Task 2.1P Particle Programming – First Name Blinky

# Student ID: 219011171

# Name: Peter Stacey

## Q1: Describe the steps required to modify the code to blink your last name instead?

The steps to modify the code were:

1. Determine the morse code representation of each letter:
   1. P ( · – – · )
   2. E ( · )
   3. T ( – )
   4. E ( · )
   5. R ( · – · )
2. Define the unit of time:
   1. Although Morse code has two common word speeds of 50 and 60 words (sound units) per minute, I chose a duration of 100 ms as the base time unit
   2. This is slower than morse, but more useful for demonstrating on a flashing LED
3. Create a morse.h file containing:
   1. #define for the different times units
   2. Functions for the dot, dash and pauses
   3. Function to combine the dot, dash and pauses into the letters of my name
4. Addition of a function in the BlankName.ino file to blink my name
5. Update of the loop() function to blink my name repeatedly

## Q2: Discuss on the effectiveness of your modifications. Reflect on how you should modify your code to be reusable and modular to adapt quickly to changes in requirements.

I think the approach of defining functions for the dot and dash and combining those into letters, is a reusable approach. Additionally, by defining the base time unit and then using that to determine the time intervals, the timing can be easily changed by a single change in my code.

With the code for the morse code separated into morse.h and morse.cpp files, these could be converted into a library that could be imported into other projects, or the files copied easily into other projects.

In this way, the code is already modular, however I’m also aware that single board controllers and small PIDs are resource limited, so code ideally needs to consider available memory and not just be developed as though it will run on a desktop computer.

## Q3: Create a repository named BlinkName on Github. Upload your code to the repository. Include the link to your repository here.

## Q4: Take a five second video of your Photon board with the LED blinking your first name and upload it to youtube. Include the link here.