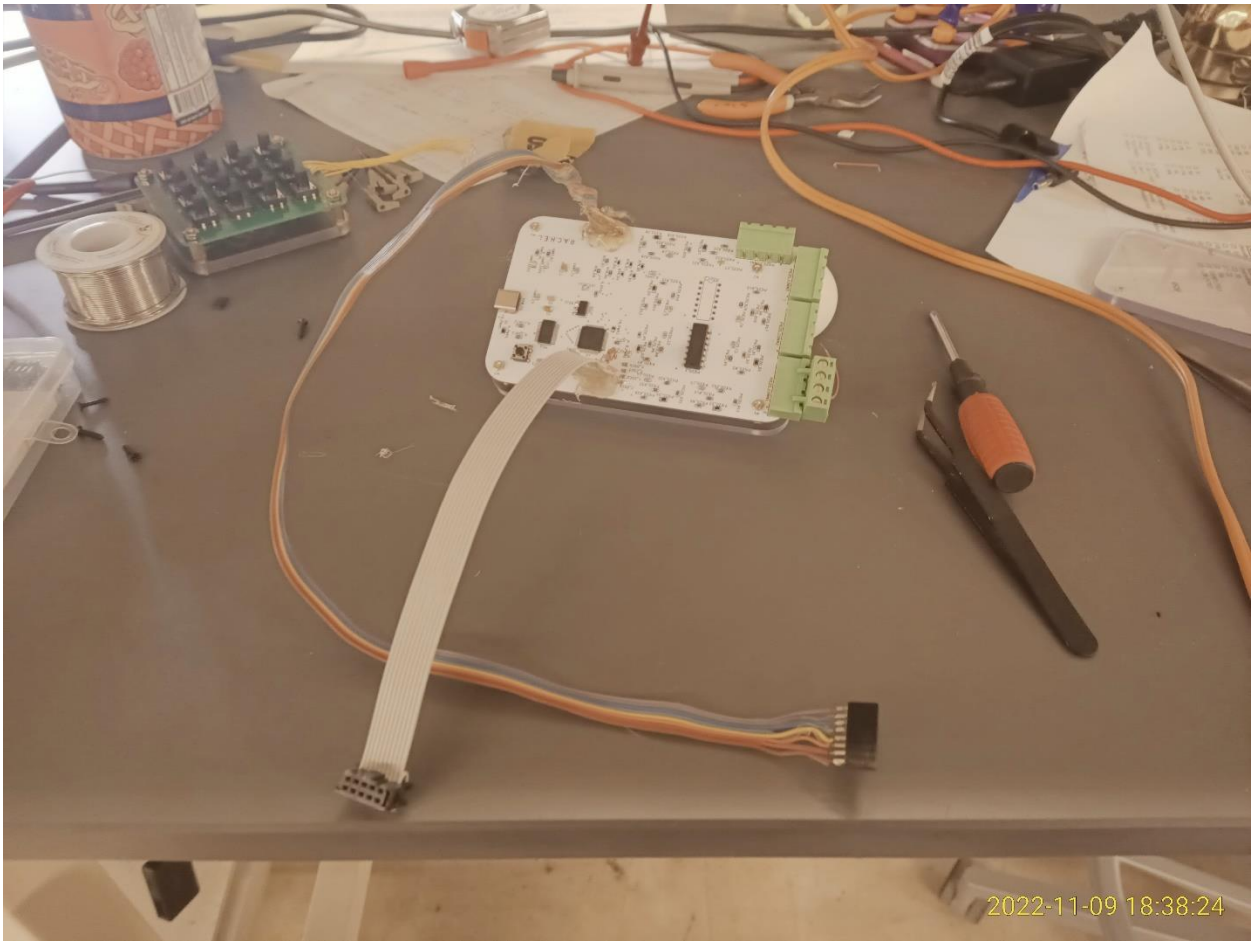
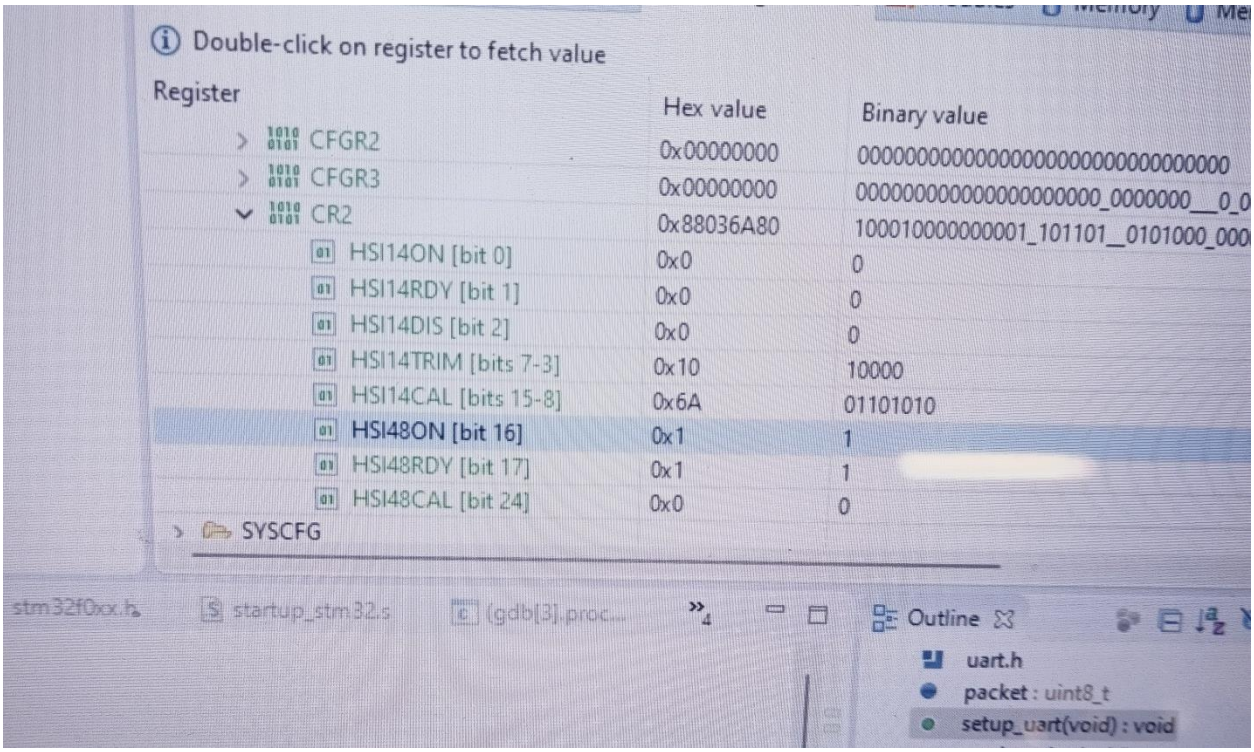
Week 12:

Hours: 6

This week was spent finalizing the assembly of our PCB, and working out the bugs which were preventing the team from demonstrating our preliminary PSSCs. We demonstrated four of our preliminary PSSCs on Friday afternoon.

The first thing I did this week was replace the old connectors we had installed on our PCB with pigtail wires soldered directly to the board. The connectors we had used were already starting to fail and wobble around, so I replaced them with two ribbon cables with appropriate connectors for our keypad and programmer. These cables were reinforced with a generous amount of hot glue to prevent them from being snapped or yanked out as easily.






The next thing I did was try to figure out why the microcontroller was using the wrong clock internally. This was causing UART messaged to come at about 1/6 of the speed that they should. Shown above is a photo of the debugger view, looking at somed flags which control the microcontroller's internal clock. The issue was not in this register, and we haven't actually found it yet, but in the interim we have changed the UART's baud rate register to run 6 times faster, making up for the slower clock.