2016

Handling Interrupt in
MPLAB Xpress Evaluation Board

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Contents

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:**

      o MPLAB Xpress evaluation tool

      o   LED

      o Push button

➢ **Software:**

      o MPLAB Xpress IDE

Note: we have on board LED and pushbutton

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Procedure

Step 1: Open your Browser and go to following link

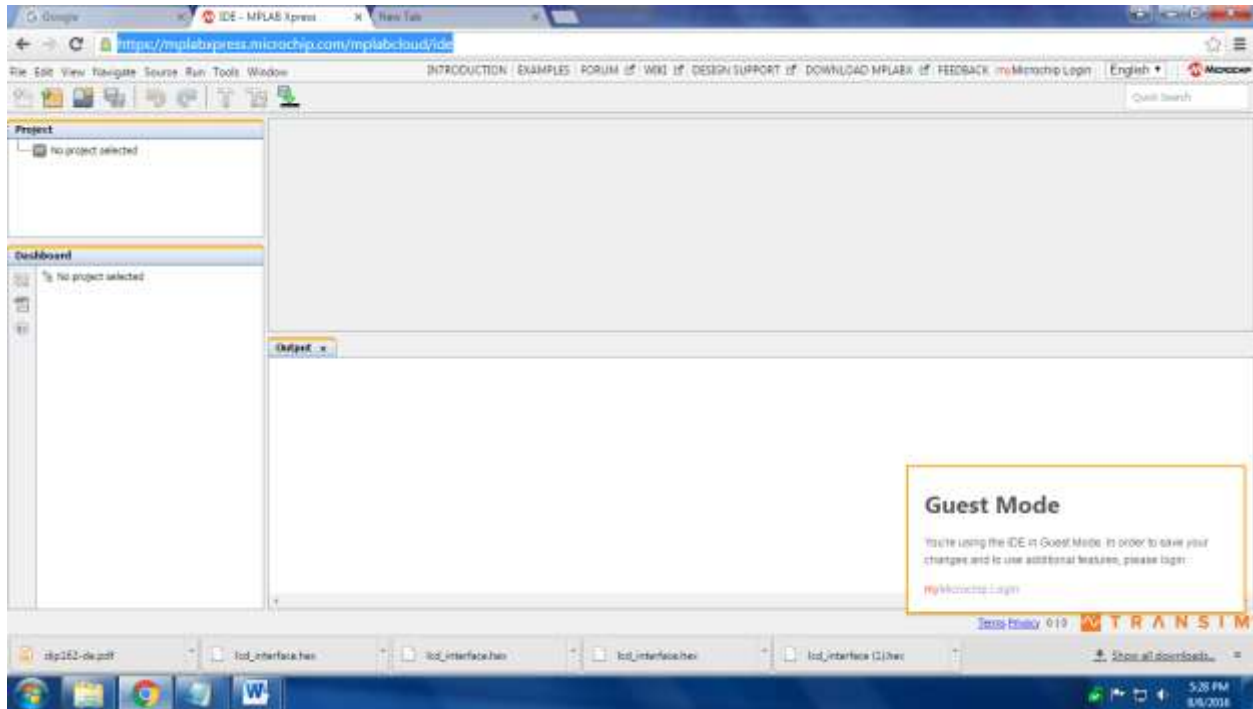https://mplabxpress.microchip.com/mplabcloud/ide

Figure 1 MPLAB Xpress IDE main window

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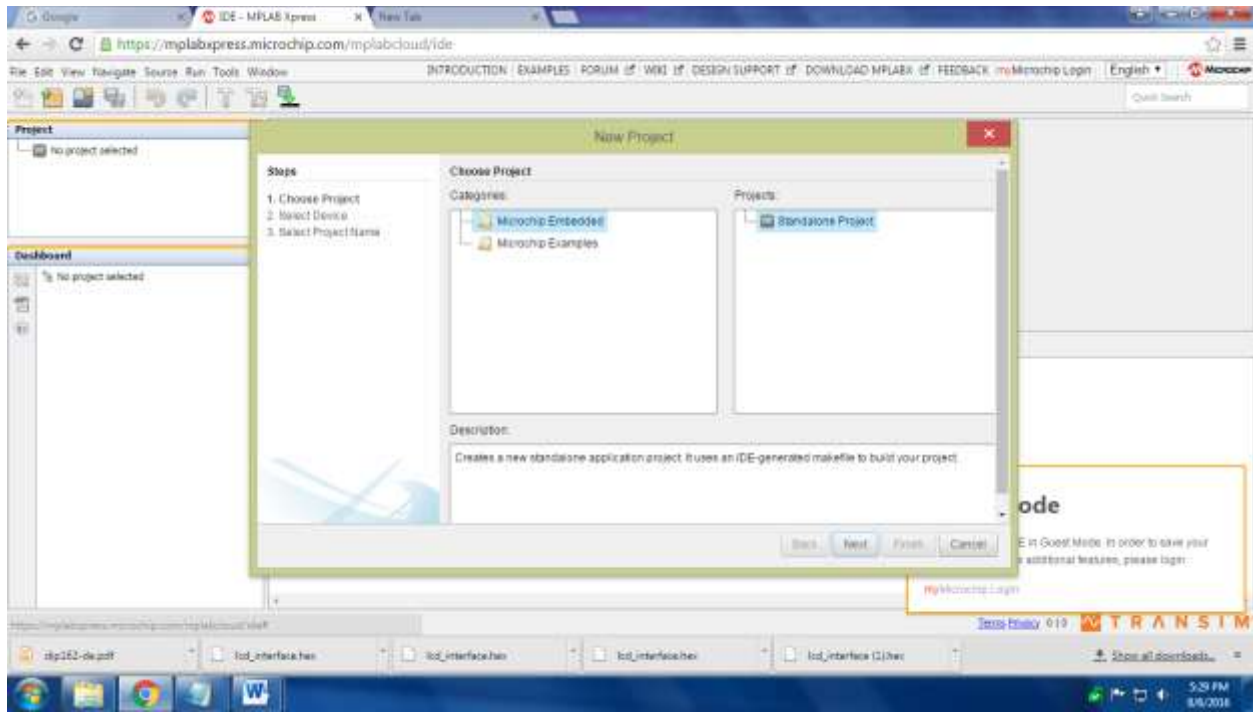
as well as **standalone project** then click **next**

Figure 2 Open new project

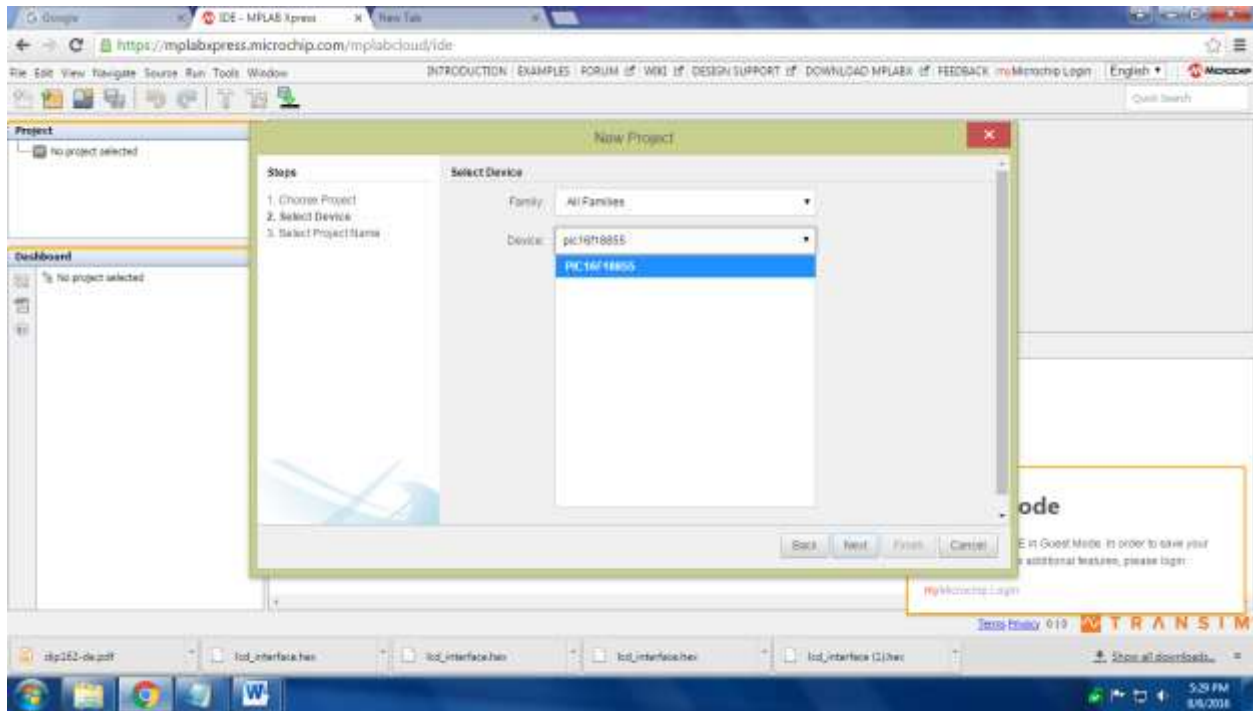**Step 3:** Select device **pic16f18855**, and click **next .**

Figure 3 select Device

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

Figure 4 give project name

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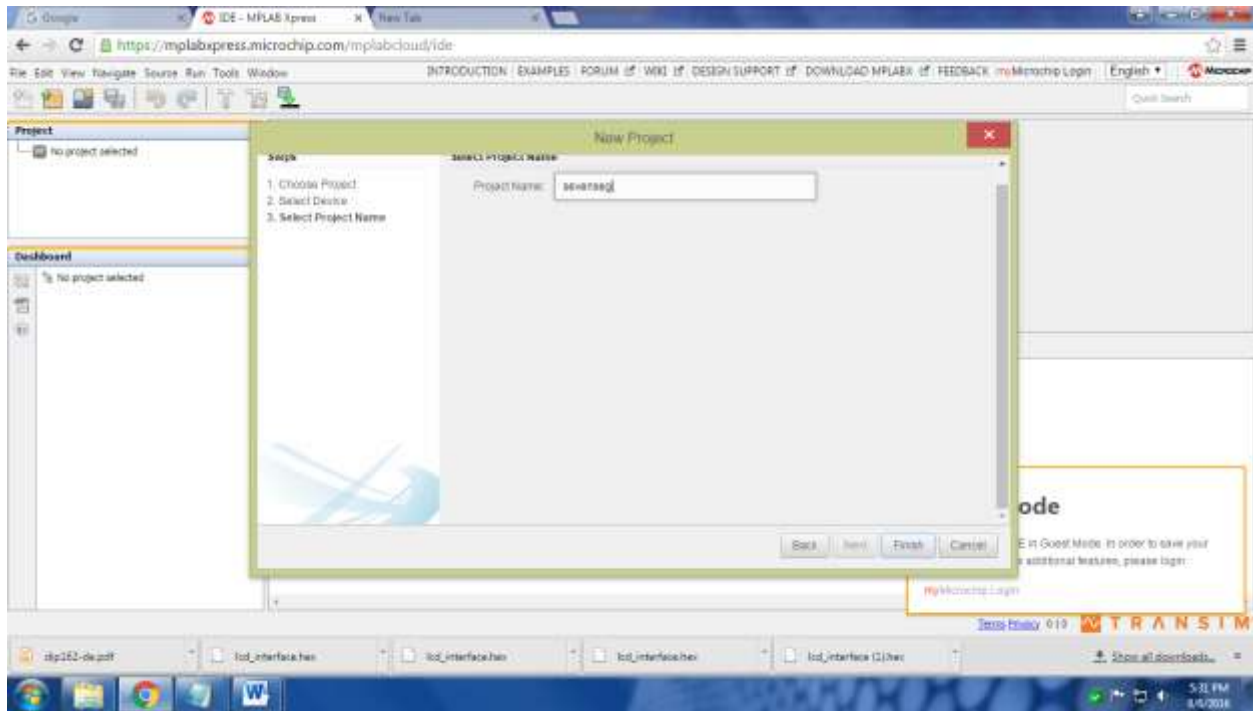Ph. No: 080-26722726., Website: www.tenettech.com, Email: info@tenettech.com**

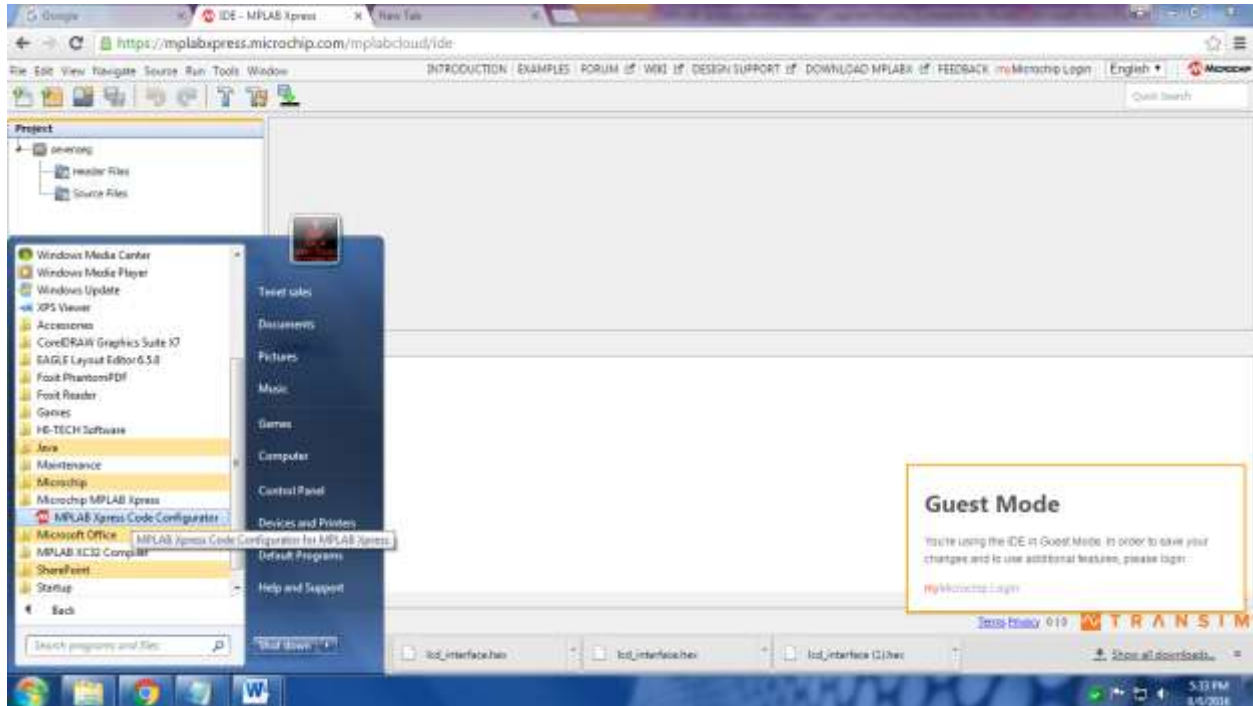**Step 5:** Now choose mplab xpress code configurator if its not present in your Device please Download and install from following link. http://www.microchip.com/mplab/mplab-code-configurator

Figure 5 Select mplab xpress code configurator

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

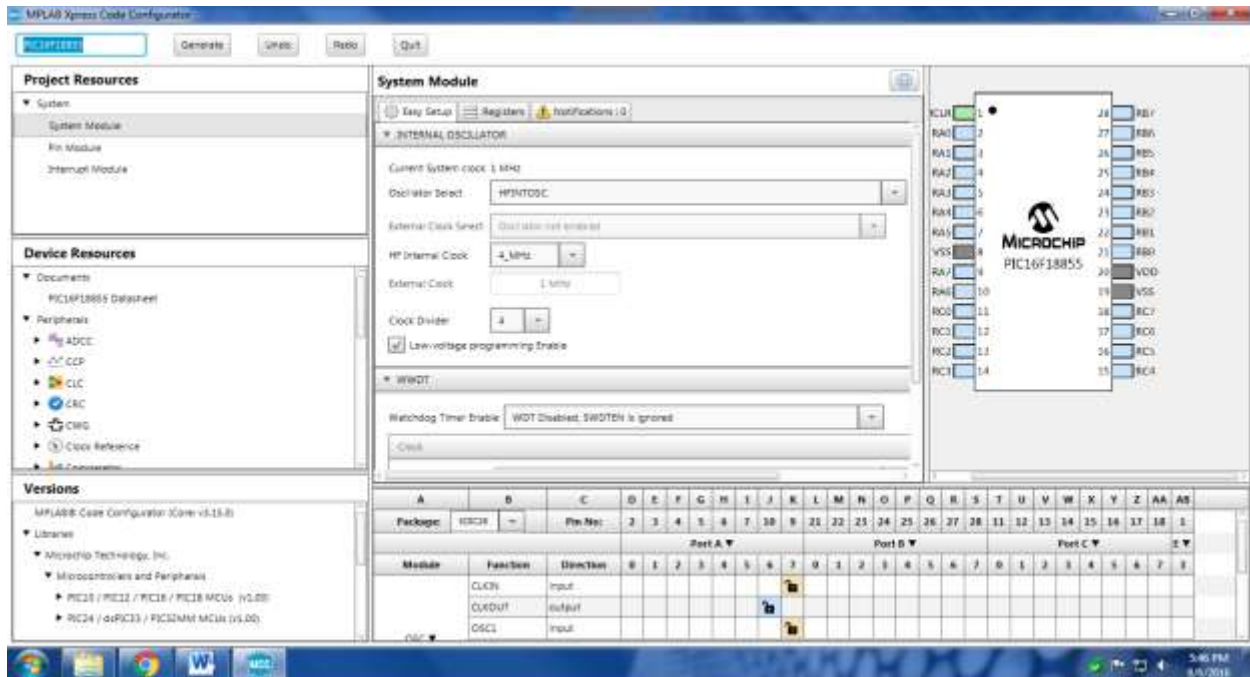Figure 6 select pin

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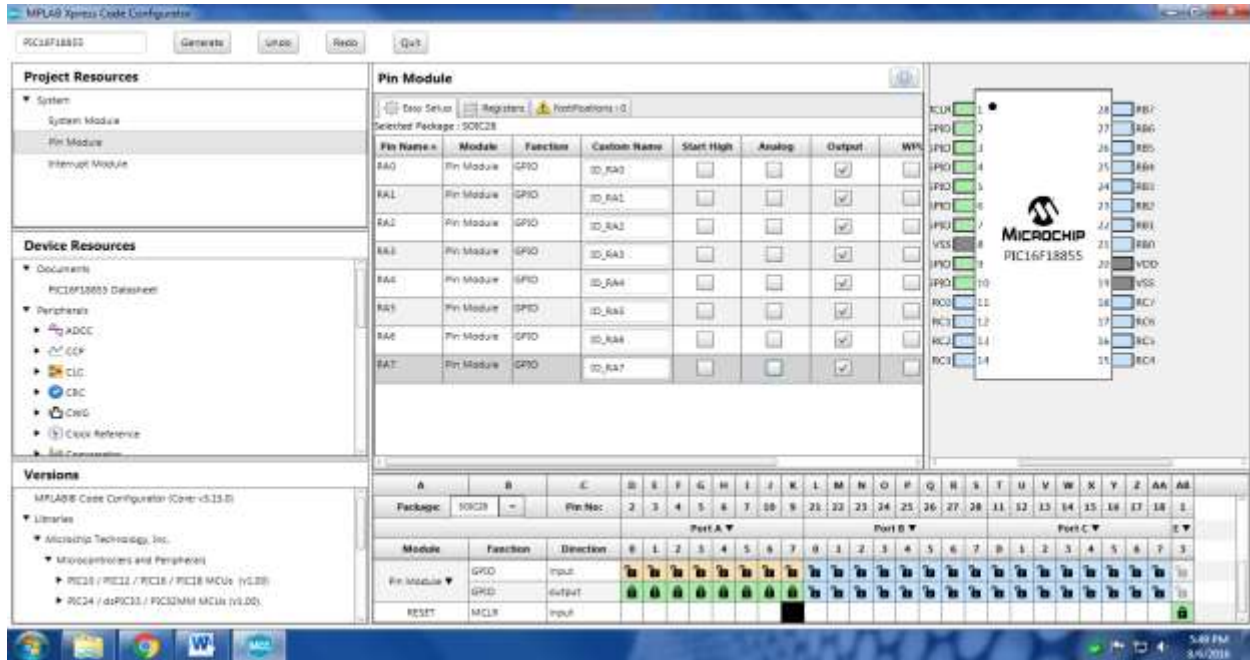**Step 7:** select pin module in mplab xpress configuration window

Figure 7 pin configuration set

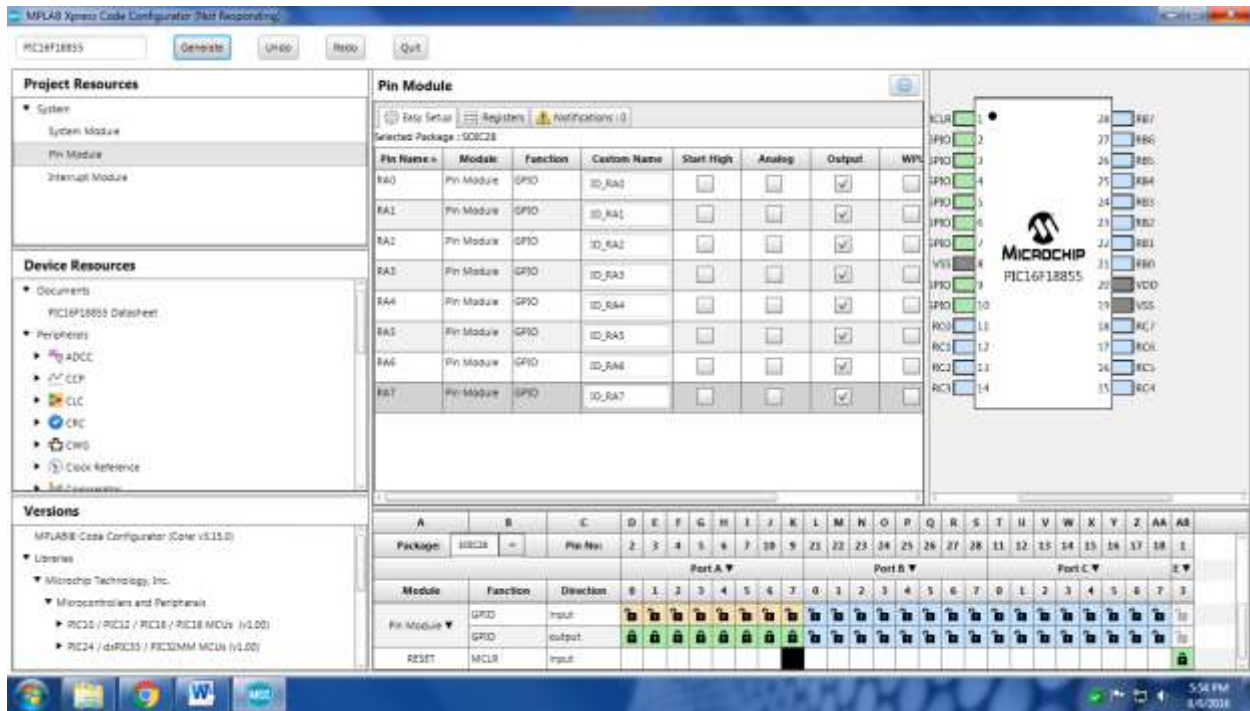**Step 8:**Now click Generate option.

Figure 8 click Generate

Note: **If you didn't done above things please add all library files.**

Source Code

```
void main(void)

{

    SYSTEM_Initialize();

    INTERRUPT_GlobalInterruptEnable();

    INTERRUPT_PeripheralInterruptEnable();

    while (1)

    {

        // application wrote on interrupt handler function

    }

}

/* end of your main function  */
```

Note: following code is not your main code which is interrupt handler function

```
void interrupt INTERRUPT_InterruptManager (void)

{

   // interrupt handler

   if(PIE0bits.IOCIE == 1 && PIR0bits.IOCIF == 1)

   {
```

```
        PIN_MANAGER_IOC();

                RA0=~RA0; //toggle LED state

        // clear global interrupt-on-change flag

        PIR0bits.IOCIF = 0;

    }

    else

    {

        //Unhandled Interrupt

    }

}
```

Step 9: Go to your MPLAP 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.
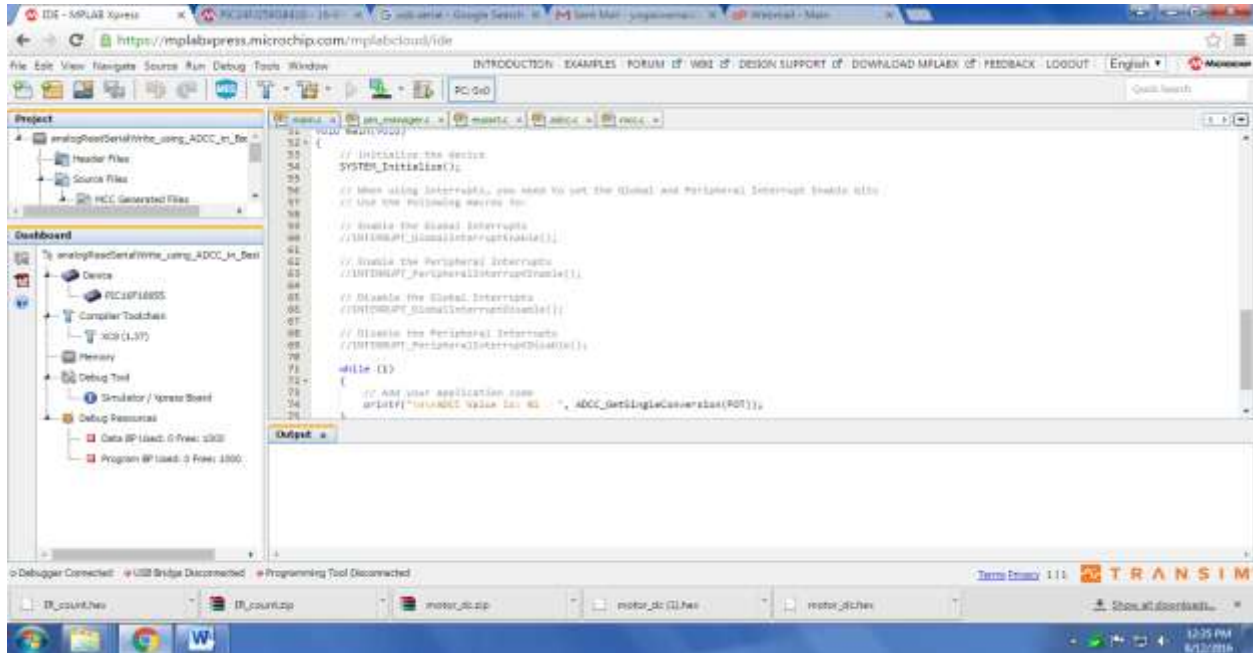

Figure 10 Build the project

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Step 10: 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.
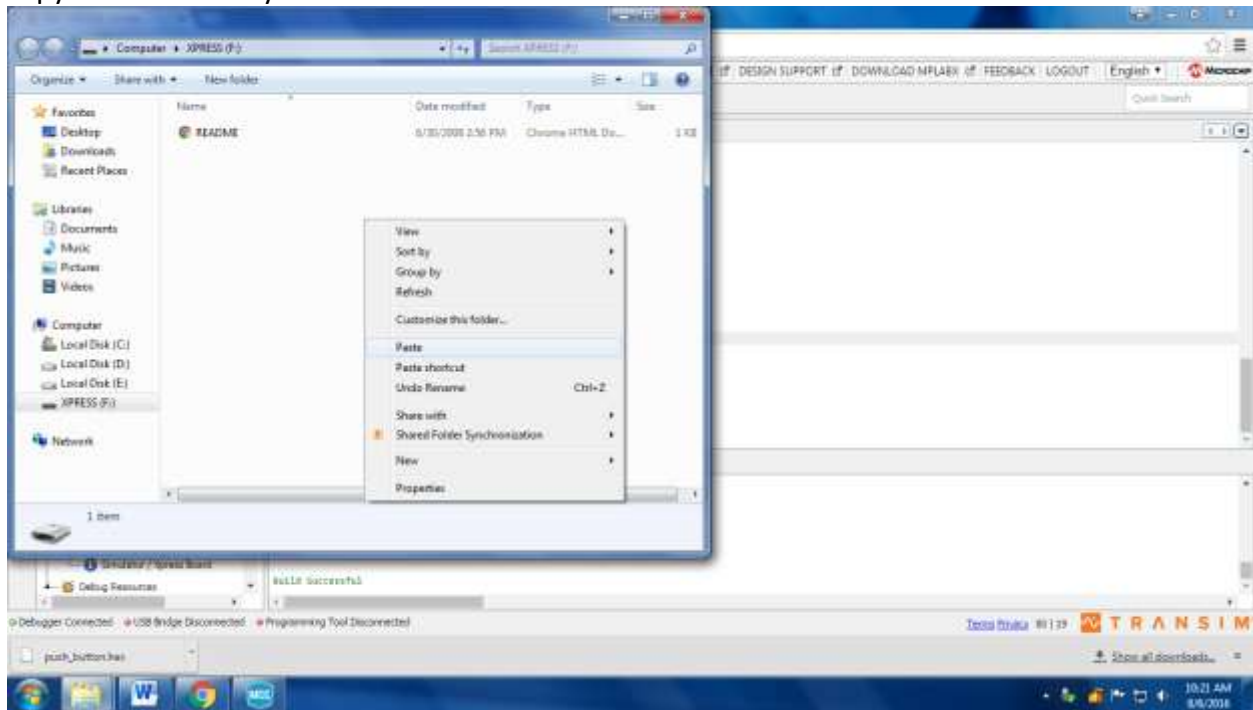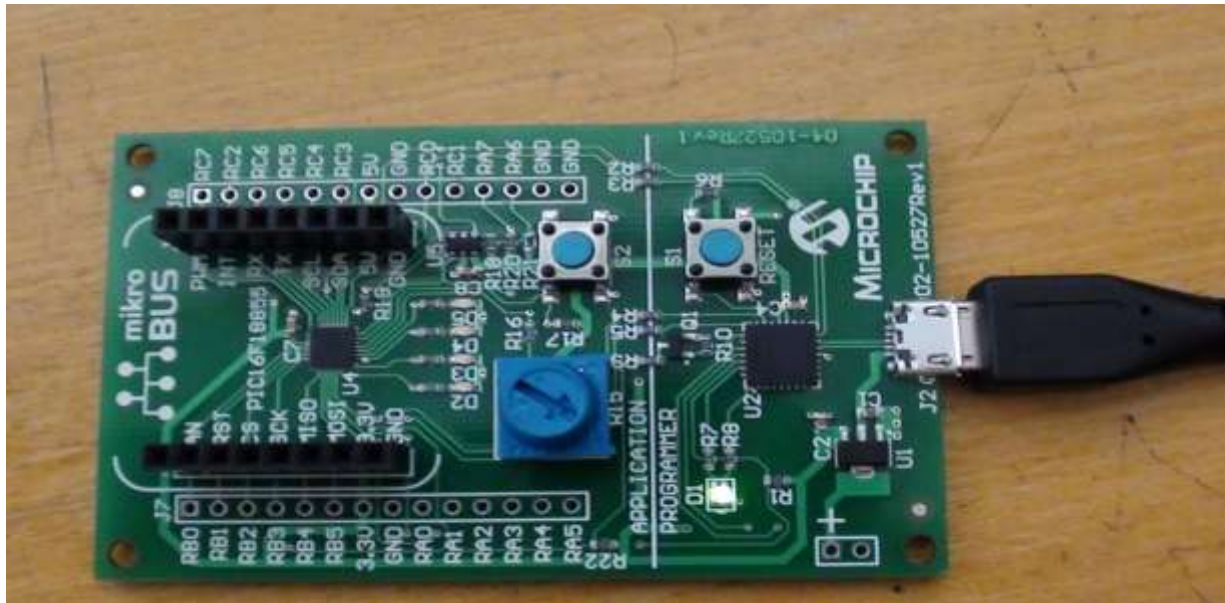
Output:

Figure 12 output

For product link:

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

For more information please visit: www.tenettech.com

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