1. LED blink

#ifndef F\_CPU

#define F\_CPU 16000000UL

#endif

#include <avr/io.h>

#include<util/delay.h>

int main(void)

{

  DDRD=0xFF;

  while (1)

  {

    PORTD =0XFF;

    \_delay\_ms(220);

    PORTD=0X00;

    \_delay\_ms(220);

  }

    /\* Replace with your application code \*/

    while (1)

    {

    }

}

#ifndef F\_CPU

#define F\_CPU 16000000UL

#endif

#include <avr/io.h>

#include<util/delay.h>

int main(void)

{

  DDRD=0xFF;

  while (1)

  {

    PORTD =0X01;

    \_delay\_ms(220);

    PORTD=0X02;

    \_delay\_ms(220);

    PORTD=0X04;

    \_delay\_ms(220);

    PORTD=0X08;

    \_delay\_ms(220);

    PORTD=0X10;

    \_delay\_ms(220);

    PORTD=0X20;

    \_delay\_ms(220);

    PORTD=0X40;

    \_delay\_ms(220);

    PORTD=0X80;

    \_delay\_ms(220);

  }

/\* Replace with your application code \*/

  while (1)

  {

  }

}

1. LED (up to down)

#ifndef F\_CPU

#define F\_CPU 16000000UL

#endif

#include <avr/io.h>

#include<util/delay.h>

int main(void)

{

  DDRD=0xFF;

  while (1)

  {

    PORTD =0X80;

    \_delay\_ms(220);

    PORTD=0X40;

    \_delay\_ms(220);

    PORTD=0X20;

    \_delay\_ms(220);

    PORTD=0X10;

    \_delay\_ms(220);

    PORTD=0X08;

    \_delay\_ms(220);

    PORTD=0X04;

    \_delay\_ms(220);

    PORTD=0X02;

    \_delay\_ms(220);

    PORTD=0X01;

    \_delay\_ms(220);

  }

/\* Replace with your application code \*/

  while (1)

  {

  }

}

**led 1.b (down to top)**

#ifndef F\_CPU

#define F\_CPU 16000000UL

#endif

#include <avr/io.h>

#include<util/delay.h>

int main(void)

{

  DDRD=0xFF;

  while (1)

  {

    PORTD =0xAA;

    \_delay\_ms(220);

    PORTD =0x00;

    \_delay\_ms(220);

    PORTD=0X55;

      \_delay\_ms(220);

      PORTD =0x00;

  }

**led 1.d (all even on delay,all odd off)**

#ifndef F\_CPU

#define F\_CPU 16000000UL

#endif

#include <avr/io.h>

#include<util/delay.h>

int main(void)

{

  DDRD=0xFF;

  while (1)

  {

    PORTD =0X18;

    \_delay\_ms(220);

    PORTD=0X00;

    \_delay\_ms(220);

    PORTD=0X24;

    \_delay\_ms(220);

    PORTD=0X00;

    \_delay\_ms(220);

    PORTD=0X42;

    \_delay\_ms(220);

    PORTD=0X00;

    \_delay\_ms(220);

    PORTD=0X81;

    \_delay\_ms(220);

    PORTD=0X00;

    \_delay\_ms(220);

  }