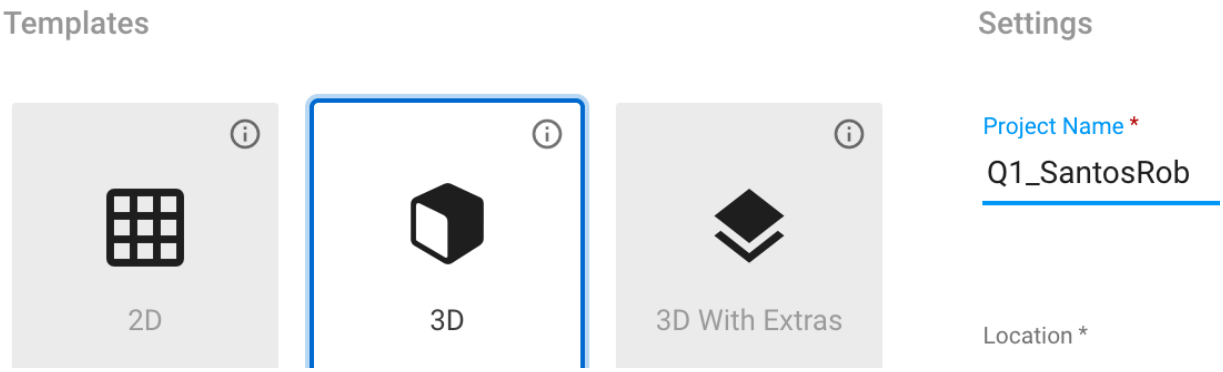
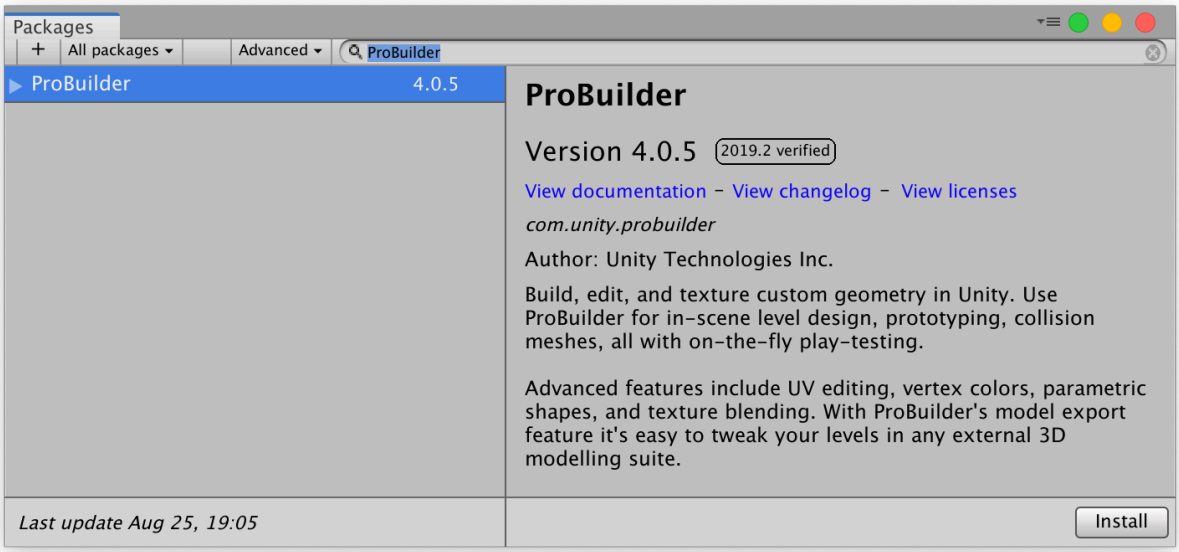
# Quest 1 - 3D Movement - Steps

## 1) Create Project




## 2) Import ProBuilder

Window->Package Manager*




*Use whatever version is latest

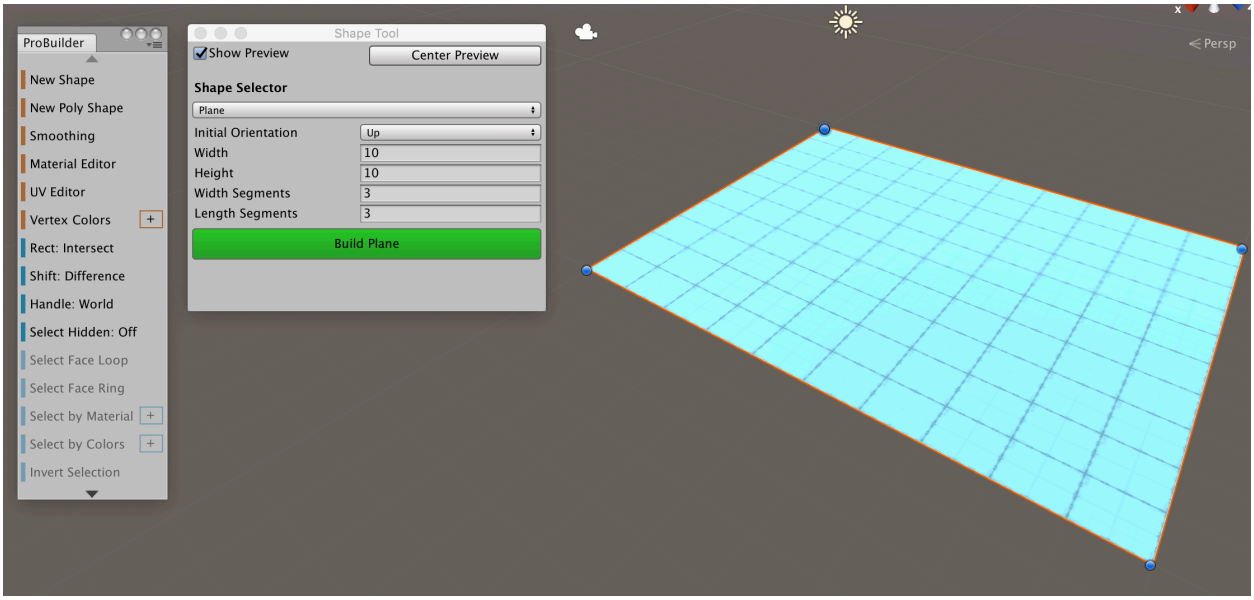
## 3) Rename your Scene to “Q1”

We will actually be reusing this project for multiple quests. To keep the project organized, we will use a different scene for each quest.

## 4) Set up “Work Area” (non-final level design)

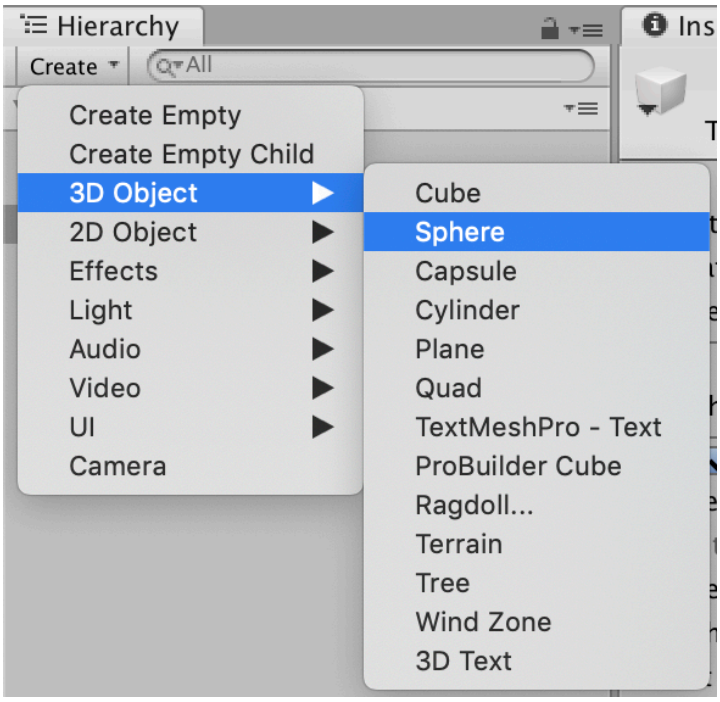
Tools->ProBuilder->ProBuilder Window

ProBuilder->New Shape->Plane

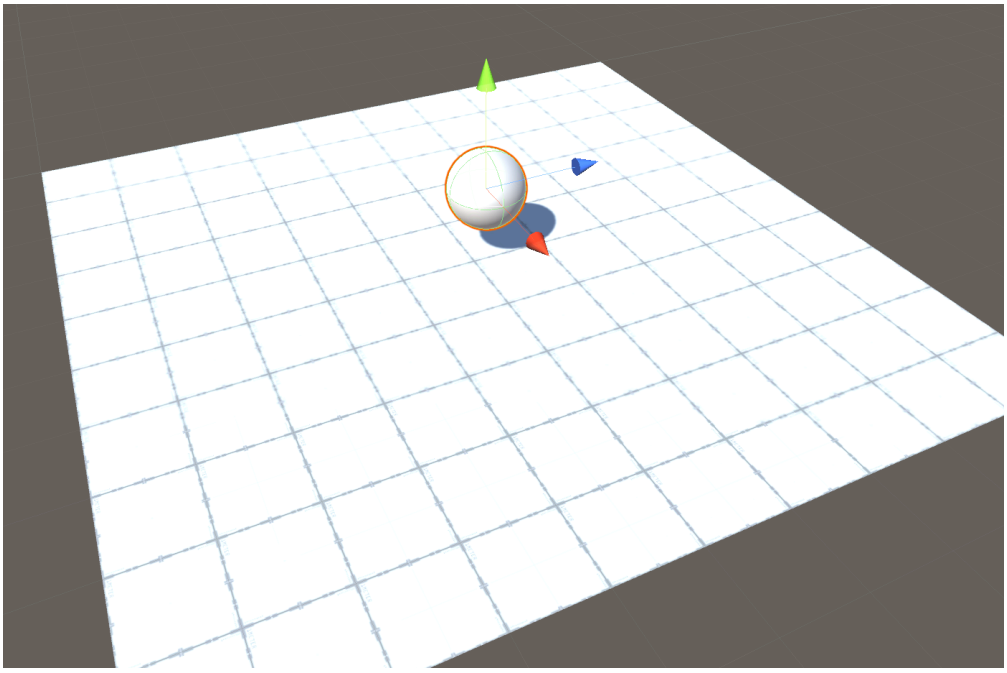



Don’t forget to click “Build” to finalize your choice.

# 5) Create Player Object

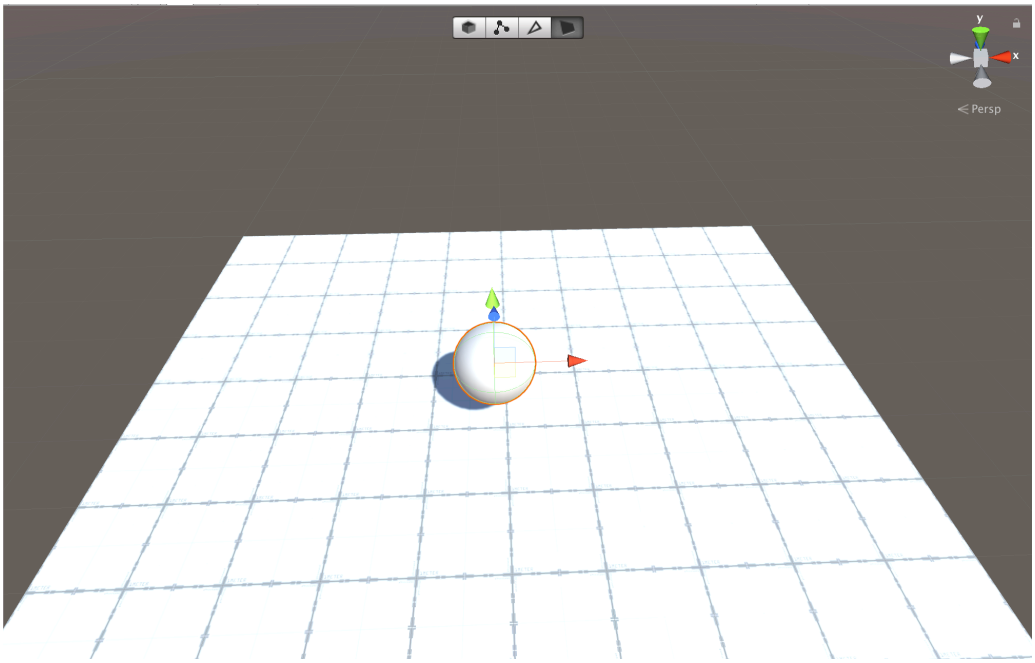



Center Player Object above Level Object

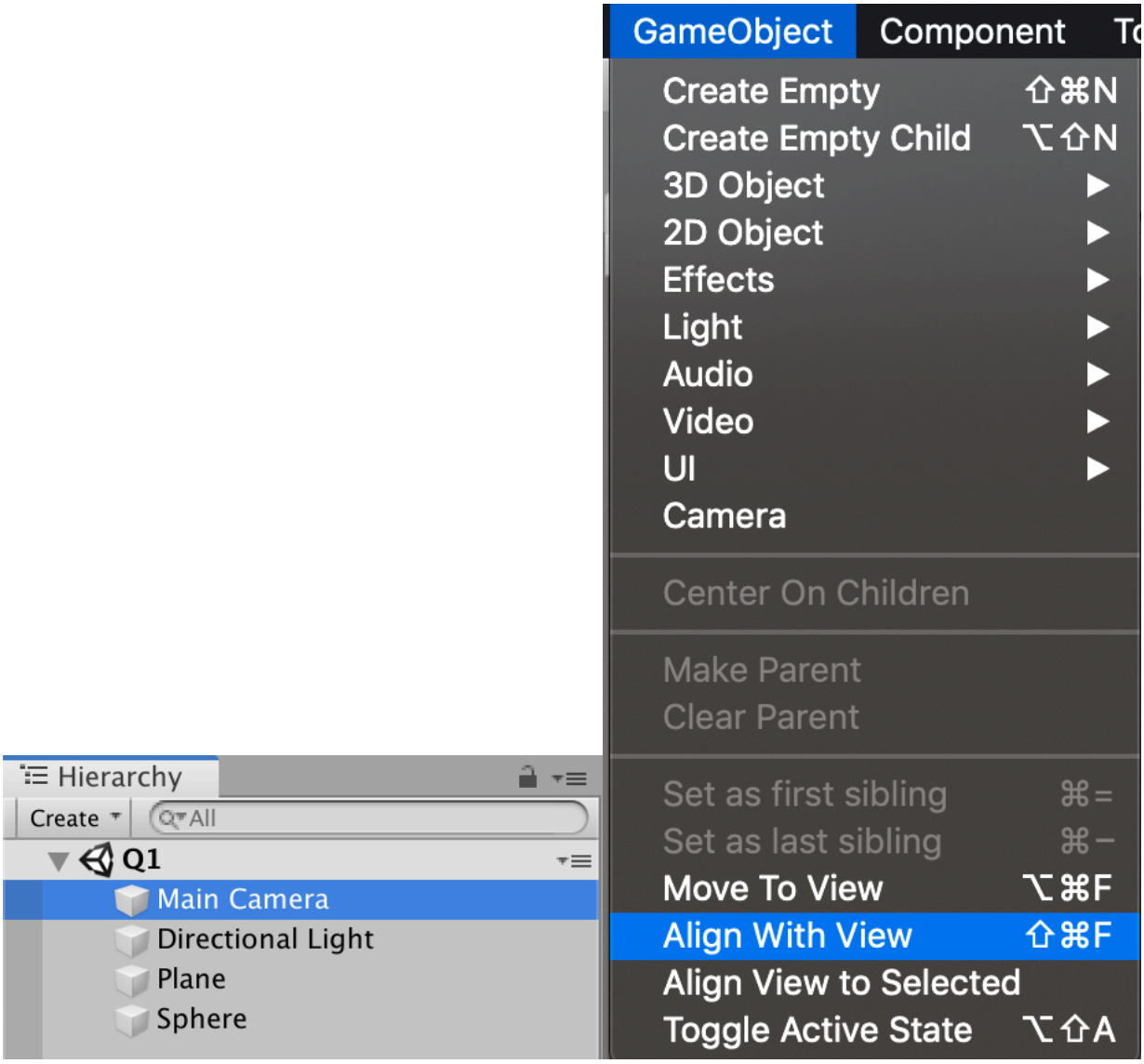


# 6) Align Camera

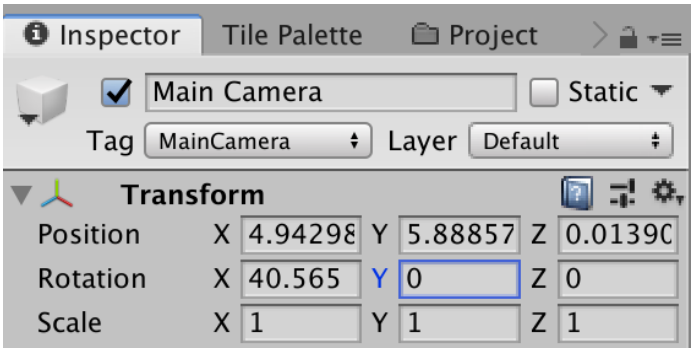
Hold Right-Click on the Scene view and use WASD to navigate (traditional First Person Shooter controls) and align the view to the desired gameplay angle. (Notice how the Blue X-axis points away from the camera.)

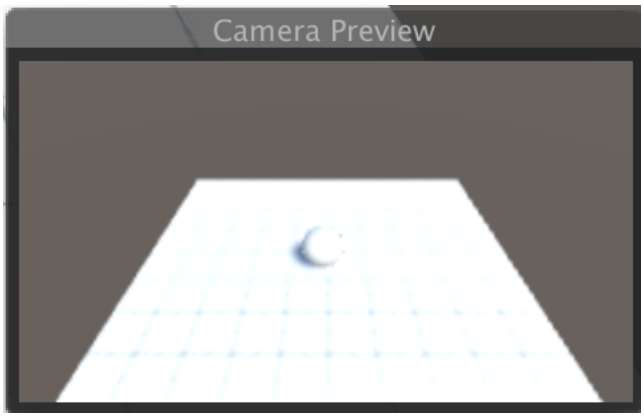



Select the “Main Camera” from the Scene Hierarchy.




Zero out the Y-rotation of the Main Camera.



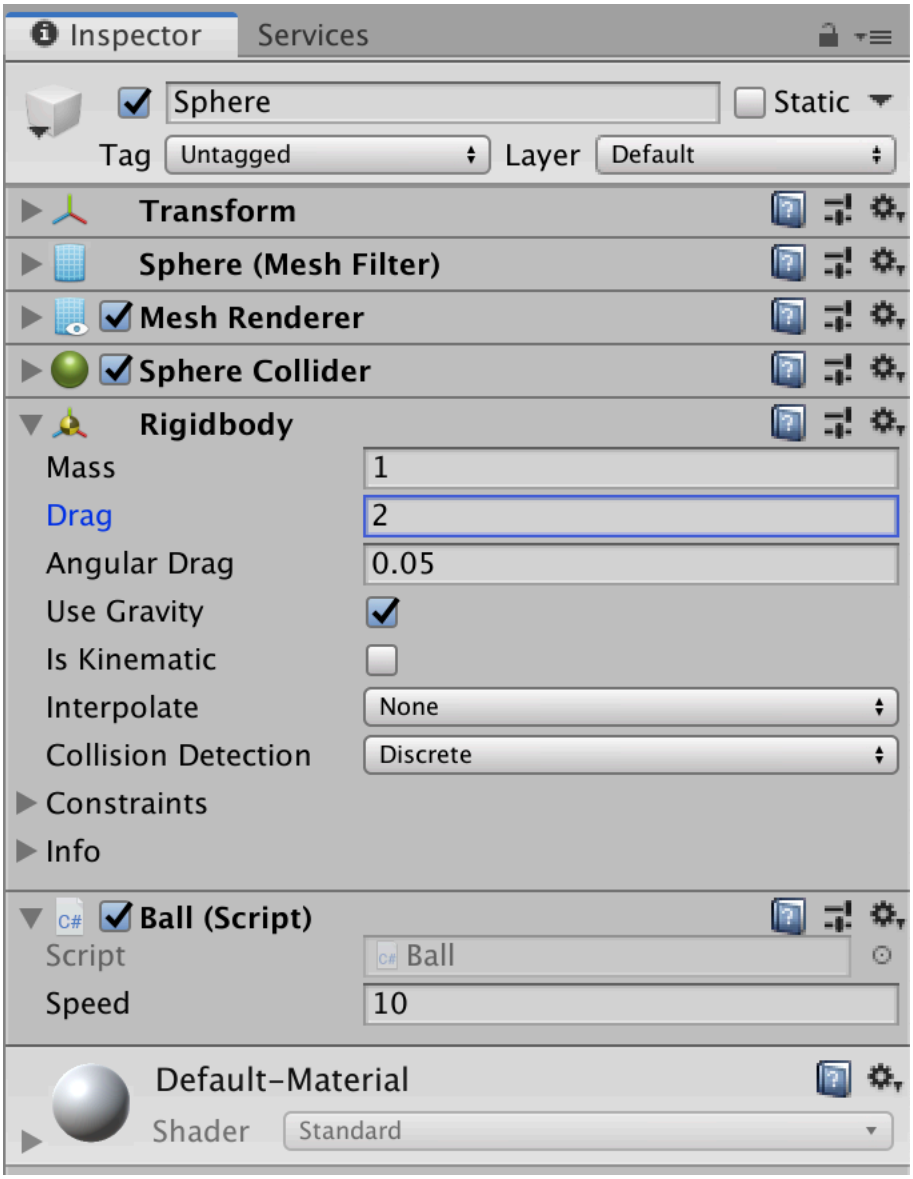



# 7) Create a player Ball C# script

Assets/Scripts/Ball.cs

```
using UnityEngine;

public class Ball : MonoBehaviour
{
    // Outlets
    Rigidbody rb;

    // Configuration
    public float speed;

    // Methods
    void Start() {
        rb = GetComponent<Rigidbody>();
    }

    void FixedUpdate() {
        // Get Input
        float moveHorizontal = Input.GetAxis("Horizontal");
        float moveVertical = Input.GetAxis("Vertical");

        // Combine into Vector movement
        Vector3 movement = new Vector3(moveHorizontal, 0, moveVertical);

        // Apply camera perspective rotation
        if(Camera.main != null) {
            Vector3 cameraForward =
                Vector3.Scale(Camera.main.transform.forward, new Vector3(1, 0, 1)).normalized;
            movement =
                moveVertical * cameraForward + moveHorizontal * Camera.main.transform.right;
        }

        rb.AddForce(movement * speed);
    }
}
```

## 8) Attach Rigidbody and Ball.cs to the Player Object



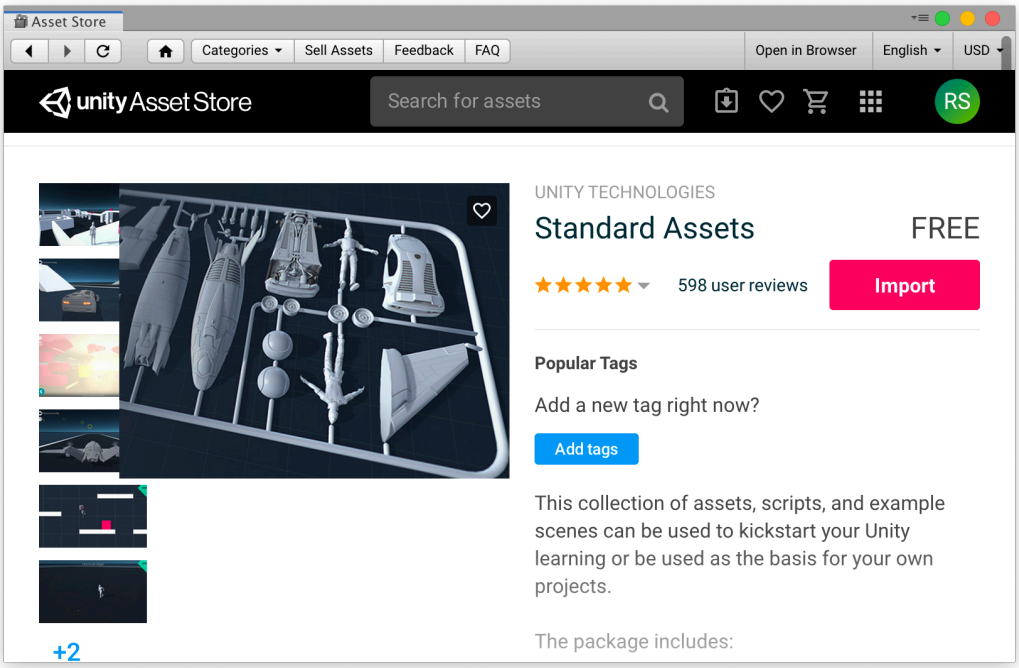
# 9) Playtest

Arrow and WASD keys should work with the default Edit->Project Settings->Input configuration

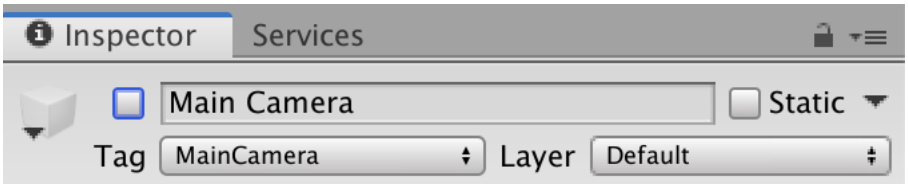
Notice how the ball responds to input, but our gameplay possibilities are limited by our static camera perspective.

# 10) Import Unity's StandardAssets samples

Window->Asset Store



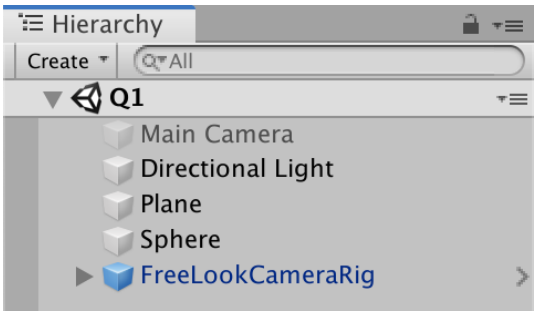

# 11) Disable the old Main Camera



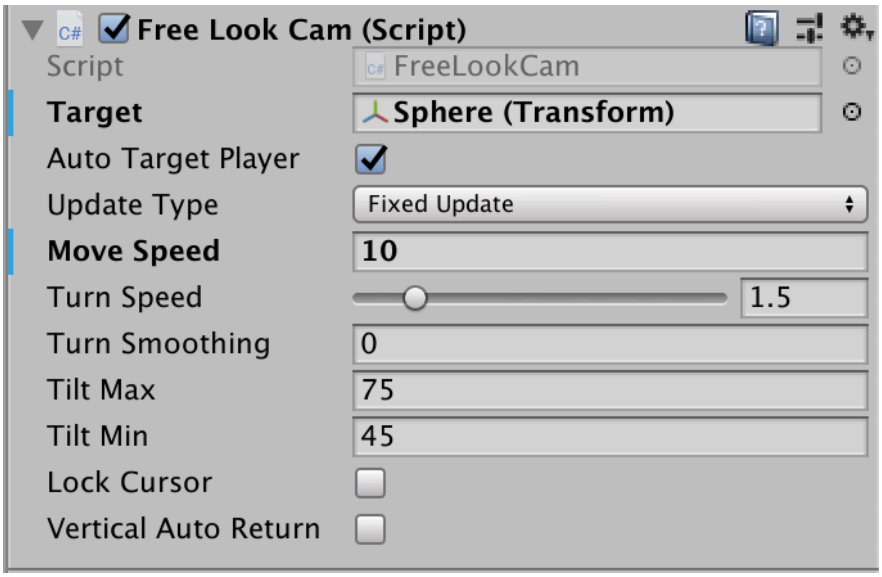

# 12) Add the StandardAssets FreeLookCameraRig

Assets/Standard Assets/Camera/Prefabs/FreeLookCameraRig.prefab

Drag the prefab into the scene.




Update its settings to follow the player with a speed of 10.




# 13) Playtest

The new camera should follow the player and rotate on mouse movement.

# 14) Build a Challenging Level

To be continued…