

2. Error due to makefile:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initiallization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delayms(1000); //Turning OFF the LED's
    }

    //*****
}
```

Output

```
> "make.exe" all
make.exe: *** No rule to make target `all'. Stop.

> Process Exit Code: 2
> Time Taken: 00:00
```

Solution:

For this kind of error messages, check the current folder and make sure that it contains the **Makefile** (a 18kb file), if not then copy it from any other program folder and paste it inside your current folder.

3. Error due to the included header file:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initiallization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delayms(1000); //Turning OFF the LED's
    }

    //*****
}
```

Output

```
Compiling C: main.c
avr-gcc -c -mmcu=atmega8535 -I. -g -std=gnu99 -DF_CPU=16000000ULL -Os -funsigned-char -funsigned-l
main.c:14:61: error: delay.h: No such file or directory
main.c: In function 'main':
main.c:24: warning: implicit declaration of function 'delayms'
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:02
```

Solution:

For these kinds of error messages, check the current folder and make sure that it contains the other included header files like here **delay.h**, if not then copy the missing header files from any other program folder or the header folder and paste the same inside your current folder.

4. Error due to **0 (Zero Digit)** & **o (the letter "o")**:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initialization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00; //Turning OFF the LED's
        delayms(1000);
    }
}

//*****//
```

Output

```
Compiling C: main.c
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -funsigned-bitf
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c:18:8: error: invalid suffix "x00" on integer constant
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:00
```

5. Error due to **"x"** & **"*"**:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initialization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0*F0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00; //Turning OFF the LED's
        delayms(1000);
    }
}

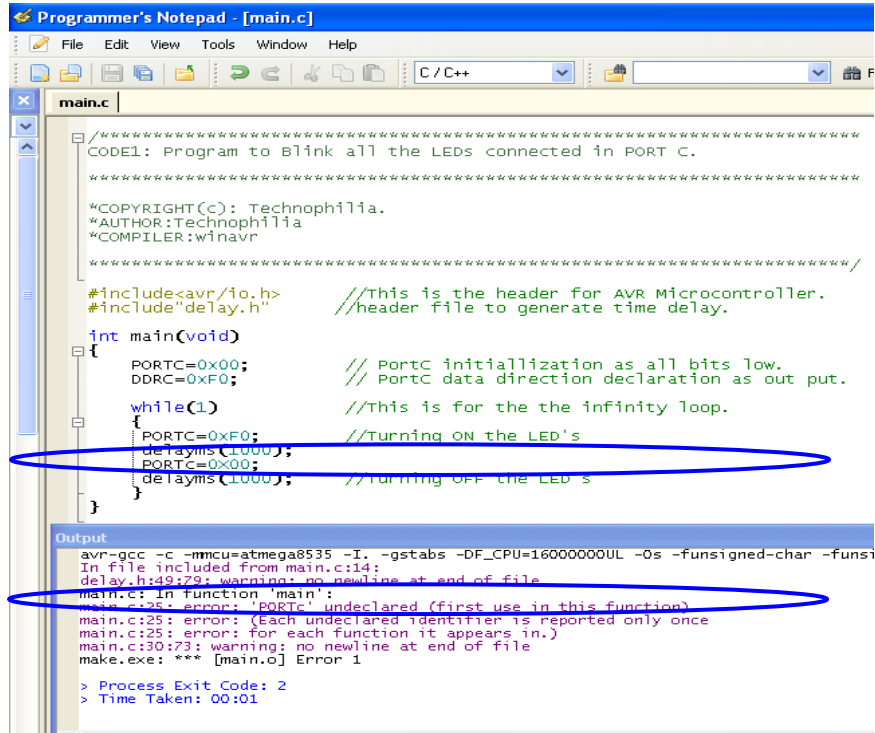
//*****//
```

Output

```
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -funsigned-bitf
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c: In function 'main':
main.c:23: error: 'F0' undeclared (first use in this function)
main.c:23: error: (Each undeclared identifier is reported only once
main.c:23: error: for each function it appears in.)
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:01
```

6. Error due to capital and small letters:



```

Programmer's Notepad - [main.c]
File Edit View Tools Window Help
C / C++

main.c
//The code is for Blinking all the LEDs connected in PORT C.
//The code is for Blinking all the LEDs connected in PORT C.

*COPYRIGHT(c): Technophilia.
*AUTHOR:Technophilia
*COMPILER:winavr

#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

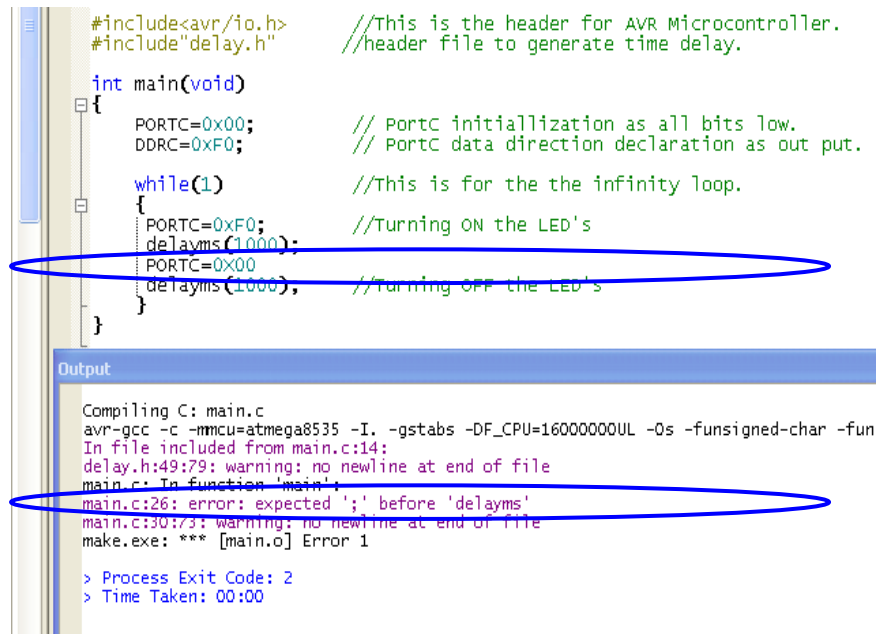
int main(void)
{
    PORTC=0x00; // PortC initiallization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delayms(1000); //Turning OFF the LED's
    }
}

Output
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -funsi
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c:25: error: 'PORTC' undeclared (first use in this function)
main.c:25: error: (Each undeclared identifier is reported only once
main.c:25: error: for each function it appears in.)
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:01
  
```

7. Error due to ; :



```

#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initiallization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00
        delayms(1000); //Turning OFF the LED's
    }
}

Output
Compiling C: main.c
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -fun
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c: In function 'main':
main.c:26: error: expected ';' before 'delayms'
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:00
  
```

8. Error due to improper calling of functions:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initialization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delay(1000); //Turning OFF the LED's
    }
}
```

Output

```
main.c: In function 'main':
main.c:26: warning: implicit declaration of function 'delay'
main.c:30:73: warning: no newline at end of file

Linking: main.elf
avr-gcc -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -funsigned-
main.o: In function 'main':
main.c:26: undefined reference to 'delay'
make.exe: *** [main.elf] Error 1

> Process Exit Code: 2
> Time Taken: 00:00
```

Look there is no error written over here but it contains error

9. Error due to WHILE instead of while:

```
#include<avr/io.h> //This is the header for AVR Microcontroller.
#include"delay.h" //header file to generate time delay.

int main(void)
{
    PORTC=0x00; // PortC initialization as all bits low.
    DDRC=0xF0; // PortC data direction declaration as out put.

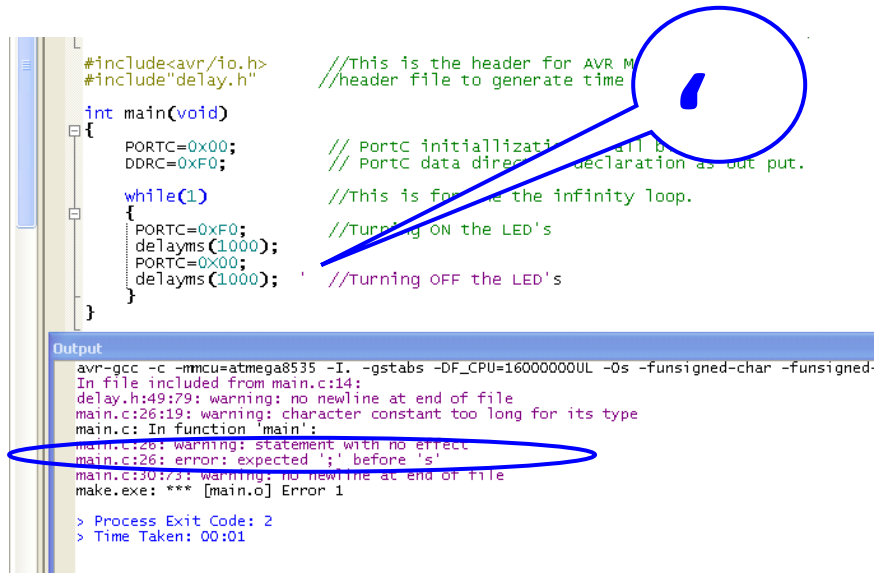
    WHILE(1) //This is for the the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delayms(1000); //Turning OFF the LED's
    }
}
```

Output

```
Compiling C: main.c
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -fun
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c: In function 'main':
main.c:21: warning: implicit declaration of function 'WHILE'
main.c:22: error: expected ';' before '{' token
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:01
```

10. Error due to the presence of extra characters ({, ., ; etc):



```
#include<avr/io.h> //This is the header for AVR M
#include"delay.h" //header file to generate time

int main(void)
{
    PORTC=0x00; // PortC initiallization
    DDRC=0xF0; // PortC data direction declaration as out put.

    while(1) //This is for the infinity loop.
    {
        PORTC=0xF0; //Turning ON the LED's
        delayms(1000);
        PORTC=0x00;
        delayms(1000); //Turning OFF the LED's
    }
}
```

```
Output
avr-gcc -c -mmcu=atmega8535 -I. -gstabs -DF_CPU=16000000UL -Os -funsigned-char -funsigned-
In file included from main.c:14:
delay.h:49:79: warning: no newline at end of file
main.c:26:19: warning: character constant too long for its type
main.c: In function 'main':
main.c:26: error: expected ';' before 's'
main.c:30:73: warning: no newline at end of file
make.exe: *** [main.o] Error 1

> Process Exit Code: 2
> Time Taken: 00:01
```

Notes:

1. Warnings can be neglected, i.e., if your program output contains some warnings then it will not create any problems in generating the **.hex** file.
2. Process Exit Code of individuals should be 0 in order to make the program error-free but the Time Taken may vary from computer to computer; it will not create any problems.
3. All other possible errors may be due to reasons like the use of **;** instead of **:** in case of switch case statements.
4. Errors can also occur due to unequal number of opening and closing brackets, **{}**.
5. There may also be L-Value errors, i.e., storing characters using an integer variable.