**Assignment 1 Bibliography.**

Blackthornprod: “HOW TO MAKE A GREAT MAIN MENU IN UNITY – TUTORIAL”, Youtube tutorial, Published Dec 9, 2017.

Inspired the colour changing text when hovering over or clicking in-game buttons.

<https://www.youtube.com/watch?v=VXK1KMDAldo>

Brackeys: “START MENU in Unity”, Youtube tutorial, Published Nov 29, 2017.

Taught me how to use the disable and enable system to make the “Instruction” area of the menu in the same scene seamlessly. It also helped with the implementation of scene manager functions; however I used one that addressed scenes by names rather than number values.

<https://www.youtube.com/watch?v=zc8ac_qUXQY>

Omnirift: “Do After Time – Creating Delays in Unity | Unity Do Something After Time Tutorial”, Youtube Tutorial, Published Mar 12, 2018.

One of the many ways I looked to in order to add a waiting mechanic for enemy spawn and bullet destruction (Before adding in the invisible destruction box in order to simplify the code, and mostly shifting over to Invoke and InvokeRepeating later on to avoid bugs.)

<https://www.youtube.com/watch?v=ACDZ3W-stCE>

Unity Documentation: “SceneManager.LoadScene” Version 2018.3

Taught me how to use the scenemName path to load scenes rather than their Index values.

<https://docs.unity3d.com/ScriptReference/SceneManagement.SceneManager.LoadScene.html>

Unity Forums: “I created an UI button but click does not work.” Answered by Kiwasi - Jan 31, 2015

I didn’t know that I required an “Event System” to be in my hierarchy in order for these systems to work, however this taught me that I needed it. Apparently the comments also mention multiple event systems will also cause buttons to not work, which is good knowledge to have in the future.

<https://answers.unity.com/questions/889908/i-created-an-ui-button-but-click-does-not-work.html>

Unity Forums: “How teleport gameobject to specific location in c#?” Answered by BabilinApps – Oct 03, 2015

This transform function is a base for movement in my game. The player teleports their avatar up and down the invisible “rows” using this system. Rocks and enemies are both using the transform.translate function to move right and left respectively, which this question pointed me to.

<https://answers.unity.com/questions/1075924/how-teleport-gameobject-to-specific-location-in-c.html>

Unity Documentation: “Input.GetKeyDown” Version 2018.3

Taught me how to create player controls, which I used for player movement and fire system. I may have changed this to GetKey or GetKeyUp instead after iterating which gave the player the smoothest controls.

<https://docs.unity3d.com/ScriptReference/Input.GetKeyDown.html>

Unity Documentation: “Keycode” Version 2018.3

Helped me figure out how to link keys to the Input.GetKey system, allowing me to bind controls to keys.

<https://docs.unity3d.com/ScriptReference/KeyCode.html>

Unity Forums: “does finction start or awake run when the object or script is enabled mid game” Answered by Bunny83 - Jan 02, 2013.

I had an issue where the “Rocks” which at the time were still placeholder bullets, had an automated delete system. After 3 seconds, they would be disabled, but they would also be disabled after 3 seconds, thus if a bullet hit an enemy, and was re-fired, the 3 second timer would still be counting over, and the bullet would disable itself after a second or so. This helped me figure out the issue was unfixable in its current implementation. However I later removed it completely and replaced it with the deletion zone which was a far simpler solution than using a timer. However, this remained a useful piece of information I shall probably use in the future.

<https://answers.unity.com/questions/372752/does-finction-start-or-awake-run-when-the-object-o.html>

Unity Forums: “Spawn Object On Empty Object Location Different Each Time Game Starts” Answered by Hirenkacha – Dec 09, 2013.

This taught me how to use the Random.Range function that allowed me to set up the system for random enemy type selection and spawn selection. However, unlike the code they display where it does it once at the start of the game, mine uses it continuously under the InvokeRepeating function to continuously spawn different enemy types at different spawn locations.

<https://answers.unity.com/questions/592872/spawn-object-on-empty-object-location-different-ea.html>

Unity Forums: “Invoke fails: “Trying to Invoke method: InputCotroller.enableInput couldn’t be called.”” Answered by khan-amil - Nov 29, 2014.

I had the same error occurring in my own system, since I was trying to pass in the random enemy’s spawn and type into the invoke method, which proved imposable as Invoke wouldn’t allow that. I later moved the random range system into spawnEnemy, which was the function being invoked.

<https://answers.unity.com/questions/843295/invoke-fails-trying-to-invoke-method-inputcontroll.html>

Unity Forums: “How to teleport a specific object to an empty?” Answered by UltraSage – Apr 23, 2016.

I used the saving of the positions of existing empties in my scene to determine where enemies were meant to spawn once the function spawnEnemy was called. Each of these empties was in a row in accordance with the player. This answer gave me the general structure I used to make the enemies spawn in the correct location (As before they were accidentally spawning where their assets used to exist.)

<https://answers.unity.com/questions/1175695/how-to-teleport-a-specific-object-to-an-empty.html>

Unity Forums: “Instantiate an Object to a specific position?” Answered by henry96 – Nov 22, 2011.

I was having an issue instantiating the enemies and I simply needed to add in the “transform.rotation” which this answer told me, fixing my issue.

<https://answers.unity.com/questions/188210/instantiate-an-object-to-a-specific-position.html>

Unity Forums: “Call function every x seconds?” Answered by fafase – Apr 25, 2013.

This is what first told me the existence of the Invoke and Invoke Repeating system. Without finding this answer, I might have still been trying to use WaitForSeconds, which caused its own giant set of issues.

<https://answers.unity.com/questions/444912/call-function-every-x-seconds.html>

Unity Documentation: “MonoBehavior.InvokeRepeating”

Taught me how to use the Invoke and Invoke Repeating system for my enemy spawn system, rather than using WaitForSeconds in Update.

<https://docs.unity3d.com/ScriptReference/MonoBehaviour.InvokeRepeating.html>

Unity Documentation: “MonoBehaviour.OnTriggerEnter2D(Collider2D)”

I had to change colliders into triggers since enemies would constantly collide if one was slower than the other, causing them to fly off in unpredictable directions, and bullets would do the same. By making them triggers, they no longer collided and thus simply would overtake one another.

<https://docs.unity3d.com/ScriptReference/MonoBehaviour.OnTriggerEnter2D.html>

Unity Forums: “How to check if a GameObject is active in an if statement” Answered by Owen Burk – Jan 15, 2014.

This was in an attempt to fix the bullet de-spawn error I was having. My idea was to, if the bullet was deactivated before 3 seconds had passed, the bullet wouldn’t deactivate after 3 seconds. However, this caused issues to long to explain and was replaced by the disable box.

<https://answers.unity.com/questions/617081/how-to-check-if-a-gameobject-is-active-in-an-if-st.html>

Unity Documentation: “WaitForSecondsRealtime” Version 2018.3

Another way I tried to set up the 3 second timer for the bullet disable system, however still lead to problems when bullets were disabled by something other than this function.

<https://docs.unity3d.com/ScriptReference/WaitForSecondsRealtime.html>

Unity Forums: “C# - Disabled Script Still Runs!” Answered by Polymo – Jan 02, 2016.

I remember reading this answer, and having the sudden idea to simply scrap the code that was causing me the bullet problem and replacing it with the disable zone. I did try the suggested method first such as using isEnabled, however that didn’t seem to fix the issue I had.

<https://answers.unity.com/questions/1120500/c-disabled-script-still-runs.html>

Unity Forums: “Prevent rigidbody from colliding” Answered by IgorAherne – Jul 20, 2013.

This was when I was searching for a fix to enemies pushing eachother out the way in unpredictable ways and causing issues with bullets doing the same. I later researched trigger colliders instead, thanks to this answer.

<https://answers.unity.com/questions/496846/prevent-rigidbody-from-colliding.html>

Unity Documentation: “Transform.Translate” Version 2018.3

Taught me how to use transform.translate to move enemies and bullets without using a force system which is what I first tried to use, but ended up with collision issues.

<https://docs.unity3d.com/ScriptReference/Transform.Translate.html>

Unity Forums: “background music” Answered by Bigblob – Jan 28, 2012.

I thought my game needed something extra, and adding music when the player is playing seemed like a natural progression, so I looked up how to add in a music track and this told me I just put the file on the scene camera.

<https://answers.unity.com/questions/211167/background-music.html>

Tchaikovsky – “Walktz of the Flowers” (Classical Music from 1892)

<https://www.youtube.com/watch?v=QxHkLdQy5f0>

Unity Tutorials: “Counting points and displaying the score”

Used this tutorial and the logic it help me add score for defeating enemies.

<https://unity3d.com/learn/tutorials/projects/space-shooter-tutorial/counting-points-and-displaying-score>

Unity Tutorials: “Displaying the Score and Text”

The step after making score coded under the hood of the game, I needed to display it on the player’s screen so they know how well they’re currently doing. This is where this tutorial helped me develop the system.

<https://unity3d.com/learn/tutorials/projects/roll-ball-tutorial/displaying-score-and-text>

Unity Forums: “Referencing non static variables from another script? C#” Answered by Statement – Jan 14, 2011.

<https://answers.unity.com/questions/42843/referencing-non-static-variables-from-another-scri.html>

Unity Forums “how to acess Static variable in other scripts without extended functions?”

<https://answers.unity.com/questions/419145/how-to-acess-static-variable-in-other-scripts-with.html>

I was trying to get the score to display on the game over screen; the two tutorials about static variables in other scripts were me trying to access the score across scenes.

All websites were the same as my first viewing on the 10/01/2019.