

게임 프로그래밍

Git Hub, Unity 게임 기능 추가

소 프 트 웨 어 학 과 2 0 2 1 8 6 3 0 6 7 정 혜 인

<https://github.com/hy31n/game>

2 0 2 3 / 1 2 / 1 3

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Git Hub 정리

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게임 분석 및 실행

hy31n / game

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Insights

Settings

game

Public

1 branch0 tags

hy31n

Create readme.md

week10/report

Update README.md

week11/report

Update README.md

week13

Update readme.md

week14

Create readme.md

week3/class

Delete week3/report directory

week4

Update README.md

week5

readme.md

README.md

Update README.md

README.md

2023 2 계인 프로그래밍

Commits on Oct 4, 2023

Update README.md

hy31n committed on Oct 4

Create README.md

hy31n committed on Oct 4

Commits on Sep 26, 2023

Update readme.md

hy31n committed on Sep 26

Update slideLength.cpp

hy31n committed on Sep 26

Update readme.md

hy31n committed on Sep 26

Commits on Sep 20, 2023

Update and rename cashpre02.cpp to cashpre.cpp

hy31n committed on Sep 20

Add files via upload

11 minutes ago

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Git Hub 정리

main

game / week3 / class /

Go to file

Add file

...

hy31n Update readme.md 0d5d1a3 · 3 months ago History

Name	Last commit message	Last commit date
..		
cashpre.cpp	Update and rename cashpre02.cpp to cashpre.cpp	3 months ago
digitnum.cpp	Add files via upload	3 months ago
moveShape.cpp	Add files via upload	3 months ago
numberLowHigh.cpp	Add files via upload	3 months ago
numberpre01.cpp	Create numberpre01.cpp	3 months ago
readme.md	Update readme.md	3 months ago
slideLength.cpp	Update slideLength.cpp	3 months ago

readme.md

5_4_1 낮은 단위 출력 프로그램

C:\Users\HYEIN\OneDrive\바탕 화면\game\3주차\03src\예제5_4_1.exe
금액을 입력하고 Enter>123456
1

main

game / week4 / report /

Go to file

hy31n Update README.md b61119c · lat

Name	Last commit message
..	
2021863067 정혜인 길이 환산 프로그램.pdf	Add files via upload
README.md	Update README.md

README.md

길이 환산 프로그램

길이에 대한 도량형 환산 프로그램

0:센티미터 1:미터 2:킬로미터
3:인치 4:피트 5:야드
6:마일 7:자(척) 8:간
9:리
기본단위와 변환단위
입력 후 Enter(예:1 5)>1 5
값을 입력하고 Enter>50
50.00 미터는 54.68066 야드

Process exited after 75.87 seconds with return value 0

main

game / week5 /

Go to file

hy31n readme.md

Name	Last commit message
..	
game	Add files via upload
2021863067 정혜인.pdf	Add files via upload
readme.md	readme.md
응용11_4_1(원본).cpp	Add files via upload

readme.md

Quiz 게임

quiz!

#####

main

game / week10 / report /

Go to file

hy31n Update README.md

Name	Last commit message
..	
2021863067 정혜인 html 게임.pdf	Add files via upload
README.md	Update README.md

README.md

HTML 게임

main

game / week11 / report /

Go to file

hy31n Update README.md

Name	Last commit message
..	
2021863067 정혜인 html 게임 기능 추가.pdf	Add files via upload
Bird.png	Add files via upload
README.md	Update README.md
background.jpeg	Add files via upload
project.html	Add files via upload

README.md

HTML 게임 기능 추가

main

game / week13 /

Go to file

hy31n Update readme.md

Name	Last commit message
..	
readme.md	Update readme.md

readme.md

C# Script 입문

1

main

game / week14 /

Go to file

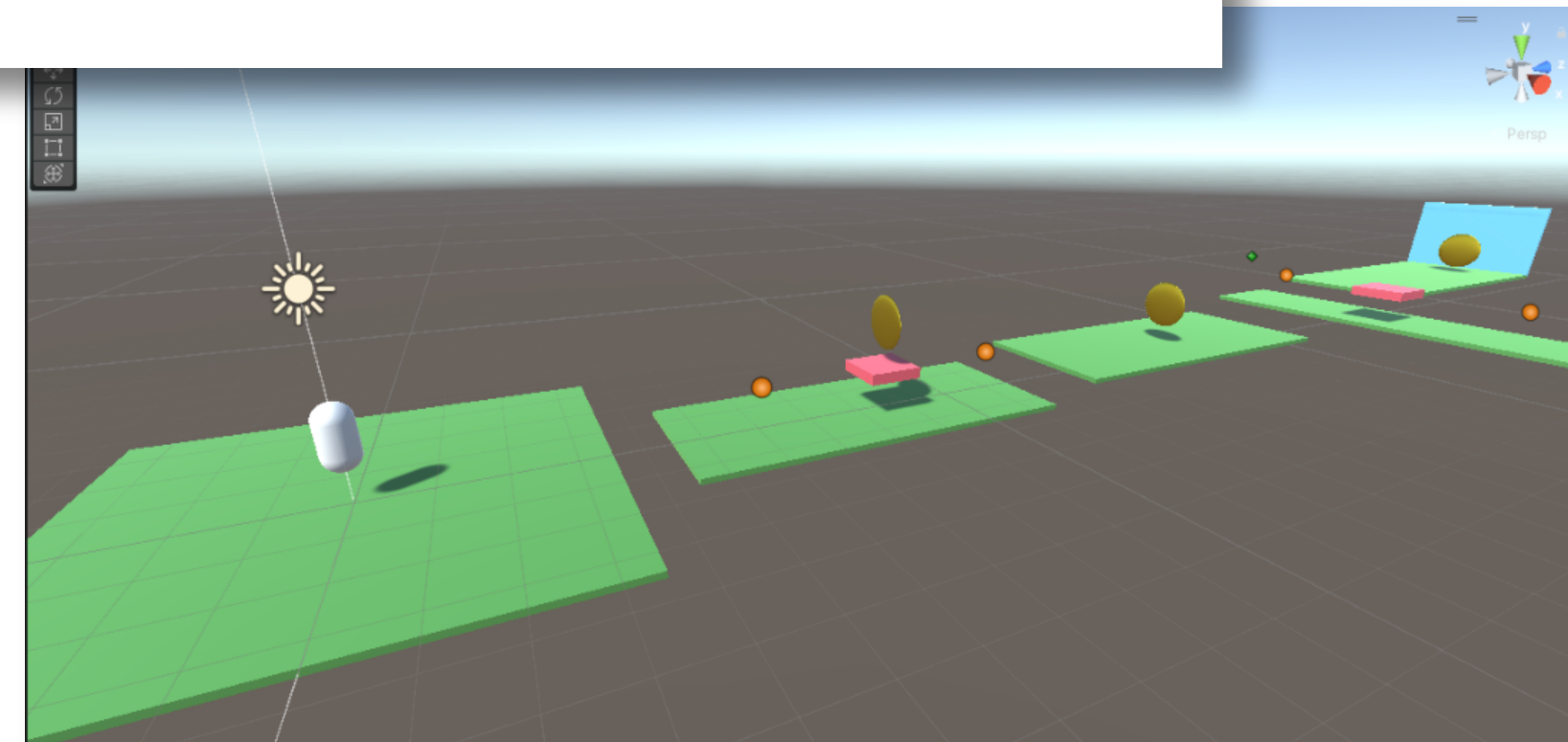
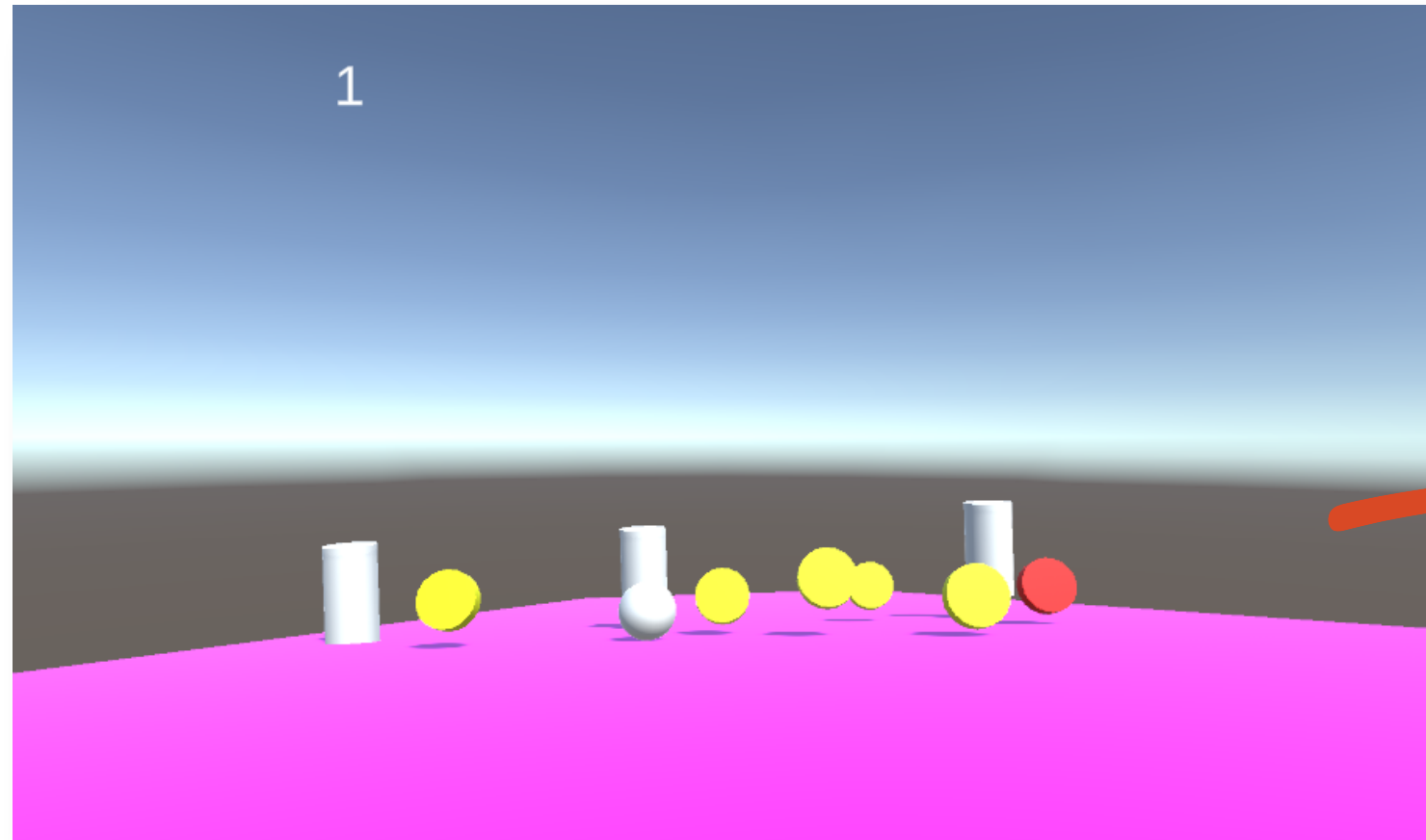
hy31n Create readme.md

Name	Last commit message
..	
readme.md	Create readme.md

readme.md

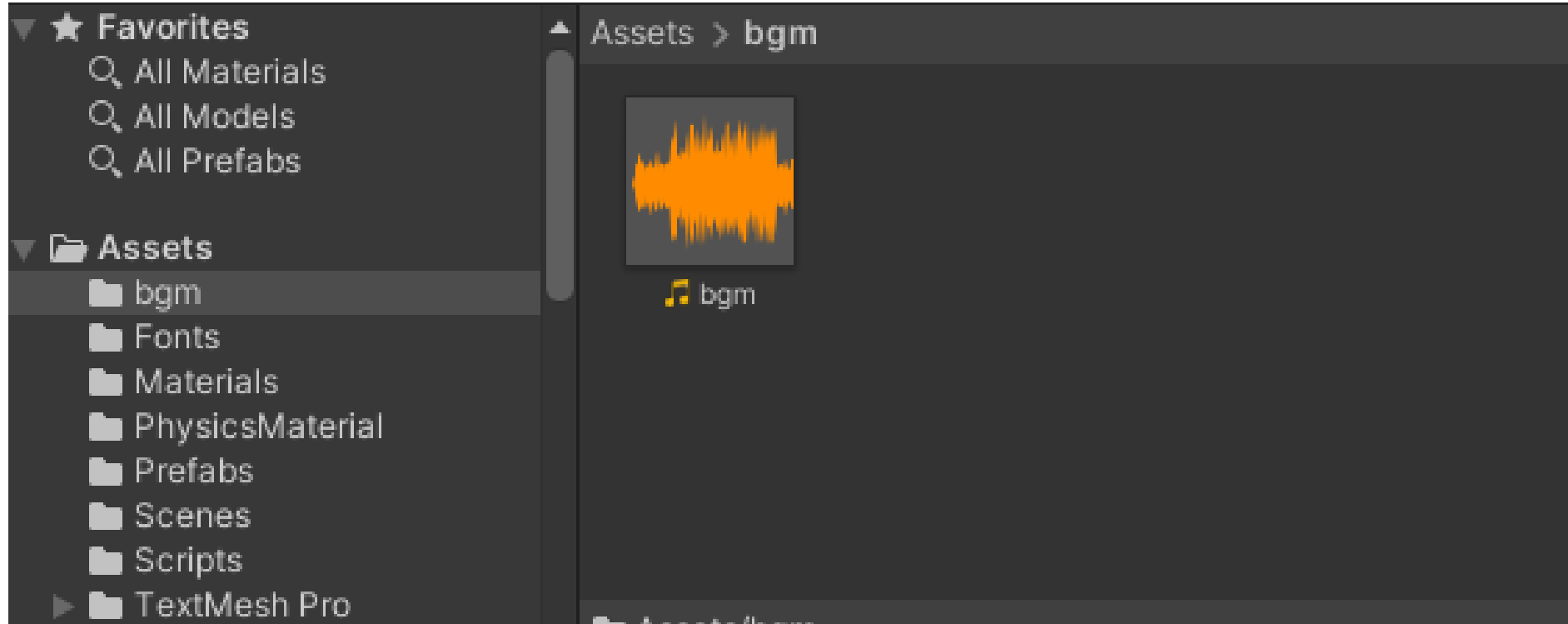
Unity 게임 기능 추가

게임 소개



- 캐릭터를 상하좌우, 점프로 조작해서 장애물을 피하면서 코인을 획득하는 게임

배경음악 추가하기



Assets - bgm 폴더에 파일 넣기
Audio Source Component
bgm 파일 넣기

장애물 반복해서 움직이기

Create Empty로 Waypoint1, 2 만들기

시작점과 끝점을 표시

```
0 references
public class WaypointFollower : MonoBehaviour
{
    3 references
    [SerializeField] GameObject[] waypoints;
    5 references
    int currentWaypointIndex = 0;
    1 reference
    [SerializeField] float speed = 1f;

    0 references
    void Update()
    {
        if (Vector3.Distance(transform.position, waypoints[currentWaypointIndex].transform.position) < .1f)
        {
            currentWaypointIndex++;
            if (currentWaypointIndex >= waypoints.Length)
            {
                currentWaypointIndex = 0;
            }
        }
        transform.position = Vector3.MoveTowards(transform.position,
            waypoints[currentWaypointIndex].transform.position, speed * Time.deltaTime);
    }
}
```

준비한 WaypointFollower Script Component

Waypoints에 Element1, 2로 Waypoint1, 2 Drag & Drop

장애물 닿으면 다시 시작하기

```
0 references
private void OnCollisionEnter(Collision collision)
{
    if (collision.gameObject.CompareTag("Enemy Body"))
    {
        GetComponent<MeshRenderer>().enabled = false;
        GetComponent<Rigidbody>().isKinematic = true;
        GetComponent<PlayerMovement>().enabled = false;
        Die();
    }
}

2 references
void Die()
{
    Invoke(nameof(ReloadLevel), 1.3f);
    dead = true;
}

1 reference
void ReloadLevel()
{
    SceneManager.LoadScene(SceneManager.GetActiveScene().name);
}
```

Player01 PlayerLife Script Component

점프로 장애물 파괴하기

Enemy - Head 만들고 각각 Enemy body, Enemy Head 추가
Head에 Inspector - Mash Renderer 체크 해제
Player에 준비한 PlayerLife Script Component

Tag Enemy Head Layer Default

Transform

Position

X -0.0006 Y 0.7 Z -

Rotation

X 0 Y 0 Z 0

Scale

X 0.821399 Y 0.597 Z 0

Cube (Mesh Filter)

Mesh

Cube

Mesh Renderer

Materials

Lighting

Cast Shadows

On

Receive Shadows

✓

Contribute Global Illumin.

Receive Global Illuminati

Light Probes

Probes

Light Probes

Blend Probes

Reflection Probes

Blend Probes

Anchor Override

None (Transform)

Additional Settings

Motion Vectors

Per Object Motion

Dynamic Occlusion

✓

Box Collider

Edit Collider

Is Trigger

Provides Contacts

Material

None (Physic Material)

Center

X 0 Y 0 Z 0

Size

X 1 Y 1 Z 1

Layer Overrides

Enemy (Material)

Shader

Standard

Edit..

움직이는 바닥이랑 Player 같이 움직이기

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

- references
public class StickyPlatform : MonoBehaviour
{
    - references
    private void OnCollisionEnter(Collision collision)
    {
        if (collision.gameObject.name == "Player")
        {
            collision.gameObject.transform.SetParent(transform);
        }
    }

    - references
    private void OnCollisionExit(Collision collision)
    {
        if (collision.gameObject.name == "Player")
        {
            collision.gameObject.transform.SetParent(null);
        }
    }
}
```

StickyPlatform Script Component

코인 회전 효과 넣기

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

0 references
public class Rotate : MonoBehaviour
{
    1 reference
    [SerializeField] float speedX;
    1 reference
    [SerializeField] float speedY;
    1 reference
    [SerializeField] float speedZ;

    0 references
    void Update()
    {
        transform.Rotate(360 * speedX * Time.deltaTime, 360 * speedY * Time.deltaTime, 360 * speedZ * Time.deltaTime);
    }
}
```

▼ **Mesh Renderer** ⓘ ⚙️ ⋮

▶ Materials 1

▼ Lighting

Cast Shadows On

Receive Shadows ☒

Contribute Global Illumin. ☐

Receive Global Illuminati Light Probes

▼ Probes

Light Probes Blend Probes

Reflection Probes Blend Probes

Anchor Override None (Transform) ⓘ

▼ Additional Settings

Motion Vectors Per Object Motion

Dynamic Occlusion ☒

▼ **Sphere Collider** ⓘ ⚙️ ⋮

Edit Collider

Is Trigger ☒

Provides Contacts ☐

Material None (Physic Material) ⓘ

Y 0 Z 0

Sphere로 코인 만들기

준비한 Roate Script Component

▼ **Rotate (Script)** ⓘ ⚙️ ⋮

Script Rotate ⓘ

Speed X 0

Speed Y 0.5

Speed Z 0

Coin (Material) ⓘ ⚙️ ⋮

Shader Standard Edit... ⋮

Add Component

스테이지 넘어가기

Cube(Finish) 만들기

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

public class Finish : MonoBehaviour
{
    private void OnTriggerEnter(Collider other)
    {
        if (other.gameObject.name == "Player")
        {
            SceneManager.LoadScene(SceneManager.GetActiveScene().buildIndex + 1);
        }
    }
}
```

Is Trigger 체크
준비한 Finish 스크립트 Component

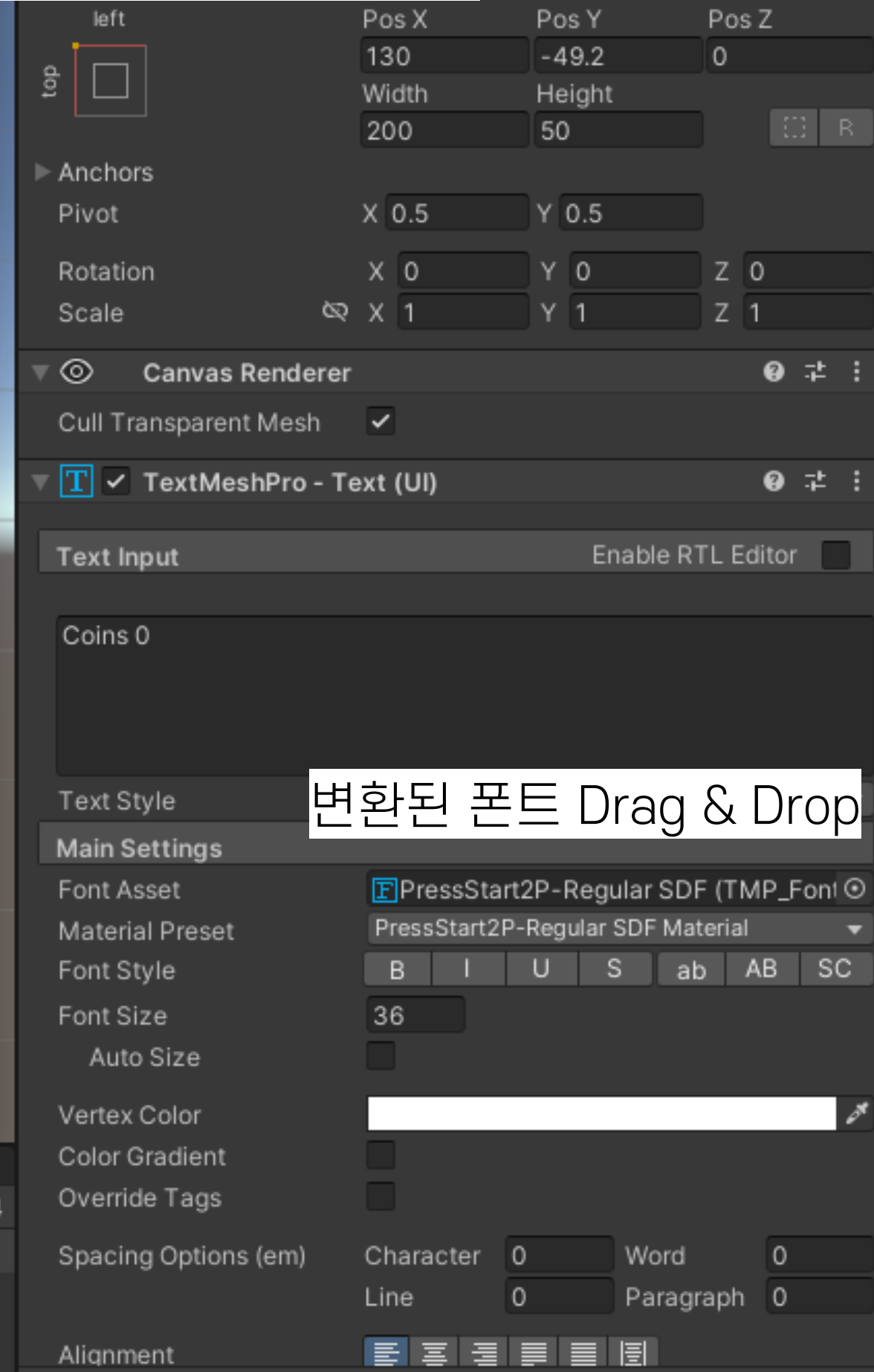
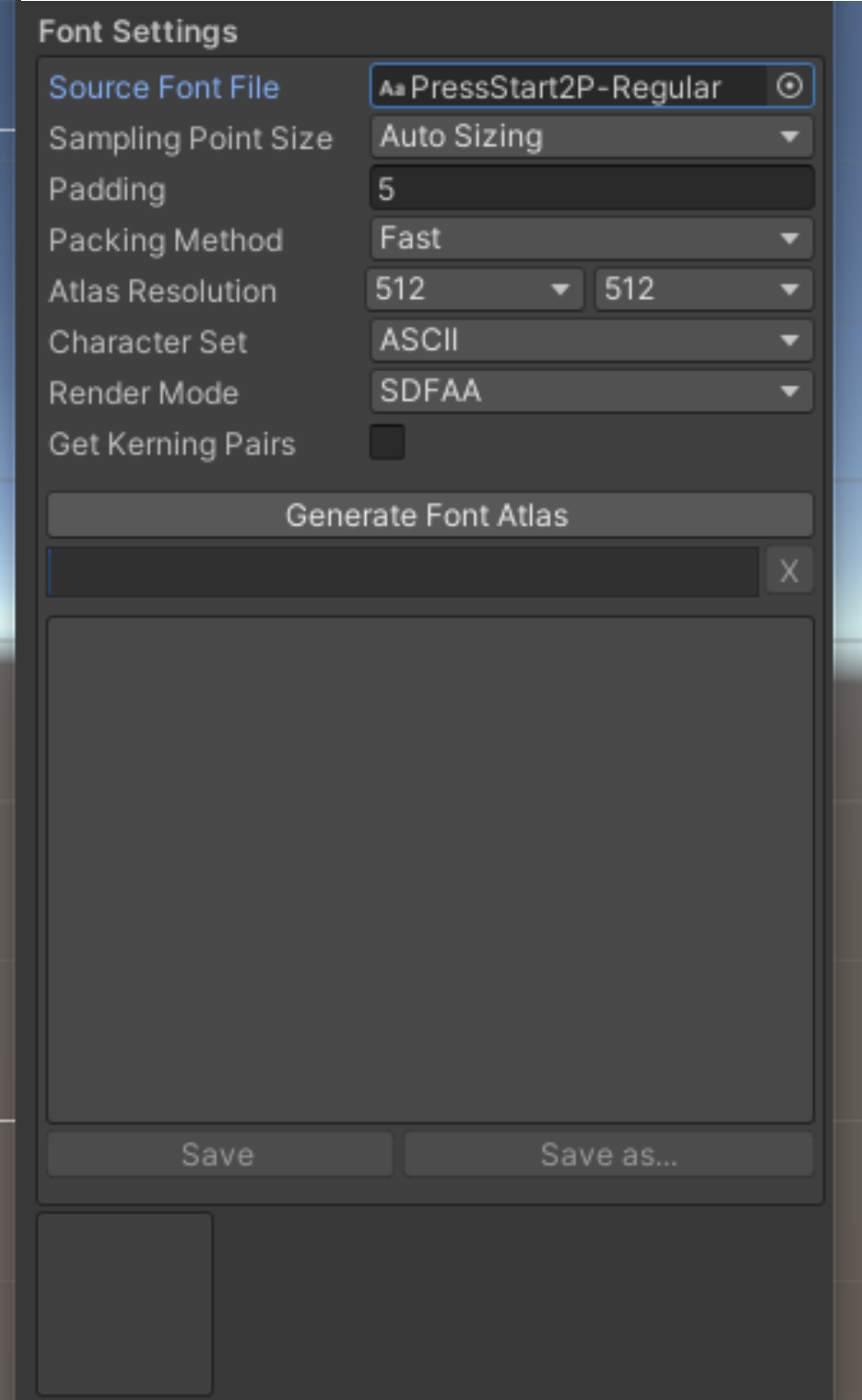
폰트 변경 하기

Window - TextMeshPro - Font Asset Creator

Source Font File에 다운로드 받은 폰트 *.ttf파일 선택



Google Fonts에서 원하는 폰트 다운로드



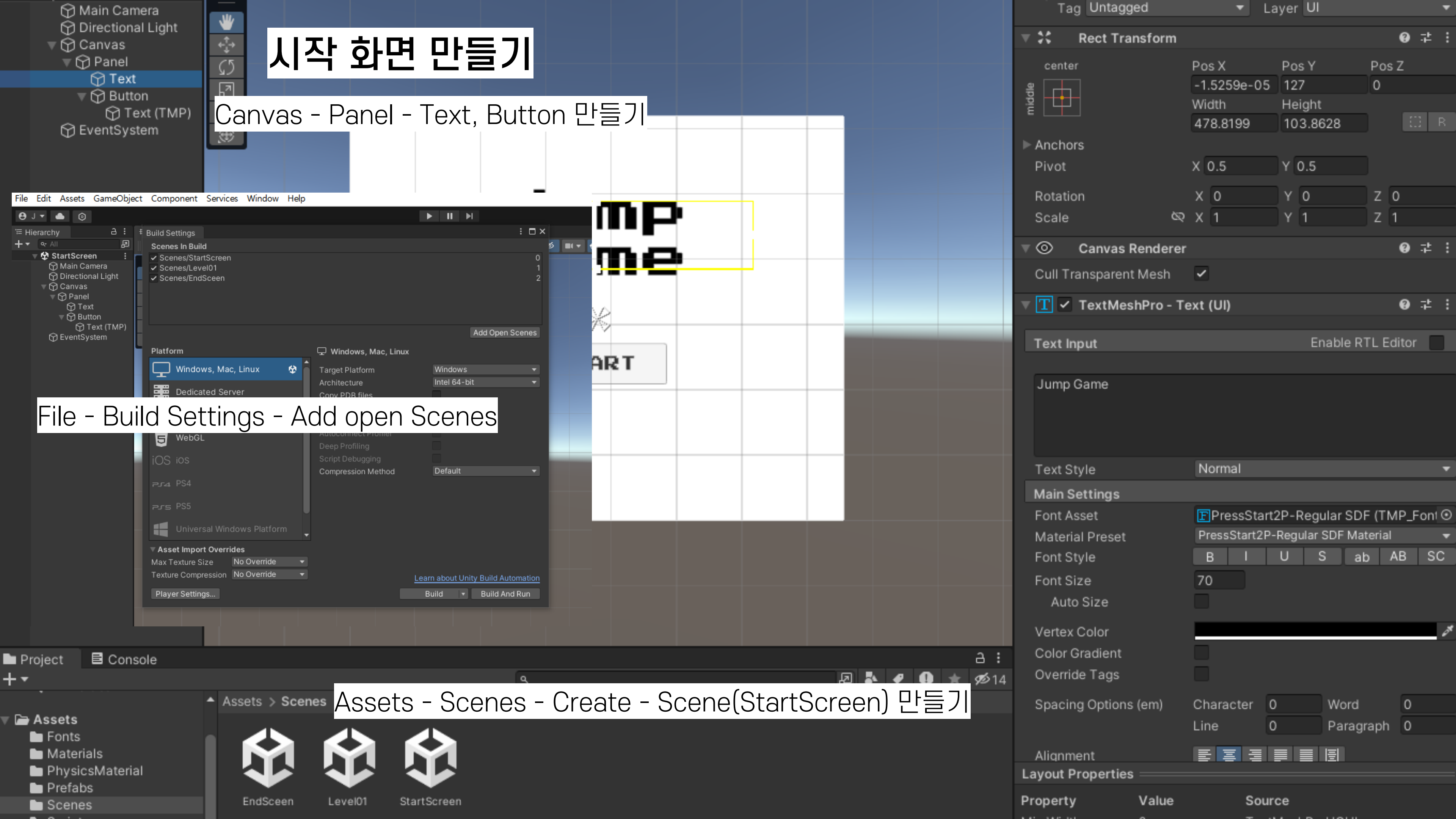
변환된 폰트 Drag & Drop

시작 화면 만들기

Canvas - Panel - Text, Button 만들기

File - Build Settings - Add open Scenes

Assets - Scenes - Create - Scene(StartScreen) 만들기



게임 종료 하기

GAME
COMPLETED

END

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

0 references
public class EndMenu : MonoBehaviour
{
    0 references
    public void QuitGame()
    {
        Application.Quit();
    }
}
```

Assets - Scenes - Create - Scene(EndScreen) 만들기

Button에 준비한 EndMenu Script Component



EndScreen



Level01



StartScreen

출처

—

<https://www.youtube.com/playlist?list=PLrnPJCHvNZuB5ATsJZLKX3AW4V9XaIV9b>

<https://itadventure.tistory.com/414>

예상 점수 : 깃허브 14 + 20(기능 10개 추가)

THANK
YOU EVERYONE
■ ■ ■ / \ ■ \ ■ /

감 사 합 니 다