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CITA 212

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### **W12 Lab: Laser Defender Part 3**

Game Link: <https://sharemygame.com/@Valle/valle-max-laserdefender>

GitHub Link: <https://github.com/Valle94/LaserDefender>

1. Implemented all features in the video tutorial series.
  - a. **Screen Shake:** Added screen shake using a script that recognizes when the player is hit and moves the camera randomly to points with a small circle creating a shaking effect.
  - b. **Scrolling Background:** I implemented the scrolling background as shown in the video but decided to keep the version I had before this week. The reason is that in the video version, once the sprites are chosen I can't seem to modify their appearance within the inspector, whereas with the way I had it using a RawImage lets you adjust the image, in particular the opacity right in the inspector.
  - c. **Sound Effects:** Added sound effects for player shooting and lasers hitting.
  - d. **Music:** Added music that starts on the main menu and persists throughout scene transitions.
  - e. **Score and Game UI:** Implemented a simple scorekeeper and a bunch of UI canvas elements to track player health and score.
  - f. **Multiple Scenes and transitions:** Added a main menu and game over scene, as well as a scene manager that transitions between them using UI buttons.

2. **Creativity:** I particularly add any creative elements for this one, but I did spend my time completing the rest of the video series and fixing related bugs. The use of singleton patterns helped to solve multiple issues relating to globally persisting instances, specifically the AudioPlayer, which handles playing background music across scenes, and the Scorekeeper, which is required for showing the final score on the game over screen as well as the game UI.
3. **Challenges:** The biggest challenge and one I still haven't technically solved is the publishing to Unity Play. The conclusion that I've come to is that for whatever reason, their website simply doesn't support non-standard aspect ratios, which is surprising considering they're the company that makes the software. Using the method recommended in their build video, I was able to publish to ShareMyGame and it works just fine.
4. **Screenshots:** Unfortunately, you can't really see the screen shake in a still image.

