LED Project- Morse Code Generator

I originally got inspired by this idea after seeing an extension task in the Arduino booklet, of which I found to peak my interest. Afterword’s, I started looking into various Arduino projects that included LEDs that correspond with Morse code in order to gain a general understanding on how to produce the basic module.

Once I understood what was required to create the module, I went about sketching down ideas on how to extend the module in a logical and complex way. One option was to include batteries and a lightbulb, but I figured that it would be too far out of scope for me to do. My next option, which I then decided upon, was to include multiple lights and a buzzer that would correspond with the light’s signals. Once I had that idea planned out, I first needed to test the basic module and use some code I repurposed from the internet that includes the Morse code alphabet. I assigned each of the lights to blink whenever the corresponding Morse code letter or symbol appeared, for example, the green light would blink for every space between words and letters, the red light would blink for every dot letter or symbol, and the blue light would blink for every dash letter or symbol. This is more to show a bit of aesthetic to the project rather than functionality, as this could be easily be done with only one light.

I found that the most difficult part was understanding how the Morse code alphabet worked, as well as distributing a personalized message. Furthermore, I found it hard to sync up the buzzer with the corresponding lights as the original code I downloaded was designed for only one light.