



2016

Generating Delay using timer 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
- LED

➤ Software:

- MPLAB Xpress IDE

Note: we have on board LED



Procedure

Step 1: Open your Browser and go to following link

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

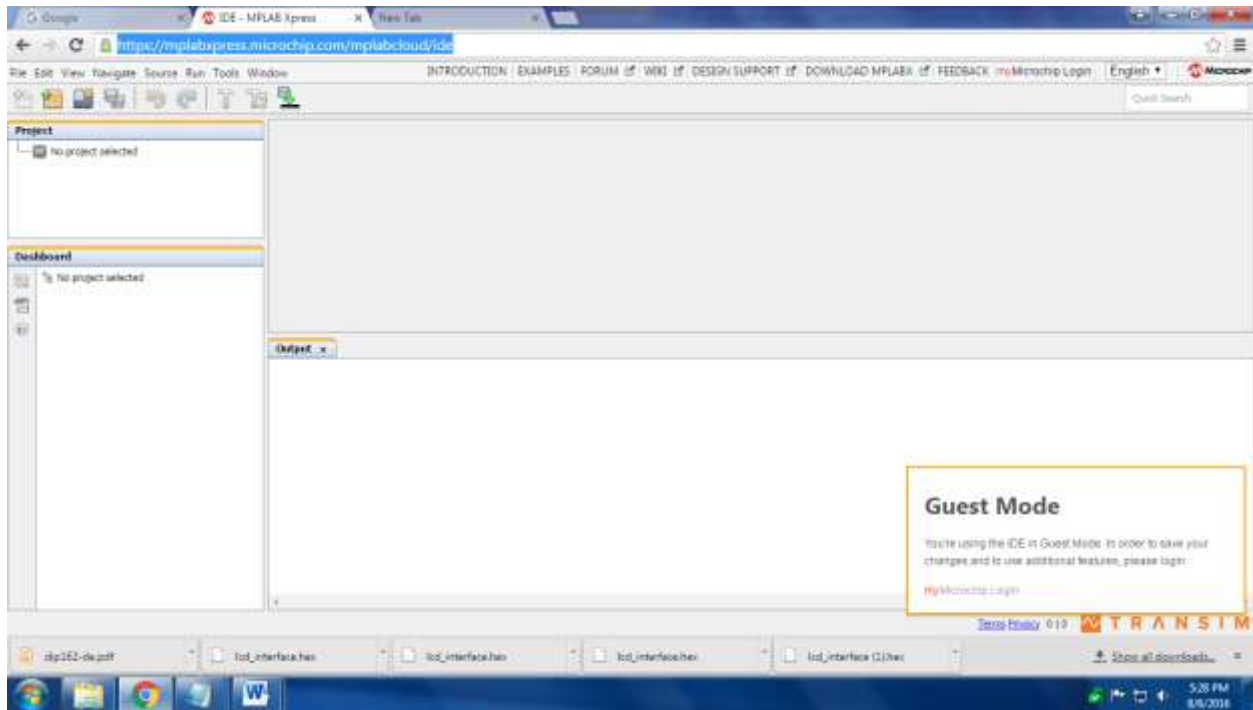


Figure 1 MPLAB Xpress IDE main window

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

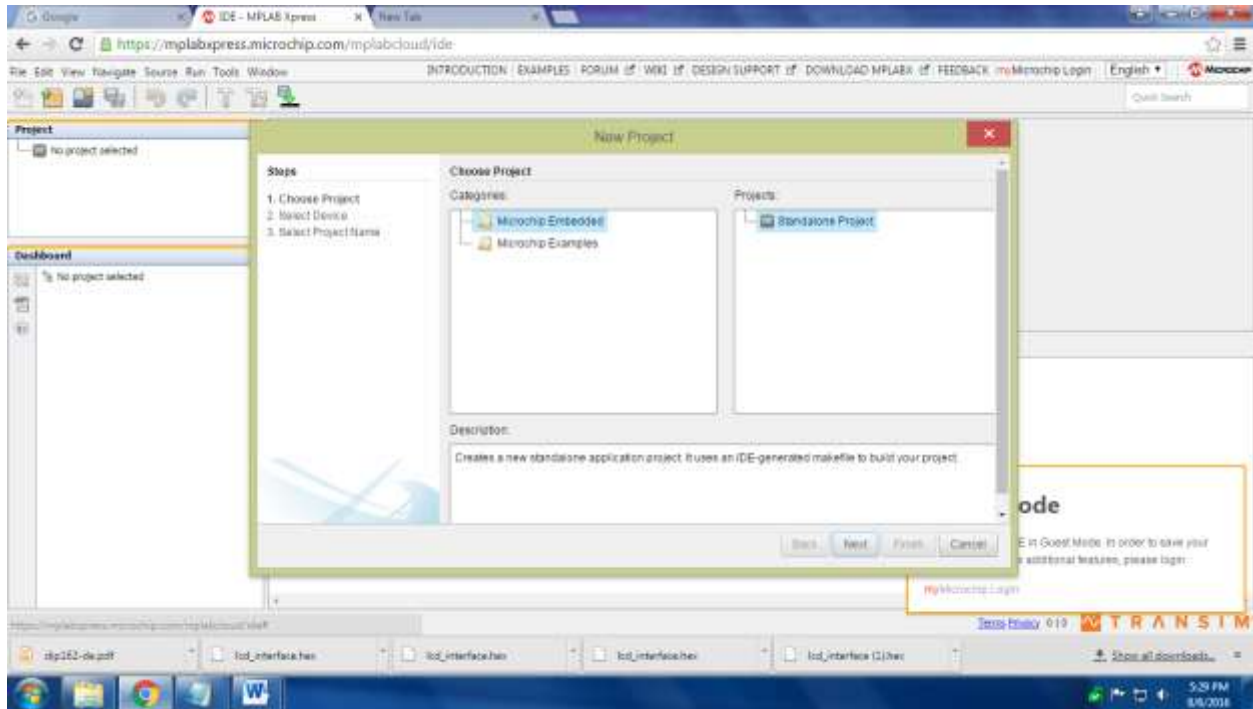


Figure 2 Open new project

Step 3: Select device PIC16F18855, and click next .

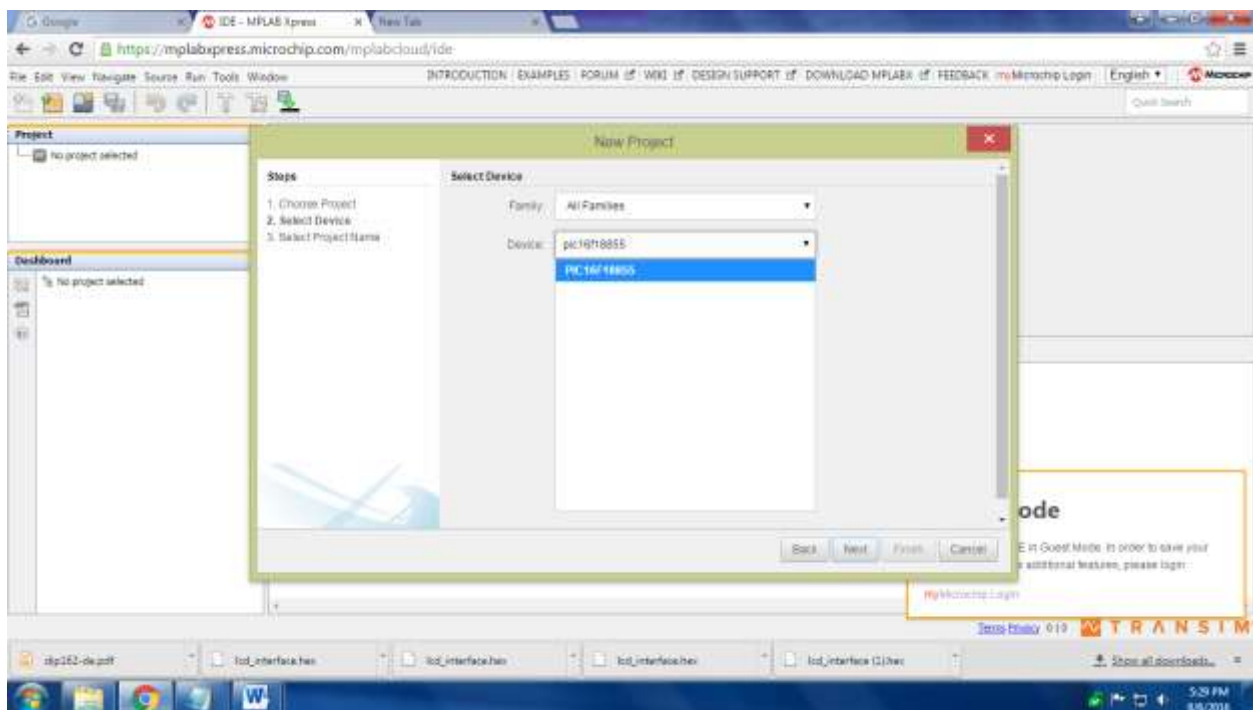


Figure 3 select Device

Step 4: Then give project name and click finish.

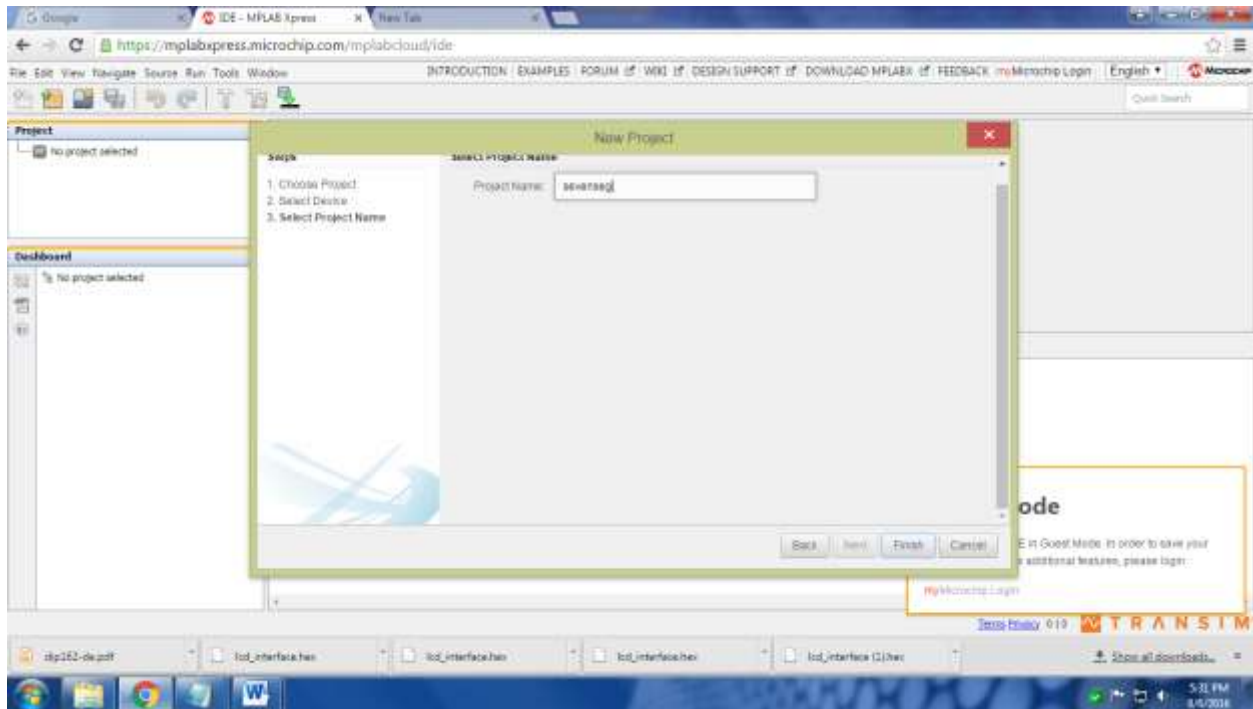


Figure 4 give project name

Step 5: Now choose MPLAB Xpress code configurator if its not present in your Device please [Download and install.](#)

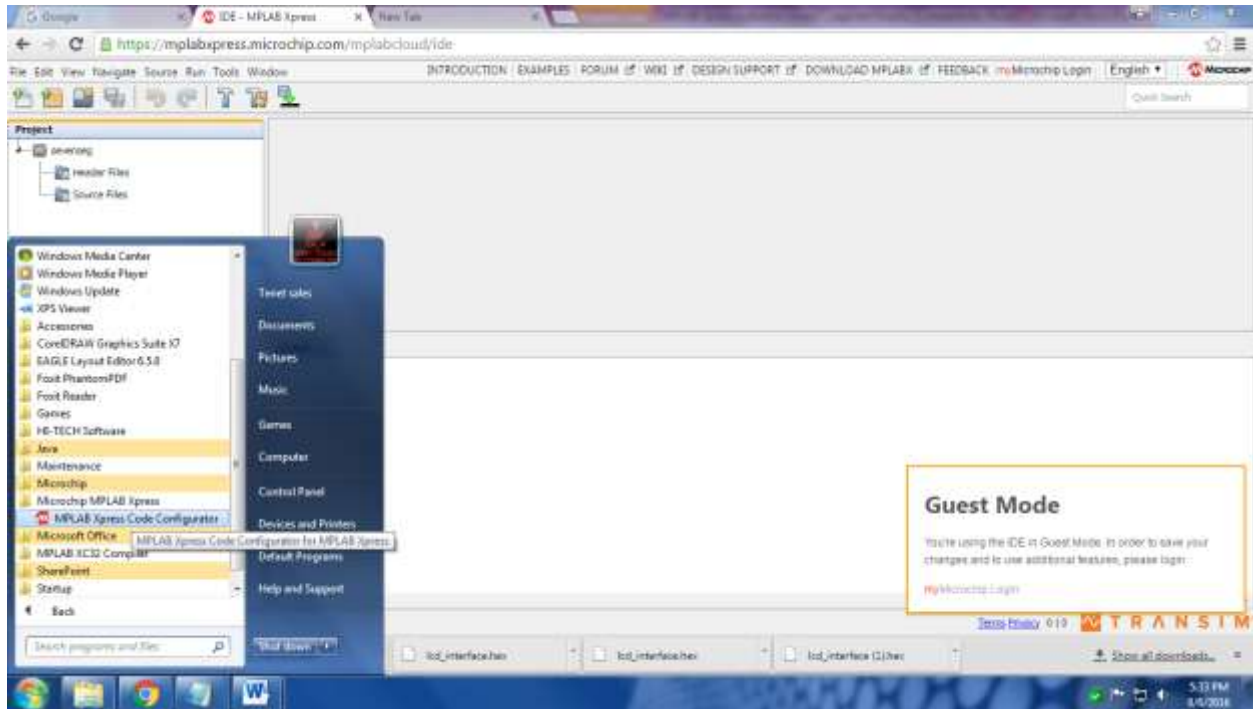


Figure 5 Select mplab xpress code configurator

Step 6: Now we can see our MPLAB Xpress configuration window and select system module in MPLAB Xpress configuration window .

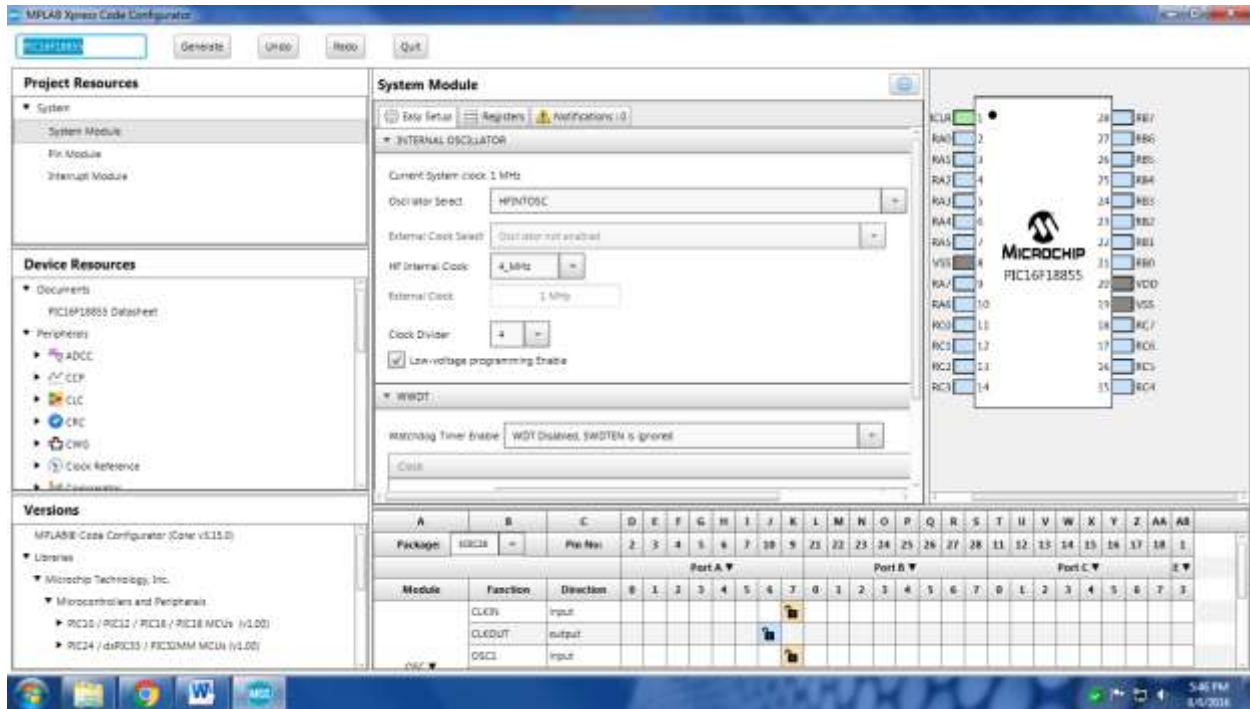


Figure 6 Assign project name

Step 7: Make oscillator configuration and select required pin .

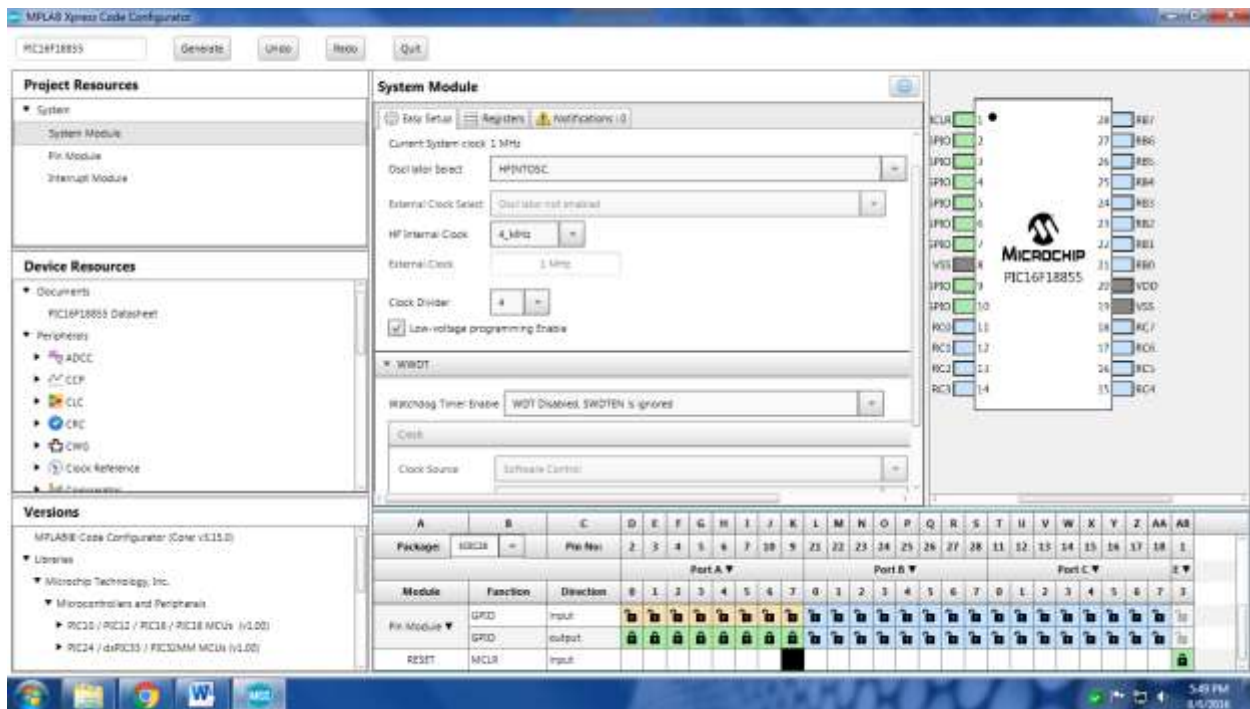


Figure 7 select pin

Step 8: Select pin module in MPLAB Xpress configuration window. Which pin you want you can choose here And select peripherals timer Finally click Generate Window.

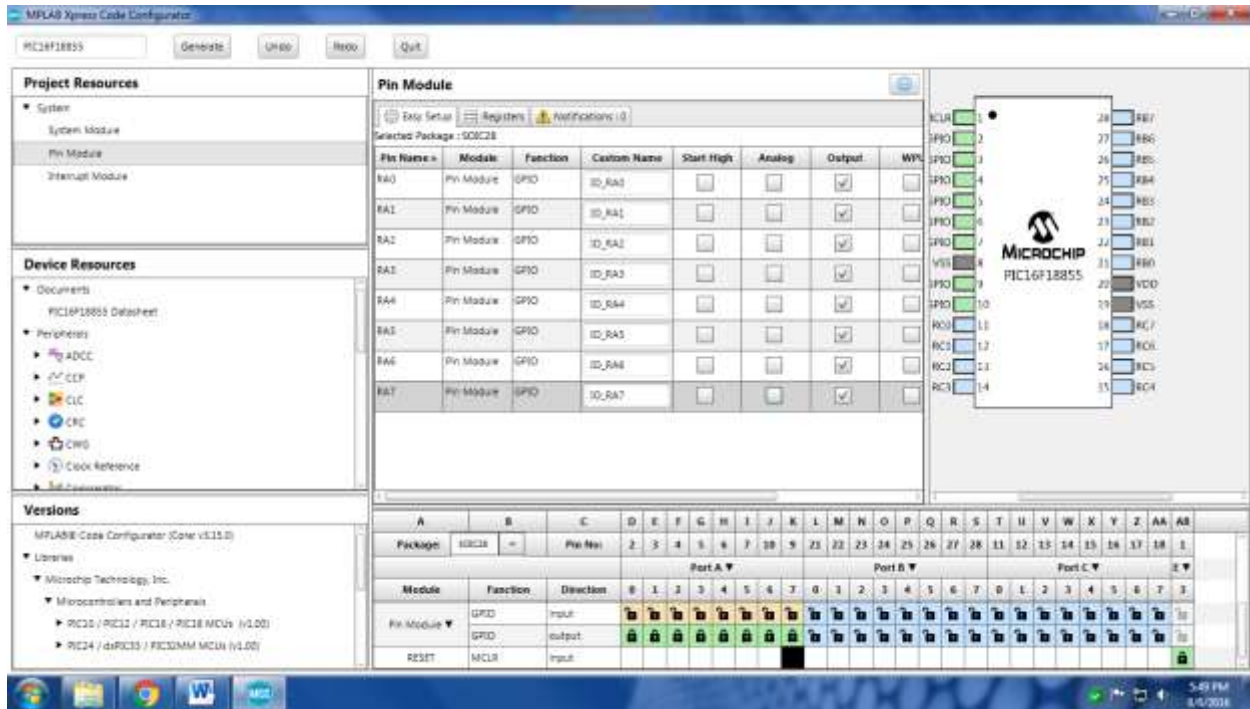


Figure 8 pin configuration set

SOURCE CODE:

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

void main(void)

{

    SYSTEM_Initialize();          // initialize the device

    while (1)

    {

        if (TMR0_HasOverflowOccured())

        {

            IO_RA0_Toggle();      //Switch state of RA2 LED

            IO_RA1_Toggle();

            TMR0IF = 0;          //Clear the Timer0 flag

        }

    }

}
```



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.



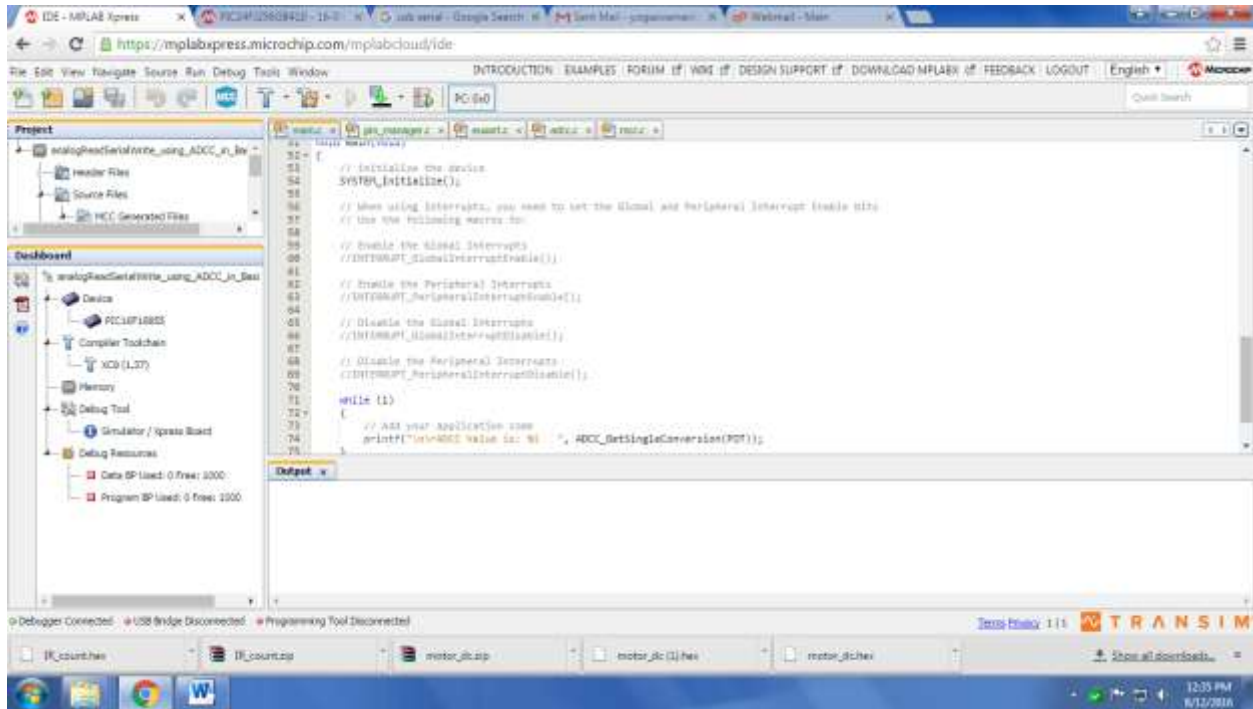


Figure 9 Build the project

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.

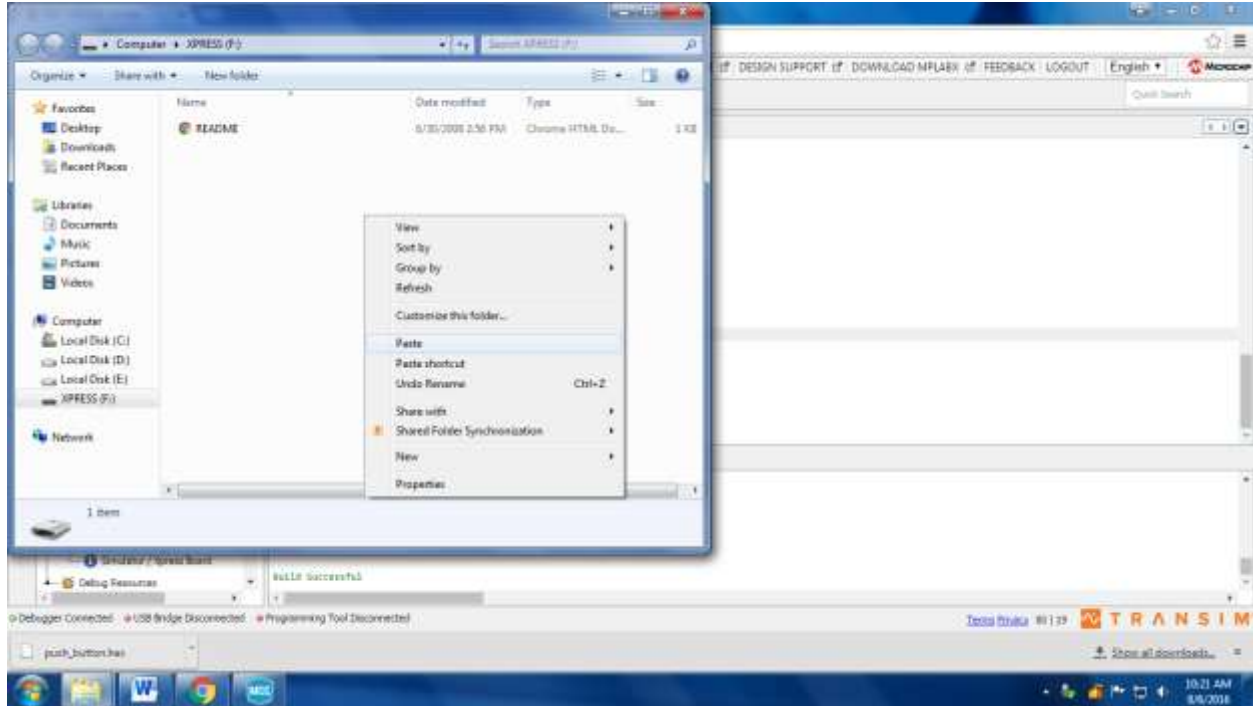


Figure 10 Build the project

Output:

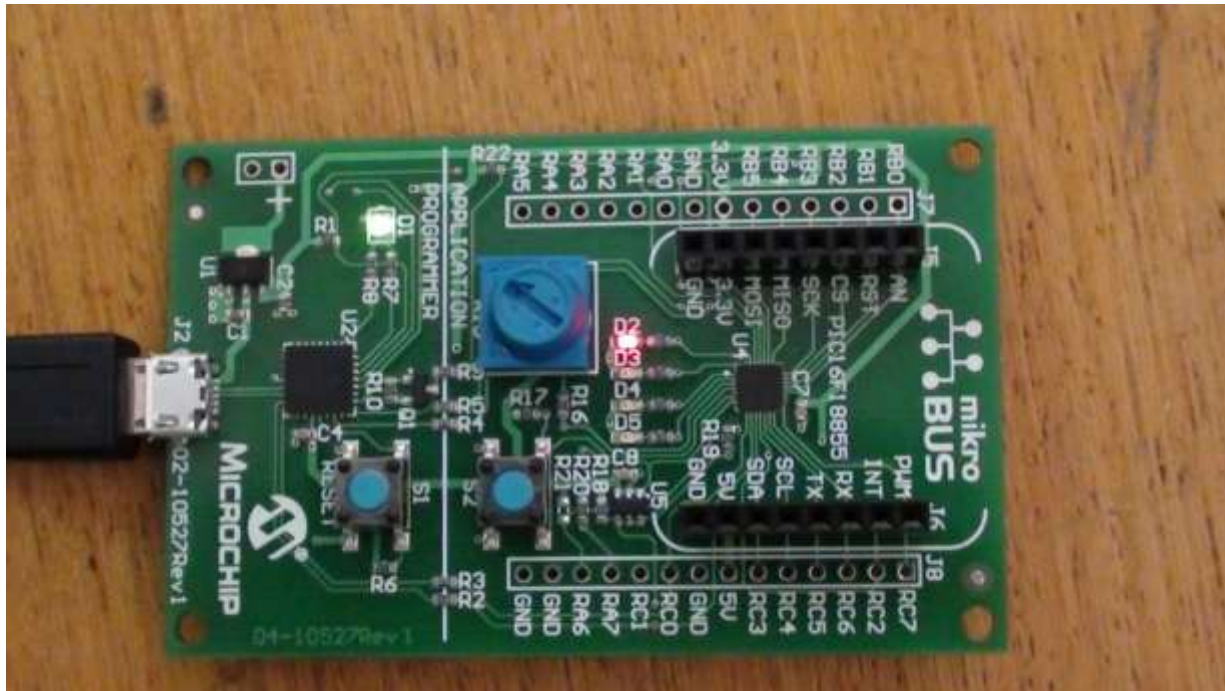


Figure 12 output

For product link:

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

For more information please visit: www.tenettech.com

For technical query please send an e-mail: info@tenettech.com