

# DEVELOPING IOS GAMES WITH UNITY

An Introduction for iOS Developers

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@neror



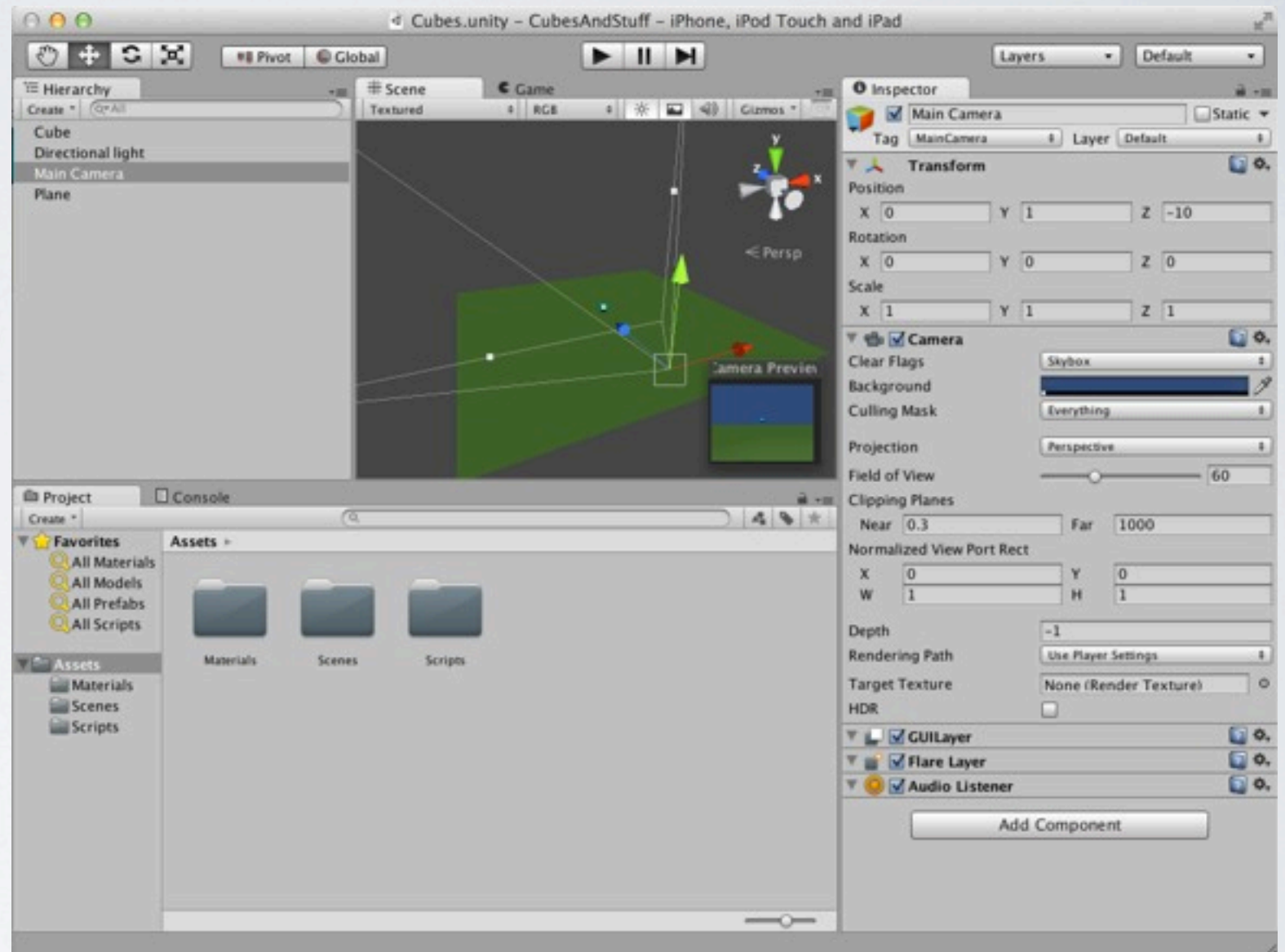
WTF?

WHAT IS UNITY?




# WHAT IS UNITY?

- 3D Game Engine
- Multiplatform
- Mono/C#
- Free! (kind of)




CAMERA

# CAMERA

☒ **Main Camera** ☐ Static


Tag  Layer

 **Transform**


Position  
X  Y  Z

Rotation  
X  Y  Z

Scale  
X  Y  Z

 ☒ **Camera**

Clear Flags

Background 

Culling Mask

Projection

Field of View

Clipping Planes  
Near  Far


Normalized View Port Rect  
X  Y   
W  H


Depth


Rendering Path

Target Texture

HDR ☐

 ☒ **GUI Layer**

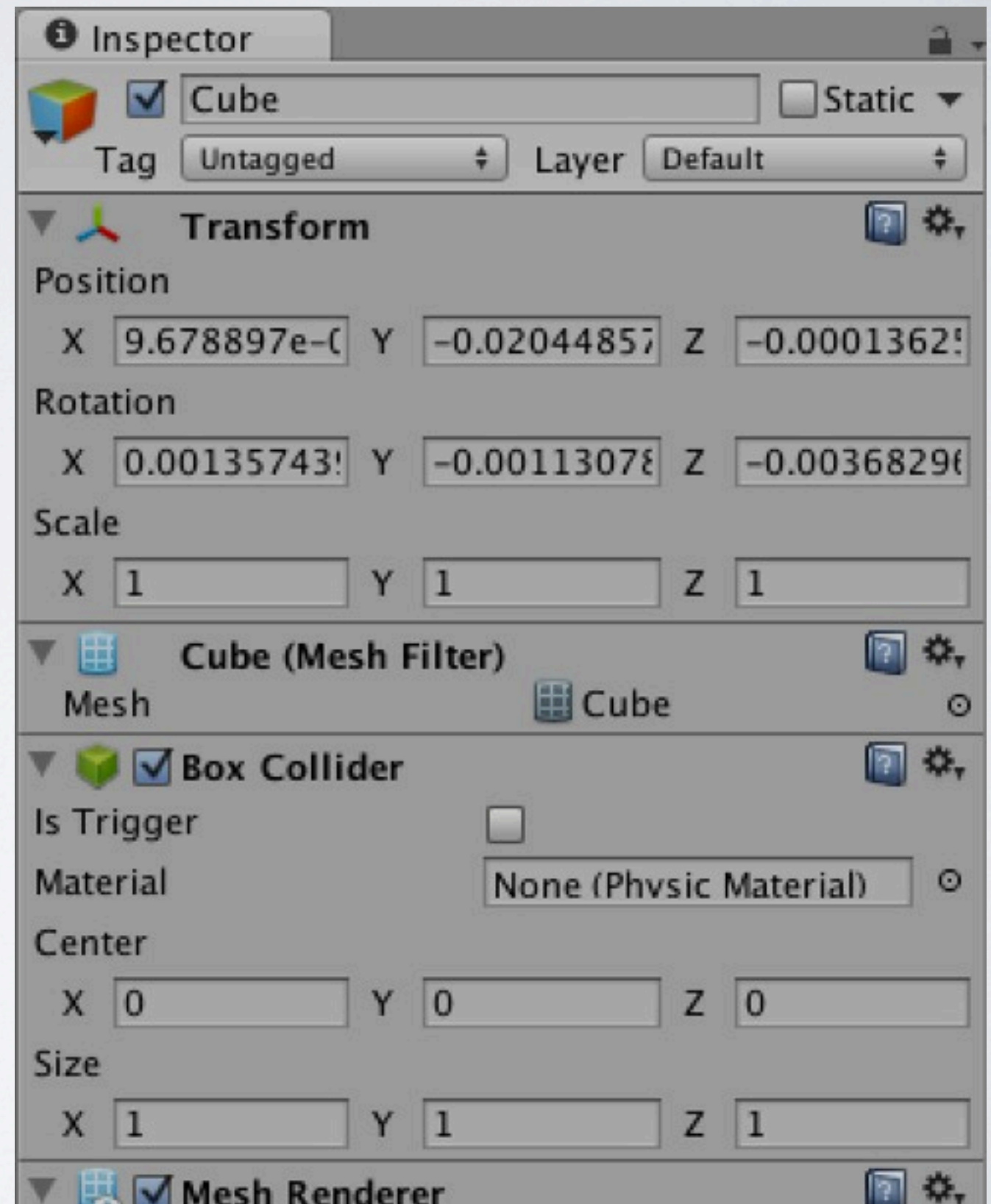
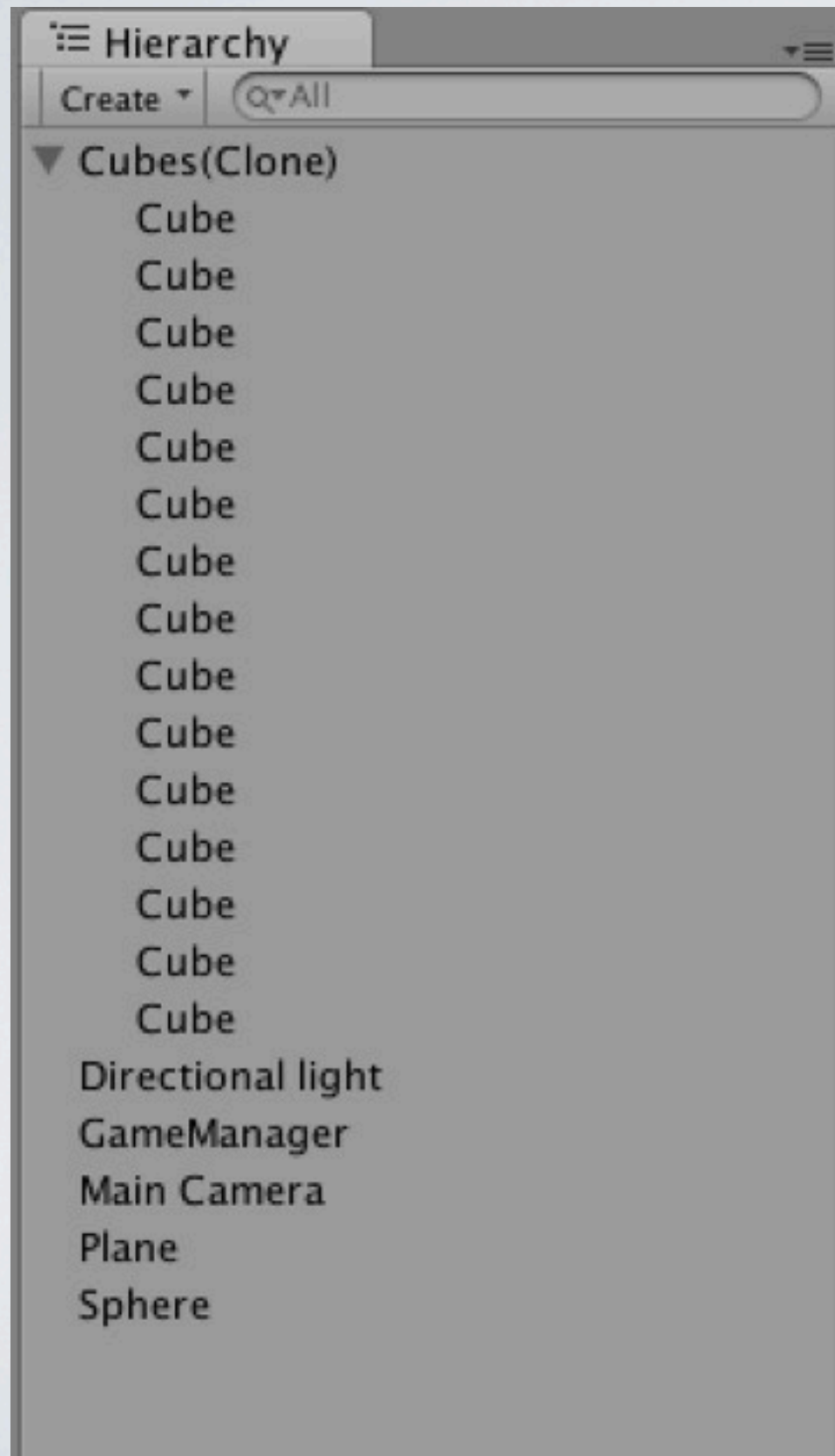
 ☒ **Flare Layer**

 ☒ **Audio Listener**



# SCENE GRAPH

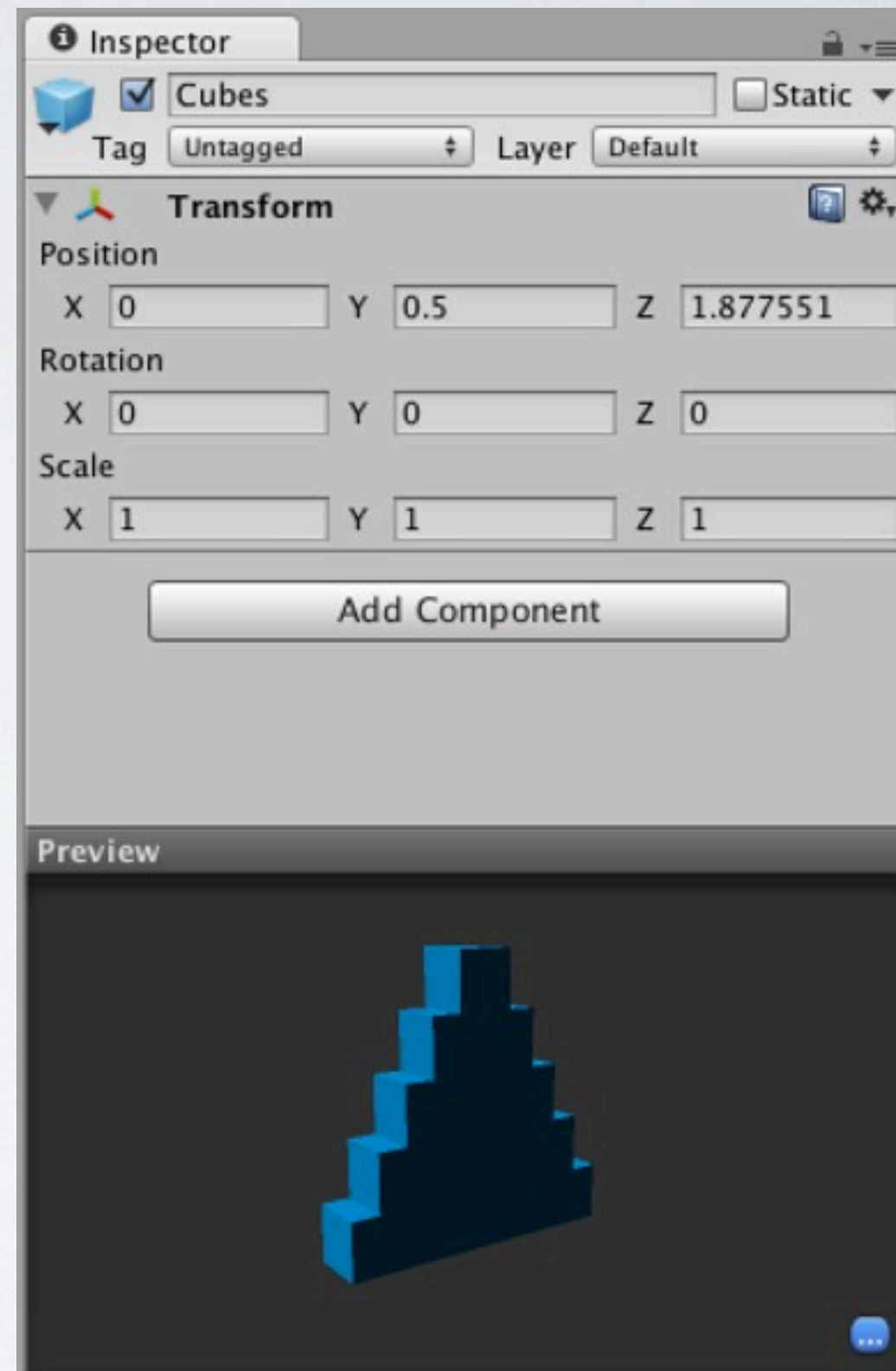
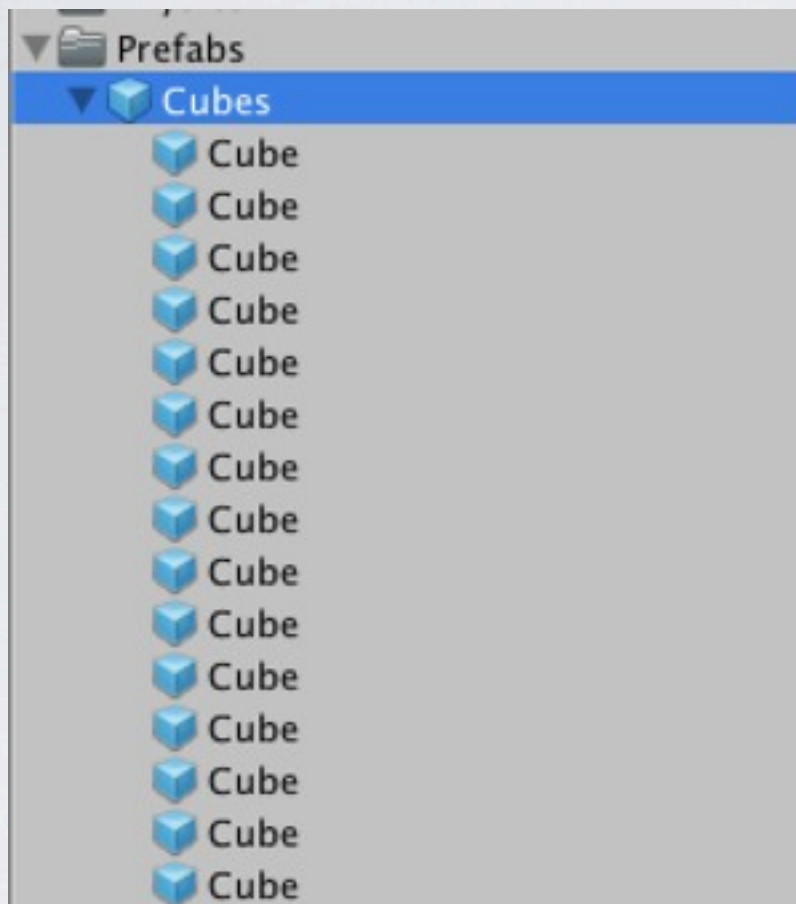
# SCENE GRAPH





# PREFABS AND SERIALIZATION

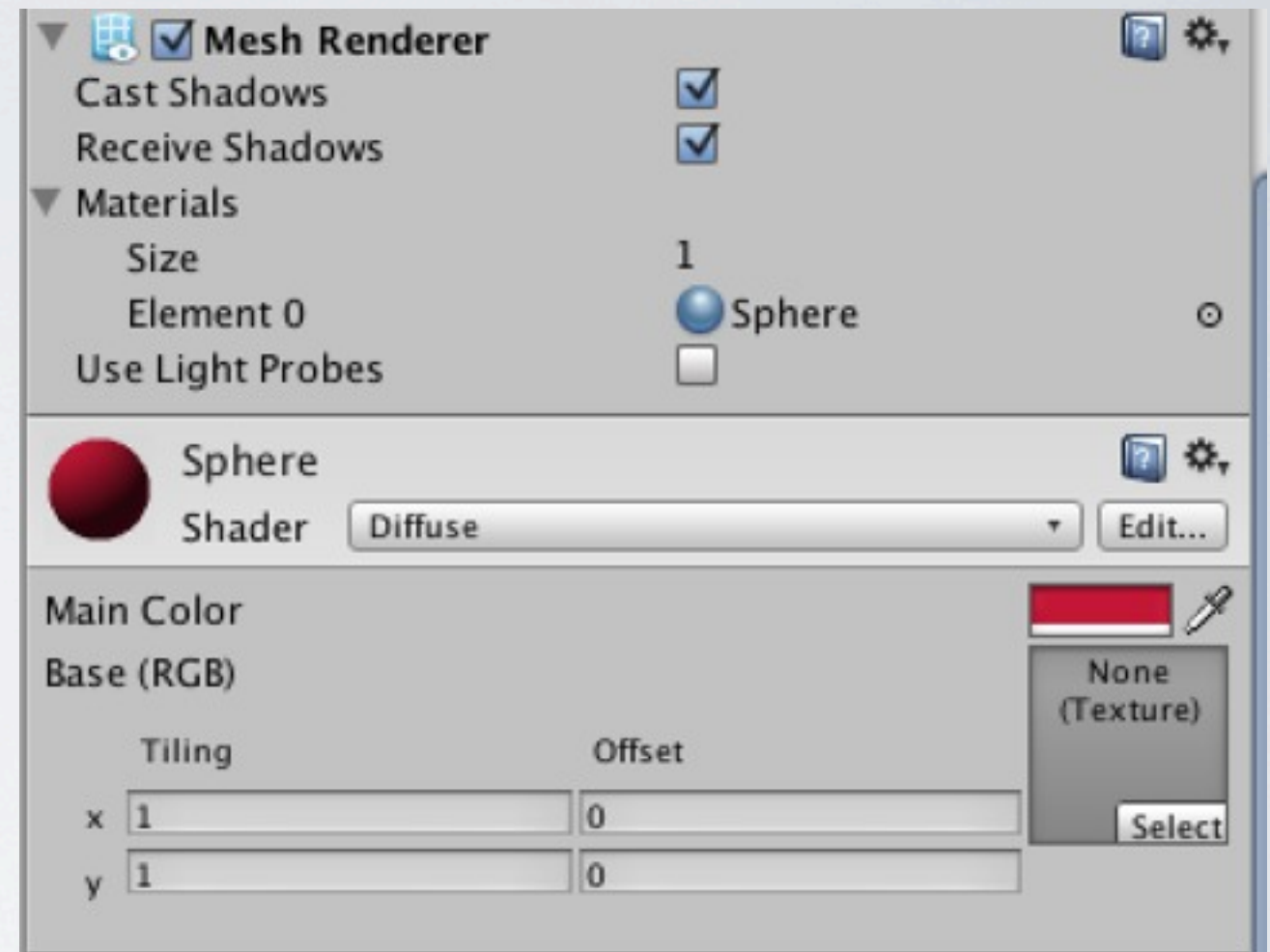
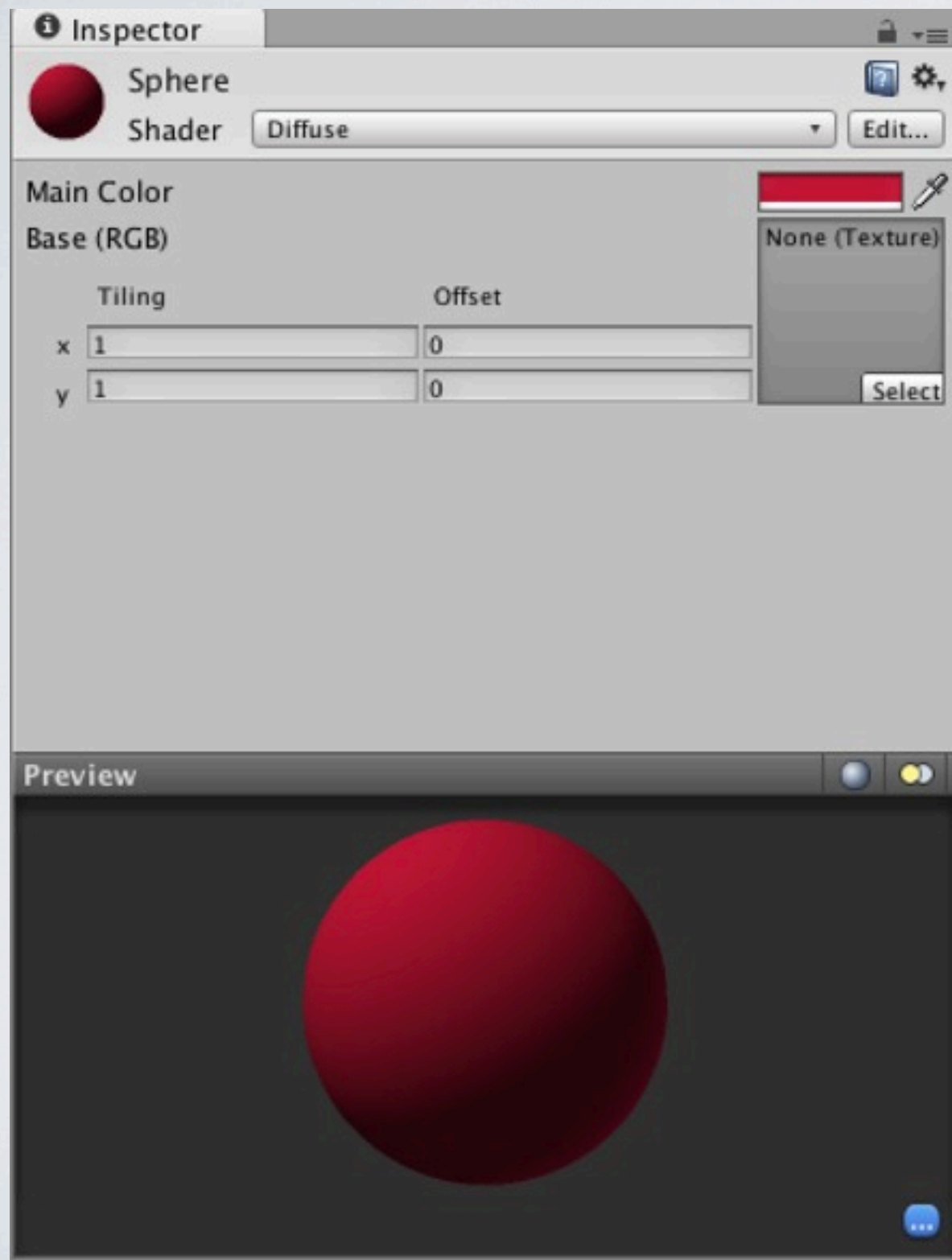
# PREFABS AND SERIALIZATION



# RENDERERS AND MATERIALS




# RENDERERS AND MATERIALS





PHYSICS

# PHYSICS



☒ Sphere Collider







Is Trigger

☐

Material

 Bouncy




Center

X


Y


Z

Radius



Rigidbody





Mass

Drag

Angular Drag


Use Gravity


☒

Is Kinematic


☐


Interpolate





Collision Detection



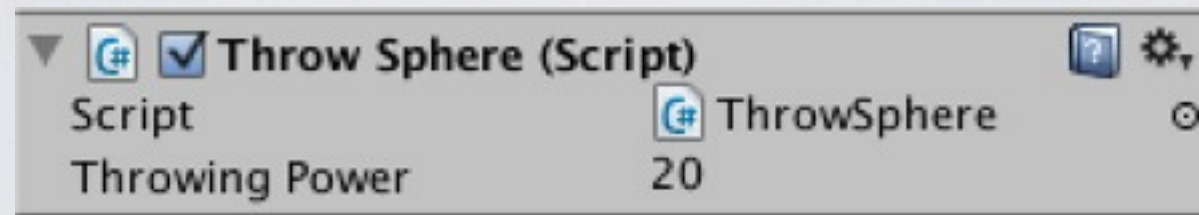


► Constraints



SCRIPTING

# SCRIPTING



```
void Update()
{
    if(Input.GetMouseButtonDown(0)) {
        Ray mouseRay = Camera.main.ScreenPointToRay(Input.mousePosition);
        RaycastHit hit;
        if(Physics.Raycast(mouseRay, out hit)) {
            if(hit.rigidbody == rigidbody) {
                isHolding = true;
                return;
            }
        }
    }

    if(Input.GetMouseButton(0) && isHolding) {
        float sphereDistance = Vector3.Distance(Camera.main.transform.position, transform.position);
        Vector3 mousePos = Input.mousePosition;
        mousePos.z = sphereDistance;
        Vector3 newPos = Camera.main.ScreenToWorldPoint(mousePos);
        newPos.z = transform.position.z;
        transform.position = newPos;
        return;
    }

    if(Input.GetMouseButtonUp(0) && isHolding) {
        isHolding = false;
        rigidbody.isKinematic = false;
        rigidbody.AddForce(Vector3.forward * throwingPower, ForceMode.Impulse);
    }
}
```

# SCRIPTING CONCEPTS

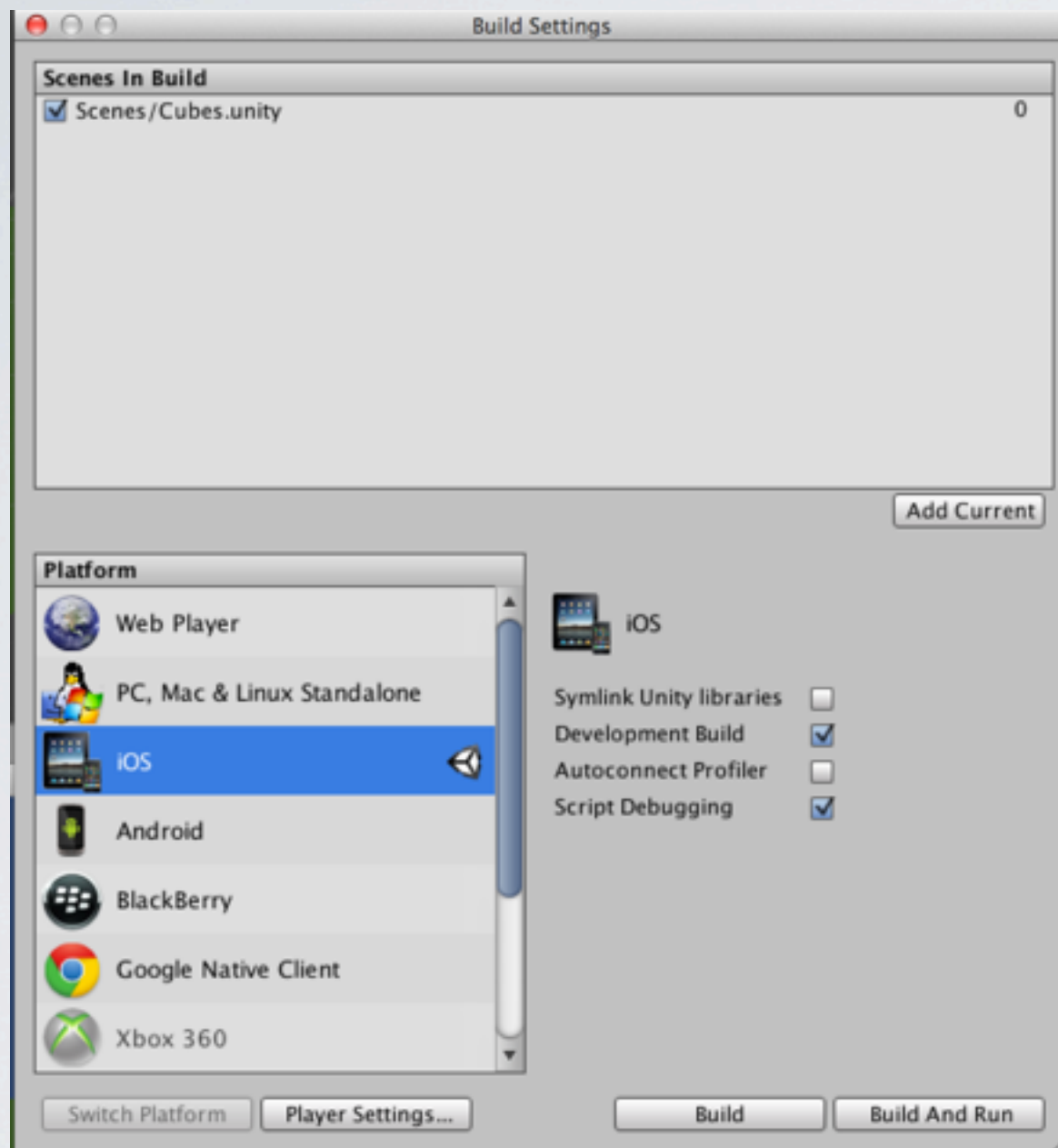


# SCRIPTING CONCEPTS

- `Awake()/Start()/Update()/FixedUpdate()/LateUpdate()`
- Instantiating Prefabs
- MonoBehaviour builtin events (On\* methods)
- Coroutines
- Message Sending
- Events and delegates
- UnityGUI

DEPLOYING TO IOS

# DEPLOYING TO IOS





# THANKYOU

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