LAB 7
3D Game

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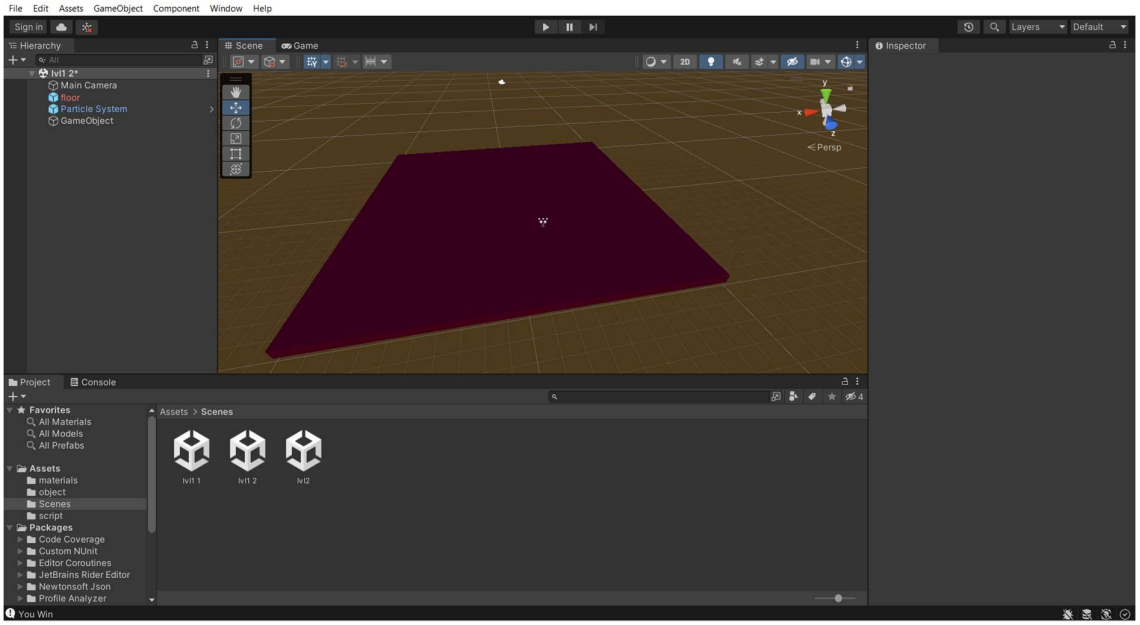
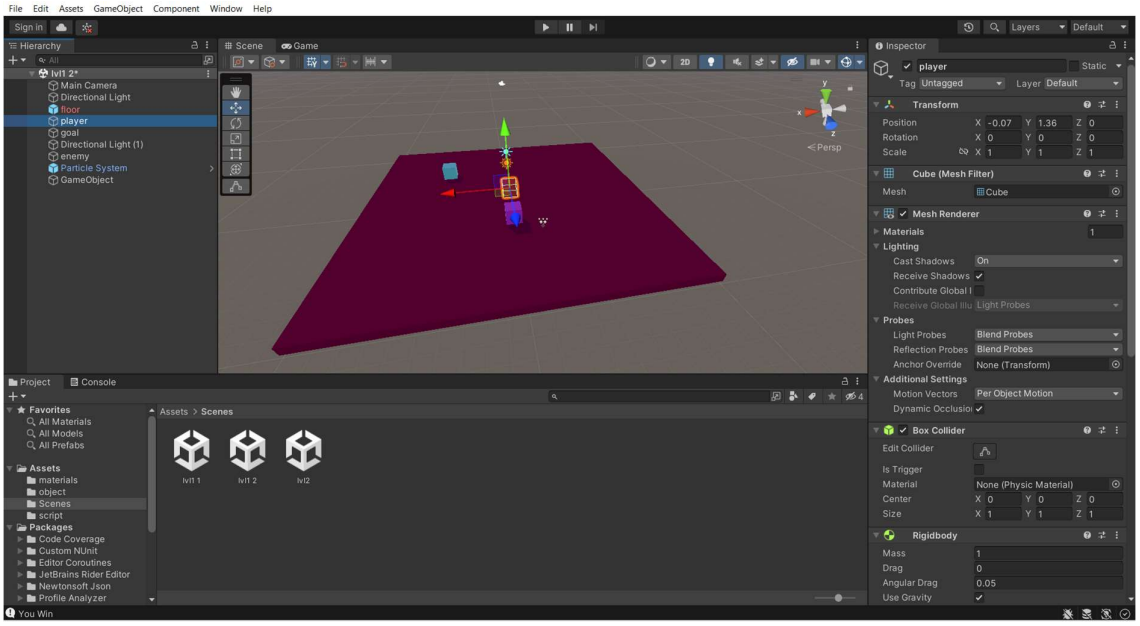
20BAI1242

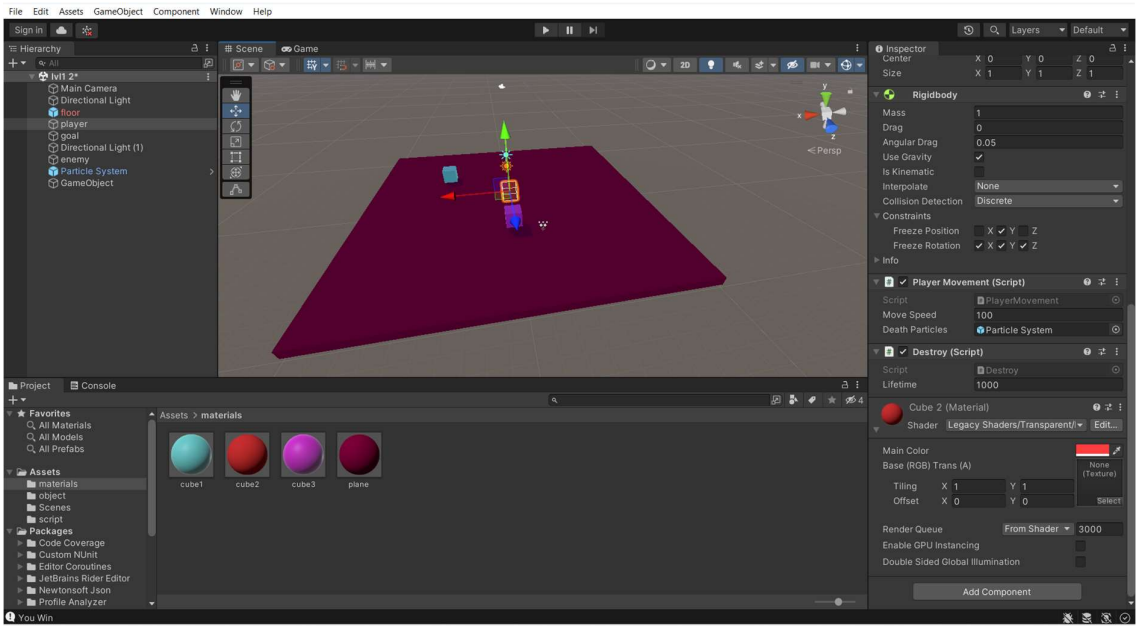
Set the Base:



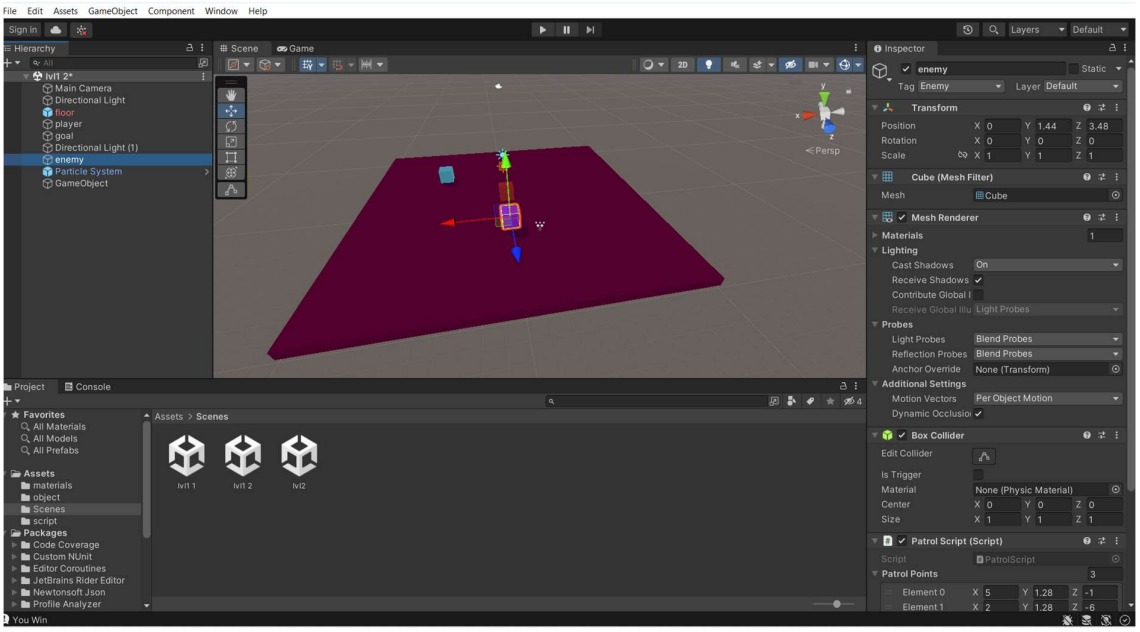
Add Player:



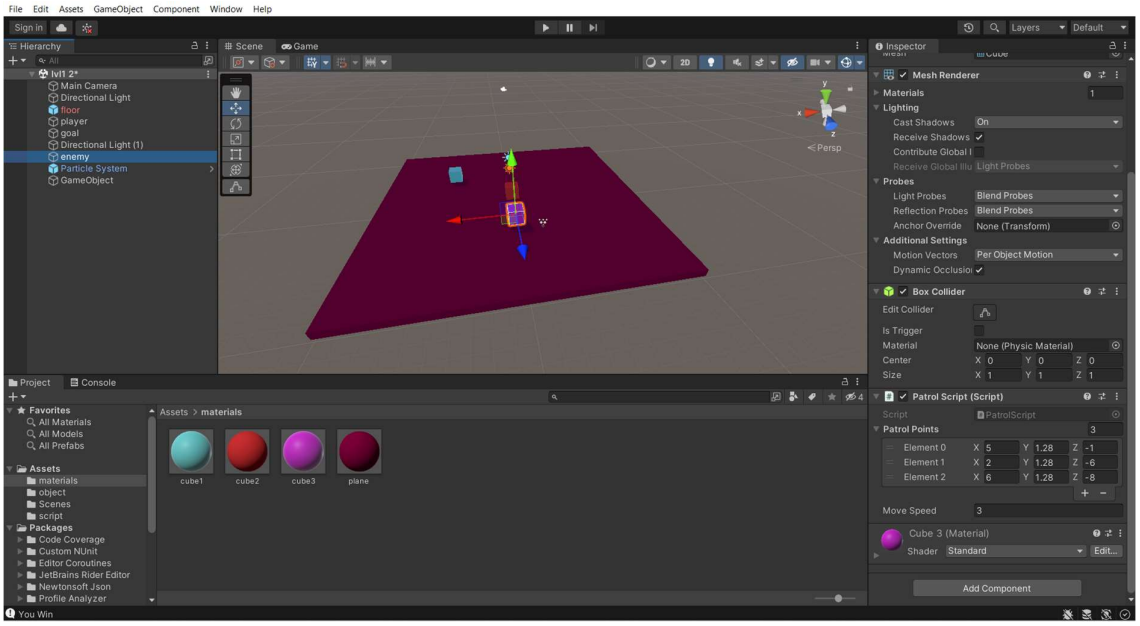
Add Material to Player:



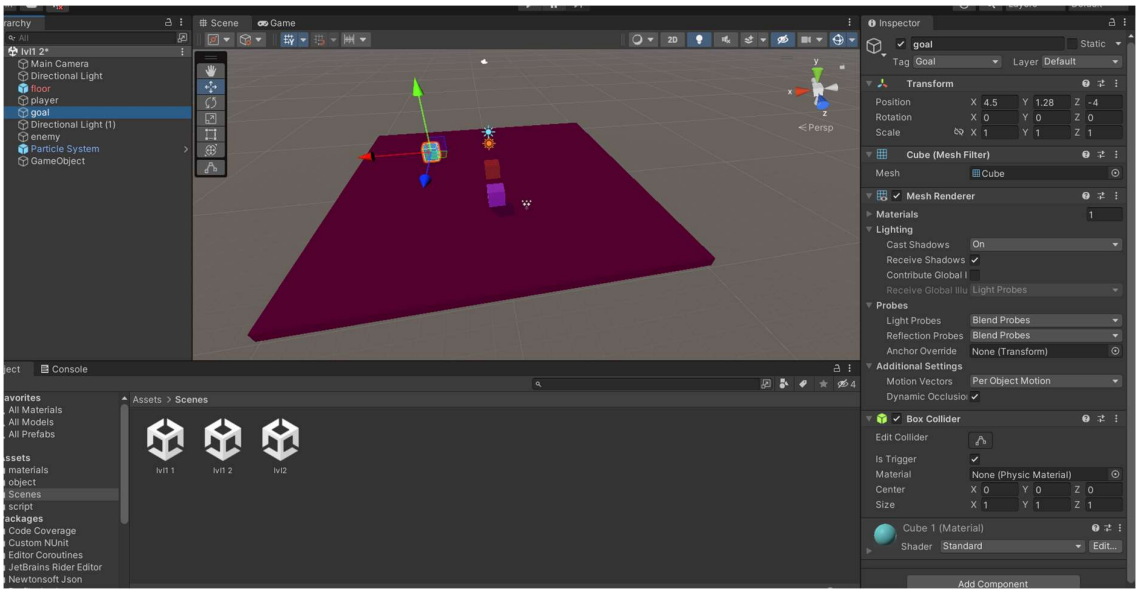
Add Enemy:



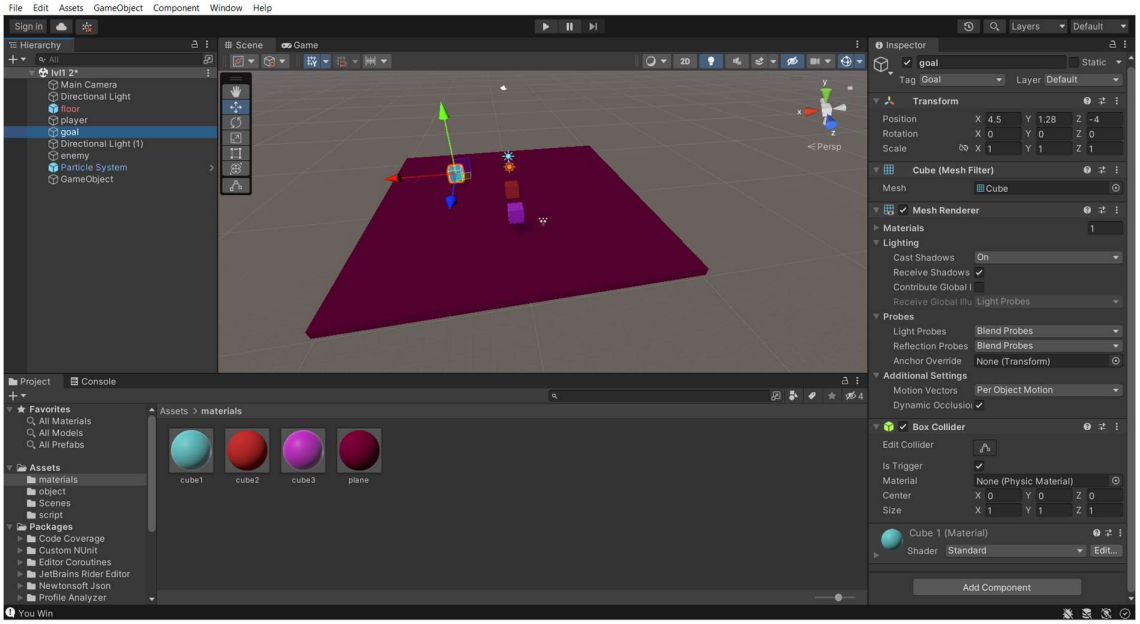
Add Materials to enemy and patrol points in the patrol script:



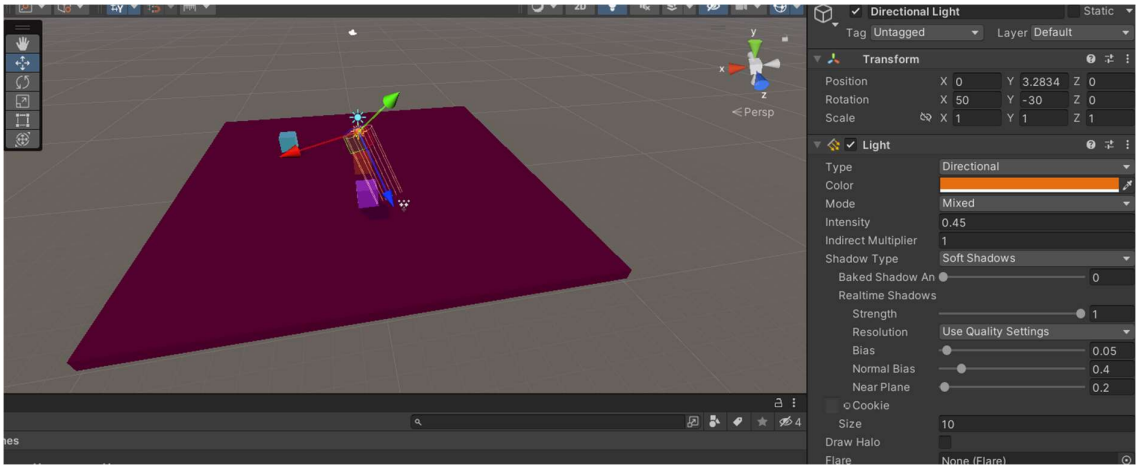
Add Goal Object:



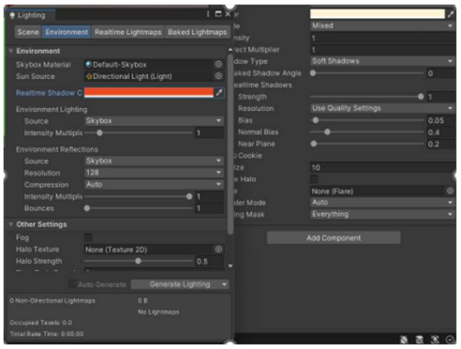
Add Material to goal and add the goal at the middle of the patrol locations of the enemy



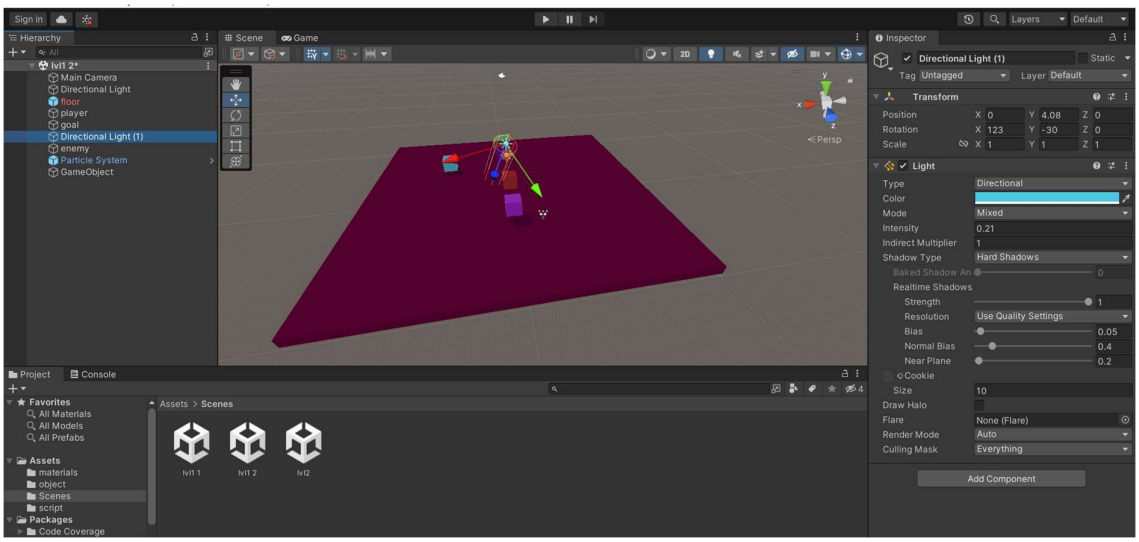
Directional Light:



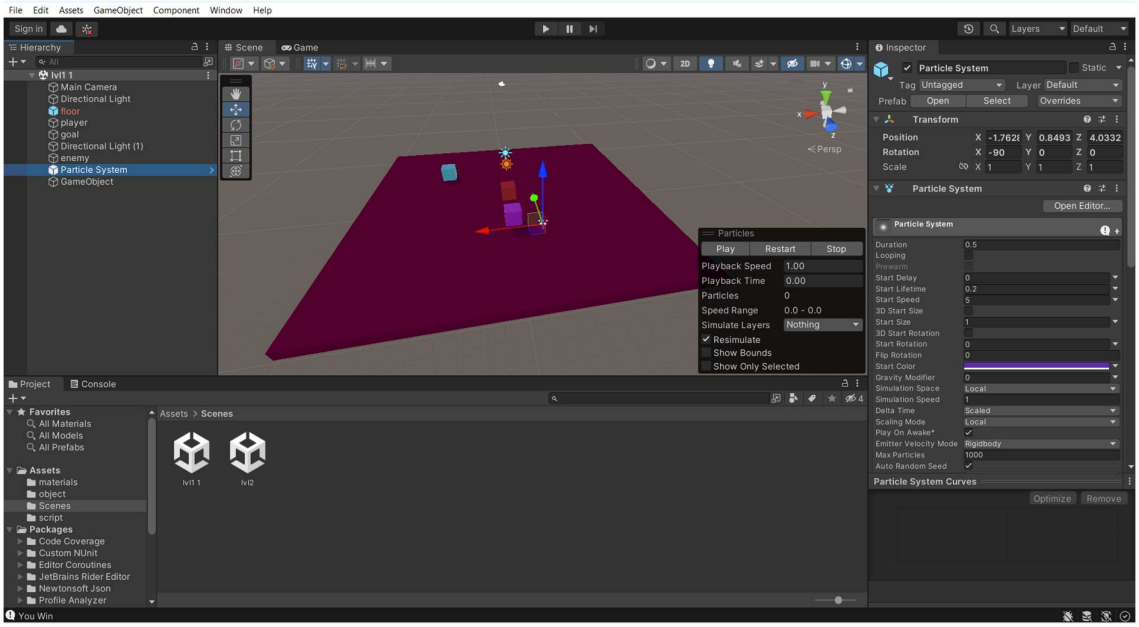
Add ambient light



Directional light2:

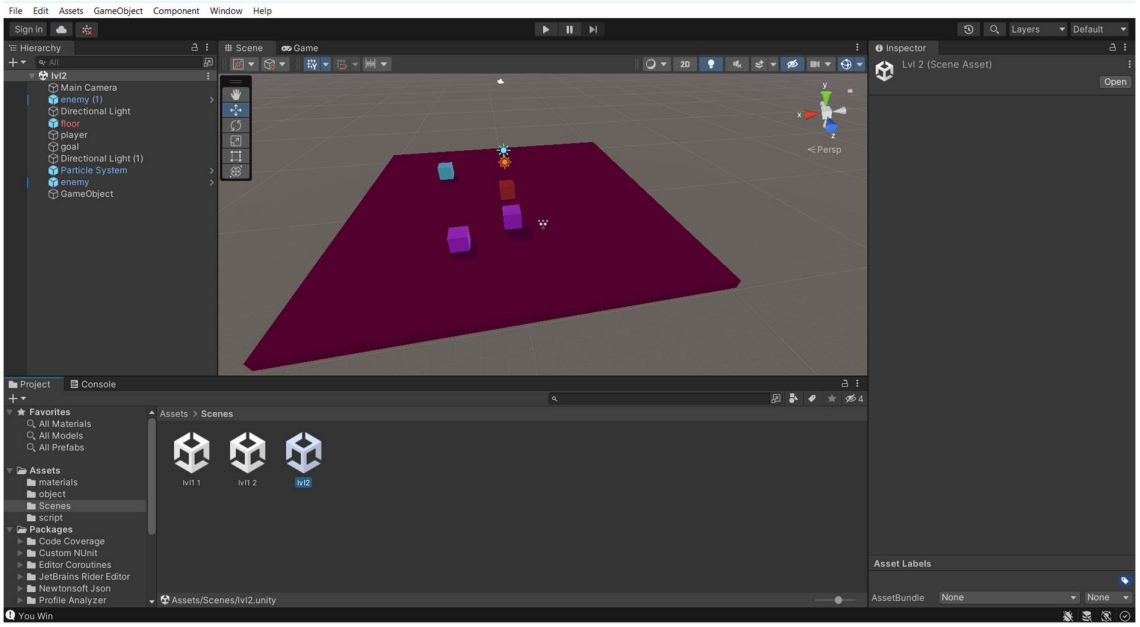


Add Particle effect on collision:



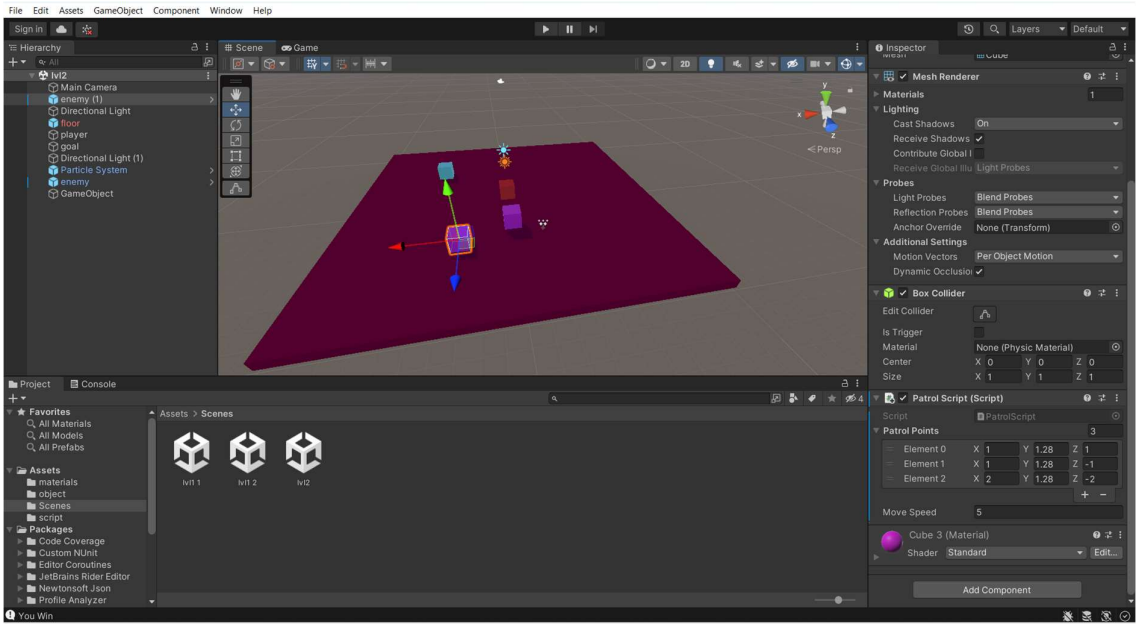
Add this to death particle in movement script

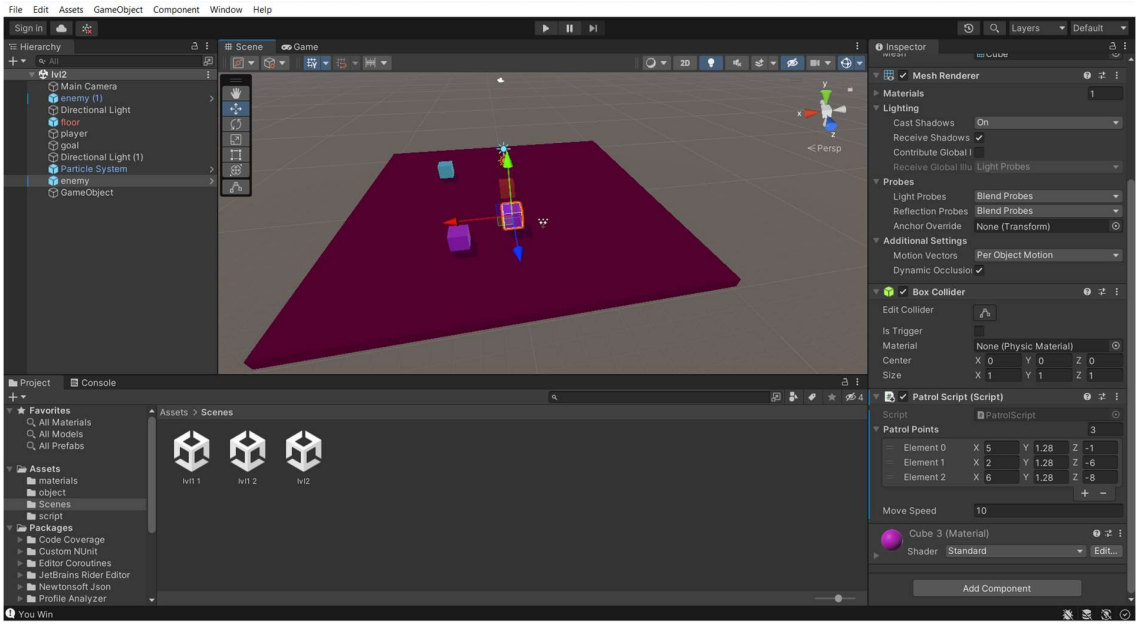
Once the player reaches the goal he moves to the level 2:



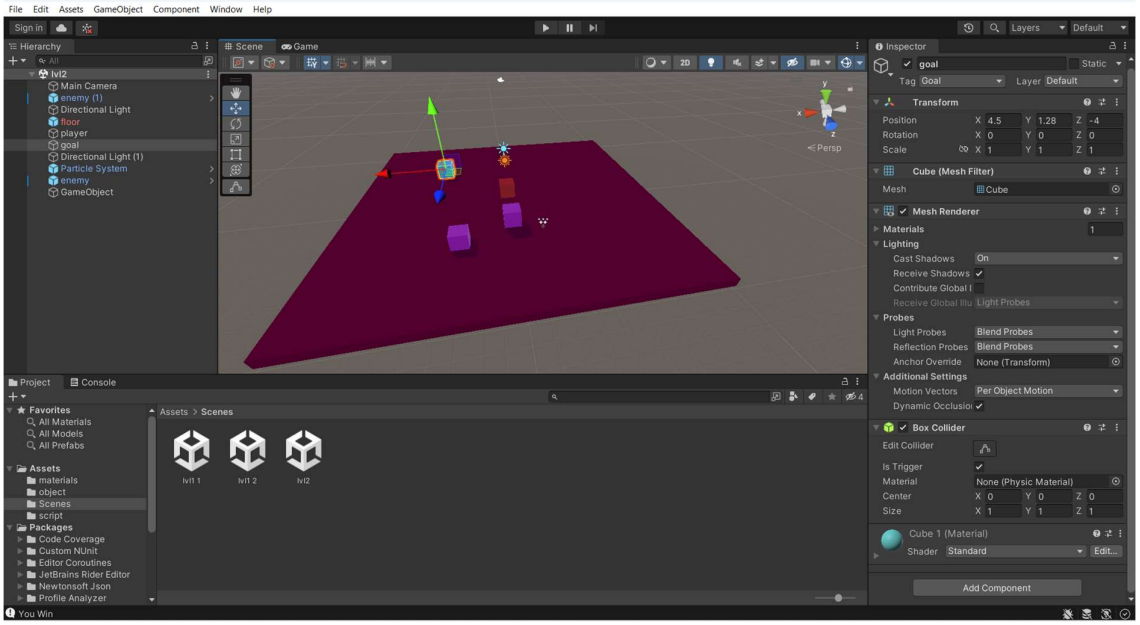
Player, 2 enemies and a goal point

Add patrol script and patrol points for enemy1 and 2





Set the goal point/object in the middle of the patrol point and make it difficult for the player to reach the goal point:



Scripts:

Destroy

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class Destroy : MonoBehaviour {
    public float lifetime = 0;
    // Use this for initialization
    void Start () {
        Destroy(gameObject, lifetime);
    }
    // Update is called once per frame
    void Update () {
    }
}
```

Patrol:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class PatrolScript : MonoBehaviour
{
    public Vector3[] patrolPoints;//part2
    public float moveSpeed;
    private int currentPoint;
    void Start()
    {
        transform.position = patrolPoints[0];//to strat the player start from
this
        currentPoint = 0;
    }
    void Update()
    {
        if (transform.position == patrolPoints[currentPoint]) {
            currentPoint++;
        }
        if (currentPoint >= patrolPoints.Length) {
            currentPoint = 0;
        }
        transform.position = Vector3.MoveTowards(transform.position,
        patrolPoints[currentPoint], moveSpeed * Time.deltaTime);
    }
}
```

Movement:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class PlayerMovement : MonoBehaviour {
    public float moveSpeed;
    public GameObject deathParticles;
    private float maxSpeed = 5f;
    private Vector3 input;
    private Vector3 spawn;
    void Start () {
        spawn = transform.position;
    }
    void Update () {
        input = new Vector3(Input.GetAxis("Horizontal"), 0,
        Input.GetAxis("Vertical"));
        if (GetComponent<Rigidbody>().velocity.magnitude < maxSpeed) {
            GetComponent<Rigidbody>().AddForce(input * moveSpeed);
        }
        if (transform.position.y < -2) {
            Die();
        }
    }
    private void OnCollisionEnter(Collision other) {
        if(other.transform.tag == "Enemy") {
            Die();
        }
    }
    private void OnTriggerEnter(Collider other) {
        if(other.transform.tag=="Goal") {
            GameManager.CompleteLevel();
        }
    }
    void Die() {
        Instantiate(deathParticles, transform.position,
Quaternion.Euler(270,0,0));
        transform.position = spawn;
    }
}
```

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.SceneManagement;
public class GameManager : MonoBehaviour {
    public static int currentScore;
    public static int highscore;
    public static int currentLevel = 0;
    public static int unlockedLevel;
    public static void CompleteLevel() {
        if (currentLevel < 1) {
            currentLevel += 1;
            SceneManager.LoadScene(currentLevel);
        }
        else {
            print("You Win");
        }
    }
}
```

Gameplay link:

https://drive.google.com/file/d/1aqd-Q4irci3kXWCGdgveAn7n_gD7bIxz/view?usp=share_link