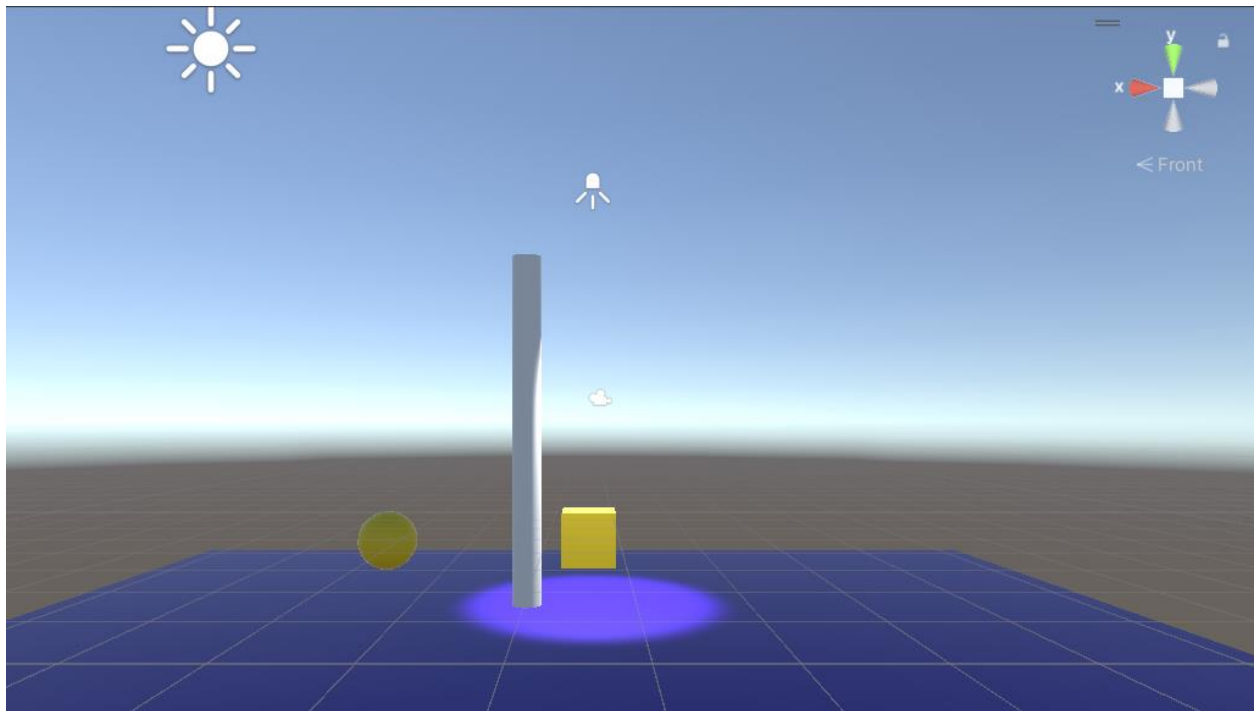


**Date:** 5-07-2024

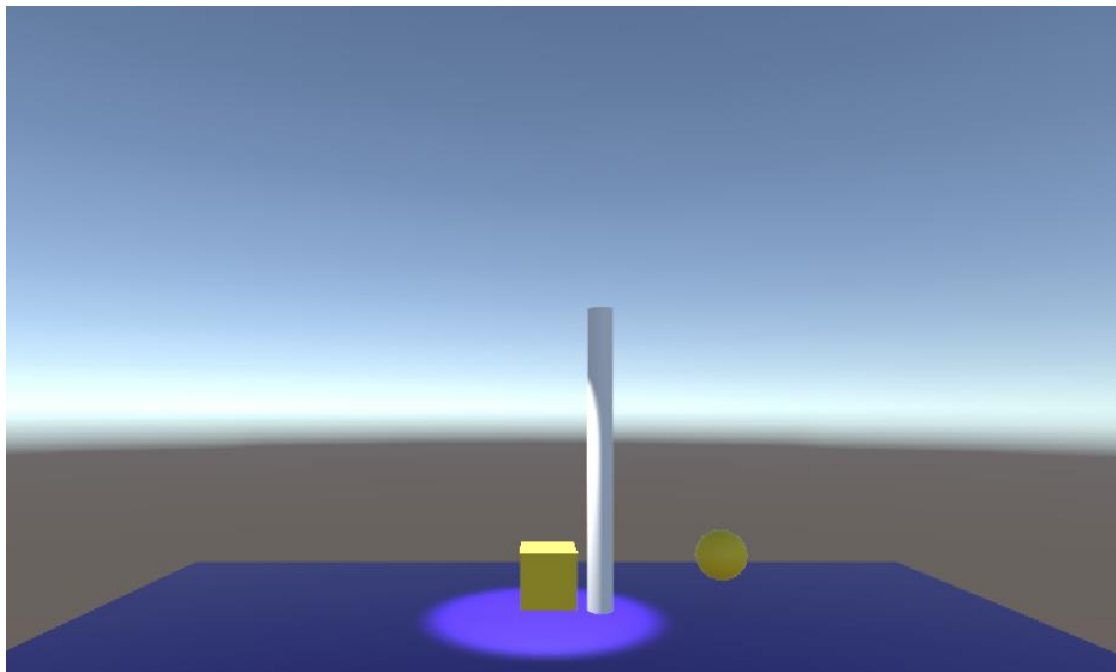
## Practical no: 1

**Aim:** Use Different 3D Primitive game objects and create a game scene along with different light effects.

**Scene:**



**Game:**

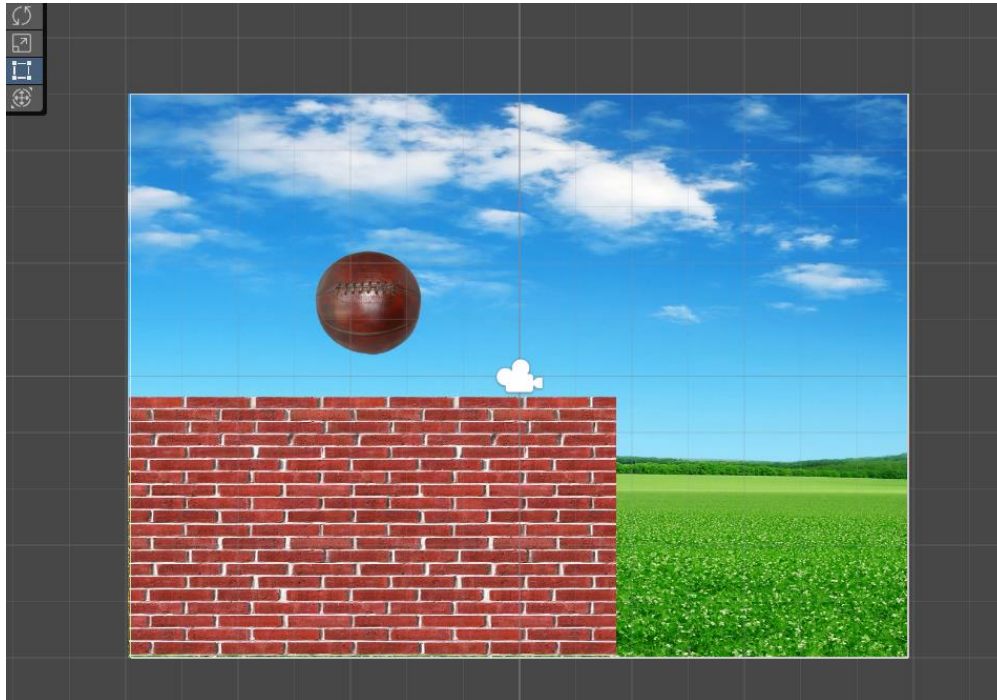


**Date:** 11-07-2024

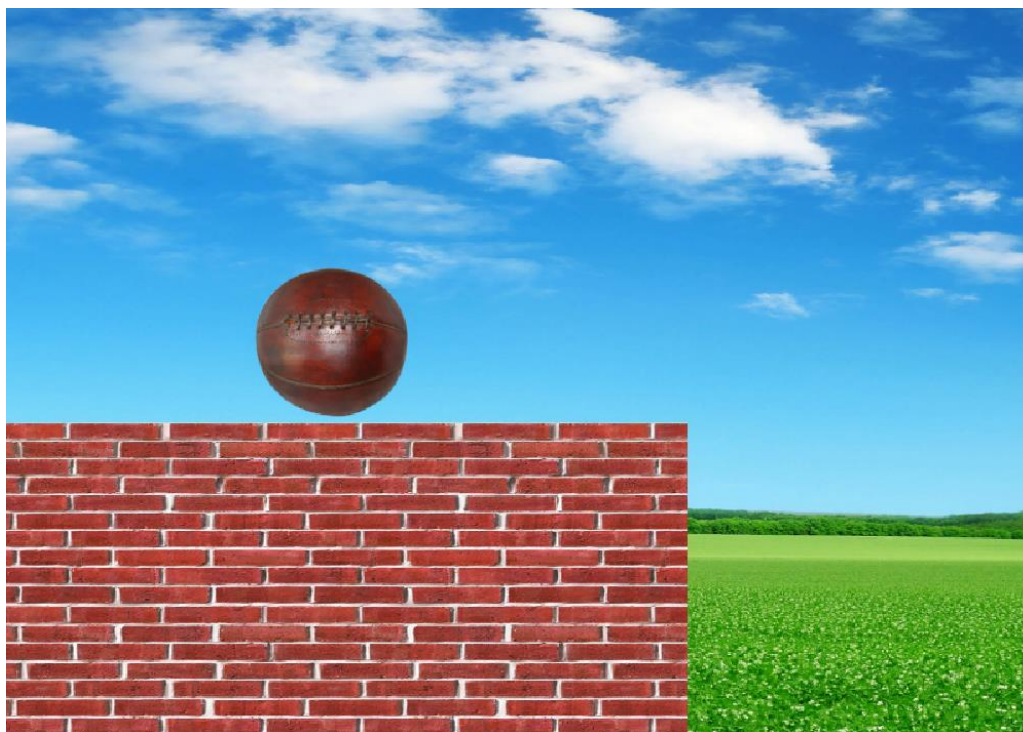
## Practical no: 2

**Aim:** Create an environment around representing walls, bricks, ground, sticks etc. The ball should fall using gravity and keep on bouncing randomly as it hits these objects

**Scene:**



**Game:**



**Date:** 18-07-2024

## Practical no: 3

**Aim:** Using Unity 2D, Create 2D game for collecting a collectable object and use TextMeshPro to display count or score on screen.

**Scene:**



**Script:**

**cat.cs:**

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

public class girl : MonoBehaviour
{
    private Rigidbody2D rb;
    private float move;
    public float playerSpeed;
    public float jumpSpeed;
    private bool isJumping;

    void Start()
    {
        rb = GetComponent<Rigidbody2D>();
    }
}
```

```
// Update is called once per frame
void Update()
{
    move = Input.GetAxis("Horizontal");
    rb.velocity = new
    Vector2(move*playerSpeed,
    rb.velocity.y);

    if (move > 0)
    {
        transform.eulerAngles = new
        Vector3(0,0,0);
    }
    else if (move < 0)
    {

```

```

        transform.eulerAngles = new
Vector3(0,180,0);
    }

    if (Input.GetButtonDown("Jump")
&& !isJumping)
    {
        rb.AddForce(new
Vector2(rb.velocity.x,jumpSpeed));
        isJumping=true;
    }
}

```

```

private void
OnCollisionEnter2D(Collision2D other)
{
    if
(other.gameObject.CompareTag("Tiles")
)
    {
        isJumping=false;
    }
}

```

### **mushroom.cs**

```

using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class coin : MonoBehaviour
{
    int giftvalue=1;
    void Start(){ }
    void Update(){ }

    private void
OnTriggerEnter2D(Collider2D collider)

```

```

{
    if
(collider.gameObject.CompareTag("Play
er"))
    {
        ScoreManager.instance.scoreChe
ck(giftvalue);
    }
}

```

### **ScoreManager.cs**

```

using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using TMPro;
public class scoreManager :
MonoBehaviour
{

```

```

public static scoreManager instance;
public TextMeshProUGUI textpro;
int score;
void Start()
{
    if (instance==null)
    {
        instance=this;

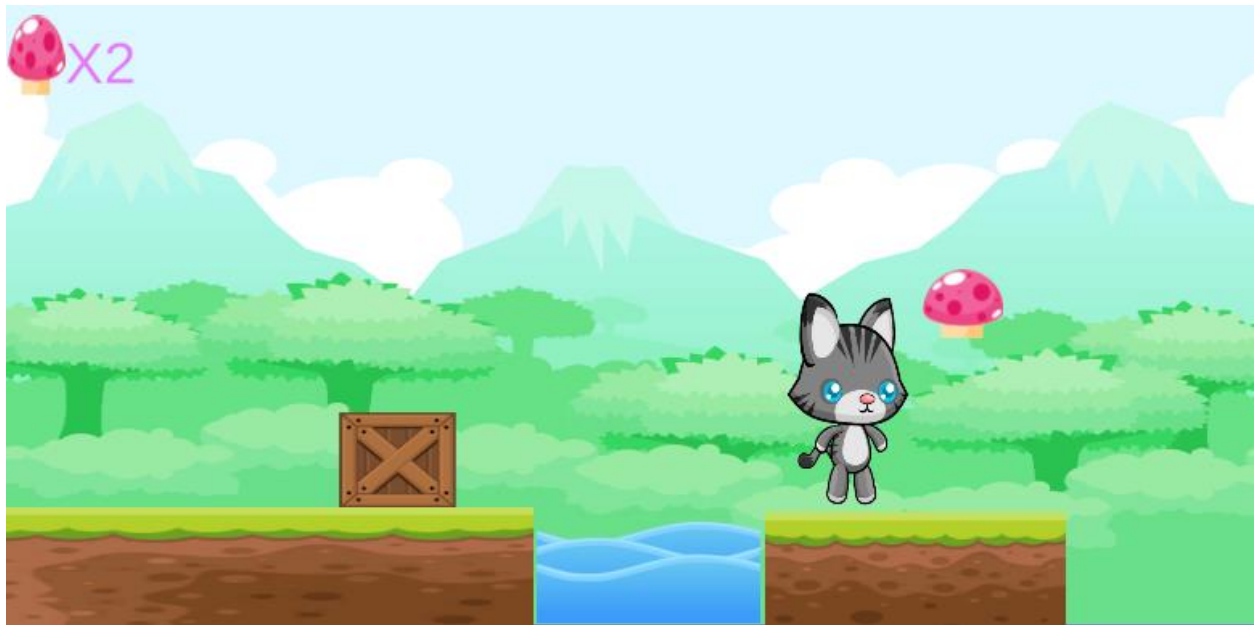
```

```
}  
}
```

```
// Update is called once per frame  
void Update(){ }
```

```
public void scoreCheck(int  
gemvalue){  
    score+=gemvalue;  
    textpro.text = "Score:  
"+score.ToString();  
}  
}
```

**Game:**

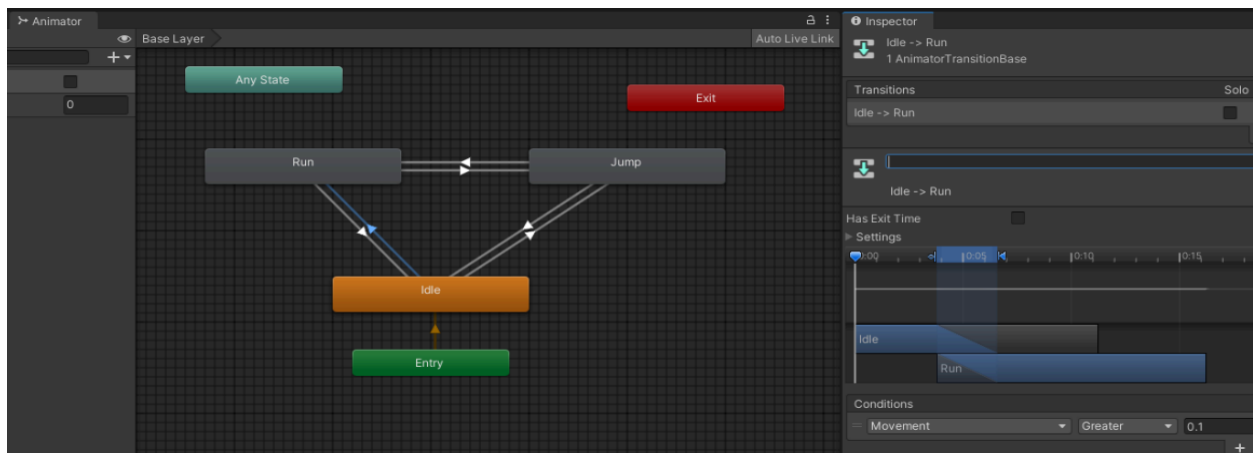


**Date:** 8-08-2024

## Practical no: 4

**Aim:** Using unity 2D, Create 2D game and also add animation on gameObject.

**Scene:**



### Scripts:

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

```
public class girl : MonoBehaviour  
{  
    private Rigidbody2D rb;
```

```
    private float move;  
    public float playerSpeed;  
    public float jumpSpeed;  
    private bool isJumping;  
    private Animator anim;
```

```
    void Start()
```



```

{
    rb=GetComponent<Rigidbody2D>();
}

// Update is called once per frame
void Update()
{
    move = Input.GetAxis("Horizontal");
    rb.velocity = new
Vector2(move*playerSpeed,
rb.velocity.y);

    if (move > 0)
    {
        transform.eulerAngles = new
Vector3(0,0,0);
    }
    else if (move < 0)
    {
        transform.eulerAngles = new
Vector3(0,180,0);
    }

    if (Input.GetButtonDown("Jump")
&& !isJumping)

```

```

{
    rb.AddForce(new
Vector2(rb.velocity.x,jumpSpeed));
    isJumping=true;
}

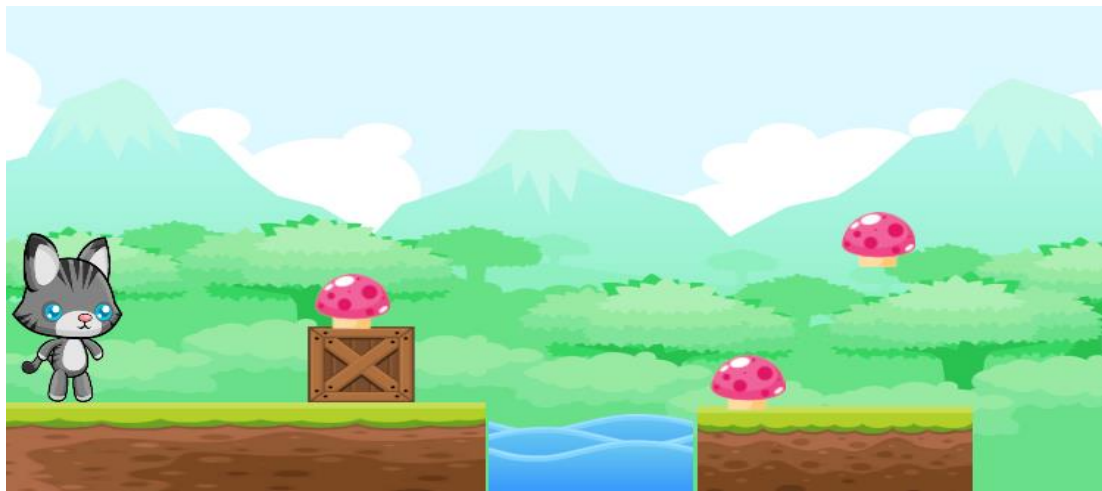
}

private void
OnCollisionEnter2D(Collision2D other)
{
    if
(other.gameObject.CompareTag("Tiles")
)
    {
        isJumping=false;
    }
}

void runAnimation(){
    anim.SetFloat("Movement",Mathf
.Abs(move));
    anim.SetBool("isjump",isjumping);
}

```

### Game:



**Date:** 22-08-2024

## Practical no: 5

**Aim:** Using unity 2D, Create 2D Complete UFO Game.

**Scene:**



### UFO.cs :

```
using UnityEngine;
public class UFO_Script : MonoBehaviour
{
    public float playerSpeed = 5f;
    private Rigidbody2D rb;
    void Start()
    {
        rb = GetComponent<Rigidbody2D>();
    }
    void Update()
    {
        // Get input from the player
```

```
        float moveHorizontal =
Input.GetAxis("Horizontal");
        float moveVertical =
Input.GetAxis("Vertical");
        // Calculate movement vector
        Vector2 movement = new
Vector2(moveHorizontal, moveVertical) *
playerSpeed;
        // Apply movement to the Rigidbody2D
        rb.velocity = movement;
    }
}
```

### ScoreManager.cs :

```
using System.Collections;
using System.Collections.Generic;
```

```
using UnityEngine;
using TMPro;
```



```

public class ScoreManager : MonoBehaviour
{
    public static ScoreManager instance;
    public TextMeshProUGUI scoreText;
    int score;
    void Start()
    {
        if(instance==null)
        {

```

```

            instance=this;
        }
    }
    public void checkScore(int coinvale)
    {
        score += coinvale;
        scoreText.text = score.ToString();
    }
}

```

### **Gems\_coin.cs :**

```

using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class gems_coin : MonoBehaviour
{
    int coinvale=1;
    private void OnTriggerEnter2D(Collider2D
collider)

```

```

    {
        // Destroy the coin when it collides with
something
        Destroy(gameObject);

        ScoreManager.instance.checkScore(coinvale);
    }
}

```

### **Game View :**

