The Raspberry Pi Foundation makes the Raspberry Pi Pico, which is a board with a microprocessor on it. The RP2040 chip, which has a dual-core ARM Cortex M0+ processor, is the main part of the board. It has many different functions and interfaces, which makes it useful for a wide range of projects. It has 3 ADC pins and 26 I2C pins, and any external circuit can get 3.3V from it. It needs 5V to work, and it has a lot of ground pins.

Set up the photoresistor by connecting it to the Raspberry Pi Pico's ADC (Analog to Digital Converter) pin ADC0. The Pico can read and understand analog numbers based on how bright the light is. Most of the time, it is used as part of a voltage divider. The changing resistance of the photoresistor changes the voltage at the ADC pin, which the Pico can read as a digital number.

Setup of the Tackle Switch by connecting to the Raspberry Pi Pico's digital pin GP2. Whether the switch is pressed or not, it gives a binary state (HIGH/LOW or 1/0). Needs debouncing, which can be done with software or extra hardware, to make sure that when the switch is flipped, there is only one clear signal. 10k ohm has been used with switch as pulldown resistor.

Measurement without multithreading -- <https://github.com/Mahmood245/code2.md/blob/main/main.py>

<https://github.com/Mahmood245/code2.md/blob/main/response_times.txt>

Measurement with multithread ---

<https://github.com/Mahmood245/code2.md/blob/main/main.py>

<https://github.com/Mahmood245/code2.md/blob/main/response_times.txt>

Hardware setup image –

<https://github.com/Mahmood245/Image.md/blob/main/EC%20463_A1.jpg>