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KJK CSUF CPSC 386 Unity Assignment 1 Documentation

This video game is a marble platformer that allows the user to play as a purple marble while avoiding plant obstacles. If the player hits any of the plant obstacles, then it is game over. If the player makes it past all of the levels and reaches all of the goals, then it is game over.

Game Object Composition:

The player script interacts with the player object component by allowing the player to move. The scene changer script interacts with the buttons to make them work and the five collision scripts make the rest of the collision work.

Scene Description:

Scene 1 is the title screen. It includes the button and title screen game objects. The button allows you to move on to the first level by clicking it.

Scene 2 is the first level. It includes the background, player, ground, plant enemy and goal game objects. The player can move and play the game.

Scene 3 is the second level. It includes the background, player, ground, plant enemy and goal game objects. The player can move and play the game.

Scene 4 is the third level. It includes the background, player, ground, plant enemy and goal game objects. The player can move and play the game.

Scene 5 is the fourth level. It includes the background, player, ground, plant enemy and goal game objects. The player can move and play the game.

Scene 6 is the game over screen. It includes the button and game over screen game objects. The button allows you to retry the first level by clicking it.

Scene 7 is the you win screen. It includes the button and you win screen game objects. The button allows you to go back to the title screen by clicking it.

Source Code:

sceneChanger:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class sceneChanger : MonoBehaviour

{

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

Player:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Player : MonoBehaviour

{

float playerX;

float playerY;

float Y\_Velocity = 7f;

Rigidbody2D playerVelocity;

bool touchingGround = false;

void Start() {

playerVelocity = GetComponent<Rigidbody2D>();

}

void OnCollisionEnter2D(Collision2D collision\_detection) {

if (collision\_detection.gameObject.CompareTag("Ground")) {

touchingGround = true;

}

}

void Update() {

//keyboard and jumping functions

playerX = Input.GetAxis("Horizontal");

playerY = Input.GetAxis("Vertical");

playerVelocity.velocity = new Vector2(playerX \* 5f, playerVelocity.velocity.y);

if(Input.GetKey("space") && touchingGround) {

playerVelocity.velocity = new Vector2(playerVelocity.velocity.x, Y\_Velocity);

touchingGround = false;

}

}

}

collision1:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class collision1 : MonoBehaviour

{

void OnCollisionEnter2D(Collision2D death\_collision) {

if (death\_collision.gameObject.CompareTag("Death")) {

LoadScene("Scene 6");

}

}

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

collision2:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class collision2 : MonoBehaviour

{

void OnCollisionEnter2D(Collision2D scene\_collision) {

if (scene\_collision.gameObject.CompareTag("Goal1")) {

LoadScene("Scene 3");

}

}

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

collision3:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class collision3 : MonoBehaviour

{

void OnCollisionEnter2D(Collision2D scene\_collision) {

if (scene\_collision.gameObject.CompareTag("Goal2")) {

LoadScene("Scene 4");

}

}

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

collision4:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class collision4 : MonoBehaviour

{

void OnCollisionEnter2D(Collision2D scene\_collision) {

if (scene\_collision.gameObject.CompareTag("Goal3")) {

LoadScene("Scene 5");

}

}

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

collision5:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class collision5 : MonoBehaviour

{

void OnCollisionEnter2D(Collision2D scene\_collision) {

if (scene\_collision.gameObject.CompareTag("Goal4")) {

LoadScene("Scene 7");

}

}

public void LoadScene(string scene) {

SceneManager.LoadScene(scene);

}

}

antiCameraMovementScript:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class antiCameraRotationScript : MonoBehaviour

{

[SerializeField] private float followspeed;

[SerializeField] private float X\_Offset;

[SerializeField] private float Y\_Offset;

[SerializeField] private Transform vcamera;

private void Update()

{

Vector3 newPosition = new Vector3(vcamera.position.x - X\_Offset, vcamera.position.y - Y\_Offset, -10f);

transform.position = Vector3.Slerp(transform.position, newPosition, followspeed \* Time.deltaTime);

}

}

pause:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

using UnityEngine.SceneManagement;

public class pause : MonoBehaviour

{

public GameObject PausePanel;

public void Pause() {

PausePanel.SetActive(true);

Time.timeScale = 0;

}

public void Continue() {

PausePanel.SetActive(false);

Time.timeScale = 1;

}

public void Quit() {

SceneManager.LoadScene("Scene 1");

}

}

References:

Some code was originally from Solo Game Dev and Rehope Games.

Modifications by Kevin Kiely.