



Spawn game Objects that will spawn at random positions without overlapping 2D.

<https://youtu.be/OQrdzWt-gxE>

First we create an empty game Object we call ObjectSpawner and give it this script :

```
/// Spawning gameObjects without overlapping 2D///  
//by René Pol and Larry Pendleton for the Script Library -2021-///  
/// RP-Interactive.nl@///  
  
using System.Collections;  
using System.Collections.Generic;  
using UnityEngine;  
  
public class StarSpawner : MonoBehaviour  
{  
  
    public GameObject spawnPrefab;  
    public float CountD;  
  
    void Update()  
    {  
        CountD -= Time.deltaTime;  
        if (CountD <= 0)  
        {  
            SpawnRandomSpot();  
            CountD = 2f;  
        }  
    }  
  
    public void SpawnRandomSpot()  
    {  
        int ranX = Random.Range(-8, 8);  
        int ranY = Random.Range(-6, 6);  
        Vector3 randomPosition = new Vector3(ranX, ranY, 0f);  
        Instantiate(spawnPrefab, randomPosition, Quaternion.identity);  
    }  
}
```

You can set the spawn time in the inspector's view as well as the game Object it needs to spawn.
Get the coordinates for the X and Y limits from the inspector's view.
In order to let the spawned Objects not overlap we need these objects to have this script :



```
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using System.Collections;  
using System.Collections.Generic;  
using UnityEngine;  
  
public class Star : MonoBehaviour  
{  
  
    public float scanRadius = 3f;  
    public LayerMask filterMask;  
    private StarSpawner SP;  
    private Collider2D checkCollider;  
  
    void Awake()  
    {  
        SP = FindObjectOfType<StarSpawner>();  
    }  
  
    void Update()  
    {  
        checkCollider = Physics2D.OverlapCircle(transform.position, scanRadius,  
        filterMask);  
        if (checkCollider != null && checkCollider.transform != transform)  
        {  
            Destroy(checkCollider.gameObject);  
            SP.CountD = 0;  
        }  
    }  
  
    protected void OnDrawGizmos()  
    {  
        Gizmos.color = Color.red;  
        Gizmos.DrawWireSphere(transform.position, scanRadius);  
    }  
}
```

Create a LayerMask and select it in this gameObject. You can set the overlap radius in the Inspector's view. When it overlaps it gets removed and the timer is set to 0 so a new object is created at another spot immediately. You can name it what you want and use any object you need to be spawned.