TENET TECHNETRONICS

2016

Zigbee With MPLAB Xpress Evaluation Board

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Version: 1.0

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

- Hardware:
  - MPLAB Xpress Evaluation tool
  - ZIGBEE-2
  - Connecting Wires
  - Prolific cable
- Software:
  - MPLAB Xpress IDE
  - XCTU

Note: you must be configure your device before make communication

Step 1: Open your Browser and go to following link

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

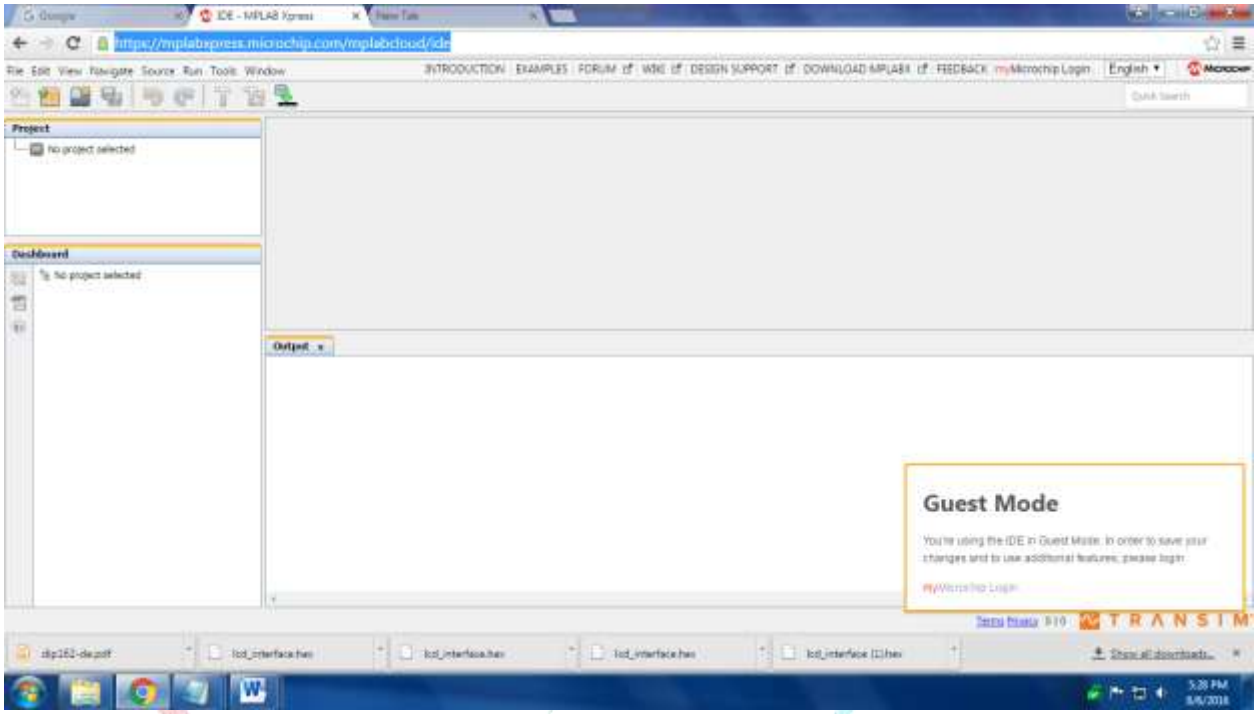


Figure 1 MPLAB Xpress IDE main window

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

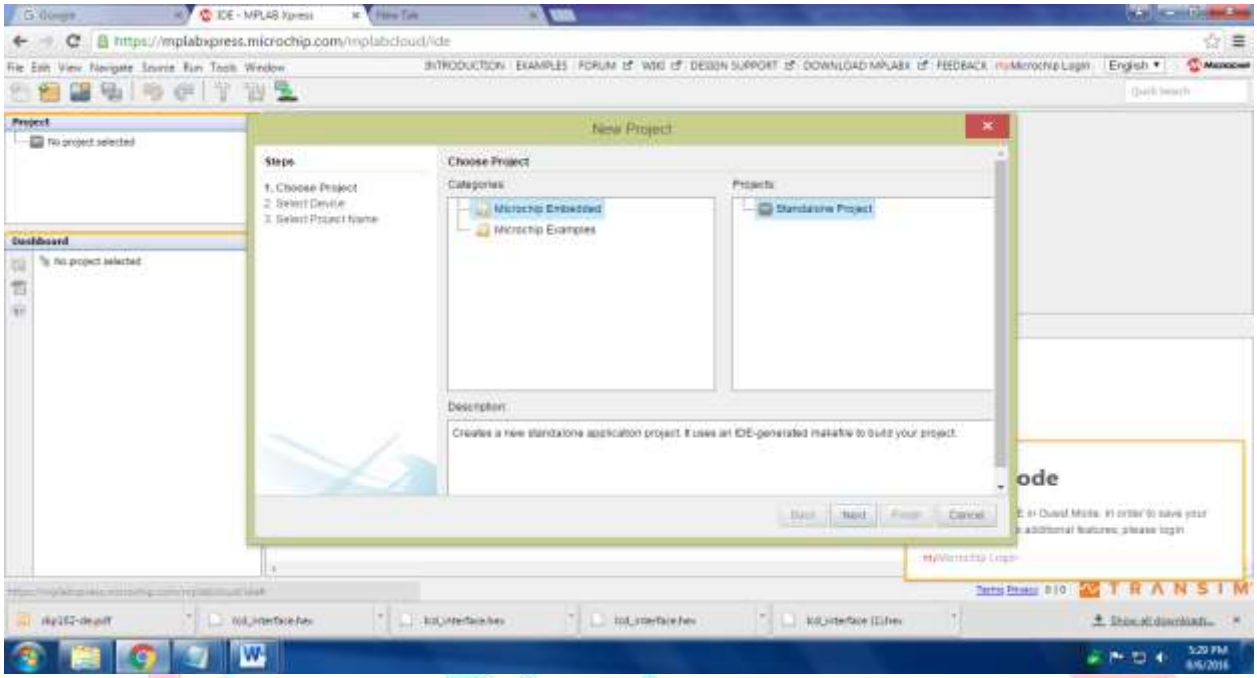


Figure 2 Open new project

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

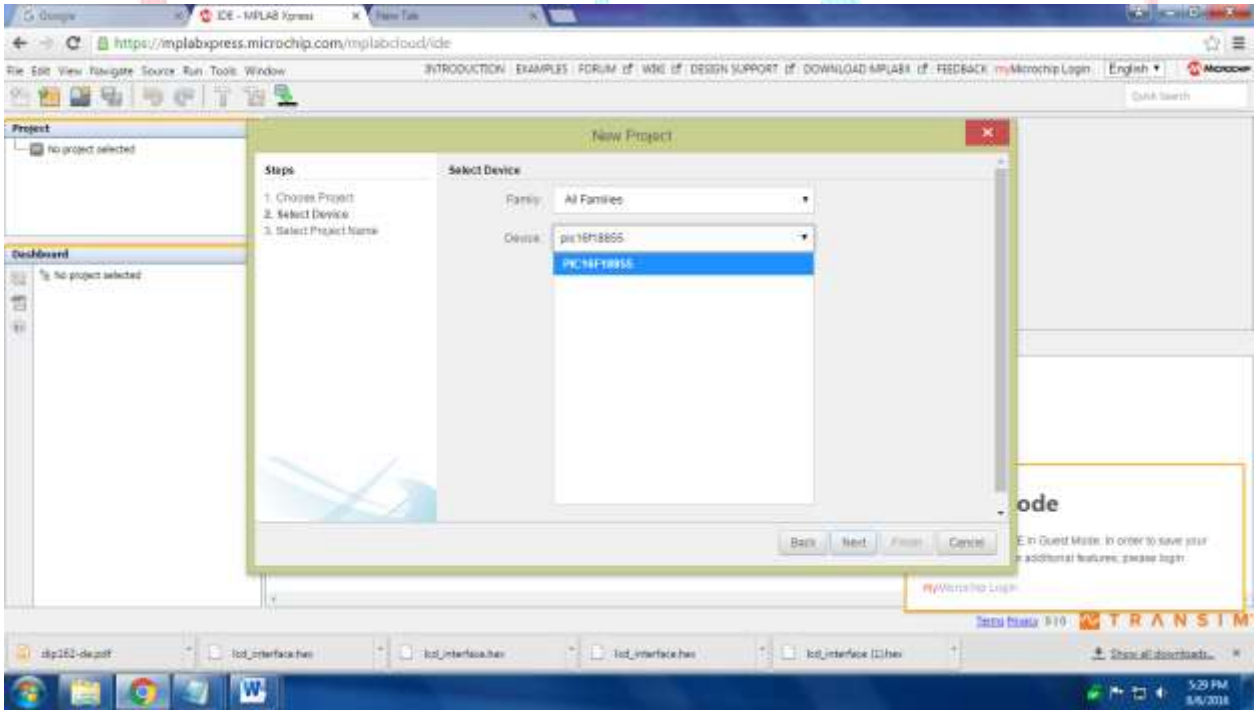


Figure 3 select Device

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

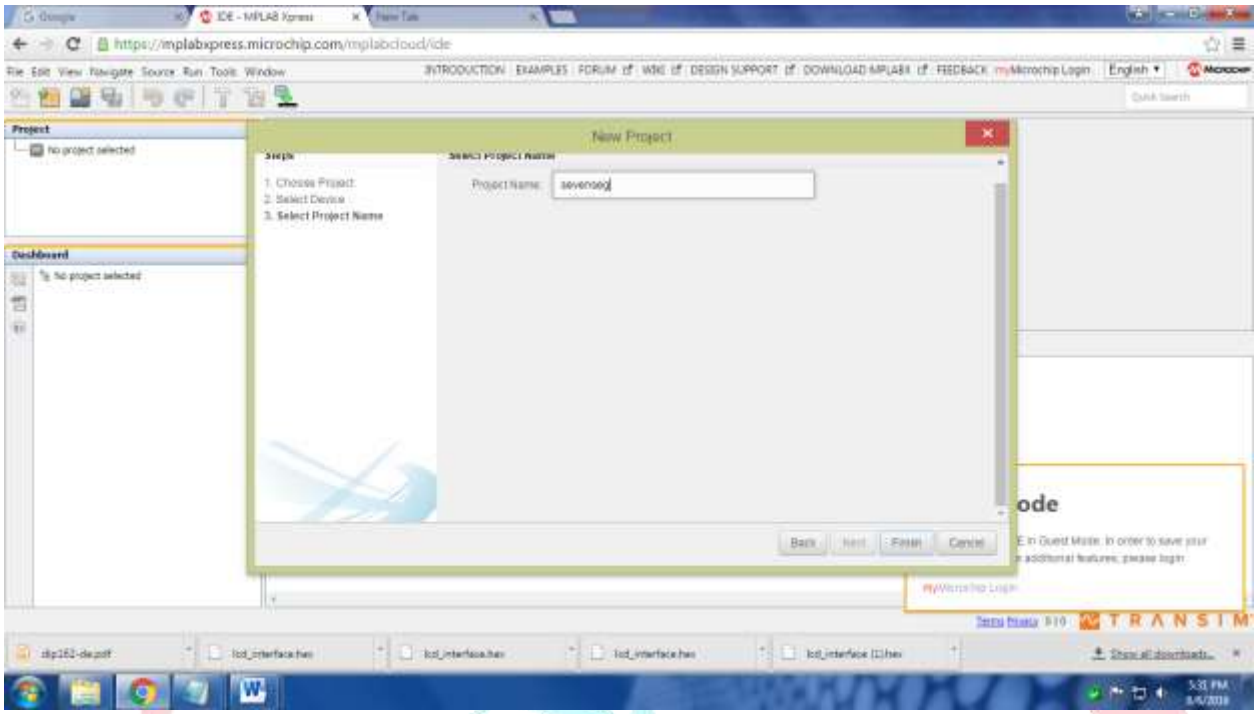


Figure 4 give project name

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

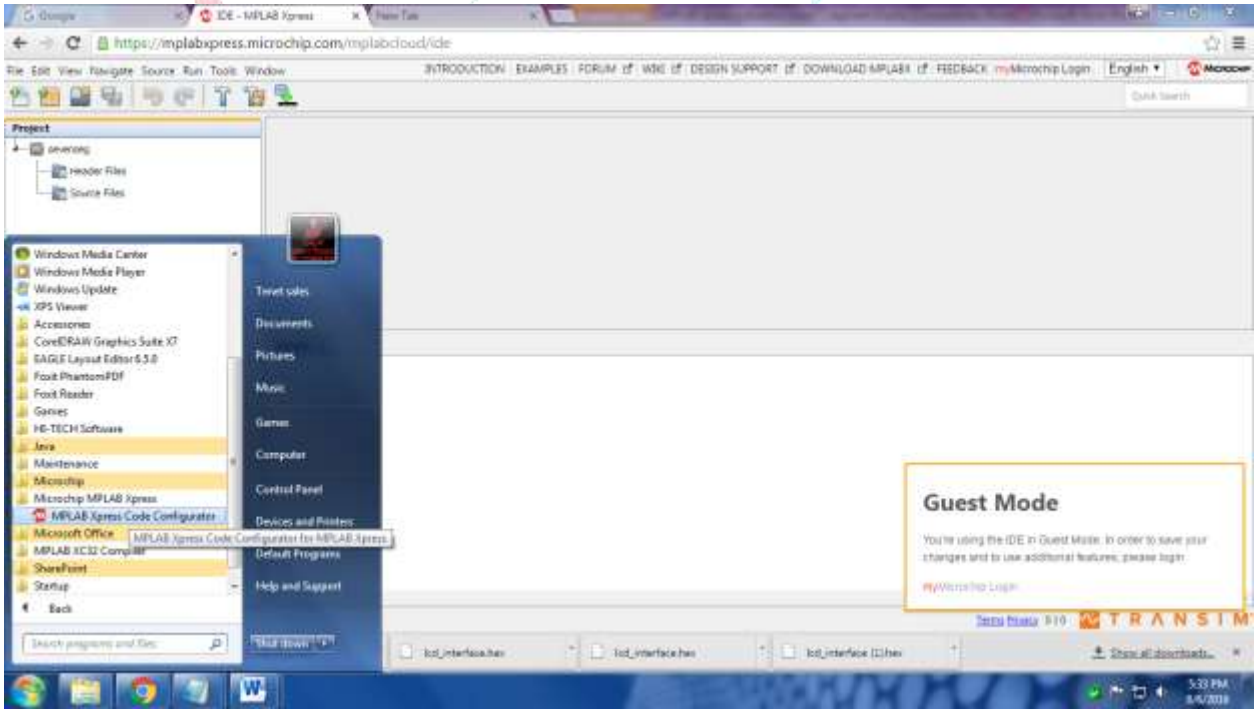


Figure 5 Select mplab xpress code configurator

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

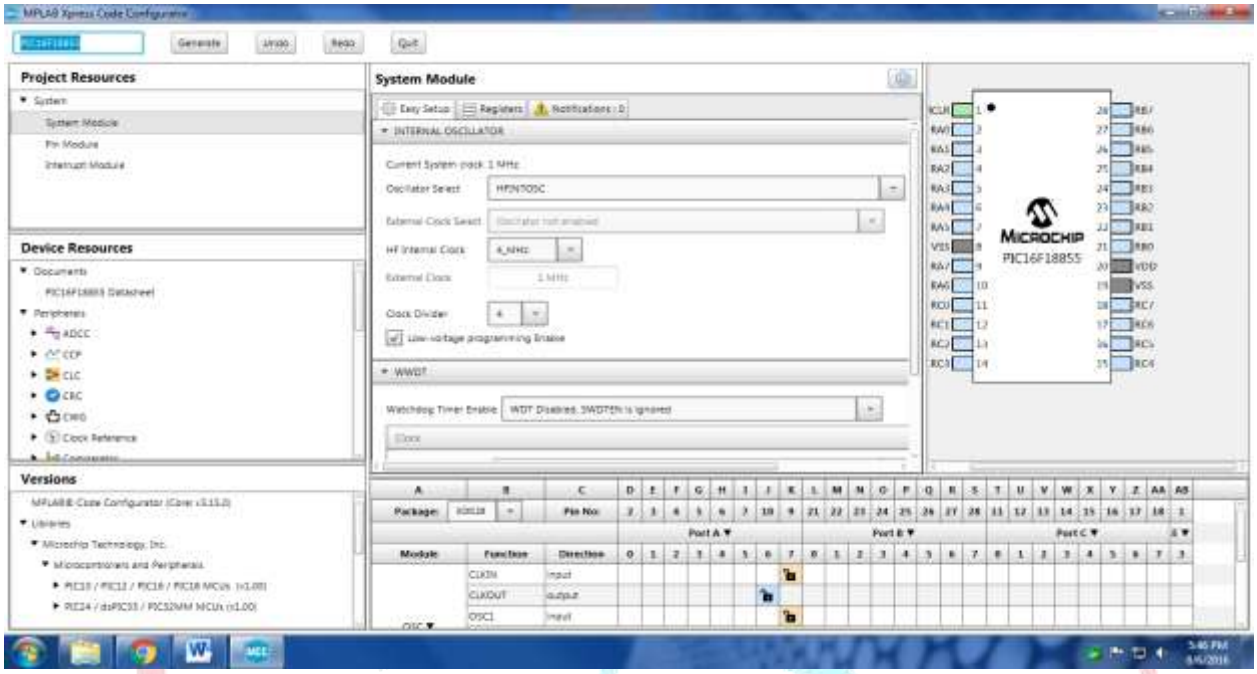


Figure 6 Assign project name

Step 7: Make oscillator configuration

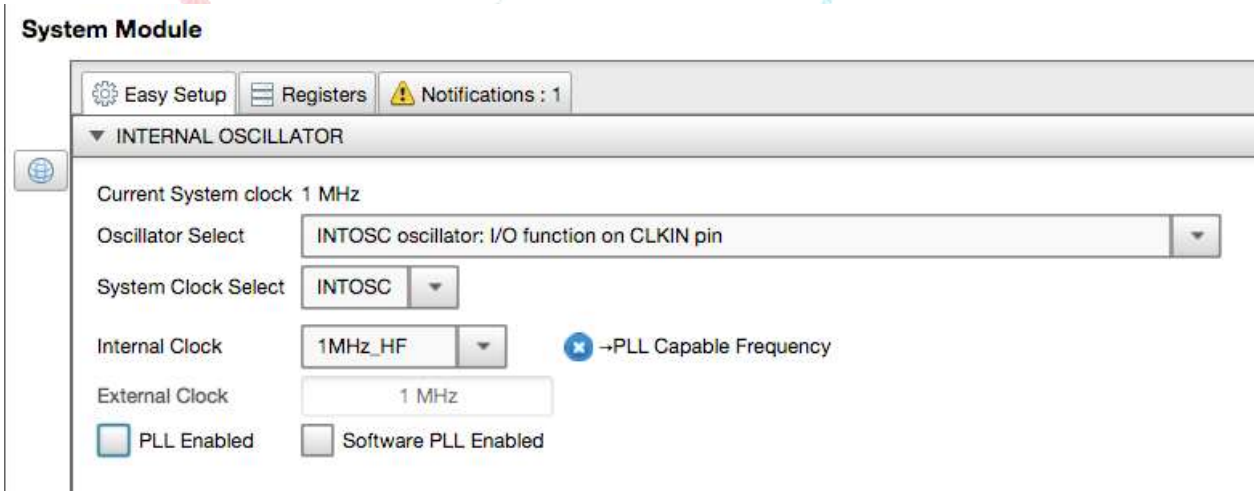


Figure 7 select pin

Step 8: select peripherals UART And select pin RC0,RC1

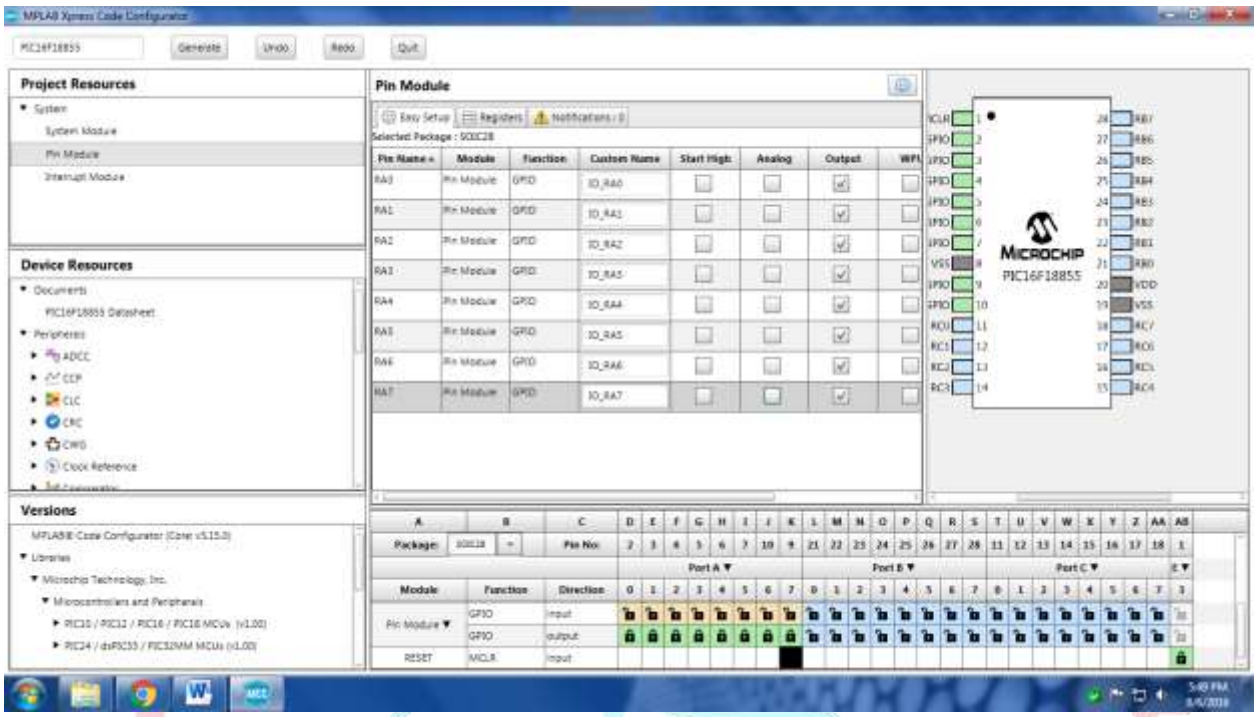


Figure 8 pin configuration set

Step 9: Now click Generate option.

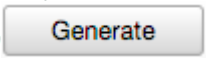


Figure 9 click Generate

SOURCE CODE:

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

/*
                Main application
 */
void main(void)
{
    // initialize the device
    SYSTEM_Initialize();
```

```
while (1)
   {
        printf("tenet\n\r");
}
}
/**
 End of File
*/
```

Note: you must be configured your Devices by XCTU Software.

Step 10: 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.

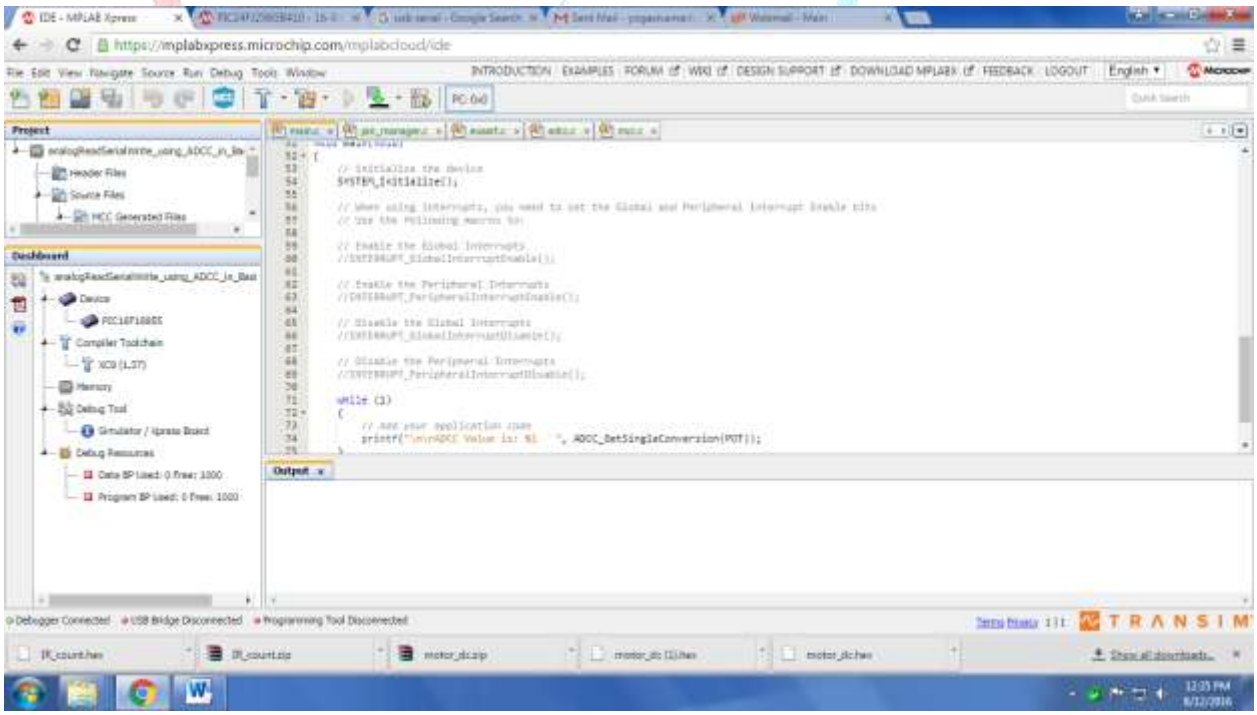
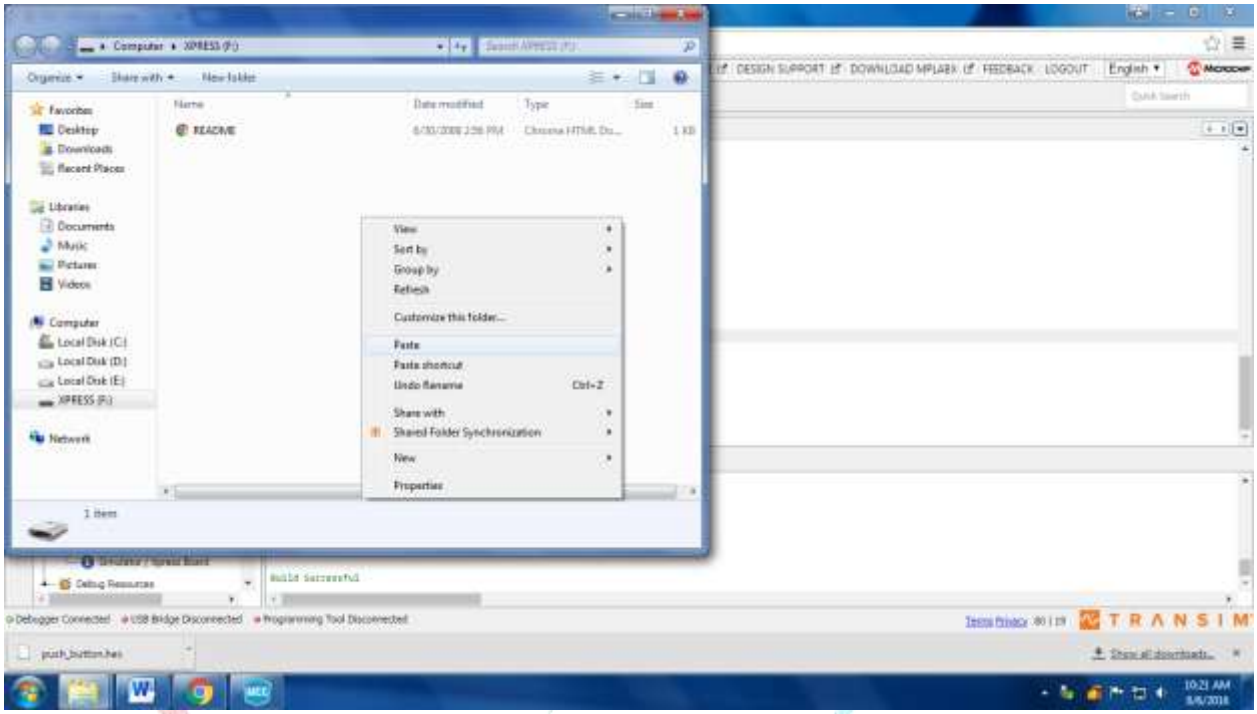
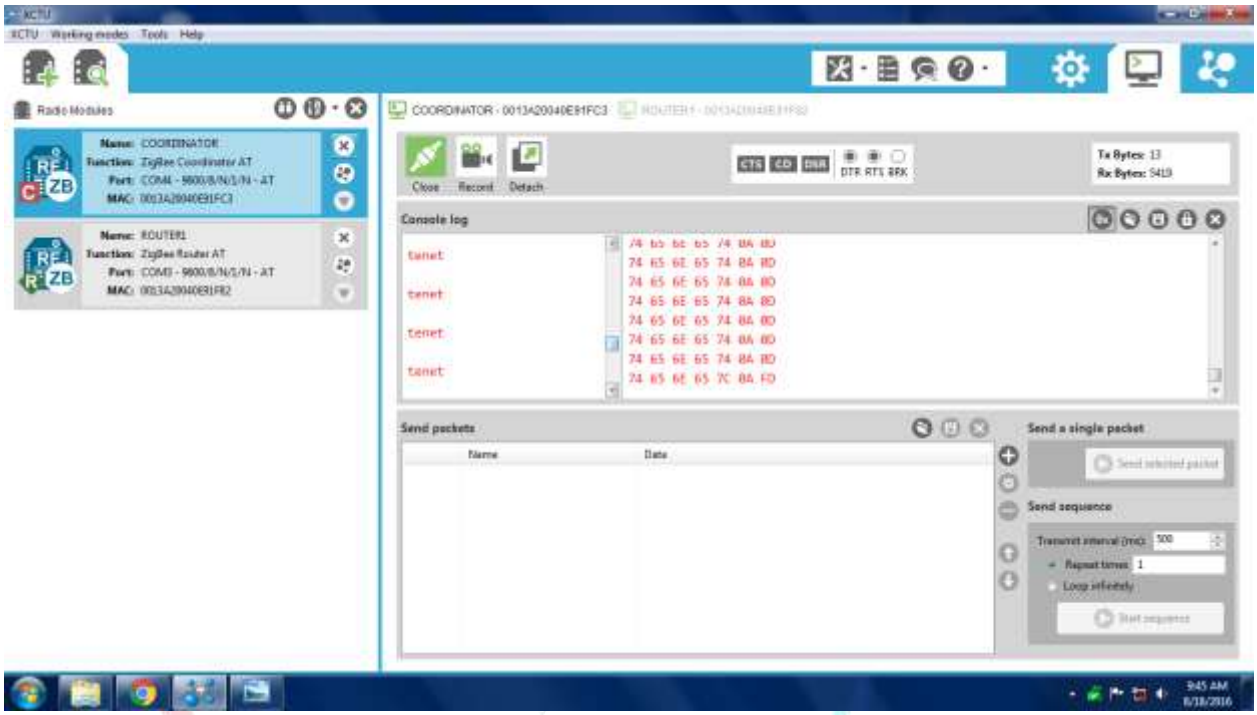


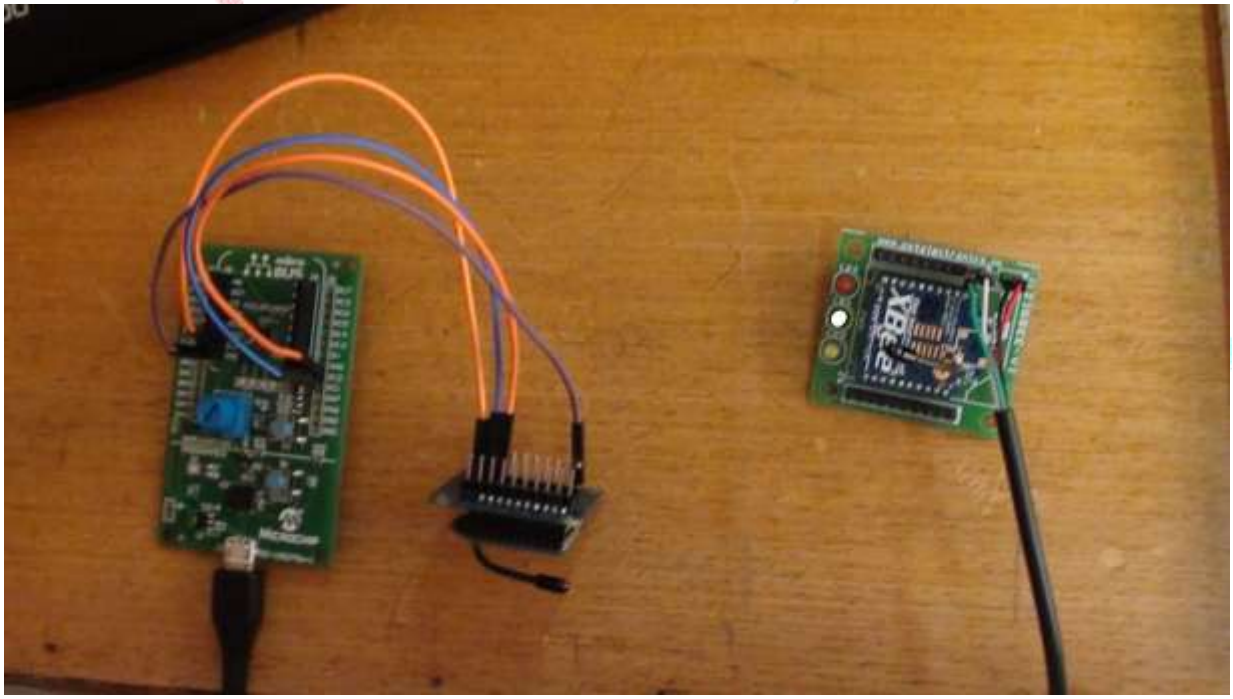
Figure 10 Build the project

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:





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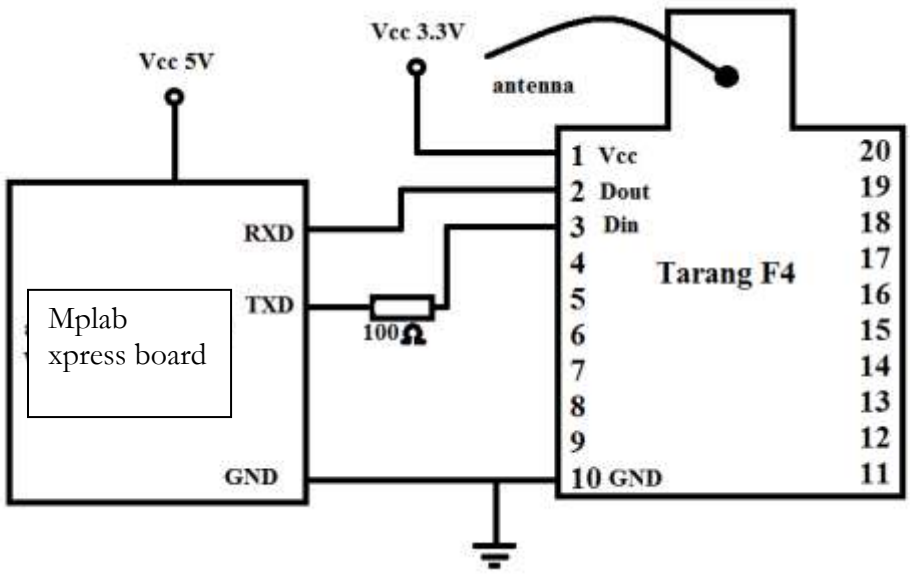
Email: info@tenettech.com, Phone: 080 - 26722726

Figure 12 output

Circuit connection:



Pin connection:

RXD=RC1

TXD=RC0

NOTE: Another zigbee Device Connected with your pc through Prolific cable.

For more information please visit: www.tenettech.com

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