

Course : 2D Game Programming
Effective Period : September 2016

2D Game Programming

LAB 05

Acknowledgement

These slides have been adapted from:

Pereira, V. (2014). Learning Unity 2D Game Development by Example, Packt Publishing, Inc. San Francisco. ISBN: 9781783559046

Chapter 4

Learning Objectives

LO 1 : Create 2D game for PC platform

LO 3 : Design 2D game for PC platform

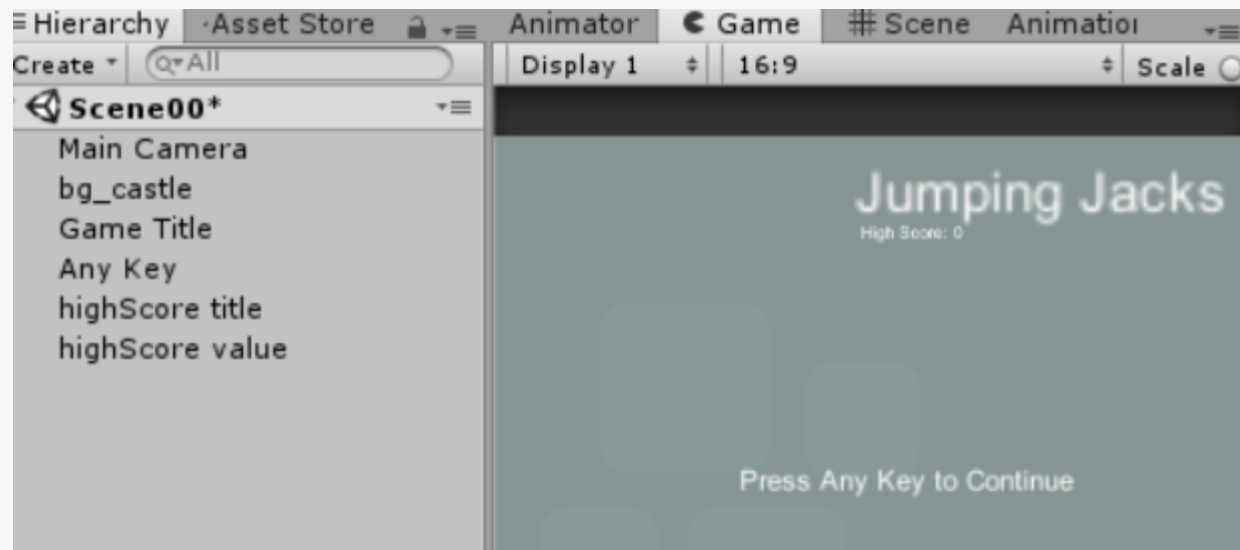
Let's add enemies to our game.

SAVING YOUR GAME

Remember this scene?



Add high score text



The Script

Create a new script and name it Load



Edit the script

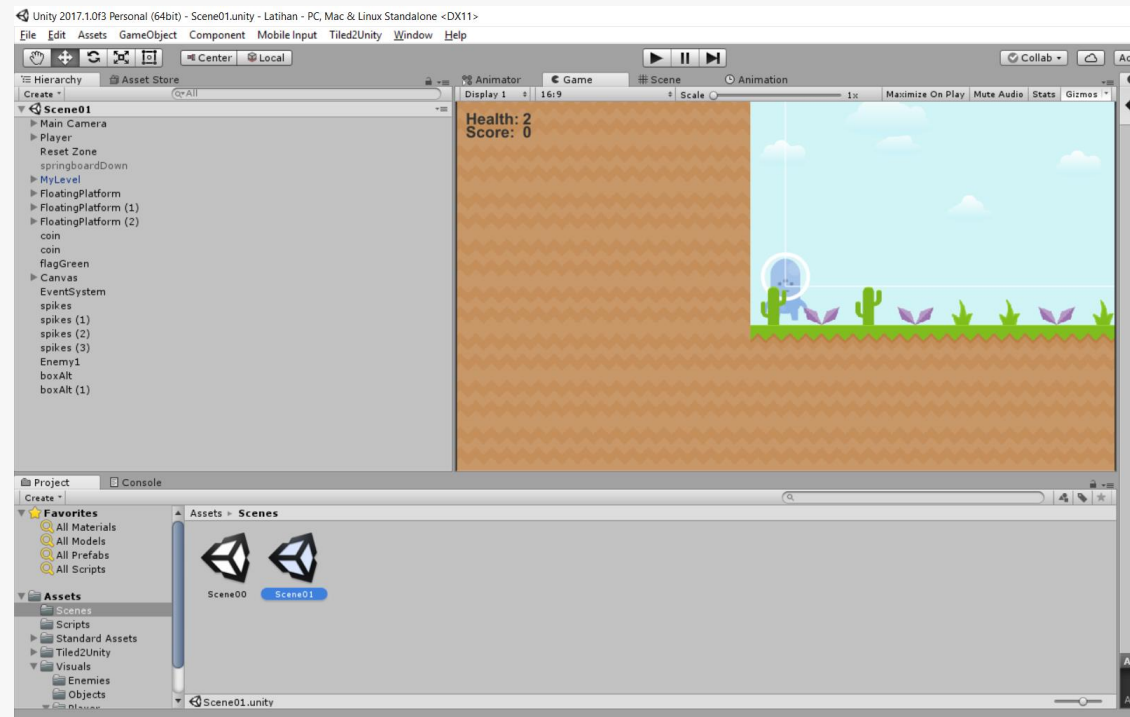
```
1 using System.Collections;
2 using System.Collections.Generic;
3 using UnityEngine;
4
5 public class Load : MonoBehaviour {
6
7     // Use this for initialization
8     void Start () {
9
10    }
11
12    // Update is called once per frame
13    void Update () {
14        this.GetComponent<TextMesh>().text = PlayerPrefs.GetInt("highScore",0).ToString();
15    }
16 }
17
```


Try it out

Nothing seems to happened



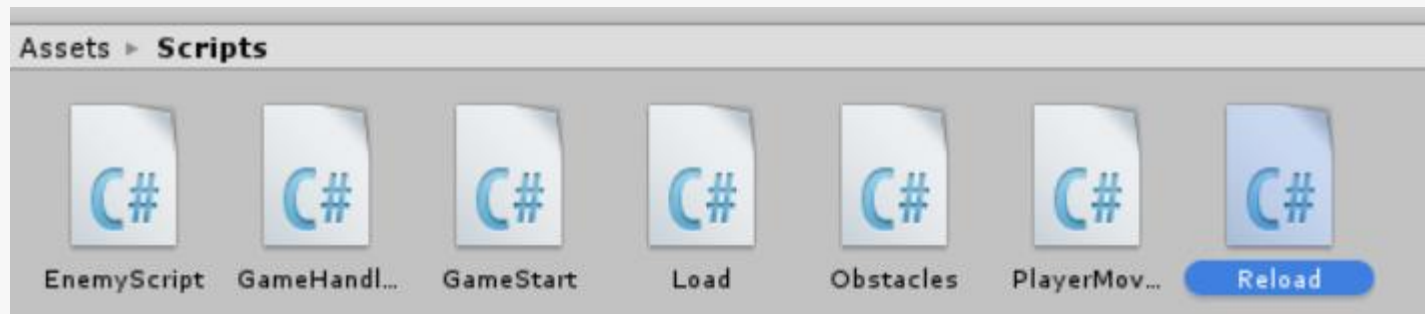
Go Back to Scene01



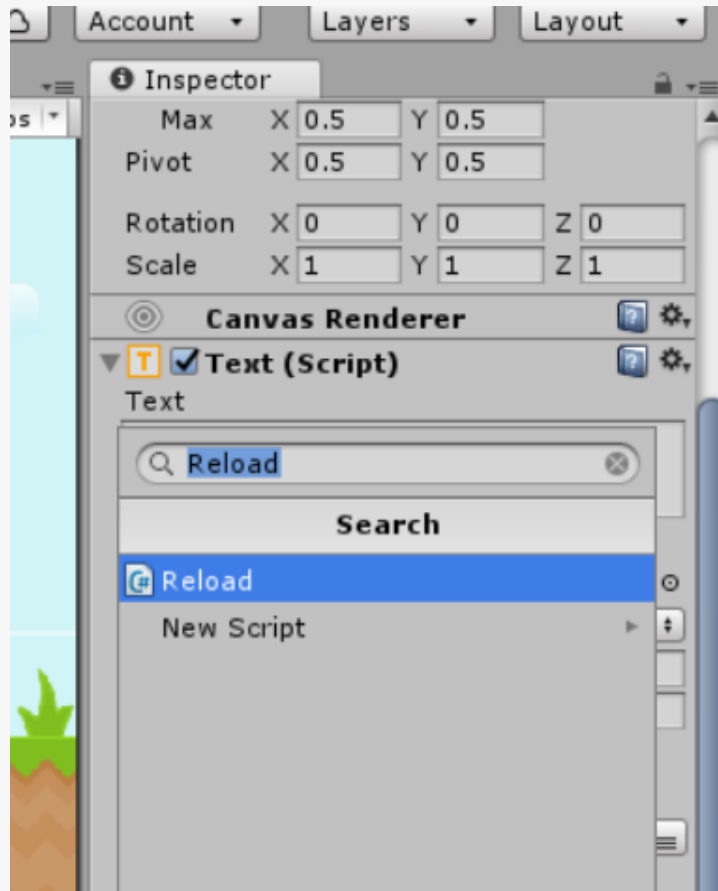
Update GameHandler script Onto the AddScore function

```
public void AddScore() {  
    score += 10;  
    ScoreUI.text = score.ToString();  
    if (score > PlayerPrefs.GetInt ("highScore", 0)) {  
        PlayerPrefs.SetInt ("highScore", score);  
    }  
}
```

Create another script



```
1 using System.Collections;
2 using System.Collections.Generic;
3 using UnityEngine;
4 using UnityEngine.SceneManagement;
5
6 public class Reload : MonoBehaviour {
7     |
8     public const float TIME_LIMIT = 5f;
9     private float timer = 0f;
10
11     // Use this for initialization
12     void Start () {
13
14     }
15
16     // Update is called once per frame
17     void Update () {
18         this.timer += Time.deltaTime;
19         if (this.timer >= TIME_LIMIT) {
20             SceneManager.LoadScene ("Scene00");
21         }
22
23     }
24 }
25
```



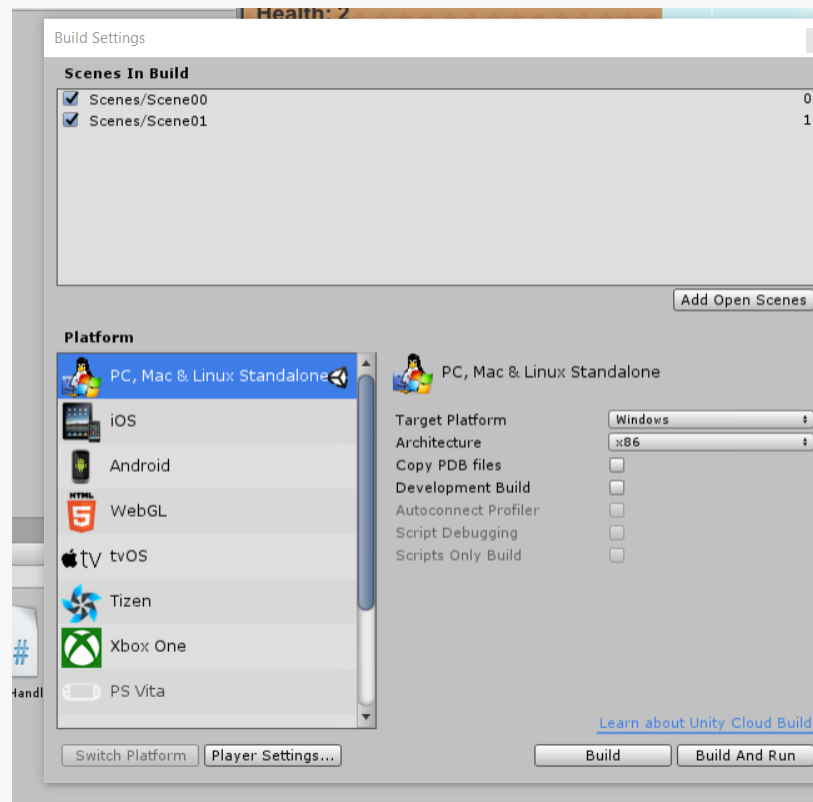
**Attach script to
GameOver and Winning
Game object**

PLAY THE GAME!!!!!!!

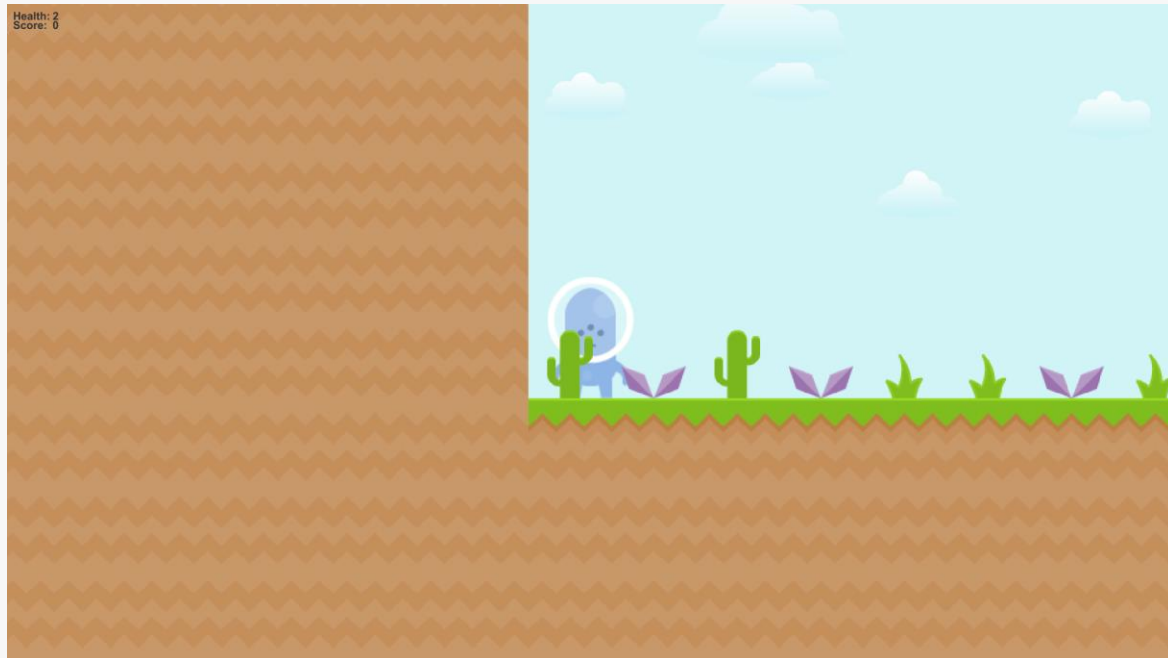
Edit some code

```
void OnTriggerEnter2D(Collider2D c) {  
    if (c.name == "coin") {  
        AddScore();  
        Debug.Log ("get coin");  
        Destroy(c.gameObject);  
    }  
    else if (c.tag == "water") {  
        health = 0;  
        Debug.Log ("water");  
        healthUI.text = health.ToString();  
        gameOverUI.SetActive(true);  
        StopGame();  
    }  
    else if (c.tag == "Ending") {  
  
        Debug.Log ("end");  
        youWinUI.SetActive(true);  
        StopGame();  
    }  
}
```


BUILD THE GAME



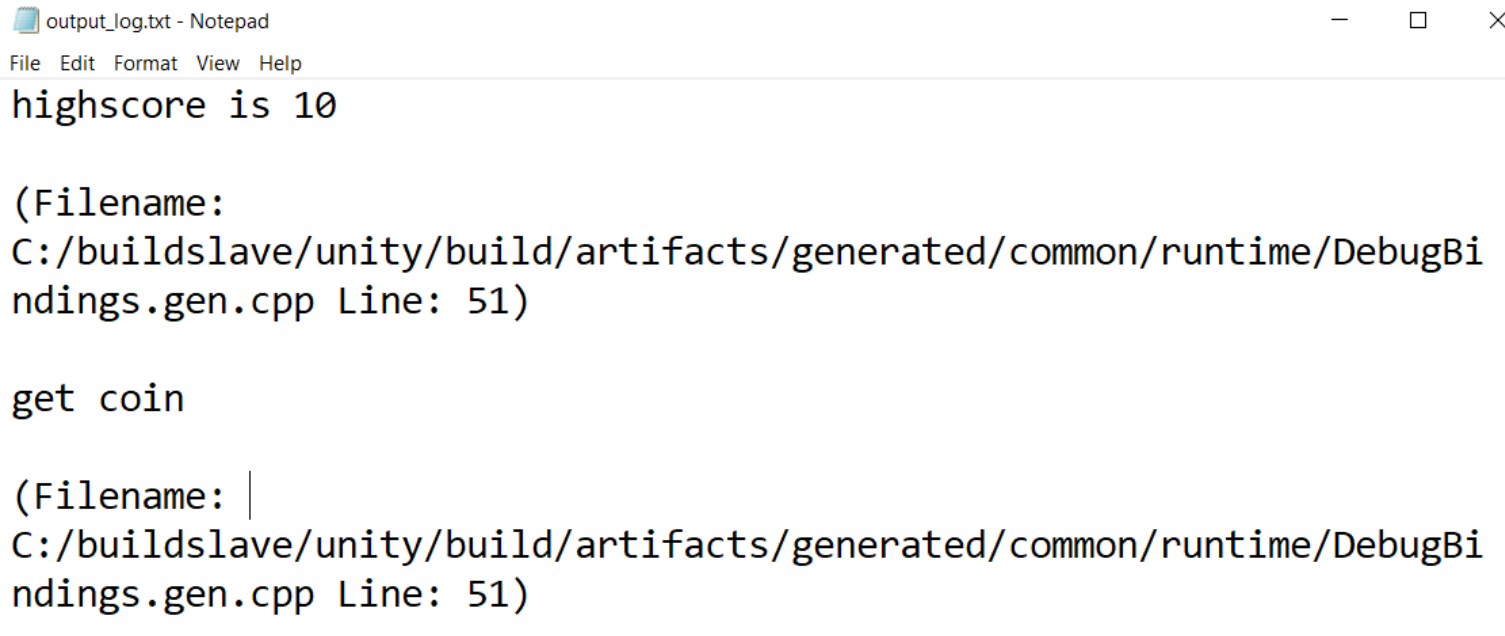
Run your game



Check your output log

NAME	Date modified	Type	Size
Managed	1/7/2018 5:32 PM	File folder	
Mono	1/7/2018 5:32 PM	File folder	
Resources	1/7/2018 5:32 PM	File folder	
app.info	1/7/2018 5:32 PM	INFO File	1 KB
boot.config	1/7/2018 5:32 PM	XML Configuration...	0 KB
globalgamemangers	1/7/2018 5:32 PM	File	27 KB
globalgamemangers.assets	1/7/2018 5:32 PM	ASSETS File	32 KB
level0	1/7/2018 5:32 PM	File	7 KB
level1	1/7/2018 5:32 PM	File	26 KB
output_log.txt	1/7/2018 5:40 PM	Text Document	5 KB
sharedassets0.assets	1/7/2018 5:32 PM	ASSETS File	5 KB
sharedassets0.assets.resS	1/7/2018 5:32 PM	RESS File	32 KB
sharedassets1.assets	1/7/2018 5:32 PM	ASSETS File	99 KB
sharedassets1.assets.resS	1/7/2018 5:32 PM	RESS File	7,356 KB

What's in it?



```
output_log.txt - Notepad
File Edit Format View Help
highscore is 10

(Filename:
C:/buildslave/unity/build/artifacts/generated/common/runtime/DebugBi
ndings.gen.cpp Line: 51)

get coin

(Filename: |
C:/buildslave/unity/build/artifacts/generated/common/runtime/DebugBi
ndings.gen.cpp Line: 51)
```

References

Freeman, J. (2015). Unity's New 2D Workflow

Vidyasagar. (2014). Unity and C#: Game Loop.CodeProject

Pereira, V. (2014). Learning Unity 2D Game Development by Example. Packt Publishing, Inc. San Francisco. ISBN: 9781783559046