Task 2.1P Particle Programming – First Name Blinky

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

The steps to modify the code written that blinks my first name, would be:

1. Determine the morse code representation of each letter in my last name (see source code linked in Q3 for implementation):
    a. S (· · ·)
    b. T (−)
    c. A (· −)
    d. C (− · − ·)
    e. E (·)
    f. Y (− · − −)
2. Add additional function definition to morse.h containing a definition to blink each letter
3. Add implementations of the functions into morse.cpp combining the existing dot, dash and pause functions into the letters of my last name
4. Addition of a function in the BlankName.ino file to blink my last name
5. Update of the loop() function to blink my last name repeatedly, instead of my first name.

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.

https://github.com/pscompsci/SIT210_Embedded_Programming/tree/main/Task_2_1P/BlinkName

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.

https://www.youtube.com/watch?v=Iw8TbtHcjCE

The version in the linked video blinks my full name, not just my first name.