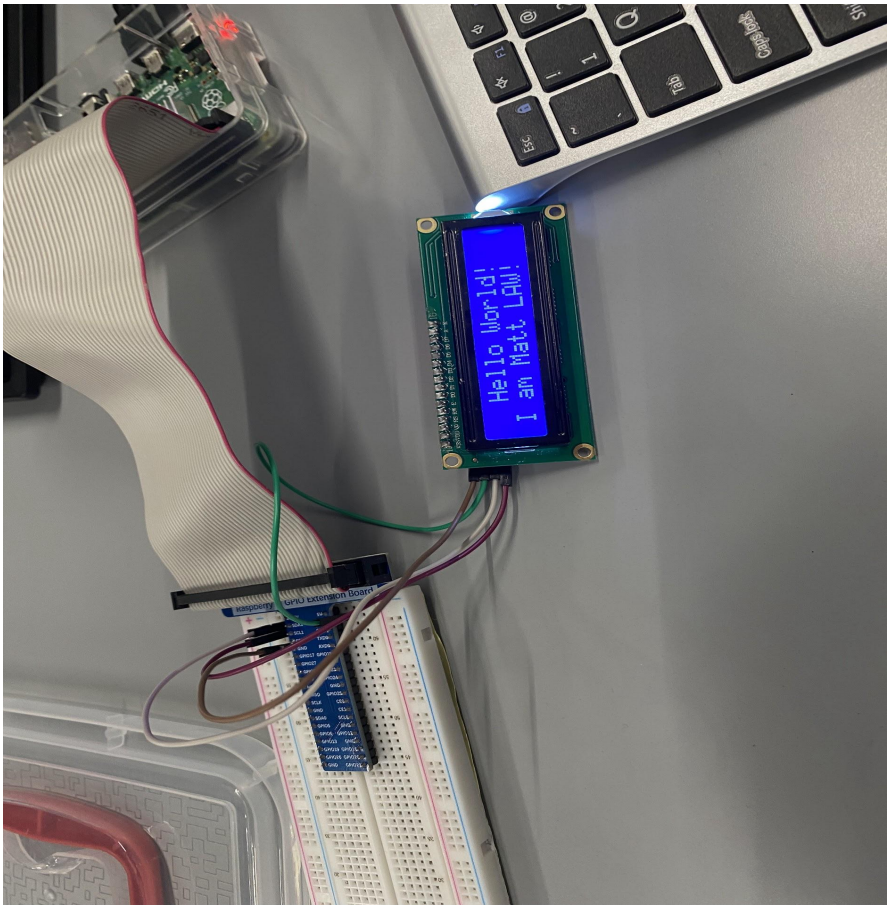
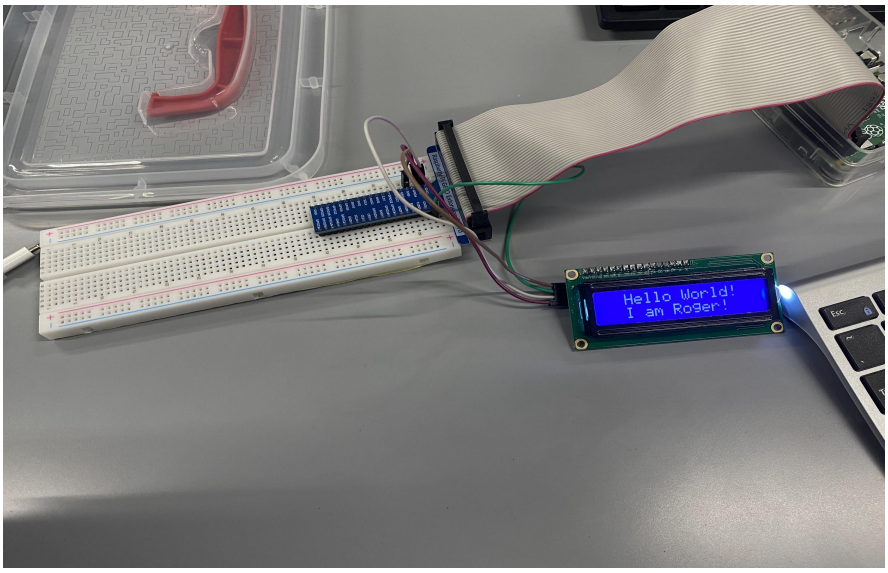
Lab #4 - Interface with LCD

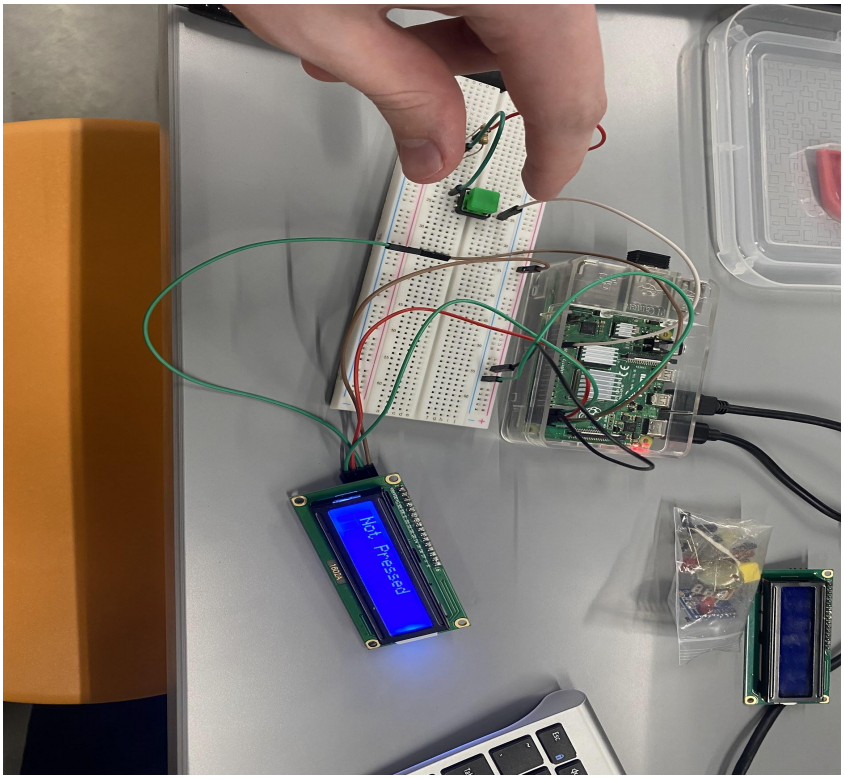
Roger Bennett & Matt Law

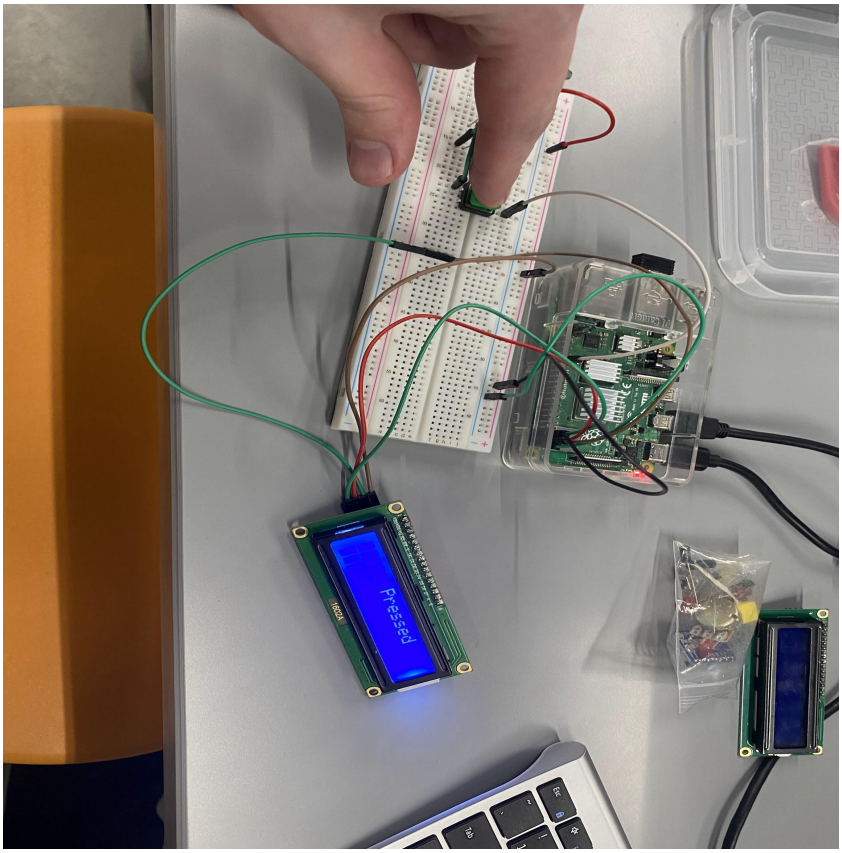
1. Exercise 1

1.1. 

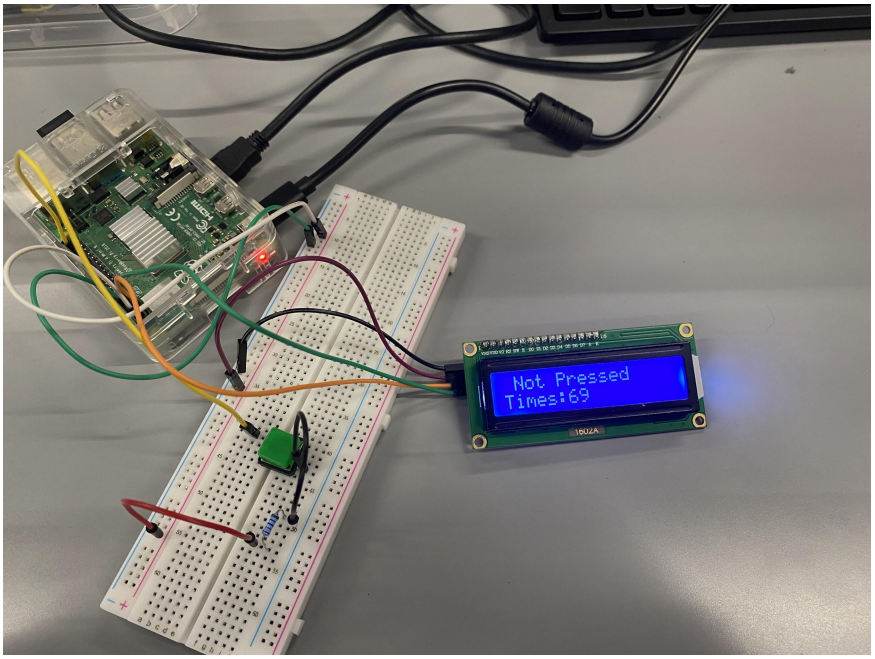


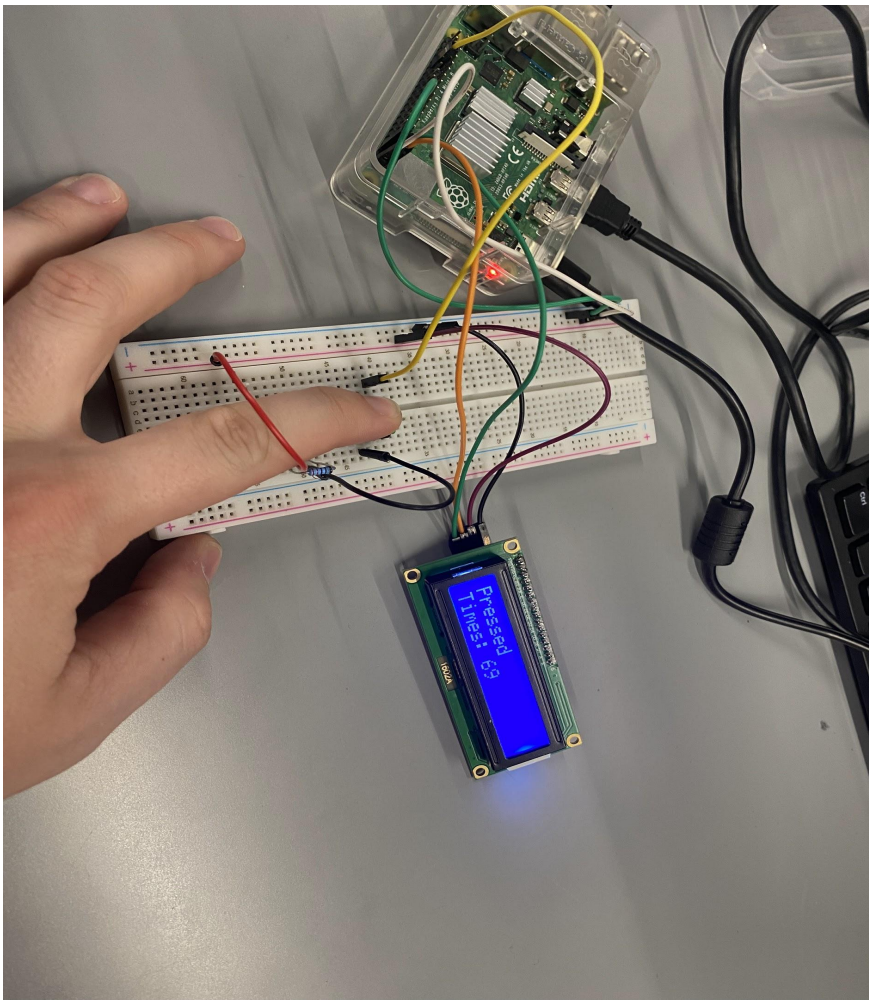
2. Exercise 2 &3

2.1. 



3. Exercise 4 & 5

3.1. 



4. Supplemental Questions

4.1. In this lab we learned how to interface with an LCD connected to the Raspberry Pi as well as we learned the differences between using a Poll - based method and using interrupts in real world applications.

4.2. The LCD module has an integrated I2C interface and the Raspberry Pi can talk to the LCD through the I2C module on the Raspberry Pi.

4.3. When you are using a polling - based method it can miss some actions because it will stop one action to check in on another to see if there was a change where with an Interrupt method it will do another action and it will step away when it detects a change.

4.4. When we executed exercise 4 we got close to the actual number of presses, but we did not get it exact. The reason for this is because the faster we pressed the more the counter missed. We would needed a software debounce in order to force a slower press and only count the real presses.