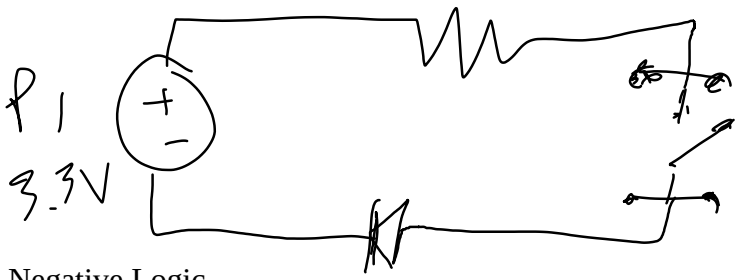
Pre-Lab Definition

1. for loop- is a control flow statement for specifying iteration, which allows code to be executed repeatedly
2. while loop- a control flow statement that allows code to be executed repeatedly based on a given Boolean condition
3. GPIO- General Purpose Input/output, a type of pin found on an integrated circuit that does not have a specific function
4. ftp- File Transfer Protocol, a standard network protocol used for the transfer of computer files between a client and server on a computer network
5. positive logic- If the signal that activates the circuit (the 1 state) has a voltagelevel that is more positive than the 0 state
6. negative logic- If the signal that activates the circuit (the 1 state) has a voltage level that is more negative than the 0 state

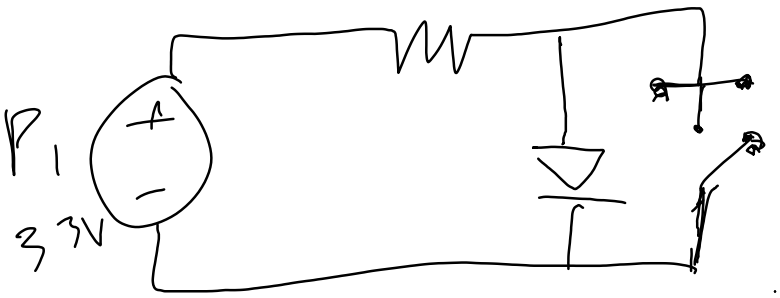
Circuit Schematics

Blink and On

Positive Logic

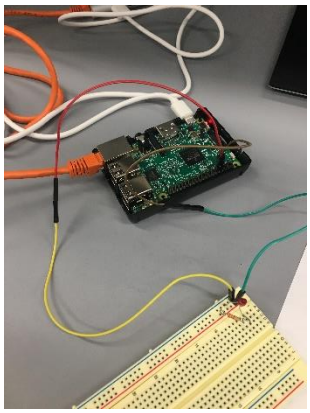


Negative Logic

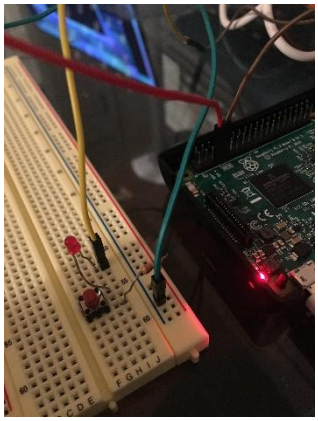


Breadboard Pictures

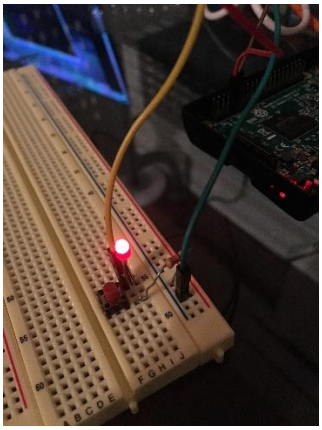
Led Blink and On



Positive Logic



Negative Logic



Conclusion

The purpose of the lab was to introduce us to the Computer Engineering of ECE. Using a Raspberry Pi, we could learn about the wonders of coding and how the pi could help power circuits onto a breadboard. To configure the pi into doing what we want it to do, we would have edit the script in proper python syntax using programming language to navigate inside the pi's command prompt. By combining circuit analysis, software coding, and logical analysis, we successfully turned on the led in different scenarios. Doing this lab effectively showed us why the University of Texas at Austin combined Electrical Engineering and Computer Engineering into one major. Now, I still have no idea whether I want to code or mess around with wires!