



MICROCHIP

Regional Training Centers

Section 4

Getting Started First Project

Lab0 – First Project

- Try to create your first MPLAB X IDE Project.
- Try to create your first PIC24 code.
- To understanding MPLAB X IDE basic operation.
- Learn how to use edit, build, project manager, debug and program functions.

■ **How to start ?**

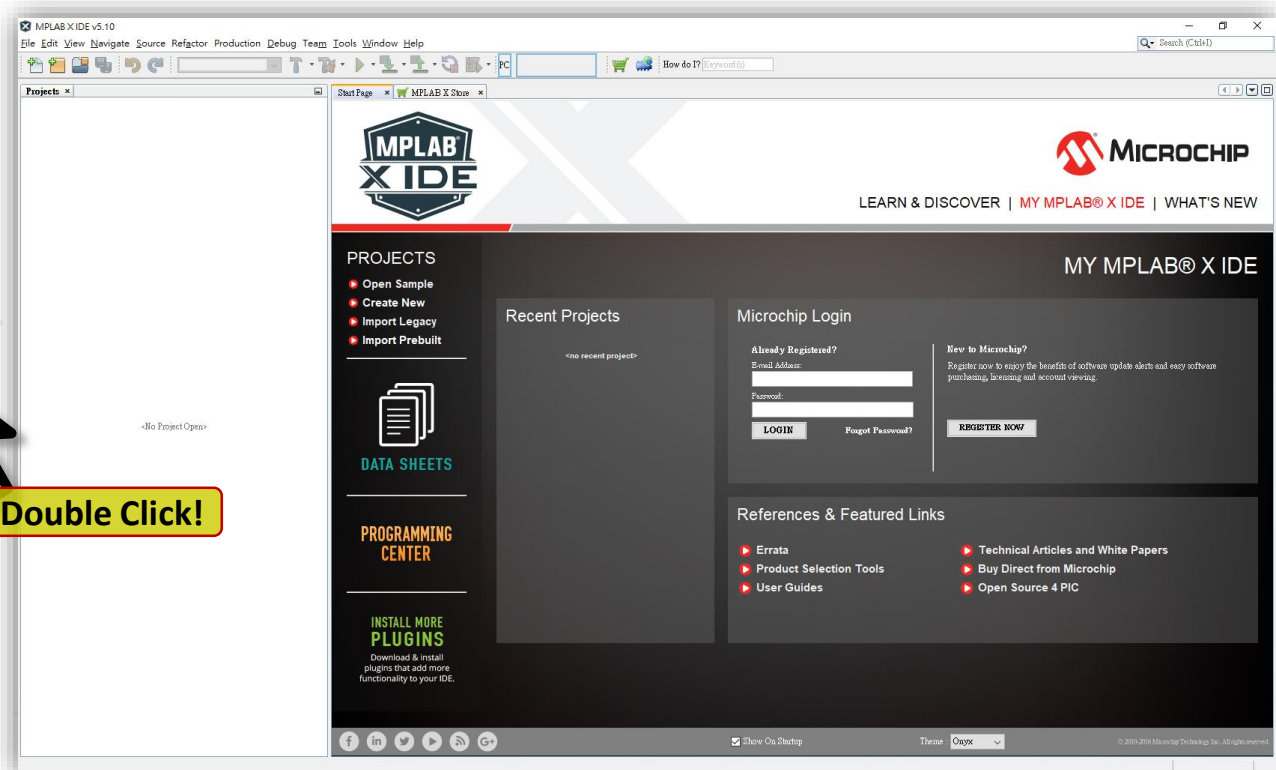
Lab0 - Create Project

Step 1

- Open MPLAB X IDE v5.10, first.



Double Click!

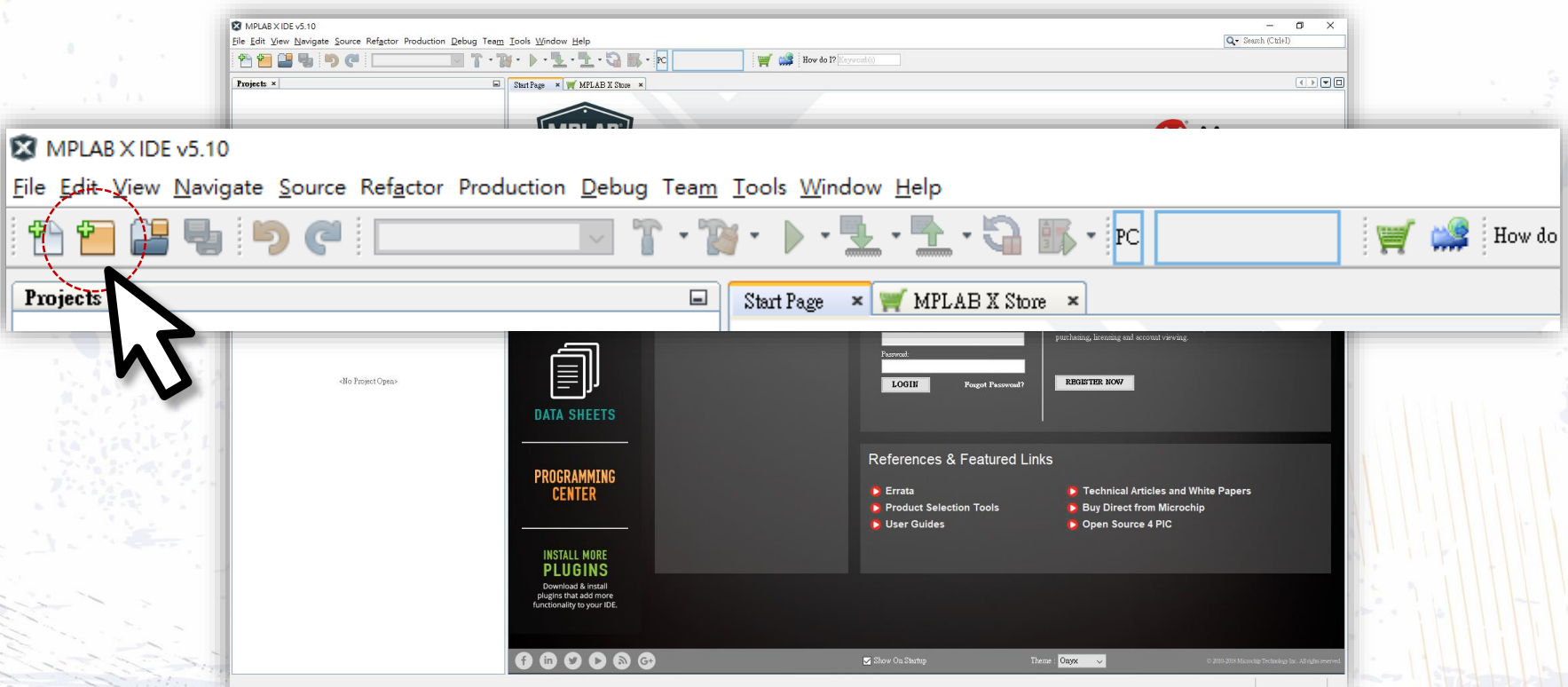


Lab0 - Create Project

Step 2

Execute Project Wizard

Select **File ► New Project** or Click **icon** 

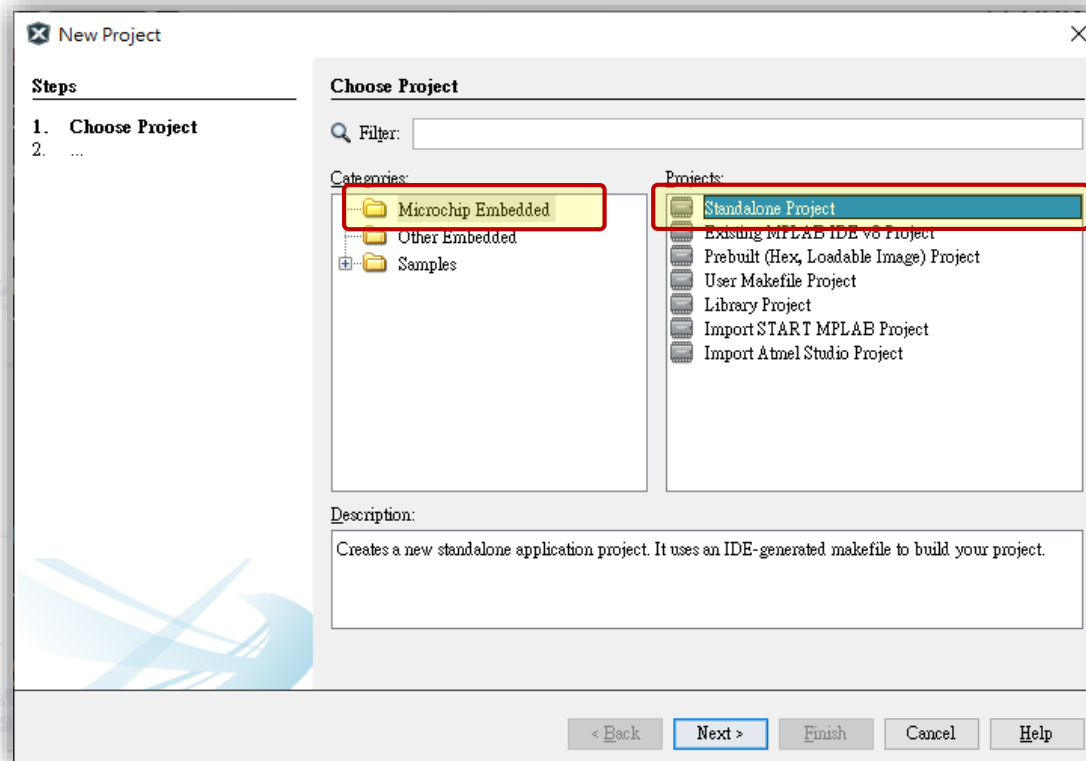


Lab0 - Create Project

Step 3

◆ Select Project Type

Select **Microchip Embedded** ► **Standalone Project**
Next



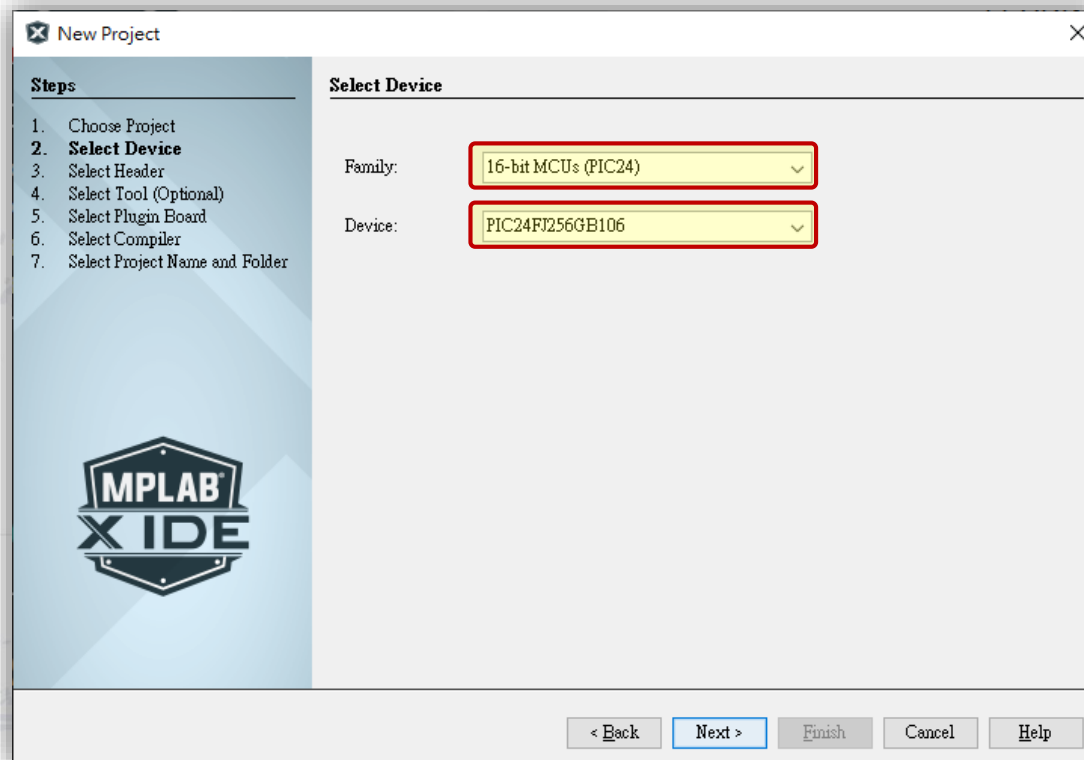
Lab0 - Create Project

Step 4

◆ Select Target Device

Select **16-bit MCUs (PIC24)** ► **PIC24FJ256GB106**

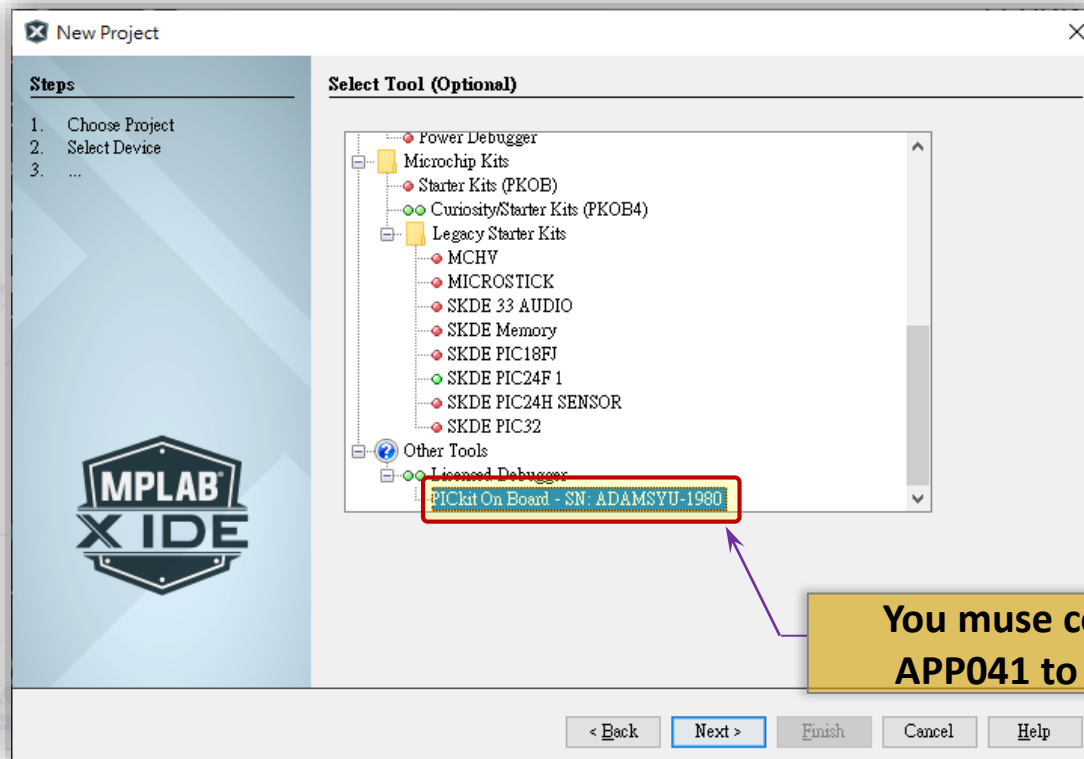
Next



Lab0 - Create Project

Step 5

- Select Debugger/Programmer
Select **PICkit On Board – SN**
Next

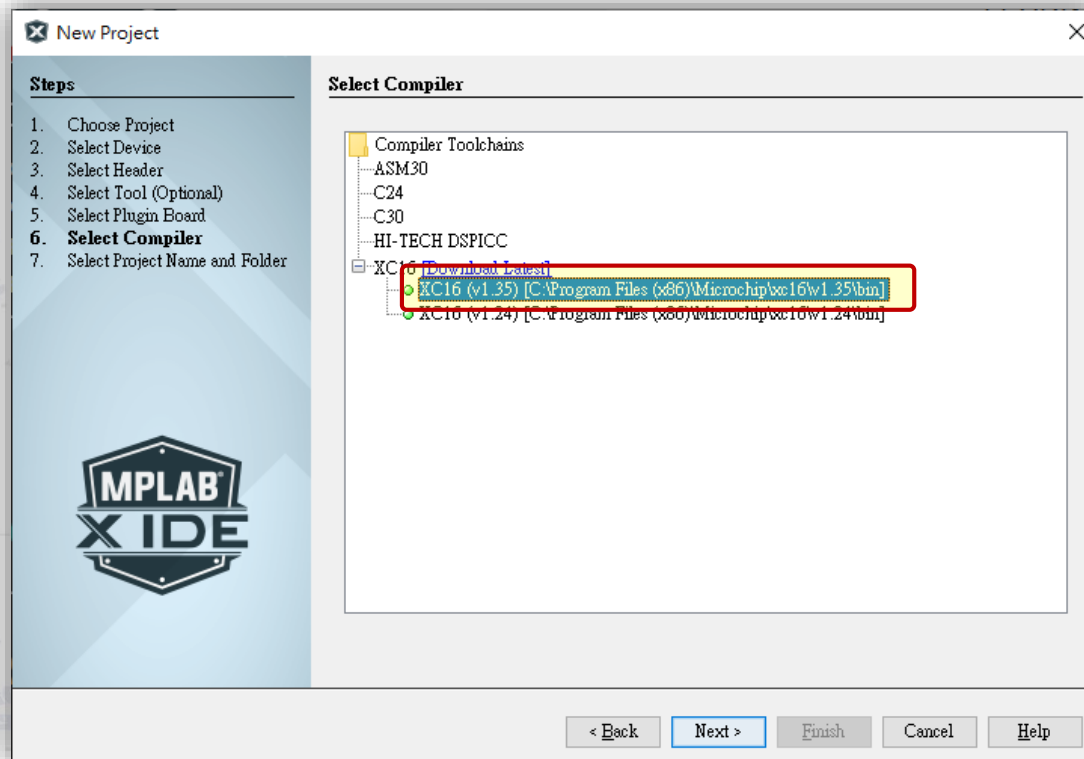


You must connect
APP041 to PC, first.

Lab0 - Create Project

Step 6

- ◆ **Select Compiler**
Select **XC16 (v1.35) ...**
Next



Lab0 - Create Project

Step 7

◆ Select Project Name & Directory

Project Name : **Lab0_FirstProject**

Project Location : **C:\PIC24_Exercises\Exams**

Encoding : **UTF-8**

Finish

New Project

Steps

1. Choose Project
2. Select Device
3. Select Header
4. Select Tool (Optional)
5. Select Plugin Board
6. Select Compiler
7. **Select Project Name and Folder**

Select Project Name and Folder

Project Name: Lab0_FirstProject

Project Location: C:\PIC24_Exercises\Exams\ Browse...

Project Folder: C:\PIC24_Exercises\Exams\Lab0_FirstProject.X

☐ Overwrite existing project.

☐ Also delete sources.

☒ Set as main project

☐ Use project location as the project folder

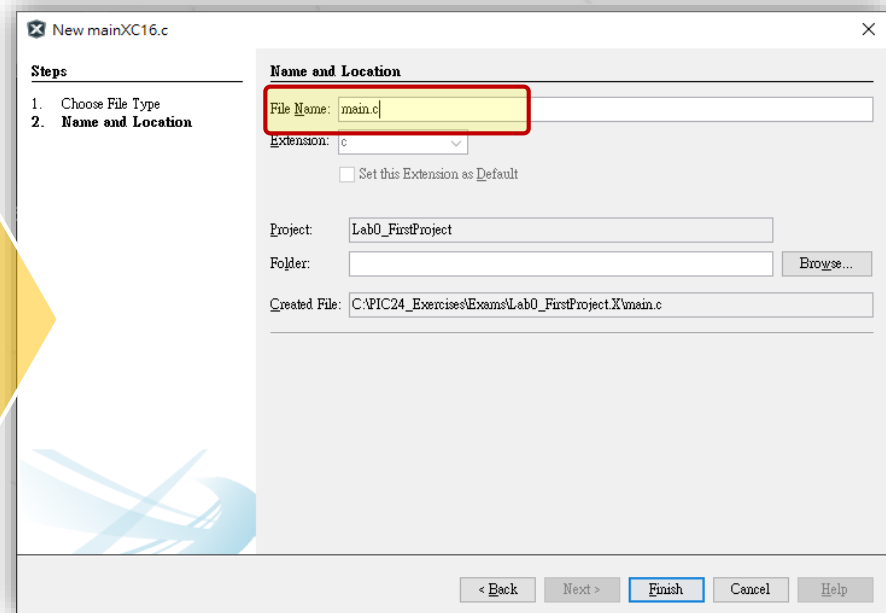
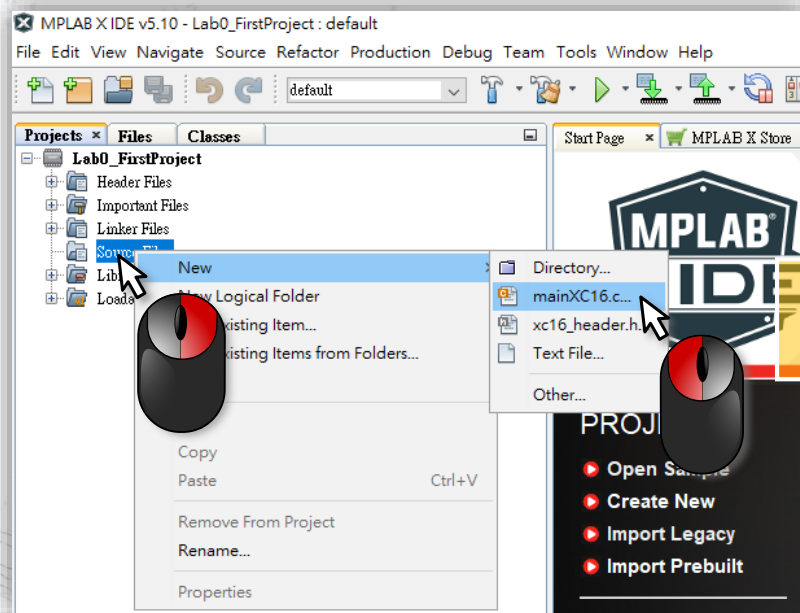
Encoding: UTF-8

< Back Next > **Finish** Cancel Help

Lab0 - Create Project

Step 8

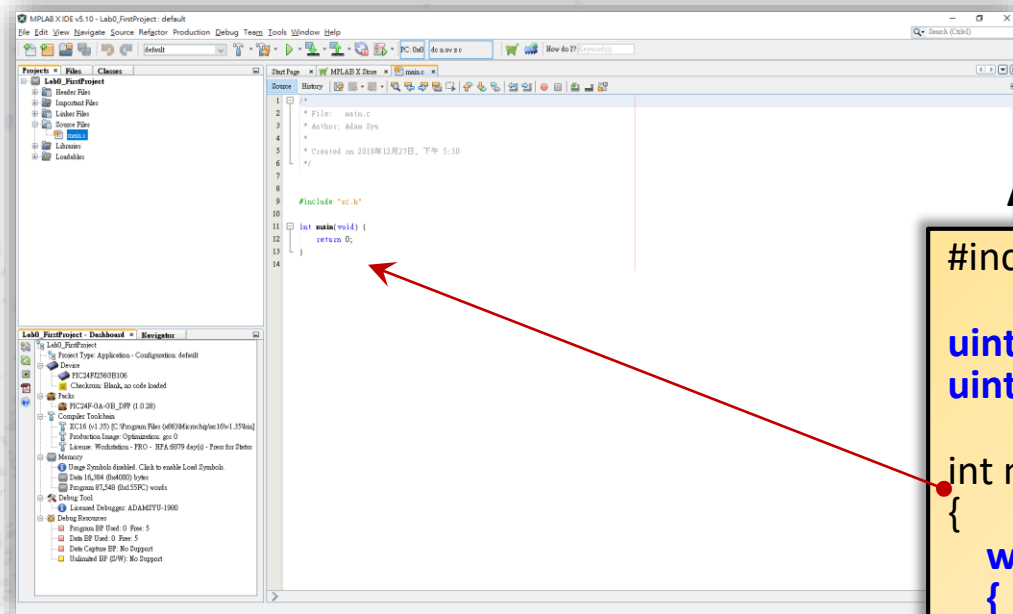
- Getting Started your first c code of PIC24GB.
Focus Project windows,
Right click at Source Files ▶ New ▶ mainXC16.c
File Name : **main.c**



Lab0 - Create Project

Step 9

- Try to add code to main function
Double Click **main.c** to view & add below code to main().



Add below code to main()

```
#include "xc.h"
```

```
uint8_t i = 0;  
uint8_t x = 0;
```

```
int main (void)  
{
```

```
while(1)
```

```
{
```

```
for ( i = 0; i < 200000 ; i++);
```

```
x = x + 1;
```

```
}
```

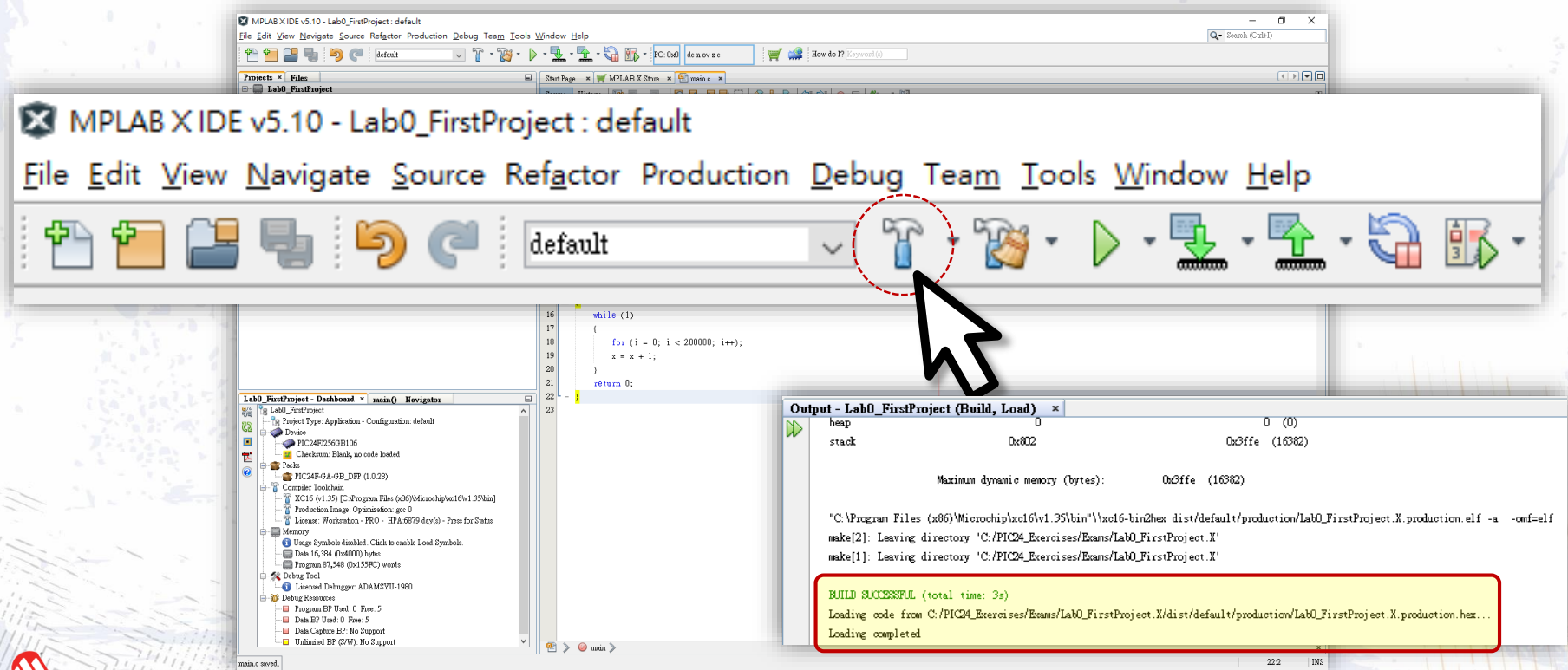
```
return 0;
```

```
}
```

Lab0 - Create Project

Step 10

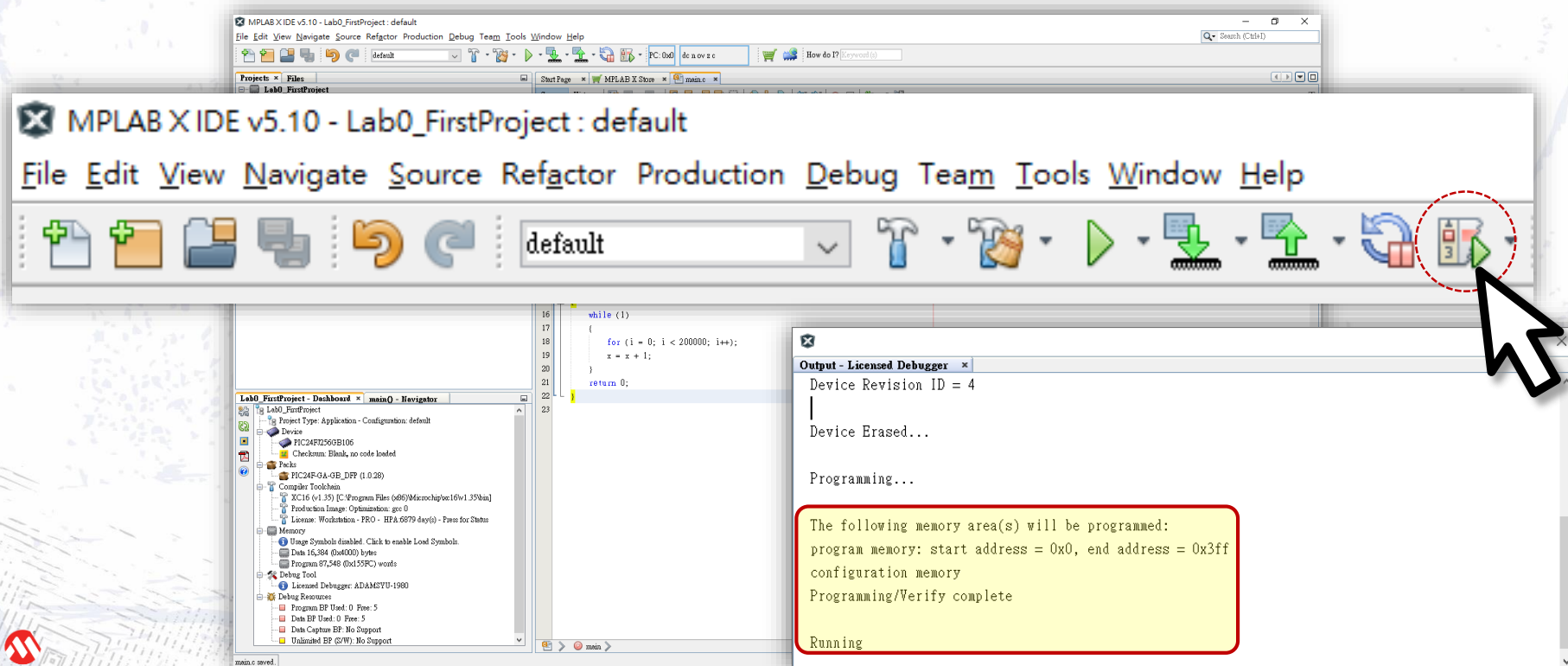
- Try to build your first Project.
Select **Build Main Project** icon 
Make sure **BUILD SUCCESSFUL**



Lab0 - Create Project

Step 11

- Try to program your code to your target board.
Select **Debug Project** icon 
Make sure **Programming/Verify complete & Running**






Lab0 - Create Project

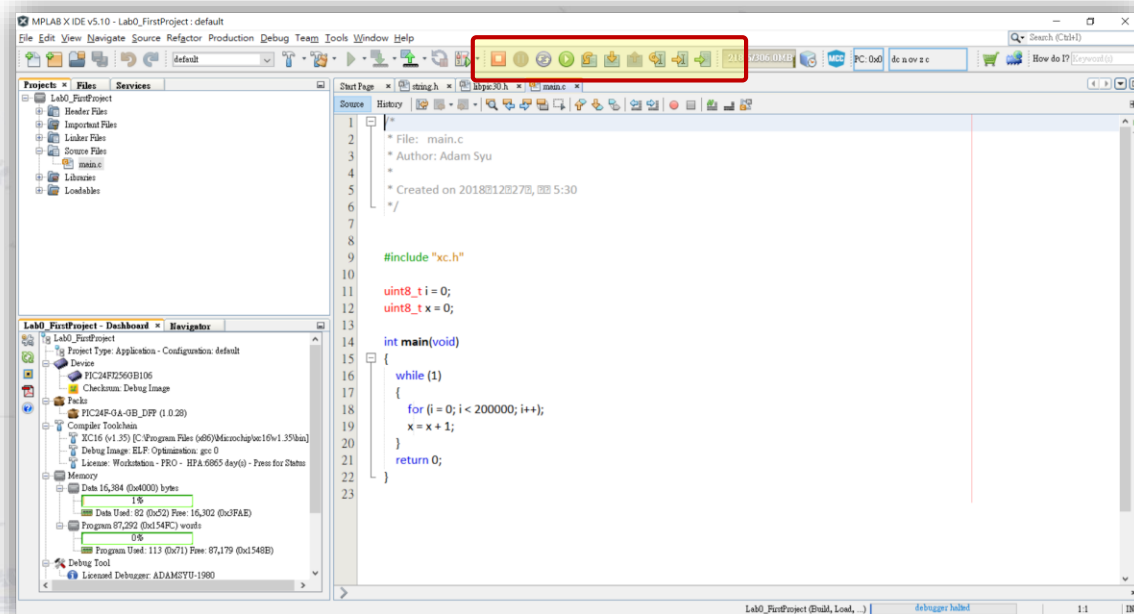
Check Point

**Nothing to happen
at your board ??**

Lab0 - Create Project

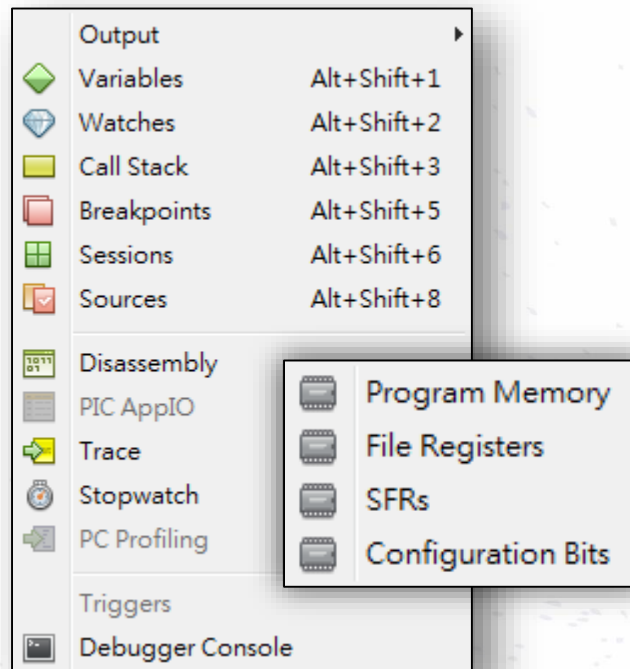
Step 12

- Try to use debug tools bar to observe your program execute flow.
- To understanding differ icon's function. 
- Compare different icons between   .



Lab0 - Create Project Hits

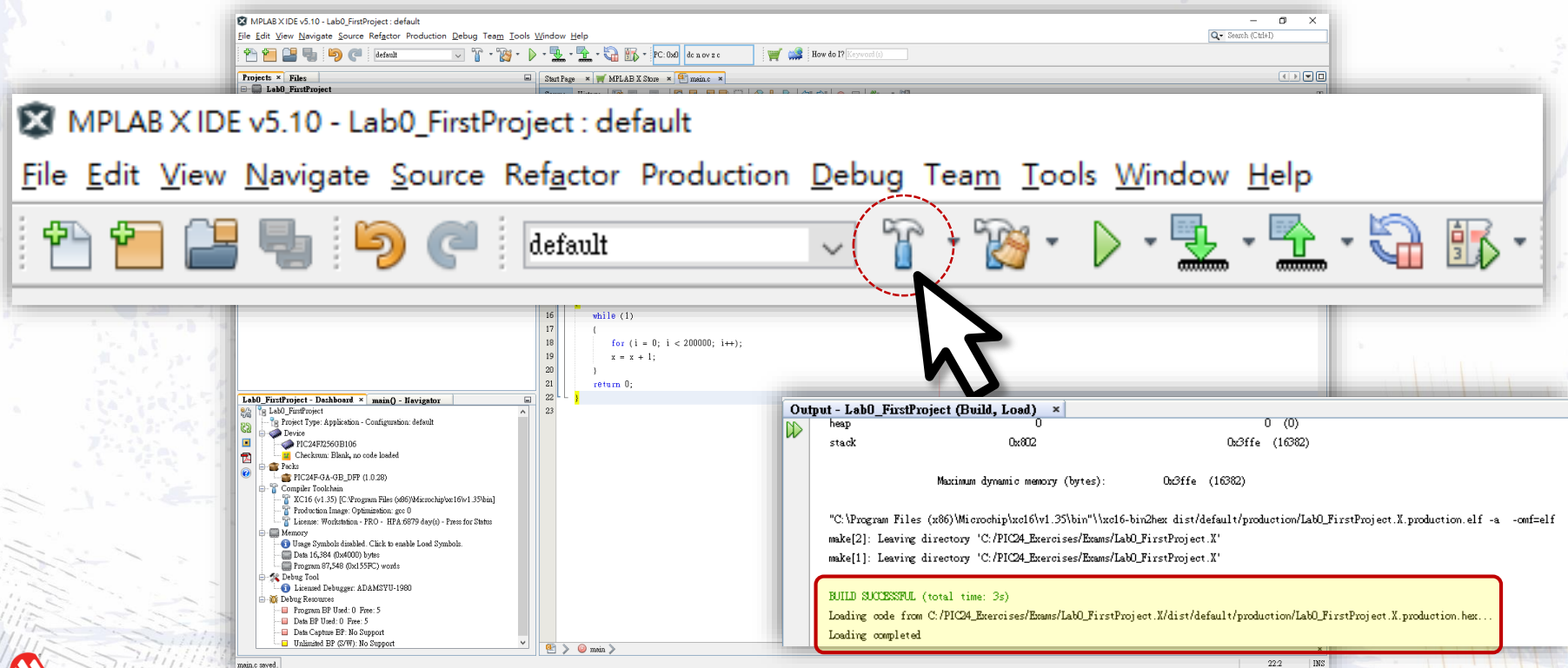
- ◆ MPLAB X IDE provide a lot of debug window.
- ◆ Menu ► Window ► Debugging
 - Menu ► Window ► PIC Memory View



Lab0 - Create Project

Step 13

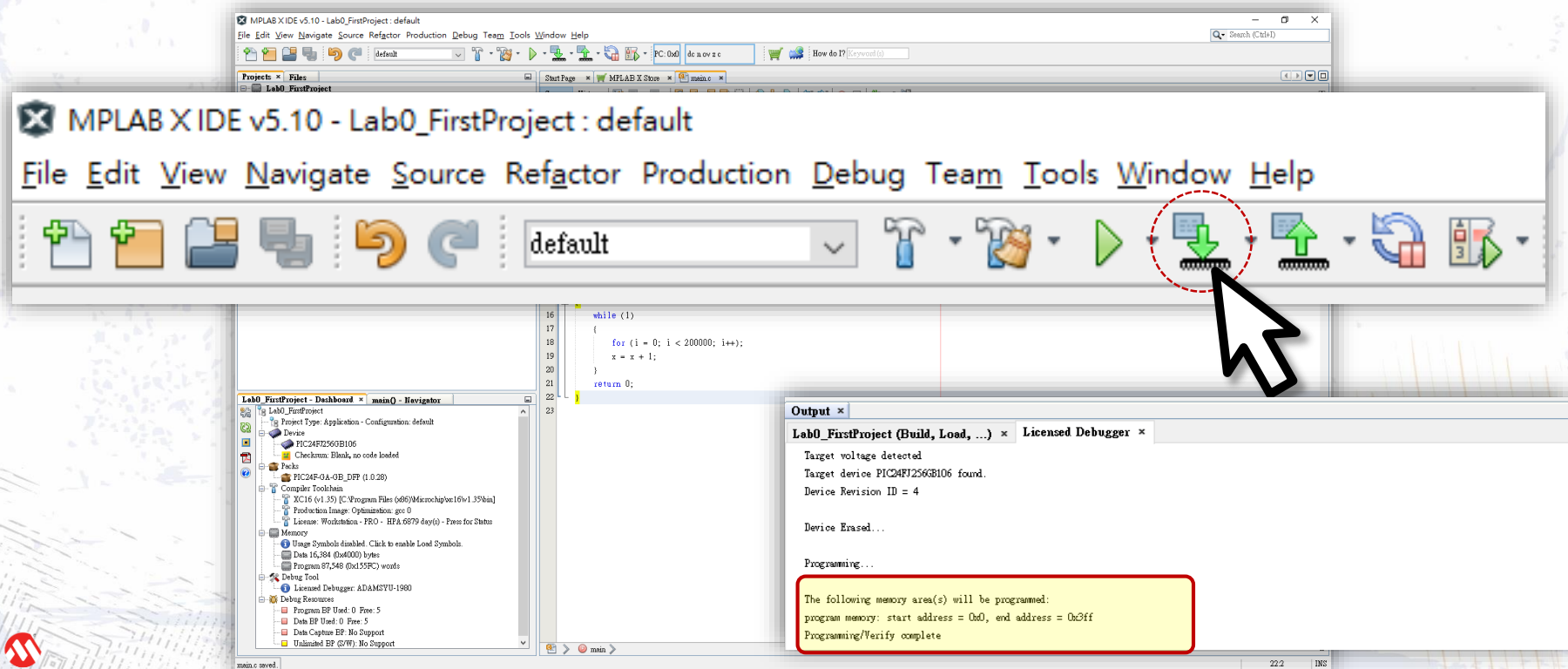
- Try to build your first Project, again.
Select **Build Main Project** icon  this time for release.
Make sure **BUILD SUCCESSFUL**



Lab0 - Create Project

Step 14

- Try to program your code to your target board. Select **Make and Program Device Main Project** icon  Make sure Programming/Verify complete



Lab0 - Create Project

Finished

**Nothing to happen
at your board, also.**