Unity

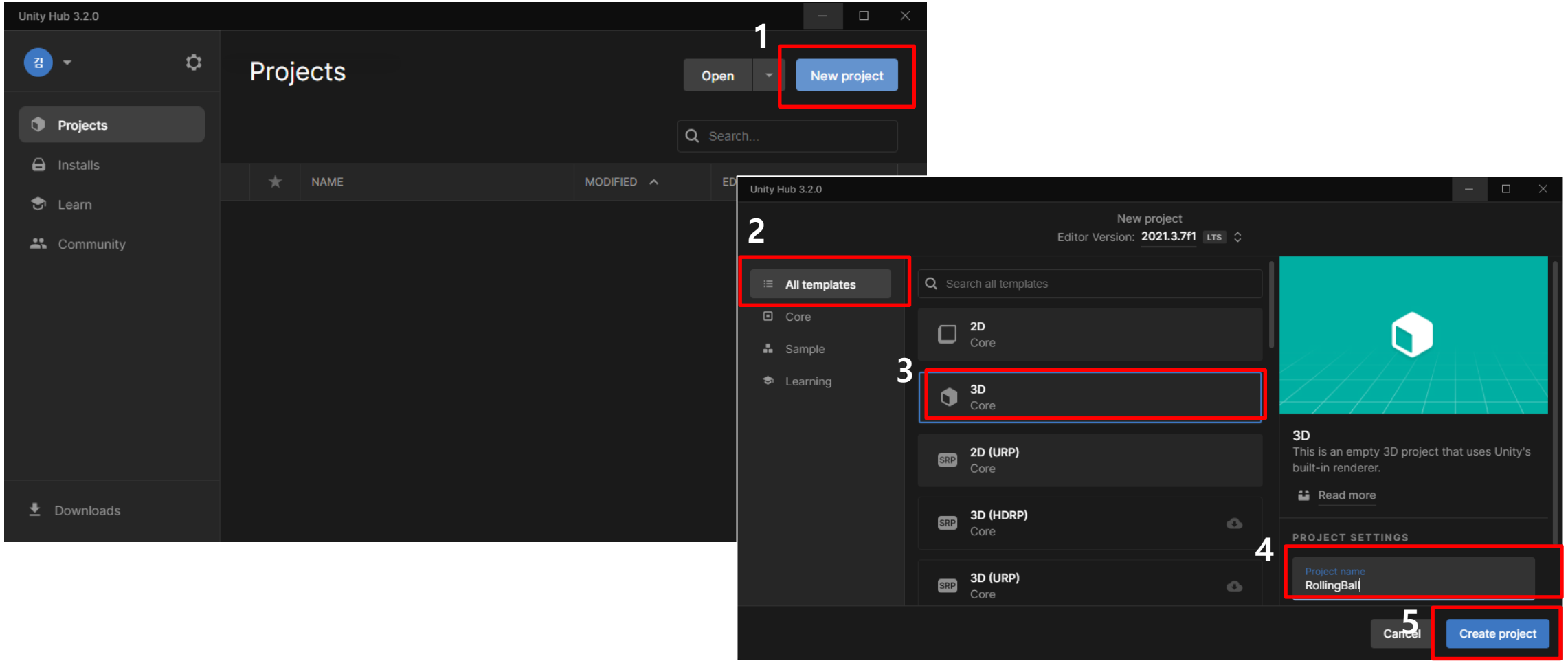
Game Programming

Simple Example

2021.3.7f1

KYUNGSUNG UNIVERSITY SINCE 1955

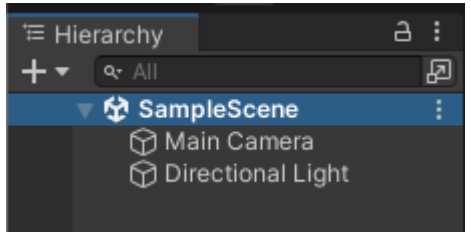
RollingBall 프로젝트 만들기



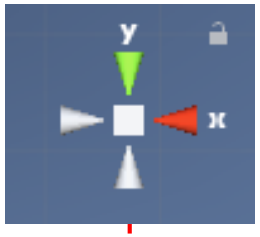
시점 확인하기

1. Hierarchy – Main Camera

1.1. Inspector – Transform – Position X:0, Y:0, Z:0



2. 씬 기즈모를 이용하여 씬의 방향 변경



원뿔 부분을 클릭하여 씬의 방향을 회전시킴

X가 오른쪽, Y가 위쪽에 오도록 변경

바닥 만들기

1. Cube 추가하기

1.1. Hierarchy – Create – 3D Object - Cube

2. Cube 위치 변경하기

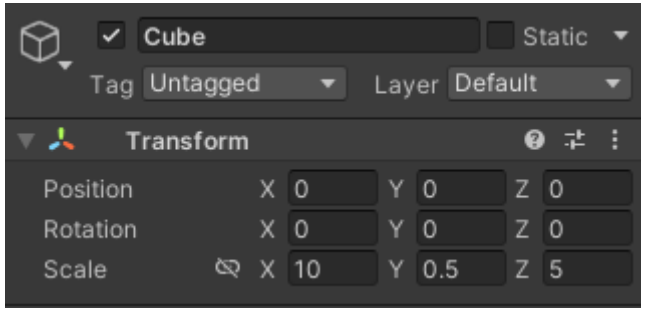
2.1. Inspector – Transform – Position 0, 0, 0

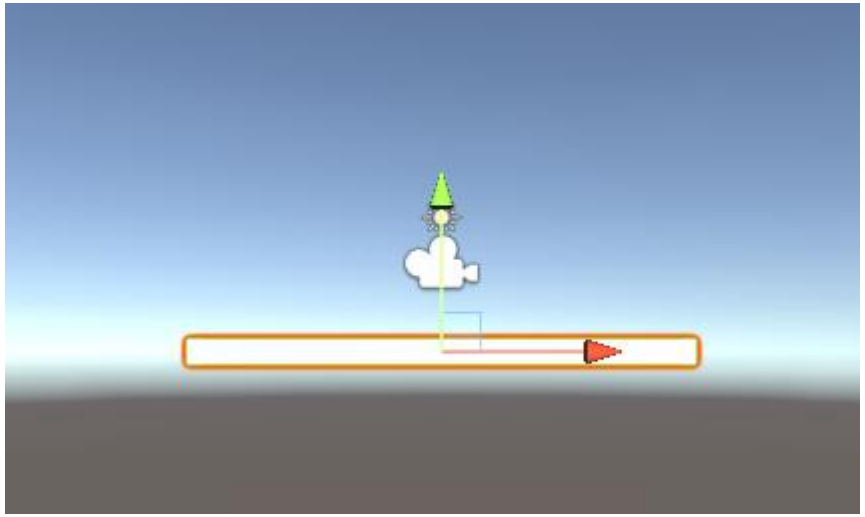
3. Cube 이름 변경하기

3.1. Hierarchy – Cube – Rename – “Floor”

4. Cube 크기 변경하기

4.1. Inspector – Transform – Scale 10, 0.5, 5





Tip(scene 뷰 조작)

시점의 선회 : *Alt + 드래그*

Main Camera를 중심으로 시점 변화

줌 업/아웃 : *마우스 휠*

주시점에서 줌인, 줌아웃

시점의 평행 이동 : *Ctrl + Alt + 드래그*

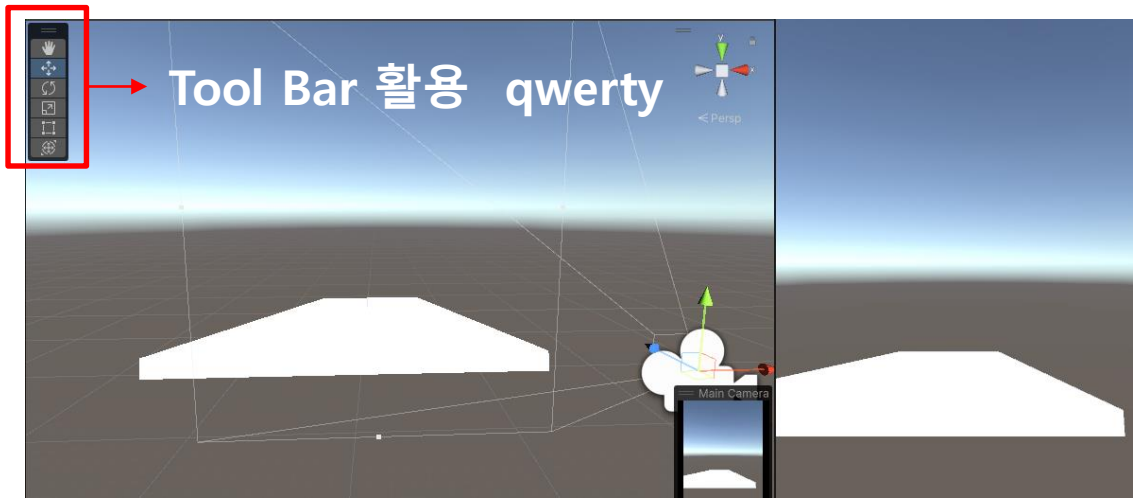
Main Camera를 중심으로 시점 변화

시점을 상하/좌우 평행 이동

Object에 시점 맞추기 : *F key*

현재 선택된 Object에 시점이 자동 조정

Scene에 Cube를 생성하고 먼저 Main Camera의 위치를 조정하는 것과 시점의 변화를 주는 연습이 필요



Directional Light : 방향성 광원, 또는 지향성 광원으로 불리는 용어로 거리나 위치에 관계없이 한 방향으로 비추는 광원

벽 만들기

1. Cube 추가하기

1.1. Hierarchy – Create – 3D Object - Cube

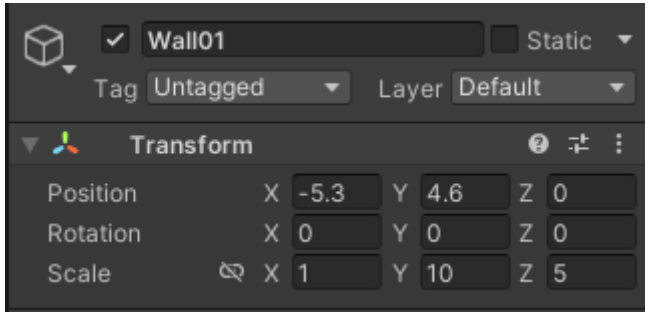
2. Cube 이름 변경하기

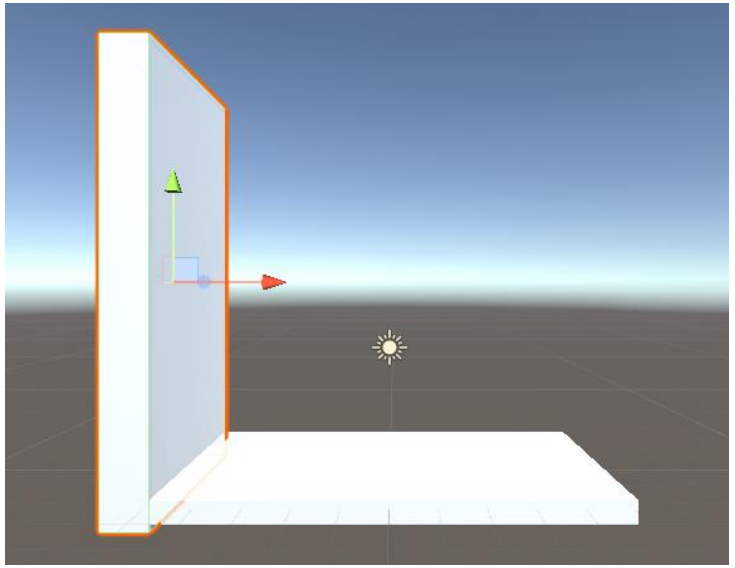
2.1. Hierarchy – Cube – Rename – “Wall01”

3. Wall01 위치, 크기 변경하기

3.1. Inspector - Transform – Position -5.3, 4.6, 0

3.2. Inspector – Transform – Scale 1, 10, 5





반대쪽 벽 만들기

1. 벽 복제하기

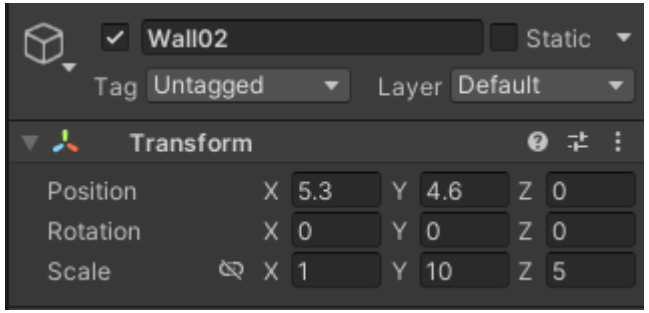
1.1. Hierarchy – Wall01 – Duplicate

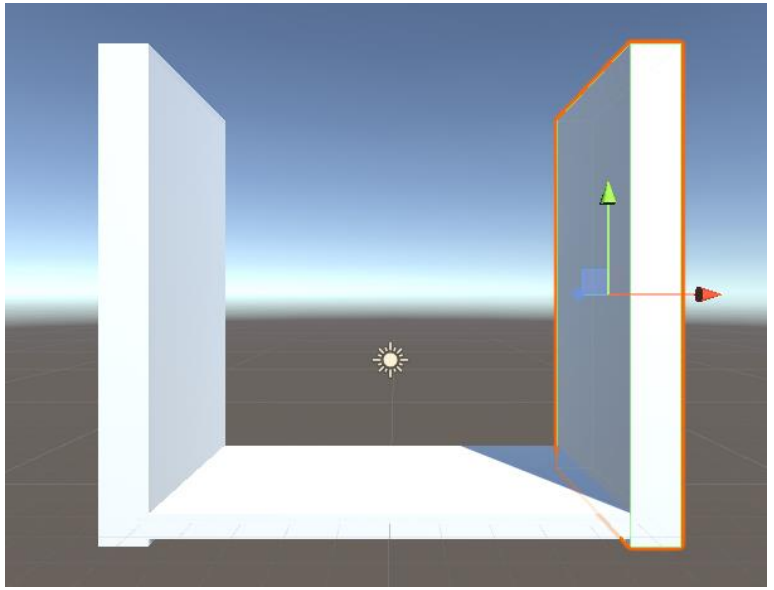
2. Wall01(1) 이름 변경하기

2.1. Hierarchy – Wall01(1) – Rename – “Wall02”

3. Wall02 위치, 크기 변경하기

3.1. Inspector - Transform – Position 5.3, 4.6, 0





안쪽 벽 만들기

1. Cube 추가하기

1.1. Hierarchy – 3D Object - Cube

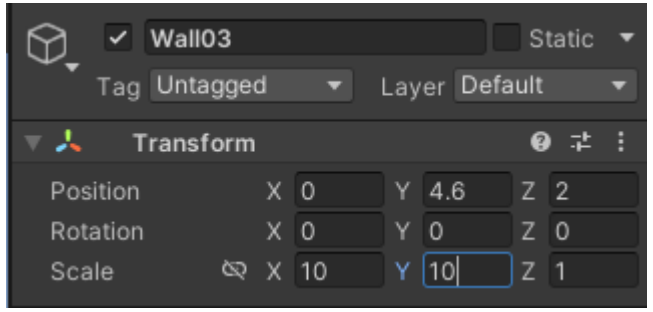
2. Cube 이름 변경하기

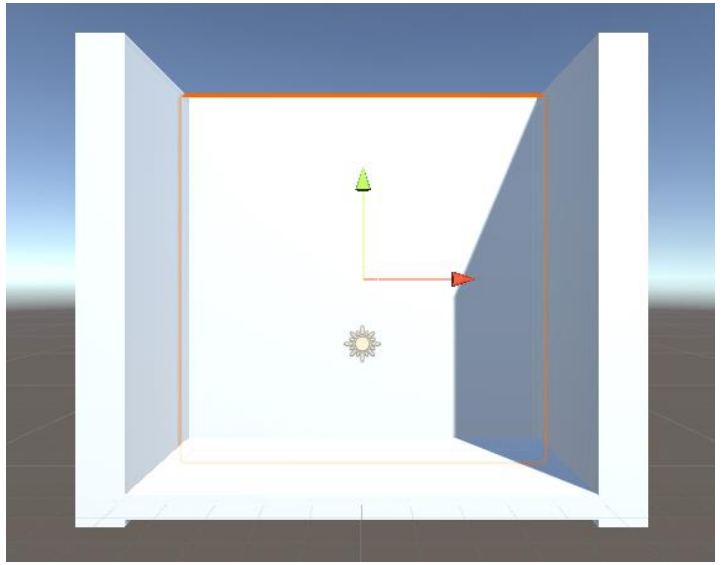
2.1. Hierarchy – Cube – Rename – “Wall03”

3. Wall103 위치, 크기 변경하기

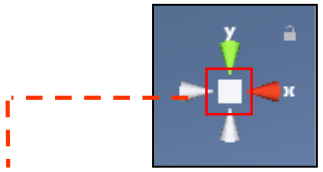
3.1. Inspector - Transform – Position 0, 4.6, 2

3.2. Inspector - Transform – Scale 10, 10, 1





4. 퍼스펙모드로 변경



씬 기즈모 내의 사각형을 클릭하여 퍼스펙티브모드 ↔ 아이소메트릭 모드 변경

카메라, 라이트 변경하기

1. Main Camera 위치와 각도 변경하기

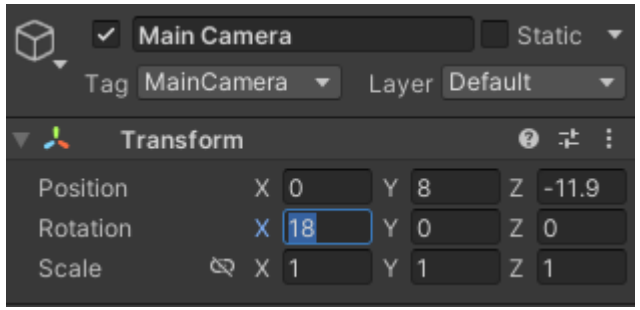
1.0. Game 뷰 클릭 → Scene 뷰 클릭

1.1. Hierarchy – Main Camera

1.2. Inspector – Transform – Position 0, 8, -11.9

1.3. Inspector – Transform – Rotation 18, 0, 0

1.4. Game 뷰 클릭

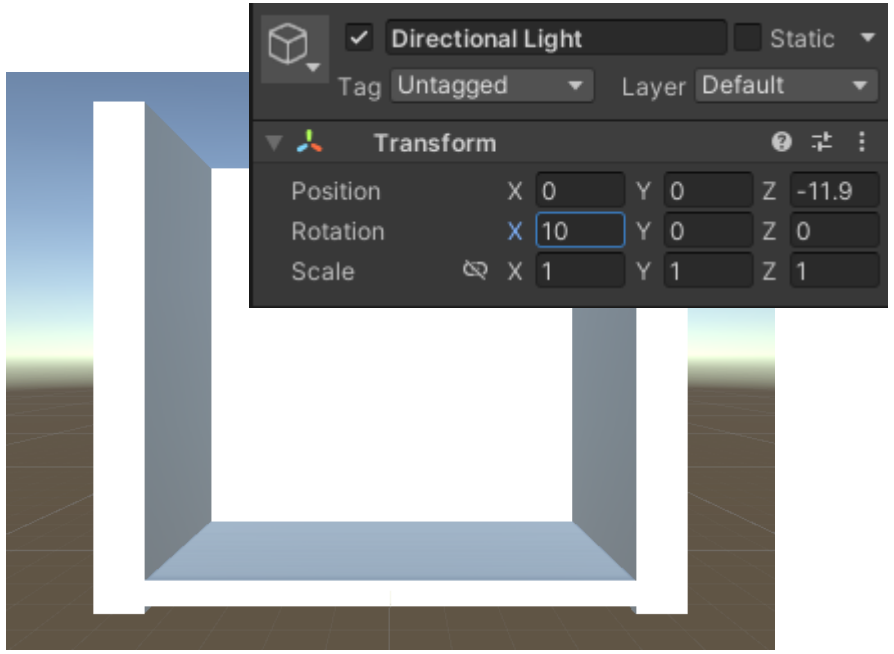


2. Directional Light 위치와 각도 변경하기

2.1. Hierarchy – Directional Light

2.2. Inspector – Transform – Position 0, 0, -11.9

2.3. Inspector – Transform – Rotation 10, 0, 0



경사면 만들기(1/5)

1. Cube 추가 및 이름 변경하기

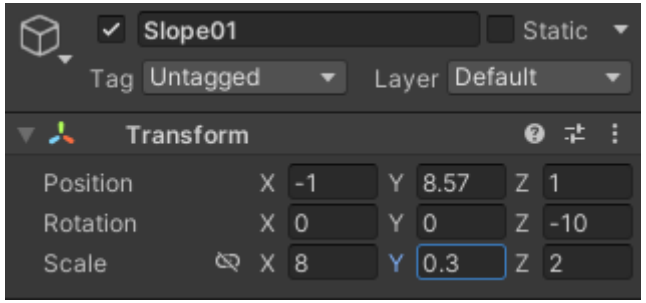
1.1. Hierarchy – 3D Object – Cube – Rename – “Slope01”

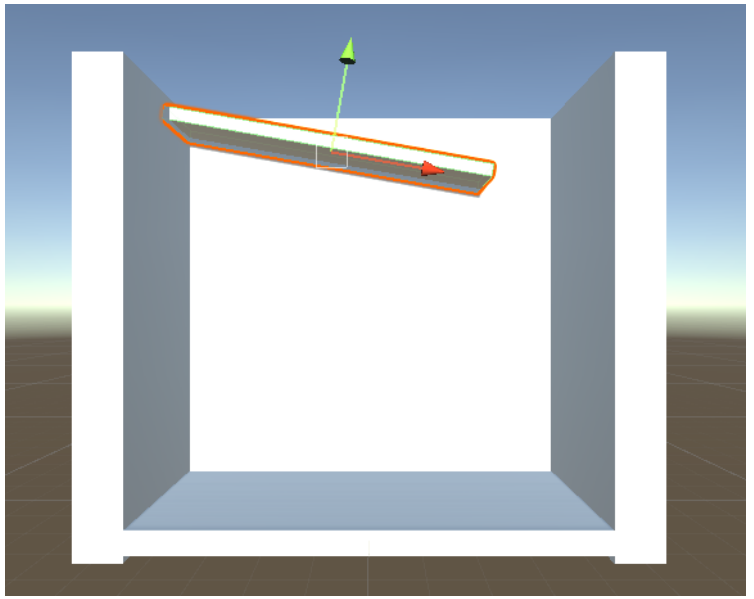
2. Slope01 위치, 각도, 크기 변경하기

2.1. Inspector – Transform – Position -1, 8.57, 1

2.2. Inspector – Transform – Rotation 0, 0, -10

2.3. Inspector – Transform – Scale 8, 0.3, 2





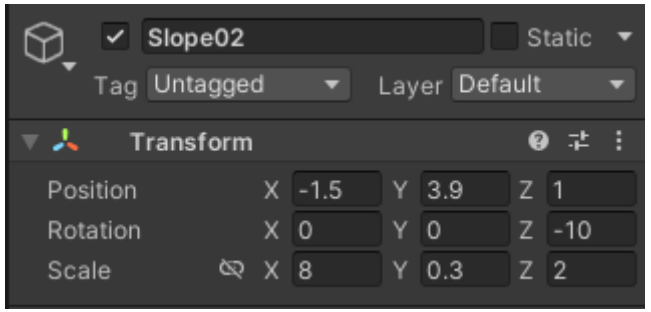
경사면 만들기(2/5)

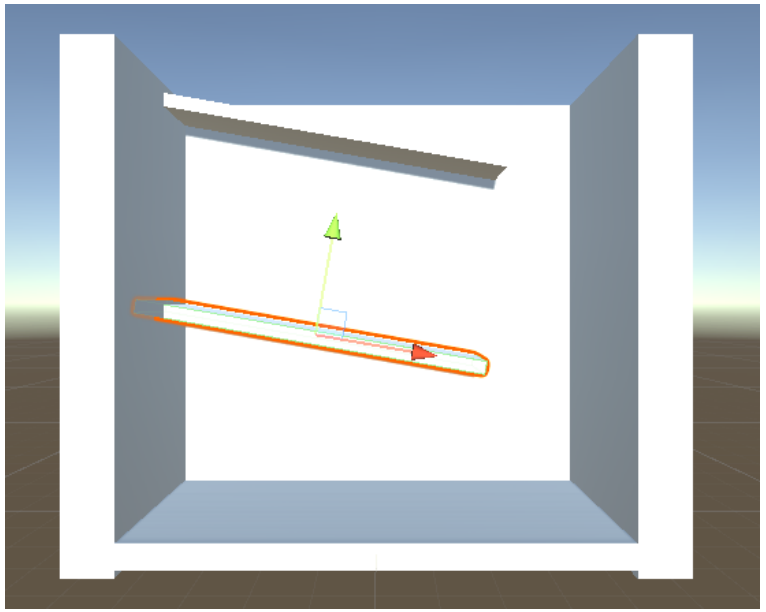
1. Slope02 만들기

1.1. Hierarchy – Slope01 – Duplicate – Rename – “Slope02”

2. Slope02 위치 변경하기

2.1. Inspector – Transform – Position -1.5, 3.9, 1





경사면 만들기(3/5)

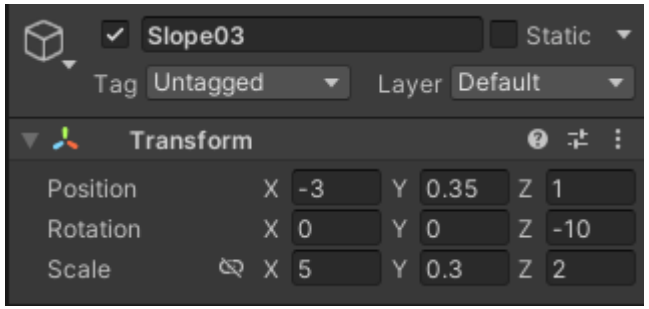
1. Slope03 만들기

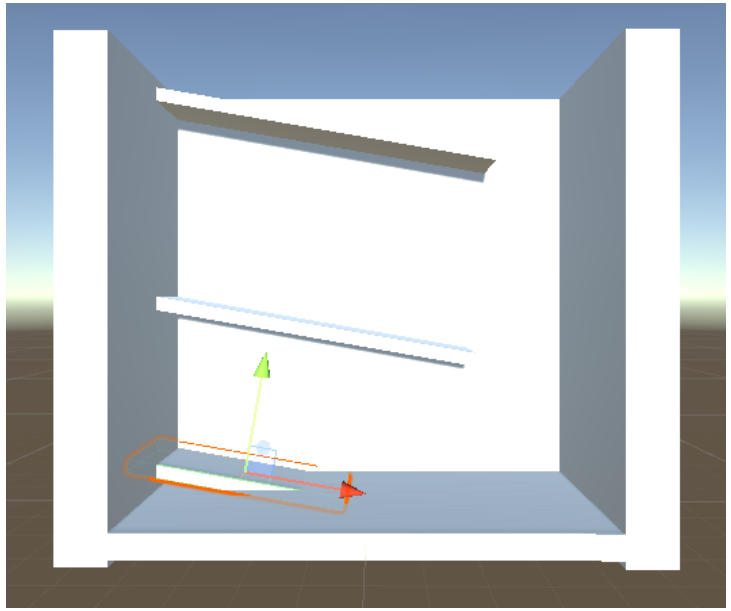
1.1. Hierarchy – Slope02 – Duplicate – Rename – “Slope03”

2. Slope03 위치, 크기 변경하기

2.1. Inspector – Transform – Position -3, 0.35, 1

2.2. Inspector – Transform – Scale 5, 0.3, 2





경사면 만들기(4/5)

1. Slope04 만들기

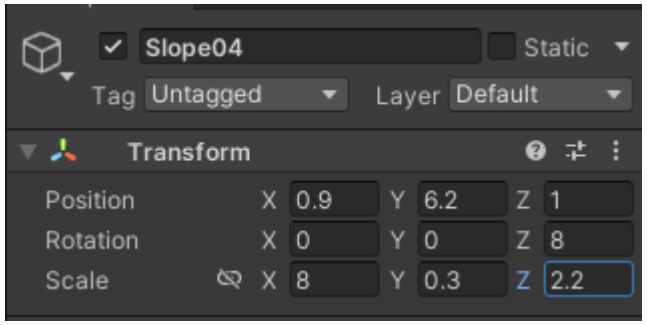
1.1. Hierarchy – Slope03 – Duplicate – Rename – “Slope04”

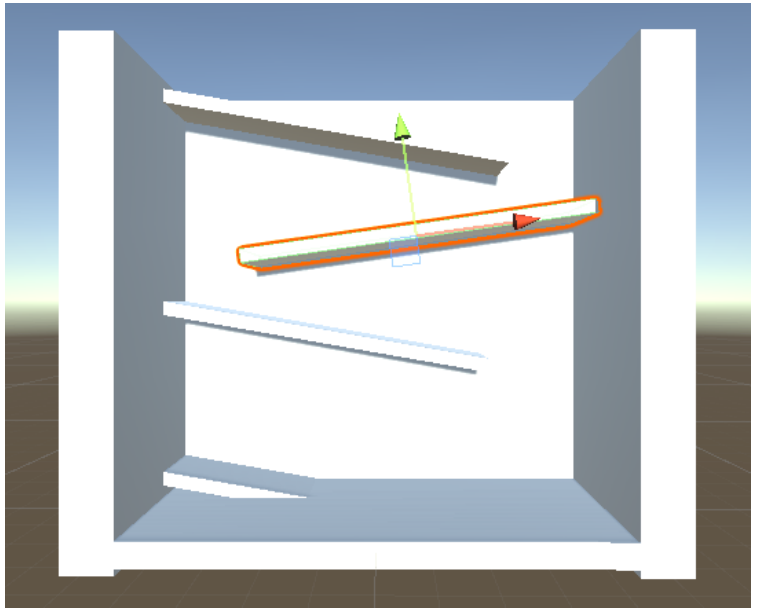
2. Slope04 위치, 각도, 크기 변경하기

2.1. Inspector – Transform – Position 0.9, 6.2, 1

2.2. Inspector – Transform – Rotation 0, 0, 8

2.3. Inspector – Transform – Scale 8, 0.3, 2.2





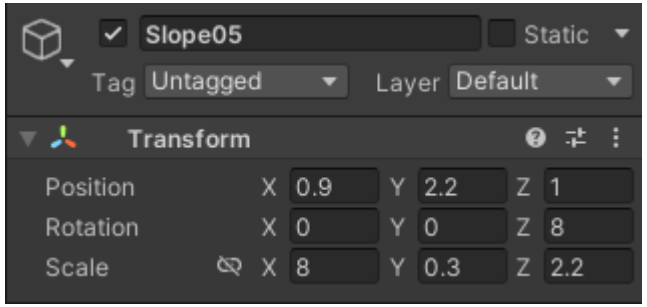
경사면 만들기(5/5)

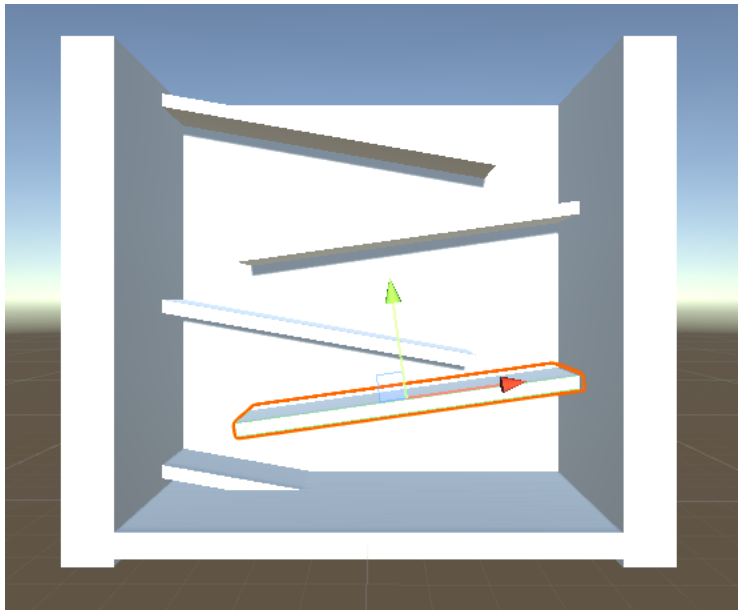
1. Slope05 만들기

1.1. Hierarchy – Slope04 – Duplicate – Rename – “Slope05”

2. Slope05 위치 변경하기

2.1. Inspector – Transform – Position 0.9, 2.2, 1

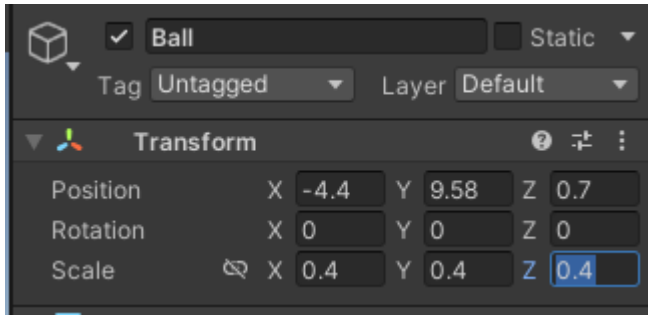




공 만들기

1. Sphere 만들기 및 이름 변경하기

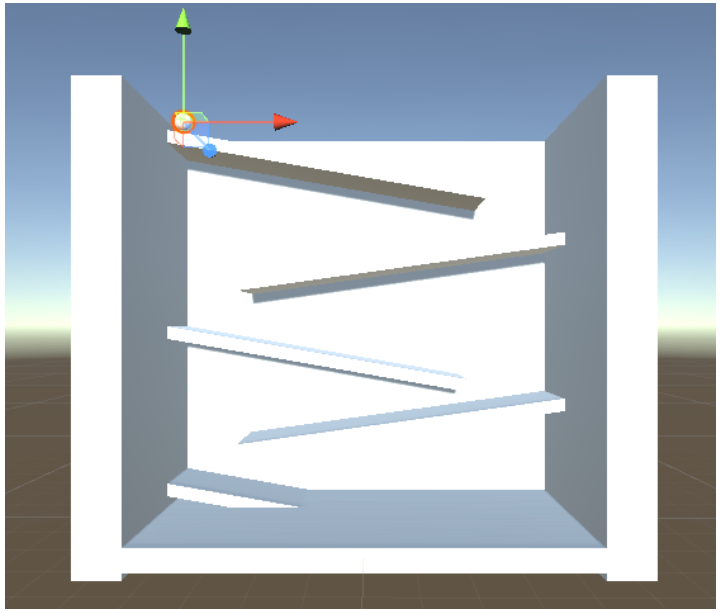
1.1. Hierarchy – 3D Object – Sphere – Rename – “Ball”



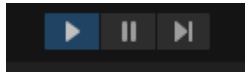
2. Ball 위치, 크기 변경하기

2.1. Inspector – Transform – Position -4.4, 9.58, 0.7

2.2. Inspector – Transform – Scale 0.4, 0.4, 0.4



3. Play



물리 동작 설정하기

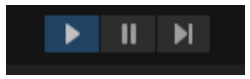
1. Ball 선택하기

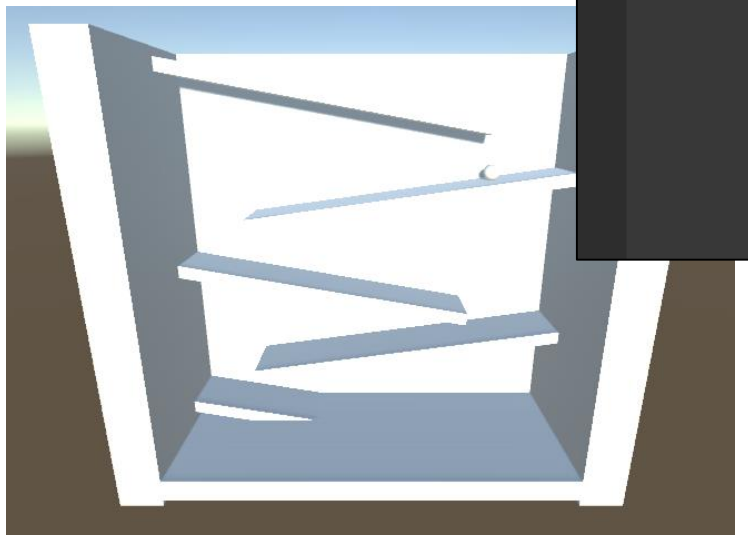
1.1. Hierarchy – Ball

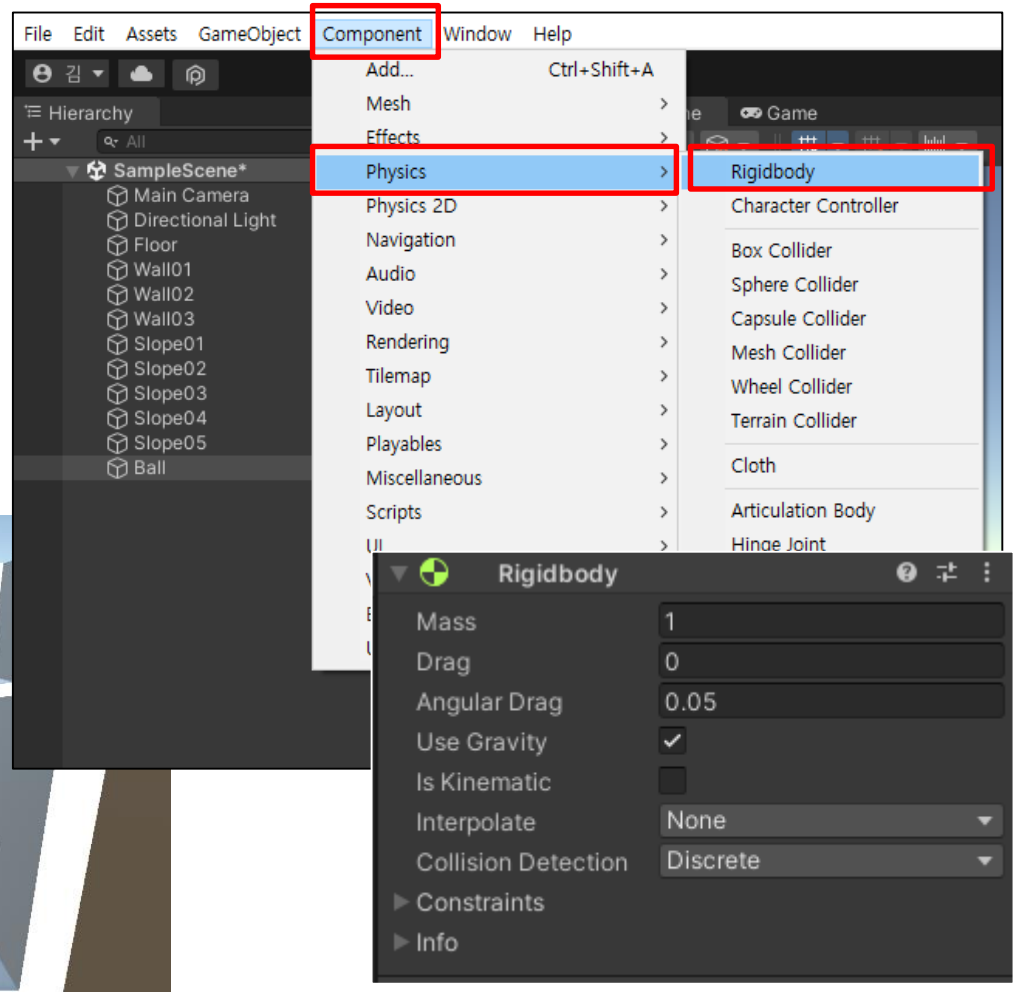
2. 물리 동작 설정하기

2.1. Component – Physics - Rigidbody

3. Play







오브젝트에 중력을 적용하기 위해서는 Use Gravity를 체크

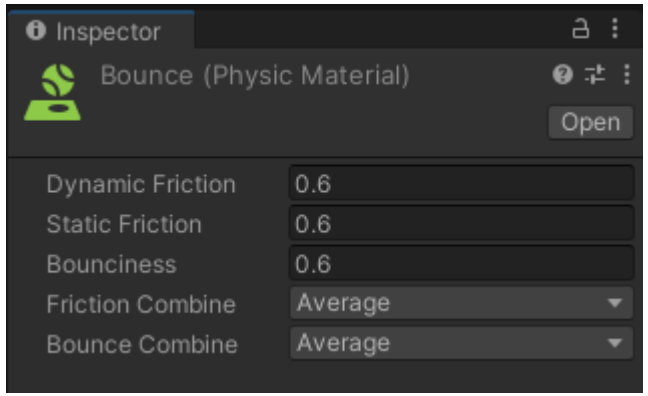
물리 속성 변경하기

1. Bounce 만들기

1.1. Project – Create – Physic Material – Rename – “Bounce”

2. Bounce 탄성 값 변경하기

2.1. Inspector – Bounciness 0.6



공에 속성 적용하기

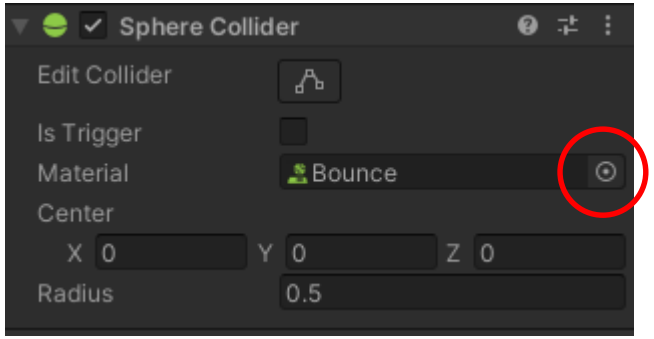
1. Ball 선택하기

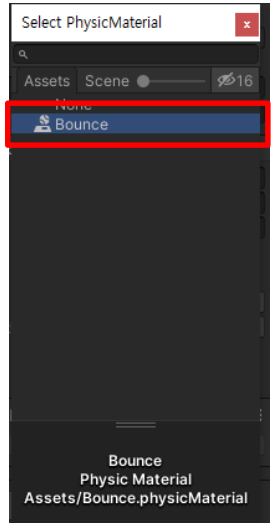
1.1. Hierarchy - Ball

2. Ball에 Bounce 적용하기

2.1. Inspector –Sphere Collider – Material - Bounce

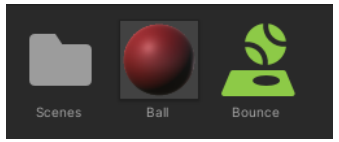
Project - bounce를 Hierarchy – Ball로 드래그 해도 됨

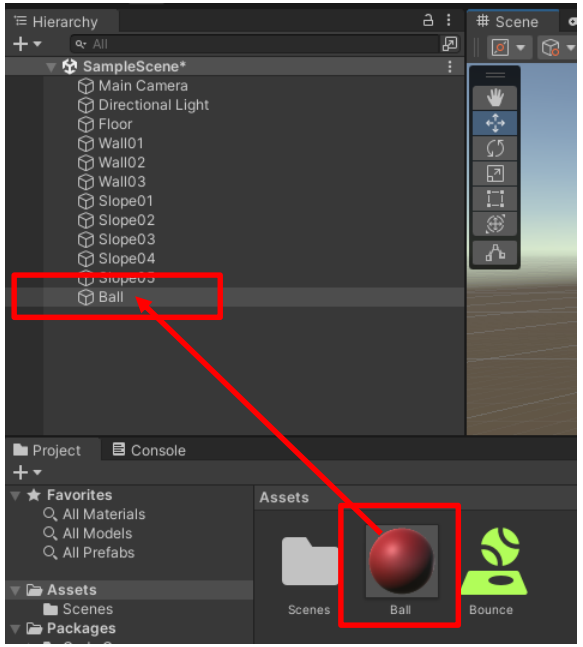


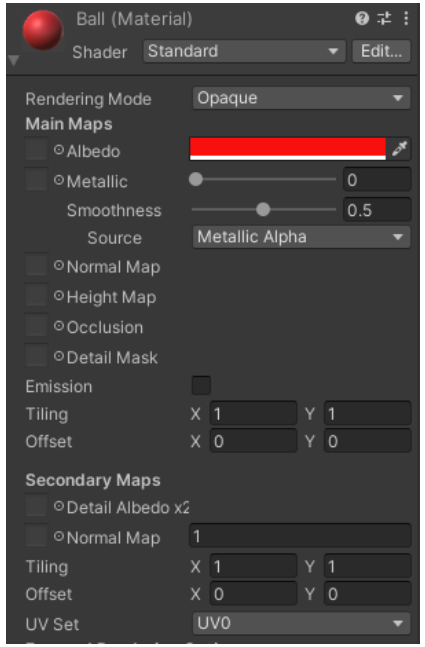


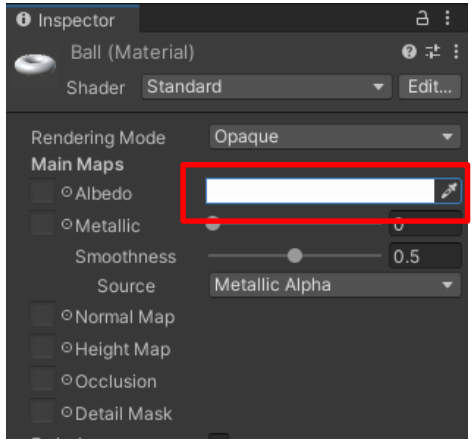
공의 색상 변경하기 및 적용하기

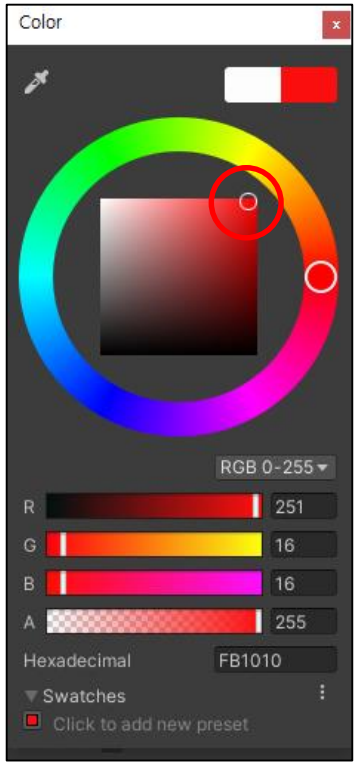
1. Project – Create – Material – Rename – “Ball”
2. Inspector – Main Maps – Albedo – Color Choice
3. Project – Ball을 Hierarchy – Ball로 드래그



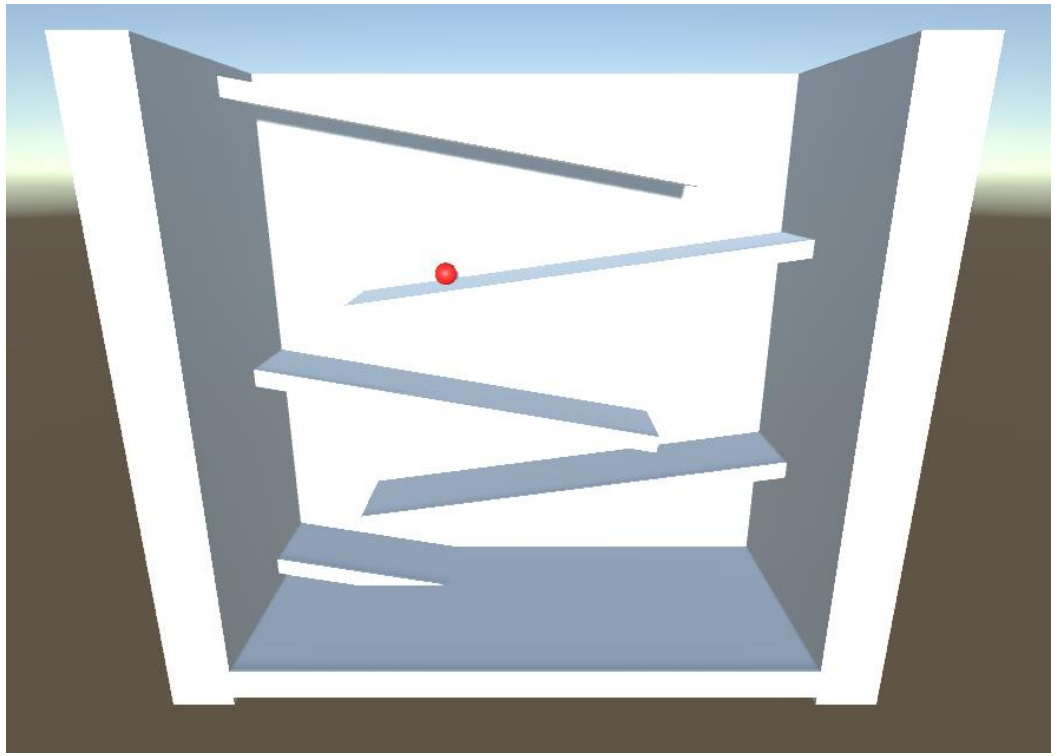








Play



Reference

- ✓ https://unity.com/
- ✓ (초보자를 위한) 유니티 5 입문, 아라카와 다쿠야, 아사노 유이치 지음, 윤준 옮김, 한빛미디어