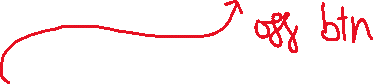
inb\_outc ; the light is on, when the button is clicked it will blink

A diagram of a circuit board

Description automatically generated



.include "M32DEF.INC"

LDI R16,0x00;

OUT DDRB,R16; configure portb as 8 bit inputs

LDI R16,0b11111111

OUT PORTB,R16 ; configure pull-up resistors

LDI R16,0xFF

OUT DDRC,R16 ;configure portc as 8 bit outputs

WHILE\_1:

IN R16,PINB;

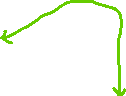
OUT PORTC,R16;

JMP WHILE\_1

led\_rorate; from D13 (PortC0) to D4 (PortC7) and go back and forever

A diagram of a computer

Description automatically generated



.include "M32DEF.INC"

LDI R16,0xFF;

OUT DDRC,R16;

MLOOP:

LDI R17,0b00000001;

LDI R18,8

L1:

OUT PORTC,R17;

ROL R17

CALL delay\_1s

DEC R18

BRNE L1

LDI R17,0b10000000;

LDI R18,8

L2:

OUT PORTC,R17;

ROR R17

CALL delay\_1s

DEC R18

BRNE L2

JMP MLOOP

delay\_1s:

LDI R20,68 ; 1 Cycle

DL3: LDI R21,100 ; 1

DL2: LDI R22,48 ; 1

DL1: DEC R22 ; 1

BRNE DL1 ; 1/2

DEC R21 ; 1

BRNE DL2 ; 1/2

DEC R20 ; 1

BRNE DL3 ; 1/2

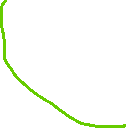
RET ; 3

Led\_Control\_4\_ports with C++

Led on the **same time** from D13 to D4 then D5 to D28 then D29 to D20 then D21 to D12 after that loop infinity with single led for each goes from D13

A computer diagram with many circles and dots

Description automatically generated with medium confidence



#define F\_CPU 8000000UL // XTAL = 8MHZ = 8000000Hz

#include <util/delay.h> // \_delay\_ms(d) and \_delay\_us(d)

#include <avr/io.h>

int main(void)

{

char i;

DDRA = 0xFF; //PORTA is output

DDRB = 0xFF; //PORTB is output

DDRC = 0xFF; //PORTC is output

DDRD = 0xFF; //PORTD is output

while (1)

{

PORTC = 0xFF;

\_delay\_ms(1000);

PORTC = 0x00;

PORTD = 0xFF;

\_delay\_ms(1000);

PORTD = 0x00;

PORTB = 0xFF;

\_delay\_ms(1000);

PORTB = 0x00;

PORTA = 0xFF;

\_delay\_ms(1000);

PORTA = 0x00;

for(i=0;i<8;i++)

{

PORTC=(1<<i);

\_delay\_ms(1000);

}

PORTC=0x00;

for(i=0;i<8;i++)

{

PORTD=(1<<i);

\_delay\_ms(1000);

}

PORTD=0x00;

for(i=0;i<8;i++)

{

PORTB=(1<<i);

\_delay\_ms(1000);

}

PORTB=0x00;

for(i=0;i<8;i++)

{

PORTA=(1<<i);

\_delay\_ms(1000);

}

PORTA=0x00;

}

return 0;

}