

Unity – Collision Process

NHN NEXT
서형석

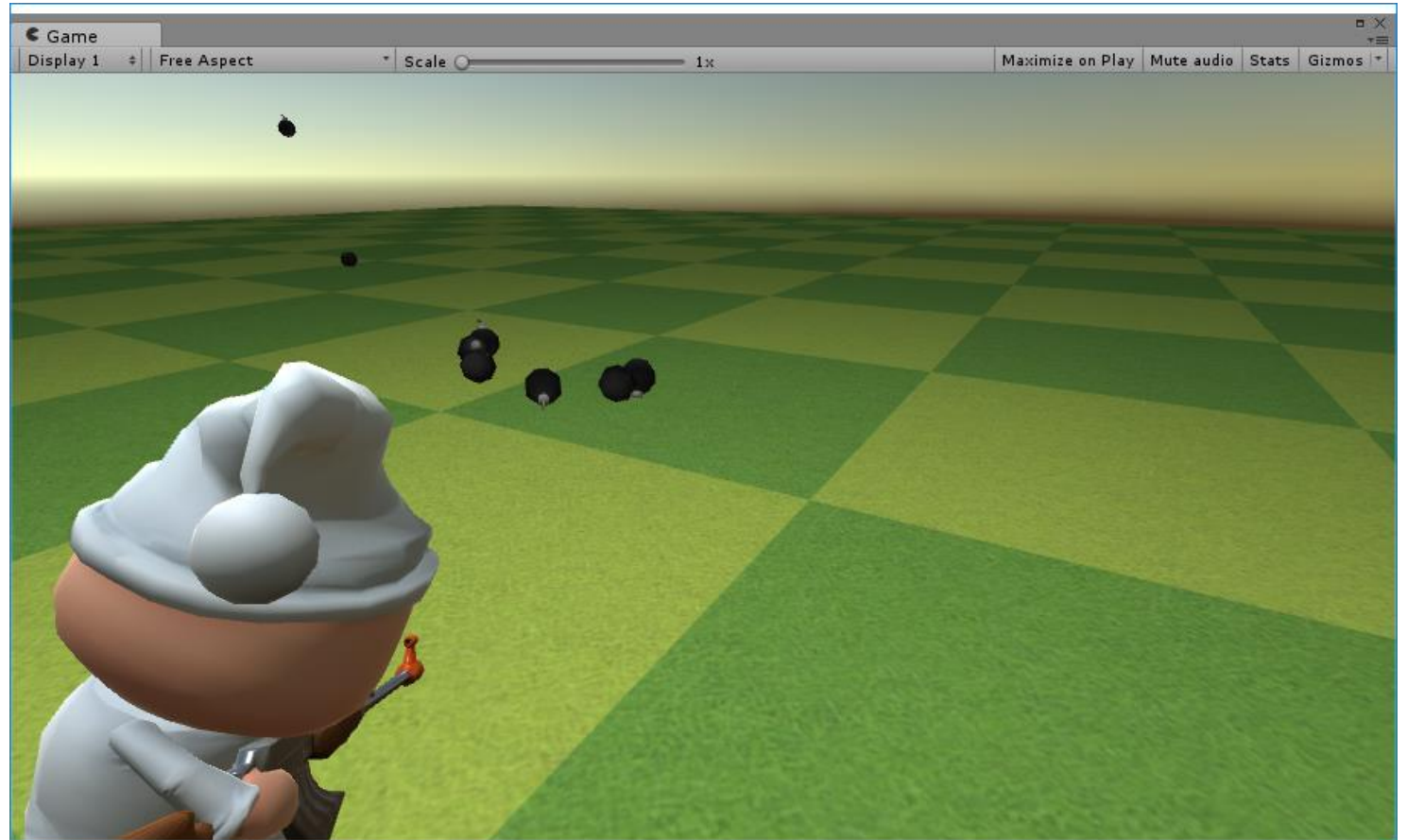
Unity

- 포탄이 누군가와 충돌하면 기대하는 동작은 무엇인가?



Unity

- 현재 상황 : 포탄이 볼링공처럼 굴러다닌다.



Unity

- 포탄의 충돌 감지

```
public class Bomb : MonoBehaviour
{
    void OnCollisionEnter( Collision other )
    {
        Debug.Log( "OnCollisionEnter : " + other.gameObject.name );
    }
}
```

Unity

- 포탄 제거

```
public class Bomb : MonoBehaviour
{
    void OnCollisionEnter( Collision other )
    {
        // Debug.Log( "OnCollisionEnter : " + other.gameObject.name );
        Destroy( gameObject );
    }
}
```

Unity

- 파티클 생성

```
public class Bomb : MonoBehaviour
{
    public GameObject explosionParticle;

    void OnCollisionEnter( Collision other )
    {
        // Debug.Log( "OnCollisionEnter : " + other.gameObject.name );

        GameObject explosionParticleObj = Instantiate(explosionParticle) as GameObject;
        explosionParticleObj.transform.position = transform.position;

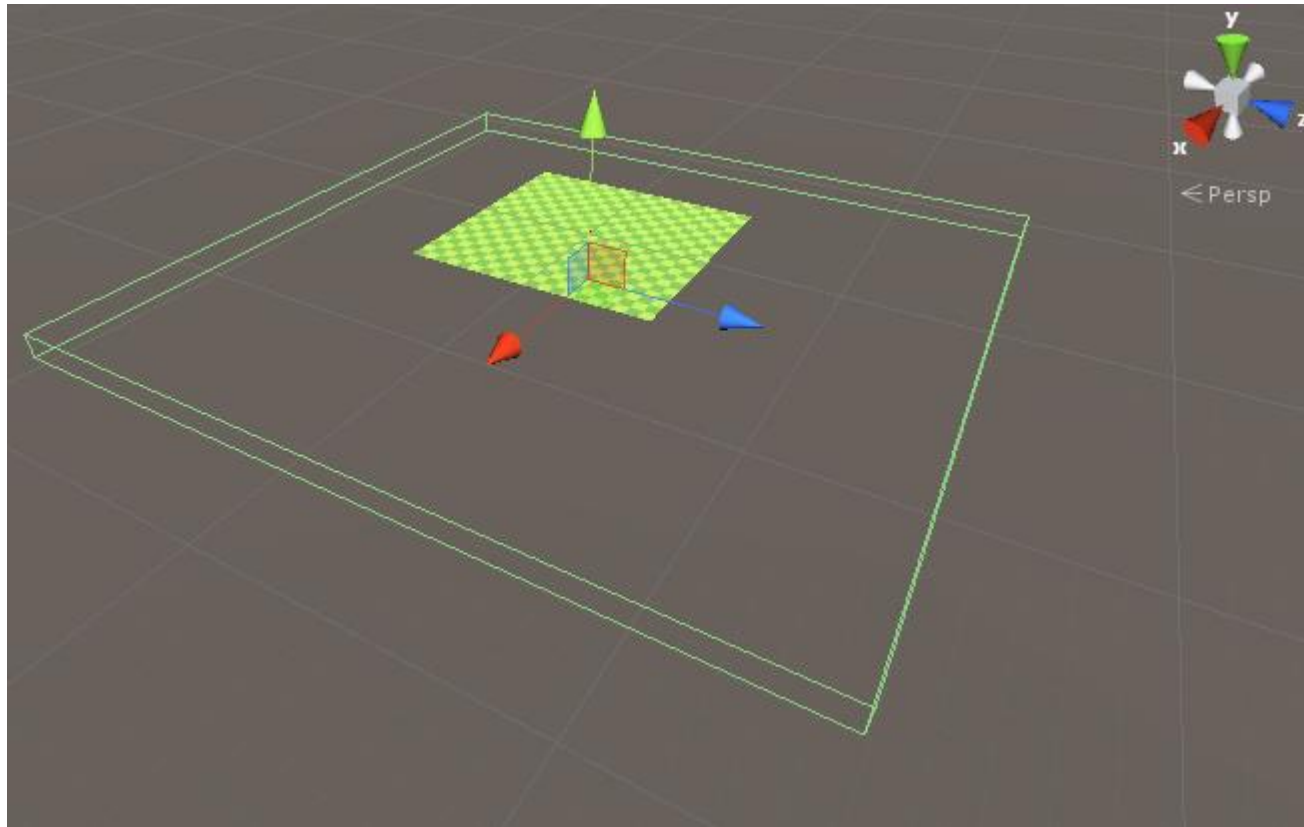
        Destroy( gameObject );
    }
}
```

Unity

- 문제점 : 포탄이 바닥과 충돌시 파괴되지만,
바닥 밖으로 떨어진다면 어떻게 되는가?

Unity – 컴퍼넌트 구현

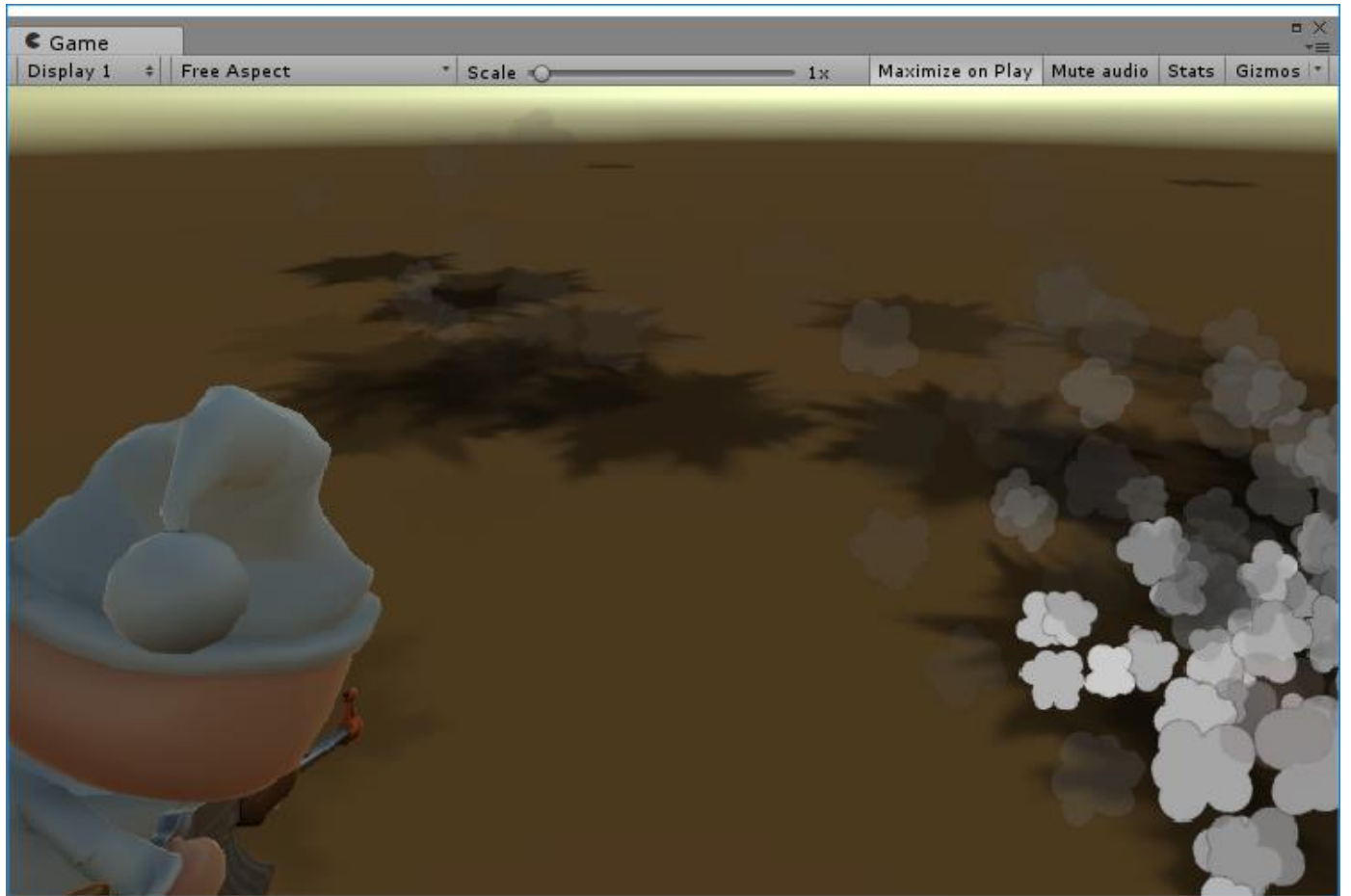
- 충돌을 위한 DestroyArea 설정



Unity – 컴퍼넌트 구현

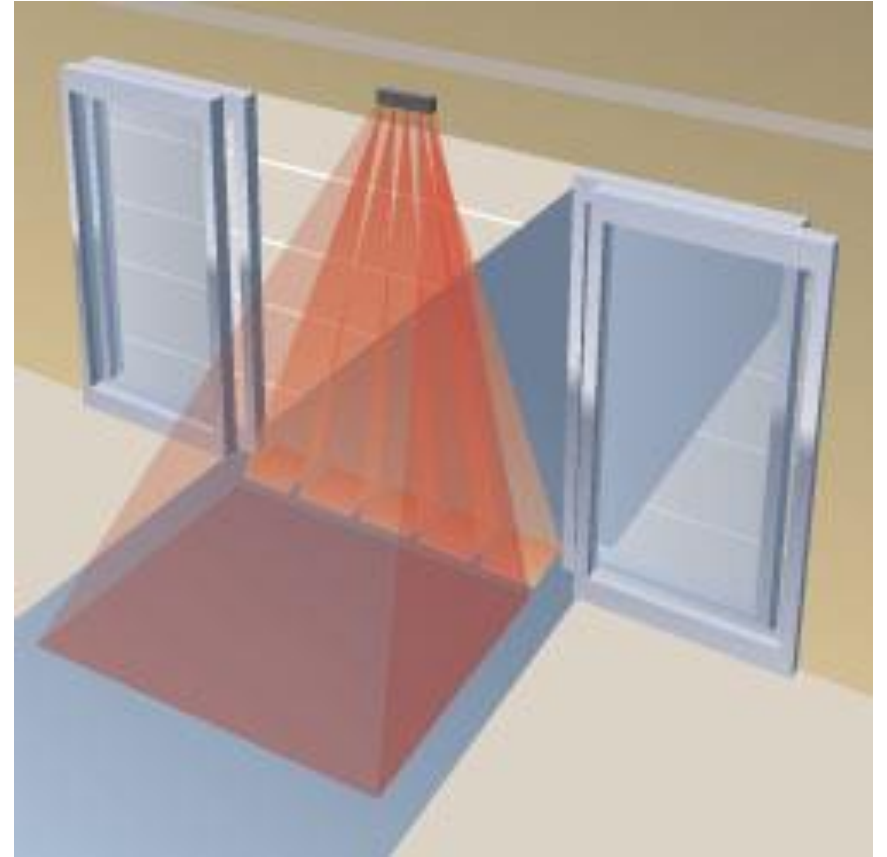
- DestroyArea의 문제점 파악

**DestroyArea 위에
왜 서있는가?**



Unity – 컴퍼넌트 구현

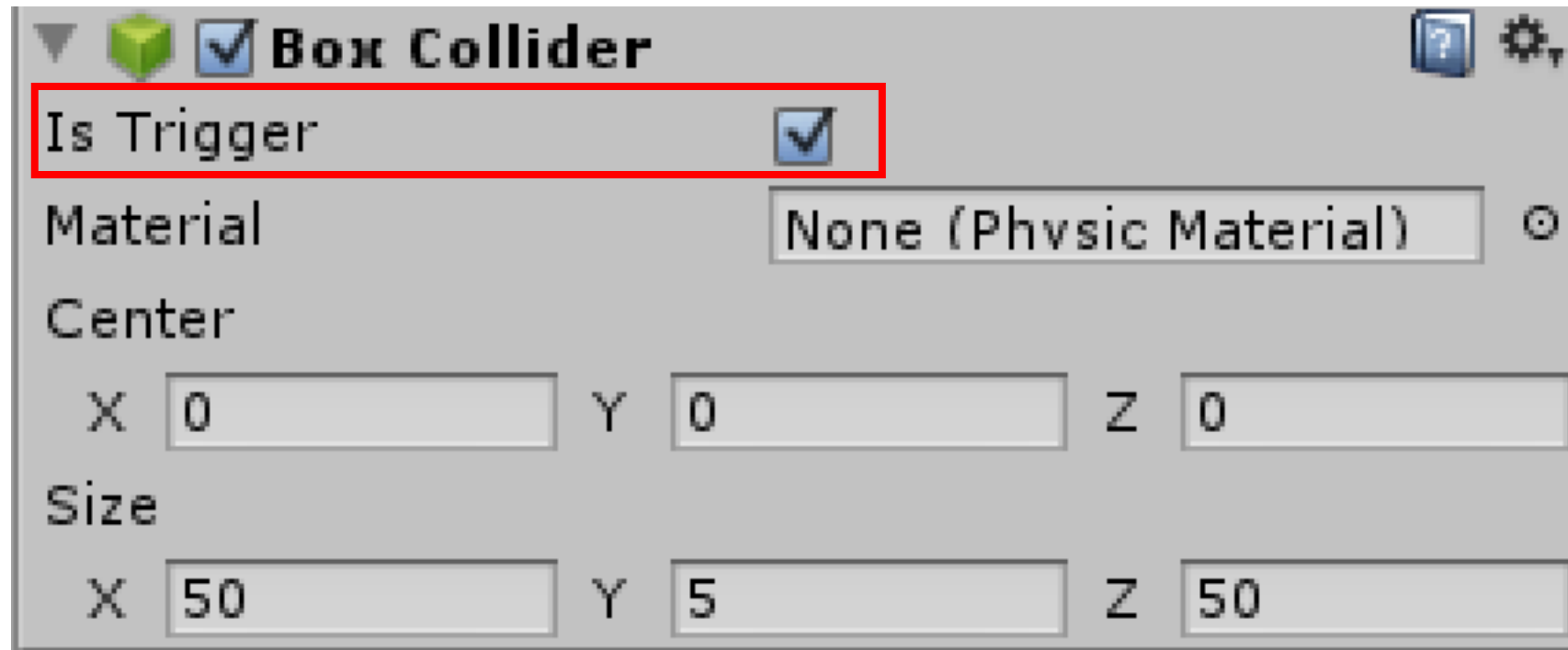
- Collider 와 Trigger의 차이



Unity

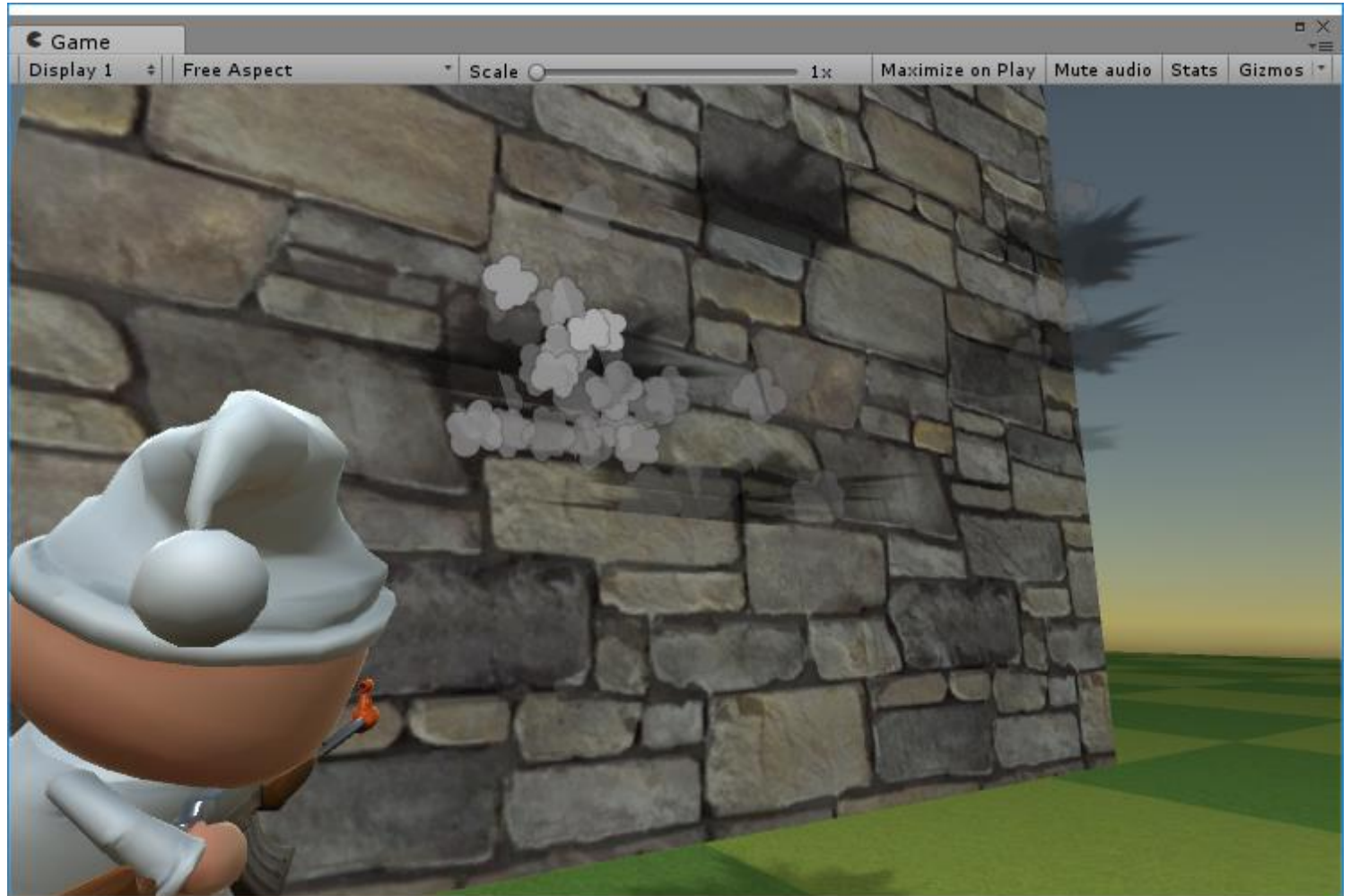
```
public class DestroyArea : MonoBehaviour
{
    void OnTriggerEnter( Collider other )
    {
        Debug.Log( "Enter Object : " + other.gameObject.name );
        if( other.gameObject.name.Contains( "Player" ) )
        {
            other.gameObject.transform.position =
                new Vector3( 0.0f, 100.0f, 0.0f );
        }
        else if ( other.gameObject.name.Contains( "Ball" ) )
        {
            Destroy( other.gameObject );
        }
    }
}
```

- Trigger 설정



Unity – 컴퍼넌트 구현

- 벽에는 그을음이 생기면 어색하기 때문에 수정이 필요



Unity

- BombScript 수정

```
public class Bomb : MonoBehaviour
{
    public GameObject groundExplosionParticle;
    public GameObject airExplosionParticle;

    void OnCollisionEnter( Collision other )
    {
        // Debug.Log( "OnCollisionEnter : " + other.gameObject.name );
        int collisionLayer = other.gameObject.layer;
        if( collisionLayer == LayerMask.NameToLayer("Ground") )
        {
            GameObject particleObj
                = Instantiate(groundExplosionParticle) as GameObject;
            particleObj.transform.position = transform.position;
        }
        else
        {
            GameObject particleObj
                = Instantiate(airExplosionParticle) as GameObject;
            particleObj.transform.position = transform.position;
        }
        Destroy( gameObject );
    }
}
```

Unity – 컴퍼넌트 구현

