2016

TENET TECHNETRONICS

GSM
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 requirement

- Hardware:
  - MPLAB Xpress evaluation Tool
  - Jumper wires
  - GSM module with SIM card
  - Power supply Breakout
  - Regulator break out
  - Power adapter
  - Mobile phone with SIM card
- Software:
  - MPLAB Xpress IDE

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Step 1: Open your Browser and go to following link

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

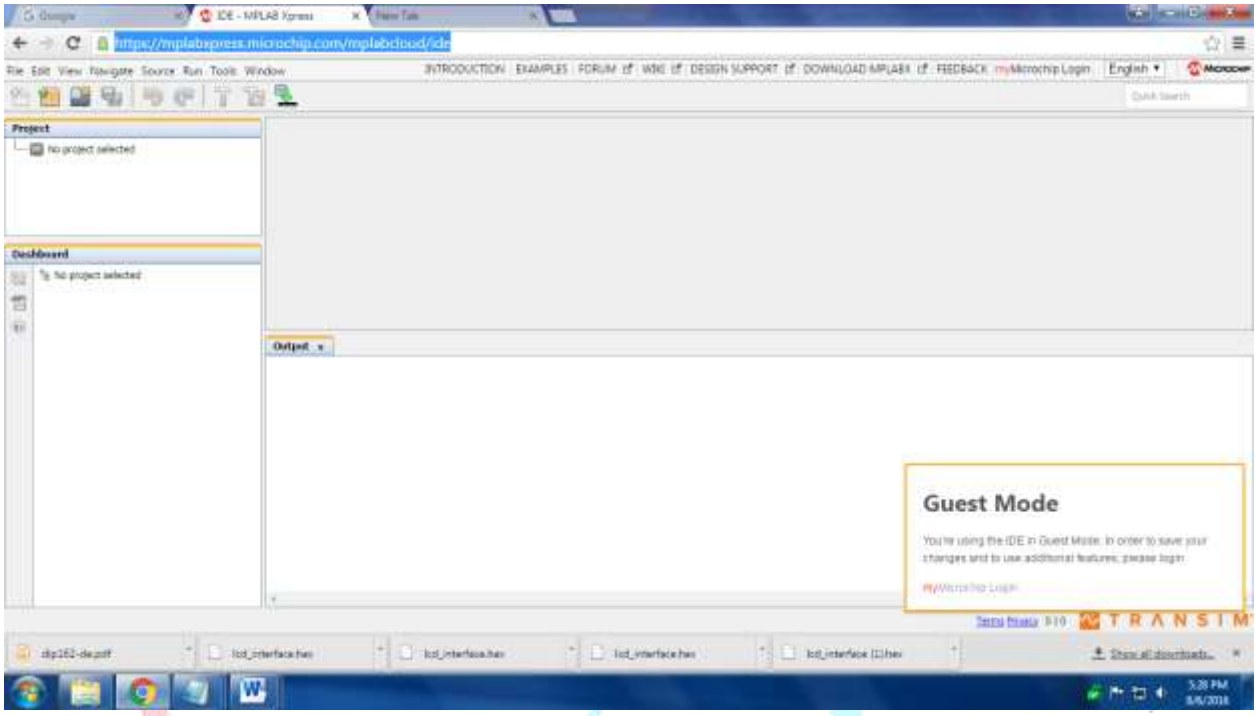

Figure 1 MPLAB Xpress IDE main window

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

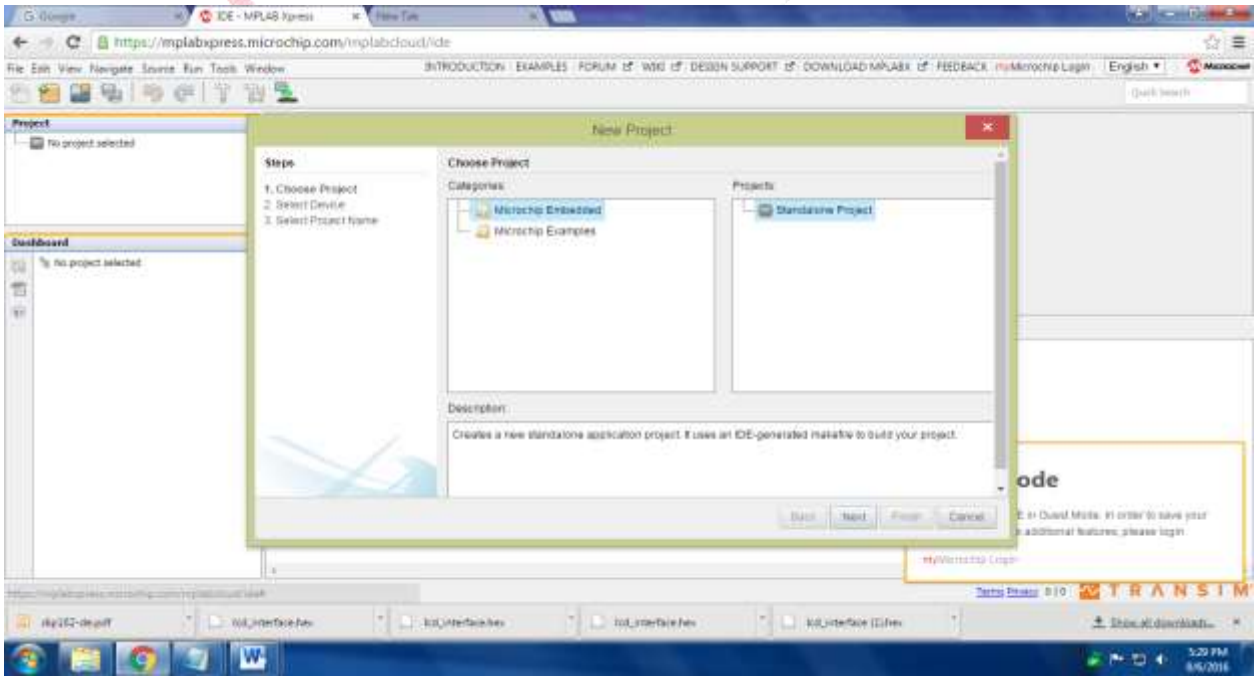

Figure 2 Open new project

Step 3: Select device **PIC16F18855**, and click **next .**

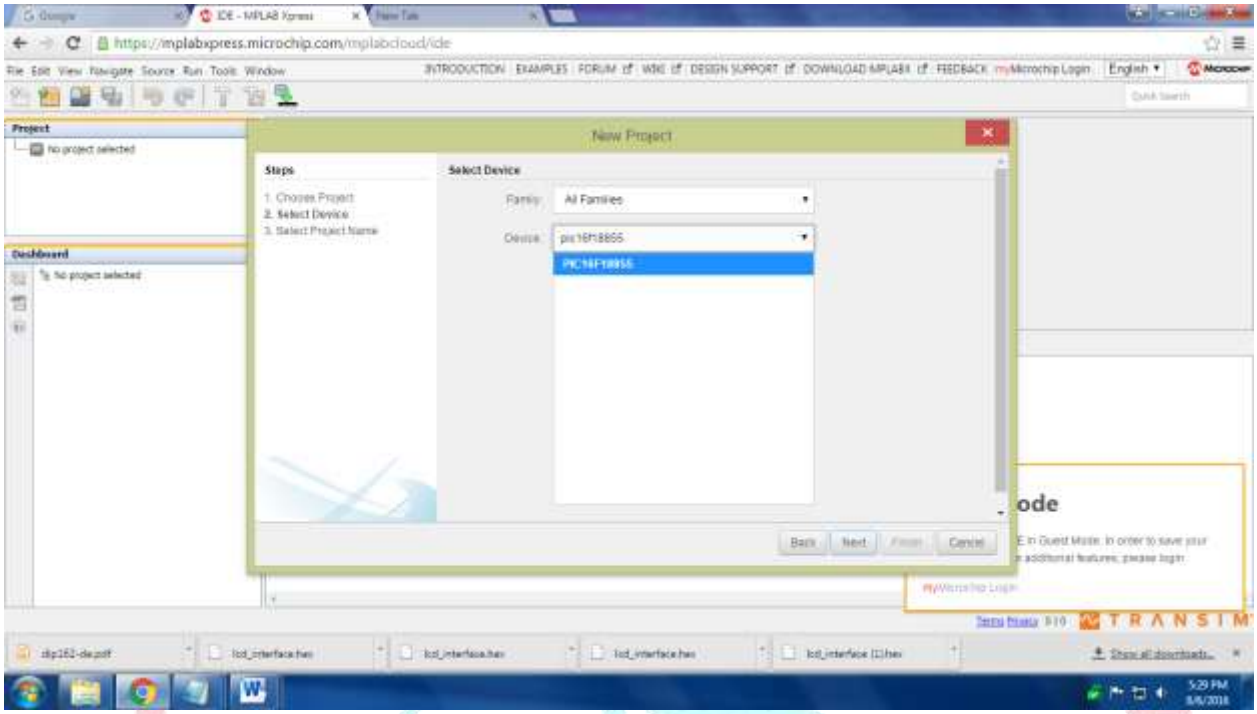

Figure 3 select Device

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

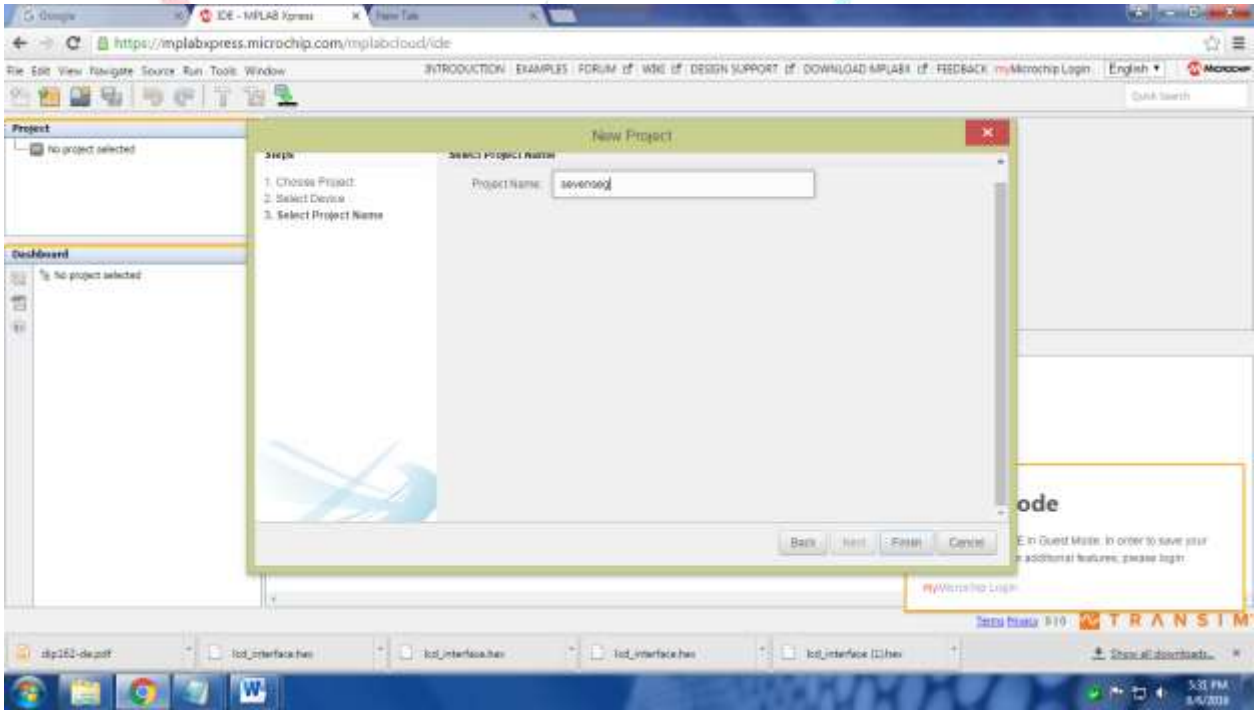

Figure 4 give project name

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

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

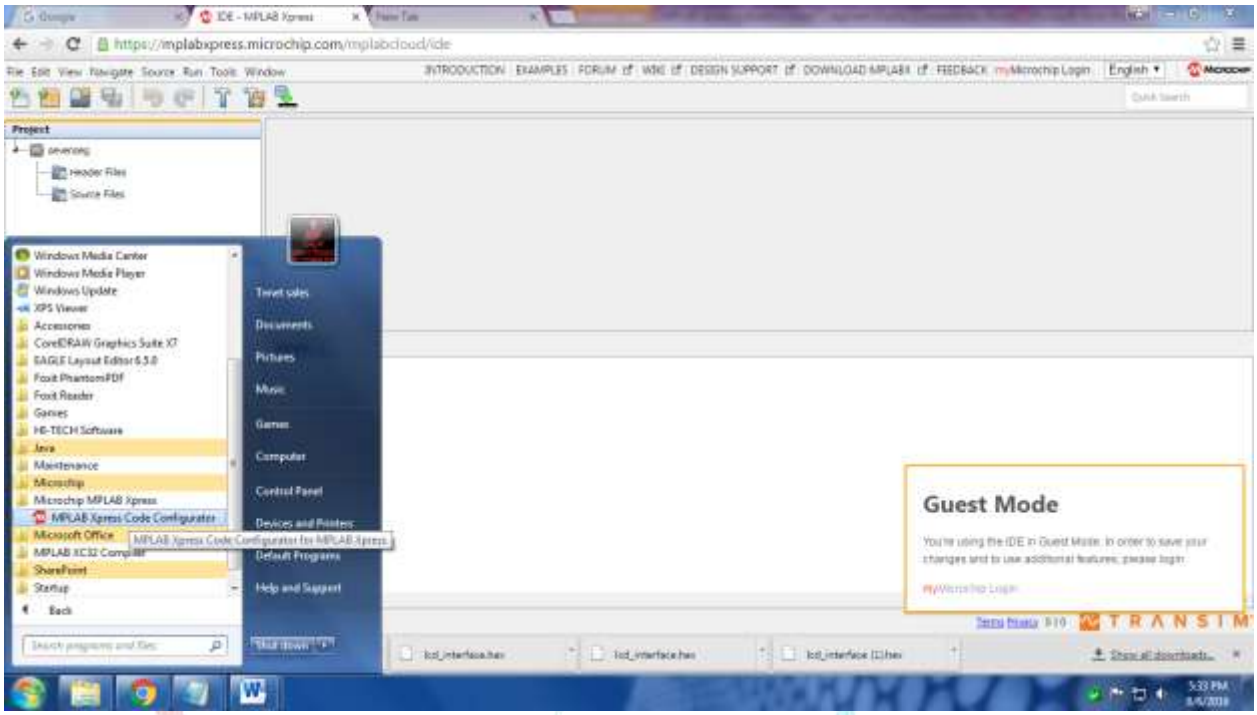

Figure 5 Select mplab xpress code configurator

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

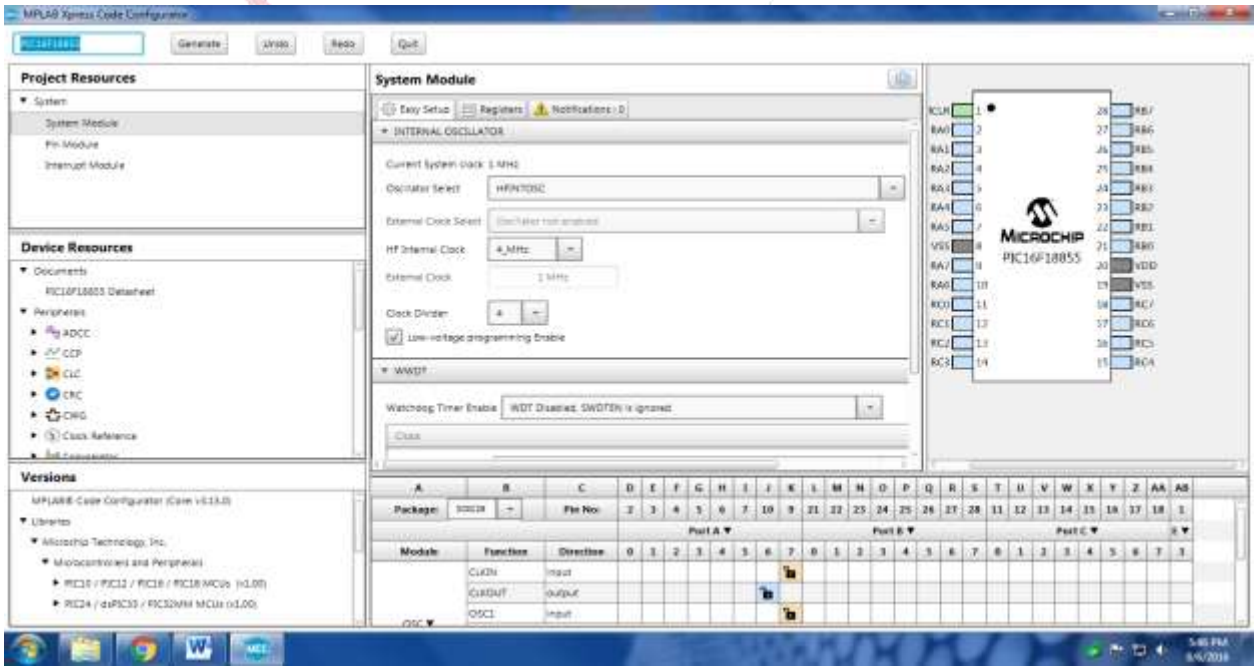

Figure 6 configuration window

Step 7: Make oscillator configuration

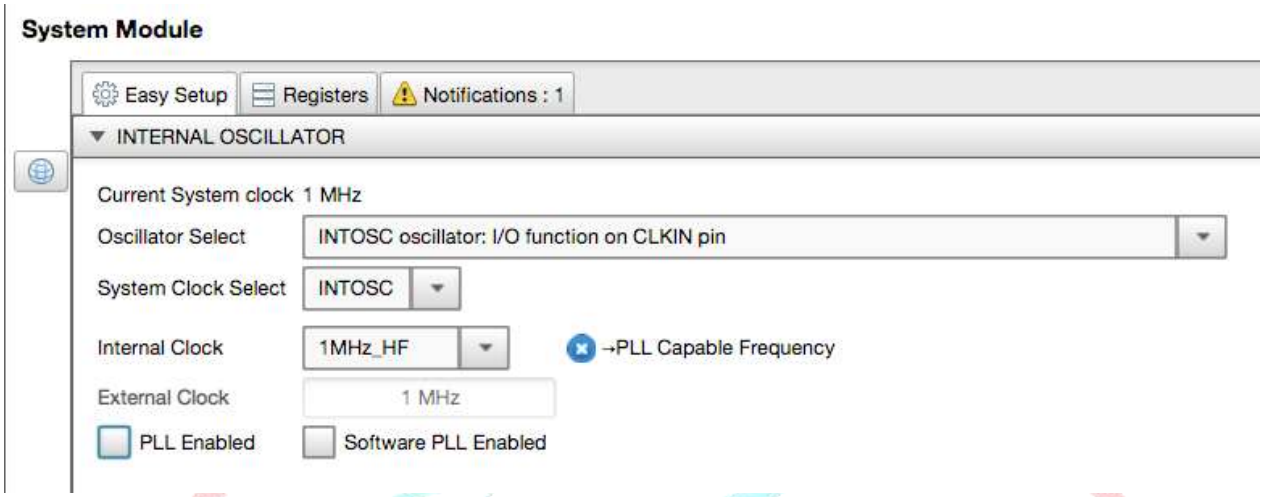

Figure 7 select pin

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

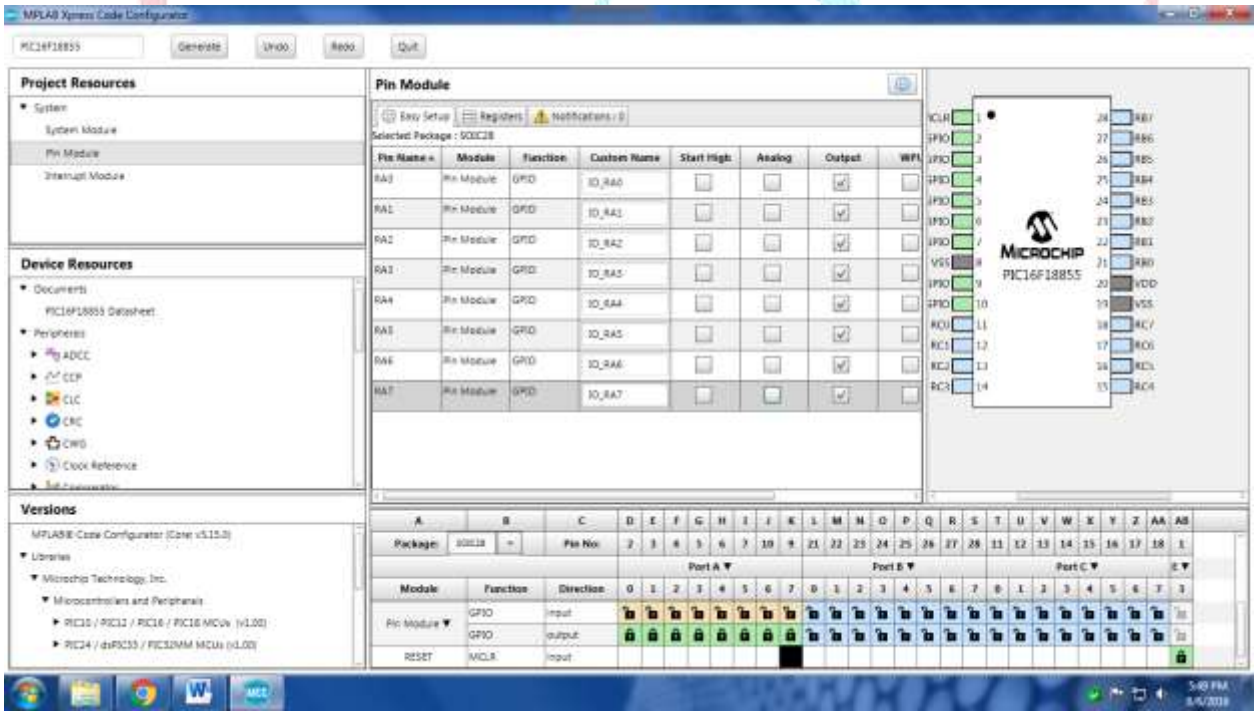

Figure 8 pin configuration set

SOURCE CODE:

```
#include "mcc_generated_files/mcc.h"
void main(void)
{
    SYSTEM_Initialize();
   // Enable the Global Interrupts
INTERRUPT_GlobalInterruptEnable();
   // Enable the Peripheral Interrupts
   INTERRUPT_PeripheralInterruptEnable();
      printf("AT\r\n");
     printf("AT+CSCS=\"GSM\"\r\n");
 printf("AT+CMGF=1\r\n");    //Sets the GSM Module in Text Mode
 __delay_ms(2000);  // Delay of 1000 milli seconds or 1 second
 printf("AT+CMGS=\"+917708161066\"\r\n");
__delay_ms(2000);
 printf("hello\r\n");// The SMS text you want to send
 __delay_ms(000);
 putch(26);
__delay_ms(3000);

   while (1)
   {
   }
}
```

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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.

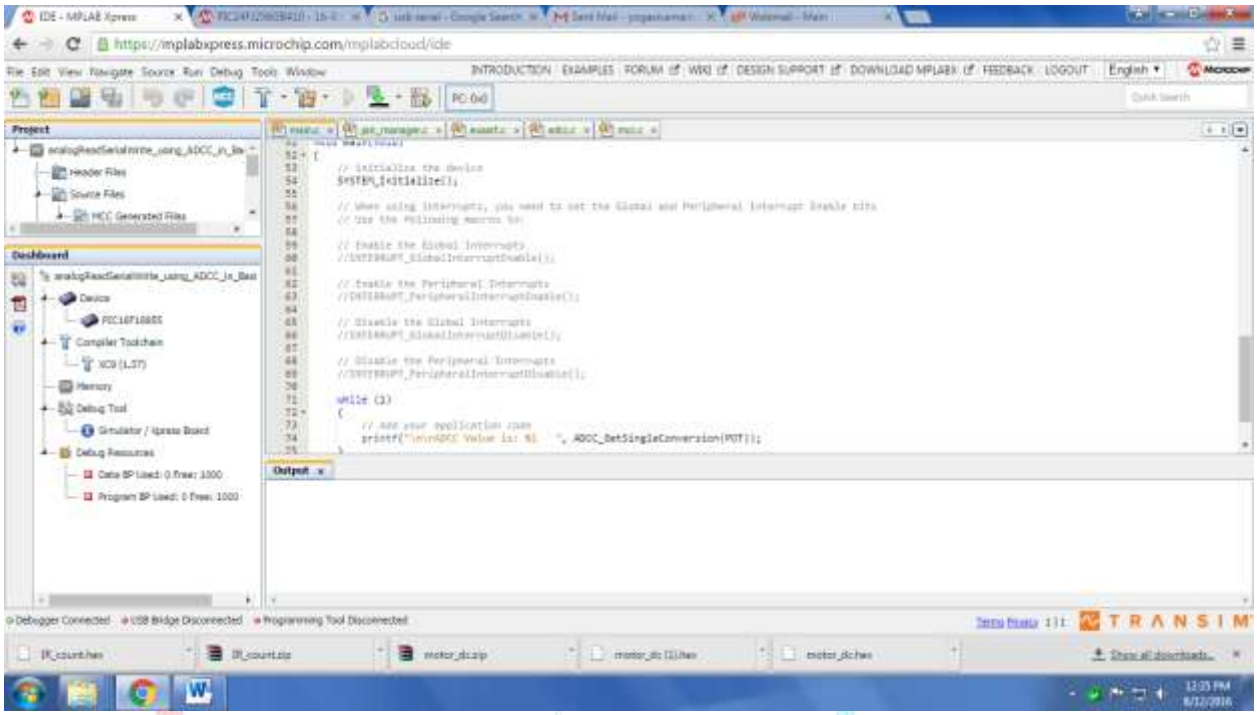

Figure 9 Build the project

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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.

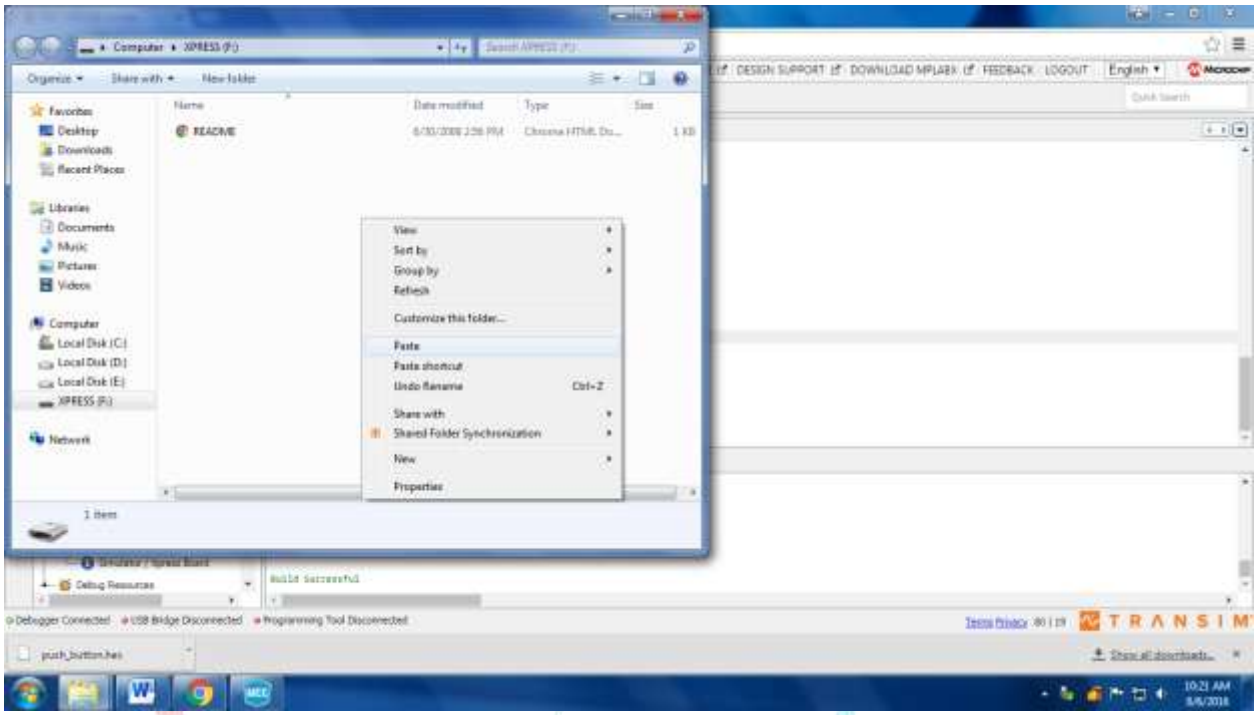
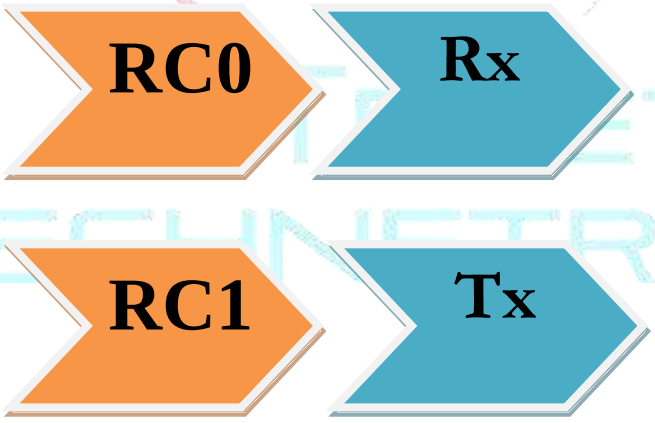


Figure 10 Build the project

Pin connection:



OUTPUT:

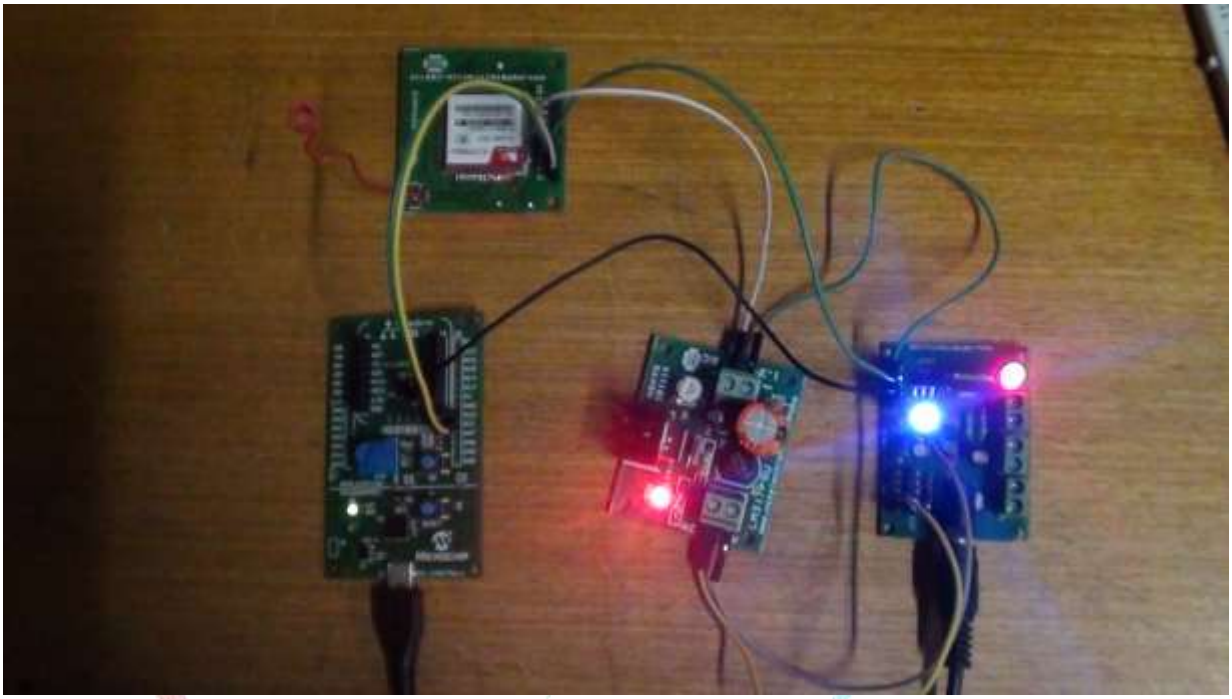


Figure 11 output

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