



Making project file and downloading software

–How to turn on or off
two LEDs





For what?

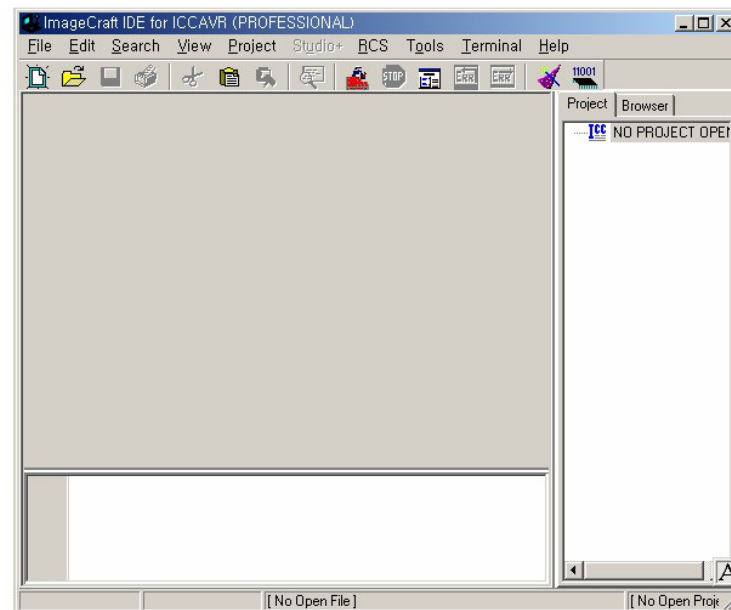


- I made this lecture for the beginner about AVR MCU, and after you see this documents, you could compile and turn on and off LEDs.
- I used port for this.



Initial loading of ICC AVR

- If you start ICC AVR for the first time, then you can see the following screen.

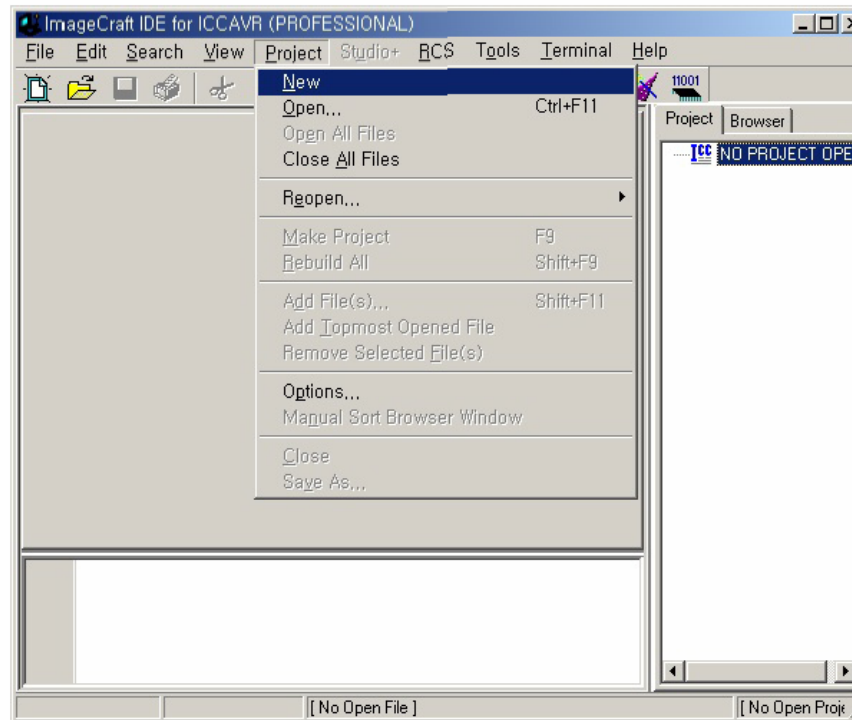




New project



- To make new project, then first select Project > New.

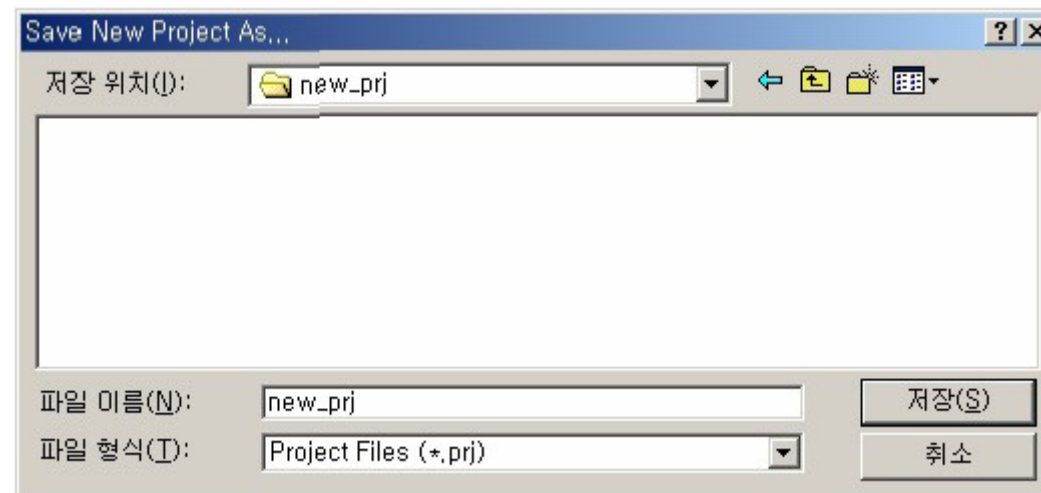




Naming for new project



- Select folder for new project, and name for new project.

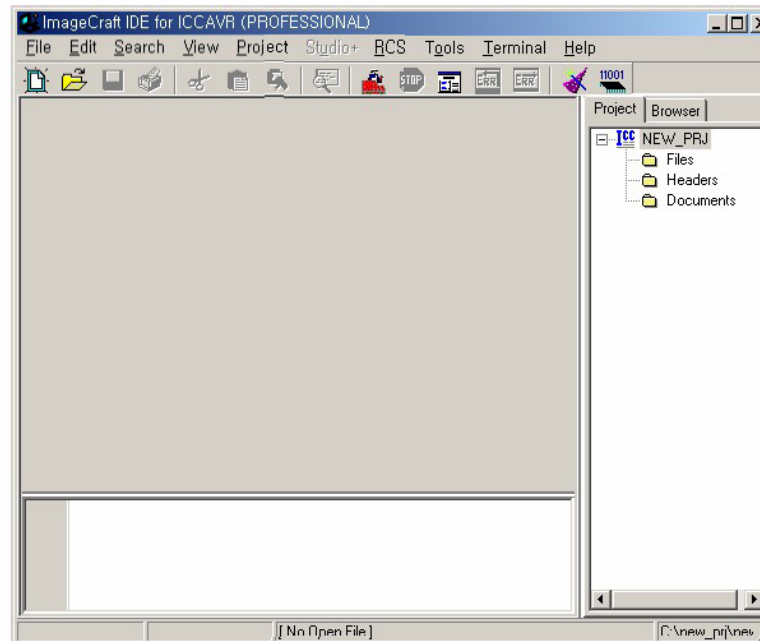




status



- You succeeded to make new project.
- You have no file for new project, yet.

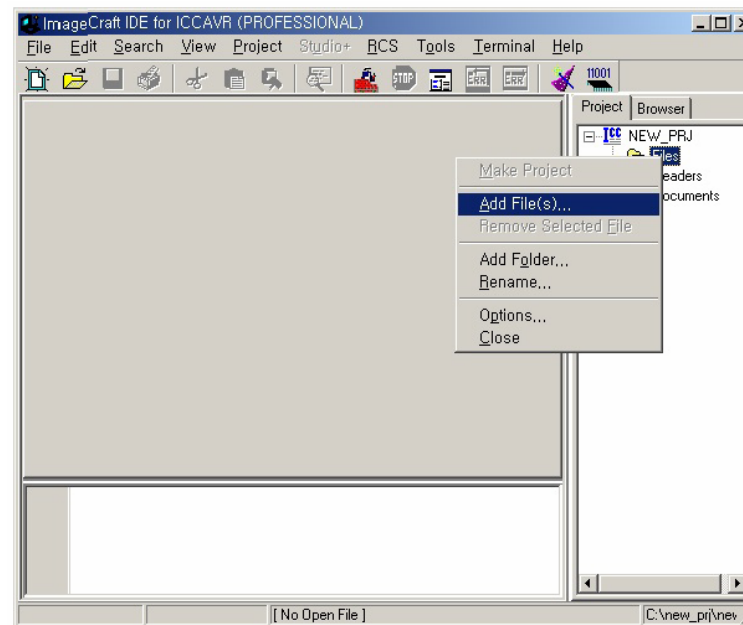




Add file



- At menu, select Project > Add file, or at right side, you can select Project and click right button of that, and click Add file.

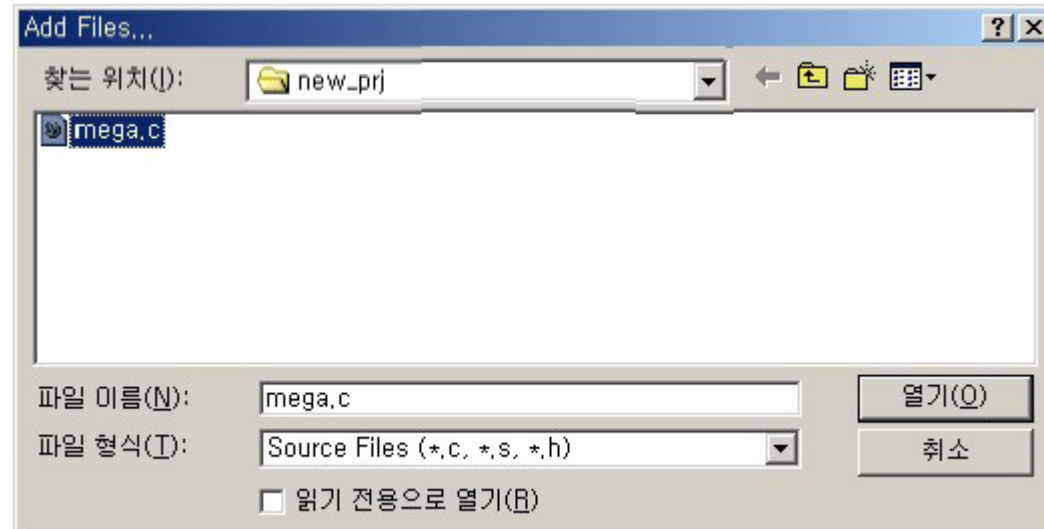




Add C source files to your project

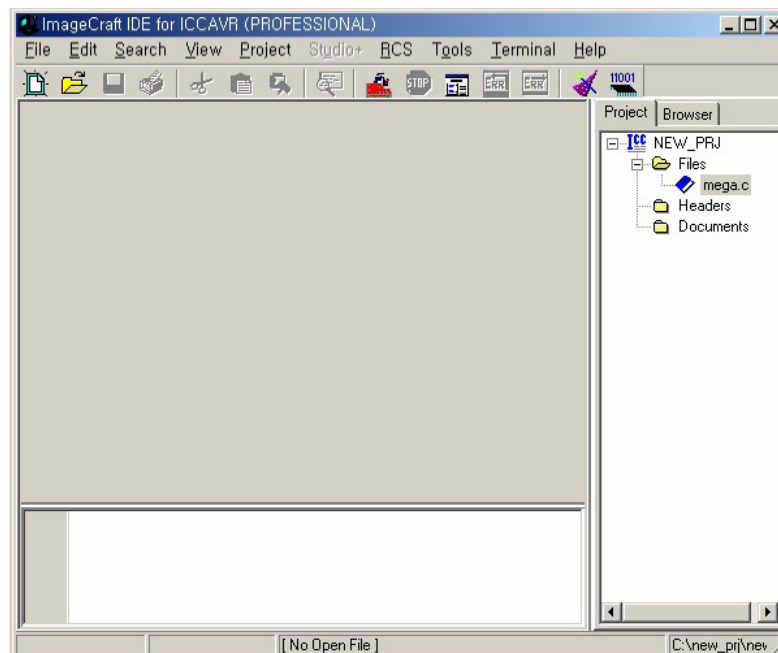


- Add “mega.c” to your project, You can download this file from the website or from my email.



Adding mega.c files to project

- Like the followings, mega.c was added to project.





Programming LED



The screenshot shows the ImageCraft IDE for ICCAVR (PROFESSIONAL) with a menu bar (File, Edit, Search, View, Project, Studio+, RCS, Tools, Terminal, Help) and a toolbar. The main editor window displays the code for 'mega.c':

```
void main(void)
{
    init_devices();
    DDRF = 0xFF;

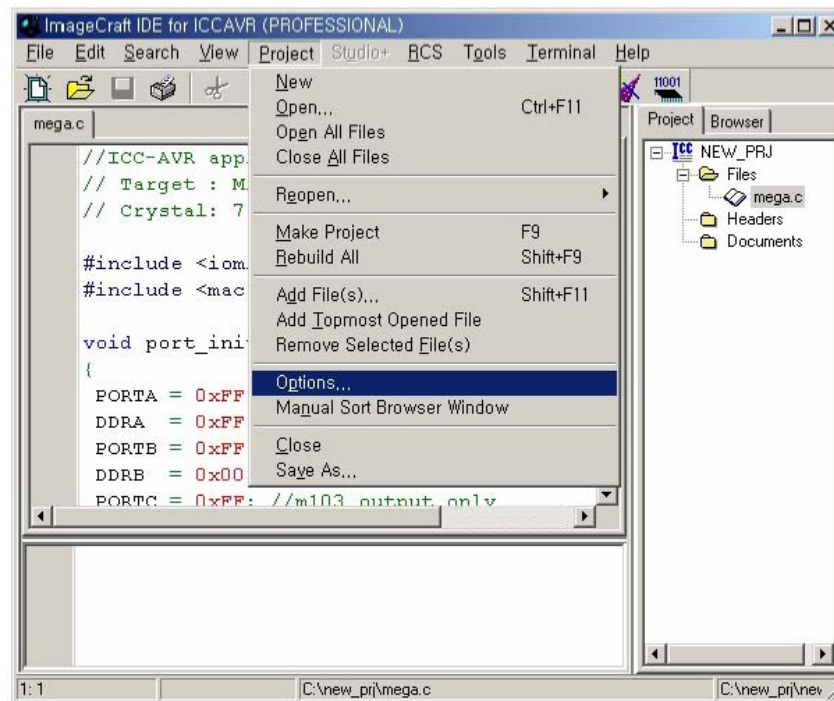
    PORTC=0xFF;
    while(1){
        PORTC=0xFF;
        delay(1000);
        PORTC= 0x00;
        delay(1000);
    }
}
```

The Project Browser on the right shows a project named 'NEW_PRJ' with folders for 'Files', 'Headers', and 'Documents'. The 'Files' folder contains 'mega.c'. The status bar at the bottom shows '55: 1' and the file path 'C:\new_prj\mega.c'.



Select Project → Options

- Select Project → Options, then you can see custom on device configuration.

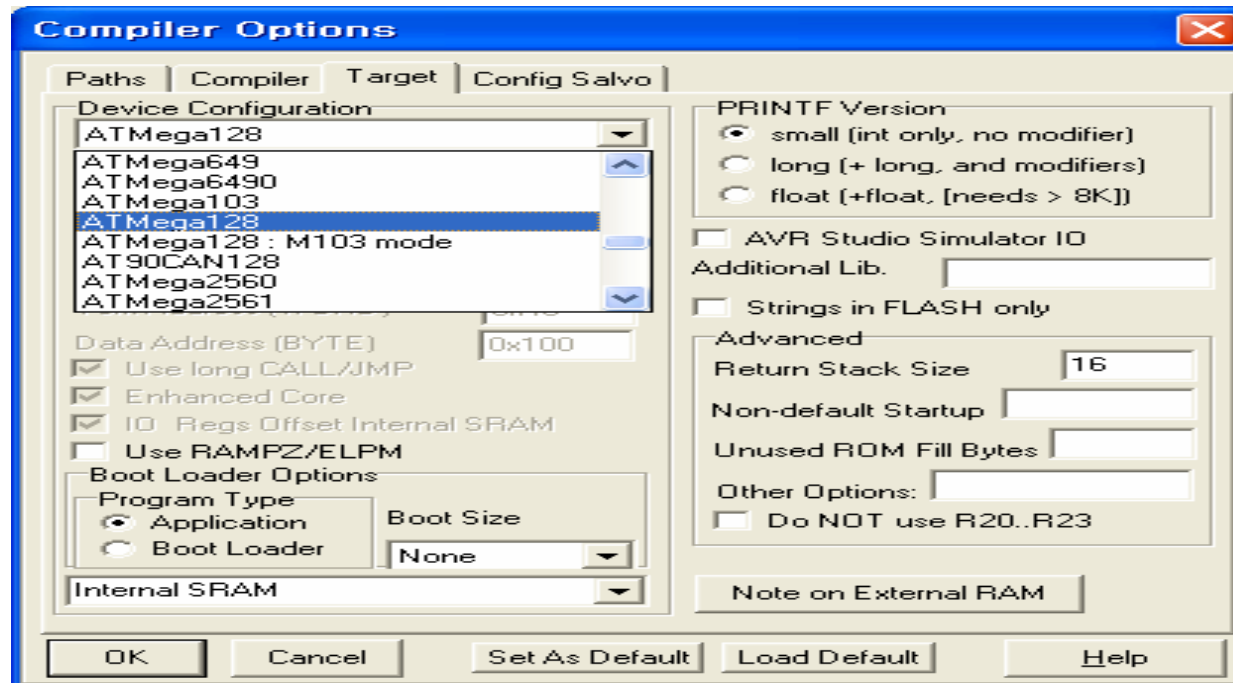




Compiler Option



Select ATMega128, and use defaults for others.
Press OK

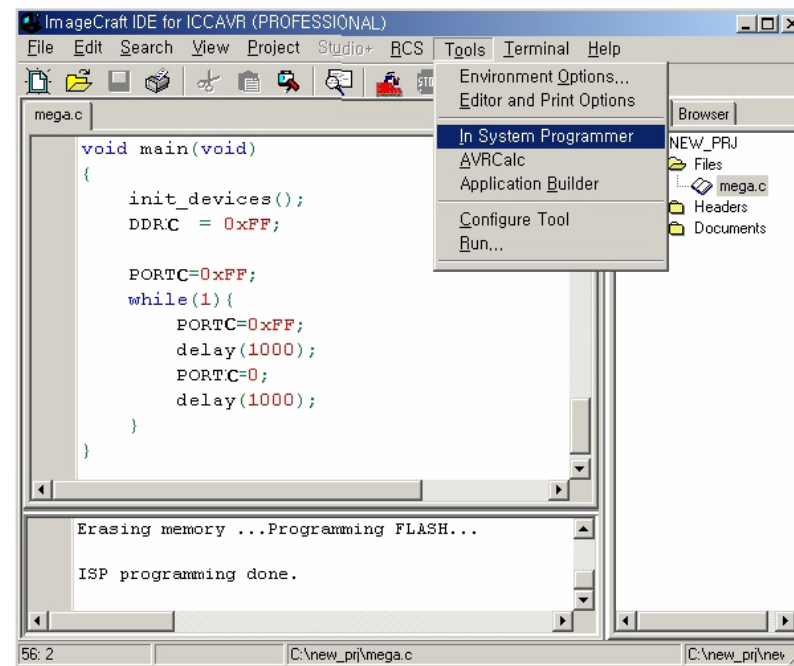




Initializing ISP



- For download, ISP must be initialized.
Select Tools > In System Programmer.

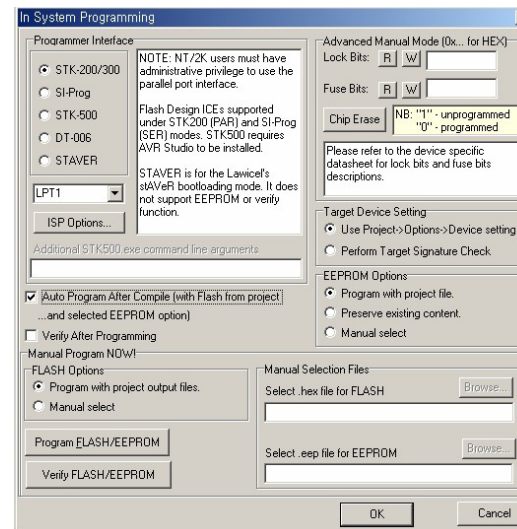




In System Programming



- Check if your programmer interface is selected like the picture, and if you want to use automatic download after compiling, check “Auto program After Compile”





About Fuse bit (1/2)



- After buying ATmega128, then you should set fuse bits.
- You can see right side, then you could see Advanced Manual Mode. On fuse bit, write “0xFFD9EF”, and press left “W” button. (Caution!! If you do wrongly, ATmega128 may not work correctly.)
- Click OK.





About Fuse bit (2/2)

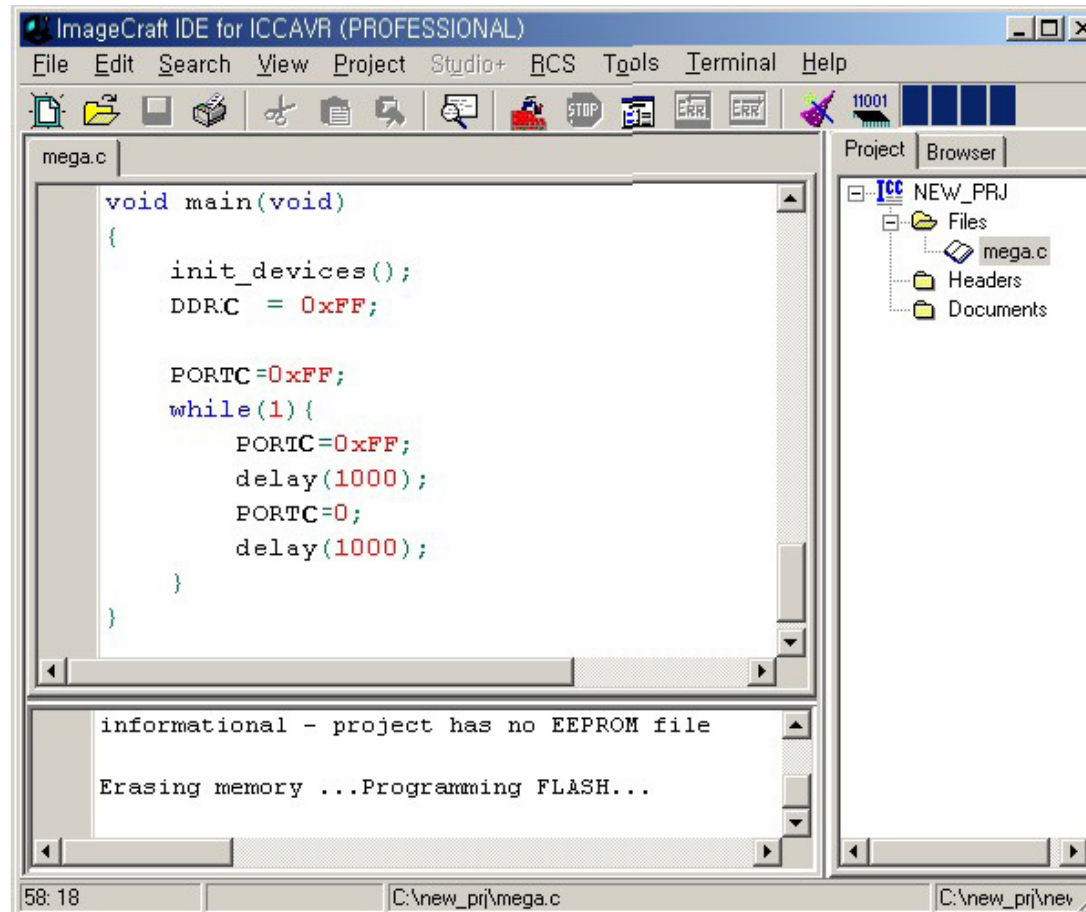


- All the settings are complete, and to compile and download, power ON to board, and connect ISP cable. Prepare to download with ISP cable.
- Click Project→Make Project.
- Press “F9”, then you can see status bar of right upper side is moving.





Compiling and downloading



<http://www.NewTC.co.kr>

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Testing



- If you completed to download, the LED of board will start to blink.
- If this does not operate, you could check hardware, and hardware connection, and C-language.
- Refer “<http://www.NewTC.co.kr>”

