# Unity 3D

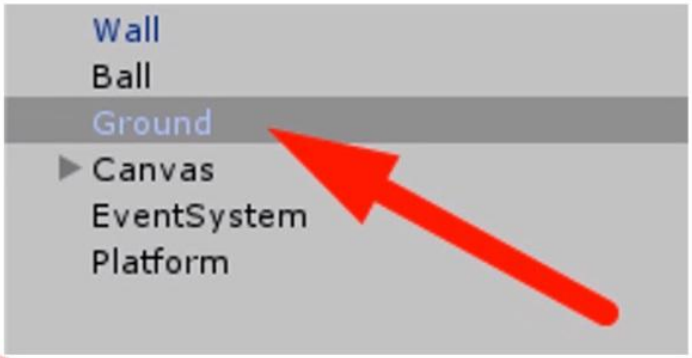
2D игра

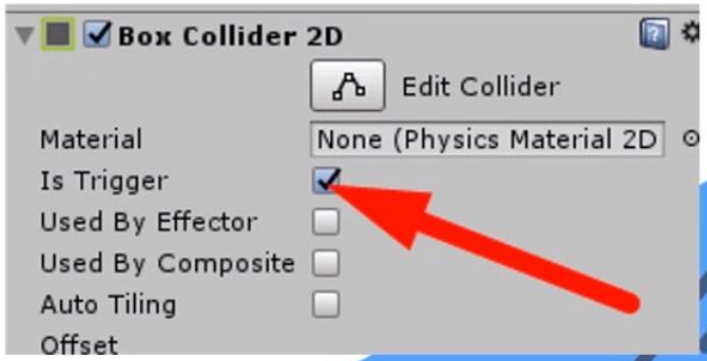
Массивы

Урок 4

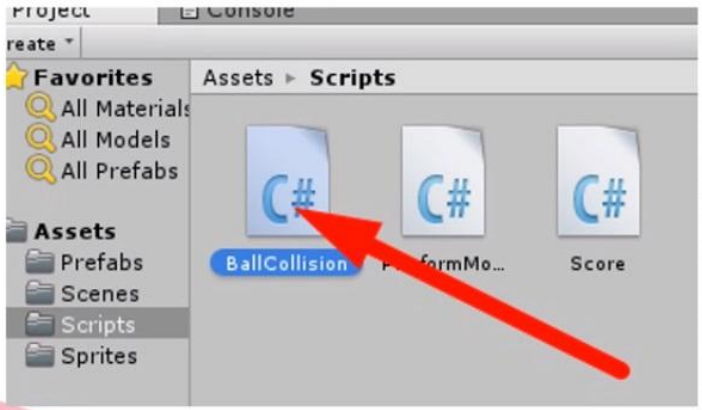
CODOLOGIA

# Домашнее задание



# Домашнее задание

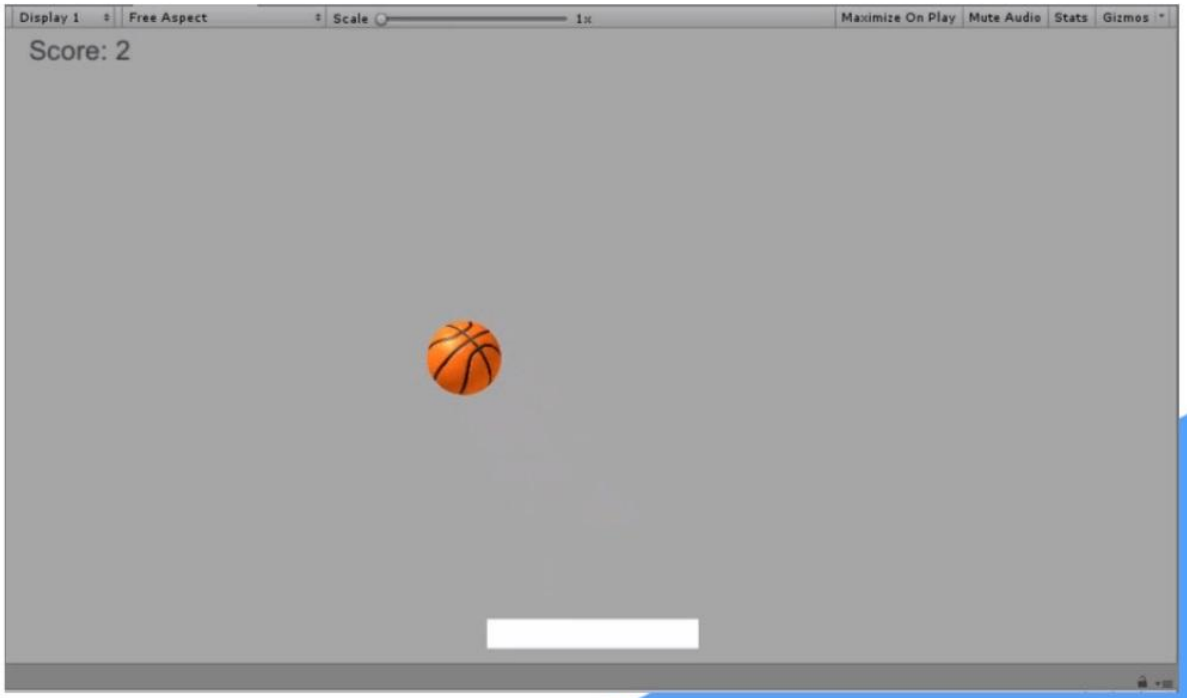



```
        if (collision.gameObject.name == "Platform")
        {
            direction = new Vector2(Random.Range(-1, 1), Ran
            rbody.AddForce(direction * impulse, ForceMode2D.
            score.GameScore += 1;
        }
    }

    private void OnTriggerEnter2D(Collider2D collision)
    {

    }
}
```

# Домашнее задание

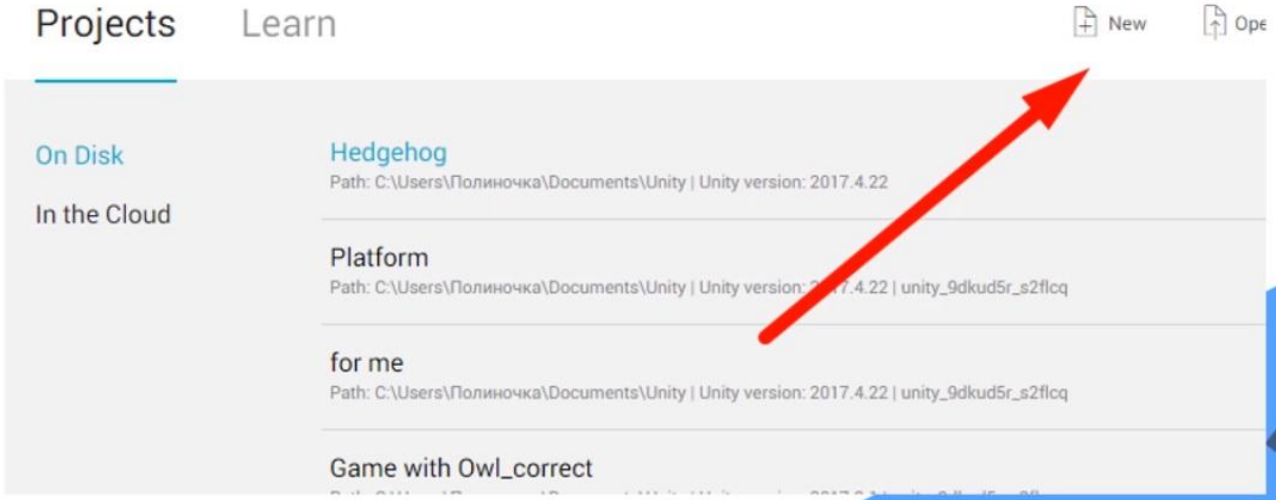
```
private void OnTriggerEnter2D(Collider2D collision)
{
    if (collision.gameObject.name == "Ground")
    {
        score.GameScore = 0;
    }
}
```

# Домашнее задание

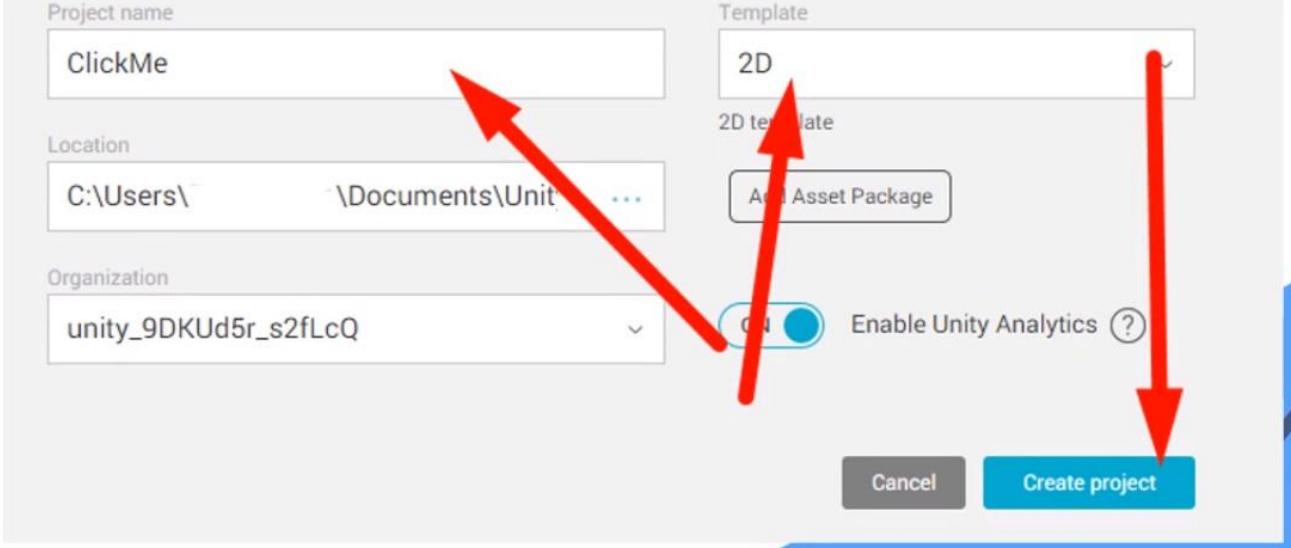


# Игра

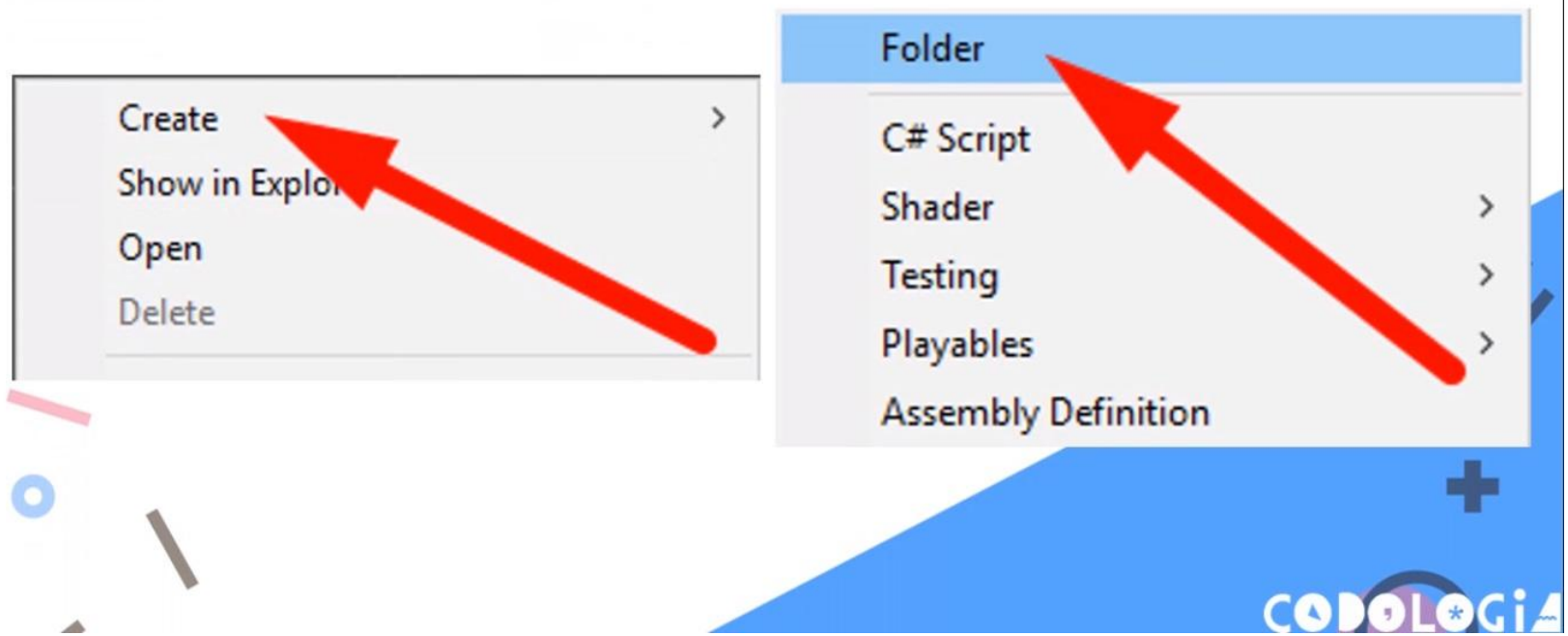
# Создаем проект



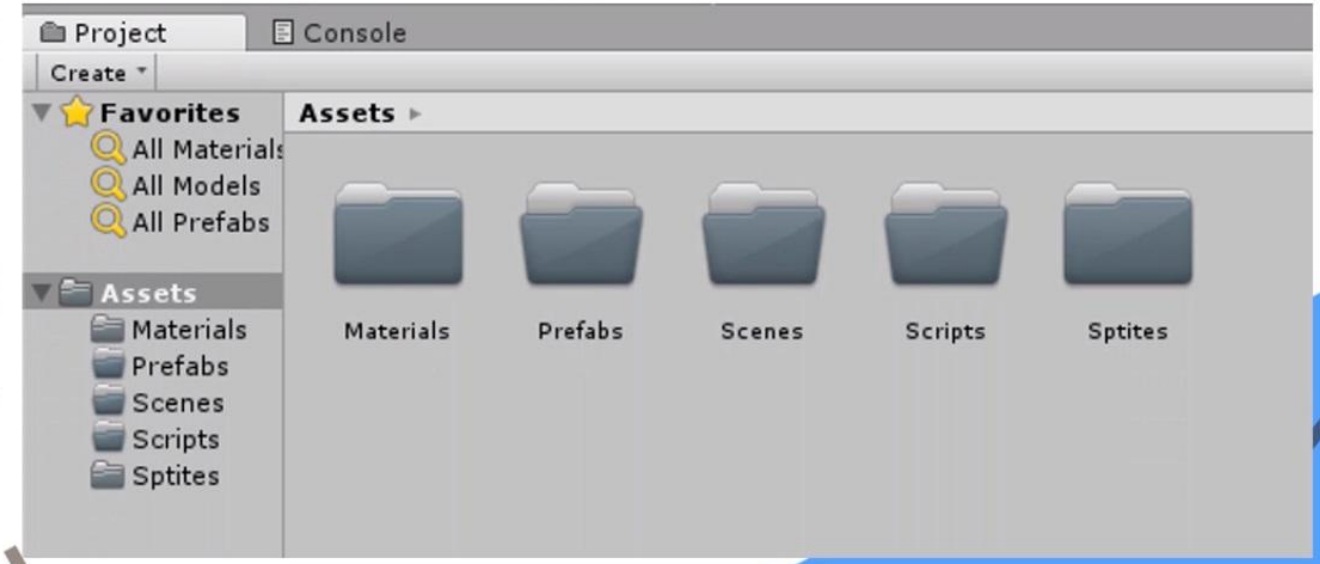
# Создаем проект



# Создание папок



# Задание 🤔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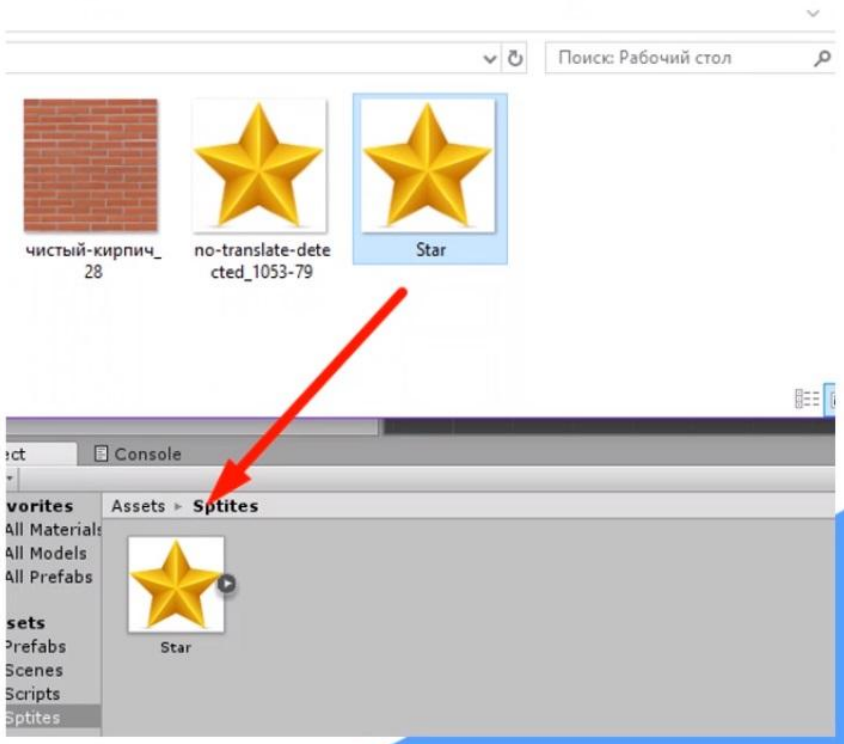
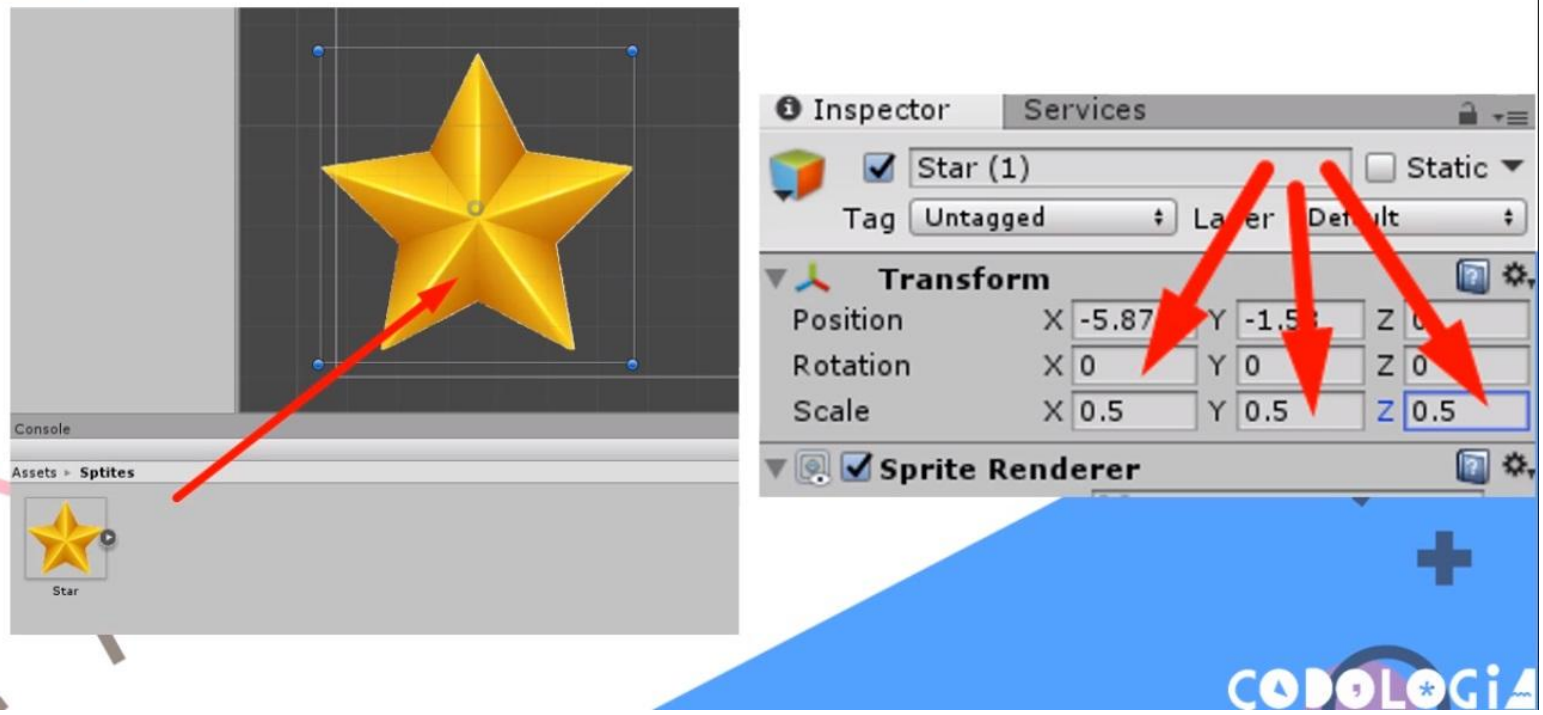
Console
Create
Favorites
All Materials
All Models
All Prefabs
Assets
Materials
Prefabs
Scenes
Scripts
Sptites
Assets
Materials
Prefabs
Scenes
Scripts
Sptites

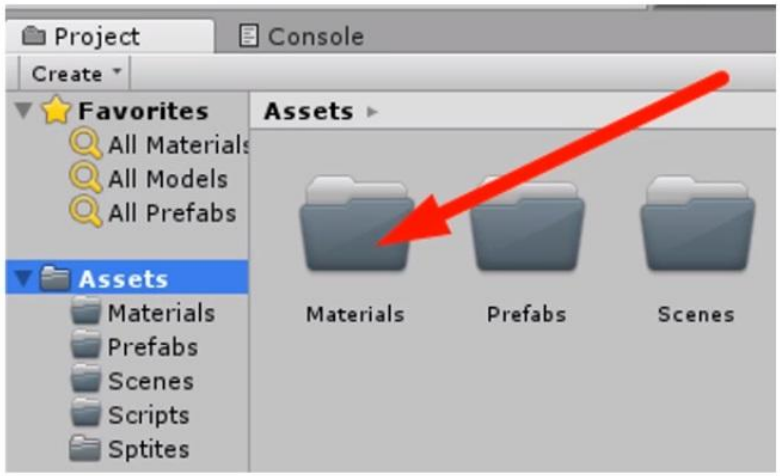
# Добавление спрайта

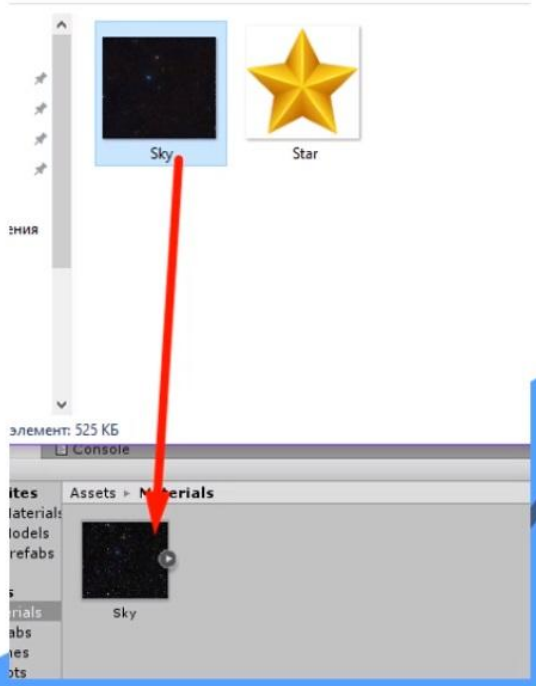


# Настройка спрайтов

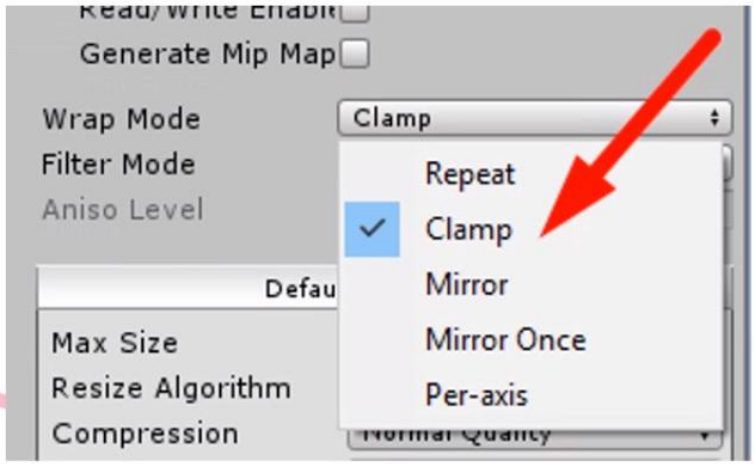


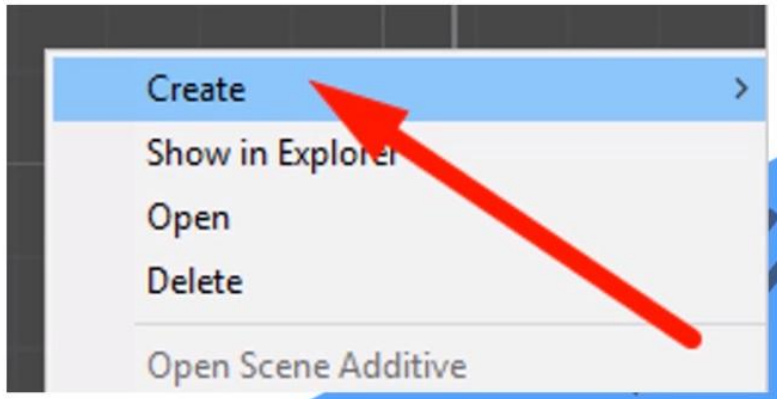
# Настройка материала



# Создание материала



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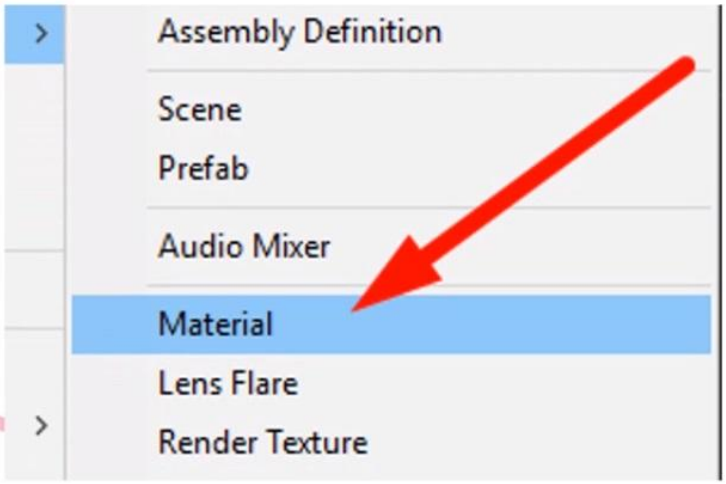
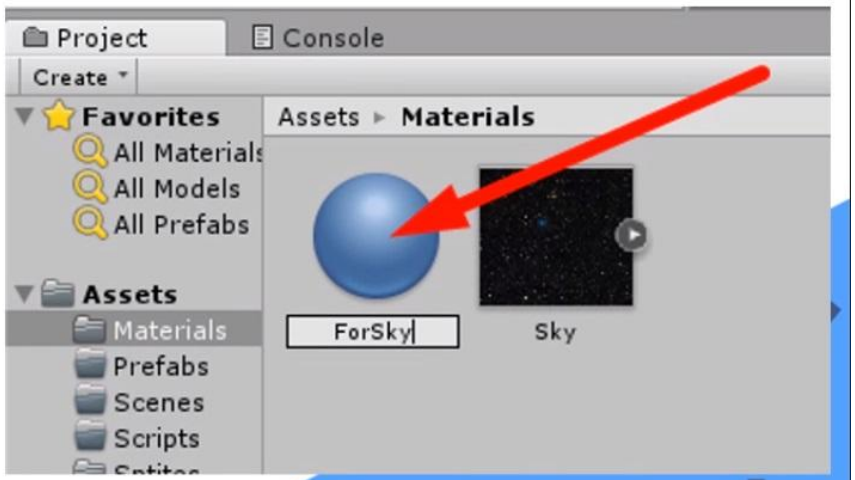
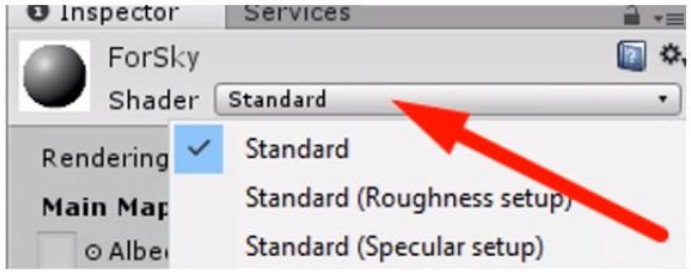
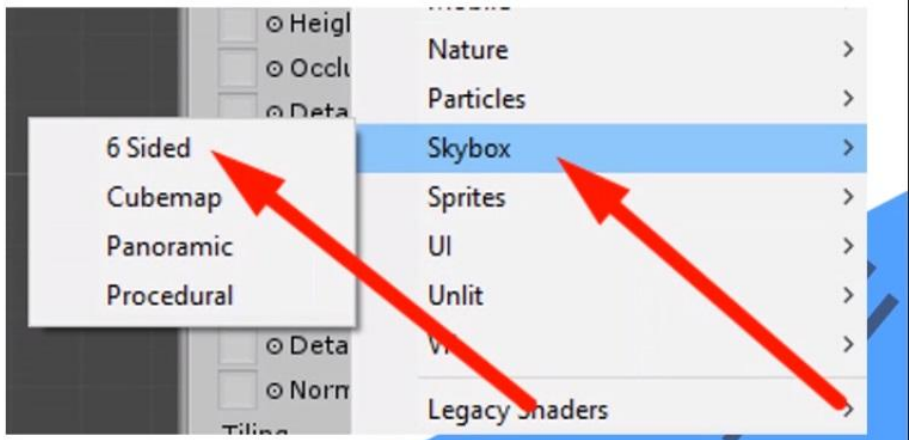


# Настраиваем SkyBox



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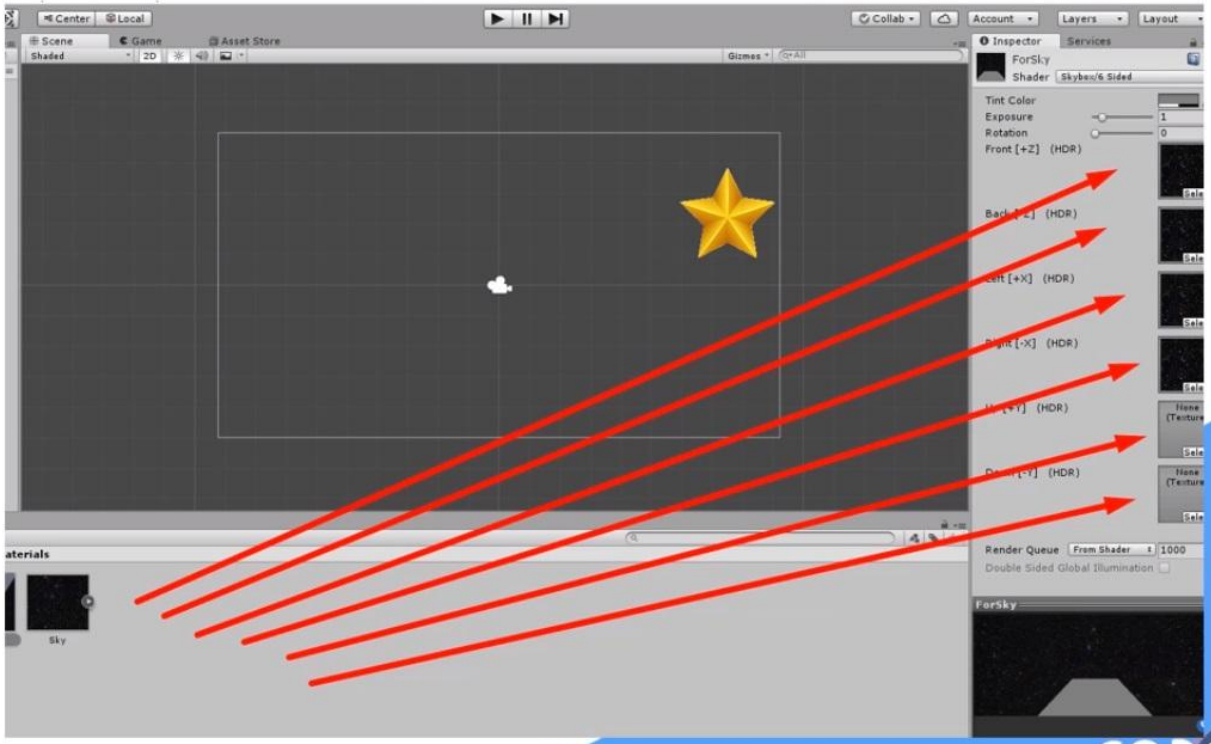

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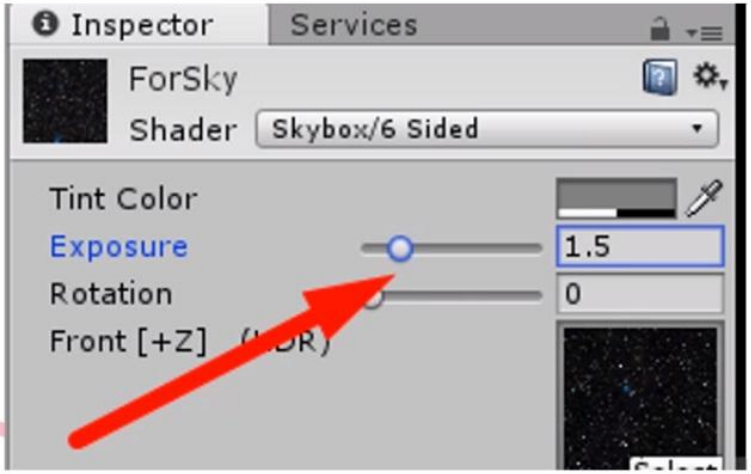
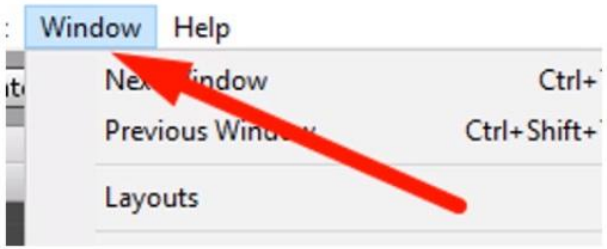
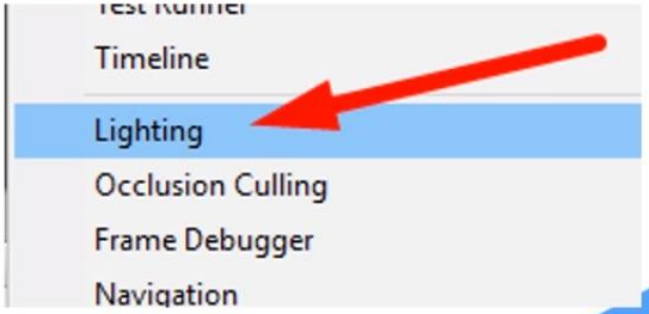
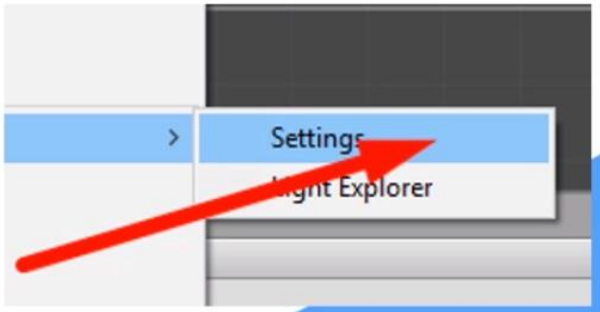


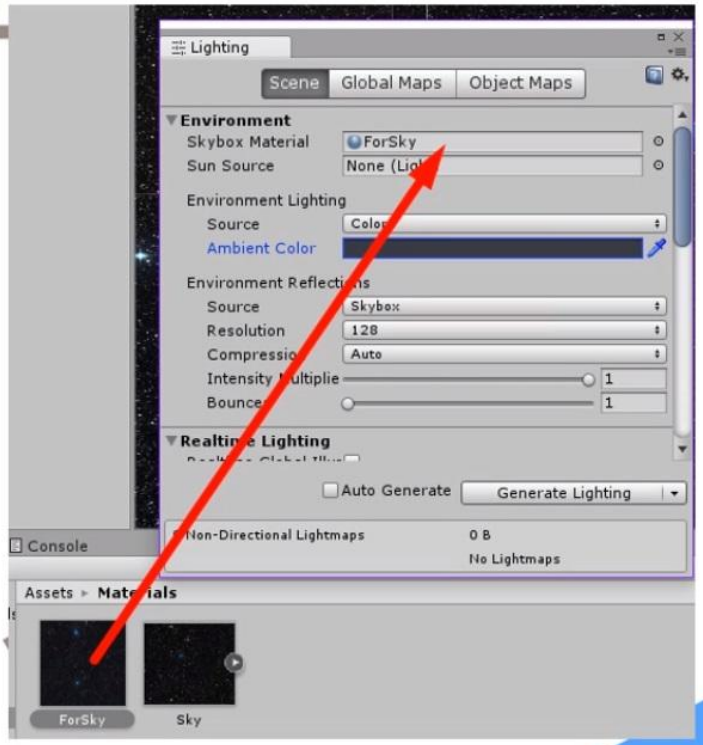

# Добавляем SkyBox на сцену

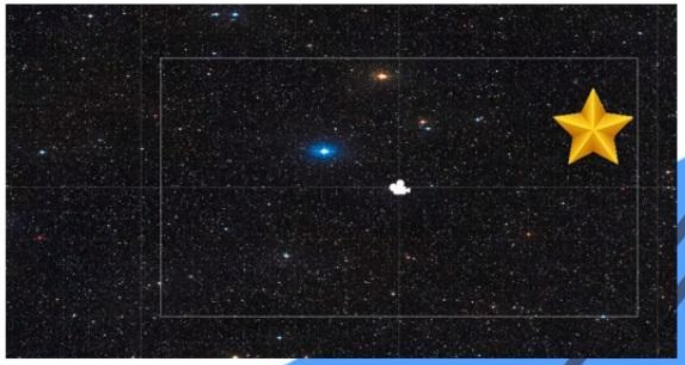


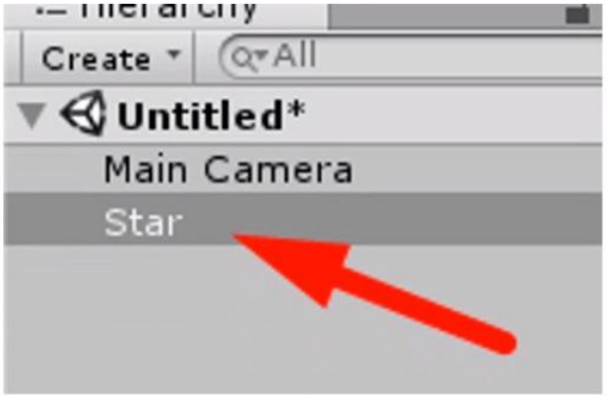



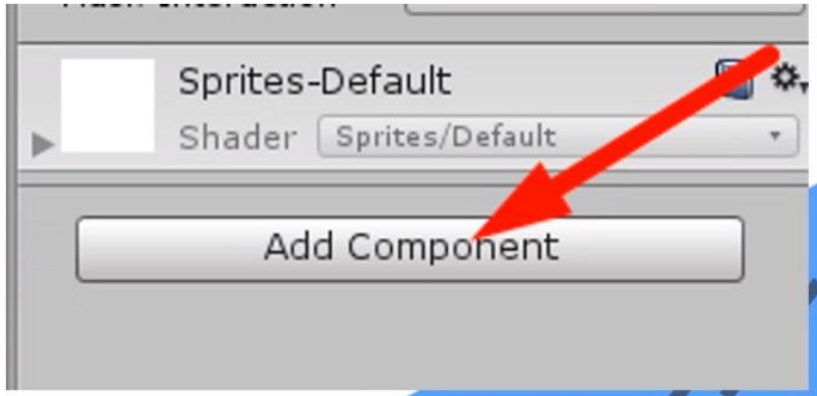
# Добавляем SkyBox на сцену



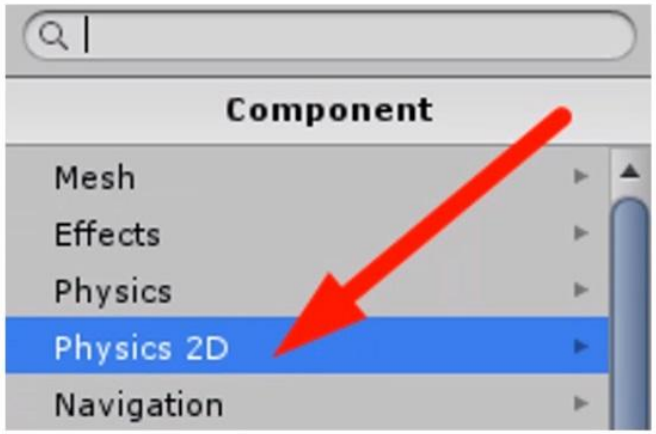



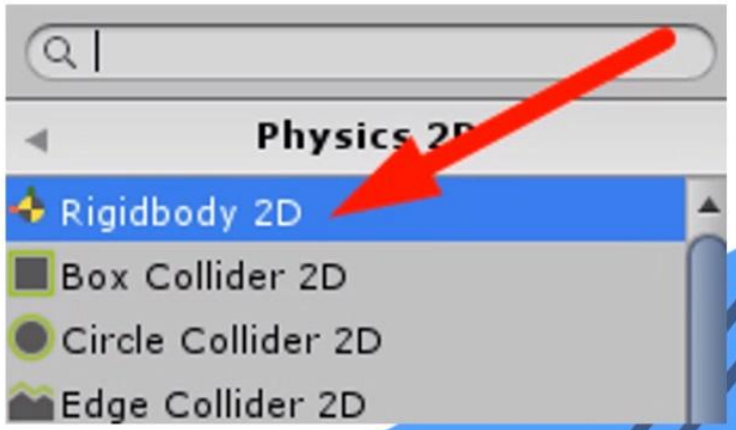
# Добавление компонентов



# Добавление компонентов



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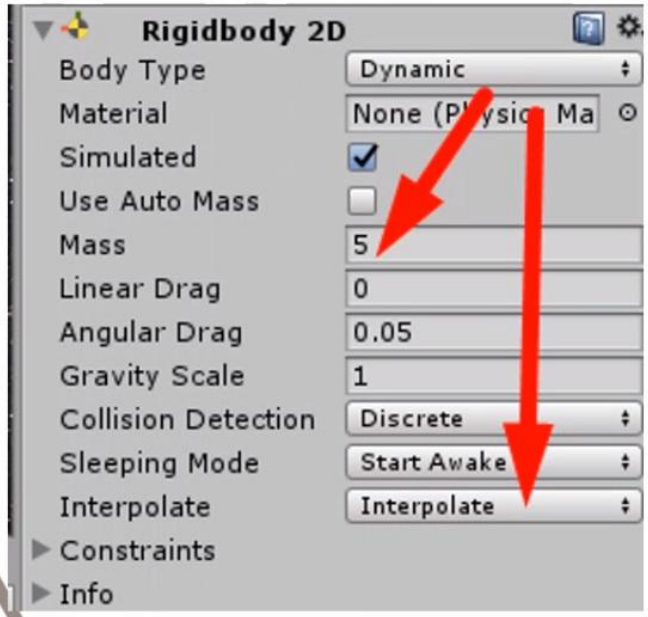


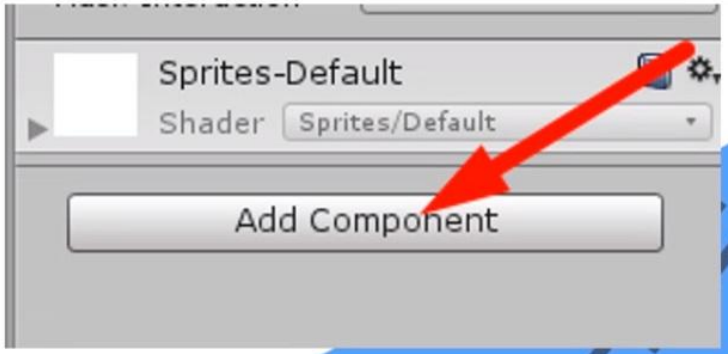

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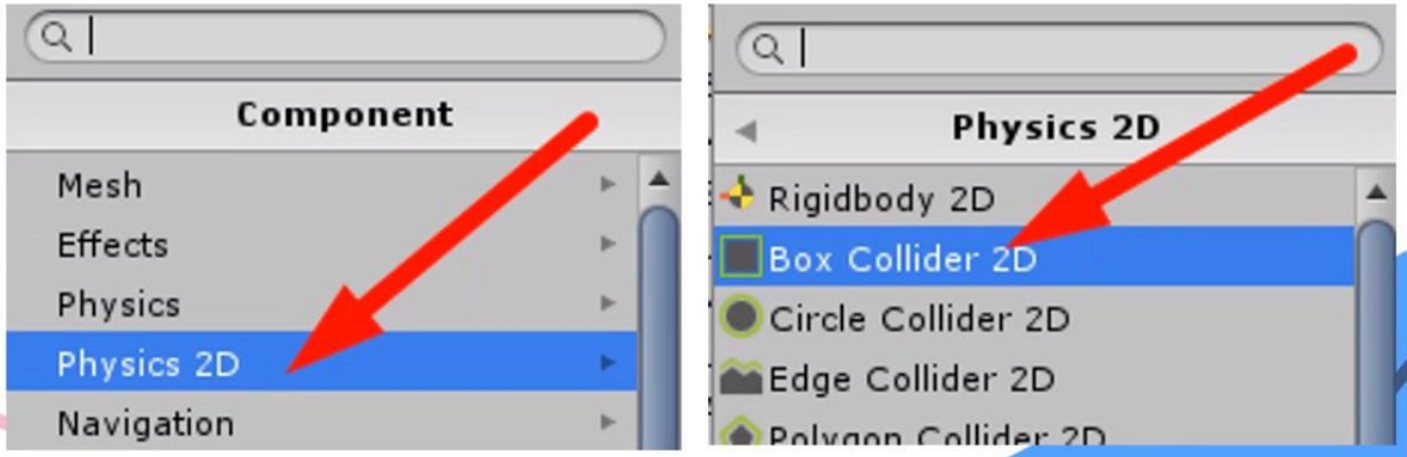
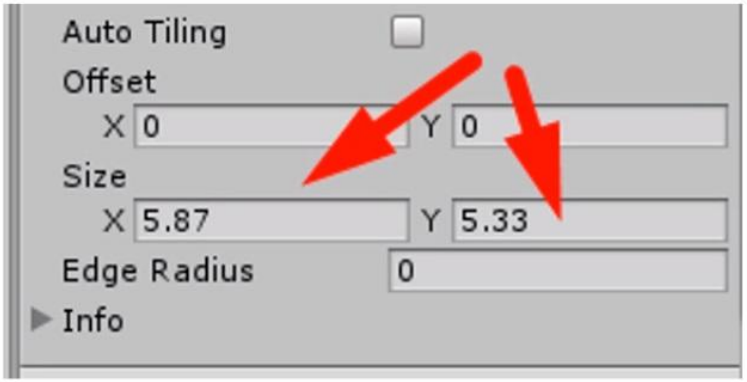
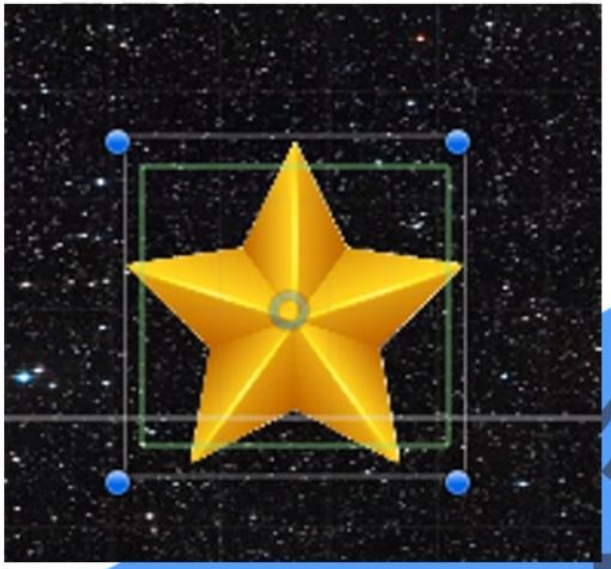
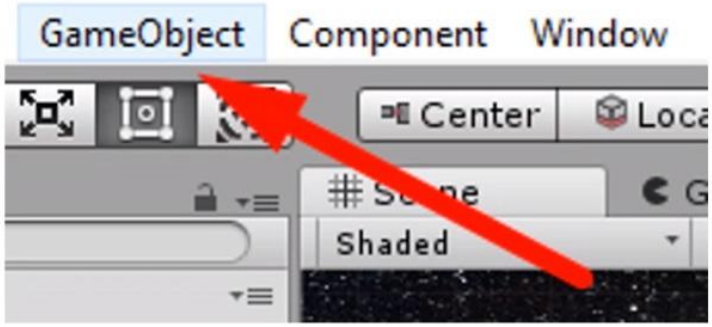


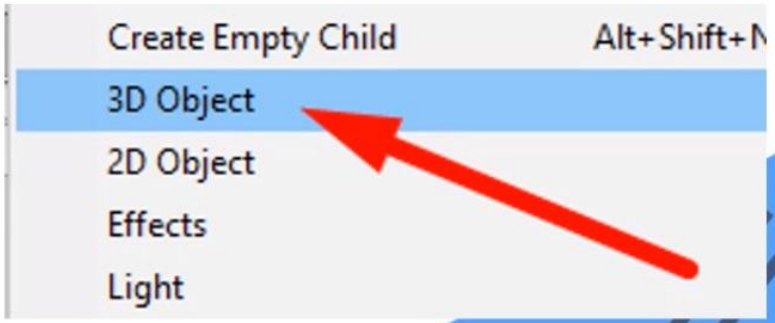
# Настройка компонентов



# Создание спрайта



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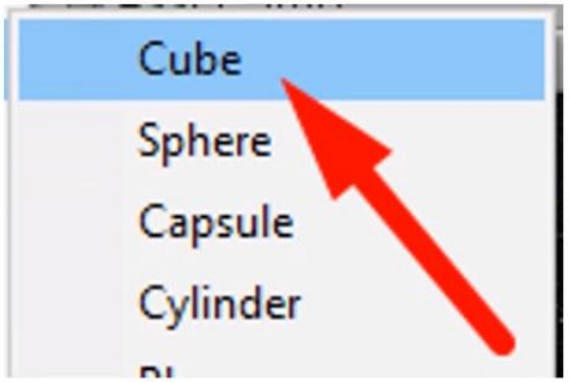
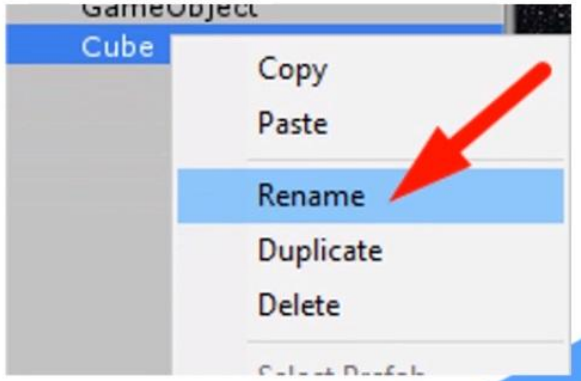
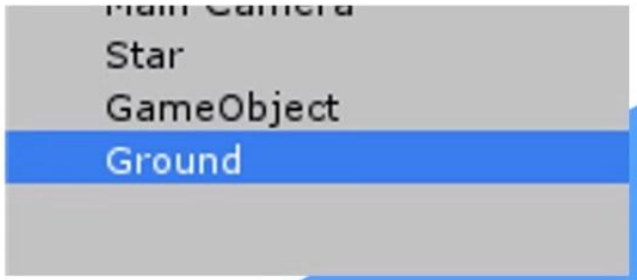
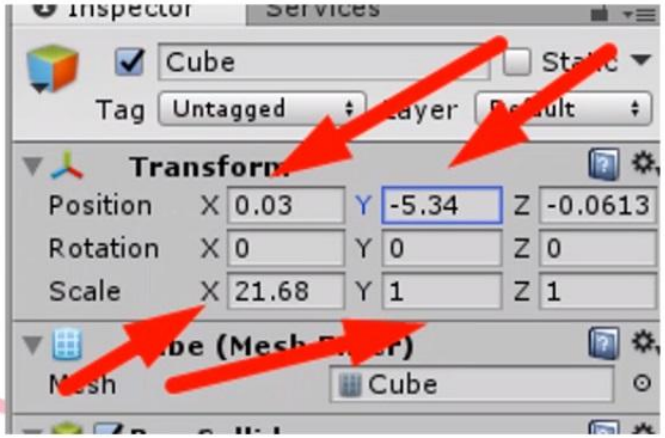
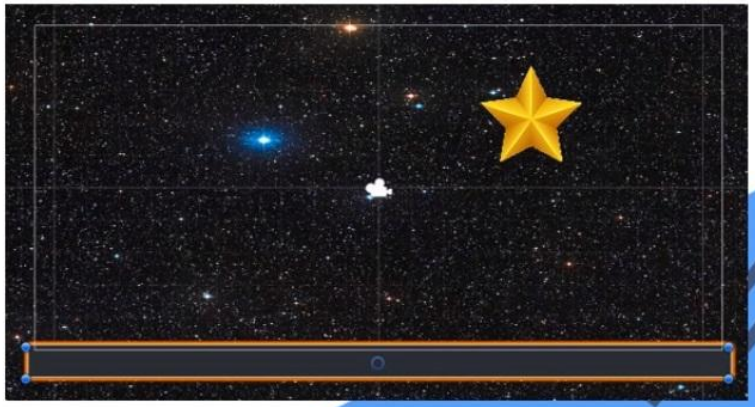


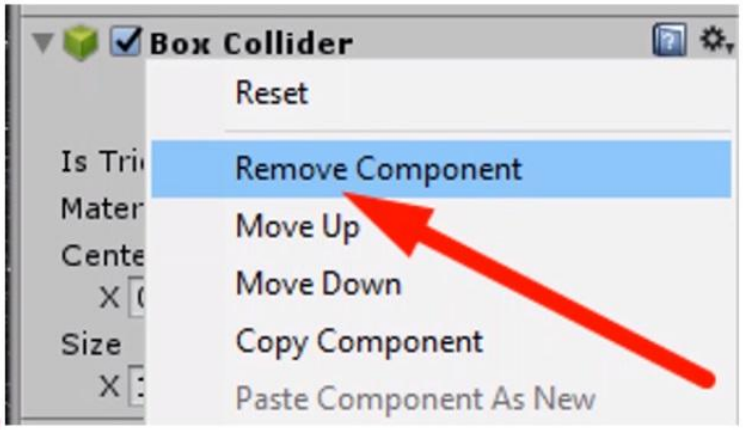



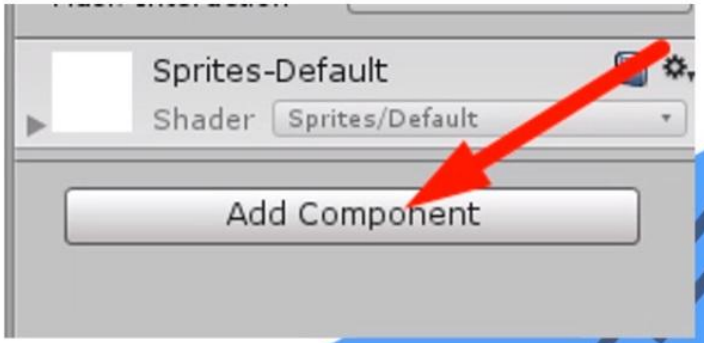
# Настройка компонентов



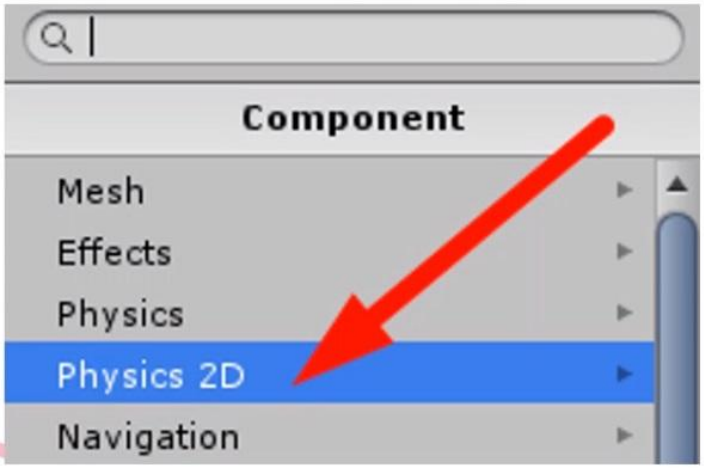



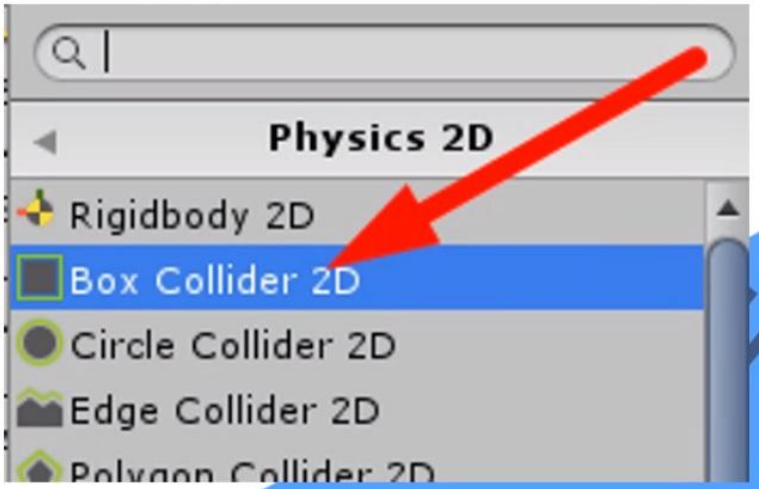
# Настройка компонентов



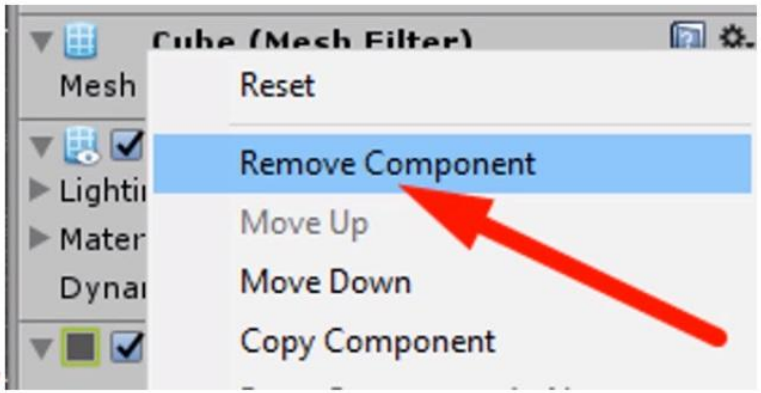



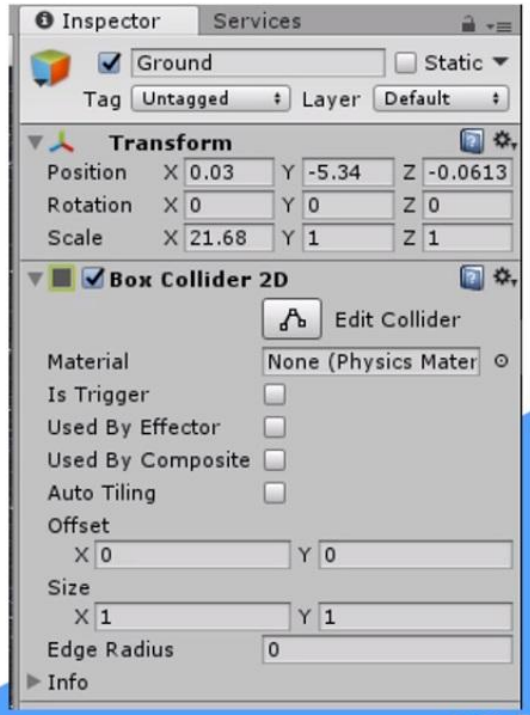
# Добавляем компоненты



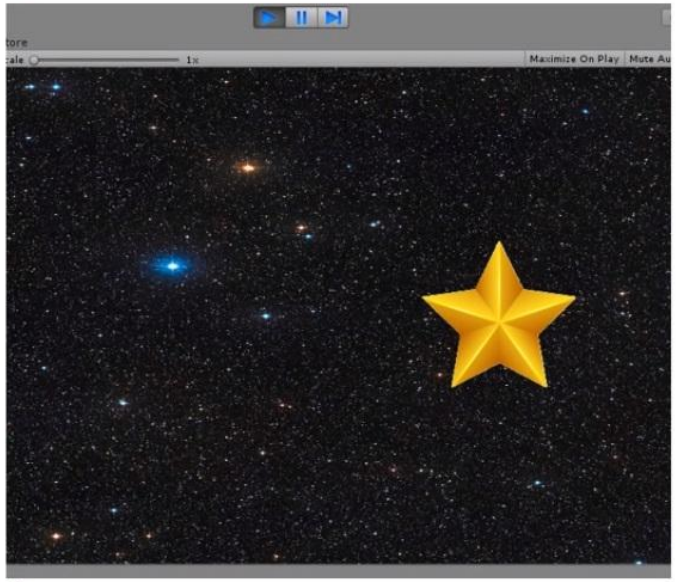



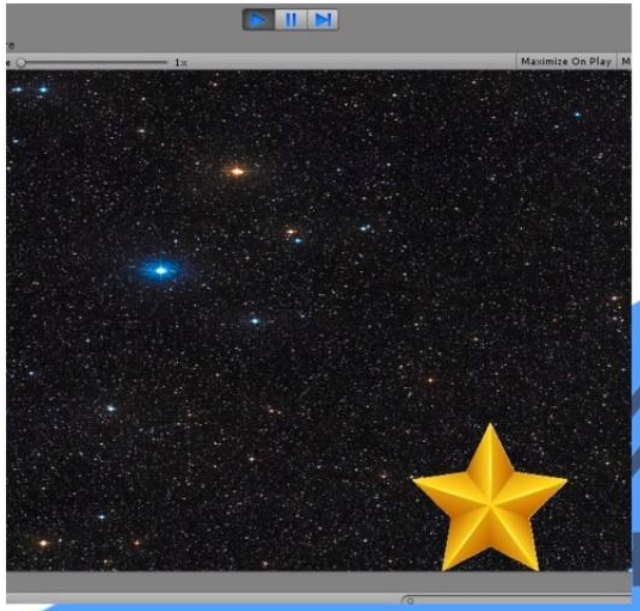
# Удаляем компоненты



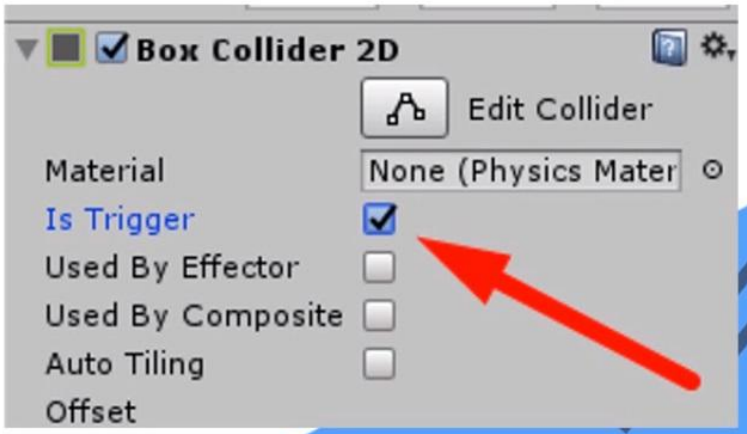



# Запускаем игру

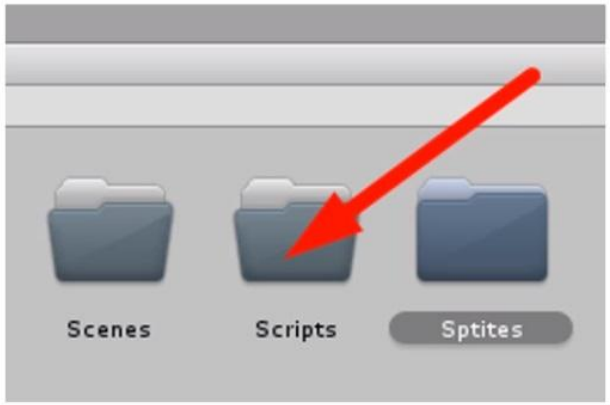


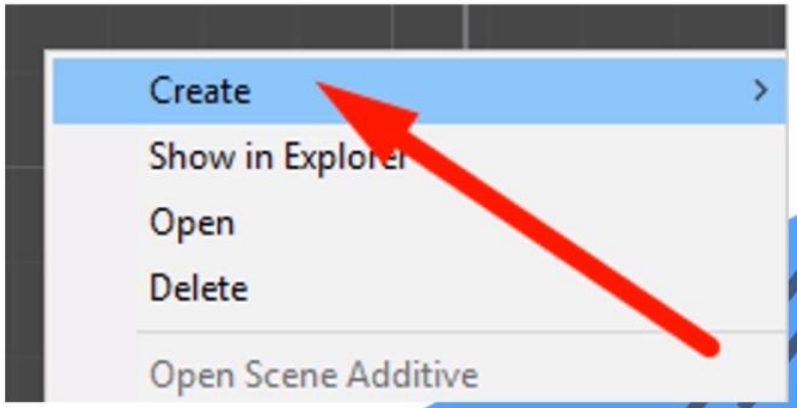



# Добавление компонентов

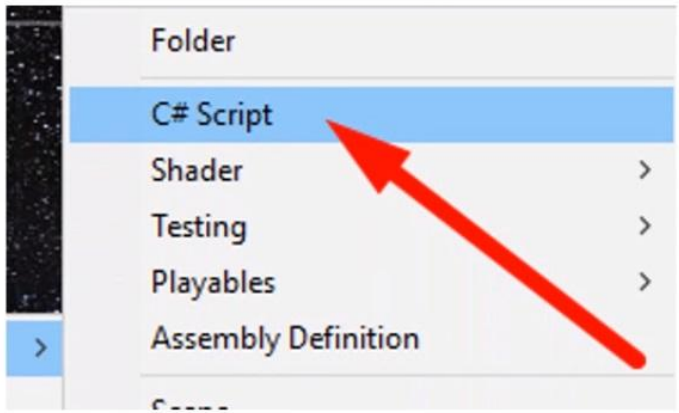



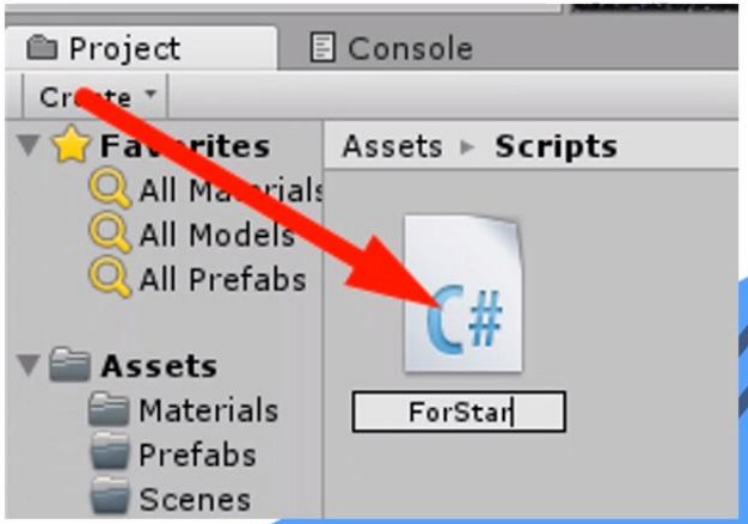
# Создание скрипта



# Создание скрипта



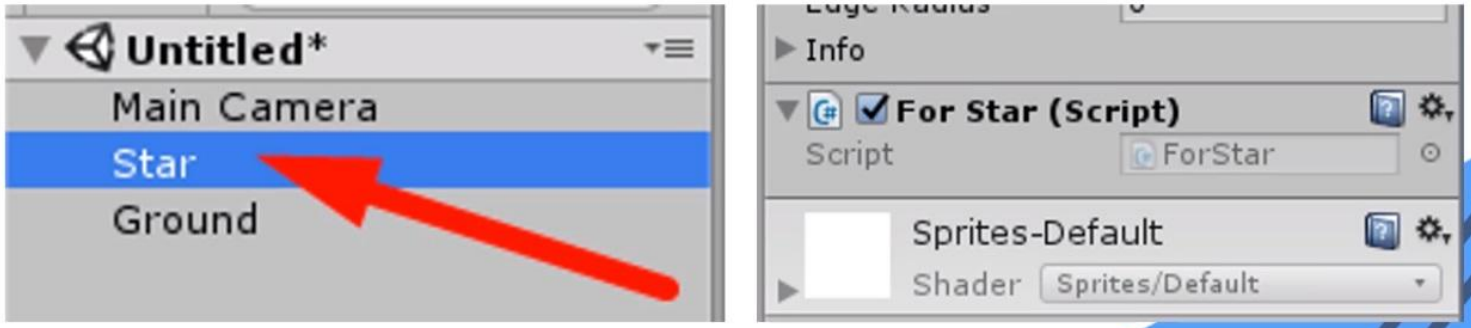



# Пишем код

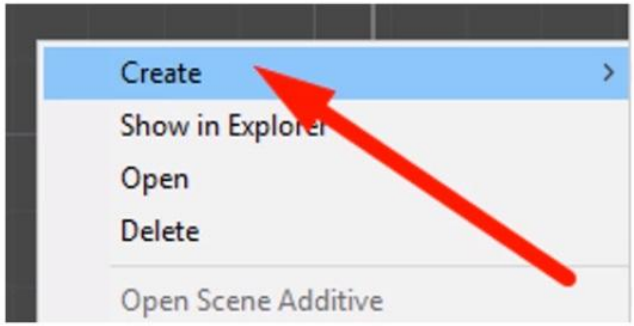
```
public class ForStar : MonoBehaviour {

    private void OnMouseDown()
    {

    }
}
```

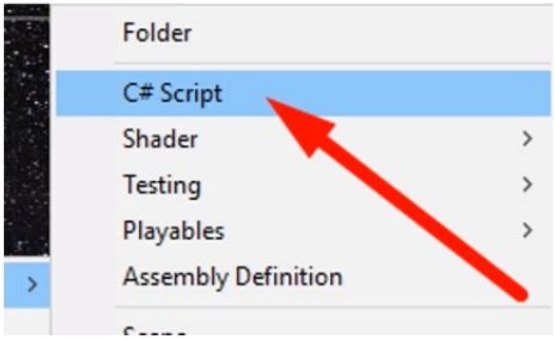
```
public class ForStar : MonoBehaviour {

    private void OnMouseDown()
    {
        Destroy(gameObject);
    }
}
```

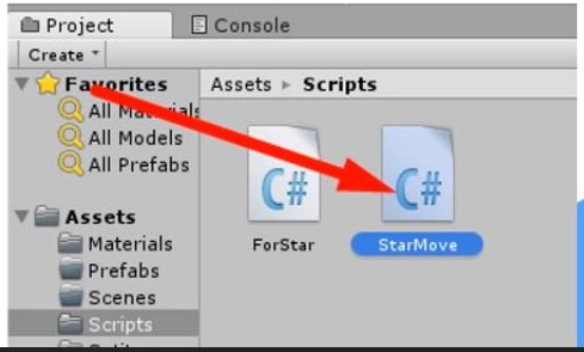
# Прикрепляем скрипт



# Создаем скрипт



# Пишем код

```
public class StarMove : MonoBehaviour {

    [SerializeField] private GameObject star;
    [SerializeField] private float TimeStars;

    GameObject[] Stars;
    public int numberOfStars;
```

# Массивы

# Пишем код

```
void Start()
{
    Stars = new GameObject[numberOfStars];

}
```

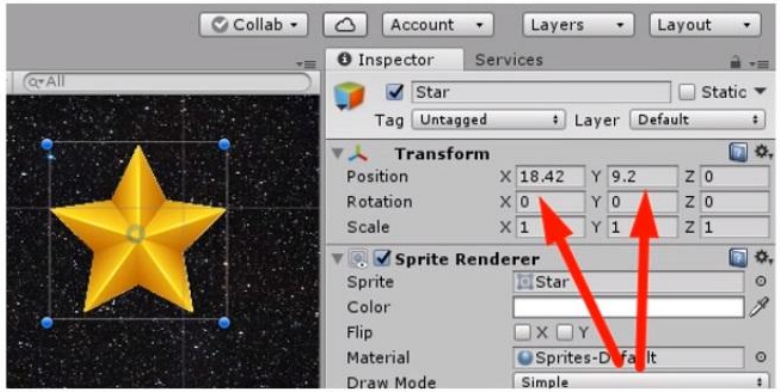
# Написание скрипта

```
IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {

    }
```

# Пишем скрипт

```
IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {
        Stars[i] = Instantiate(star, new Vector3(), Quaternion.identity);
        yield return new WaitForSeconds(TimeStars);
    }
```

# Задание 🤔




**Найдите координаты возможного появления звезд.**

# Пишем код

```
es()

< numberOfStars; i++)

tantiate(star, new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f), 0), Quaternion.identity);
ew WaitForSeconds(TimeStars);
```

# Пишем код

```
IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {
        Stars[i] = Instantiate(star, new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f),
        yield return new WaitForSeconds(TimeStars);
    }
    while (true)
    {
        for (int i = 0; i < numberOfStars; i++)
        {

        }
    }
}
```

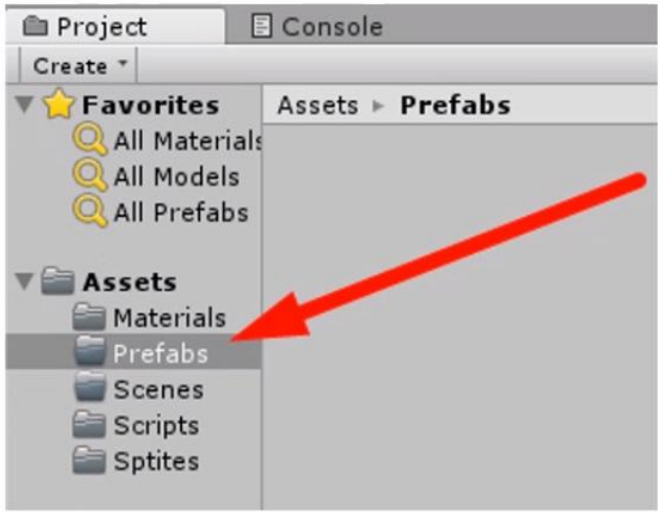
# Пишем код

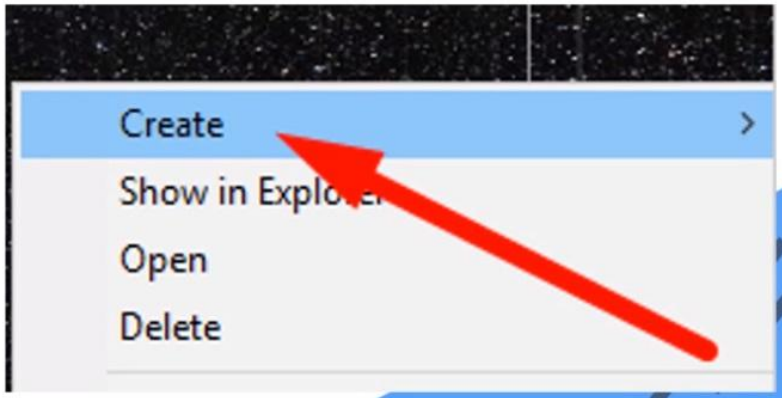
```
IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {
        Stars[i] = Instantiate(star, new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f), 0), Quaterni
        yield return new WaitForSeconds(TimeStars);
    }
    while (true)
    {
        for (int i = 0; i < numberOfStars; i++)
        {
            Stars[i].transform.position = new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f), 0);
            yield return new WaitForSeconds(TimeStars);
        }
    }
}
```

# Пишем код

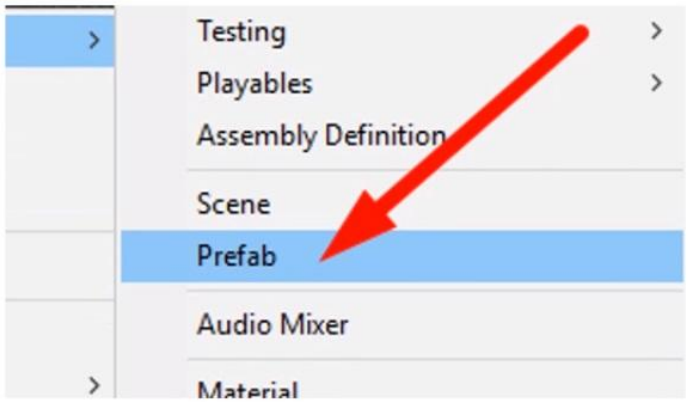
```
void Start()
{
    Stars = new GameObject[numberOfStars];
    StartCoroutine(SpawnNyushes());
}

IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {
```

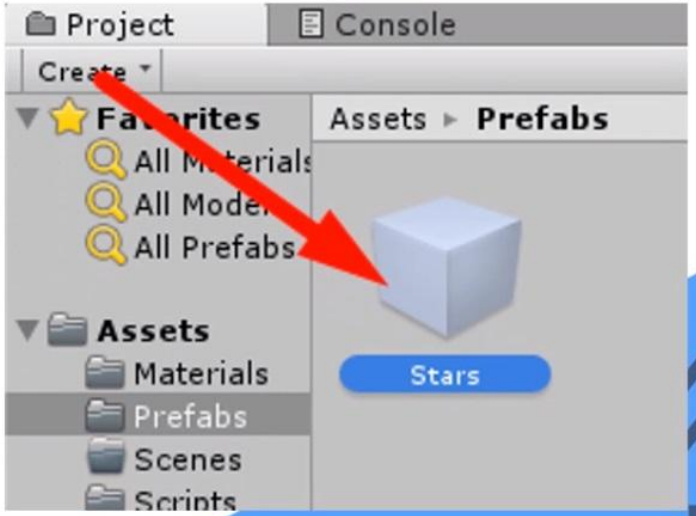
# Создаем префаб



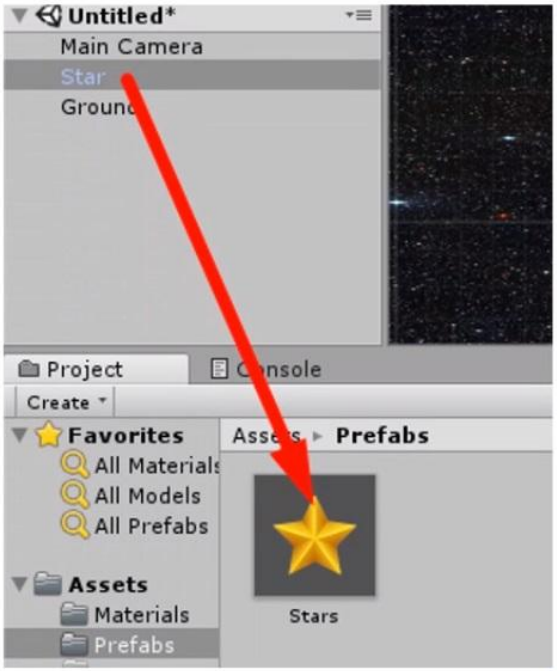



# Создаем префаб

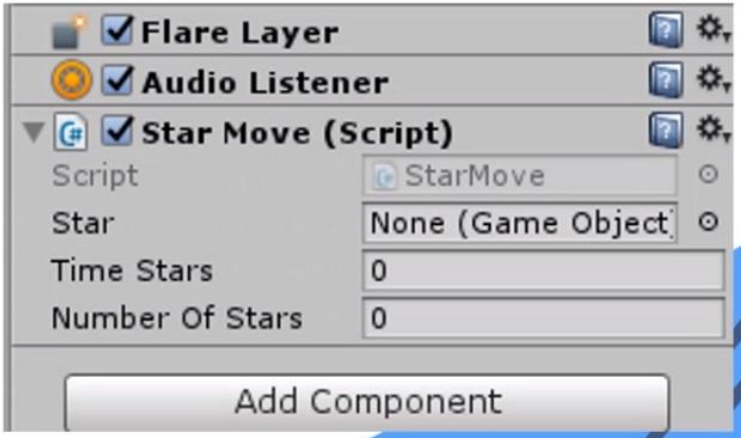


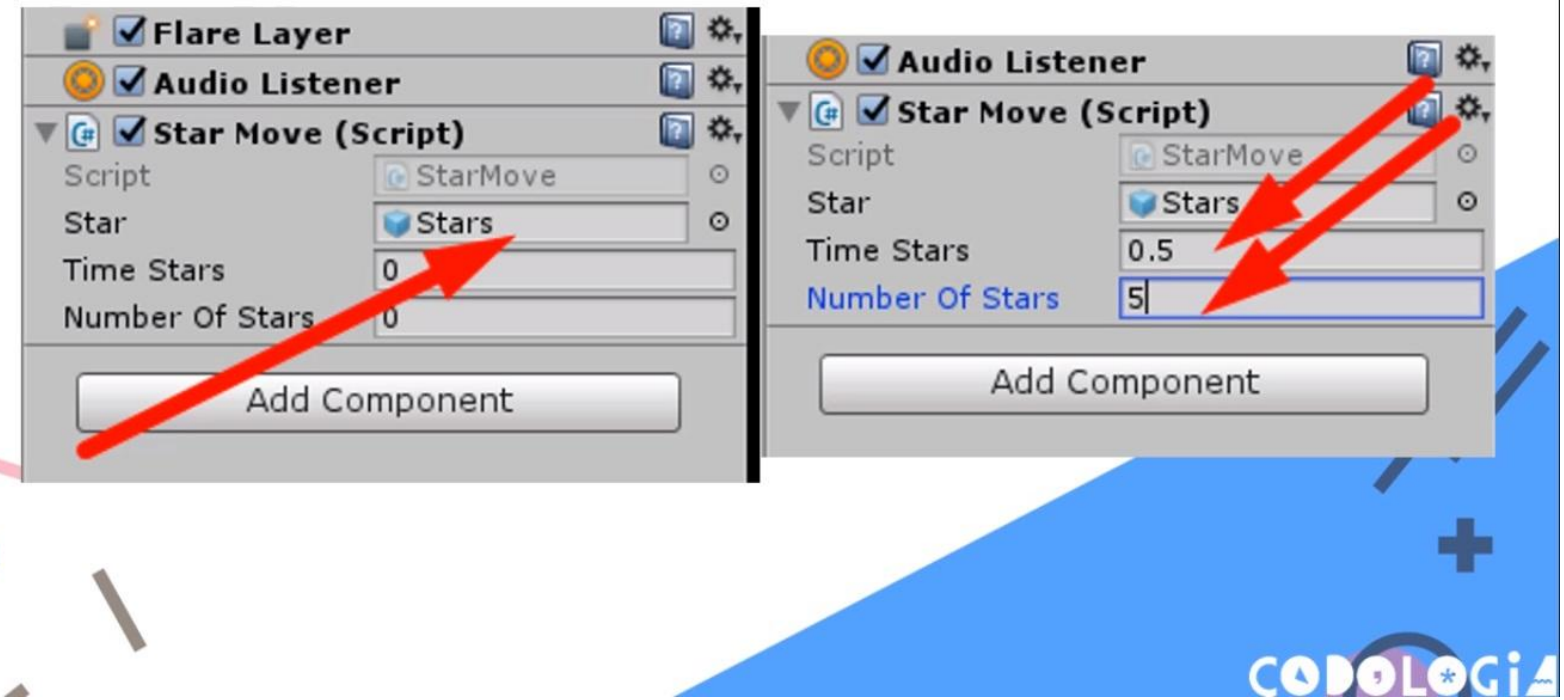
# Создаем префаб



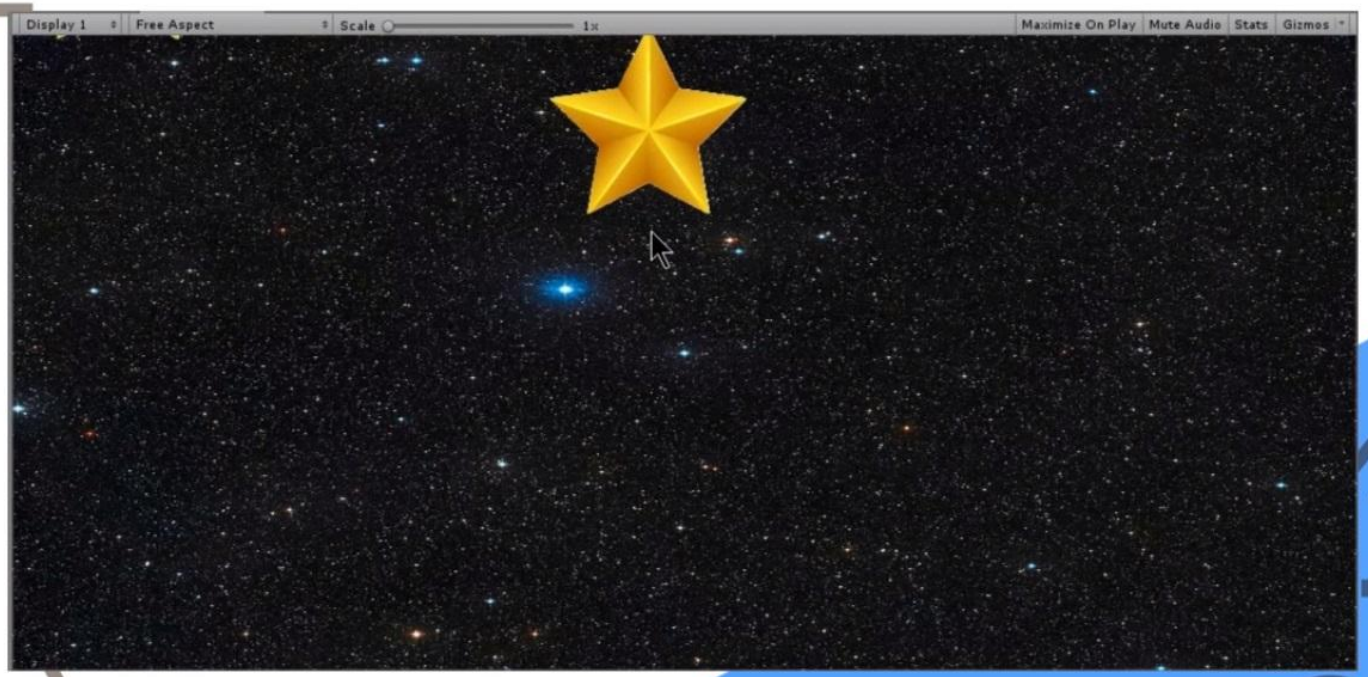

# Прикрепляем скрипт

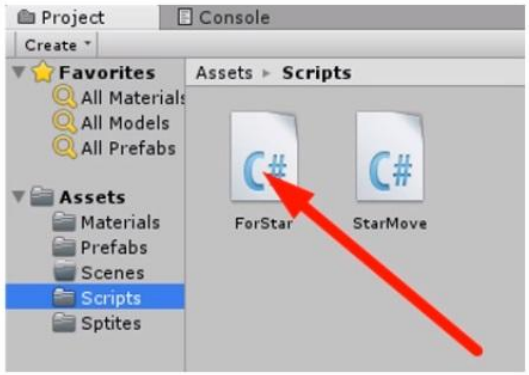
# Настраиваем значения



# Запускаем игру

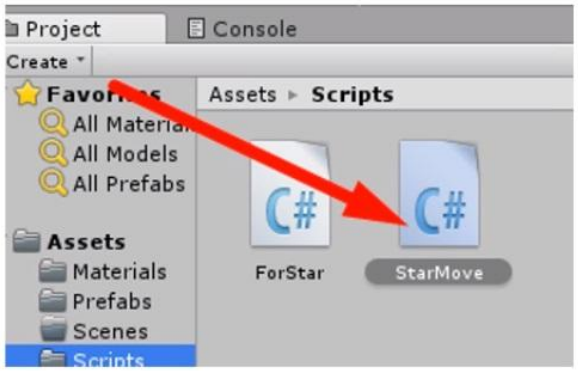


# Пишем код




```
public class ForStar : MonoBehaviour {

    private Rigidbody2D rbody;
    Vector3 start = new Vector3(0, -15f, 0);

    private void OnMouseDown()
    {
        transform.position = start;
    }
}
```

# Пишем код




```
public class StarMove : MonoBehaviour {

    [SerializeField] private GameObject
    [SerializeField] private float Ti

    Vector3 velocity = new Vector3(0, 0, 0);
    float position;

    GameObject[] Stars;
    public int numberOfStars;
```

# Пишем код

```
IEnumerator SpawnNyushes()
{
    for (int i = 0; i < numberOfStars; i++)
    {
        Stars[i] = Instantiate(star, new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f), 0), Quaternion.i

        position = Random.Range(0.3f, 0.6f);
        Stars[i].transform.localScale = new Vector3(position, position, position);

        yield return new WaitForSeconds(TimeStars);
    }
    while (true)
    {
        for (int i = 0; i < numberOfStars; i++)
```

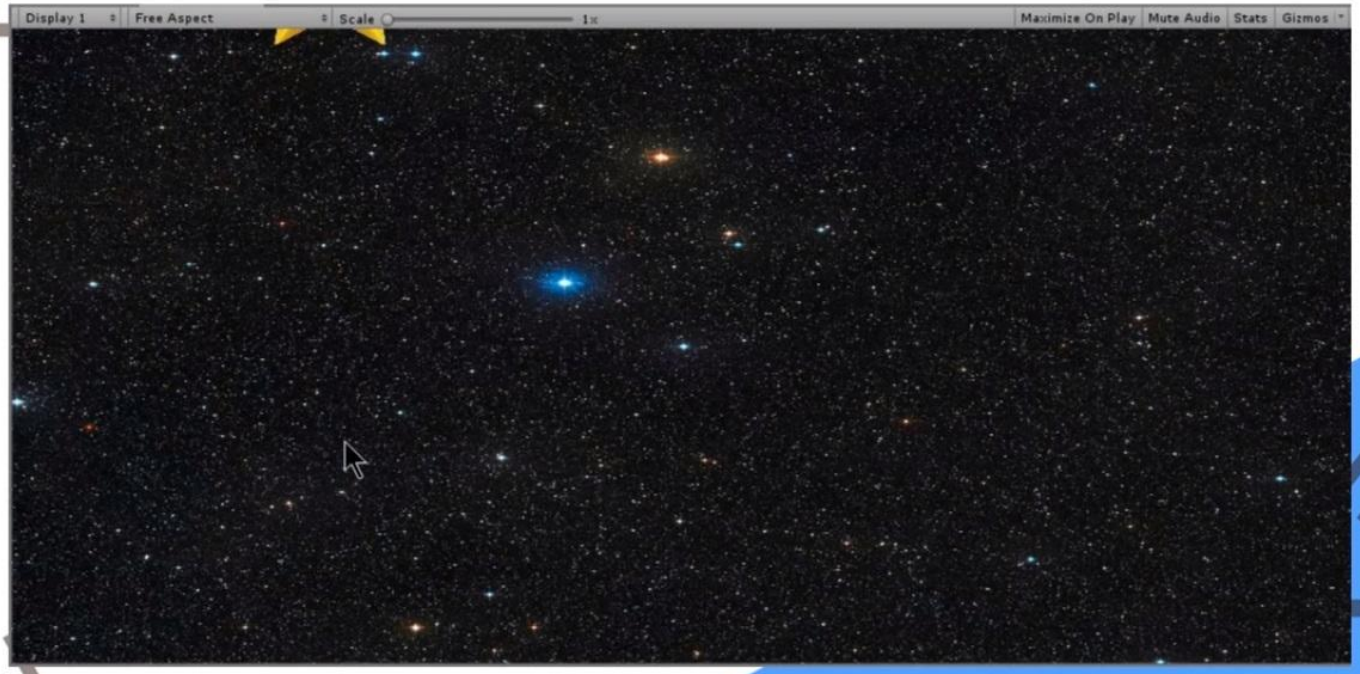
# Пишем код

```
            yield return new WaitForSeconds(TimeStars);
        }
        while (true)
        {
            for (int i = 0; i < numberOfStars; i++)
            {
                position = Random.Range(0.3f, 0.6f);
                Stars[i].transform.localScale = new Vector3(position, position, position);

                Stars[i].transform.position = new Vector3(Random.Range(-9f, 10f), Random.Range
                yield return new WaitForSeconds(TimeStars);
            }
        }
    }
}
```

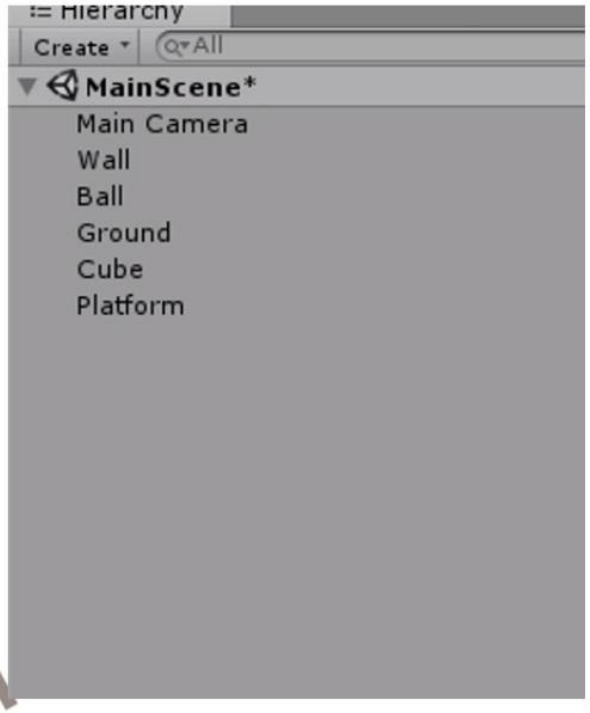
# Пишем код

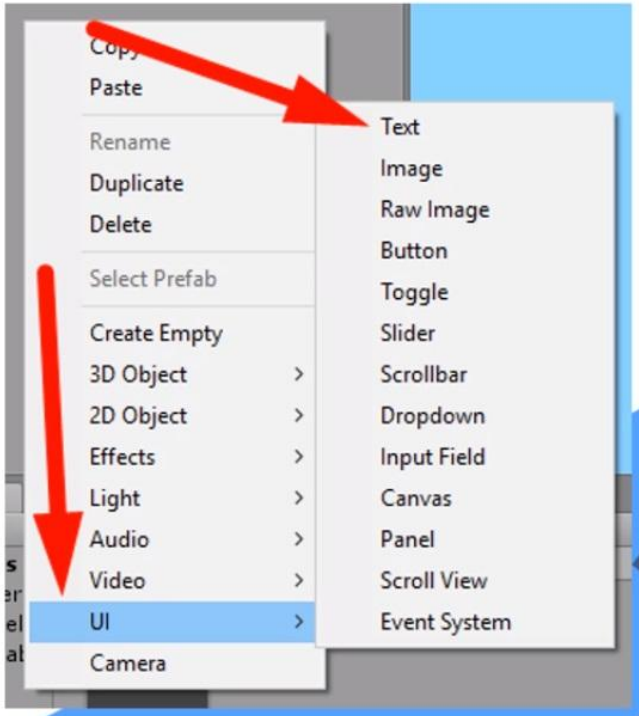
```
}
while (true)
{
    for (int i = 0; i < numberOfStars; i++)
    {
        position = Random.Range(0.3f, 0.6f);
        Stars[i].transform.localScale = new Vector3(position, position, position);

        Stars[i].GetComponent<Rigidbody2D>().velocity = new Vector3(0, 0, 0);

        Stars[i].transform.position = new Vector3(Random.Range(-9f, 10f), Random.Range(6f, 10f), 0);
        yield return new WaitForSeconds(TimeStars);
    }
}
```

# Запускаем игру

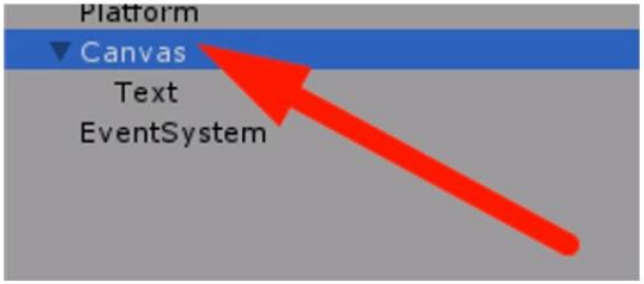


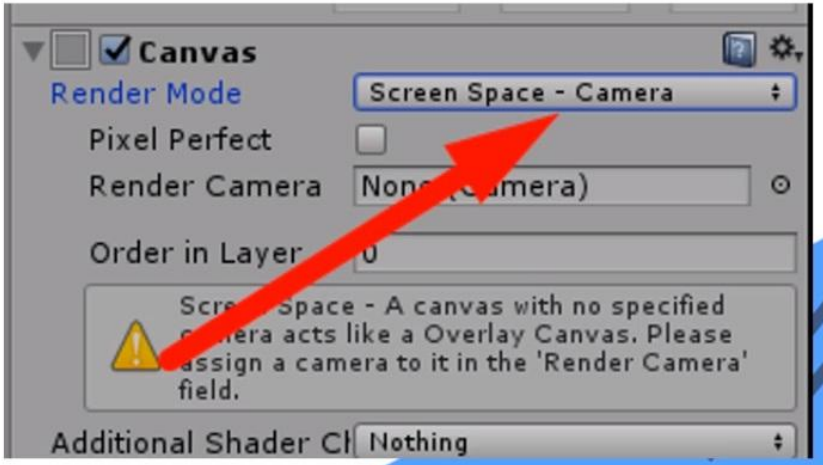
# Добавляем текст



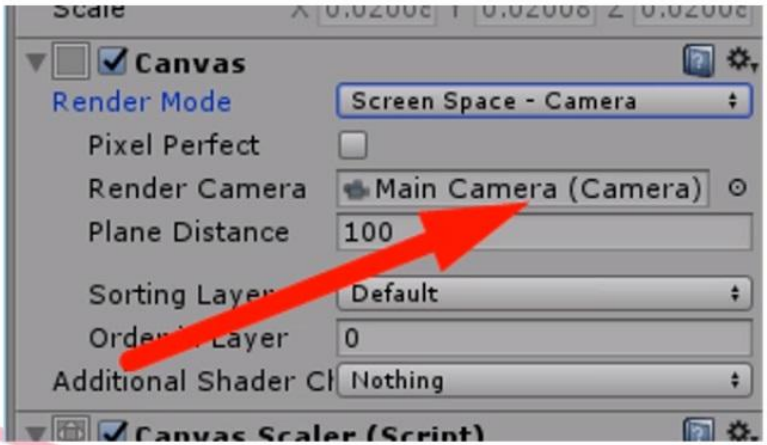



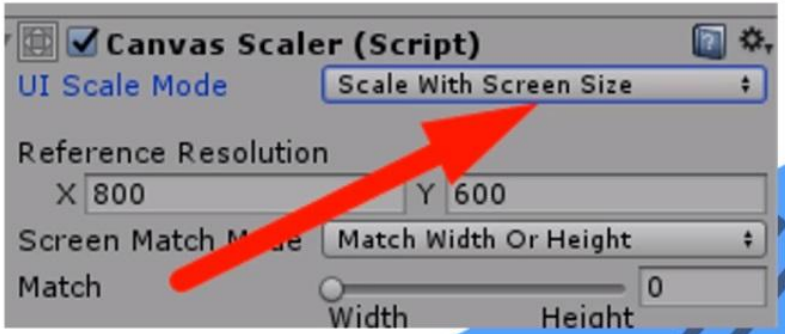
# Настройка текста



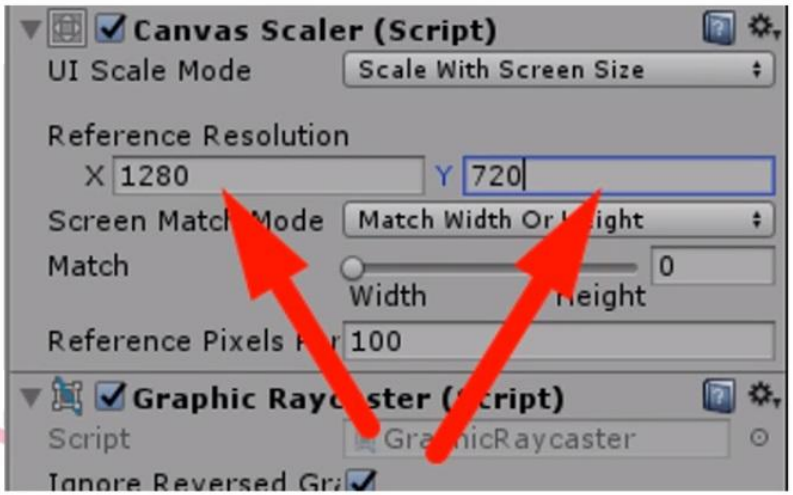



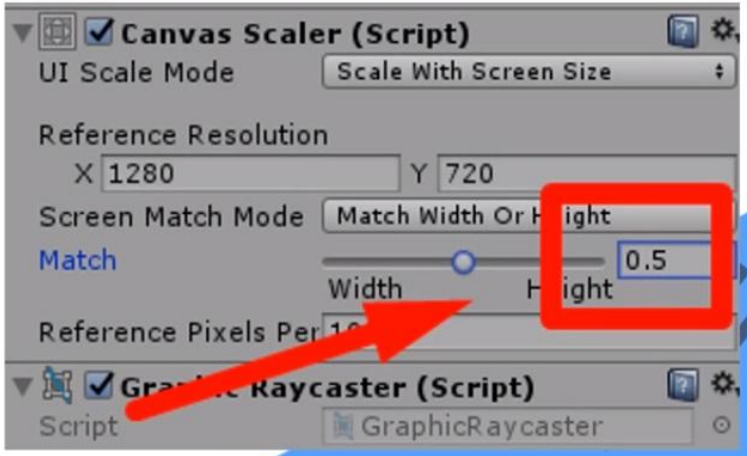
# Настройка текста



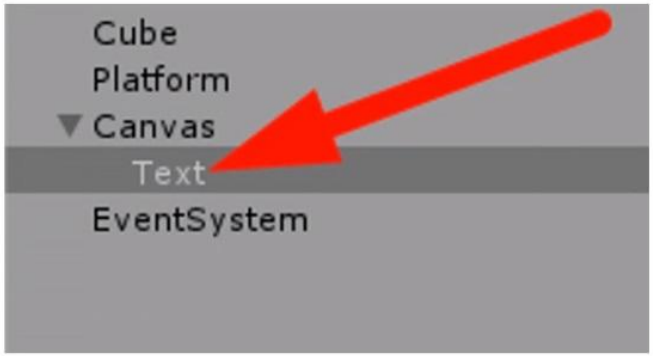



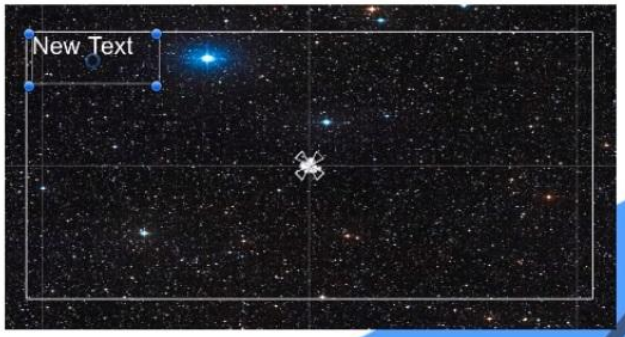
# Настройка текста



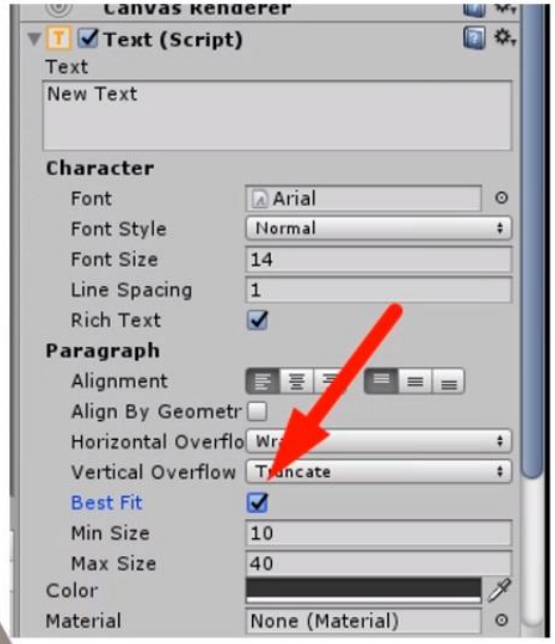



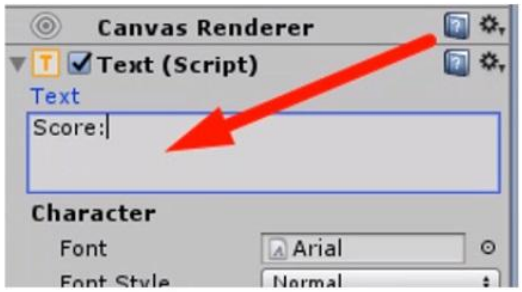
# Местоположение

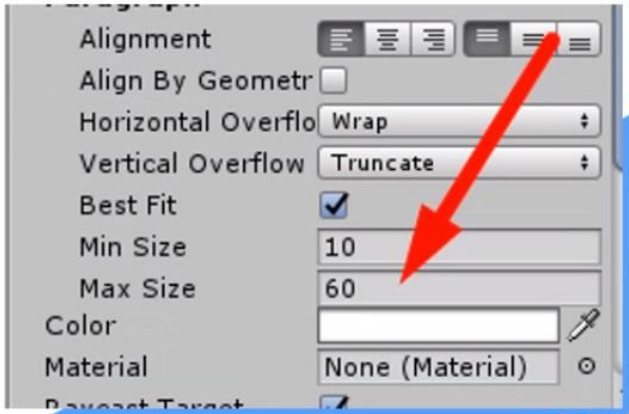


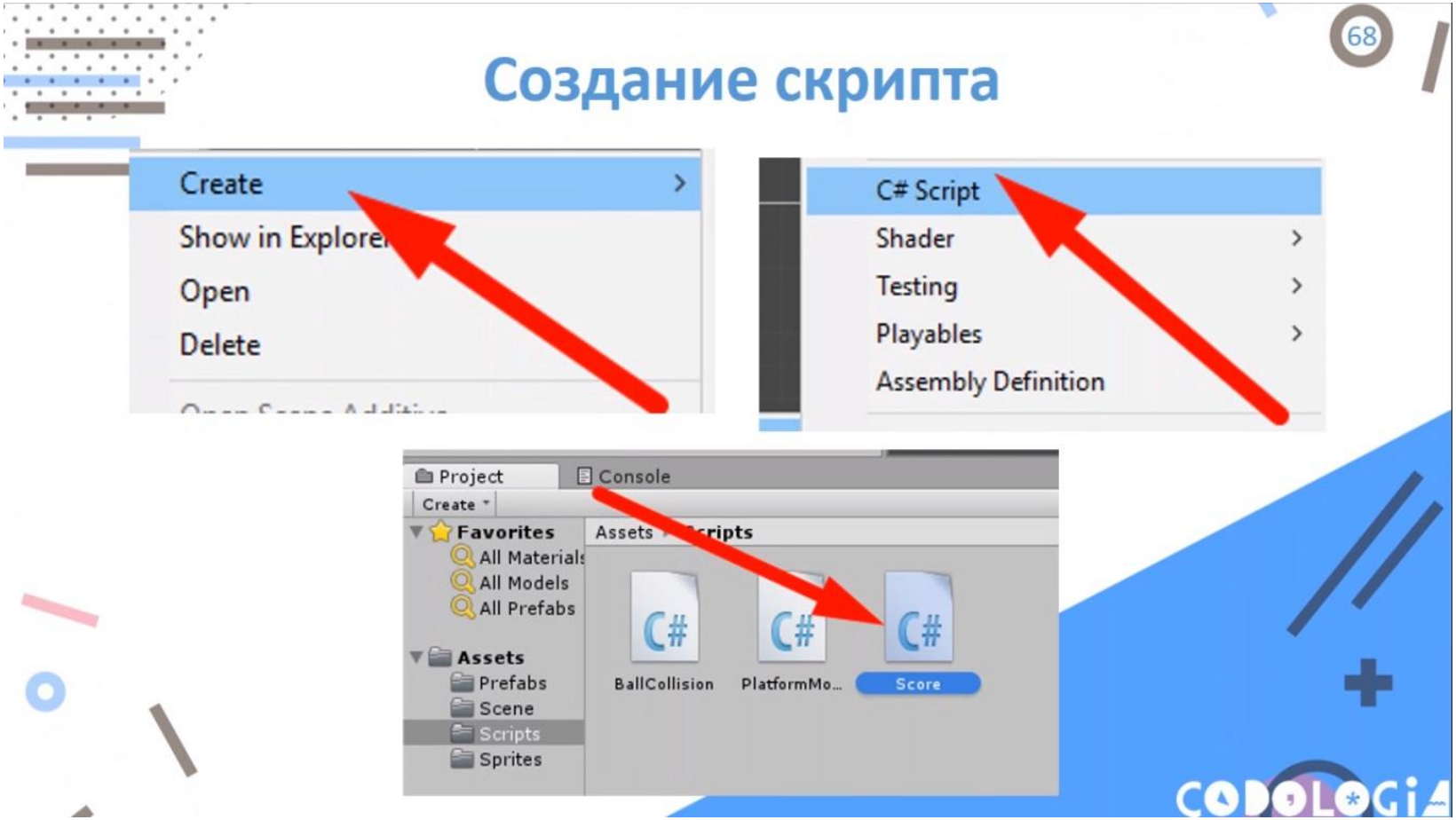
# Настройка размера



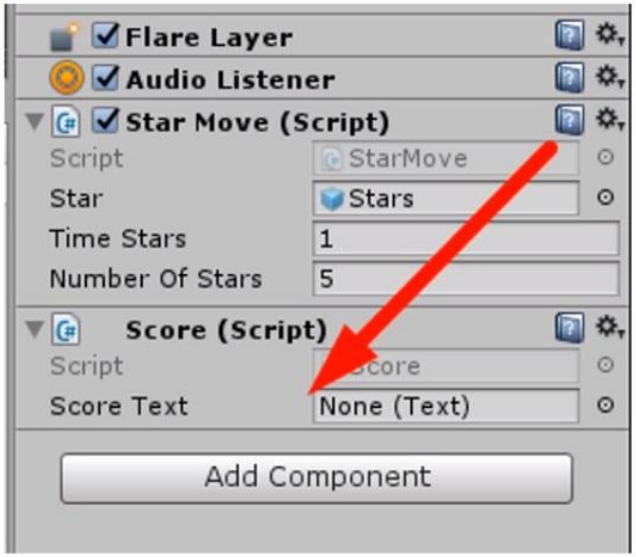
# Создание скрипта

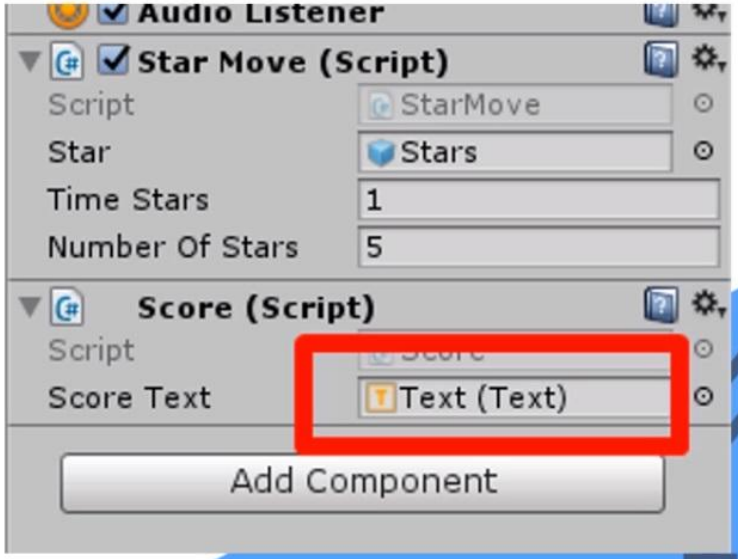


# Пишем код

```
using UnityEngine;
using UnityEngine.UI;

public class Score : MonoBehaviour {

    [SerializeField] private Text scoreText;
    private int _gameScore;

    public int GameScore
    {
        get { return _gameScore; }
        set
        {
            _gameScore = value;
            scoreText.text = "Score: " + _gameScore;
        }
    }
}
```

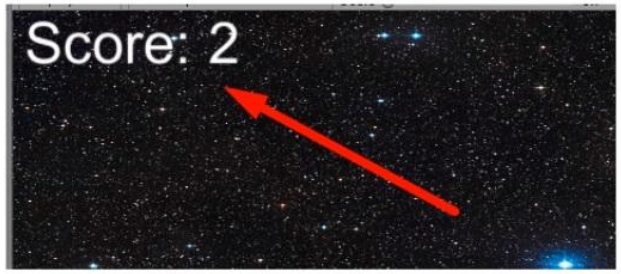
# Настраиваем скрипт



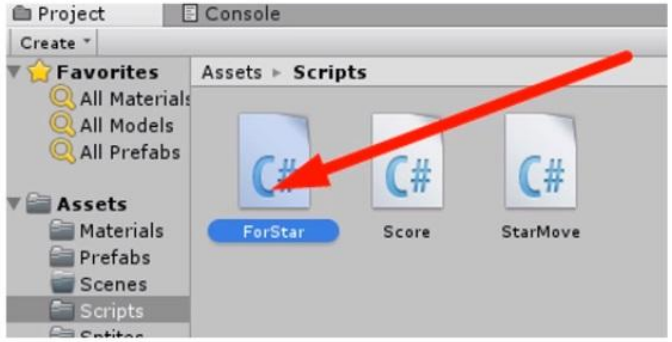
# Запуск игры


# Задание 🤔




Добавьте в скрипт строку, которая прибавит к переменной gameScore +1, когда мышь кликнет по звезде.

# Пишем код

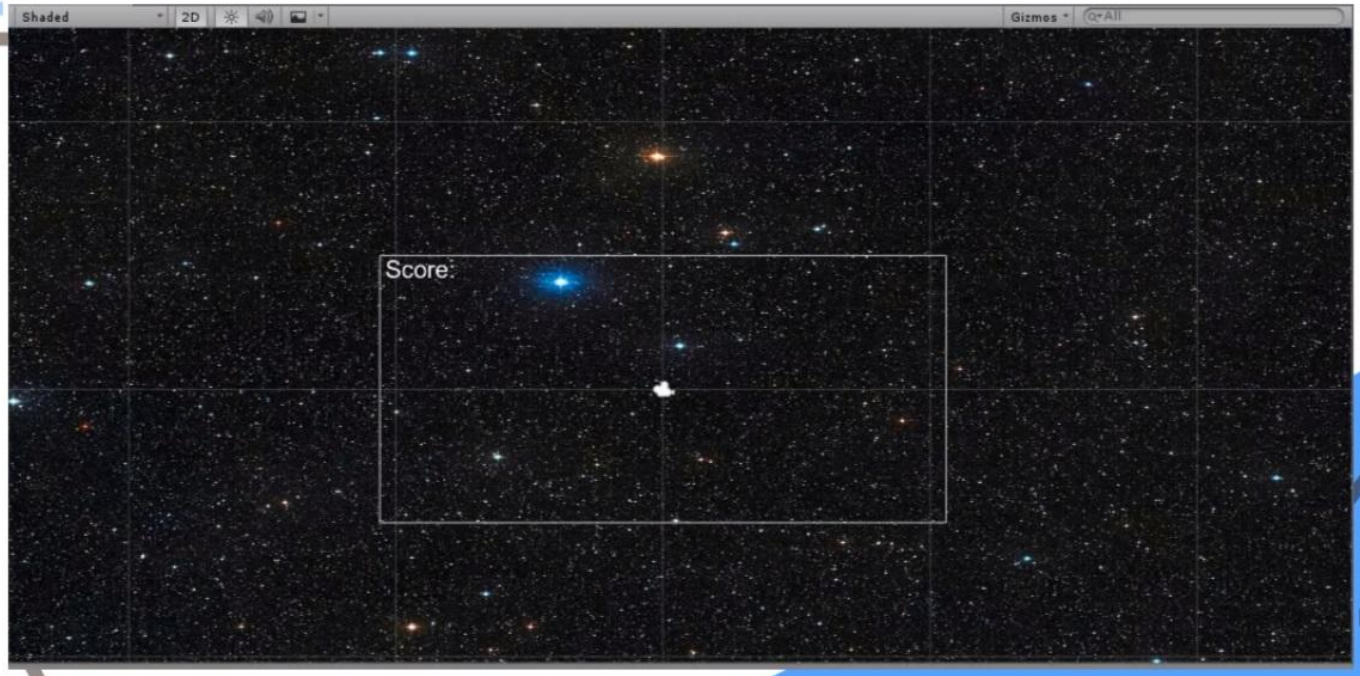



```
public class ForStar : MonoBehaviour {

    private Score score;

    private Rigidbody2D rbody;
    Vector3 start = new Vector3(0, -15f, 0);
```

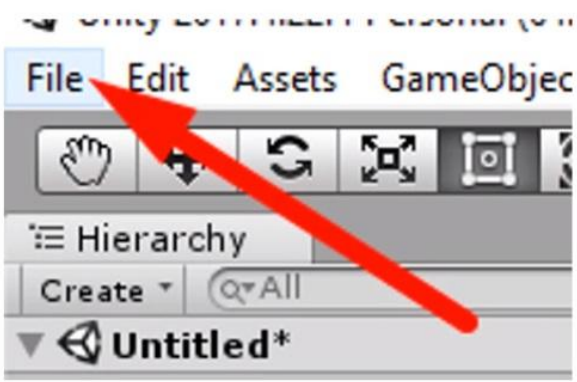
# Пишем код

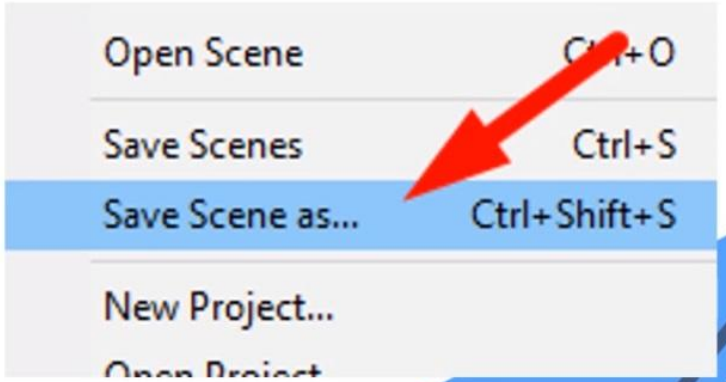
```
private void Start()
{
    score = Camera.main.GetComponent<Score>();
}

private void OnMouseDown()
{

}

private void OnMouseDown()
{
    transform.position = start;
    score.GameScore += 1;
}
}
```

# Запуск игры

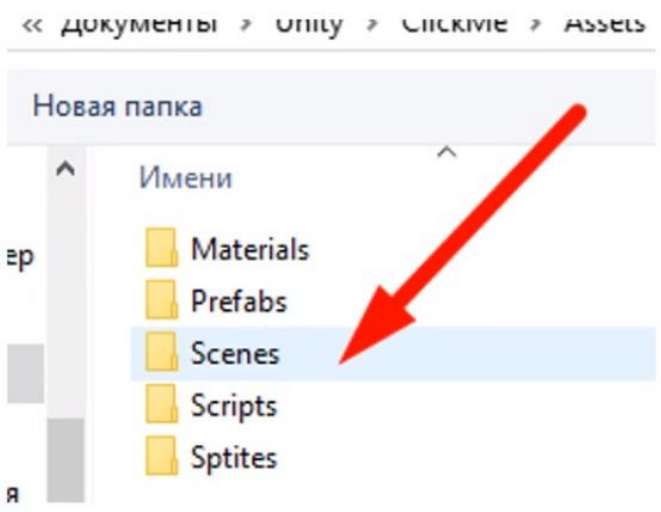


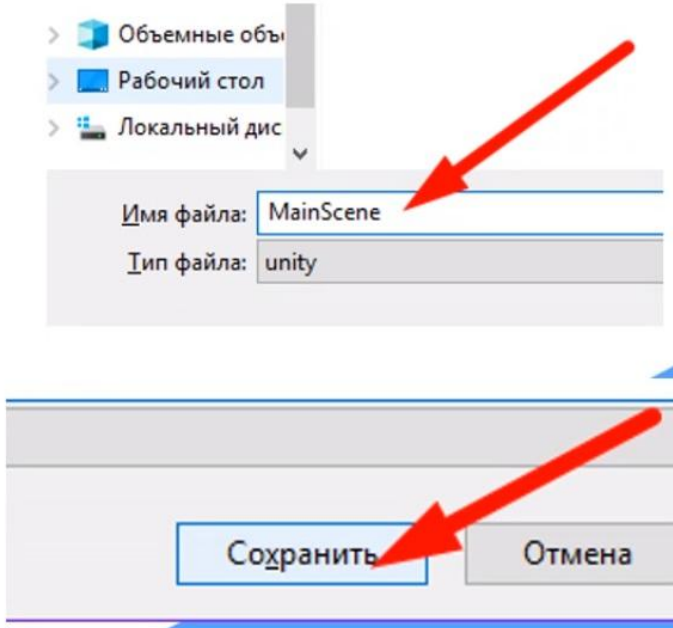
# Сохранение сцены



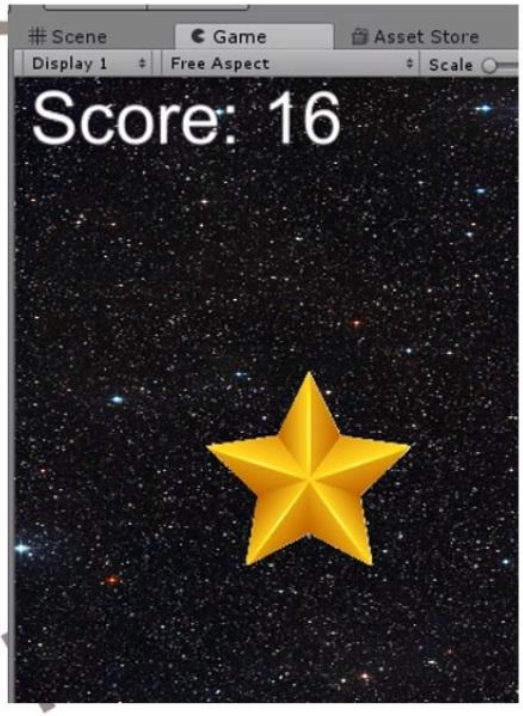



# Сохранение сцены

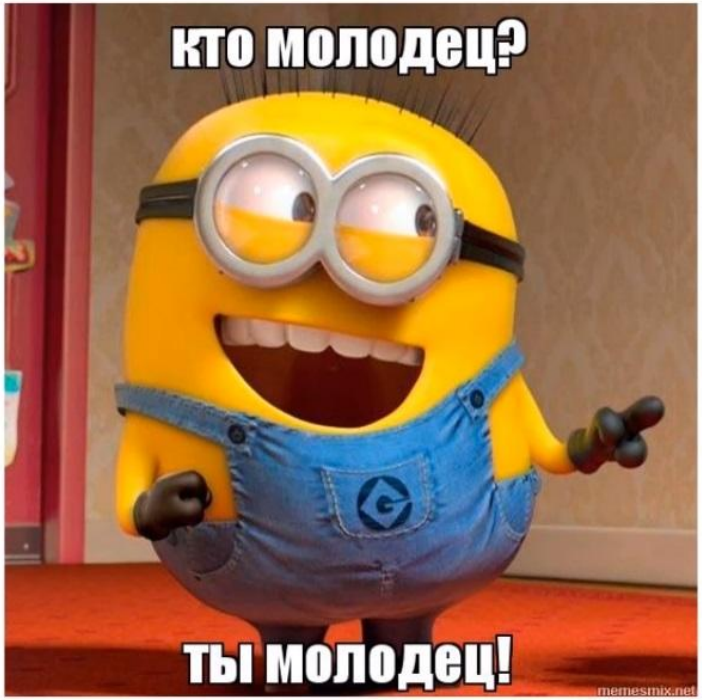


# Домашнее задание




Напишите код программы, который при падении звезды (если игрок не успел по ней щелкнуть мышью) из счета вычитает минус 1. Подсказка: прежде чем улететь, звезда пролетает через триггер Ground.




Все молодцы!