

# GUIDE FOR THE INSTALLATION OF C18 COMPILER IN MPLAB IDE

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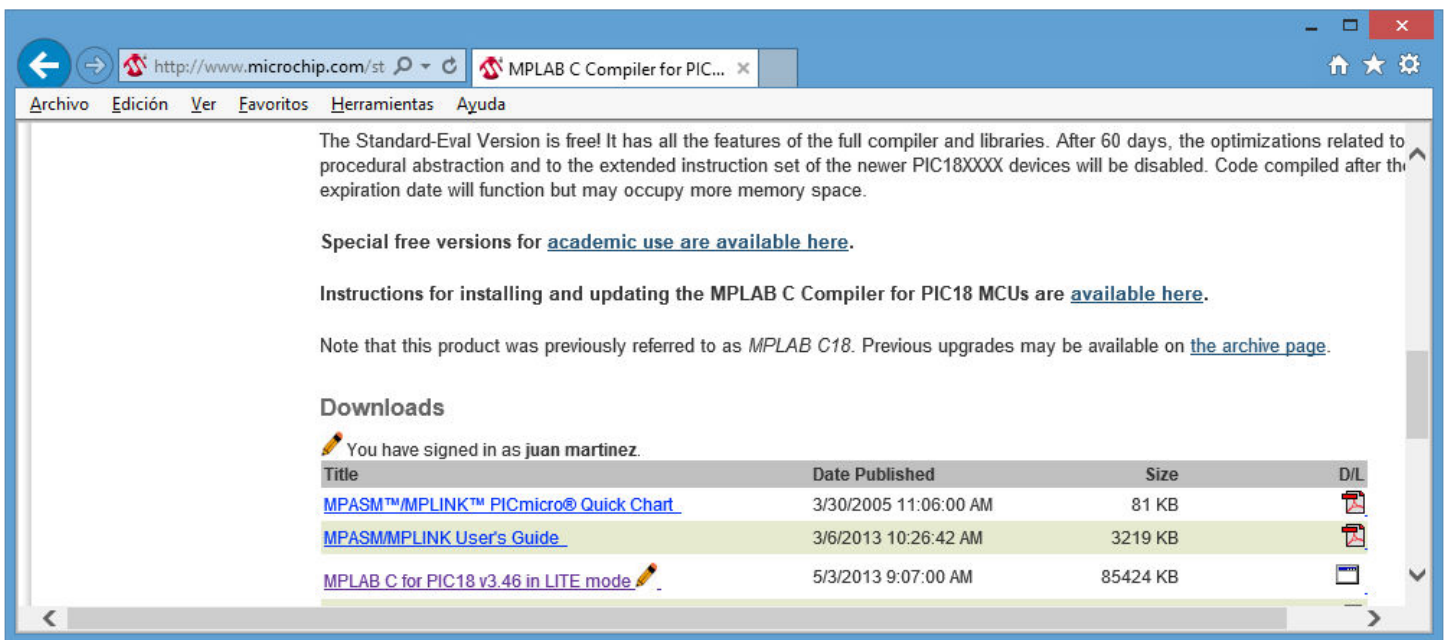
### *1. How to install C18 compiler*

-Previously, you should have already installed MPLAB IDE software in your PC. If you have not done so, please refer to the following guide:

<http://puntoflotante.net/MPLAB-IDE-INSTALLATION-GUIDE.pdf>

- Please download C18 installation files directly from Microchip's site:

[http://www.microchip.com/stellent/idcplg?IdcService=SS\\_GET\\_PAGE&nodeId=1406&dDocName=en010014](http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1406&dDocName=en010014)



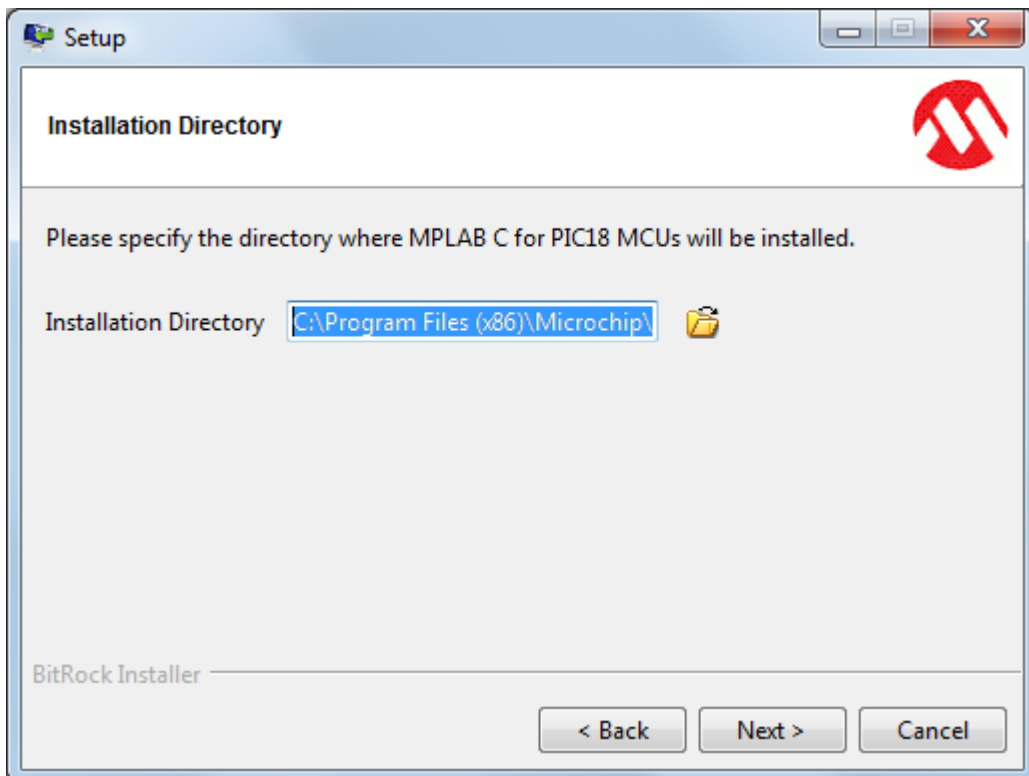
Once in Microchip's site, choose to download this file: ***MPLAB C for PIC18 v3.46 in LITE mode***. And the name of the downloaded file is:

**"mplabc18\_v3.46\_windows\_lite.exe"**.

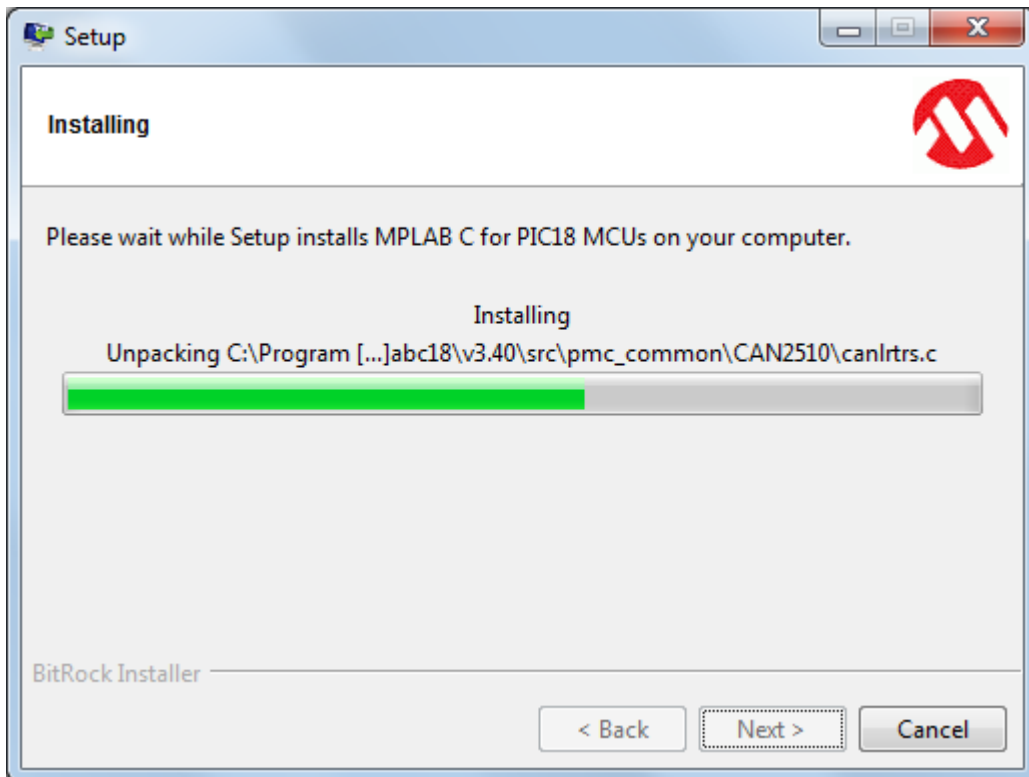
-Execute file. Click to accept licence agreement. Next.



-this window shows the path where the compiler will be installed.



-Continue installation. When the last window appears, click “Finish”.



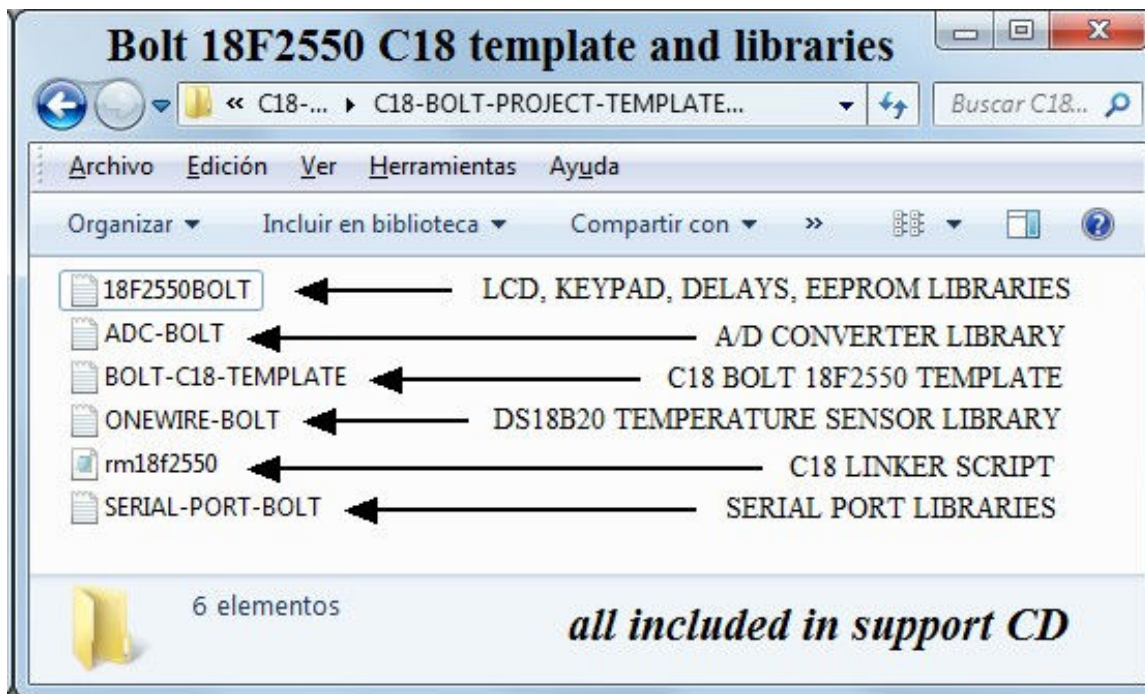
- The installation program generates 4 applications: `mcc18.exe` (compiler), `mplink.exe` (linker), `mplib.exe` (library management) and `MPASMWIN.EXE` (assembler). These 4 applications must be included by the user in any C18 project, following the instructions given right away.

## ***2. How to download a C18 template folder for Bolt 18F2550 system***

- Download the .zip file with the template files and libraries for 18F2550 Bolt system from the following link:

<http://puntoflotante.net/BOLT-18F2550-PROGRAMS/C18-BOLT-TEMPLATE-AND-LIBRARIES.zip>

-Extract the files and you will have a project folder looking like this:



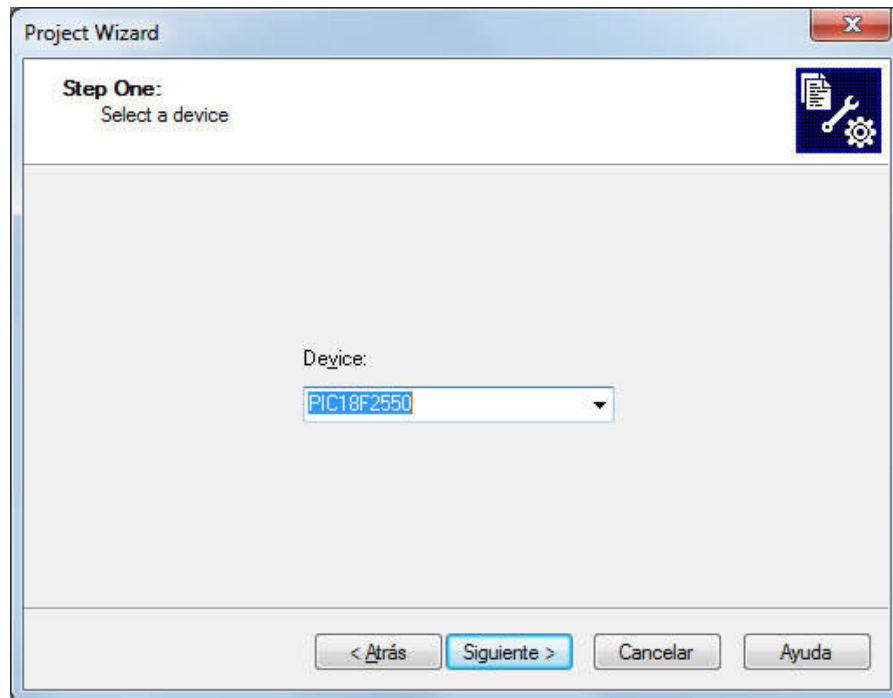
This a C18 project folder for the Bolt 18F2550 system. It includes a template source file (.c), several libraries for Bolt system (.h) and the linker script (.lkr).

By using this folder as a template for your C18 projects, you guarantee that the compiler will operate without errors and that within MPLAB IDE software, you will be able to load the executable files in the Bolt 18F2550 board.

Now go to next step and create a C18 project in MPLAB.

### 3. How to create a C18 project in MPLAB

Open MPLAB IDE and select option "Project wizard". Select microcontroller 18F2550



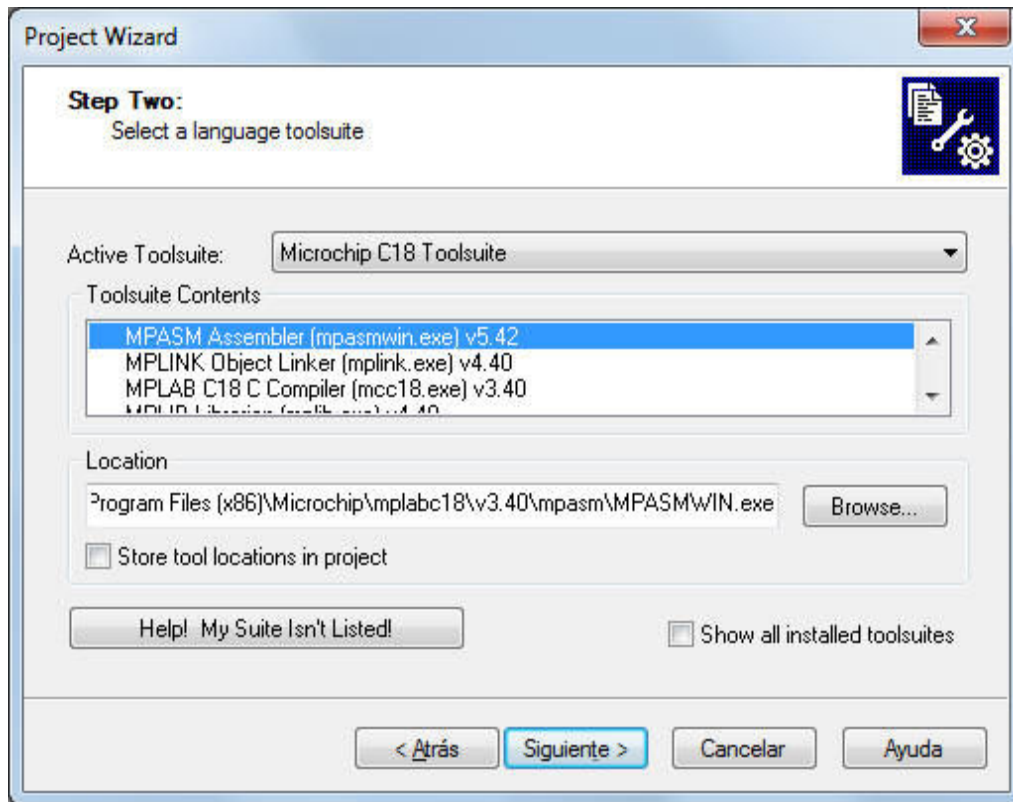
**\*\*\*THIS IS A VERY IMPORTANT STEP\*\*\***

In the next step (Step Two), select "Microchip C18 Toolsuite" and assign one by one, the four applications with their corresponding path using the "Browse" button.

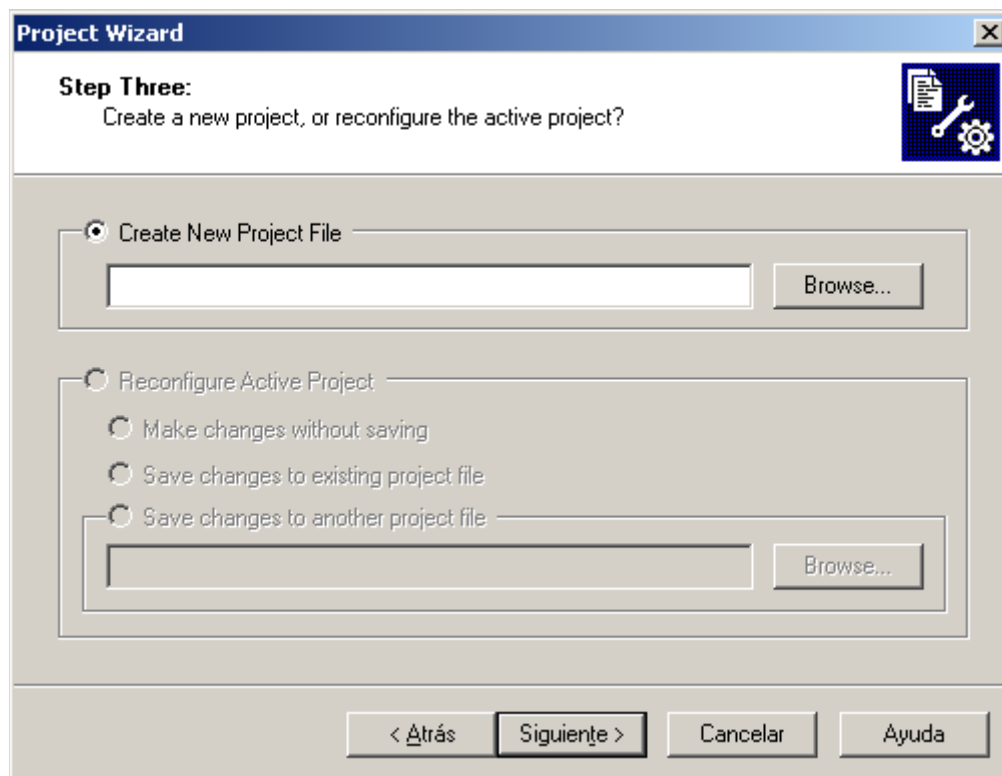
The paths where the 4 applications are located are:

C:\Program Files (x86)\Microchip\mplabc18\v3.40\bin  
(for mcc18.exe, mplink.exe and mplib.exe)

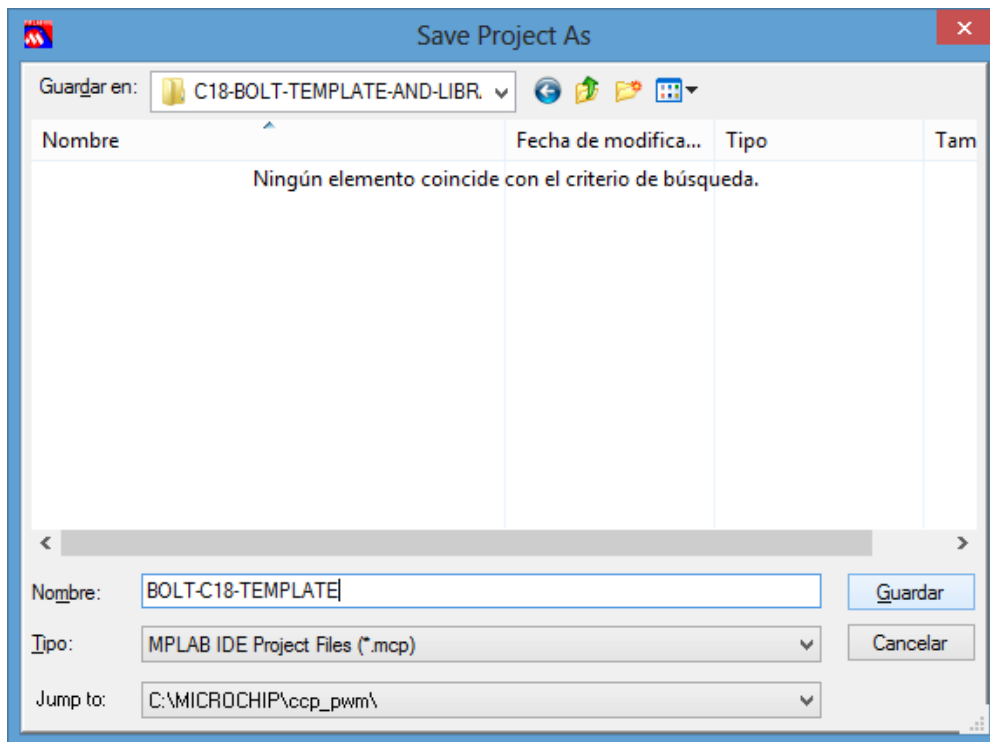
C:\Program Files (x86)\Microchip\mplabc18\v3.40\MPASM  
(for MPASMWIN.EXE)



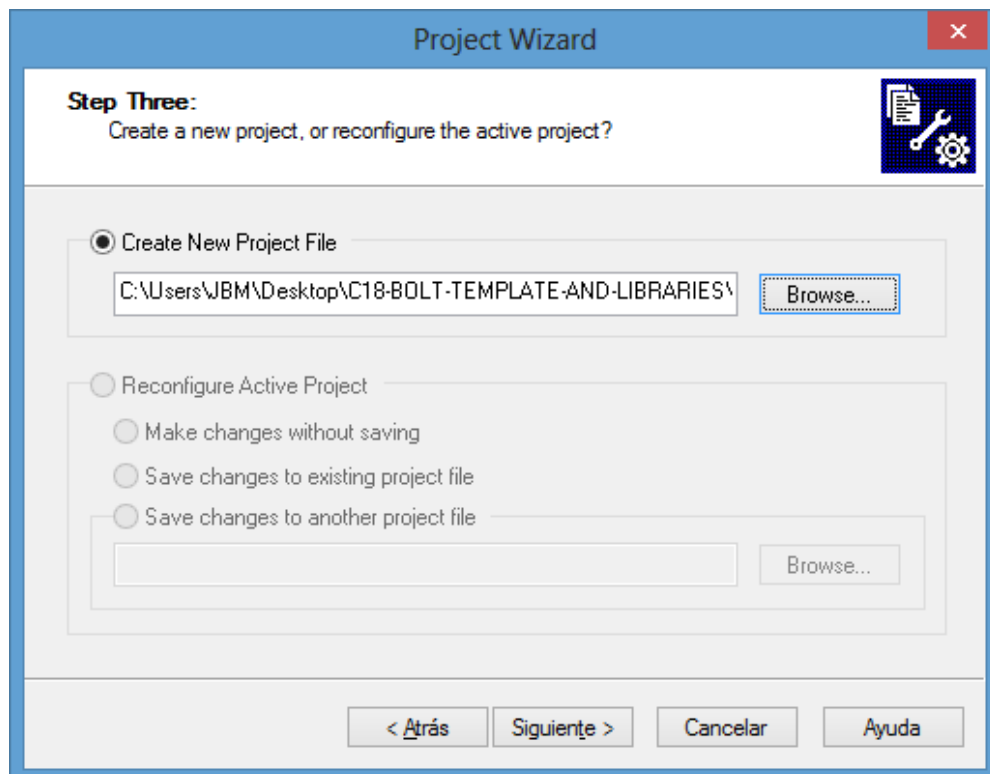
In step 3 (Step Three), use "Browse" to locate the template folder where your files of C18 project are stored. Remember that you have already this folder available.



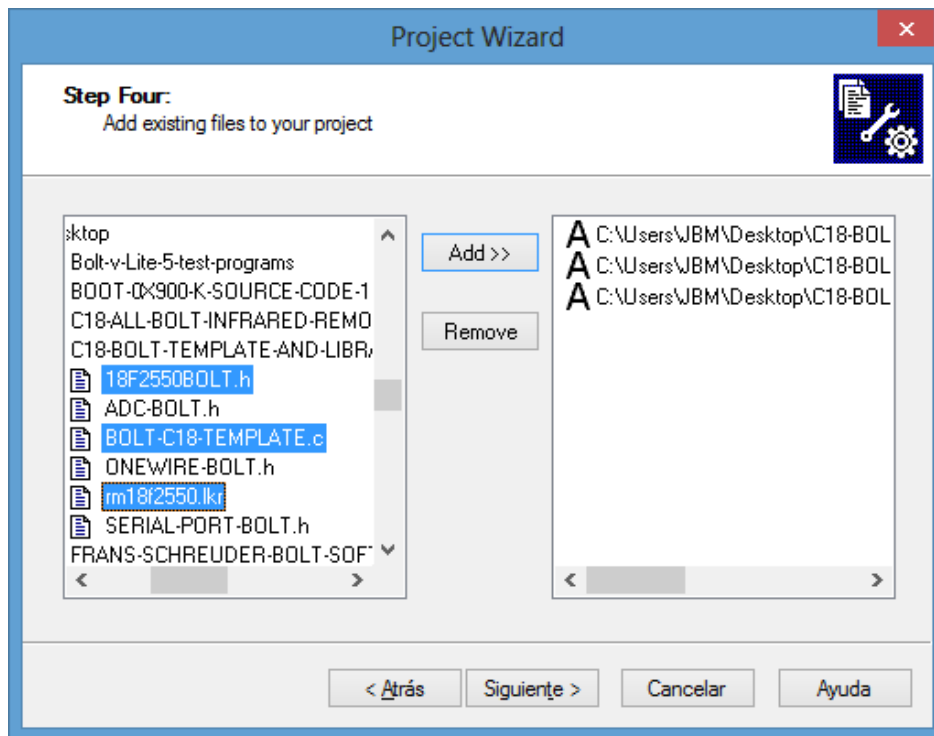
Once in the Project folder, just type the first letter of the name of source file. Choose that name (“BOLT-C18-TEMPLATE”) and erase the last two characters, ie “.c”, so that the name of project is the same as the name of the source file. Click “Save”.



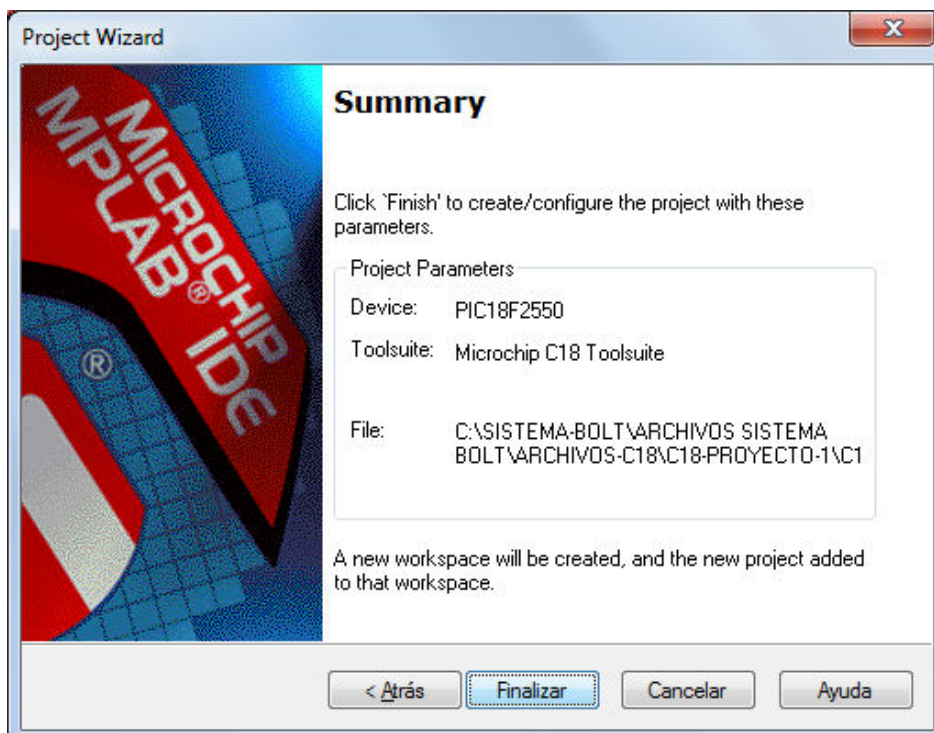
Click on “Next”:



In the next window (Step four) select the files of your project in the left window and then the “Add” option to pass them to the right window. In this case you will have in your project: the template source file (.c), a library file (.h) and the linker script (.lkr). Click “Next”.



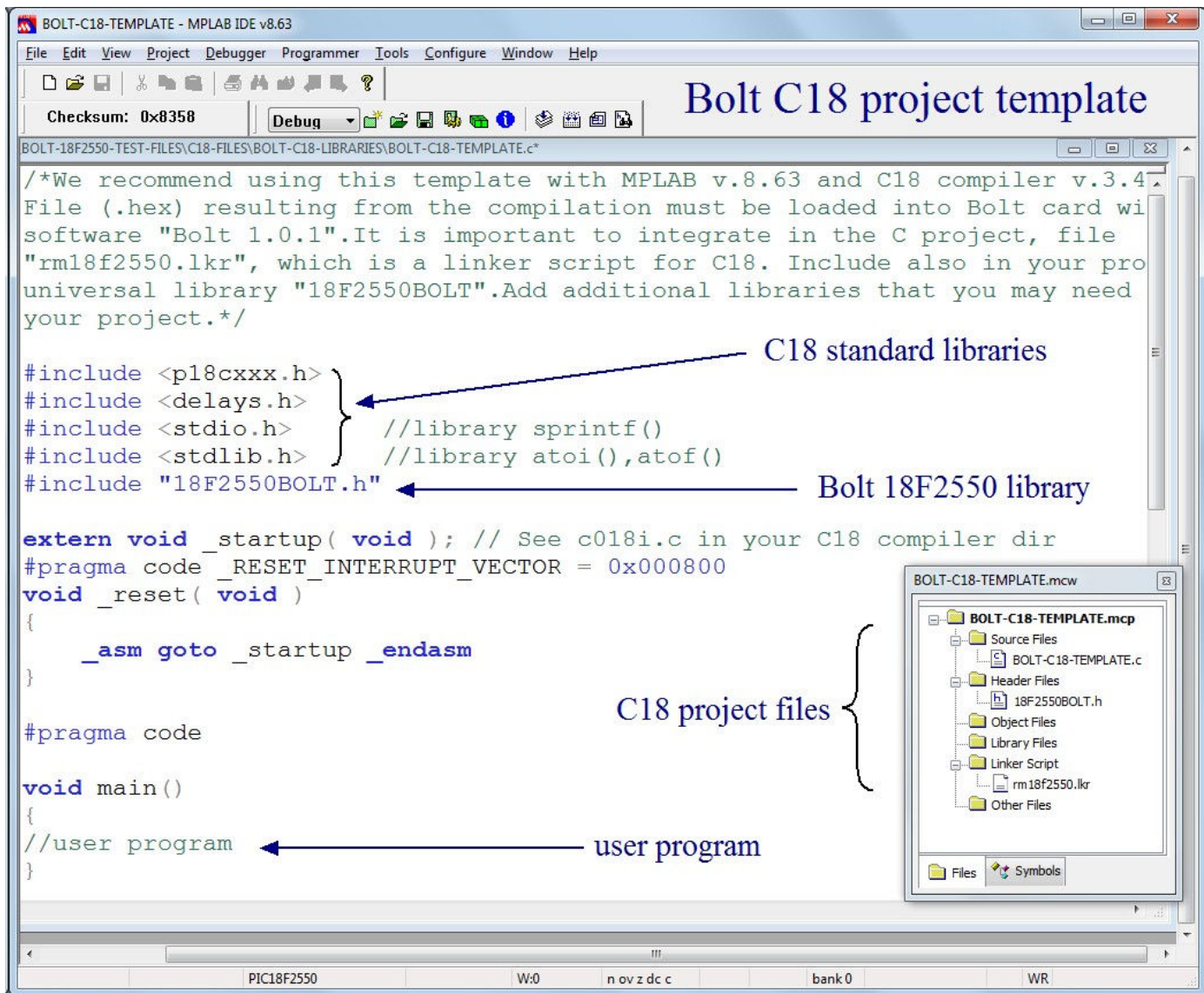
Click on “Finish” to end





#### 4. How to write a program and compile

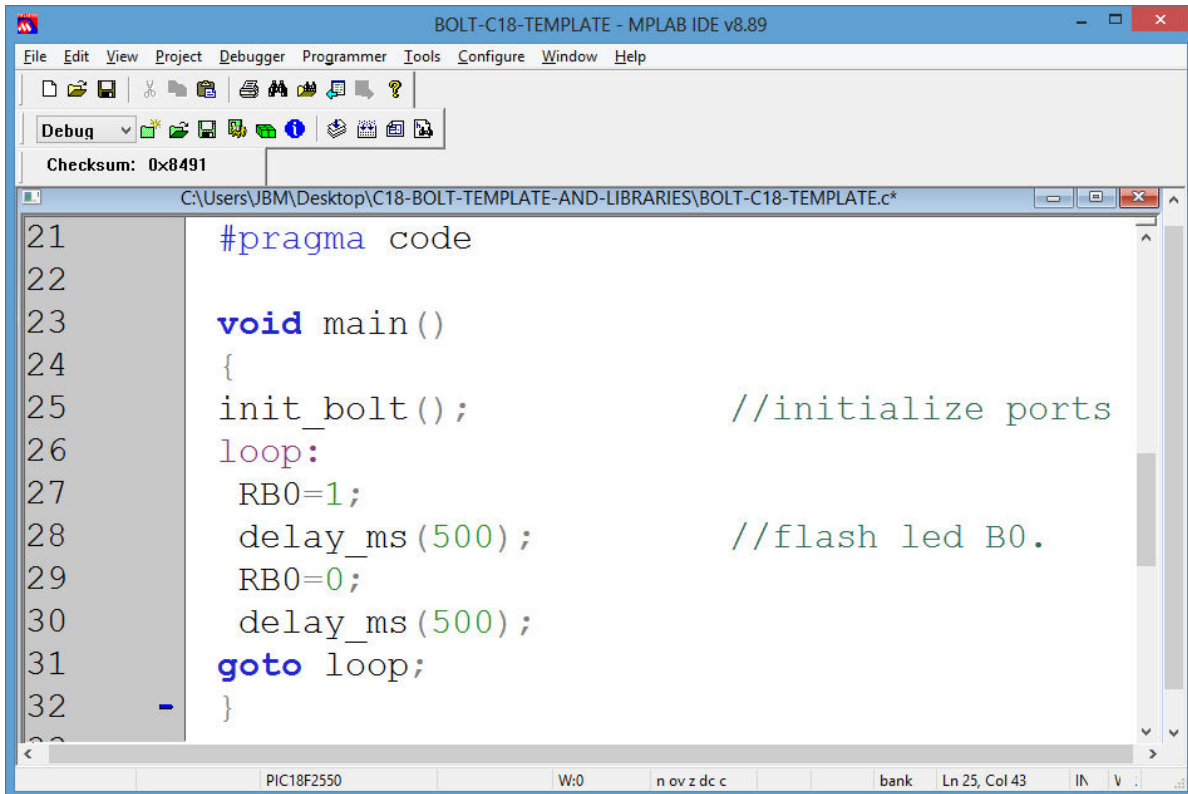
This is the window you will see in MPLAB, after finishing the creation of C18 project:



Edit the source file `.c` before compiling, adding the following lines to the main function, as shown. This program will flash led B0 every 500 ms in your Bolt 18F2550 system.

```
void main( )
{
  init_bolt( );           //initialize ports
loop:
  RB0=1;
  delay_ms(500);         //flash led B0.
  RB0=0;
  delay_ms(500);
  goto loop;
}
```

Your MPLAB window will look like this:

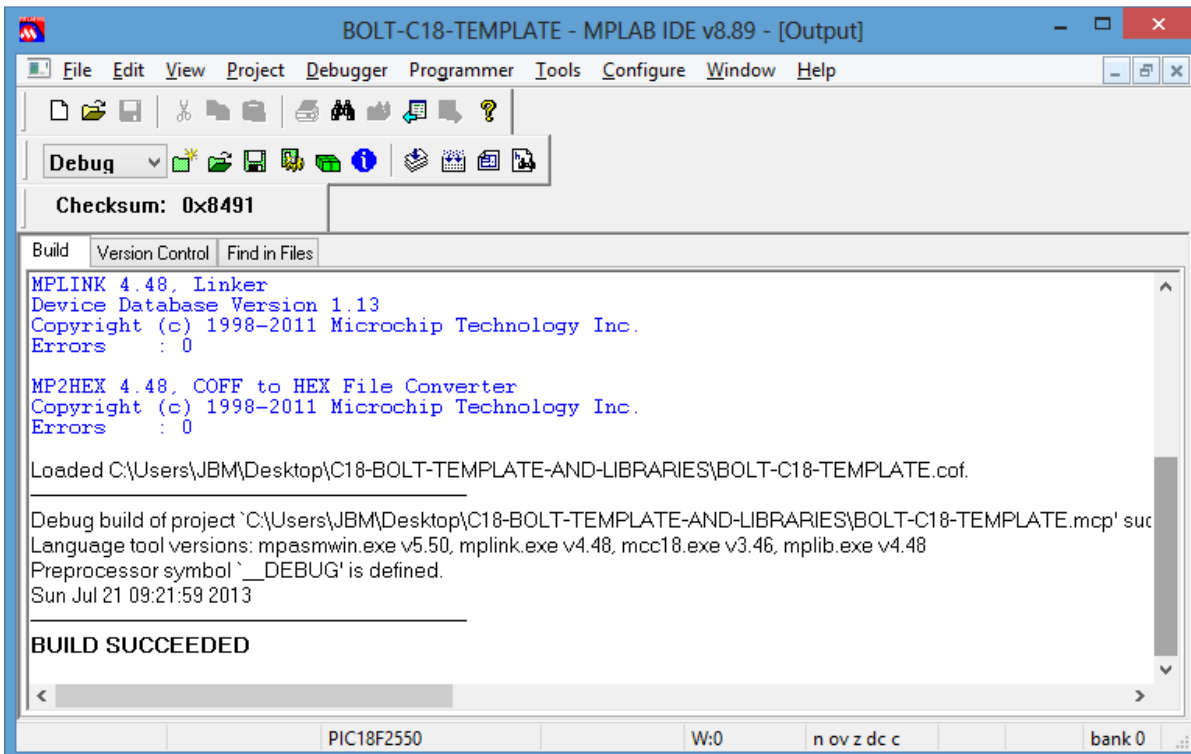


```

BOLT-C18-TEMPLATE - MPLAB IDE v8.89
File Edit View Project Debugger Programmer Tools Configure Window Help
Debug
Checksum: 0x8491
C:\Users\JBM\Desktop\C18-BOLT-TEMPLATE-AND-LIBRARIES\BOLT-C18-TEMPLATE.c*
21 #pragma code
22
23 void main()
24 {
25     init_bolt();           //initialize ports
26     loop:
27     RB0=1;
28     delay_ms(500);        //flash led B0.
29     RB0=0;
30     delay_ms(500);
31     goto loop;
32 }
PIC18F2550 W:0 n ov z dc c bank Ln 25, Col 43 IN V

```

Then choose options “Project” and “Built all” to compile. The window below shows a successful compilation:

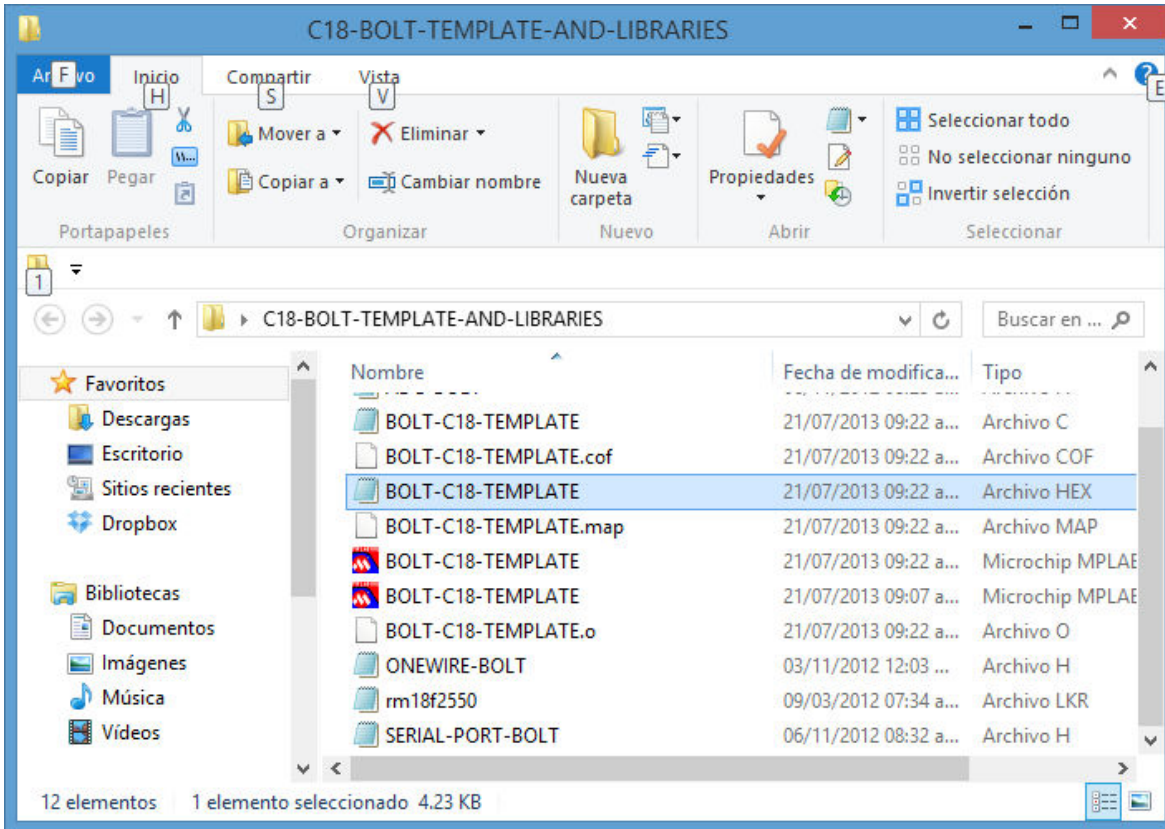


```

BOLT-C18-TEMPLATE - MPLAB IDE v8.89 - [Output]
File Edit View Project Debugger Programmer Tools Configure Window Help
Debug
Checksum: 0x8491
Build Version Control Find in Files
MPLINK 4.48. Linker
Device Database Version 1.13
Copyright (c) 1998-2011 Microchip Technology Inc.
Errors : 0
MP2HEX 4.48. COFF to HEX File Converter
Copyright (c) 1998-2011 Microchip Technology Inc.
Errors : 0
Loaded C:\Users\JBM\Desktop\C18-BOLT-TEMPLATE-AND-LIBRARIES\BOLT-C18-TEMPLATE.cof.
Debug build of project `C:\Users\JBM\Desktop\C18-BOLT-TEMPLATE-AND-LIBRARIES\BOLT-C18-TEMPLATE.mcp' suc
Language tool versions: mpasmwin.exe v5.50, mplink.exe v4.48, mcc18.exe v3.46, mplib.exe v4.48
Preprocessor symbol `__DEBUG' is defined.
Sun Jul 21 09:21:59 2013
BUILD SUCCEEDED
PIC18F2550 W:0 n ov z dc c bank 0

```

Go to the your original project folder, and observe, among many others, the executable file (.hex) created by the compiler and ready to be loaded in the system Bolt 18F2550:



Load this file to your Bolt 18F2550 system using software Bolt v.1.0.1. If you haven't done so before, use this guide:

<http://puntoflotante.net/BOLT-18F2550-SYSTEM-PROGRAMMING-MANUAL.pdf>

**This program will flash led B0 every 500 ms in your Bolt 18F2550 system!**

Should you have any questions please contact:

[atencionaclientes@puntoflotante.net](mailto:atencionaclientes@puntoflotante.net)