TO: Dr. Winikus
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Subject: *Progress report memo 1 of Project 2.*
Date: *10/14/2021*

PURPOSE:
This memo will explain the progress made, the knowledge and key information needed for the project, concerns, and the plan for the next two weeks.

SUMMARY:
In this project, an alarm/timer system is to be implemented using the Nucleo embedded platform. Knowledges and information of interrupt, GPIO, polling, bitwise masking, 4x4 matrix keypad and LCD are needed to complete this project.

UPDATE ON PROGRESS:
The keypad has been set up properly by using polling and interrupt, each key can be sensed by the Nucleo. The 1602 LCD has also been set up properly by using the provided CSE321 LCD library files. Now only the time inputting part is implemented, user can press D on the keypad to start inputting time and press digit keys to enter time.

CONCERNS:
Sometimes the program goes into dead lock.
Sometimes the program cannot sense the input from the keypad.
Sometimes it takes took long to sense the input from the keypad.
How to make the timer count down?

RECOMMENDATION:
The program goes into dead lock might be because the there are some bugs in one of the while loops, need to check which while loop(s) and what cause the dead lock.
The program cannot sense the input form the keypad might be because spin_polling() is not running in the while loop, which mean the keypad cannot form a complete circuit, need to check which while loop(s). Or possibly the interrupt is not working properly.
The latency is high, this might be because the polling.
These problems will be solved during next week.
Count down has something to do with SysTick, Dr. Winikus will take about that more in future lectures.
Other functionalities will be implemented after relevant lectures.