Part 6: Unity Flappy Bird Tutorial

Contents

Replay The Game

1. Right-click the **Canvas** game object → **Create** → **UI** → **Button**

2. Name: **BtnReplay**

3. **Assets** → **Sprites** → **Play** sprite → Drag **Play** sprite to **Source Image** of **BtnReplay**
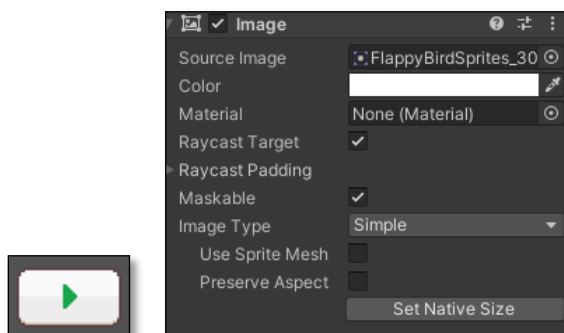
4. Click **Set Native Size**

5. Right-click the **Canvas** game object → **Create** → **UI** → **Image**

6. Name: **ImgGame**

7. **Assets** → **Sprites** → **Game** sprite → Drag **Game** sprite to **Source Image** of **ImgGame**

8. Click **Set Native Size**

9. Create another Image named **ImgOver**

10. **Assets → Sprites → Over** sprite → Drag Over sprite to **Source Image** of **ImgOver**

11. Click **Set Native Size**

12. Use the **Move** tool to arrange these items like show below.

Bird Script

This is the complete code for the **BirdScript** script. Some of this will not work until we complete this section.

```csharp
using UnityEngine;
using UnityEngine.SceneManagement;
using UnityEngine.UI;

// Unity Script (1 asset reference) | 0 references
public class Bird : MonoBehaviour
{
    // Variable to store the Bird vertical velocity
    public float velocity;

    // Create a reference to the Rigidbody2D class
    private Rigidbody2D rb;
    // Create reference to Score script object
    public Score scoreText;
    public GameObject BtnReplay;
    public Image ImgGame;
    public Image ImgOver;

    // Start is called before the first frame update
    // Unity Message | 0 references
    void Start()
    {
        Time.timeScale = 1;
        // Create a Rigibody2D object referencing
        // the Bird game object
        rb = GetComponent<Rigidbody2D>();
        BtnReplay.SetActive(false);
        ImgGame.enabled = false;
        ImgOver.enabled = false;
    }

    // Update is called once per frame
    // Unity Message | 0 references
    void Update()
    {
        // If the up arrow key is pressed
        if (Input.GetKeyDown(KeyCode.UpArrow))
        {
            // Make the bird jump by moving up
            rb.velocity = Vector2.up * velocity;
        }
    }
```

```
                  ⊕ Unity Message | 0 references
41    ⊟          private void OnTriggerEnter2D(Collider2D collision)
42               {
43                   // If the Bird collides with the Obstacle
44    ⊟              if (collision.CompareTag("Score"))
45                   {
46                       // Call the ScoreUp method to display the new score
47                       scoreText.ScoreUp();
48                   }
49               }
50
                  ⊕ Unity Message | 0 references
51    ⊟          private void OnCollisionEnter2D(Collision2D collision)
52               {
53                   // If the bird collides with the Platform or the Obstacle
54                   if (collision.gameObject.CompareTag("Platform") ||
55    ⊟                      collision.gameObject.CompareTag("Obstacle"))
56                   {
57                       // Game over, freeze the game
58                       Time.timeScale = 0;
59                       BtnReplay.SetActive(true);
60                       ImgGame.enabled = true;
61                       ImgOver.enabled = true;
62                   }
63               }
64
                  0 references
65    ⊟          public void ReplayGame()
66               {
67                   // We only have one scene
68                   // Starts the game over
69                   SceneManager.LoadScene(0);
70                   BtnReplay.SetActive(false);
71                   ImgGame.enabled = false;
72                   ImgOver.enabled = false;
73               }
74    }
```
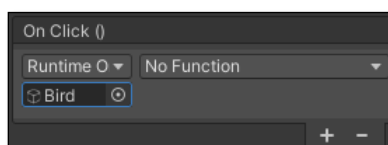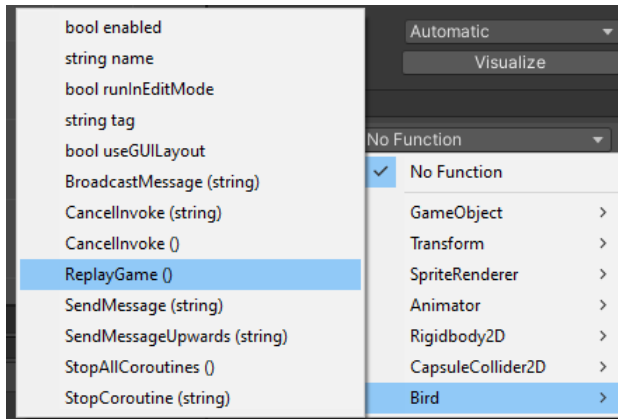
1. **Save** the script.

2. **Hierarchy** → Click the **BtnReplay** game object → **Inspector**

3. Scroll down to **On Click () Click the + sign.**

4. In the **Hierarchy** → Drag the **Bird** game object to the **On Click ()** as shown below.

5. Click **No Function** → **Bird** → **ReplayGame()** as shown below.

Save all your scripts. Play your Flappy Bird game!

Assignment Submission

A Unity project is at least 200 MB. That is too big to be submitted.

Please attach a screenshot of your project to the assignment in Blackboard.