



2016

# Interfacing Bluetooth module with MPLAB Xpress Evaluation Board



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## Introduction

MPLAB Xpress IDE cost free development platform. It's cloud Based IDE available from microchip supporting PIC-based microcontrollers. The platform is comprised of code editor, build automation tools, debugger, code configurator. MPLAB Xpress IDE is an end-to-end solution enabling engineers to develop their applications from initial evaluation to final production.

## Component Requirement

### ➤ Hardware:

- MPLAB Xpress evaluation tool
- HC-05 Bluetooth module
- Mobile phone with Bluetooth terminal app

### ➤ Software:

- MPLAB Xpress IDE



## Procedure

**Step 1:** Open your Browser and go to following link

<https://mplabxpress.microchip.com/mplabcloud/ide>

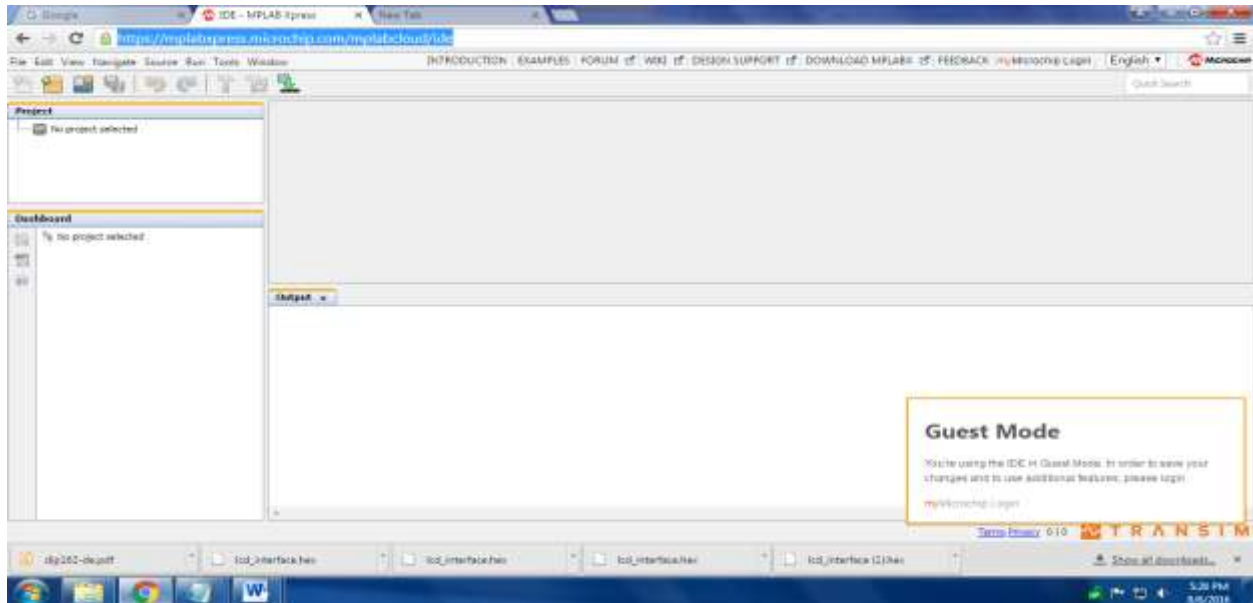


Figure 1 MPLAB Xpress IDE main window

**Step 2:** start creating our new project. Go to **File >> New Project**. Select **microchip embedded** as well as **standalone project** then click **next**

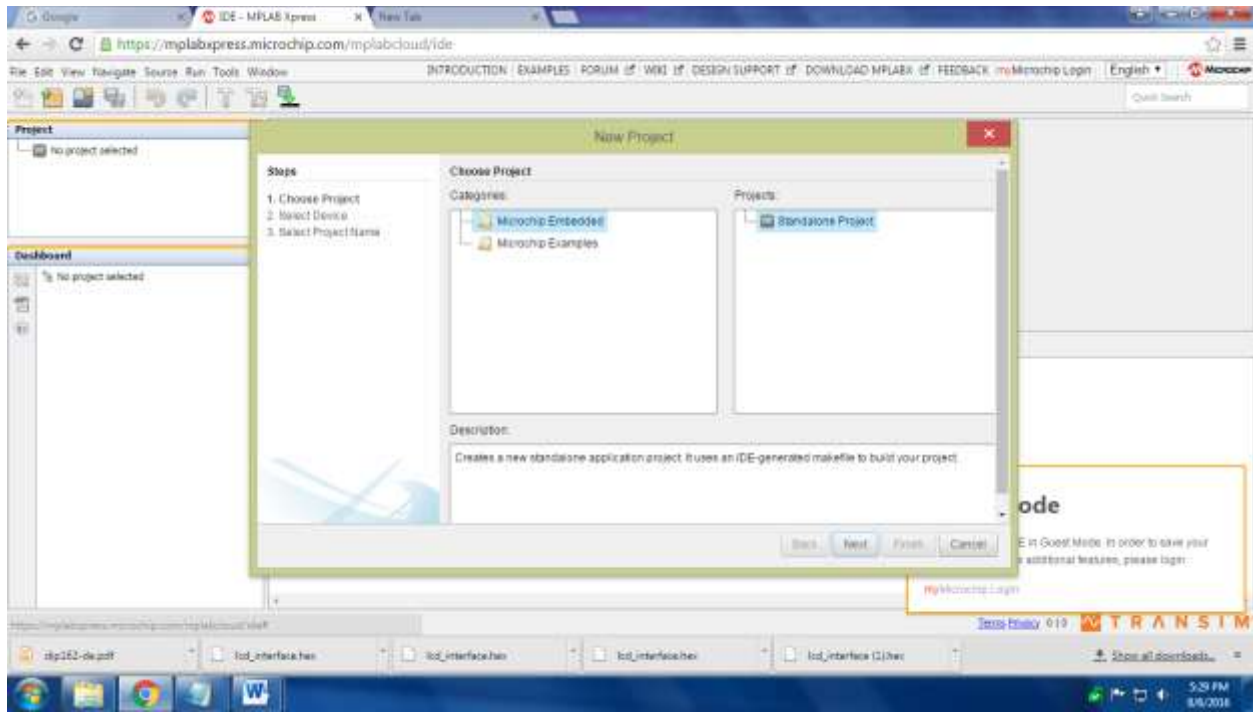


Figure 2 Open new project

**Step 3:** Select device **pic16f18855**, and click **next** .

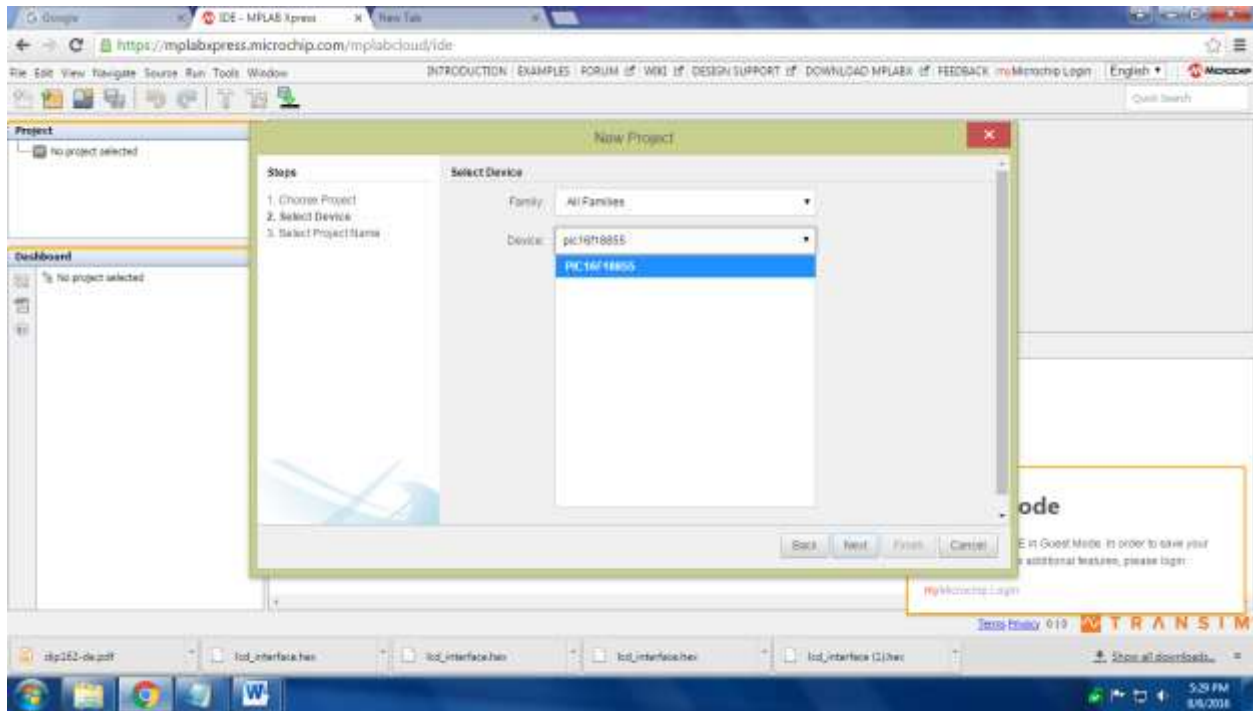


Figure 3 select Device

**Step 4:** then give project name and click finish.

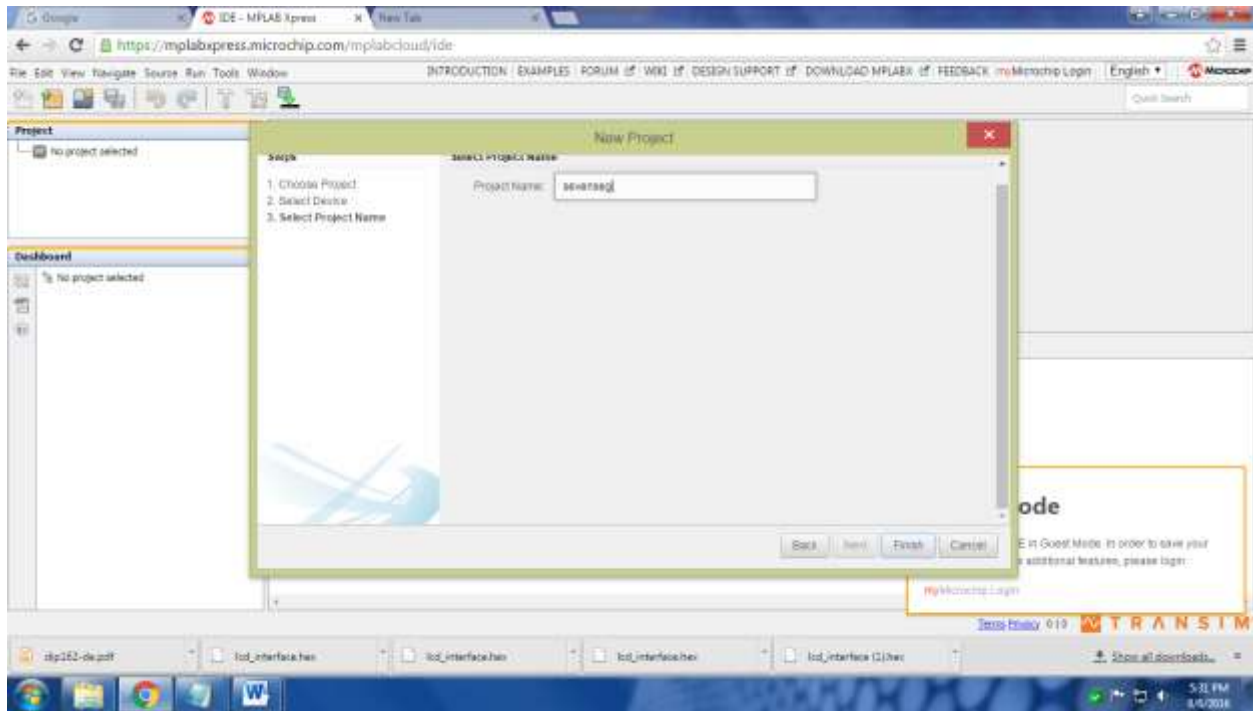


Figure 4 give project name

**Step 5:** Now choose mplab xpress code configurator if its not present in your Device please Download and install from following link. <http://www.microchip.com/mplab/mplab-code-configurator>

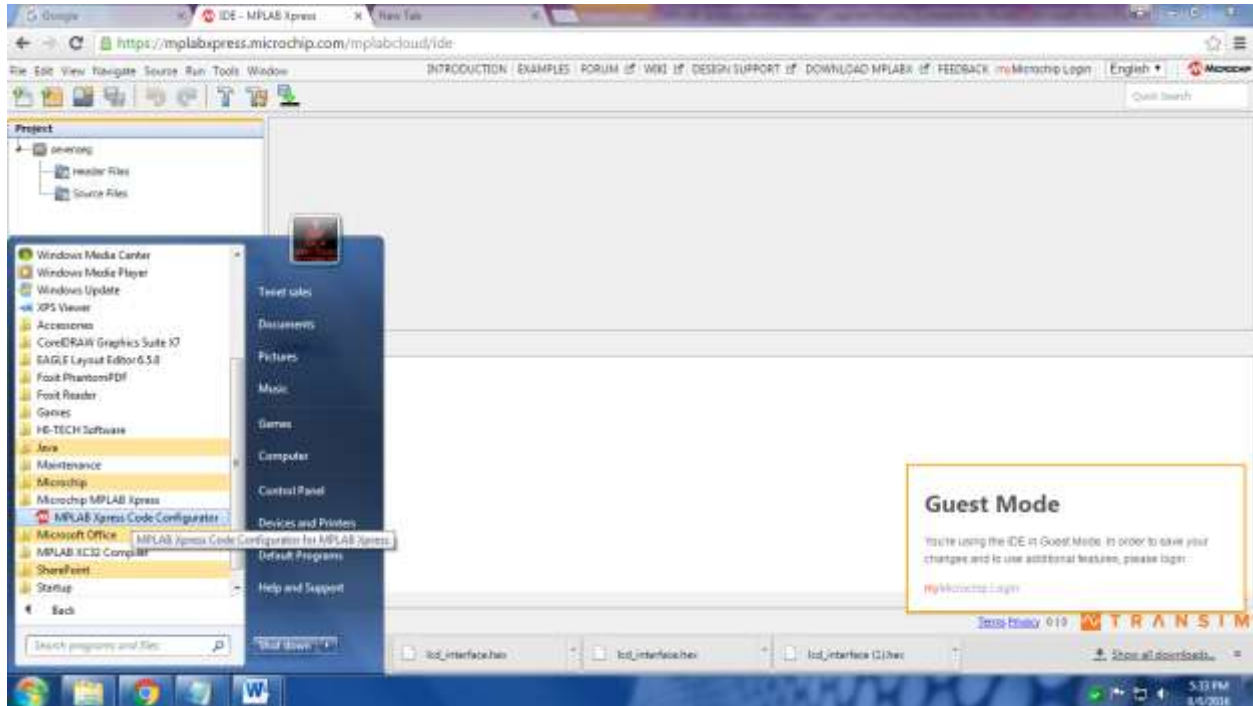


Figure 5 Select mplab xpress code configurator



**Step 6:** Now we can see our mlab xpress configuration window and select system module in mlab xpress configuration window .

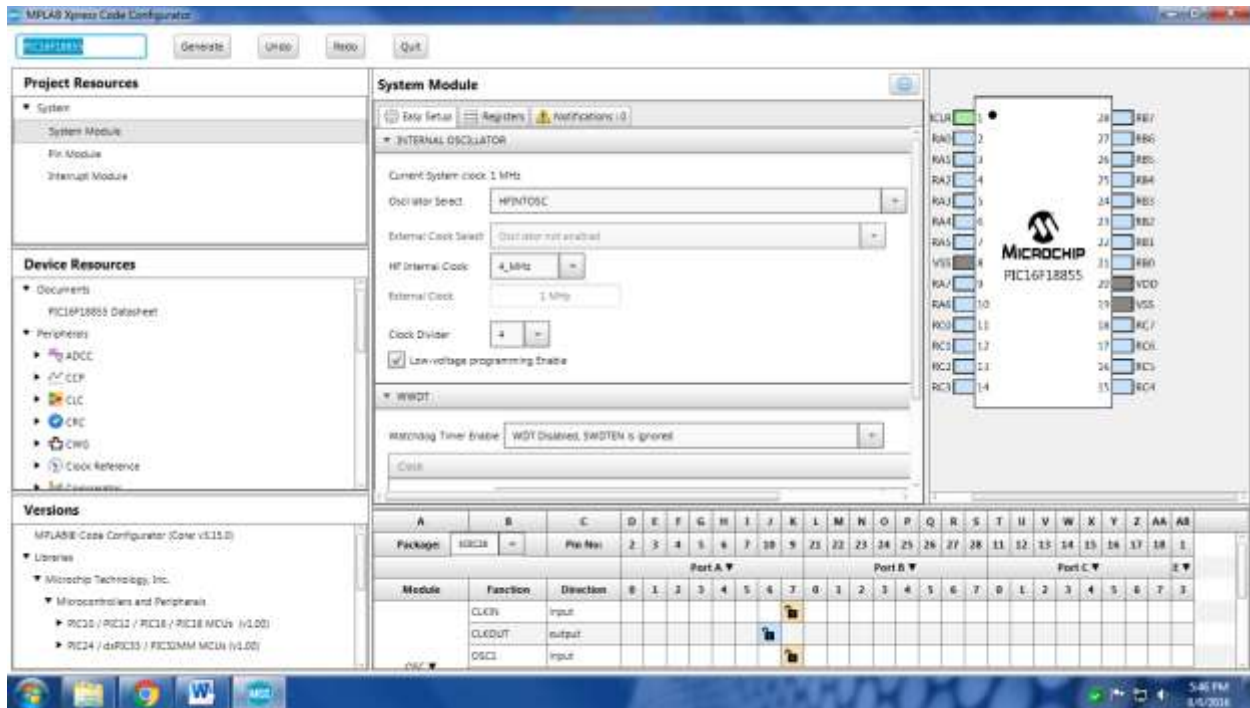


Figure 6 Assign project name

### Step 7: Make oscillator configuration

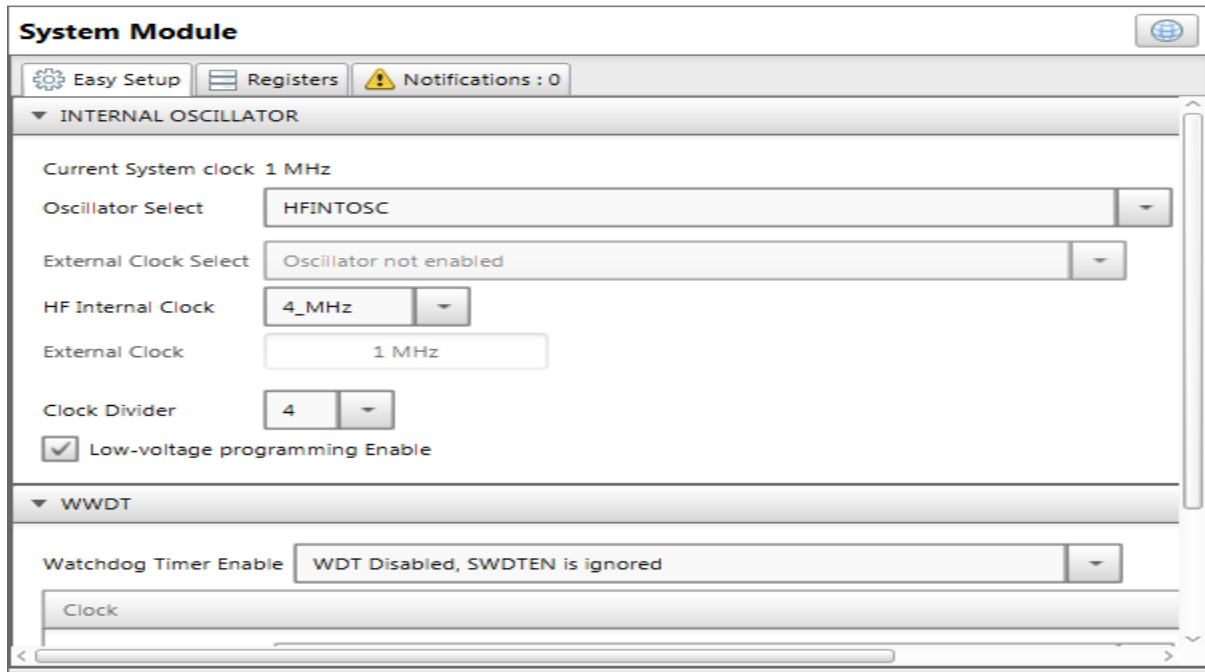


Figure 7 oscillator configuration



**Step 8:** Select pin RC0,RC1 make it digital IO and select URAT from device resource

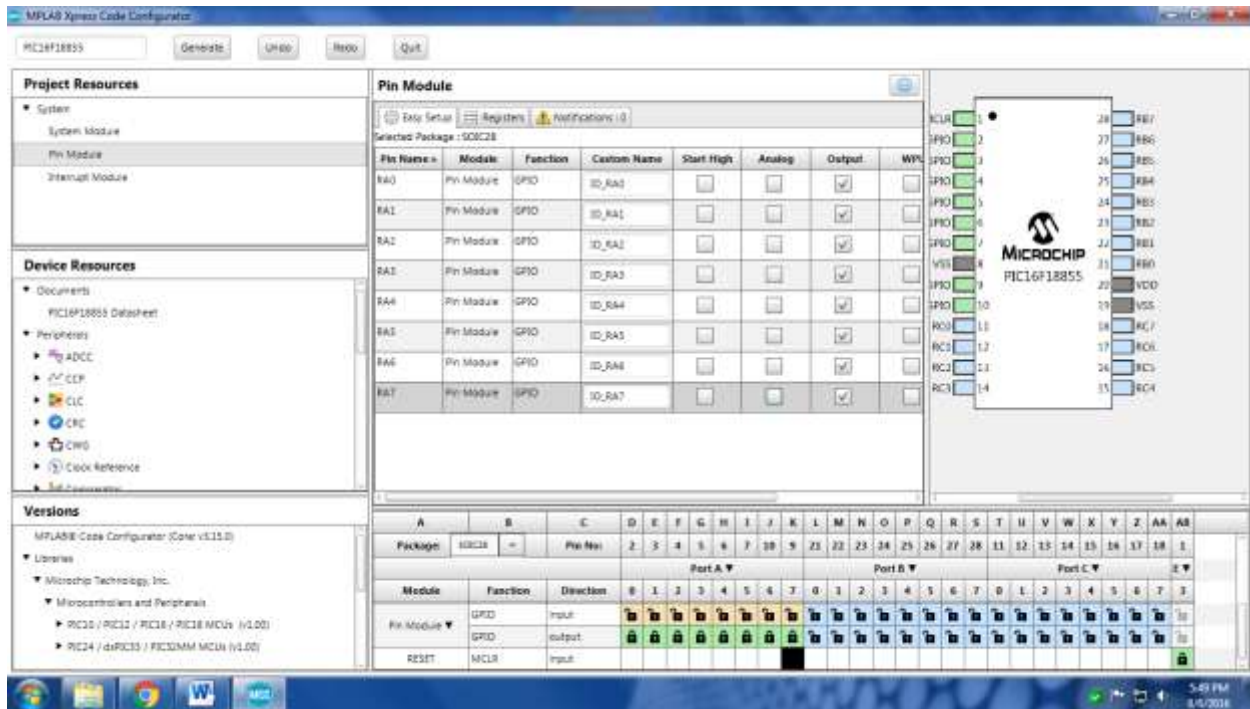


Figure 8 pin configuration set

**Step 9:** Now click Generate option.

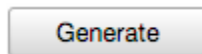


Figure 9 click Generate

**SOURCE CODE:**

```
#include "mcc_generated_files/mcc.h"

void main(void)

{

    // initialize the device

    SYSTEM_Initialize();

    while (1)

    {

        printf("tenet tech\n\r");

    }

}
```



**Step 10:** Go to your MPLAB xpress IDE Erase all existing code and copy above code past there and add header file from given file then make clean and build for Export . if you done this go to download you can see hex file for your project.

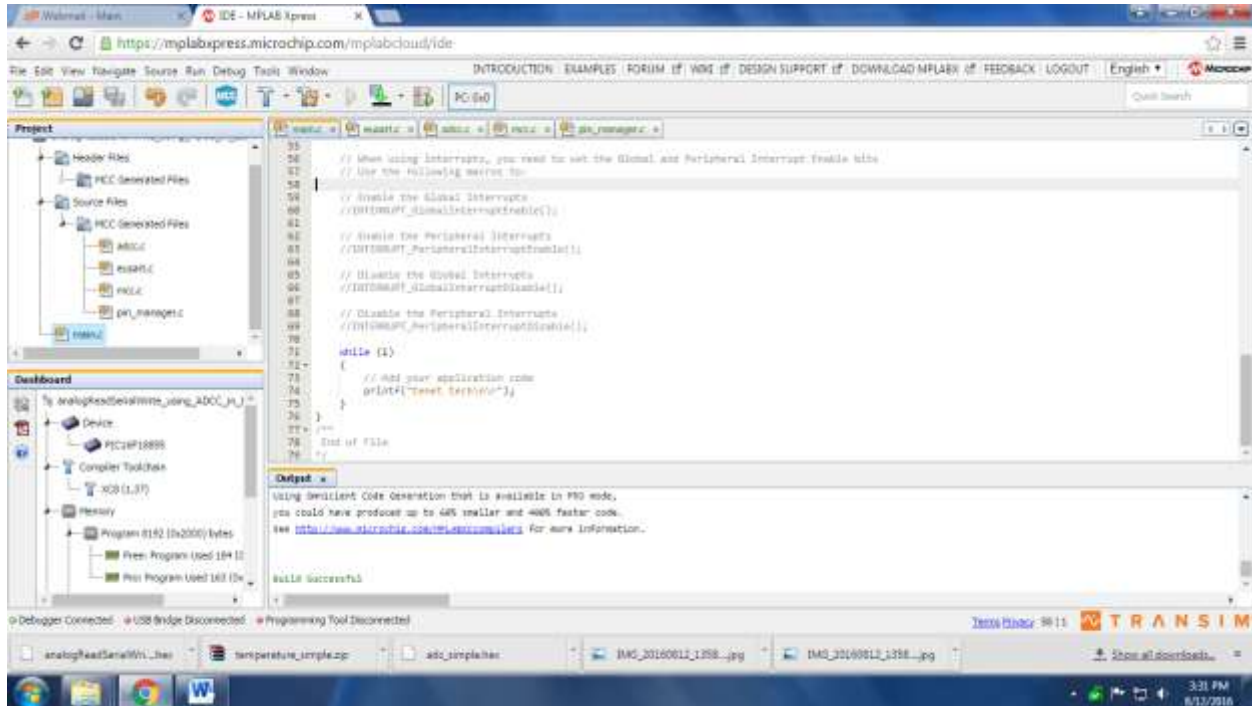
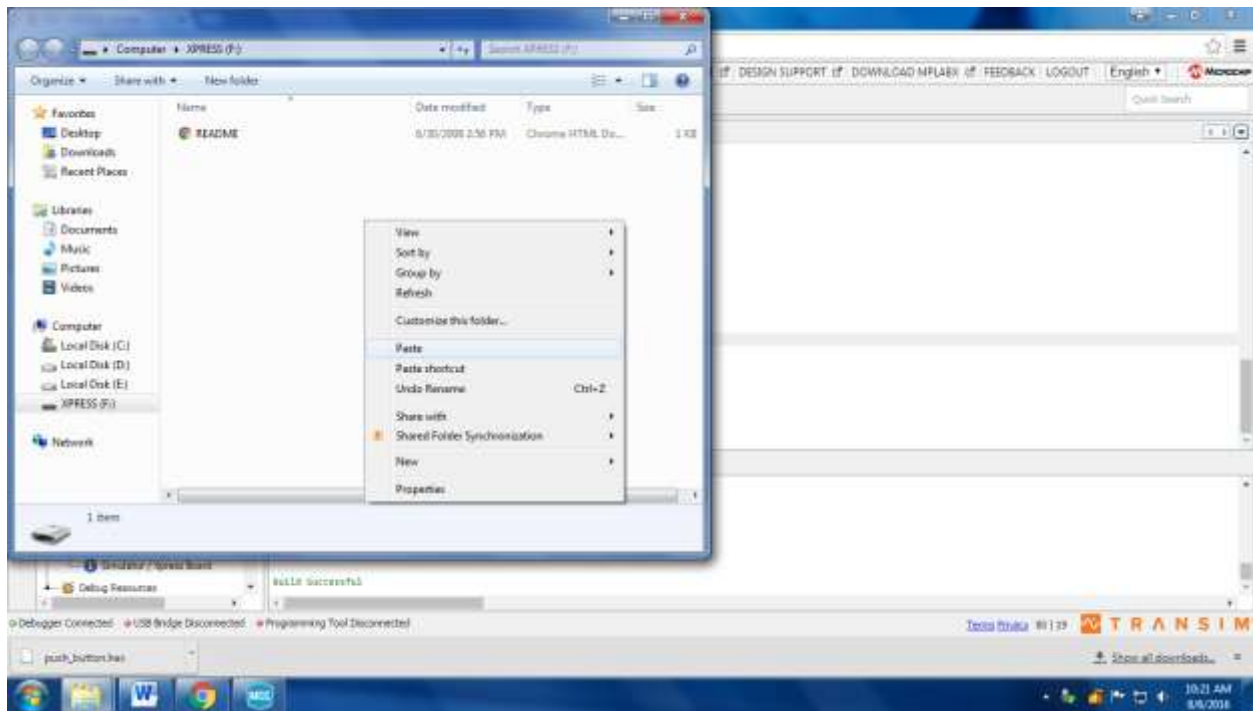


Figure 10 Build the project

**Step 11:** Now, if all goes well connect the Micro B cable to pic16f18855 (mplab xpress demonstration board) and connect it to your computer. If you done you can see your devise. And copy that Hex file to your device. And make hardware connection.



**Output:**



Figure 12 output

**For product link:**

<http://www.tenettech.com/product/8828/mplab-xpress-development-board>

**For more information please visit:** [www.tenettech.com](http://www.tenettech.com)

**For technical query please send an e-mail:** [info@tenettech.com](mailto:info@tenettech.com)

