Project summary

The custom timer project was designed to address the need for a versatile and user-friendly timer solution. The system consisted of three main blocks: the Arduino UNO microcontroller, the seven-segment display, and the speaker. The Arduino UNO served as the primary control unit, providing power and transmitting signals to the circuit. The seven-segment display was responsible for visual output, while the speaker emitted a sound when the timer reached zero.

However, despite the project's requirements, the design of the printed circuit board (PCB) was not completed due to a partner dropping out of the class. Consequently, I took on the additional challenge of completing this task, considering it to be the most demanding aspect of the project.

One significant challenge encountered during the development process was controlling the brightness of the display. Initially, I inadvertently adjusted the refresh rate instead of the brightness level. To address this, after researching, I found that I could use (PWM) mode to enable precise control over the display's brightness.

Throughout the project, I demonstrated adaptability and perseverance in overcoming obstacles. Despite the incomplete PCB design and the brightness control issue, valuable lessons were learned in project management, problem-solving, and conducting thorough research. These experiences have reinforced the importance of effective collaboration, contingency planning, and attention to detail in future endeavors.

Lastly, I have been working alone, so I did not care about the time line.