

게임프로그래밍

Unity Game Upgrade 및 깃허브 정리 발표

깃허브 주소

2019775009

23. 12. 13


소프트웨어학과

김수민


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Game Repositories

 game PublicPinUnwatch 1

main 1 branch 0 tagsGo to fileAdd file<> Code

 ks2019775009 Add files via upload

d42727d 21 minutes ago 119 commits

week1	Update readme.md	3 months ago
week10	Update reademe.md	last month
week11	Update reademe.md	3 weeks ago
week12	Add files via upload	last week
week13	Add files via upload	last week
week14	Add files via upload	21 minutes ago
week3	Update reademe.md	2 months ago
week5	Add files via upload	2 months ago
week6	Update reademe.md	2 days ago
README.md	Update README.md	3 months ago

README.md

게임프로그래밍 과목 수업 내용 및 과제물

History

History for `game` / `week1`

Commits on Sep 28, 2023

- Update readme.md
ks2019775009 committed on Sep 28
- Update readme.md
ks2019775009 committed on Sep 28
- Create readme.md
ks2019775009 committed on Sep 28

History for `game` / `week3`

Commits on Oct 4, 2023

- Update readme.md
ks2019775009 committed on Oct 4
- Create readme.md
ks2019775009 committed on Oct 4

Commits on Sep 20, 2023

- Add files via upload
ks2019775009 committed on Sep 20
- Delete week3/class/img/ex_06.png
ks2019775009 committed on Sep 20
- Add files via upload
ks2019775009 committed on Sep 20
- Delete week3/class/img/ex_06.png
ks2019775009 committed on Sep 20
- Add files via upload
ks2019775009 committed on Sep 20
- Delete week3/class/img/ex_06.png
ks2019775009 committed on Sep 20
- Add files via upload
ks2019775009 committed on Sep 20

History for `game` / `week5`

Commits on Oct 4, 2023

- Add files via upload
ks2019775009 committed on Oct 4
- Update readme.md
ks2019775009 committed on Oct 4

Commits on Sep 29, 2023

- Add files via upload
ks2019775009 committed on Sep 29
- Update readme.md
ks2019775009 committed on Sep 29
- Update readme.md
ks2019775009 committed on Sep 29
- Update readme.md
ks2019775009 committed on Sep 29
- Update readme.md
ks2019775009 committed on Sep 29
- Add files via upload
ks2019775009 committed on Sep 29
- Create readme.md
ks2019775009 committed on Sep 29

History for `game` / `week6`

Commits on Oct 12, 2023

- Update readme.md
ks2019775009 committed on Oct 12
- Update readme.md
ks2019775009 committed on Oct 12
- Update readme.md
ks2019775009 committed on Oct 12

Commits on Oct 11, 2023

- Update readme.md
ks2019775009 committed on Oct 11
- Update readme.md
ks2019775009 committed on Oct 11
- Add files via upload
ks2019775009 committed on Oct 11
- Add files via upload
ks2019775009 committed on Oct 11
- Delete week6/report/젼프발표(6주차).pdf
ks2019775009 committed on Oct 11
- Add files via upload
ks2019775009 committed on Oct 11

History for `game` / `week10`

Commits on Nov 2, 2023

- Update readme.md
ks2019775009 committed on Nov 2
- Update readme.md
ks2019775009 committed on Nov 2
- Add files via upload
ks2019775009 committed on Nov 2
- Add files via upload
ks2019775009 committed on Nov 2
- Update readme.md
ks2019775009 committed on Nov 2
- Create readme.md
ks2019775009 committed on Nov 2
- Create readme.md
ks2019775009 committed on Nov 2
- Update readme.md
ks2019775009 committed on Nov 2
- Create readme.md
ks2019775009 committed on Nov 2

History for `game` / `week11`

Commits on Nov 16, 2023

- Update readme.md
ks2019775009 committed 3 weeks ago
- Update readme.md
ks2019775009 committed 3 weeks ago
- Add files via upload
ks2019775009 committed 3 weeks ago

Commits on Nov 15, 2023

- Update readme.md
ks2019775009 committed 3 weeks ago
- Add files via upload
ks2019775009 committed 3 weeks ago

Commits on Nov 12, 2023

- Delete week11/report/game(BETA).html
ks2019775009 committed last month

Commits on Nov 11, 2023

- Add files via upload
ks2019775009 committed last month
- Create readme.md
ks2019775009 committed last month

History for `game` / `week12`

Commits on Dec 3, 2023

- Add files via upload
ks2019775009 committed 4 days ago

Commits on Nov 29, 2023

- Update readme.md
ks2019775009 committed last week
- Add files via upload
ks2019775009 committed last week
- Update readme.md
ks2019775009 committed last week
- Create readme.md
ks2019775009 committed last week
- Create readme.md
ks2019775009 committed last week

End of commit history for this file

History for `game` / `week13`

Commits on Dec 3, 2023

- Add files via upload
ks2019775009 committed 4 days ago
- Add files via upload
ks2019775009 committed 4 days ago
- Update readme.md
ks2019775009 committed 4 days ago

Commits on Nov 29, 2023

- Create readme.md
ks2019775009 committed last week
- Create readme.md
ks2019775009 committed last week

End of commit history for this file

History for `game` / `week14`

Commits on Dec 6, 2023

- Update readme.md
ks2019775009 committed 20 hours ago

Commits on Dec 3, 2023

- Create readme.md
ks2019775009 committed 4 days ago
- Create readme.md
ks2019775009 committed 4 days ago

End of commit history for this file

Readme

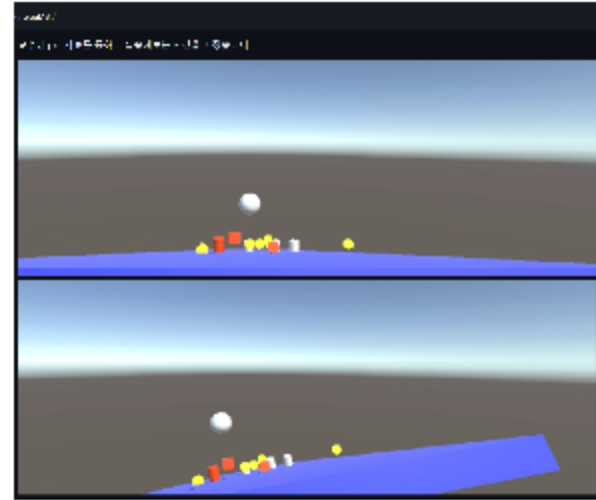
수업에 전체적인 방향에 대한 설명 및 C언어 기초 문제 해석해보기

3.7.5 날 1회 완료

```
#include <stdio.h> #include <stdlib.h> #include <time.h>
```

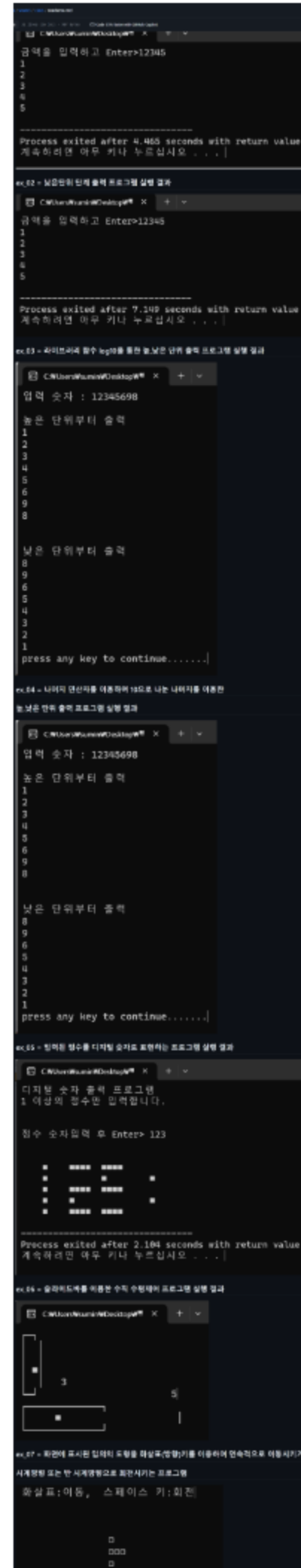
```
int main(void) { int i; srand(time(NULL)); for(i=1;i<=6;i++) printf("%2d\n",rand()%45+1); return 0; }
```

time(NULL)을 통한 현재 시각에 따른 srand 시드값을 매 번 추가해 후 1부터 45까지의 랜덤 11수를 총 6번 출력

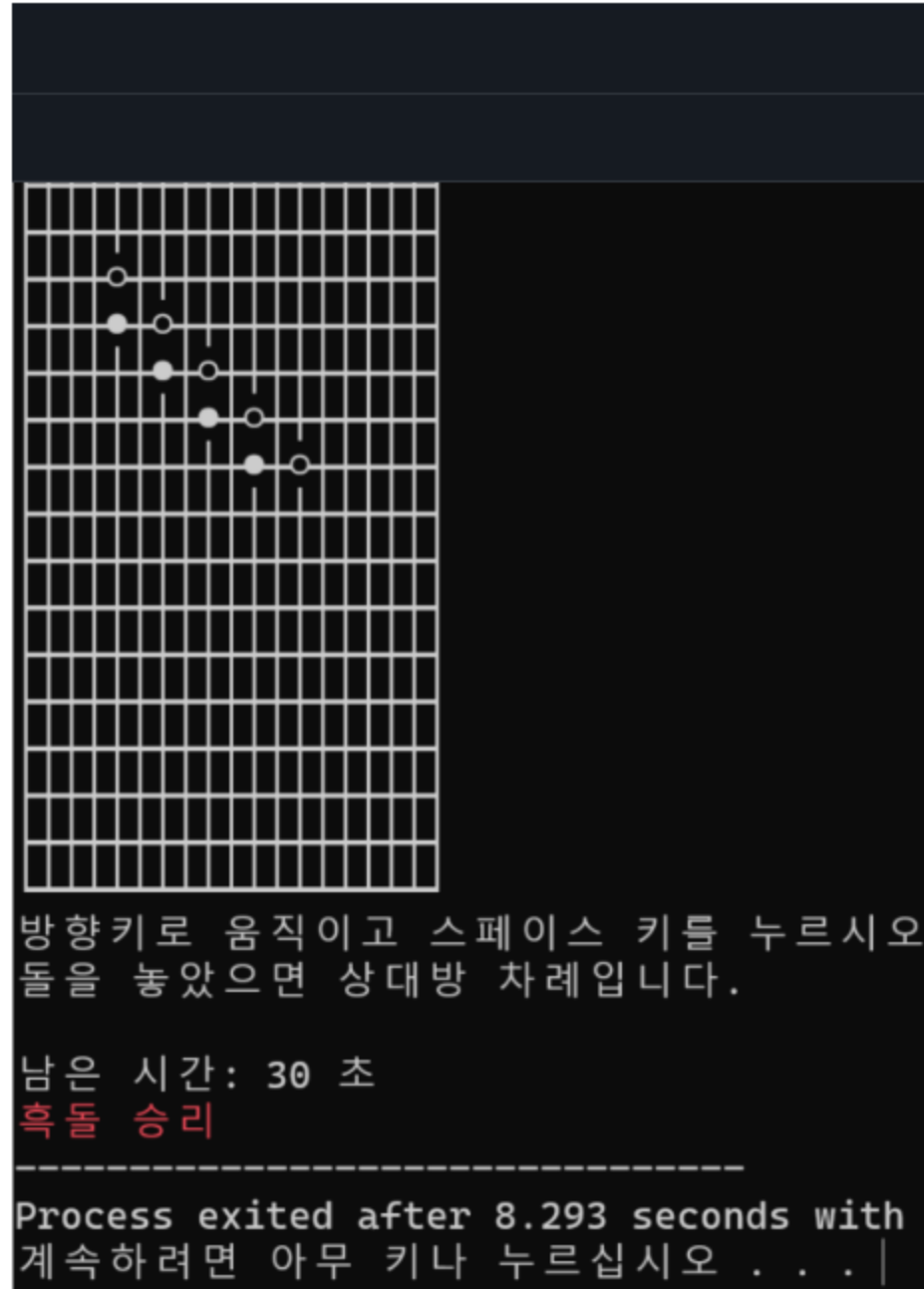


14주차 내용

이번 주차에는 간단하게 다음 주 발표내용과 시험에 관한 이야기를 하고 마칩니다

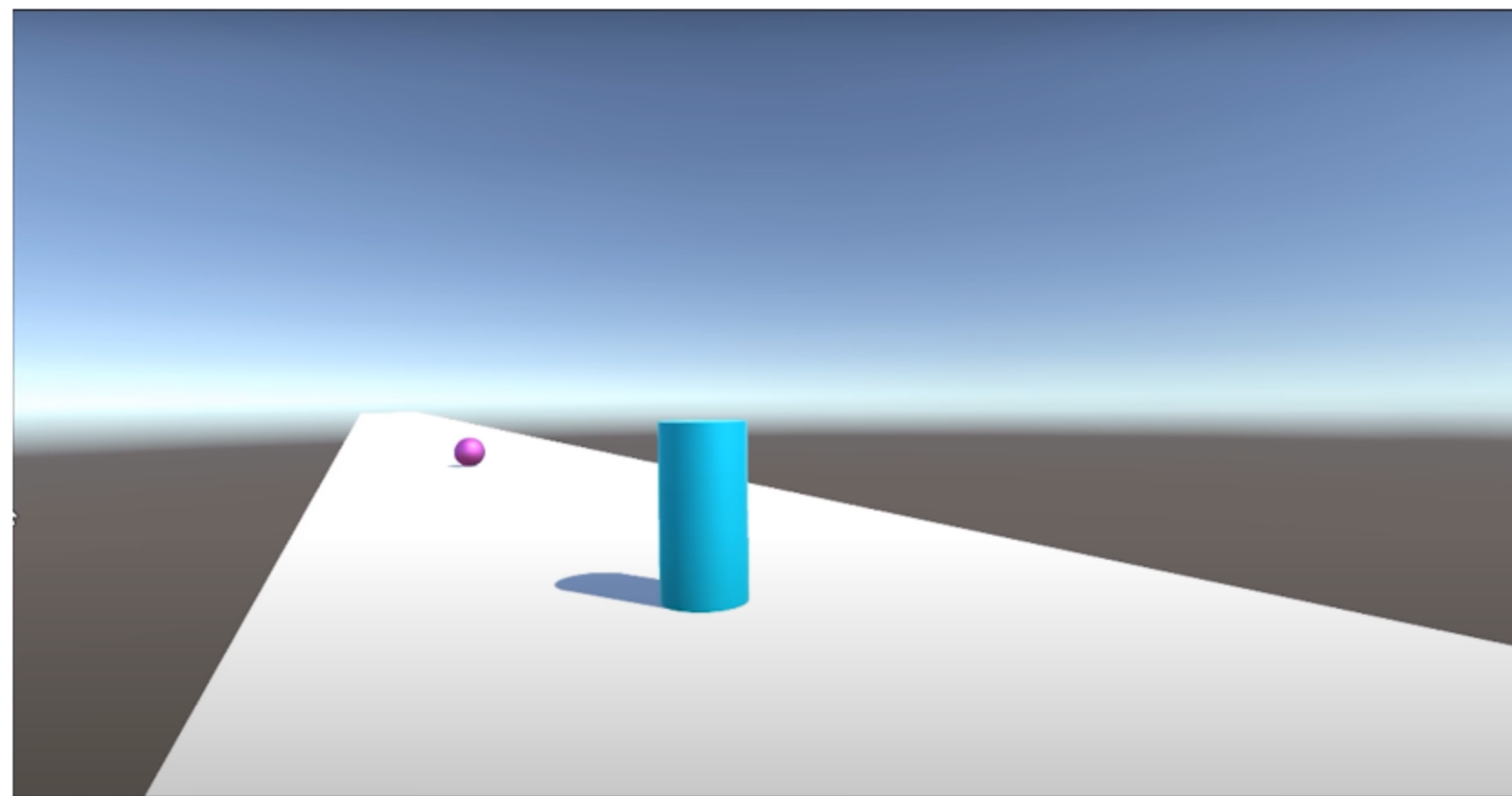
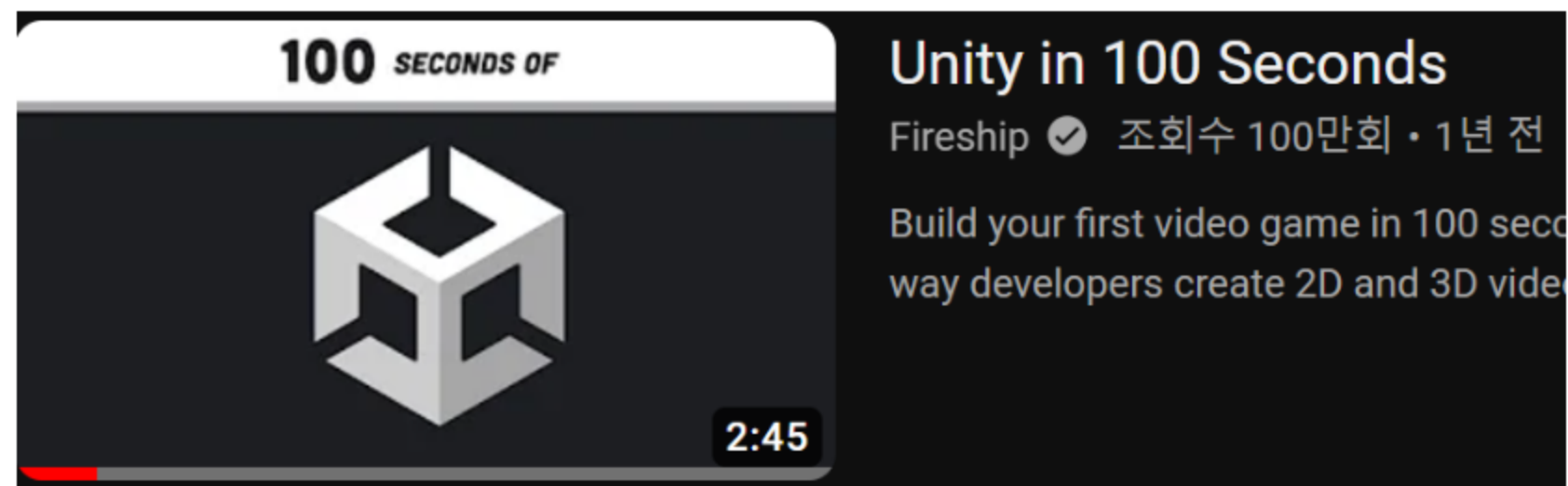


결과물 (원본 업그레이드)



참고한 원본 게임

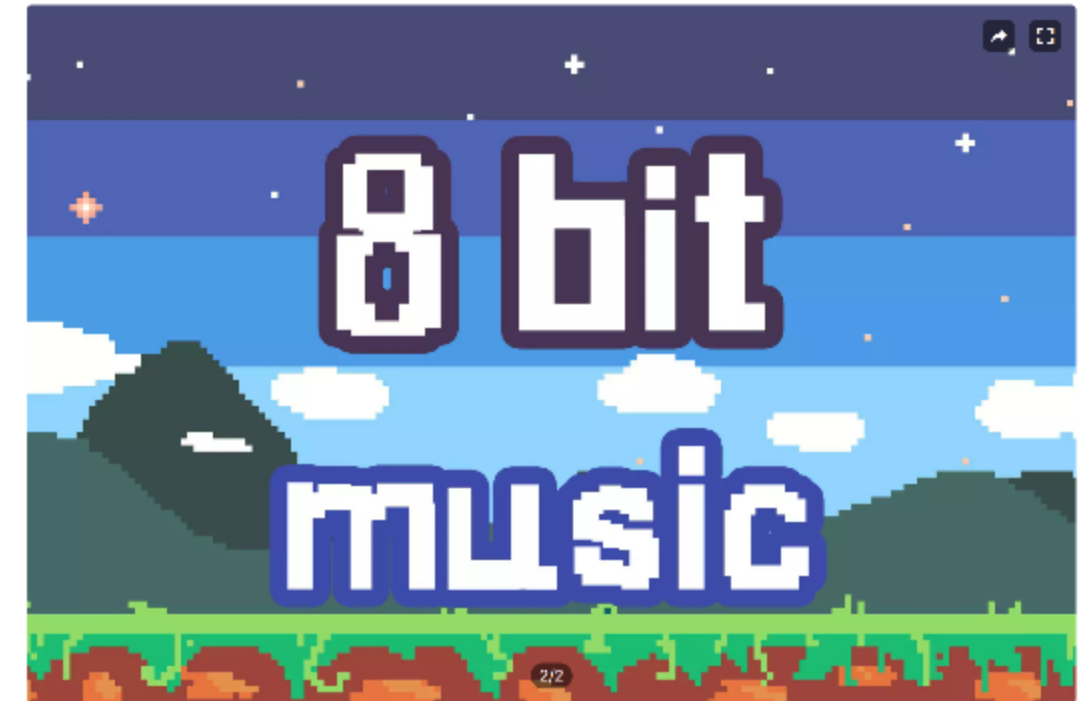
youtube link



업그레이드 구현 목록

1. 에셋스토어에서 폰트,디자인,캐릭터 추가
2. 인트로,인 게임,게임오버 씬 추가
3. 배경음 제어 및 추가
4. 로딩바 구현
5. 장애물 랜덤 색상 및 랜덤 좌표 생성
6. 난이도 선택 추가
7. 버튼 및 텍스트 애니메이션
9. 점수 표시

에셋스토어 다운 목록



사운드 생성 및 제어

SoundManager

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

public class SoundManager : MonoBehaviour
{
    public static SoundManager Instance { get; private set; } // 싱글톤 인스턴스

    public AudioSource bgm;

    private void Awake(){
        var soundManagers = FindObjectsOfType<SoundManager>();
        if( soundManagers.Length == 1){
            DontDestroyOnLoad(gameObject);
            Instance = this; // 싱글톤 인스턴스 설정
        }else{
            Destroy(gameObject);
        }
    }

    // Start is called before the first frame update
    void Start()
    {
        bgm.Play();
    }

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

OptionMenu
SoundOFFbtn
Image
Button (Legacy)

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

public class SoundController : MonoBehaviour
{
    public Text buttonText;
    public static bool isPlaying = true;

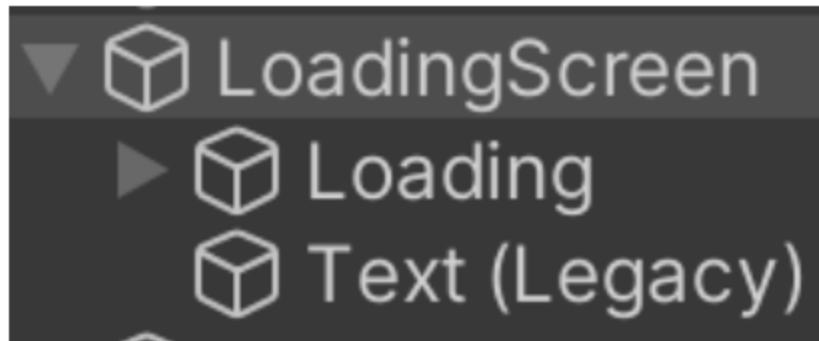
    public void ToggleChange()
    {
        if (buttonText.text == "Sound OFF")
        {
            buttonText.text = "Sound ON";
            isPlaying = false;
            SoundManager.Instance.bgm.Stop(); // 사운드 ON
        }
        else if (buttonText.text == "Sound ON")
        {
            buttonText.text = "Sound OFF";
            isPlaying = true;
            SoundManager.Instance.bgm.Play(); // 사운드 OFF
        }
    }
}
```

OPTION

SOUND OFF

SOUND ON

로딩화면

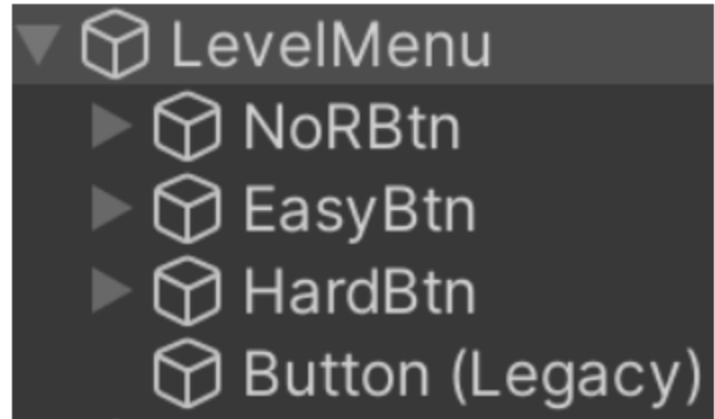


```
public class LoadingController : MonoBehaviour
{
    public Slider progressbar;
    public Text loadtext;
    public static float btninfo = 600f;

    IEnumerator LoadScene(){
        yield return null;
        AsyncOperation operation = SceneManager.LoadSceneAsync(0);
        operation.allowSceneActivation = false;
        while(!operation.isDone){
            yield return null;
            if(progressbar.value < 1f){
                progressbar.value = Mathf.MoveTowards(progressbar.value, 1f, Time.deltaTime);
            }
            else{
                Ball.speed = btninfo;
                operation.allowSceneActivation = true;
            }
        }
    }

    // Start is called before the first frame update
    void Start()
    {
        StartCoroutine(LoadScene());
    }
}
```

난이도 선택



```
using UnityEngine;
using UnityEngine.UI;

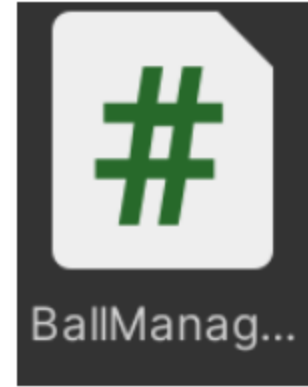
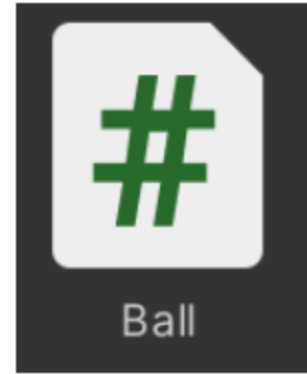
public class ButtonController : MonoBehaviour
{
    private void Start()
    {
        Button easyButton = GameObject.Find("EasyBtn").GetComponent<Button>();
        Button NormalButton = GameObject.Find("NoRBtn").GetComponent<Button>();
        Button HardButton = GameObject.Find("HardBtn").GetComponent<Button>();
        easyButton.onClick.AddListener(OnEasyButtonClick);
        NormalButton.onClick.AddListener(OnNormalButtonClick);
        HardButton.onClick.AddListener(OnHardButtonClick);
    }

    public static void OnEasyButtonClick()
    {
        LoadingController.btninfo = 600f;
        BallManager.second = 1f;
    }

    public static void OnNormalButtonClick()
    {
        LoadingController.btninfo = 1000f;
        BallManager.second = 0.6f;
    }

    public static void OnHardButtonClick()
    {
        LoadingController.btninfo = 1500f;
        BallManager.second = 0.5f;
    }
}
```

장애물 생성, 속성, 색상, 좌표 랜덤 지정



```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.SceneManagement;
public class Ball : MonoBehaviour
{
    public Rigidbody ball_Rigidbody;
    public static float speed = 500f;
    void Start()
    {
        Renderer ballRenderer = GetComponent<Renderer>();
        ballRenderer.material.color = GetRandomColor();

        float randomX = Random.Range(-3.5f, 6f);
        Vector3 randomPosition = new Vector3(randomX, transform.position.y, transform.position.z);
        transform.position = randomPosition;

        ball_Rigidbody.AddForce(-transform.forward * speed);
    }
    Color GetRandomColor()
    {
        float randomR = Random.Range(0f, 1f);
        float randomG = Random.Range(0f, 1f);
        float randomB = Random.Range(0f, 1f);
        return new Color(randomR, randomG, randomB);
    }

    void OnCollisionEnter(Collision collision){
        if(collision.gameObject.name == "user"){
            print("you lose ! ");
            GameOver();
        }
    }
    public void GameOver(){
        SoundManager.Instance.bgm.Stop();
        SceneManager.LoadScene(2);
    }
}
```

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

public class BallManager : MonoBehaviour
{
    public GameObject ballPrefab;
    public int numberOfBalls = 3;
    public static float second = 1f;

    void Start()
    {
        StartCoroutine(SpawnBalls());
    }
    IEnumerator SpawnBalls()
    {
        for (int i = 0; i < numberOfBalls; i++)
        {
            GameObject ball = Instantiate(ballPrefab, GetRandomPosition(), Quaternion.identity);
            yield return new WaitForSeconds(second);
        }
    }
    Vector3 GetRandomPosition()
    {
        float randomX = Random.Range(-3.5f, 6f);
        float randomY = transform.position.y;
        float randomZ = Random.Range(-6.6f, -10.8f);
        return new Vector3(randomX, randomY, randomZ);
    }
}
```


출처

https://www.youtube.com/watch?v=iqlH4okiQqg	// 원본게임
https://www.youtube.com/watch?v=4Zj4sf7FgPo	// Intro
https://gyeombi.tistory.com/3	// Intro
https://www.youtube.com/watch?v=hHHZucxsZPE	// 로딩바
https://www.youtube.com/watch?v=UGJ6T1g1BZk	// 사운드
https://www.youtube.com/watch?v=7vG5-QOV1_0	// 사운드
https://www.youtube.com/watch?v=YFWCNt4h_WM	// 사운드
https://blog.naver.com/ckdduq2507/222086073058	// 애니메이션
https://www.youtube.com/watch?v=BNPmyZGOWuk	// 게임오버 , 애니메이션
https://chat.openai.com/	// 나머지 소스 구현