GPIO Interrupt Review

This artifact was from my CS 330 course. The intended project was a thermostat using a Ti external board that can save temperature values and store them in a cloud server. Also, the ability to adjust the temperature by using buttons located on the board. The lcd board also displays the current temperature and if a button is pressed on the board a user can raise or lower the desired room temperature. This project was essentially a culmination of all my coding experience learned up until this point. Coding for embedded systems was a unique dilemma that required lots of work and studying to better understand its nuisances. I have gone through and re organized my code sections as well as added comments in sections to make it clearer what is happening at each step. My initial attempt at this project my code was functional however it lacked the commenting at certain stages. This was mostly because I had little understanding of what was happening at each individual step in the code. I was pulling a lot of code examples from other embedded system code and tried to follow the overall structure. Looking back now I have a better understanding of concepts such at duties and interrupts that I can include clear and concise comments for each section within the code.

The sensor on the board is running and collecting data on temperature, this data is then run through an algorithm to convert it to degrees Celsius. Every 200ms the buttons on the board are being checked if interrupted by checking for flags then the temperature would raise or lower according to how long the button is pressed in the cycle. Once the temperature is greater then then the set point the lcd screen turns off to save energy.