

# Day 13: Finalize Device

Thursday, August 03, 2023 4:05 AM

## Goals:

- Before lab, finish most of the initial software writing
  - W: Finish DAQ (Done!)
  - F: Finish App Backend (Mostly Done, still need to do local notifs)
  - Sun: Finish App Front End and integration testing w/ Eunice (Mostly done, still working on fixing SD card).
- Perform code review in/after lab with Group 4

## Code Review Meeting Minutes

- How to determine thresholds: we did set manually
  - Potentially have a variable threshold
  - Right now if bpm too low or high just discard reading but may change to variable reading on threshold
- Rtc library has time minutes, days etc
- Does output the right file name
- Void set file name is helper, okay as long as header is different, and it does compile so it's okay!
- Suggested encryption, but we didn't do any- we focused on front end security, low level, the master lock pin in the front

## DAQ

- Transfer file isnt open, only open when in the process of moving data
  - Should only be open when doing a transfer
  - When reaching the end it will close
  - If transfer isnt already happening, it will go to the next one
- To do HRV, pack data using point
- Still need to push fix to GitHub
- Suggested that it only transfers a single thing and then closes, which isn't what we want?
- Does a single function call this only do one record
  - Called in the main loop
- "Record" is a buffer to hold, when store in file its going to be 18 characters
  - Should read those 18 from transfer file
- Sscanf should parse linef format
- Issue from our team: when call open, should create file but doesnt create
  - Maybe its not flushing it? Possibly stuck in buffer
  - Suggested to explicitly call flush
  - Lines 193, made sure to write file but it doesn't
  - When you write to standard file name, should write automatically to route director
  - Maybe it is a pathing issue?
  - Prints false right now, which is incorrect
  - Suggested to call flush
  - Why is line 184 not being syntax highlight? Possibly because its part of the library coded
  - Suggested to try globally scoping
  - Suggested to find some way to print value of line 184 to make sure its coming out right
- Around 227-231 getting sum of differences to be evaluated later
- Suggested Local name wouldn't make it appear on BLE, suggested instead use of setName(), later retracted that local name works so its ok
- Line 307(?) suggested to get rid of, but the code works so if it aint broke, keep

- 331 why a function call, bc once done with instrumentation you want to reset, might as well call here
- Why +1 in line 373, bc Number of intervals divided by number of minutes
- Looks good other than that one problem for calling open and creating file  
Under qalbi, src, hooks
- Datahook should handle BLE connections
- Suggest to Use let instead of var? Line 146
- Looks good otherwise!

Action Items:

Fix the SD card reading issue (Siem) Due: 8/8/2023 by noon

Implement notifications (Siem) Due: 8/8/2023 by 3pm

Test integration with arduino and app (Siem and Eunice) Due 8/8/2023 by 3pm

Implement variable thresholds, time permitting (Siem) Due by 8/9/2023 by presentation time

Accomplishments:

- All Code is finalized!
- Integration was successful between app and arduino
- All code saved and exported in preparation for the DHF.

# Day 14: Finalize Device

Tuesday, August 8, 2023 1:20 AM

Last Day!!

Goals:

- Help Finalize the presentation
- Finalize DHF (Code portions)
- Practice presentation with team members
- Get some demo data and footage to use (please don't break lol)
- Casing for the device? (w/ Eunice in TIW).