KW 12 – Cyberspace Olympics 2
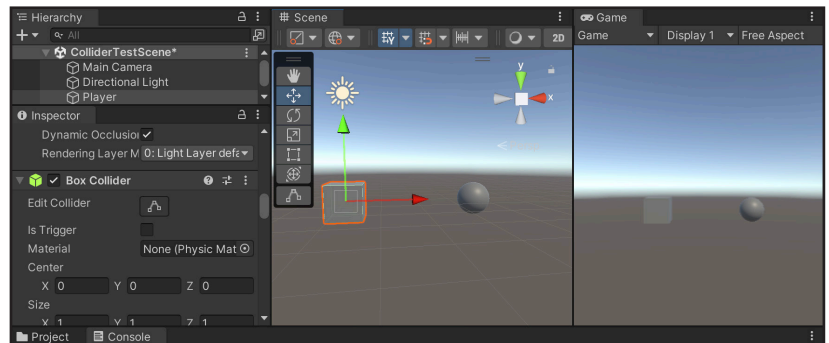
PHASE 2: REFINE PHYSICS PHYSICS

Based on your unity box prototype from last time you will now add or improve your use of physics, collisions, triggers and physics materials to improve your game.

Note: If you do not plan to include any use of the physics engine in your game, you may also submit solutions that take inspiration from "Der Lauf der Dinge" by Fischli-Weiss (https://www.youtube.com/watch?v=XL_2EF5fn8Q).

a. **Define rigidbody and collider use in your game:** Find out which object needs which type of collider: Is there physical interaction between objects (for example: player with wall), or is it just a trigger (for example for collectibles). Which objects have a rigidbody, and which do not. Do you need gravity, and if yes, in along which axis, and how strong?

Hint: Not all collisions produce a collision or trigger message. Collisions only occur if at least one object has a rigidbody attached to it, and if the Collision Action Matric (see https://docs.unity3d.com/Manual/CollidersOverview.html) is respected.

Moving objects in the scene view while the game plays is possible and helps to debug physics.

Hint 2: If you open a 'Game' and 'Scene' window side by side, you can move objects around in the scene view while the game is running. Collisions occur normally, and collision messages are sent normally. This helps to prototype without needing to write much code.

b. **Prototype and balance physical interactions:** Adjust object weights, material properties, collision detection (static, discrete, dynamic) to make the object interactions in your game feel good. For example, if you work on a Golf game, work on launching of the ball and its rolling properties on the ground.

Exercise submission (1 file):

1. Upload a short low-res video showcasing the physical interactions you prototyped.