마이크로 컨트롤러 7주차 과제

SENSOR Project No. 1

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순서

[SourceCode 2](#_Toc113543576)

[Implementation 3](#_Toc113543577)

# SourceCode

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\* ADC.c

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\* Created: 2022-10-12 오후 11:28:49

\* Author : skagn

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#include <avr/io.h>

#define *F\_CPU* 16000000UL

#include <util/delay.h>

#define CDS\_10 341

#define CDS\_100 431

#define ON 0xff;

#define OFF 0x00;

int state = OFF;

void init\_adc();

unsigned short read\_adc();

void show\_adc\_led(unsigned short data);

int main(void)

{

unsigned short value;

DDRA = 0xff;

DDRF = 0x00;

init\_adc();

while (1)

{

value = read\_adc();

show\_adc\_led(value);

}

}

void init\_adc()

{

ADMUX = 0x40;

ADCSRA = 0x87;

}

unsigned short read\_adc()

{

unsigned char adc\_low, adc\_high;

unsigned short value;

ADCSRA |= 0x40;

while((ADCSRA & 0x10) != 0x10);

adc\_low = ADCL;

adc\_high = ADCH;

value = (adc\_high << 8) | adc\_low;

return value;

}

void show\_adc\_led(unsigned short value)

{

if(value <= CDS\_10)

{

PORTA = 0xff;

}

if(value >= CDS\_100)

{

PORTA = 0x00;

}

}

# Implementation

