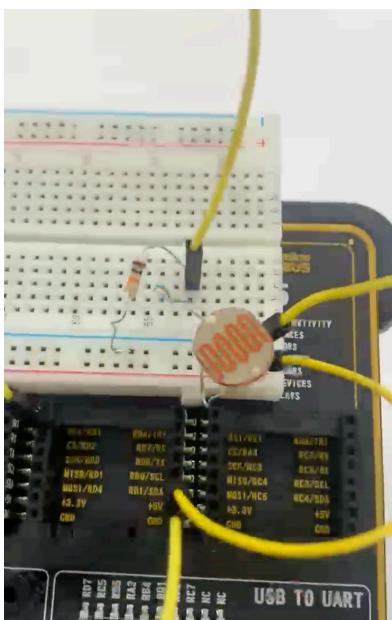


I have created a code and a LDR circuit that when connected to the EASYPIC, it switches all the ports on when light is not detected, and switches all the ports off when light is detected.

For my circuit, I used a breadboard, wires, an LDR sensor and a resistor.



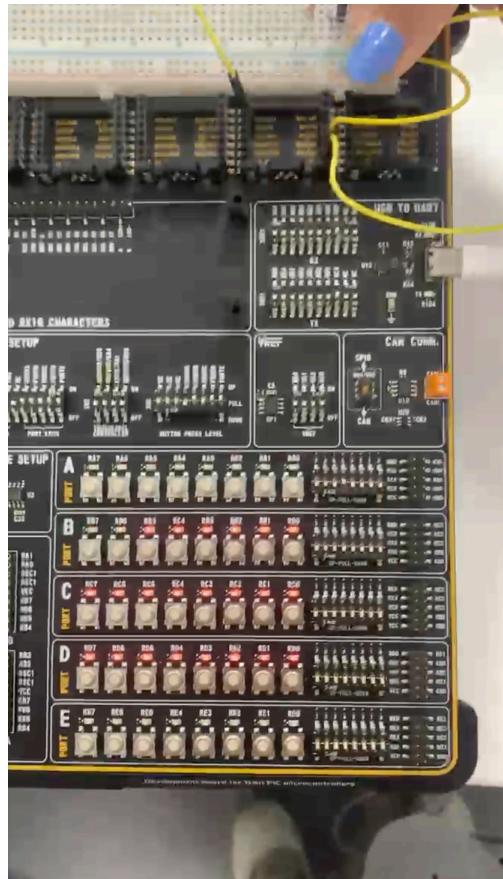
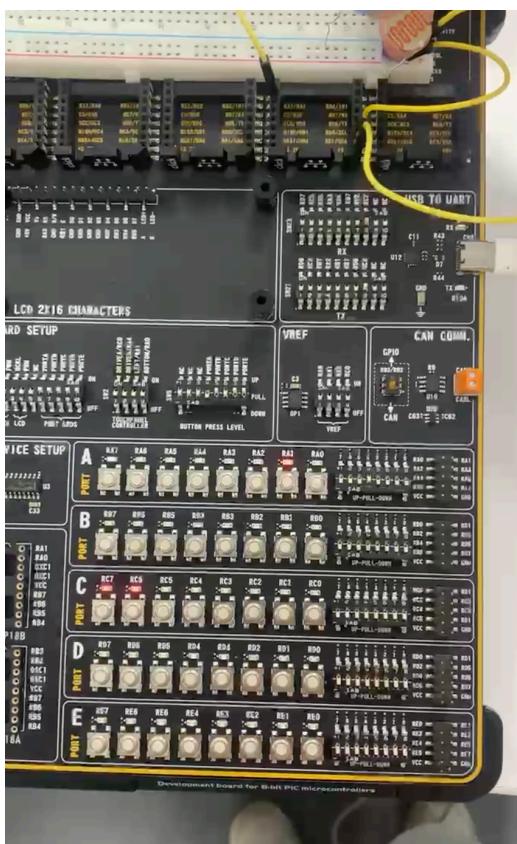
For my code, I created it to read the input signal using UART, and display the dependant output ("ON" / "OFF") on the MICROC's UART terminal. I first set all of my ports off, and then created a time delay of 1 second. After that, I created a while loop stating that if the sensor is 1 (meaning that it is detecting light) , then port b, c and d will all be off and "OFF" will be written in my UART terminal , and then I created another time delay of 0.1s, followed by an else, which states that, if light is not detected, the three ports will light up, and the UART terminal will display "ON".

```
int x;
void main() {
    ANSEL0= 0xFF;
    ANSEL1= 0;
    ANSEL2= 0;
    ANSEL3= 0;

    TRISA= 0xFF;
    TRISB= 0x00;
    TRISC= 0x00;
    TRISD= 0x00;

    UART1_Init(9600);
    Delay_ms(1000);
    while (1) {
        x = ADC_Read(1);
        if (x<1500) {
            19            UART_Write("OFF");
            PORTB= 0xFF;
            PORTC= 0xFF;
            PORTD= 0xFF;
            Delay_ms(100);
        }
        else {
            20            UART_Write("ON");
            PORTB= 0x00;
            PORTC= 0x00;
            PORTD= 0x00;
            Delay_ms(100);
        }
    }
}
```

The easy pic was connected to my circuit through the RA, the 5V and the ground



The first picture displays how the ports look like when light is detected, and the second picture displays how the ports look like when there is no light detected.