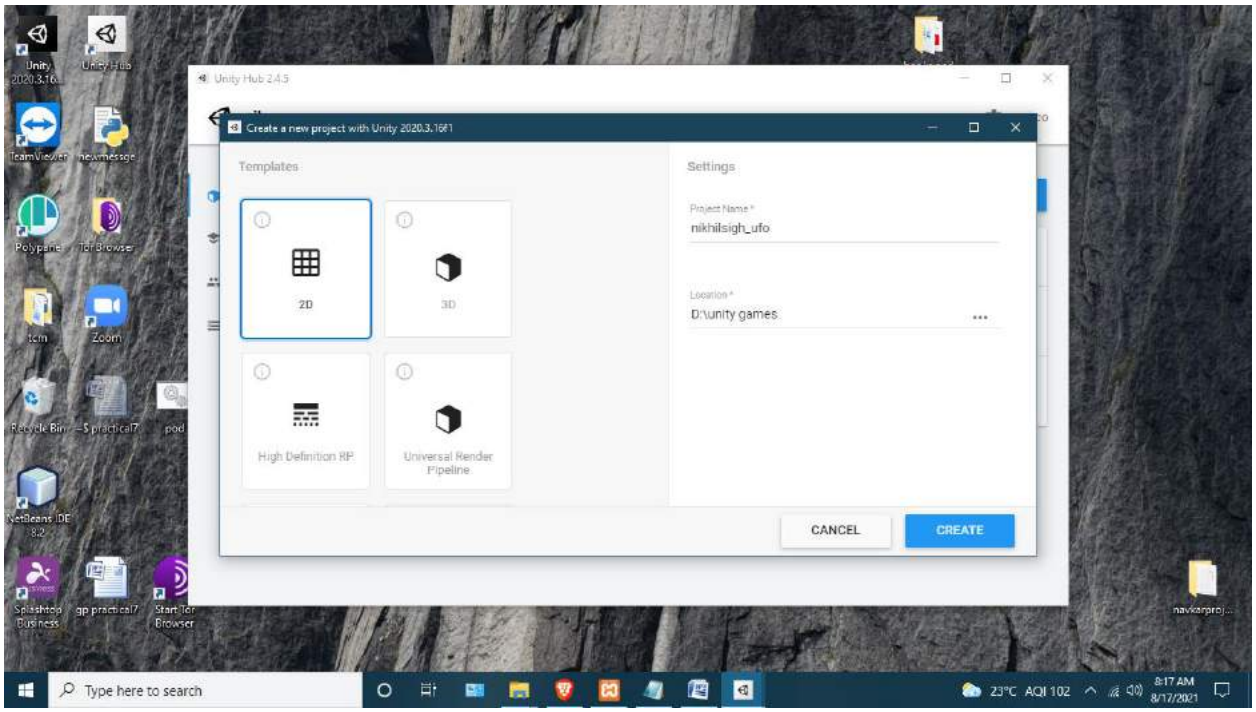
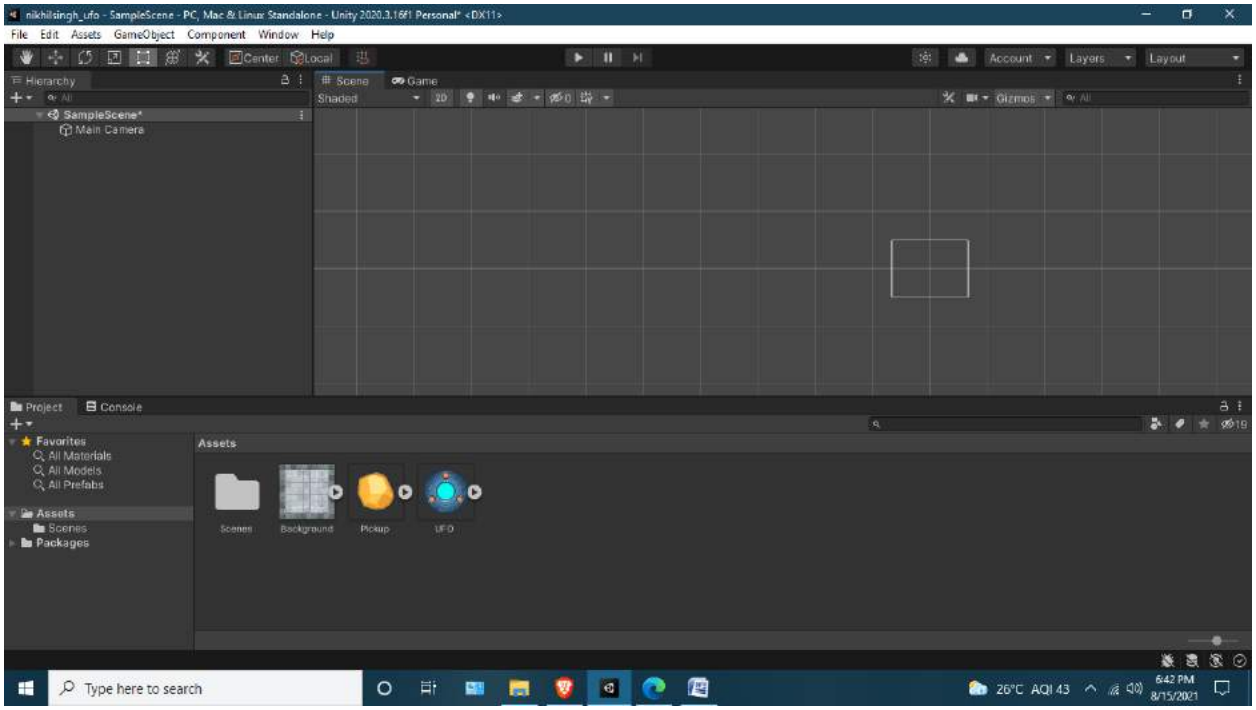
Aim: Using a unity3d software and making a 2d ufo game.

Step1:

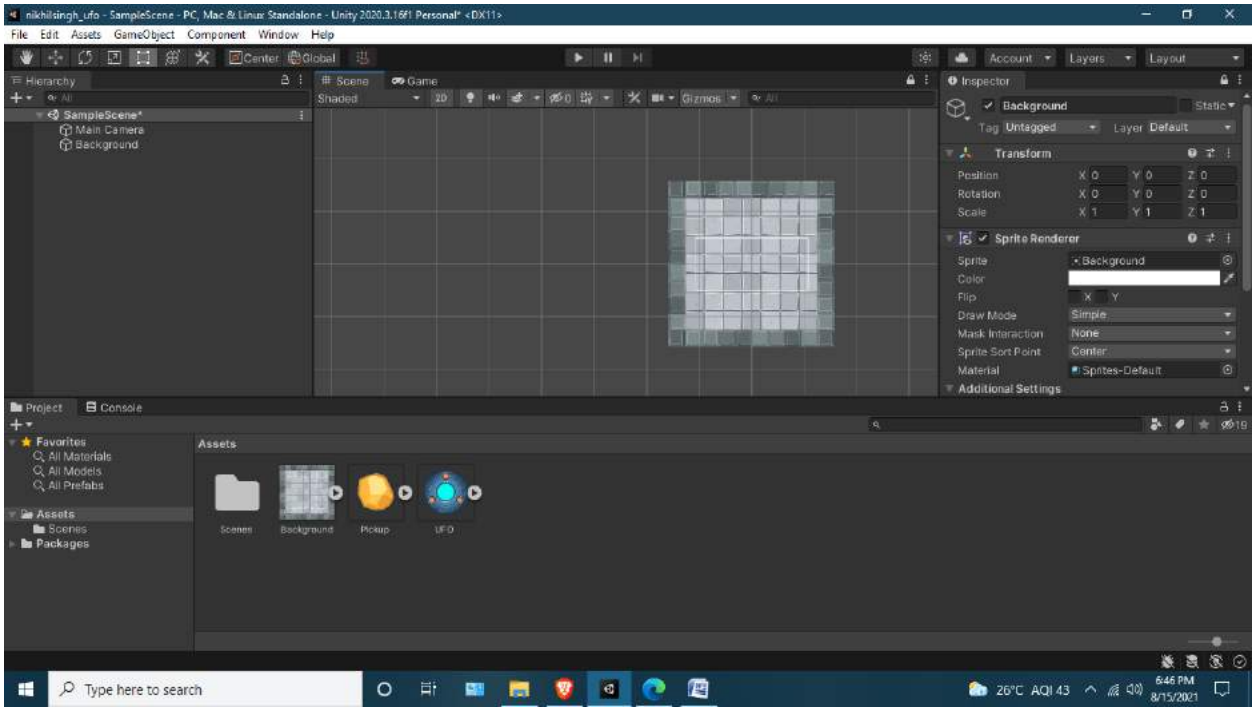
Create the project by selecting 2d and enter the name of the project



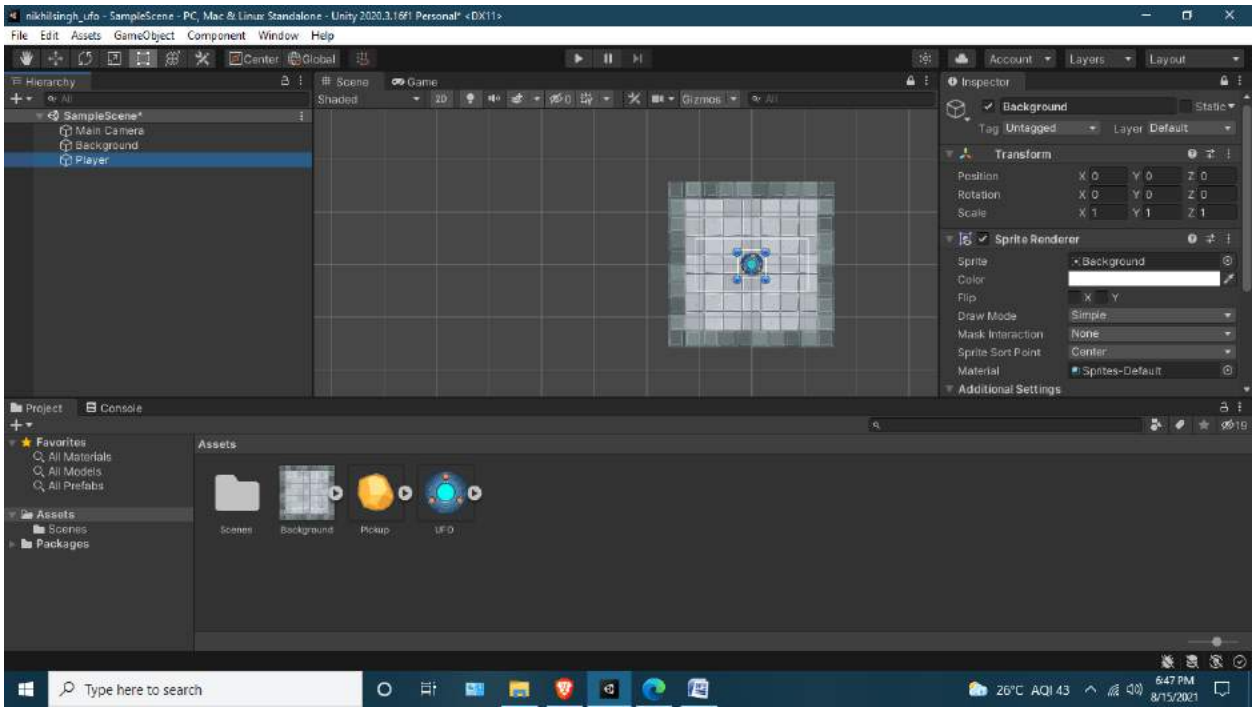
STEP2: Import the Assets Provided



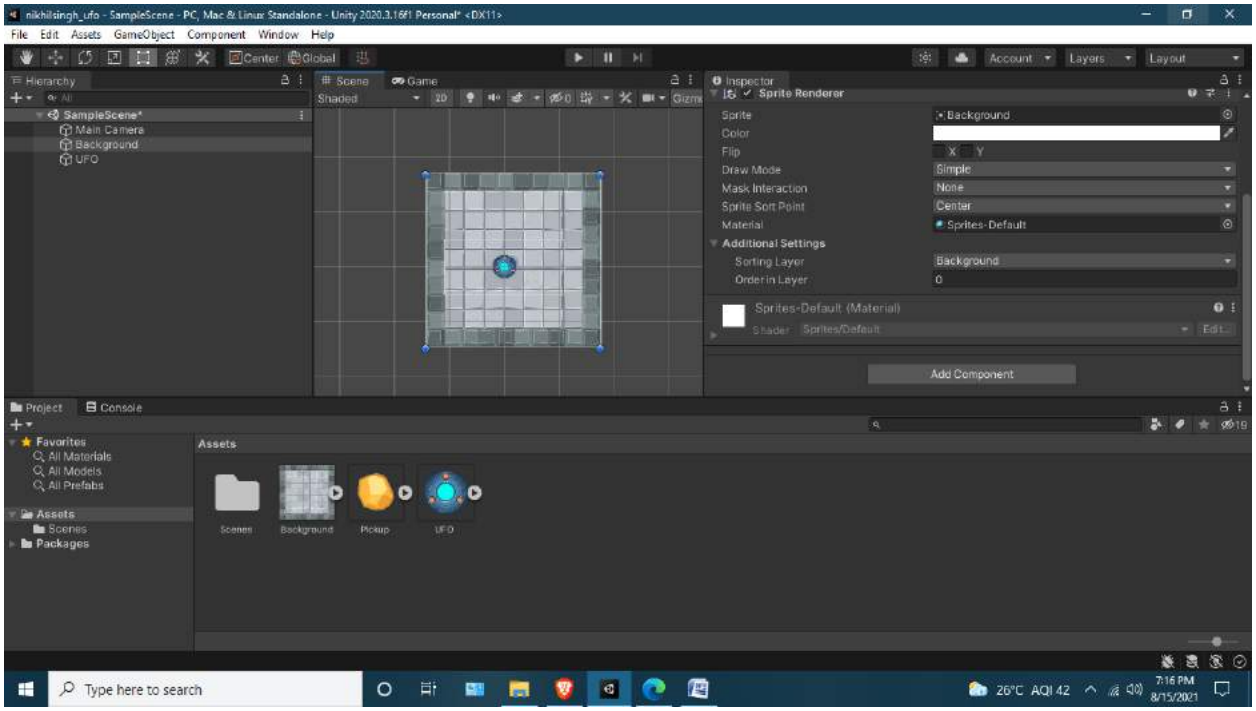
Step 3: Drag and drop Background sprite into hierarchy window and reset its transform.

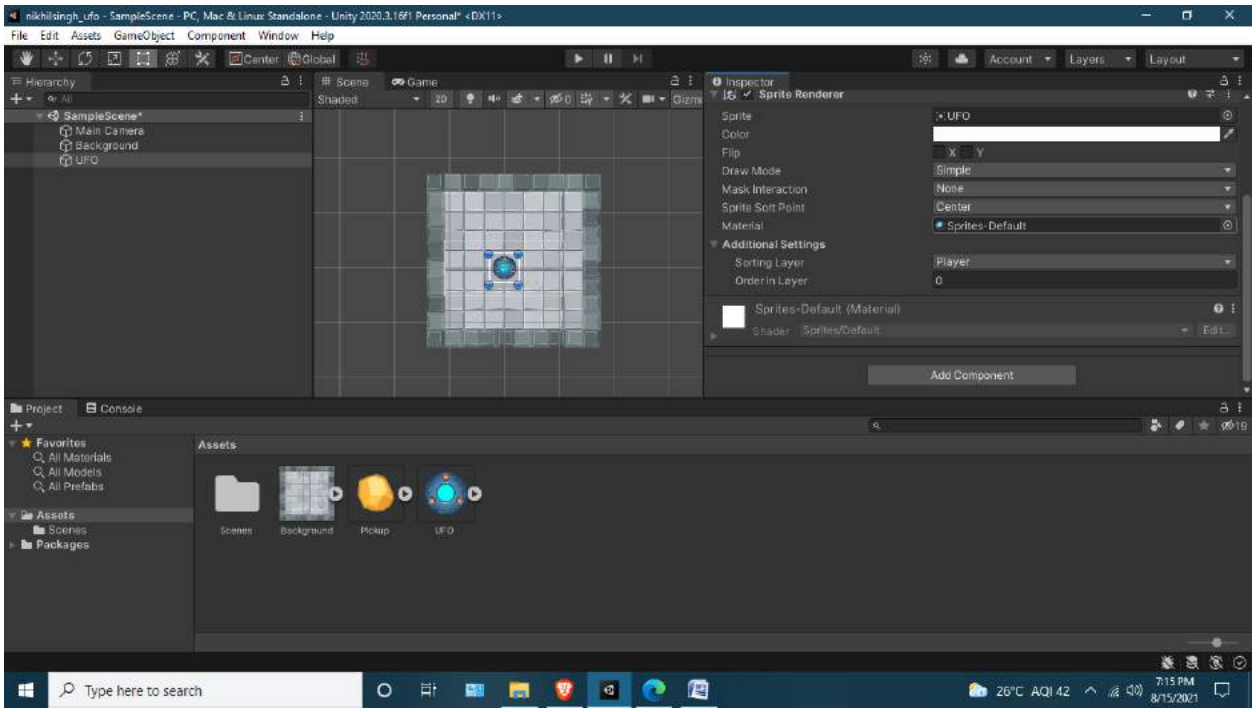


Step 4:Drag and drop UFO sprite in hierarchy and rename the game object as “Player”

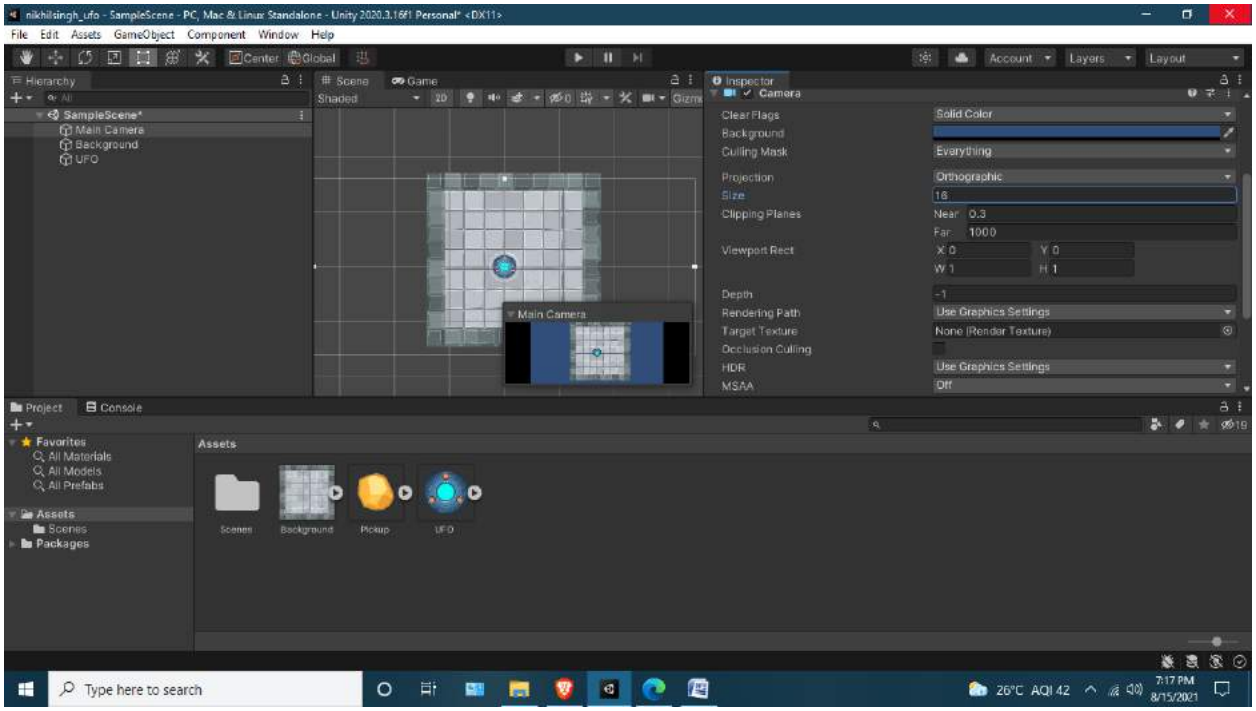


Step 5: Change sorting layer of player and background

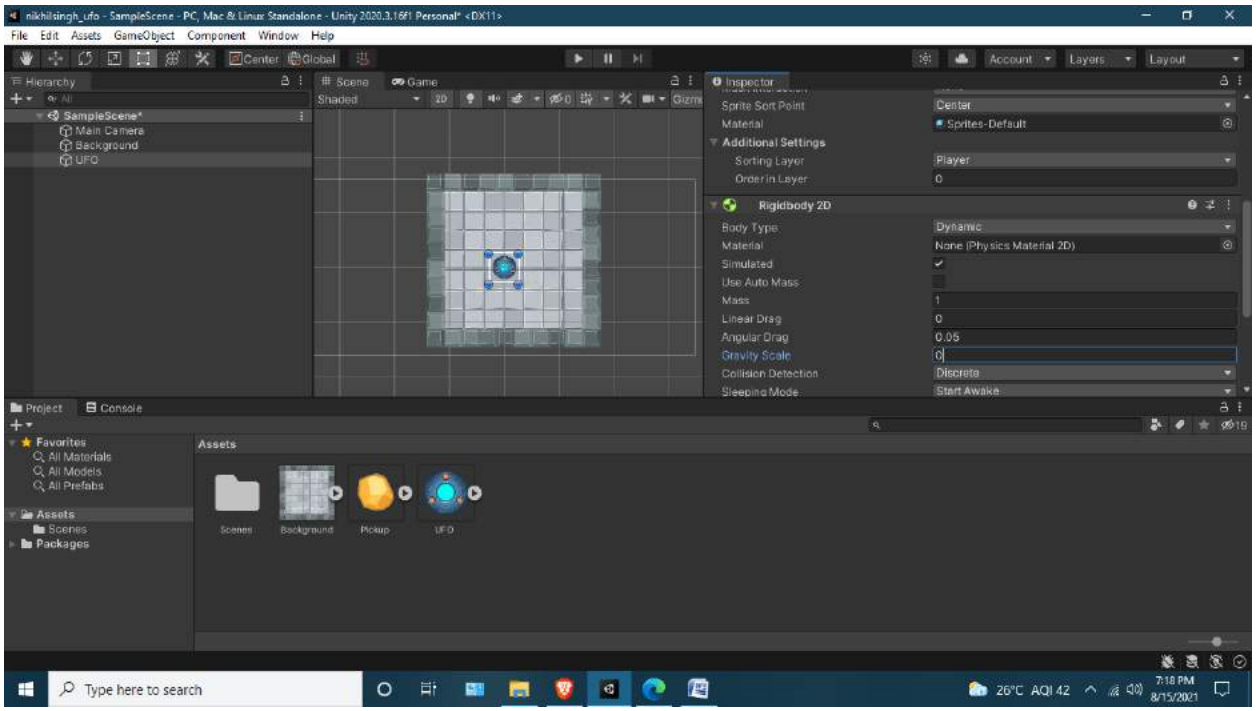




Step 6: Change the Camera Size to cover the whole background and change the background color



Step 7:Add rigidbody component to to Player and change the gravity scale to 0

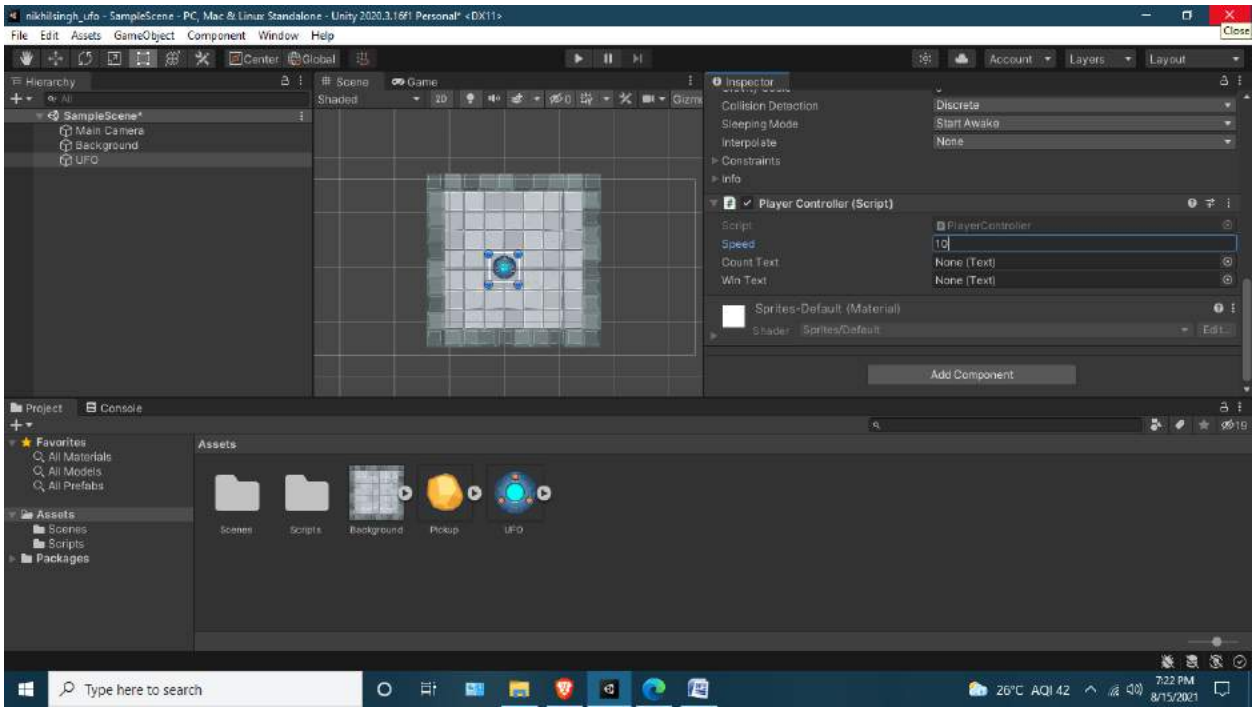


Step8: add new script called player controller and set the speed to 10

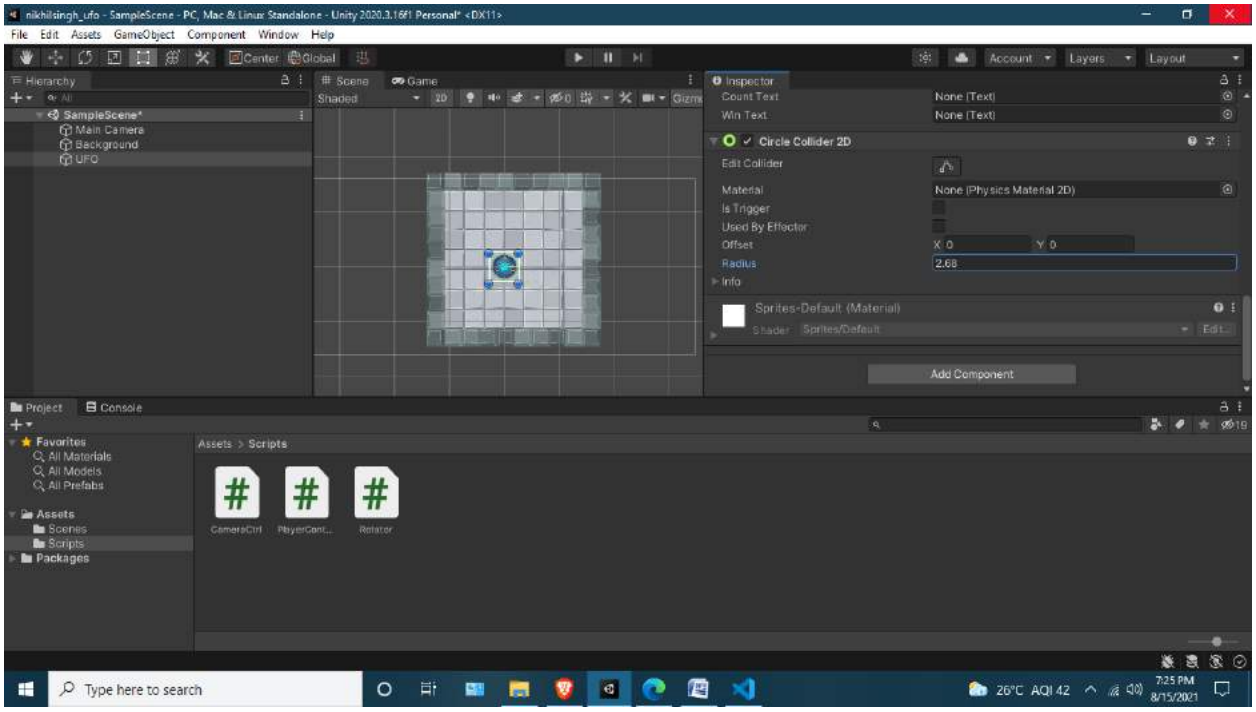
Code:-

```
using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.UI;

public class PlayerController : MonoBehaviour {

 private Rigidbody2D rb2d;

public float speed;

private int count;

void Start()

{

 rb2d=GetComponent<Rigidbody2D>();

 count=0;

 setCountText();

 winText.text="";

}

 void FixedUpdate()

 {

 float moveH=Input.GetAxis("Horizontal");

 float moveV=Input.GetAxis("Vertical");

 Vector2 movement=new Vector2 (moveH,moveV);

 rb2d.AddForce(movement * speed);


 }
```

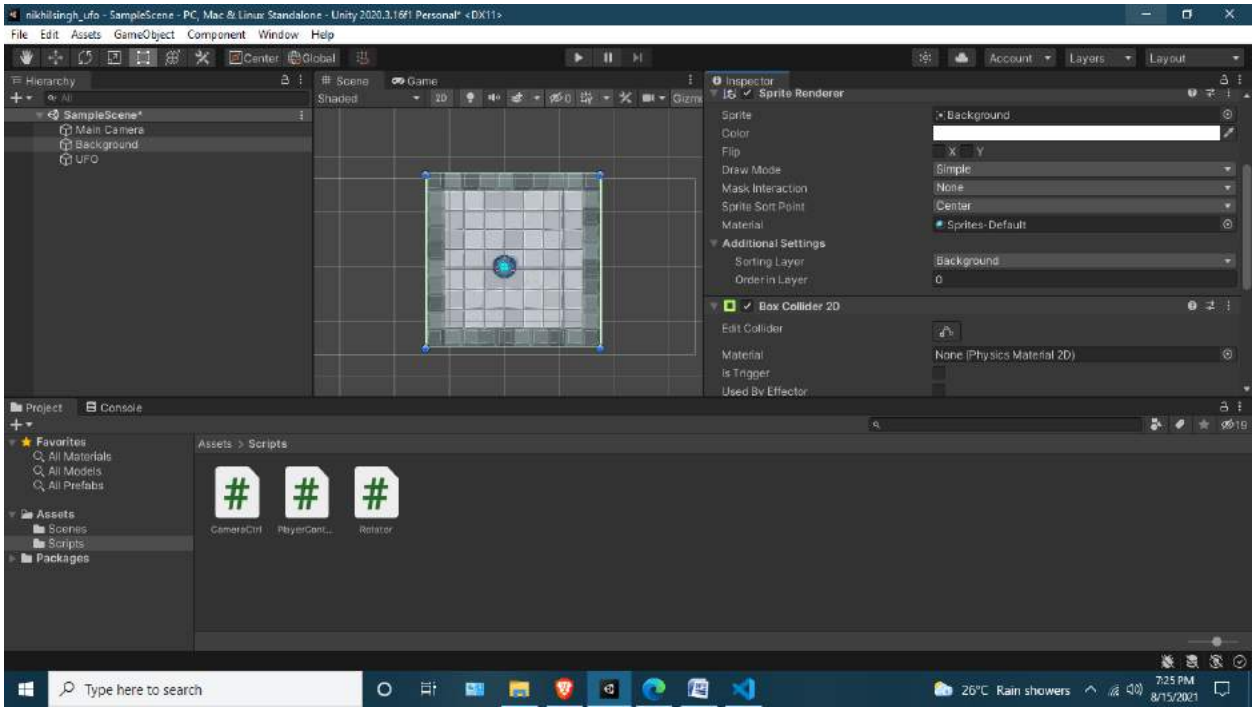
}



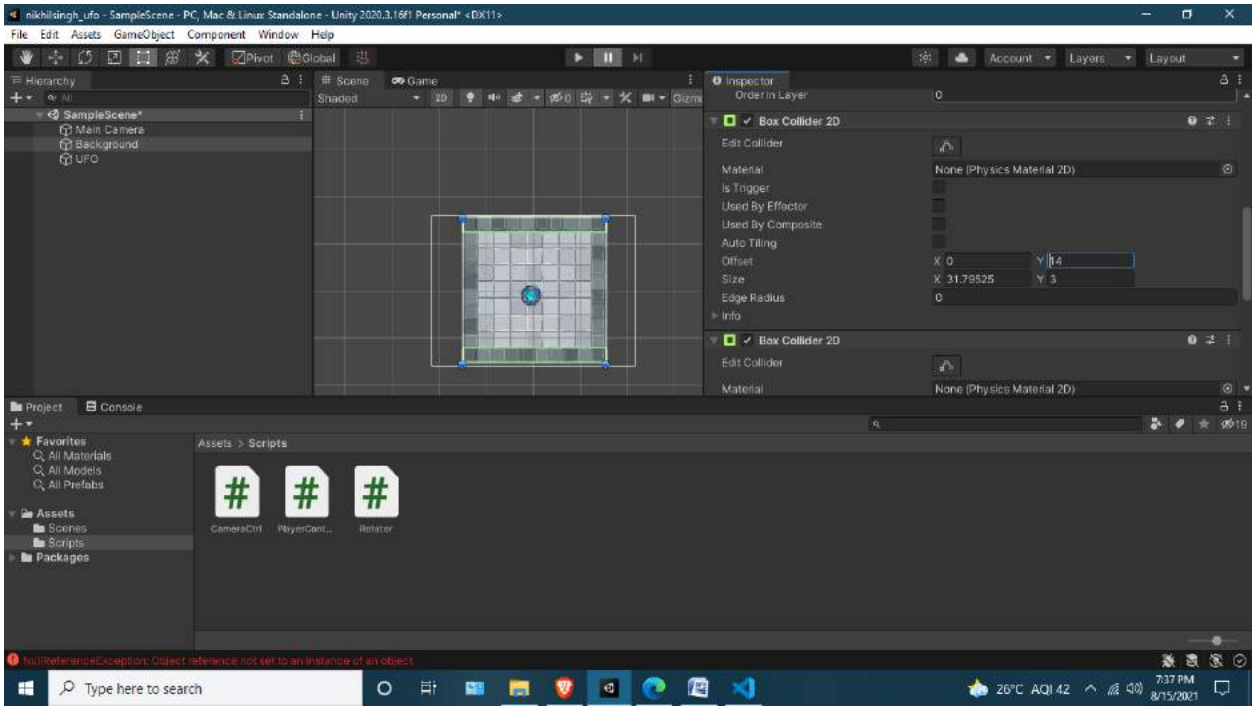
Step 9: add circle collider and set the radius accordingly



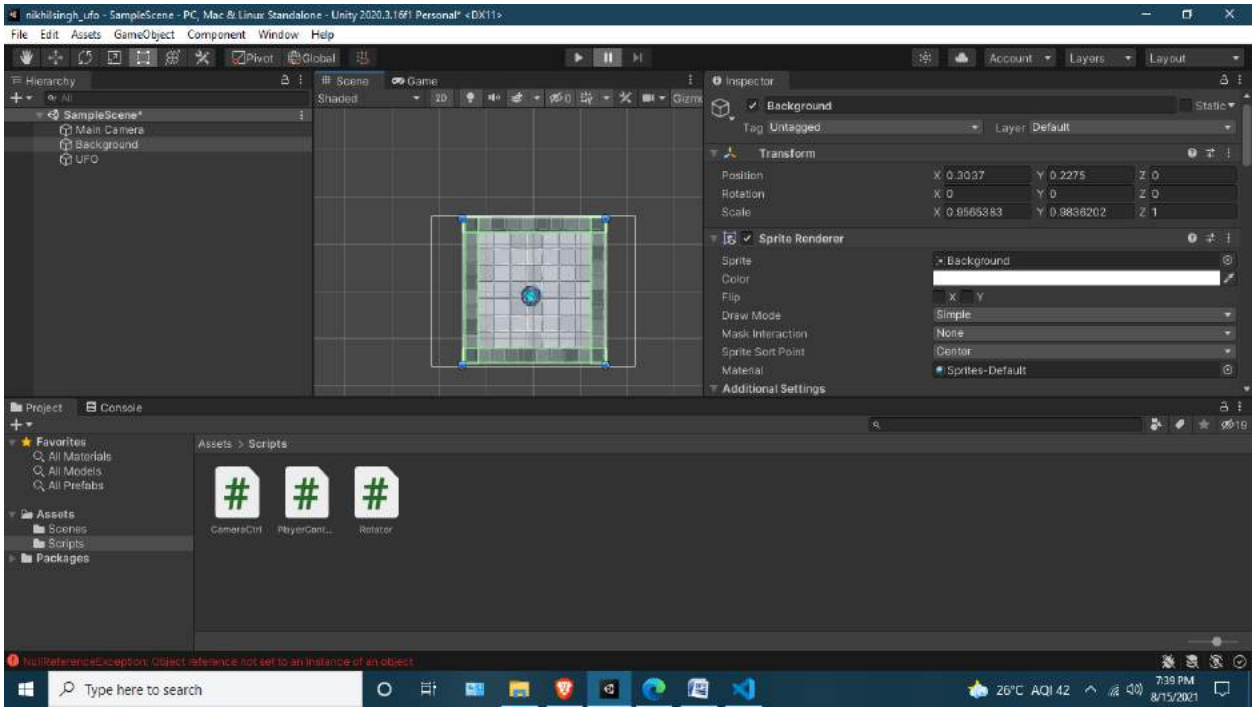
Step 10 : add box collider to the background



Step 11:now change the box collider to fit one wall on background and duplicate it for opposite side

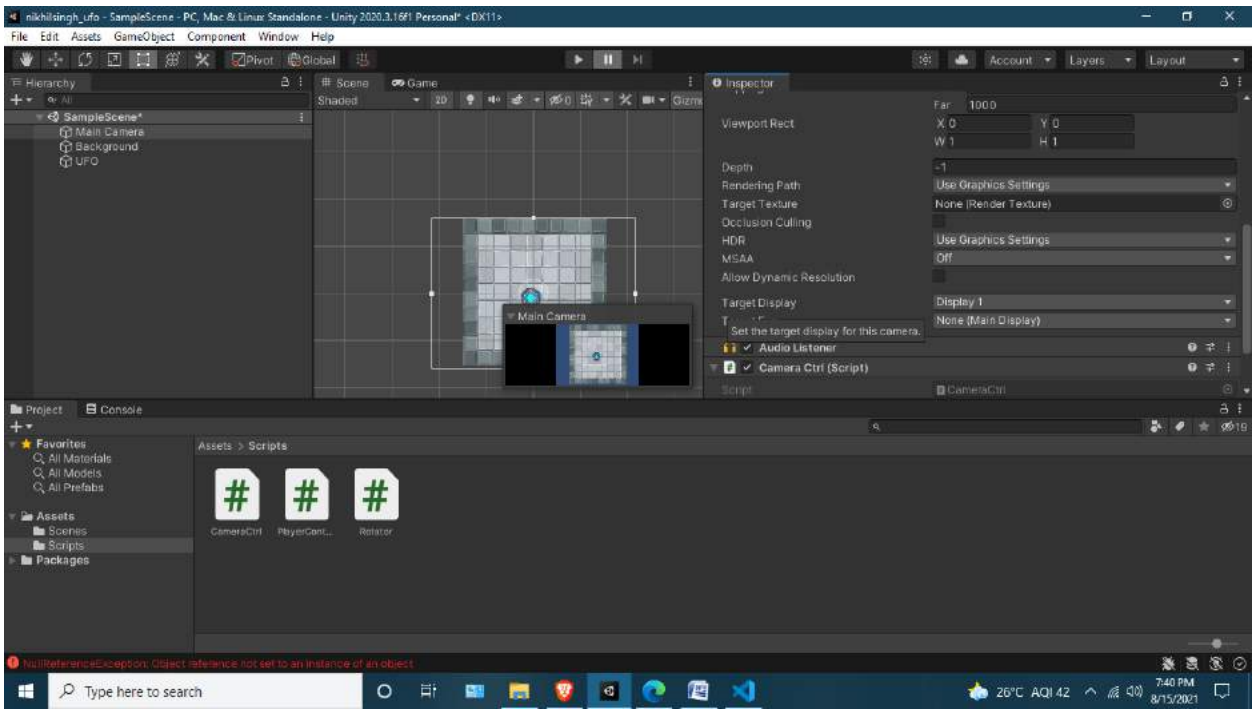


Step 12: do step 11 for other walls

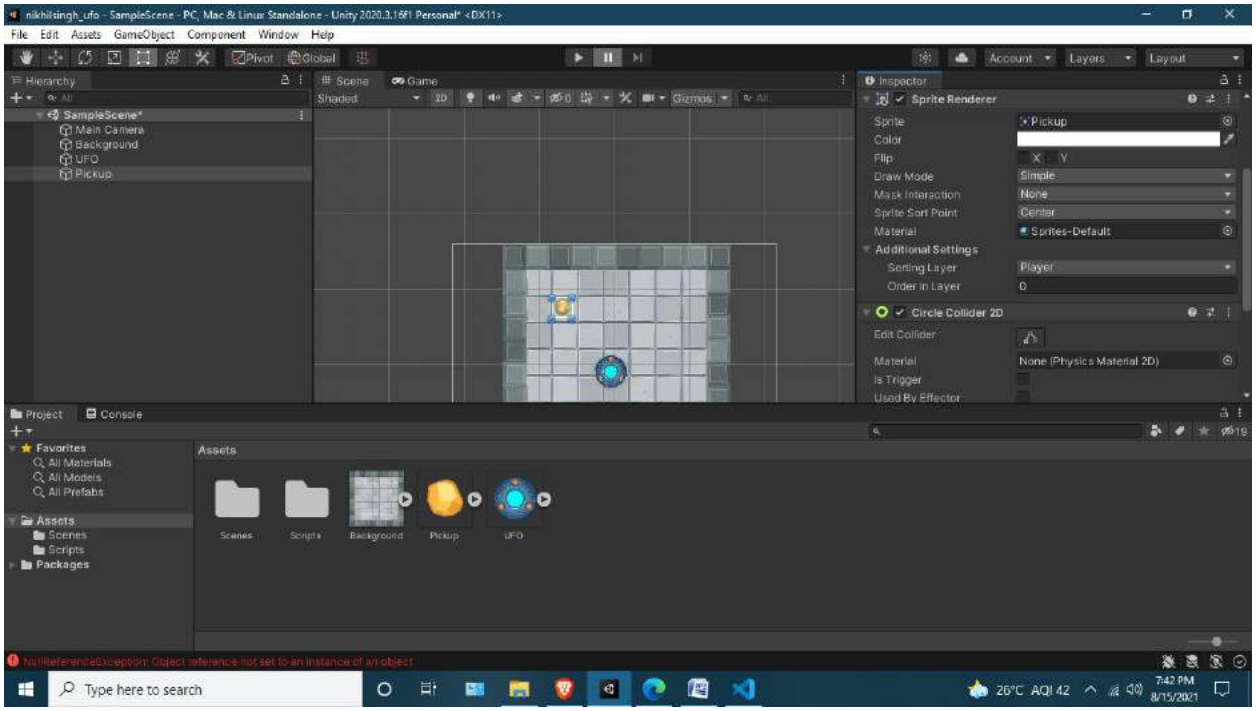


Step 13: add a script named cameracontroller to main camera

```
using UnityEngine;
using System.Collections;
public class CompleteCameraController : MonoBehaviour {
 public GameObject player;
 private Vector3 offset; camera
 void Start ()
 {
 offset = transform.position - player.transform.position;
 }
 void LateUpdate ()
 {
transform.position = player.transform.position + offset;
 }
}
```

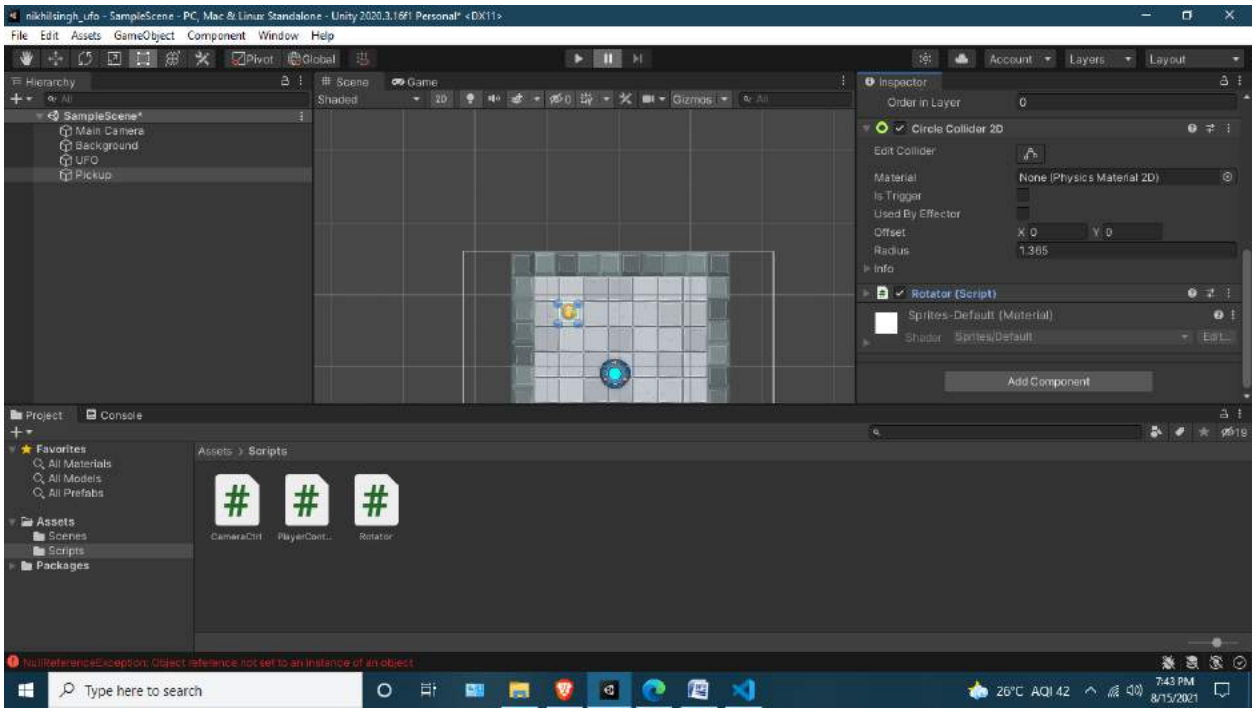


Step 14:drag and drop pickup sprite and add pickup layer to the game object and add circle collider to it

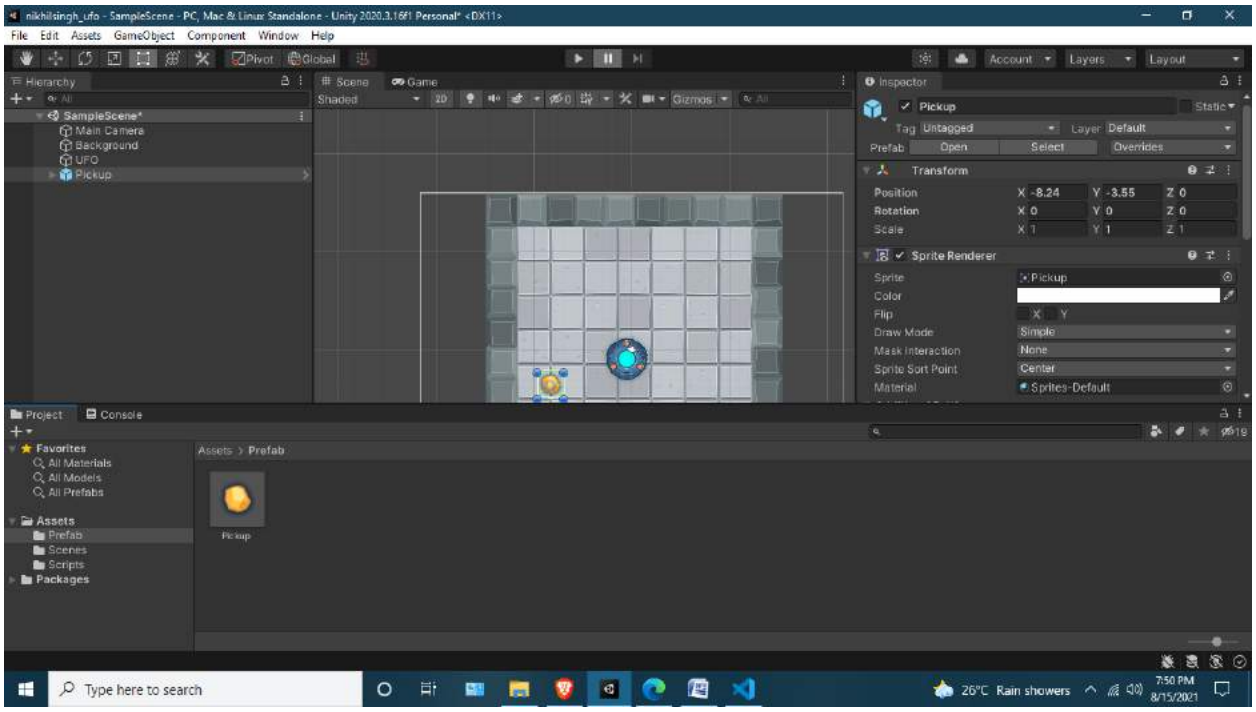


Step 15: add a script name rotator to the sprite:

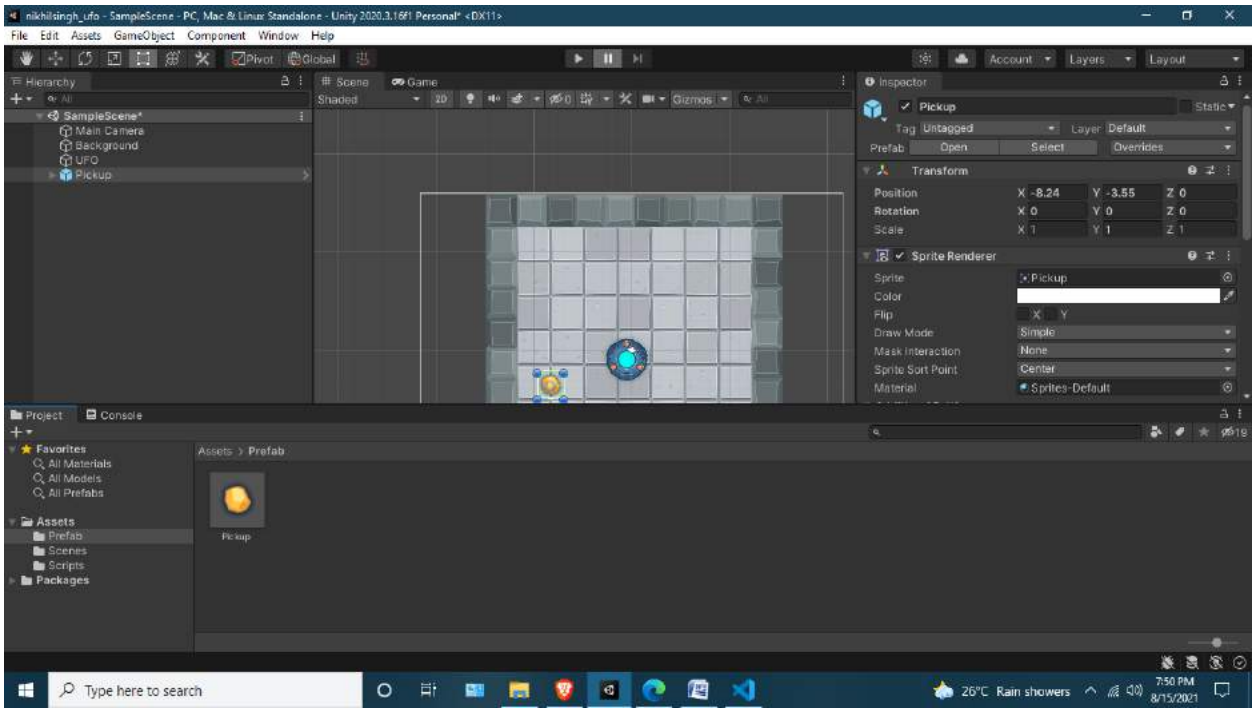
```
using UnityEngine;

using System.Collections;

public class CompleteRotator : MonoBehaviour {

 void Update ()

 {

 transform.Rotate (new Vector3 (0, 0, 45) * Time.deltaTime);

 }

}}
```



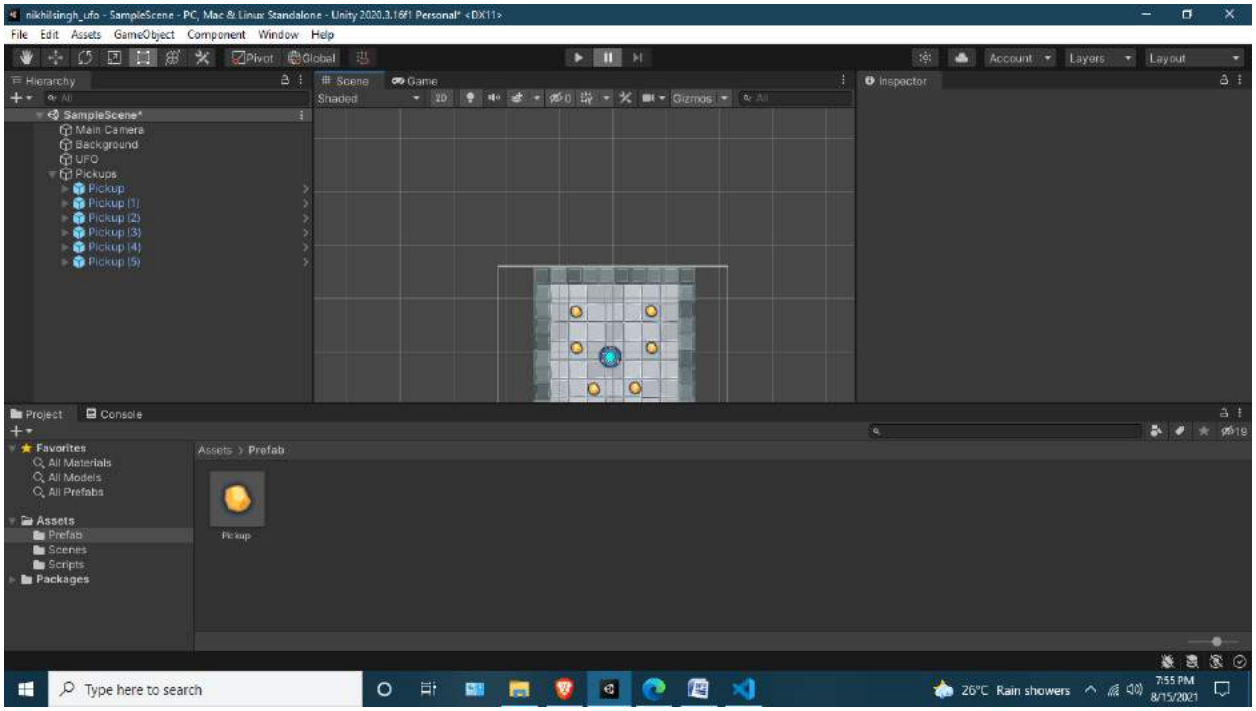
Step 16: drag and drop pickup gameobject to prefab folder to create its prefab



Step17:create a empty game object pickups and drag -drop the pickup game object as a child to this new component



Step 18: duplicate multiple pickups and place them onto the scen

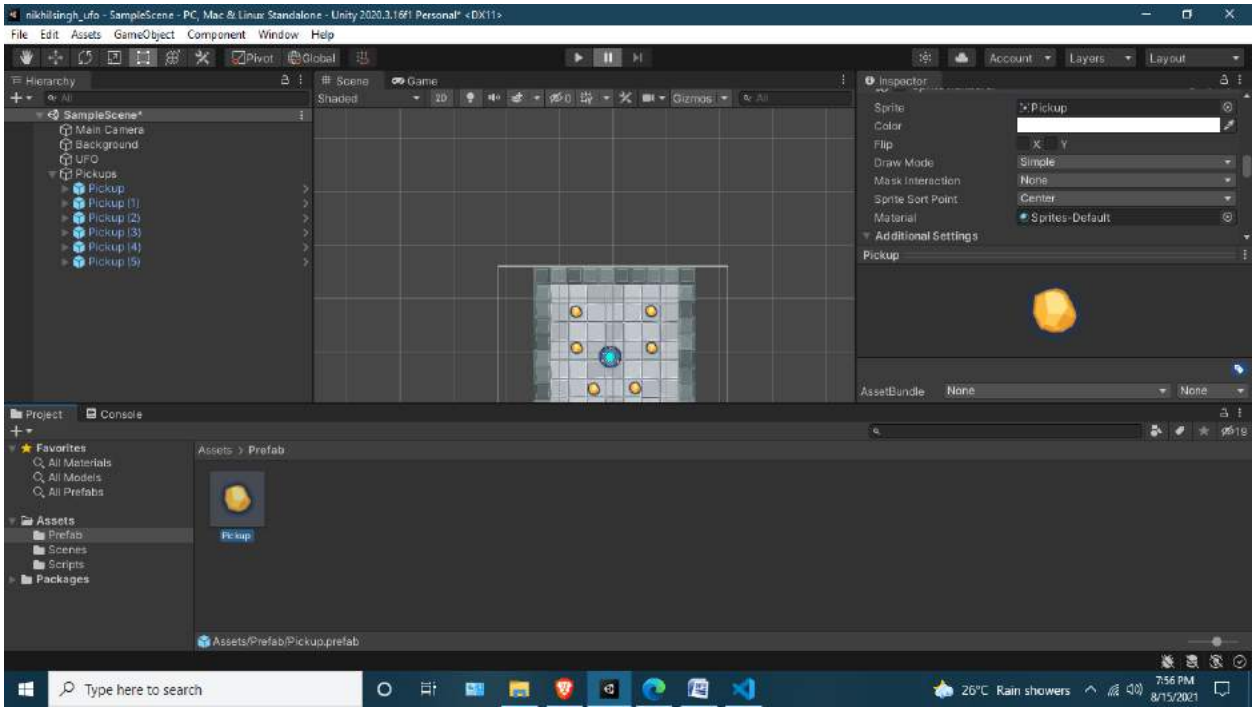


Step 19: edit the player controller script to collect pickup objects

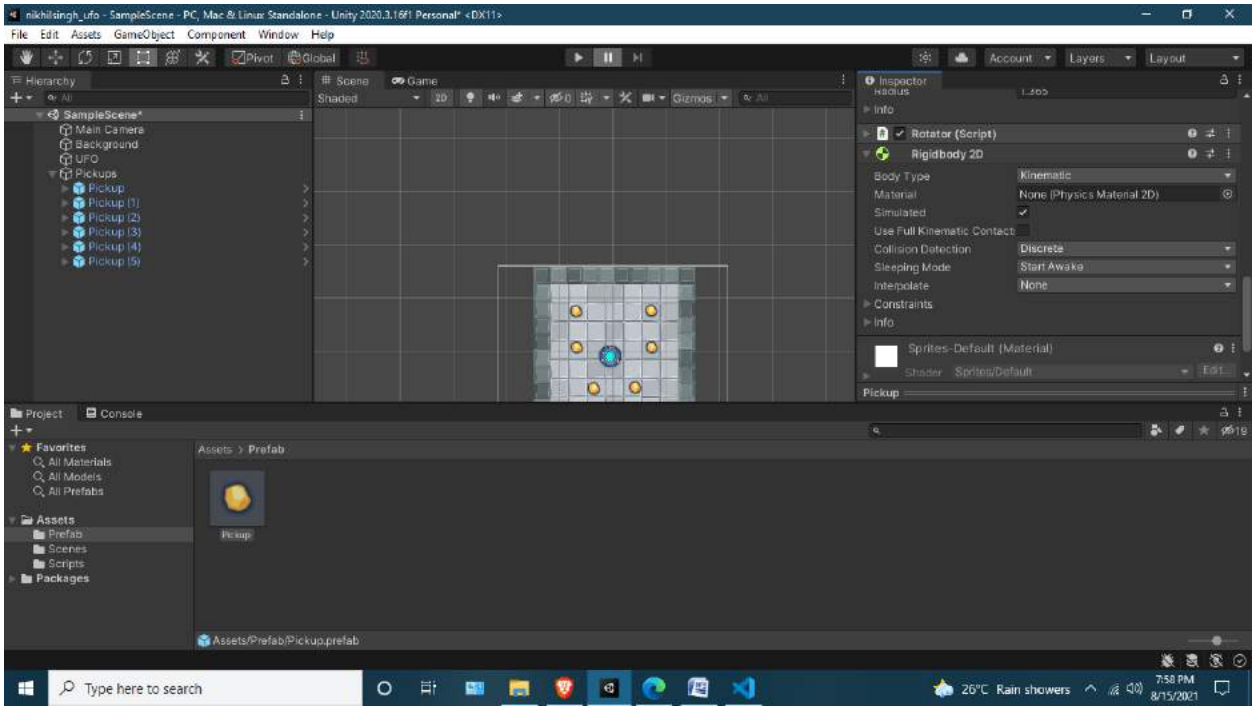
```
using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.UI;

public class PlayerController : MonoBehaviour {

private Rigidbody2D rb2d;

public float speed;

void Start()

{

rb2d=GetComponent<Rigidbody2D>();

}

void FixedUpdate()

{
```

```
float moveH=Input.GetAxis("Horizontal");

float moveV=Input.GetAxis("Vertical");

Vector2 movement=new Vector2 (moveH,moveV);

rb2d.AddForce(movement * speed);

}

void OnTriggerEnter2D(Collider2D other)

{

if (other.gameObject.CompareTag("PickUp"))

 {

 other.gameObject.SetActive(false);

 }

}}
```

Step 20: add tag pickup tag to prefab and player tag to player game object



Step 21: make pickup prefab a kinematic type rigidbody

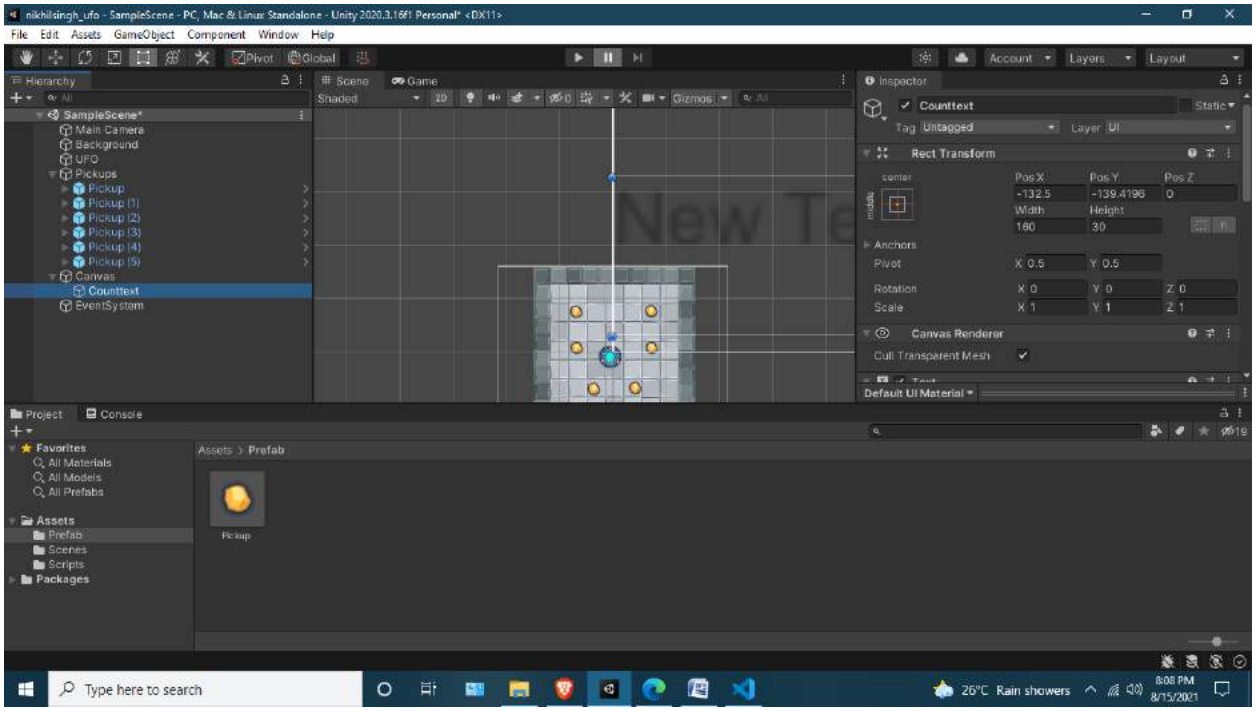


Step 22: Edit the player controller script to count the collectibles and display

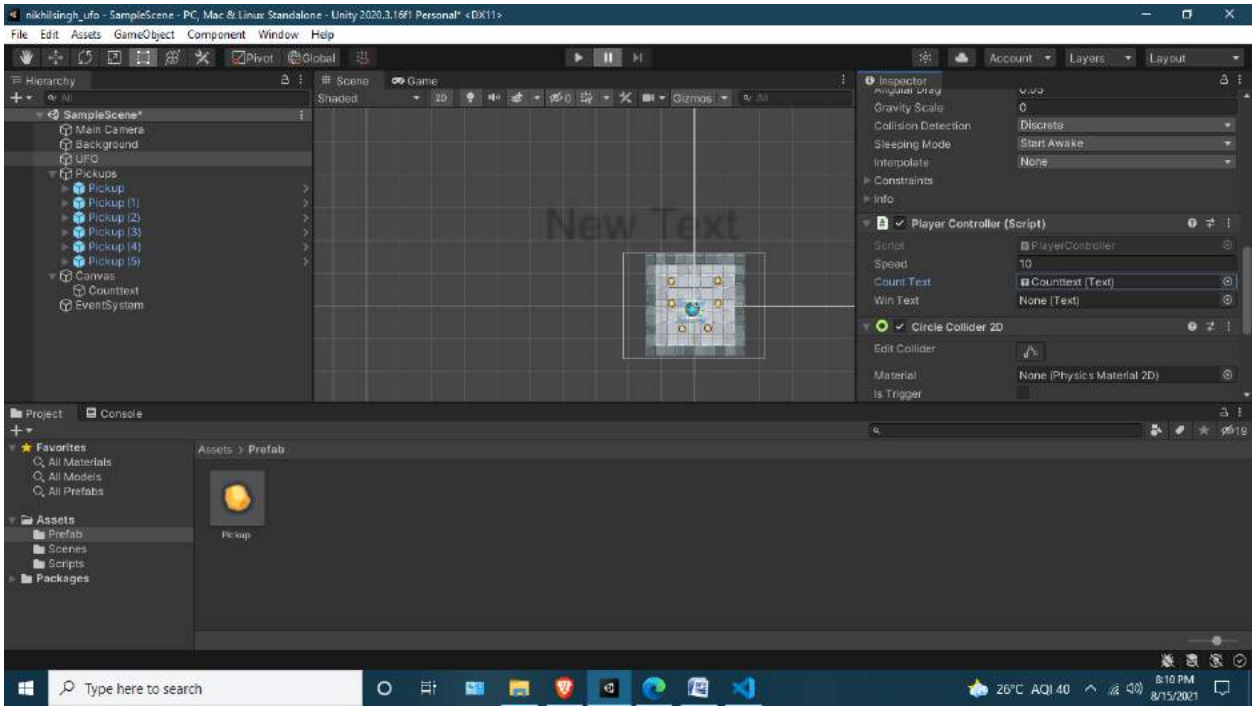
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.UI;

public class PlayerController : MonoBehaviour {

        private Rigidbody2D rb2d;
public float speed;
private int count;
public Text countText;
public Text winText;

void Start()
{
        rb2d=GetComponent<Rigidbody2D>();
        count=0;
        setCountText();
        winText.text="";
}

        void FixedUpdate()
        {
```

```
        float moveH=Input.GetAxis("Horizontal");
        float moveV=Input.GetAxis("Vertical");
        Vector2 movement=new Vector2 (moveH,moveV);
        rb2d.AddForce(movement * speed);

    }

    void OnTriggerEnter2D(Collider2D other)
    {
        if (other.gameObject.CompareTag("PickUp"))
     {
         other.gameObject.SetActive(false);
                                    count++;
                                    setCountText();
     }
    }
    void setCountText()
    {
        countText.text="Count:"+count.ToString();
        if(count >= 6)
        {
            winText.text="You Win!!";
        }
    }
}
```

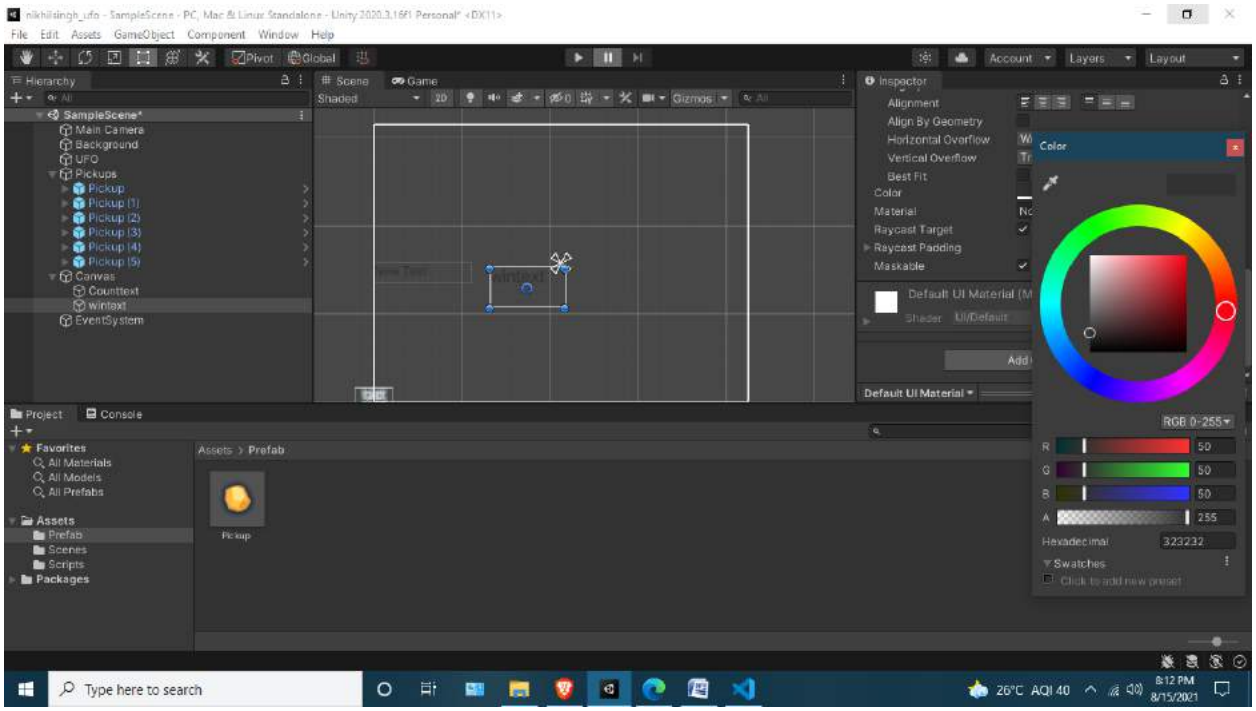
Step 23: add ui text component to display text component and rename it to counttext



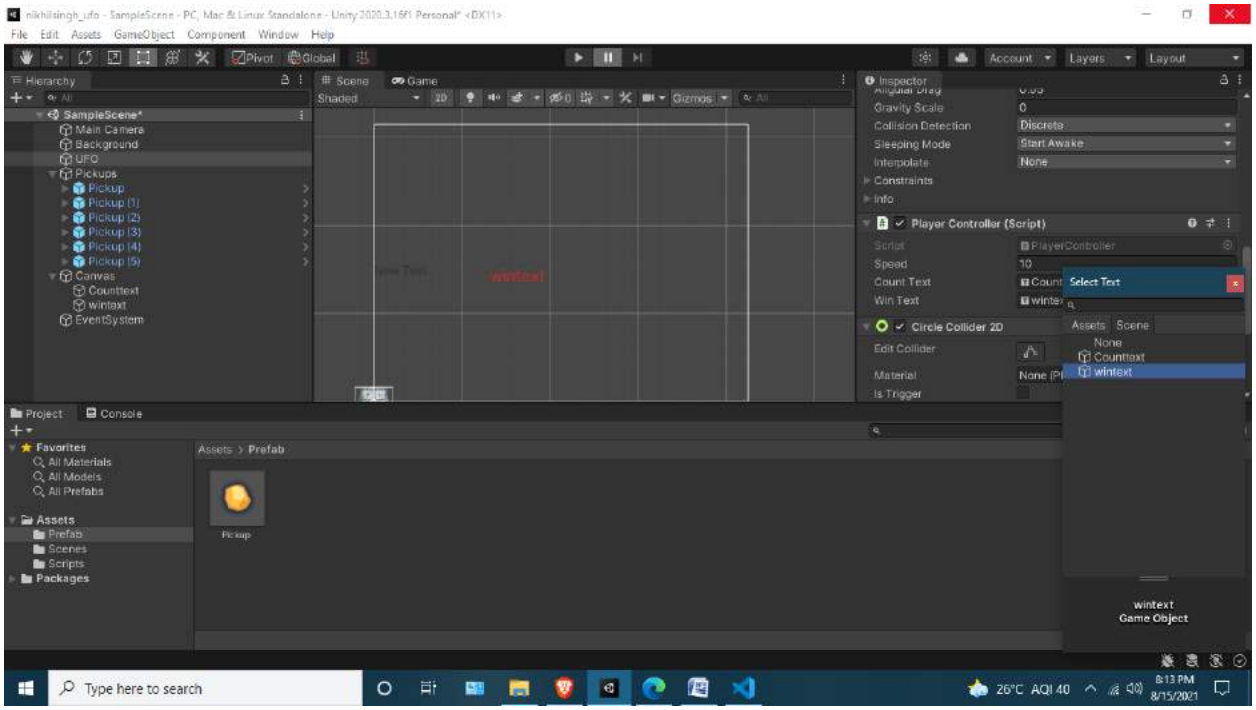
Step 24: Add count text to the editor



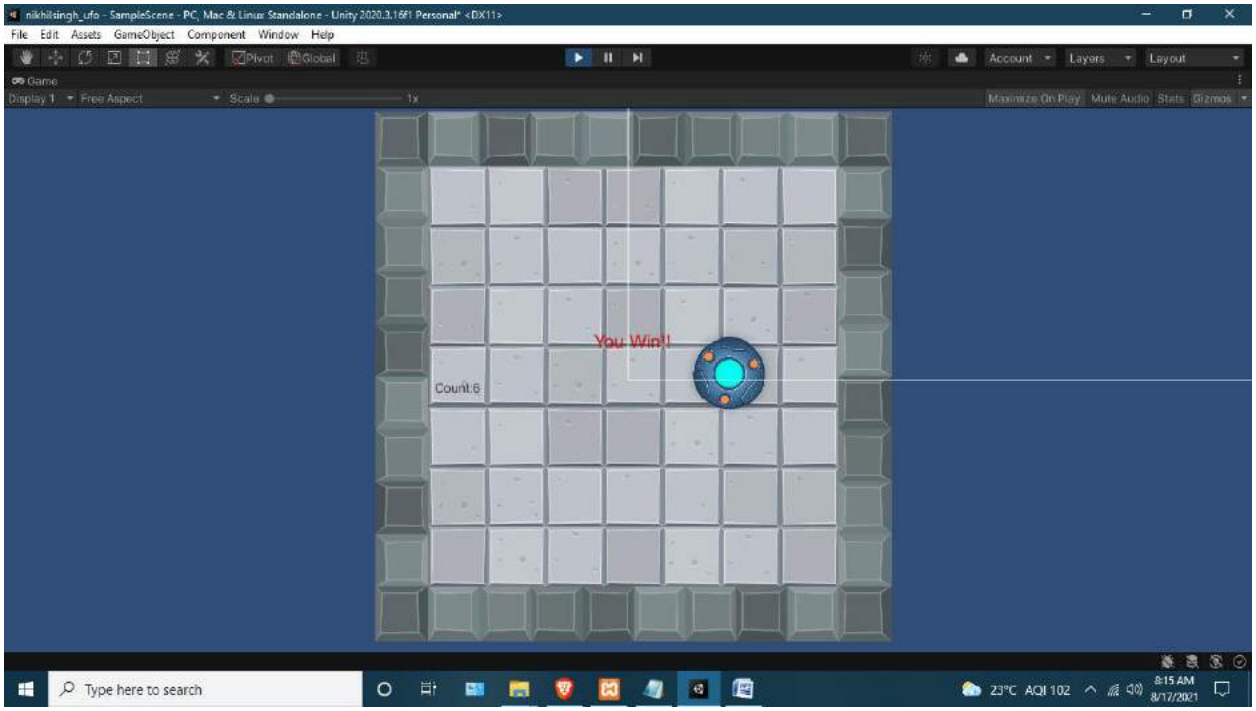
Step 25: add wintext ui and arrange it accordingly



Step 26: Add wintext to text object on player object



Step 27: Finish the game


nikhilsingh_ufo - SampleScene - PC, Mac & Linux Standalone - Unity 2020.3.16f1 Personal* <DX11>
File Edit Assets GameObject Component Window Help
Pivot Global
Account Layers Layout
Game
Display 1 Free Aspect Scale 1x
Maximize On Play Mute Audio Stats Gizmos
You Win!!
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8/17/2021