#include <avr/io.h>

#define *F\_CPU* 800000000UL

#include <util/delay.h>

#include <stdlib.h>

#include <string.h>

void ADC\_Init()

{

DDRF &=~(1 << 0); /\* Make ADC port as input \*/

DDRF &=~(1 << 1);

ADCSRA = 0x87; /\* Enable ADC, fr/128 \*/

}

int ADC\_Read1()

{

ADMUX = 0x40; /\* Vref: Avcc, ADC channel: 0 \*/

ADCSRA |= (1<<ADSC); /\* start conversion \*/

while ((ADCSRA &(1<<ADIF))==0); /\* monitor end of conversion interrupt flag \*/

ADCSRA |=(1<<ADIF); /\* set the ADIF bit of ADCSRA register \*/

return(ADCW); /\* return the ADCW \*/

}

int ADC\_Read2()

{

ADMUX = 0x41; /\* Vref: Avcc, ADC channel: 0 \*/

ADCSRA |= (1<<ADSC); /\* start conversion \*/

while ((ADCSRA &(1<<ADIF))==0); /\* monitor end of conversion interrupt flag \*/

ADCSRA |=(1<<ADIF); /\* set the ADIF bit of ADCSRA register \*/

return(ADCW); /\* return the ADCW \*/

}

int main(void)

{

DDRA |= (1 << 0); //Output

DDRA |= (1 << 1);

ADC\_Init(); /\* initialize the ADC \*/

int Moisture;

int LightSensor;

while(1)

{

Moisture = ADC\_Read1(); /\* Copy the ADC value \*/

LightSensor = ADC\_Read2();

if(LightSensor<900)

{

PORTA |= (1 << 0); //&=~(1 << 0);

}

else

{

PORTA &=~(1 << 0); //|= (1 << 0);

}

if(Moisture<900)

{

PORTA |= (1 << 1); //&=~(1 << 0);

}

else

{

PORTA &=~(1 << 1); //|= (1 << 0);

}

*\_delay\_ms*(50);

}

}