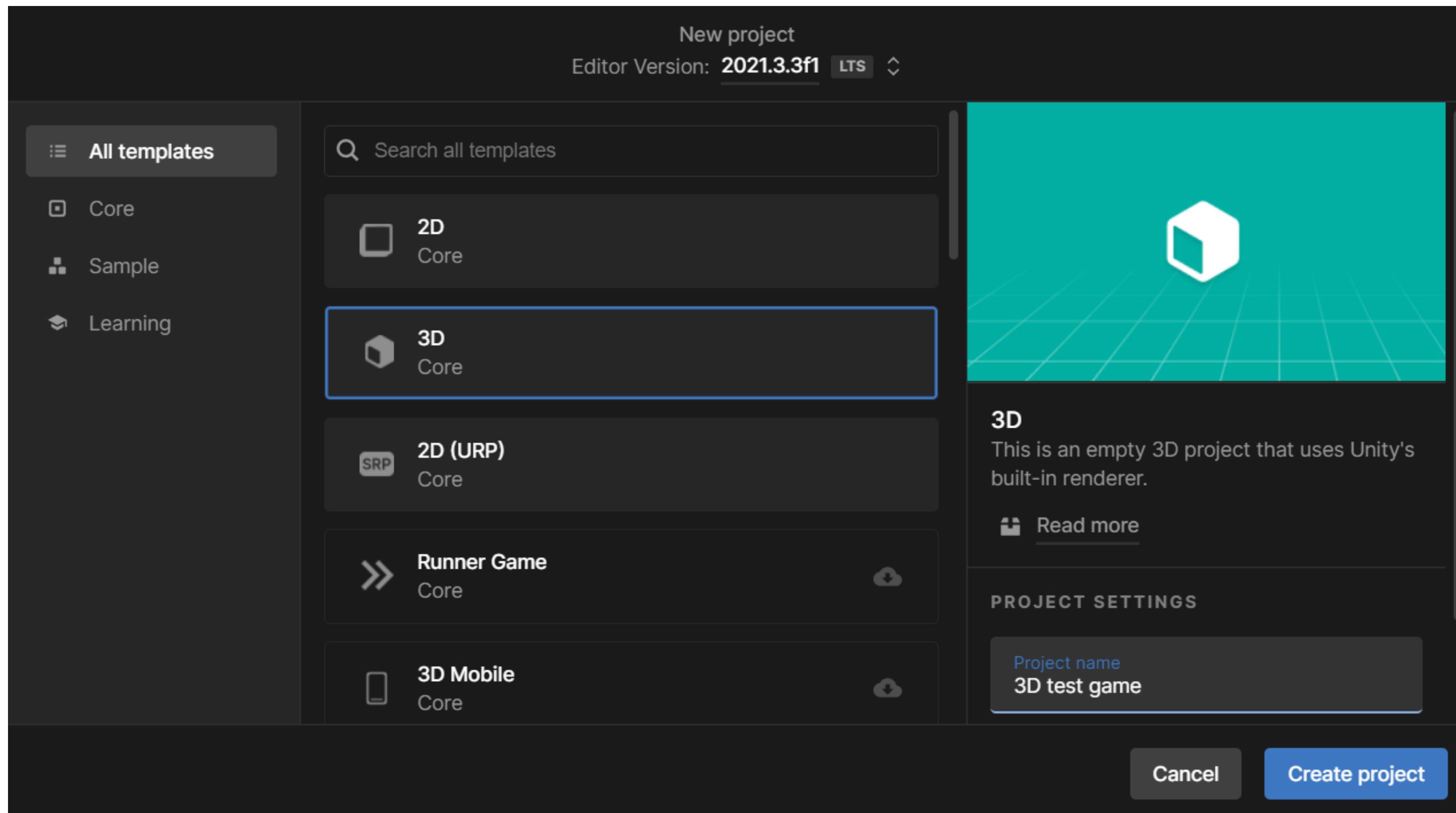
02 Installing modules

03 Creating projects

03 Default project location



Unity Hub Overview



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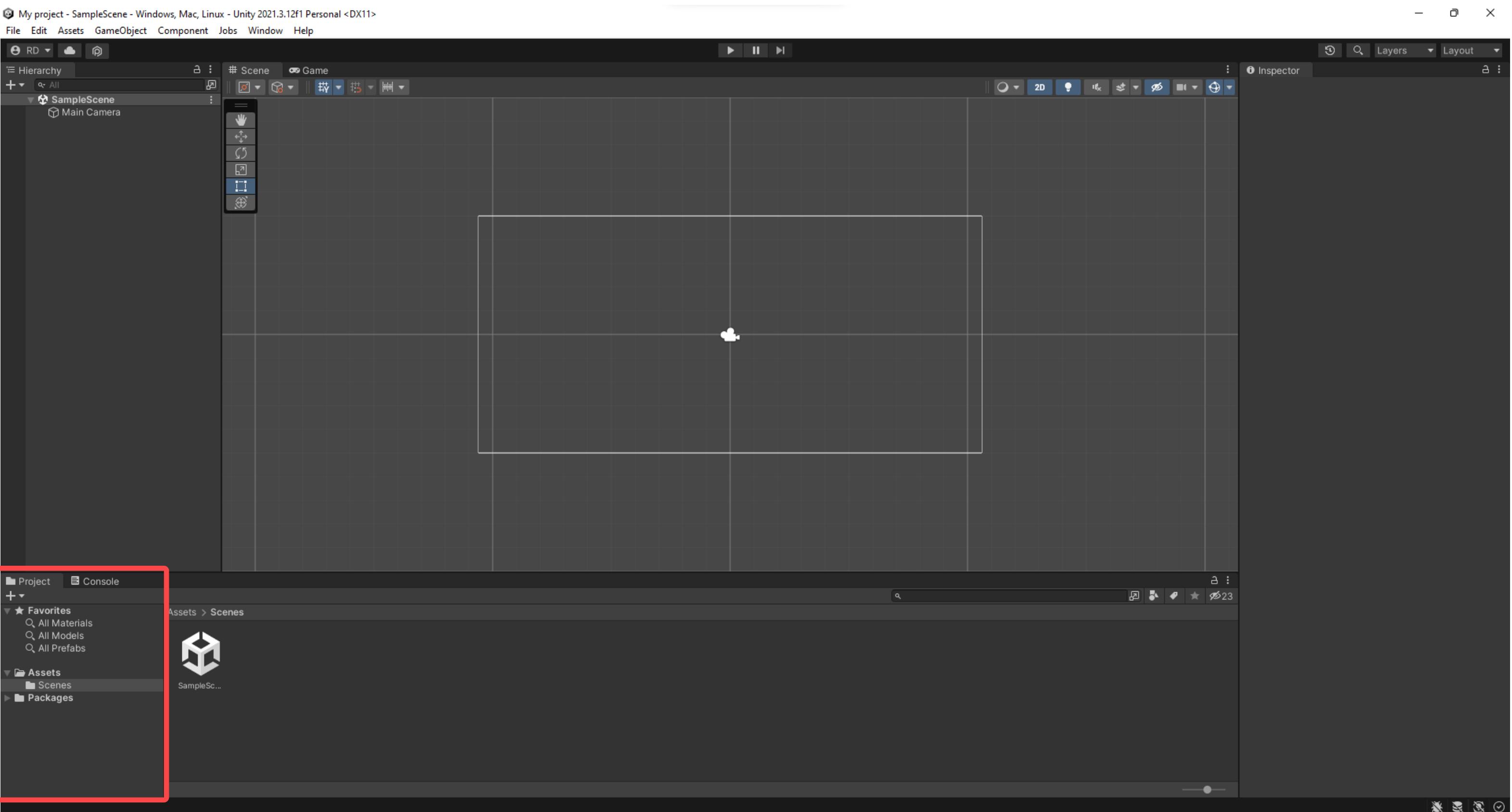
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Test Demo



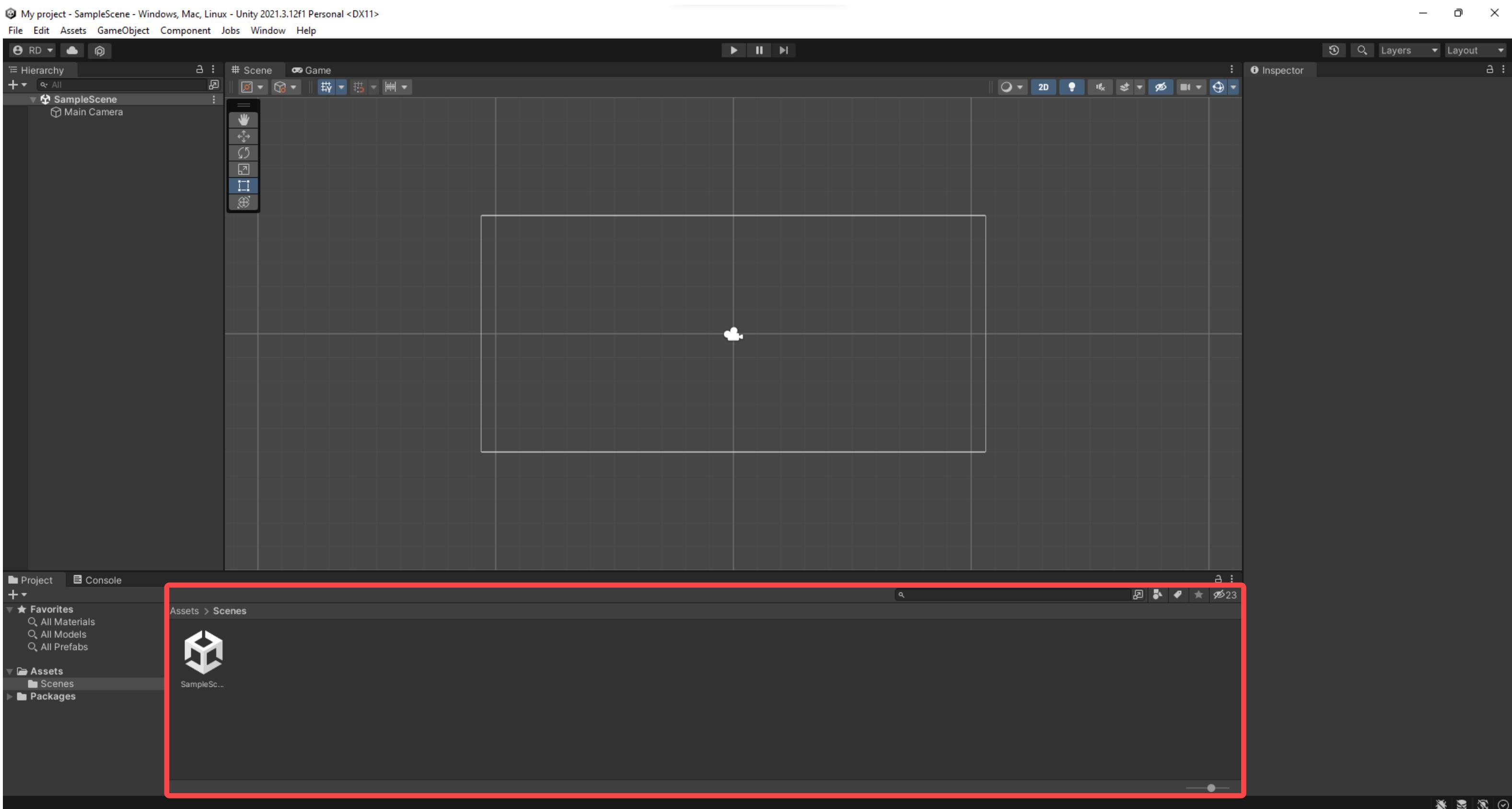
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File Tree



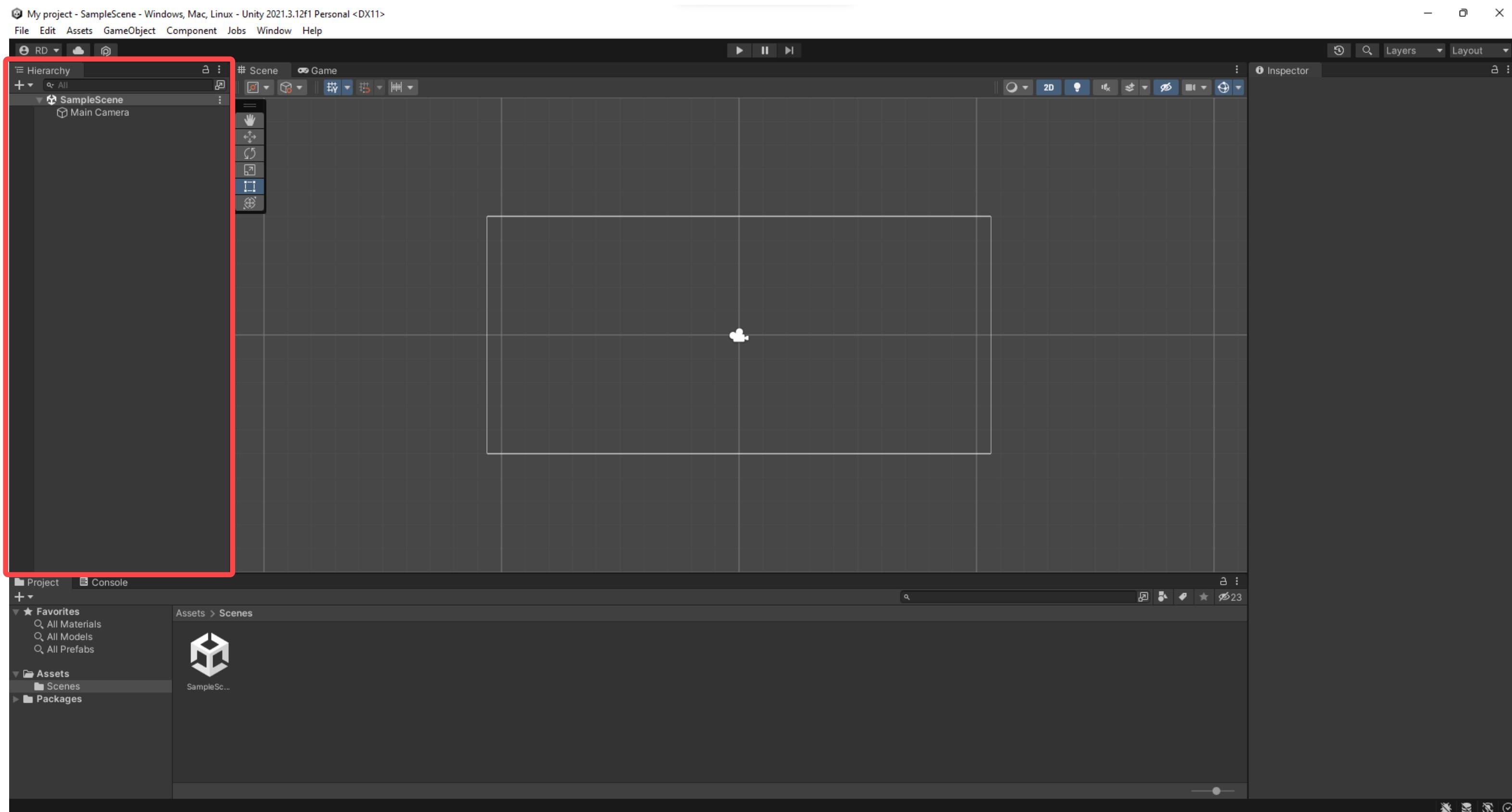
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Expanded view



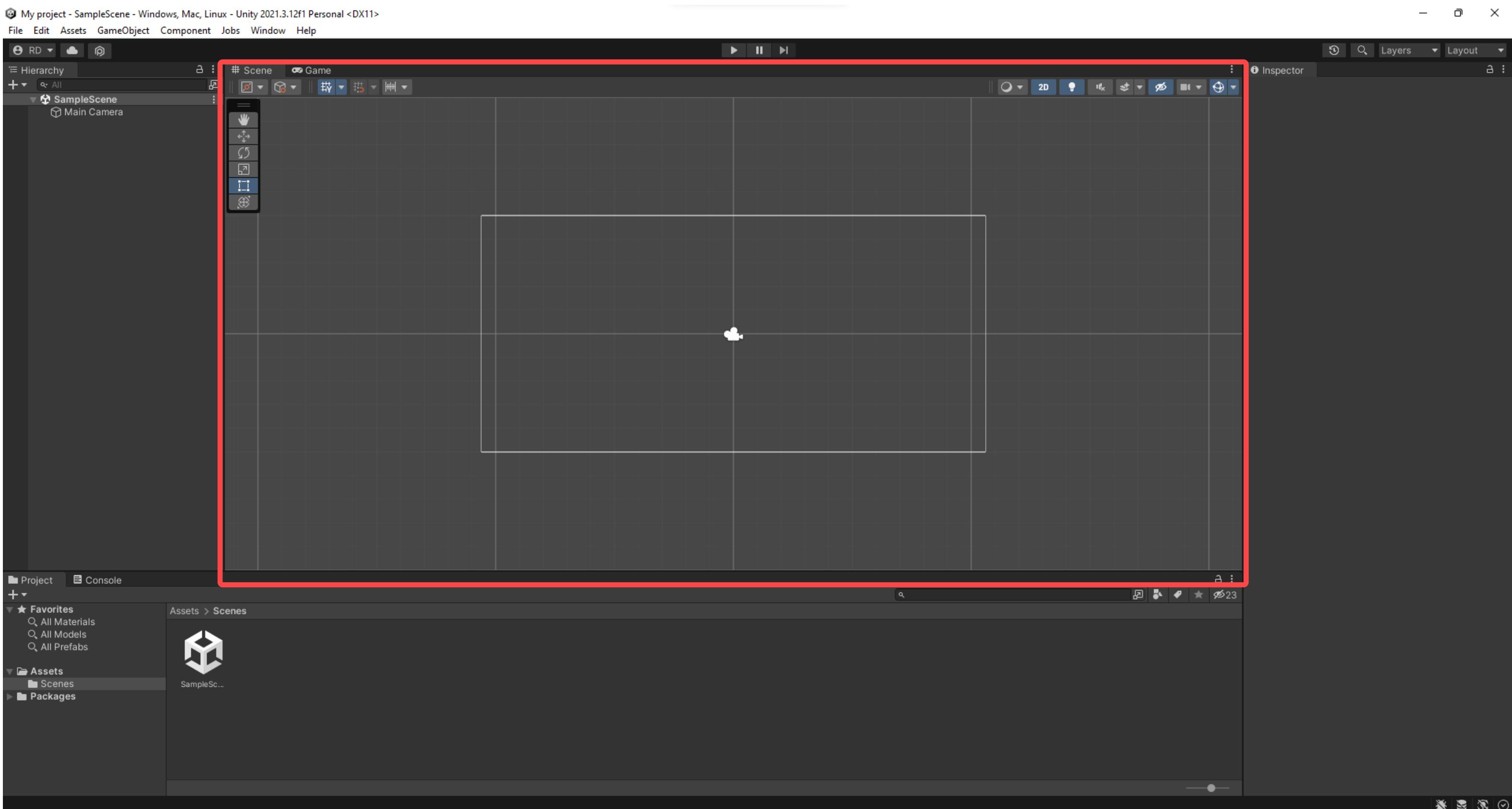
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Object Hierarchy



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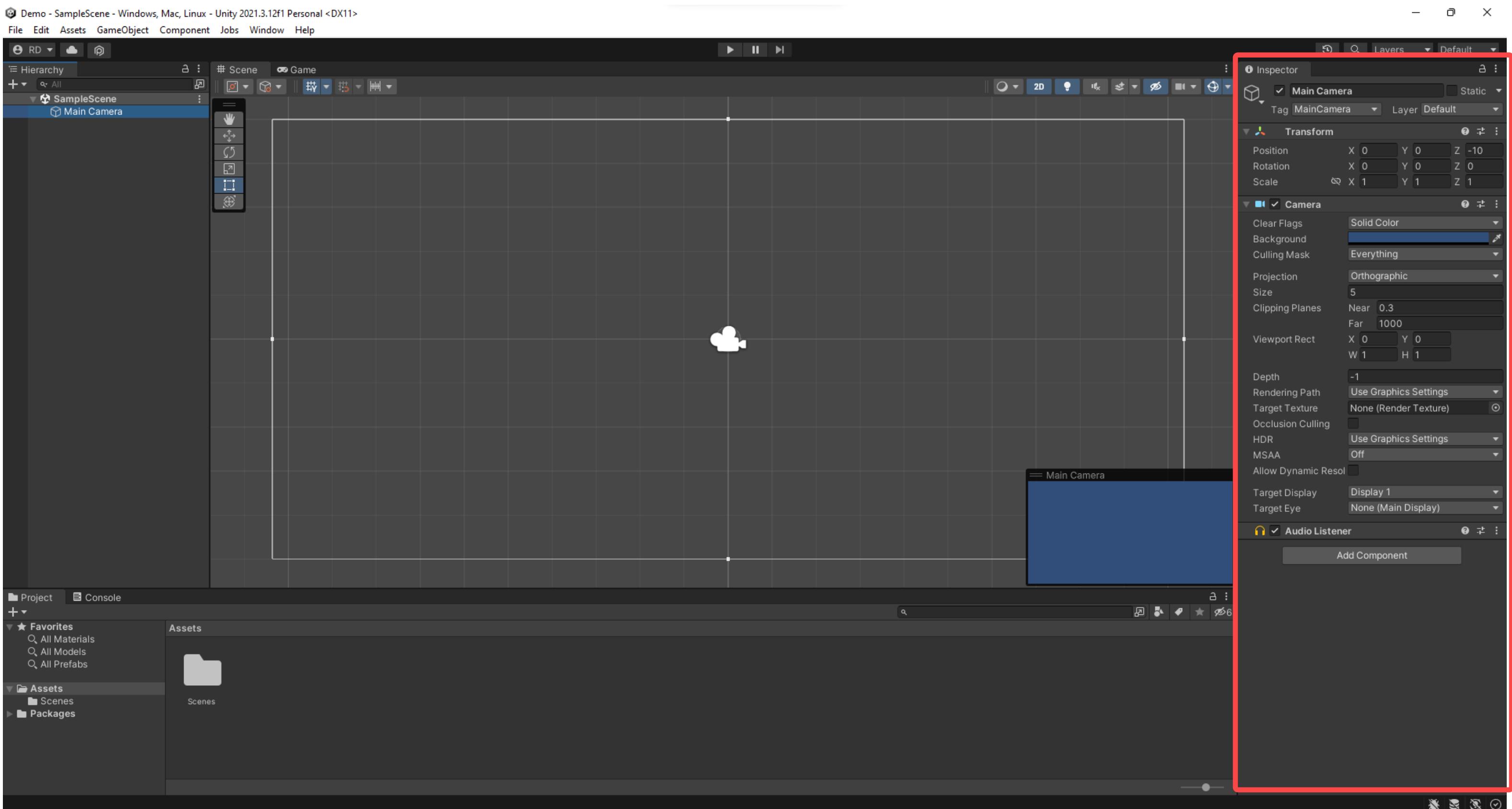
Viewport



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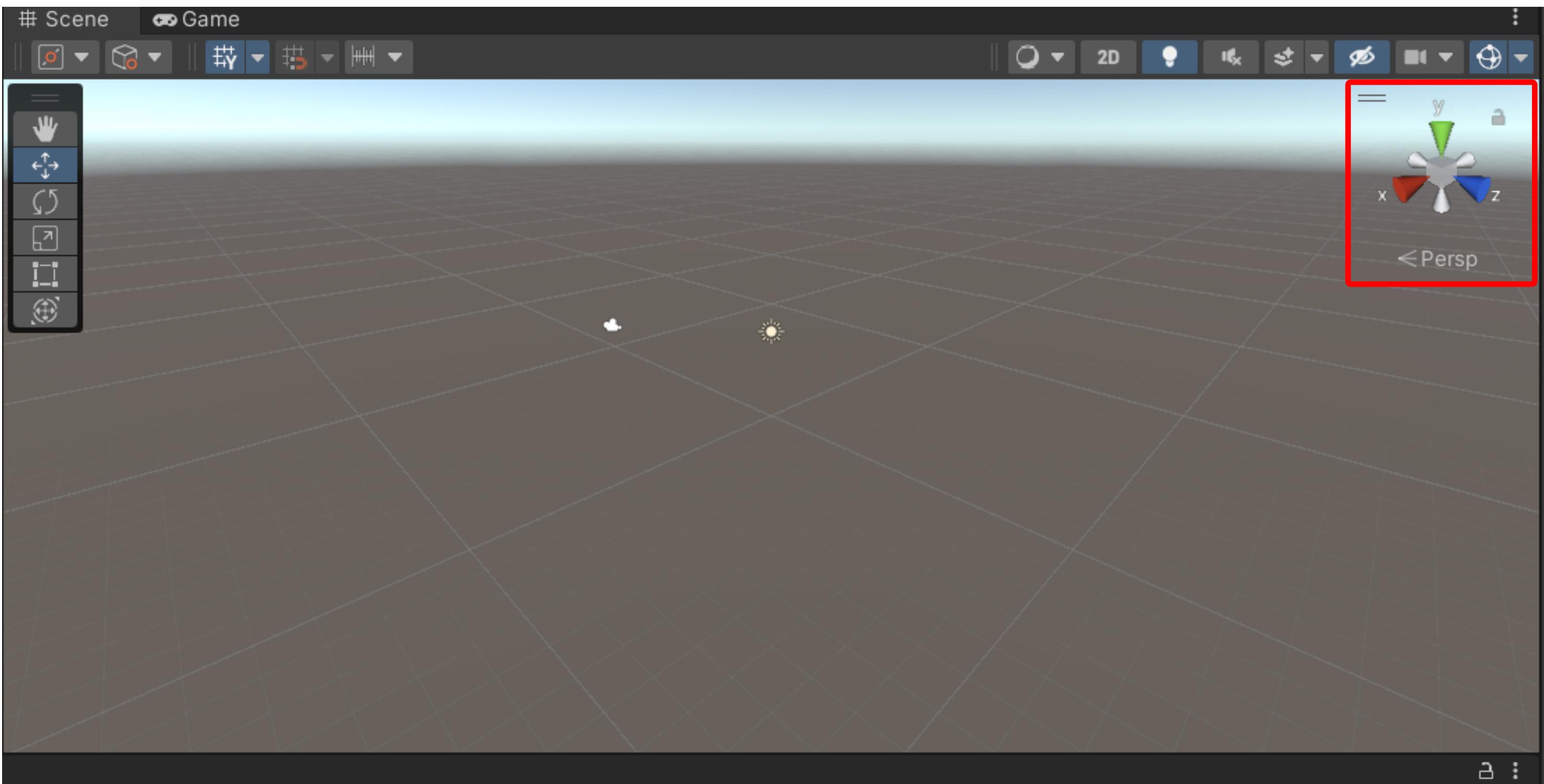
Object Inspector



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Differences in 3D



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Differences in 3D

01 Pan tool- [Q]

02 Rotate view [right click move]

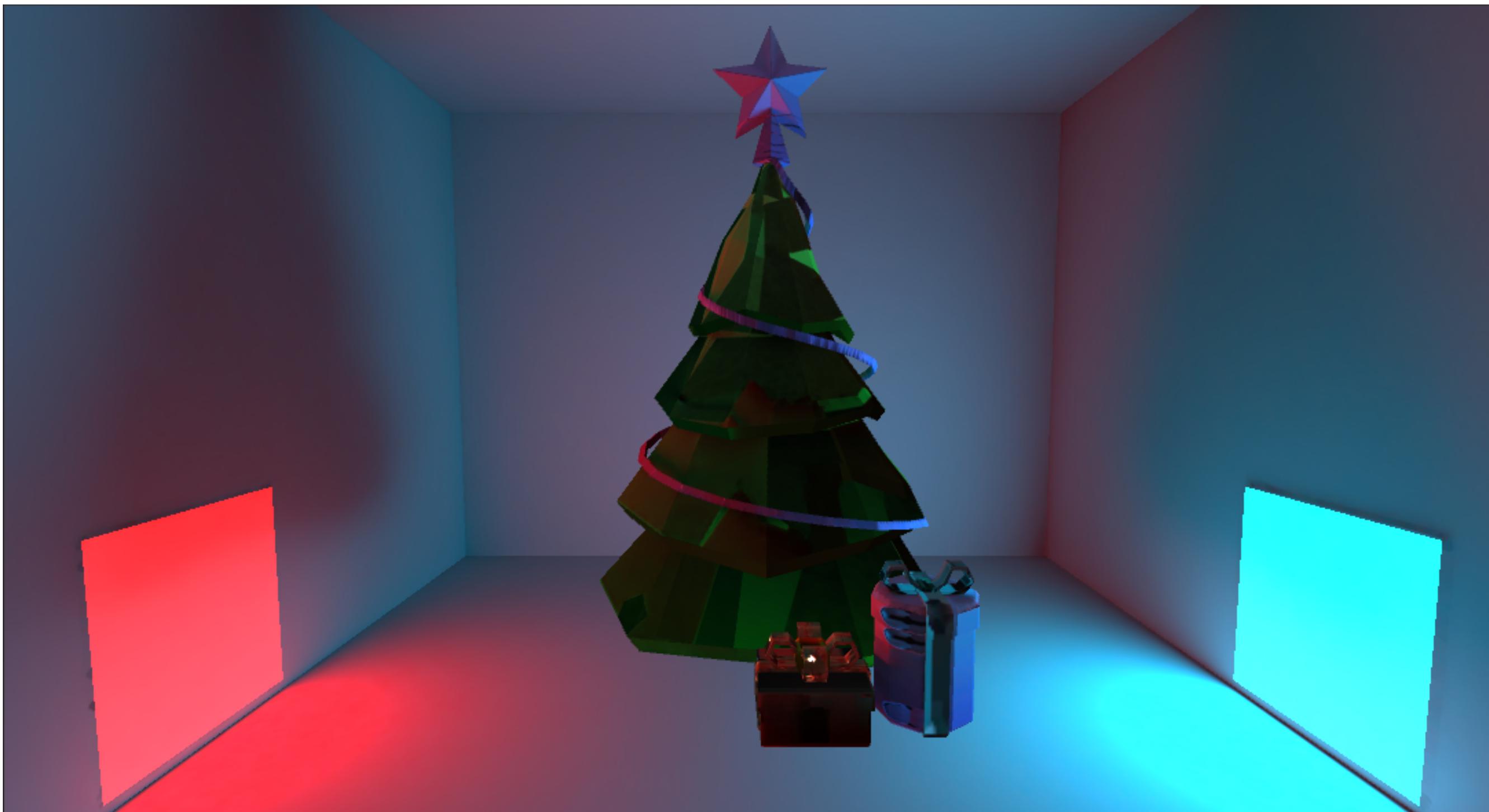
03 XYZ gizmo

3D lighting

01 Lightmapping

02 Baking

03 Global Illumination



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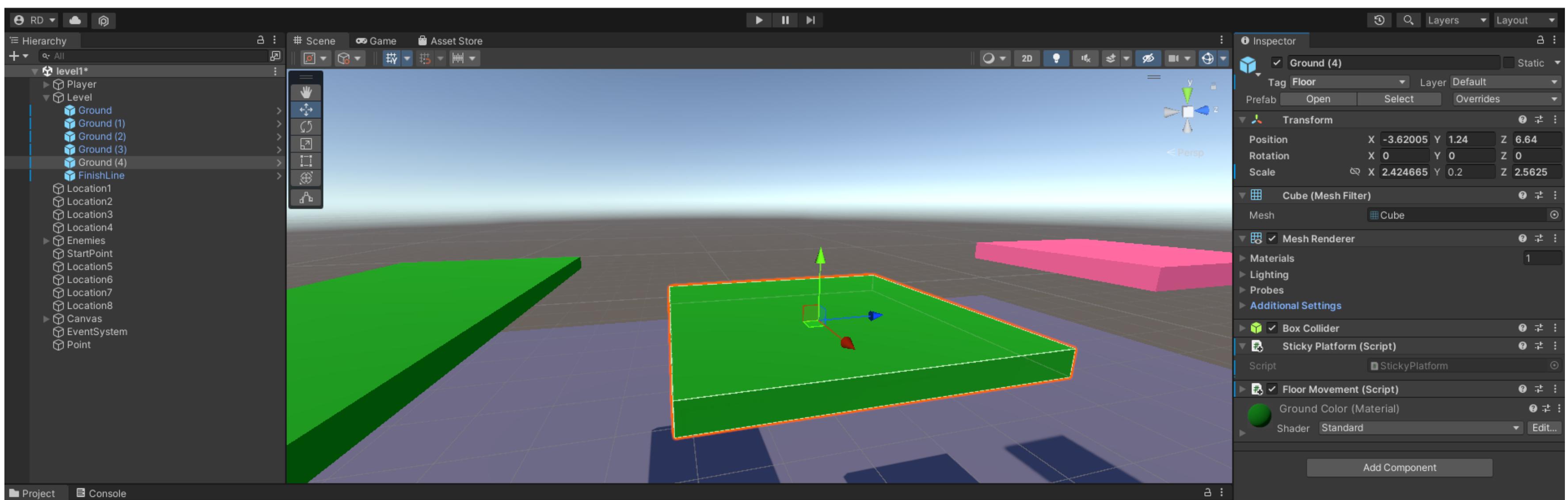


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Setting up objects

01 Making a cube

02 Transforming object into a floor



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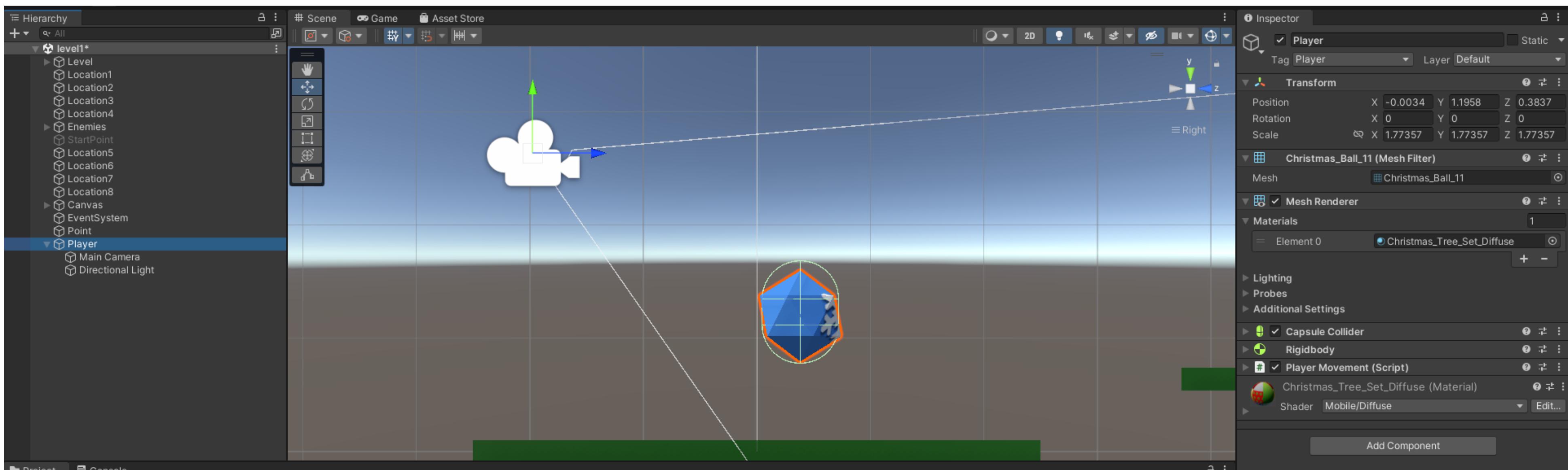
Creating the player

01 Make a capsule

02 Adding materials

03 Automatic collider addition

04 Adding RigidBody

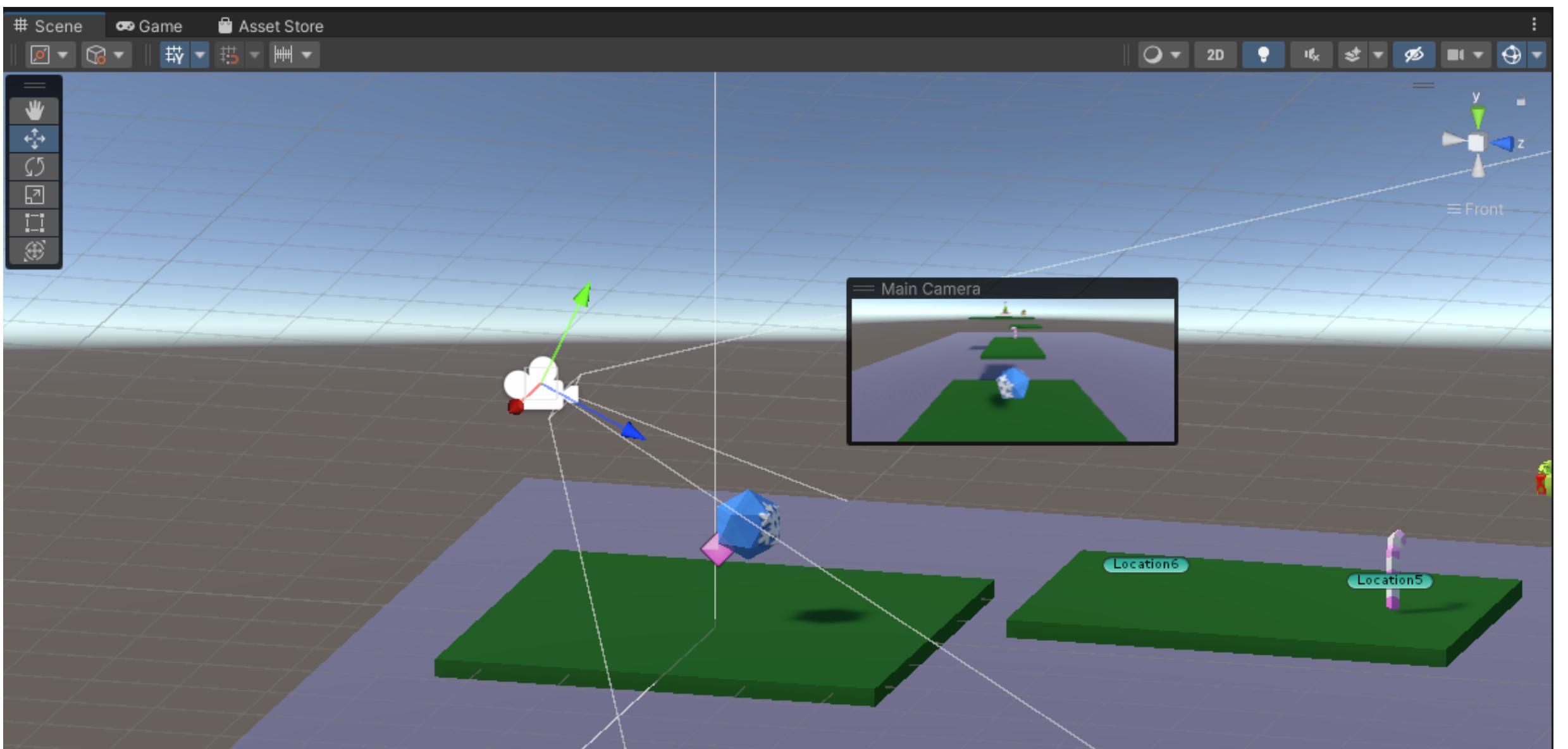


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Camera and Player Movement

- 01 Adjust camera position to look at player
- 02 Create PlayerMovement Script
- 03 Child directional light and Camera

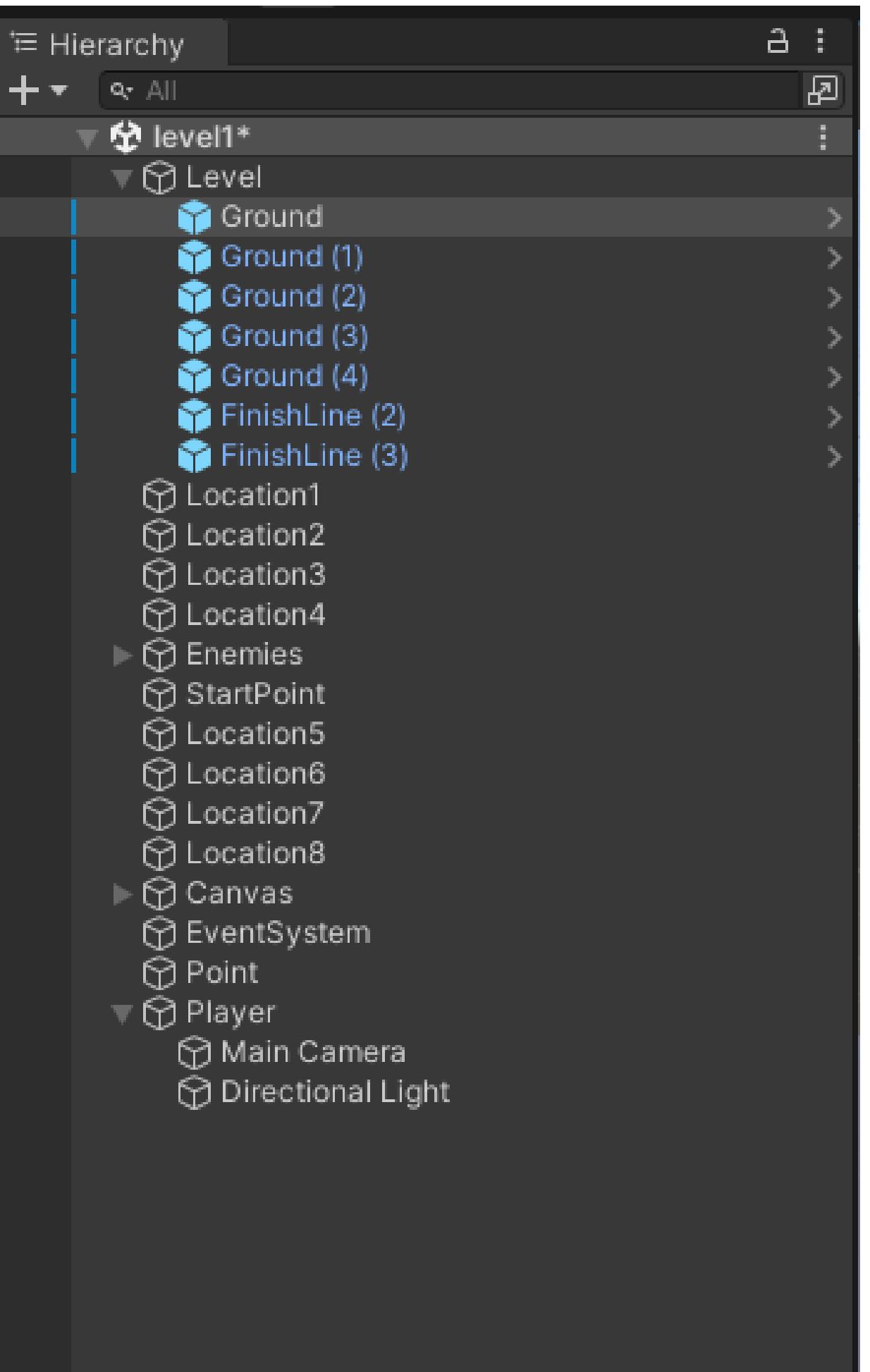


Prefabs

01 Organizing your work

02 Making prefabs

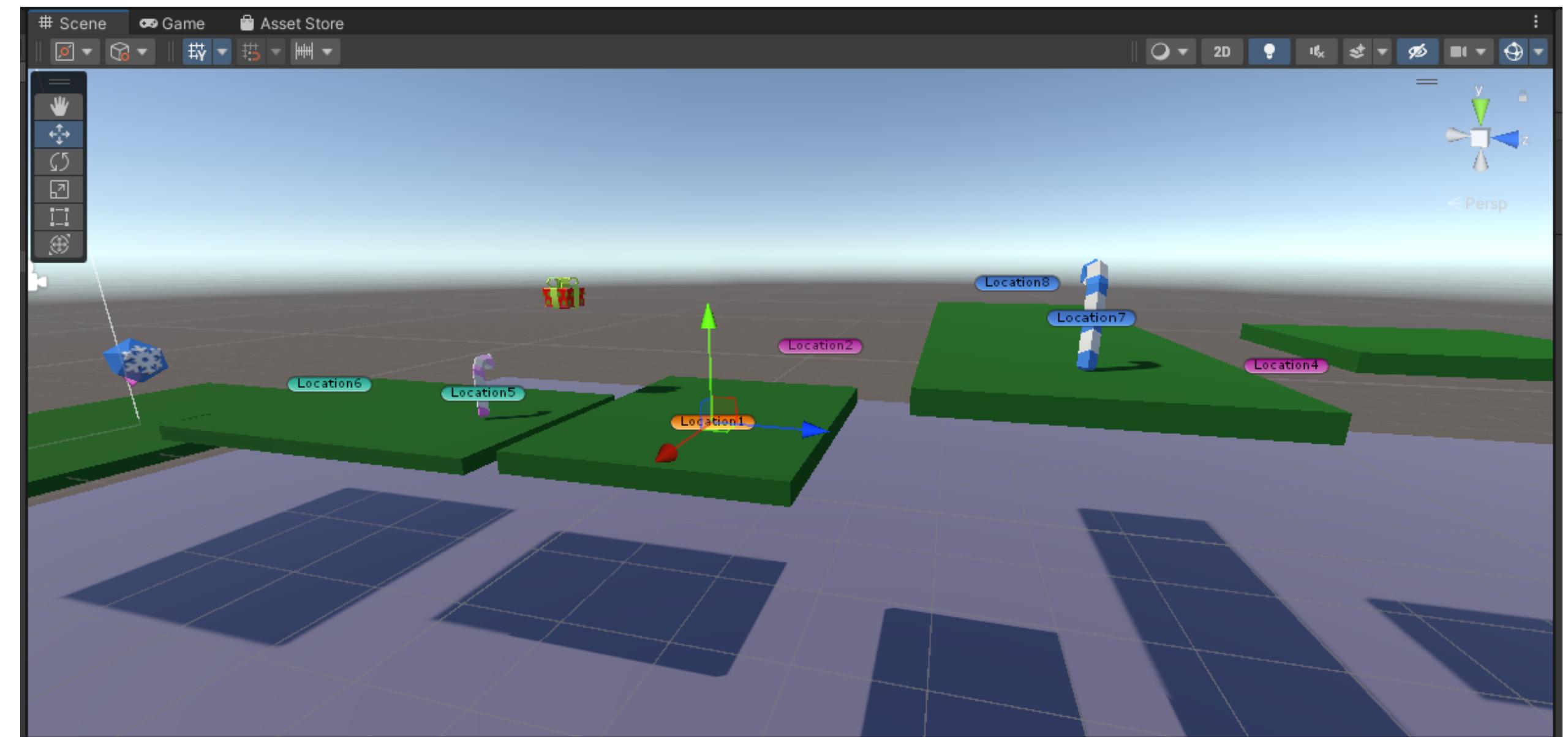
03 Use of prefabs



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Moving Platforms

- 01 Write ObjectMovement script
- 02 Make location points
- 03 Write StickyPlatform script

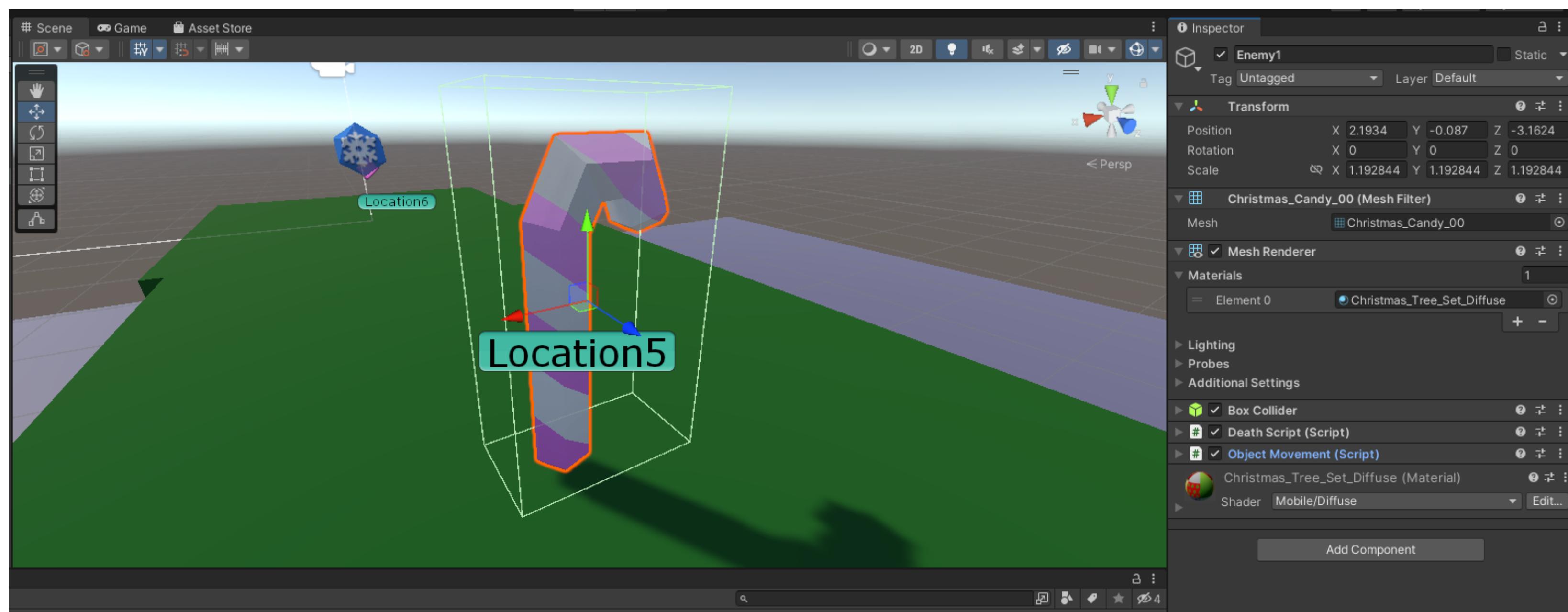


Making death object

01 Write StartPoint script and DeathScript

02 Add FloorMovement script

03 Add death boundary object

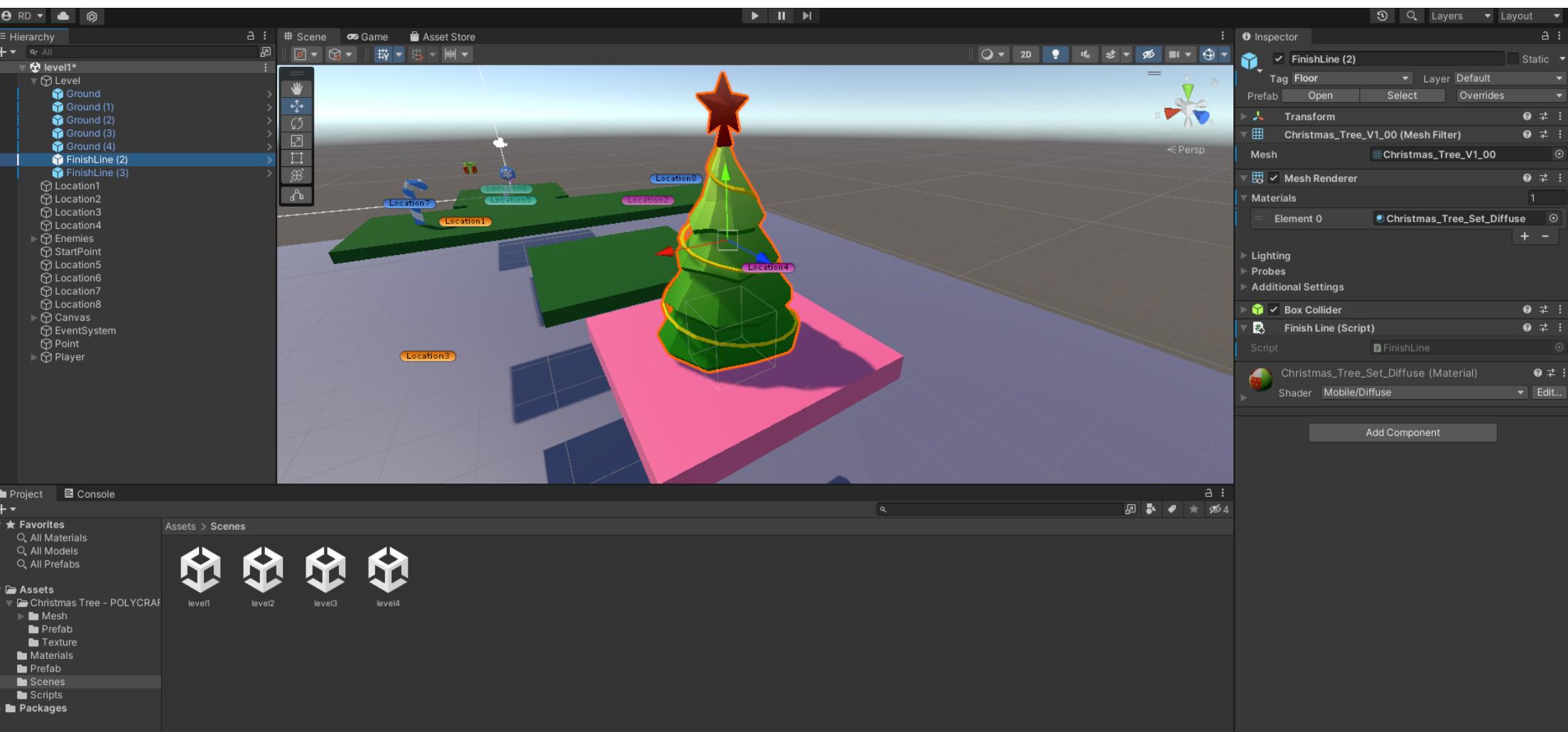


Making Multiple Levels

01 Renaming sample scene to level 1

02 Making the end level object

03 Write FinishLine script and add it to the object



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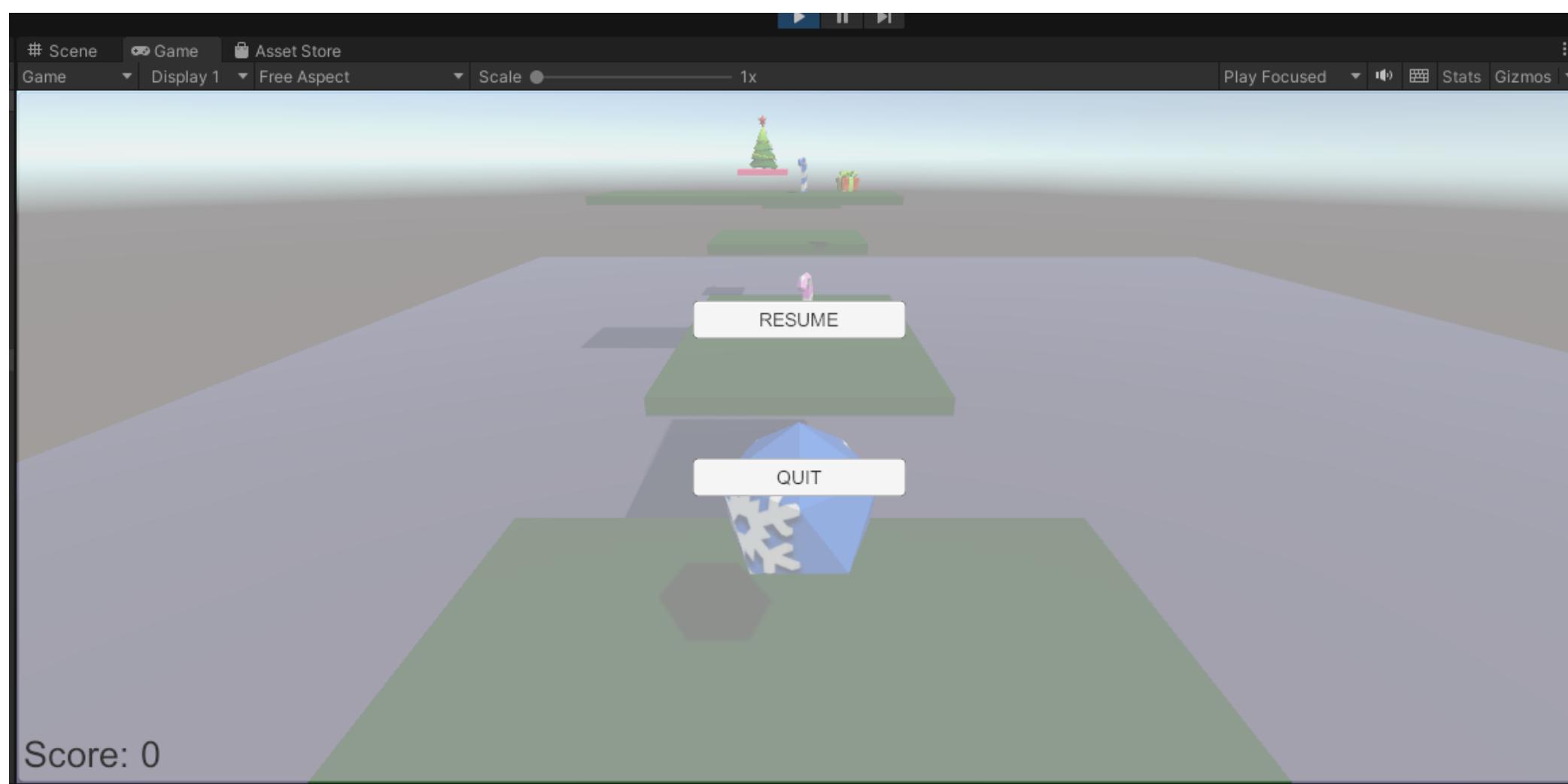
Make screen UI

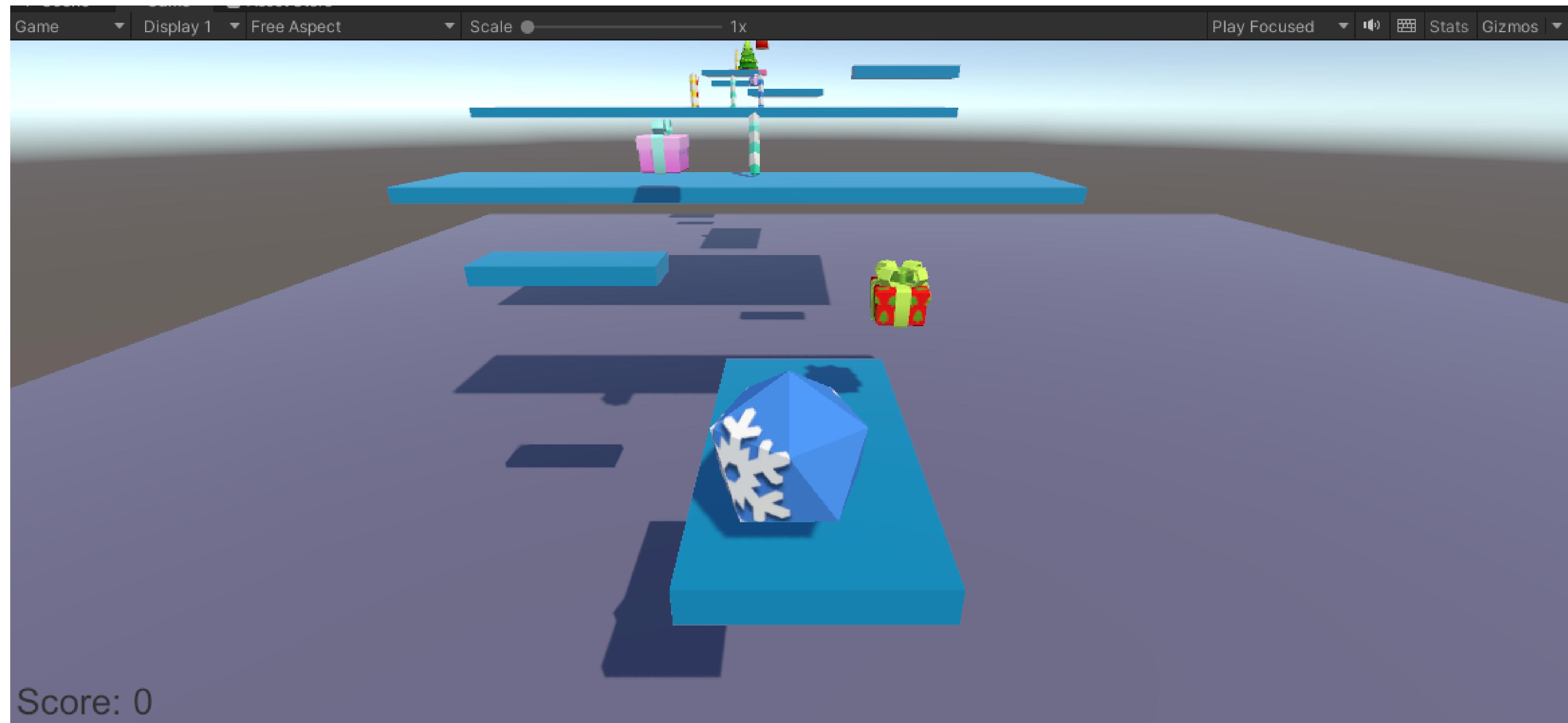
01 Add Canvas object

02 Make Panel with 'Resume' and 'Quit' buttons

03 Write PauseMenu script to add button functionality

04 Attach objects and scripts





Conclusion



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Thank You

Any Questions?



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Social Media



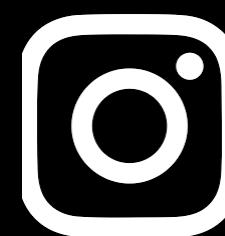
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