Steven Smith

S1315451

Introduction to Games Programming

Main Menu Scene

GUI

GUIbuttons are used to load the main scene and option menu by using co-routine methods. On clicking the button the method is activated and you are taken to either the option scene or main scene depending on the button pressed. An audio clip is also attached to the action of clicking the button.Another GUI button takes the user out the application. This one is entitled “Quit” and calls Application.Quit() when clicked.The buttons are spaced by a variable called buttonYSpacing. This controls the distance the buttons are to eachother.A background texture has been used by using a Public Texture2D called backGroundTexture and is used by means of GUI.DrawTexture()

Audio

An audio source is attached to an ingame object and is a 2d sound that plays on a loop to provide music in the menu scene. It is activated by means of audio.Play()

Option Menu

GUI

The GUI button that is drawn uses a co-routine LoadMainMenu() to bring the user back to the main menu scene. A GUI.slider is used that controls the volume by means of having a float volume attached to it and passed into the gameDataScript so the volume is saved and used on all scenes. GUI.labels are used to tell the user information such as that the slider is for volume and where to type their name. A Texture2D is again used as a background image. A GUI.textfield is used to get the input of the users name and save it as a string entitled nameText where it is then saved as playerName in the GameData.

Audio

Audio is used on button clicks using audio.Play() Background music is also attached to a gameobject and plays in a loop to provide music

Persistent Data

A game object called “GameData” is created and a gmeDataScript script is attached to it. A method is called OnStart() to make sure the game object is not deleted on loading other scenes

Main Scene

GUI

A GUI.DrawTexture is used using a Texture2D to show the bullets in the clip. GUI.labels are used to display the crosshair, lives, score and ammo. The gameDataScript is used to store the score of the user by using .getcomponent. A check is made to make sure the gun is active before the crosshair is displayed.

Spawns

Various spawns are throughout the main scene. They are set up by using OnTriggerEnter() and checking if it is the user that has entered the collider. If so the script spawnScript is called and using two integers i and n determines how many targets are spawned from the target prefab. They are positioned using spawns and transform.position

Audio

Audio is used when the player moves by checking if the player is moving using the GetButton check. If the player is moving audio.Play starts and loops until the user stops moving. This check is made with a GetButtonUp check and else statement. You can select music at the start of the main scene by walking onto different game objects. A check is made to see if it is the player entering the collider of the game object and if so it stops the other audio and plays the new one on a loop to provide backing music for the scene. Audio clips are swapped and used using the audio.clip and audio.Play() commands. There is sound effects for destroying a target, jumping, shooting, collecting a pickup, making it to the end point and hitting a respawn trigger

Pickups

There are several pickups throughout the scene. These pickups are either life or ammo. The players life and ammo are set at the start under OnStart(). If the player triggers the collider on any of the pickups a check is made to see what was hit under the OnControllerColliderHit() and the pickup is added to the players amount of ammo/lives and the object is destroyed.

Additional Features

One large additional feature was added which is the addition of the life system and objects that when hit spawn the player back at the start using a transform.position and empty game object. Another scene had to be made for this which was the GameOver scene. This scene is loaded up after a check that the players life is less than 0 by using an if statement and a lives < 0 check.

Targets

A script called targetScript is run when a target is hit with a raycast. This is checked with an if statement. HitApplyForce() is called to apply a force to the hit target using rigidbody.AddForce health is taken off and a check is made to see if the targets health is equal to 0 using an if statement. If health==0 is true then the game object is destroyed and a GameObject called explosion is created using the Instantiate () statement.

Game Over Scene

GUI

A GUI.button is used to start a co-routine LoadMainMenu() to bring the player back to the main menu. A Texture2D is drawn to use as a background.

Audio

Audio is attached to the action of clicking and an audio clip on a loop is attache to a game object to create background music.

End Scene

GUI

A GUI.Button is drawn to take the user back to the main menu using the LoadMainMenu() co-routine. A Texture2D is drawn to use as a background for the scene. A GUI.Label is used to show the users name, score and a congratulatory message. The users name and the score is taken from the gameDataScript using the .getcomponent command.

Audio

An audio.Clip is played using audio.play when the user clicks a button. An audio.clip is also attached to a game object and is played on a loop to create background music for the scene.