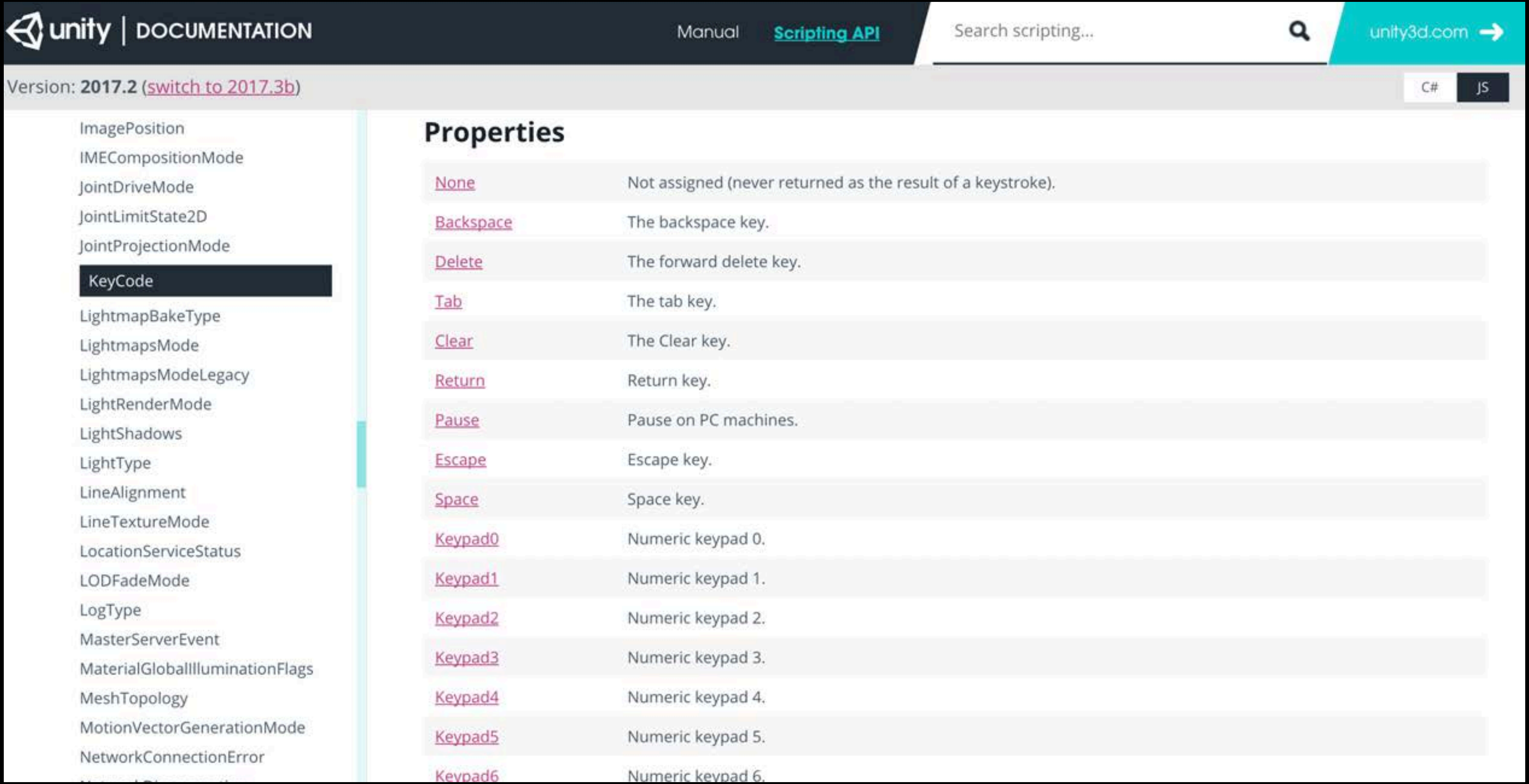
Class Unity scripts

- Rotate cube script
- Counter + collision script
- Sound script
- Materials script / mouse button input
- Add Force script
- Key and Button input script
- Particle script / button input
- Instantiate prefab script
- Destroy script

Unity Key Code



Version: 2017.2 (switch to 2017.3b)

Properties

None	Not assigned (never returned as the result of a keystroke).
Backspace	The backspace key.
Delete	The forward delete key.
Tab	The tab key.
Clear	The Clear key.
Return	Return key.
Pause	Pause on PC machines.
Escape	Escape key.
Space	Space key.
Keypad0	Numeric keypad 0.
Keypad1	Numeric keypad 1.
Keypad2	Numeric keypad 2.
Keypad3	Numeric keypad 3.
Keypad4	Numeric keypad 4.
Keypad5	Numeric keypad 5.
Keypad6	Numeric keypad 6.

Scripting exercise

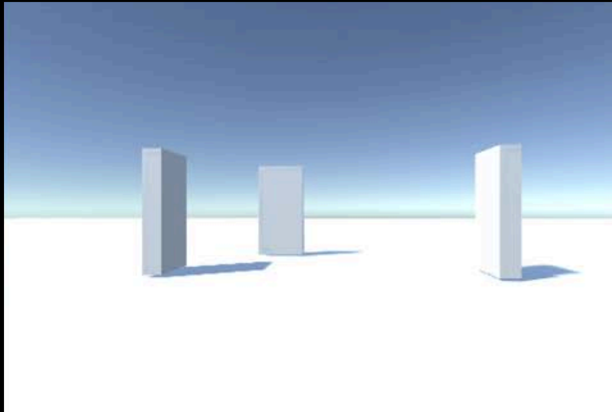
Create a room with 3 doors and FPS Controller character. As the character walks from door to door inside the room, and touches the doors (collision), each door should start to rotate (along the Y axis) and a new sound FX plays. As the user presses 3 different mouse buttons, the colors of 3 doors should change into different colors.

Add a "stop" action to stop all doors from rotation if the user presses Escape key.

Use a Key Code reference page here to find out the Key Codes:

https://docs.unity3d.com/ScriptReference/KeyCode.html

Scripting exercise



Incorporate 3 different scripts – one for each door

- Variables
- Functions
- Materials
- Collisions
- Key and mouse interaction inputs

Combine the various modules we covered to create an interactive scene. Use your problem solving skills to creatively combine different functions and find workable solutions.

Use a meaningful project organizational structure.
(Folders/subfolders)

Instantiate

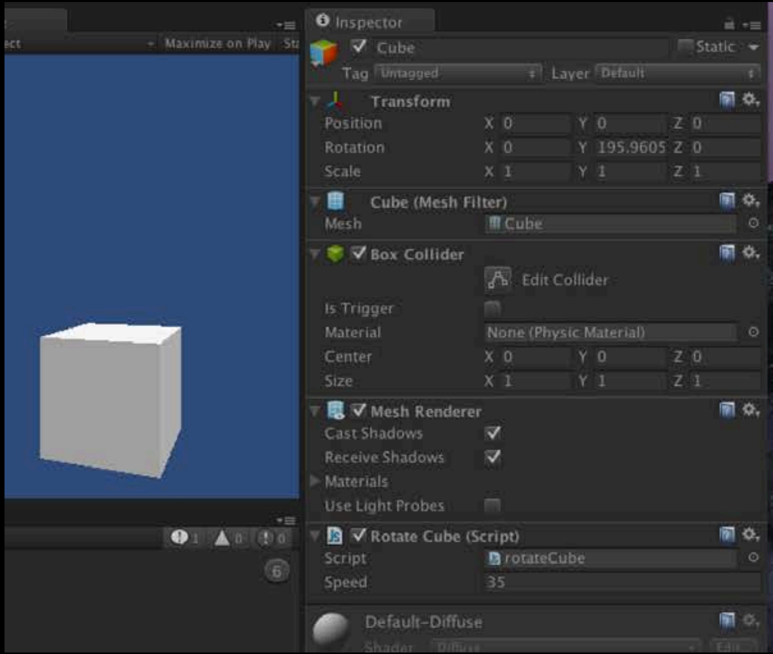
To add a direction in which the prefabs are moving,

Add a forward pointing force to the script:

```
var forwardForce = 1000;

 instanceObject.GetComponent.<Rigidbody>().AddForce(transform.forward * forwardForce);
```

Rotate cube script

```
var speed = 5.0;

function Start () {
}

function Update () {
transform.Rotate(0, speed*Time.deltaTime, 0);
}
```



☑ Cube □ Static
Tag Untagged Layer Default

Transform
Position X 0 Y 0 Z 0
Rotation X 0 Y 195.9605 Z 0
Scale X 1 Y 1 Z 1

Cube (Mesh Filter)
Mesh Cube

☑ Box Collider
Is Trigger □
Material None (Physic Material)
Center X 0 Y 0 Z 0
Size X 1 Y 1 Z 1

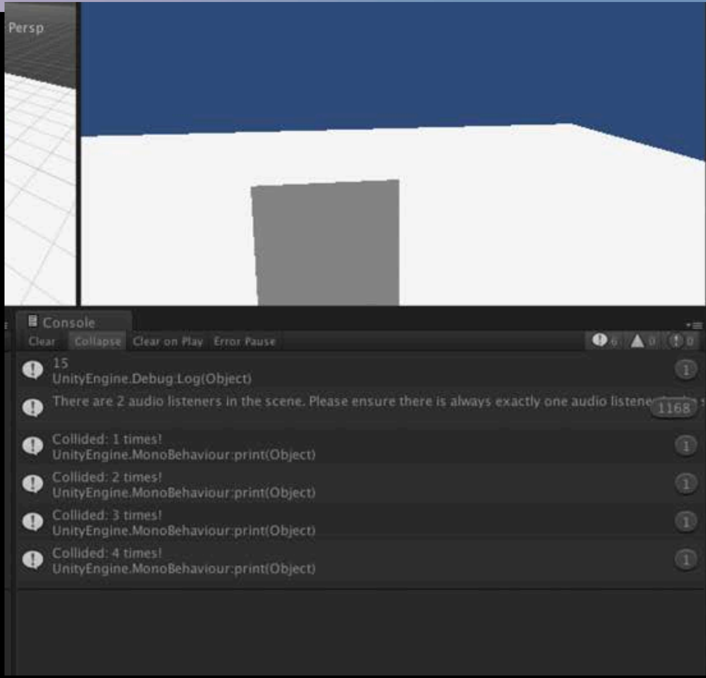
☑ Mesh Renderer
Cast Shadows ☑
Receive Shadows ☑
Materials
Use Light Probes □

☑ Rotate Cube (Script)
Script rotateCube
Speed 35

Default-Diffuse
Shader Diffuse

Counter script

```
var target : Collider;
private var counter : int = 0;

 function OnTriggerEnter(cubeTrigger : Collider)
{
if (cubeTrigger == target)
{
counter = counter + 1;
print("Collided: " + counter + " times!");
}}
```



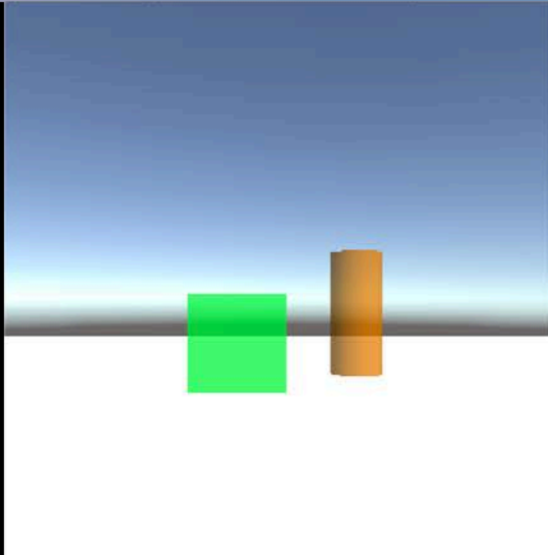
```
15
UnityEngine.Debug:Log(Object)                                                        1
There are 2 audio listeners in the scene. Please ensure there is always exactly one audio listene   1168
Collided: 1 times!
UnityEngine.MonoBehaviour:print(Object)                                              1
Collided: 2 times!
UnityEngine.MonoBehaviour:print(Object)                                              1
Collided: 3 times!
UnityEngine.MonoBehaviour:print(Object)                                              1
Collided: 4 times!
UnityEngine.MonoBehaviour:print(Object)                                              1
```

Sound script

```
var target : Collider;
private var counter : int = 0;
var mySound : AudioClip;

function OnTriggerEnter(cubeTrigger : Collider)
{
  if (cubeTrigger == target)
  {
    GetComponent.<AudioSource>().PlayOneShot(mySound);
    counter = counter + 1;
    print("Collided: " + counter + " times!");
  }
}
```

Materials script

```
private var orange : Color = Color(0.8, 0.4, 0.0, 0.7);
private var green : Color = Color(0.0, 0.9, 0.2, 0.7);
var newMaterial : Material;
var newMaterial2 : Material;
function Update()
{
if (Input.GetButtonDown("Fire1"))
{
GetComponent.<Renderer>().material.color = orange;
newMaterial.color = orange;
}
if (Input.GetButtonDown("Fire2"))
{
GetComponent.<Renderer>().material.color = green;
newMaterial2.color = green;
}}
```



AddForce script

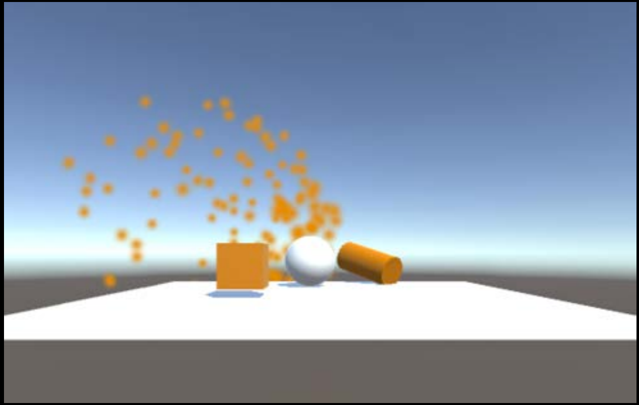
```
function OnMouseDown ()
{
    GetComponent.<Rigidbody>().AddForce(transform.forward * 500f);

    GetComponent.<Rigidbody>().useGravity = true;
}
```

Key and Button input script

```
function Update ()
{
    if (Input.GetKey ("up"))
        print ("up arrow key is held down");

    if (Input.GetKey ("down"))
        print ("down arrow key is held down");

    if (Input.GetKeyDown(KeyCode.Space))
    GetComponent.<Rigidbody>().AddForce(transform.forward * 200f);
}
```

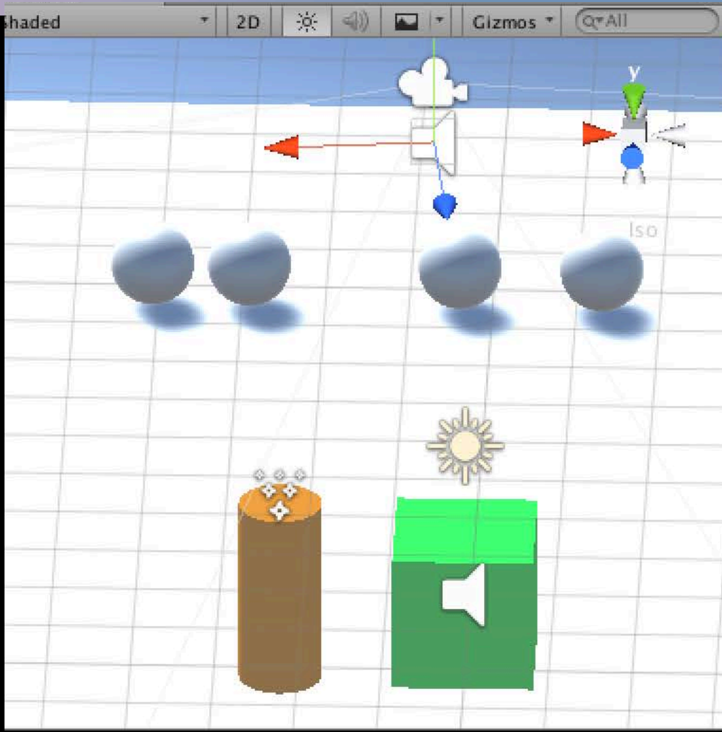
Particle script

```
public var confettiEmitter : ParticleSystem;

function Start() {
confettiEmitter = GameObject.Find("Confetti").GetComponent(ParticleSystem);
    }
function Update()
{
    if (Input.GetButtonDown("Fire1"))
        {
          confettiEmitter.Emit(30); //emits 30 particles
        }
    }
```



Instantiate prefab script

```
var prefabSphere : Transform;

function Update () {

if (Input.GetButtonDown("Jump")) {
var instanceObject = Instantiate(prefabSphere,
transform.position,
 transform.rotation);
}
}
```



Destroy script

```
var timeRemaining = 3.0;

function Update()
{
timeRemaining -= Time.deltaTime;
if (timeRemaining <= 0.0)
{
Destroy(gameObject);
}
}
```