Prototype Board Report

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The following report endeavors to elucidate the principal characteristics of our soldered prototyping board, explicate its *Arduino* interface functionality, and expound upon a couple of issues that have manifested.

In order to maintain the circuit's simplicity, we made a strategic decision to replicate it on the prototyping board. Consequently, some connections required the use of more complex and advanced techniques.

Notably, while the circuit's functionality has been achieved, as evidenced in the accompanying video, there remains potential for improvement through optimizing spatial utilization, which would, in turn, reduce its inherent complexity.
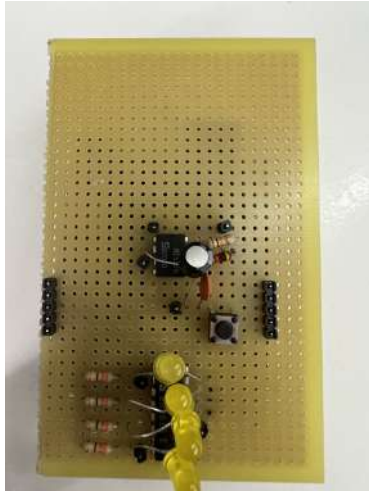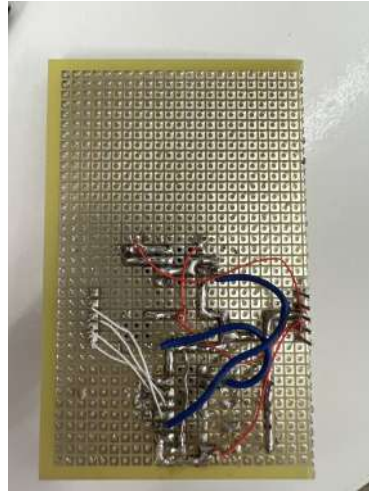

Figure 1: Top side of the prototype board.

Figure 2: Soldered side of the prototype board.

Arduino Functionality

Due to the absence of any additional hardware, we chose to make an additional connection of utmost simplicity. This was the optimal choice, as incorporating additional circuitry might have yielded adverse rather than beneficial outcomes. It is crucial to keep in mind that we are in the initial stages of acquiring soldering skills, so soldering more complex circuits could be premature.

The additional feature involves monitoring the state of the LEDs and determining whether they are in an **on** or **off** condition. Subsequently, the acquired data is processed and displayed on the computer screen to convey the results. Lastly, an application of this functionality would be to identify the potentially inevitable yet unpredictable malfunctions of the diode.