Process Work – Assignment 5: 2D Game Engine Project Mod

Game Modifications Overview

Base Game: *Asteroids*
 Modifications Implemented:

- Added a **start screen** with "Enter" to begin
- Implemented a **pause menu** toggled with "Escape"
- Integrated **background music** and **pewpew shooting sounds**
- Attempted to add a **death sound** (currently buggy triggers inconsistently)

Game Design Planning

Core Interactions

- Bullet hits asteroid → Asteroid is destroyed
- Asteroid hits player → Player dies
- Player presses **Enter** → Game starts
- Player presses **Escape** → Game pauses
- Player presses **Spacebar** → Ship accelerates
- Player uses ← / → → Ship rotates

Troubleshooting Notes

Pause Menu

- **Issue:** Pause menu wasn't updating correctly
- **Fix:** Found a capitalization typo in a variable name

- **Lesson:** Unity is case-sensitive , variable/method names must match exactly

Background Music

- **Issue:** Script threw errors due to "Audio" being capitalized
- **Fix:** Changed all references to lowercase audio
- **Lesson:** Component names must match Unity's exact syntax

Death Sound

- **Issue:** Sound effect occasionally plays at random, not just on player death
- **Investigating:**
    - Check if multiple triggers are firing the sound
    - Ensure it's tied specifically to the player death condition
    - Add debug logs to confirm whether the death state is reached

Start Screen

- **Issue:** Game does not freeze while on the start screen
- **Next Steps:**
    - Add Time.timeScale = 0 when loading the start screen
    - Check if other scripts override the pause state
    - Inspect UI settings — is input still affecting gameplay?

Sound Integration Notes

PewPew Sound

- **Status:** Working
- Added a basic shooting sound triggered via spacebar input
- Connected with AudioSource component

Background Sound

- **Issue:** Error from using Audio instead of audio
- **Fix:** Corrected all instances to lowercase

- **Status:** Playing correctly in background

Death Sound

- **Issue:** Plays at incorrect times or inconsistently
- **Next Steps:** Debug logic tied to health/death state