마이크로 컨트롤러 5주차 과제

MOTOR Project No. 1

201921280 김남훈

순서

[SourceCode 2](#_Toc113543576)

[Implementation 3](#_Toc113543577)

# SourceCode

#include <avr/io.h>

#include <avr/interrupt.h>

#define *F\_CPU* 16000000UL

#include <util/delay.h>

#define MOTOR\_CW 0xb0

#define MOTOR\_CCW 0x70

#define MOTOR\_BRAKE 0xd0

#define MOTOR\_STOP 0x30

int state = MOTOR\_STOP;

ISR(INT4\_vect) //FORWARD

{

*\_delay\_ms*(50);

if((PINE & 0x10) == 0x10) return;

EIFR |= 1<<4;

state = MOTOR\_CW;

}

ISR(INT5\_vect) //REVERSE

{

*\_delay\_ms*(50);

if((PINE & 0x20) == 0x20) return;

EIFR |= 1<<5;

state = MOTOR\_CCW;

}

int main(void)

{

DDRB = 0xf0; //motor 1

DDRE = 0x00; //Switch

DDRG = 0x03; //LED

EICRB = 0x0a;

EIMSK = 0x30;

sei();

while(1)

{

if(state == MOTOR\_CW) PORTG = 0x01; //정방향 LED 점등

else if(state == MOTOR\_CCW) PORTG = 0x02; //역방향 LED 점등

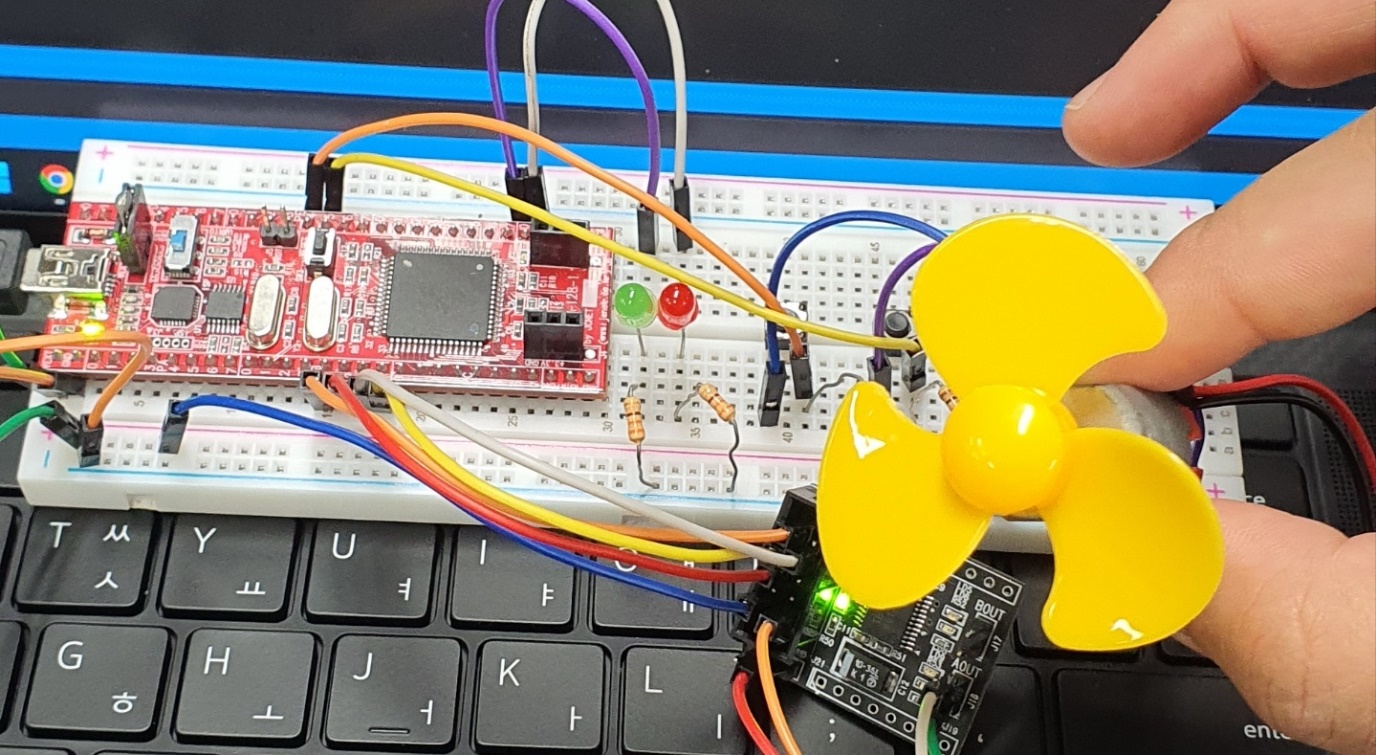
else PORTC = 0x00;

PORTB = state;

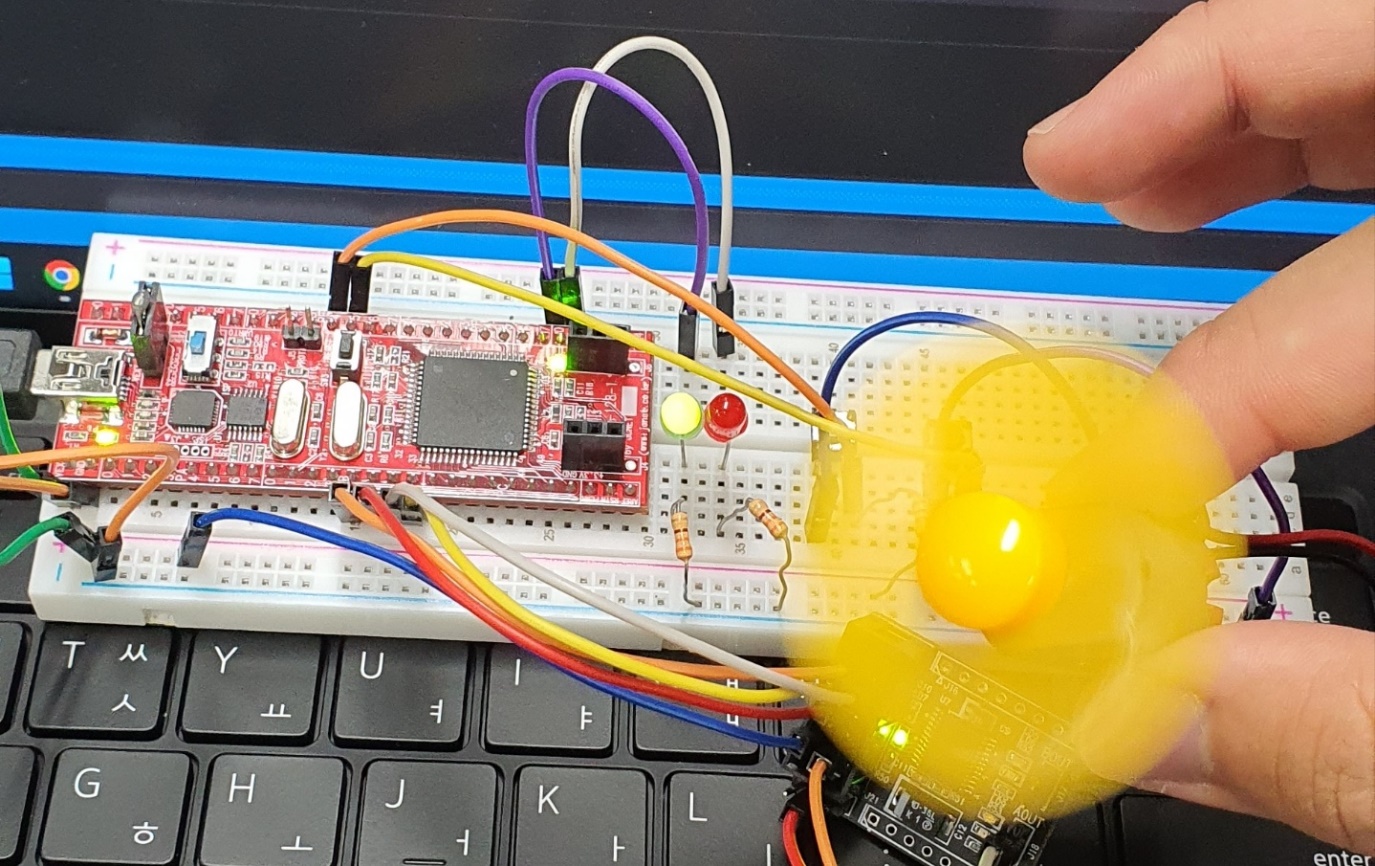
}

}

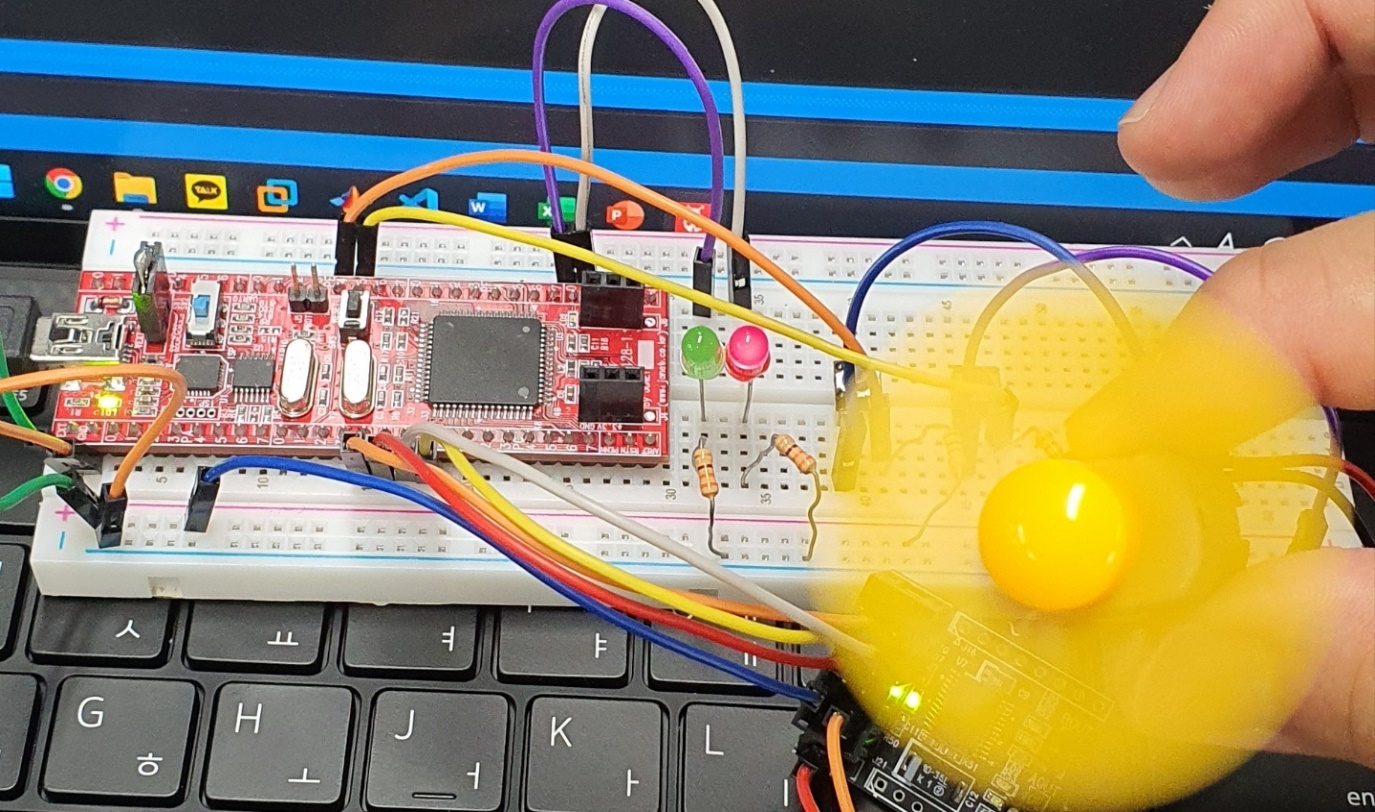
# Implementation



회로 완성, Idle state. LED: Forward/Reverse 표시기



4번 스위치 Push, 정방향 회전



5번 스위치 Push, 역방향 회전