2016

Interfacing IR sensor with

MPLAB Xpress Evaluation Board

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Tenet Technetronics

Contents

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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:**

  o MPLAB Xpress evaluation tool

  o LED

  o IR sensor

➢ **Software:**

  o MPLAB Xpress IDE

Note: we have on board LED

Procedure

Step 1: Open your Browser and go to following link

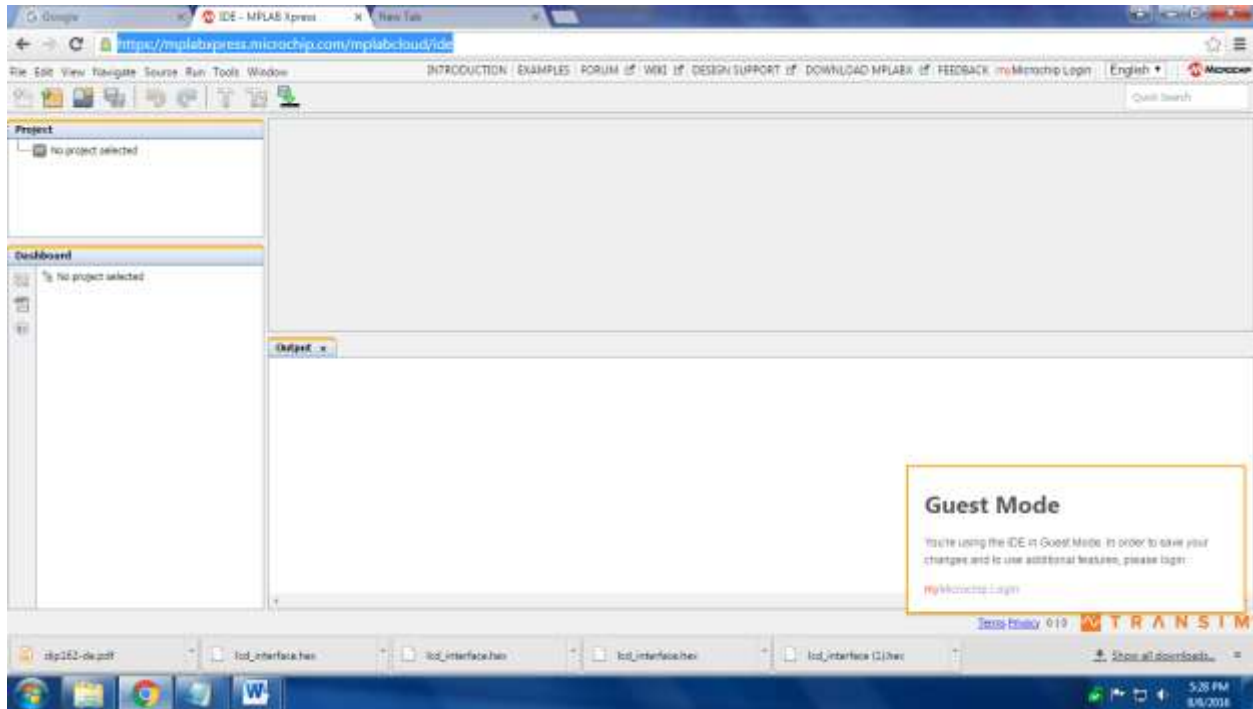https://mplabxpress.microchip.com/mplabcloud/ide

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**
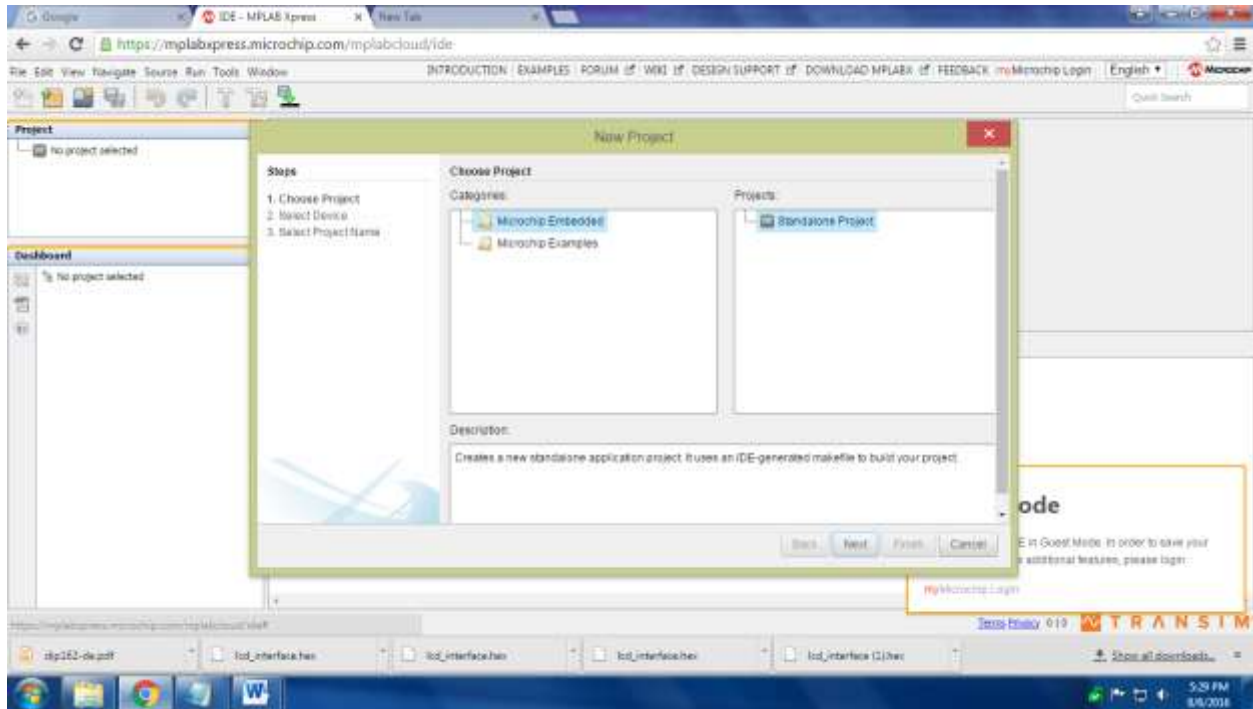
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Figure 2: Open new project

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

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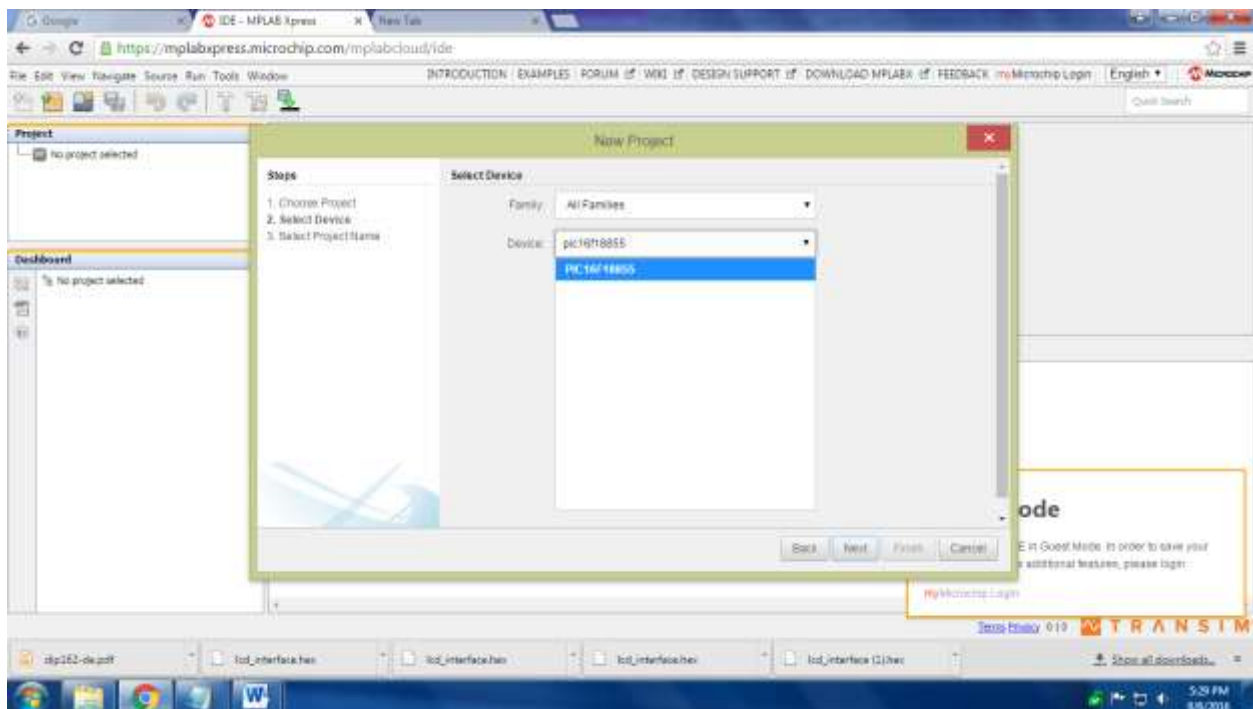**Ph. No: 080-26722726., Website: www.tenettech.com, Email: info@tenettech.com**

Figure 3: Select Device

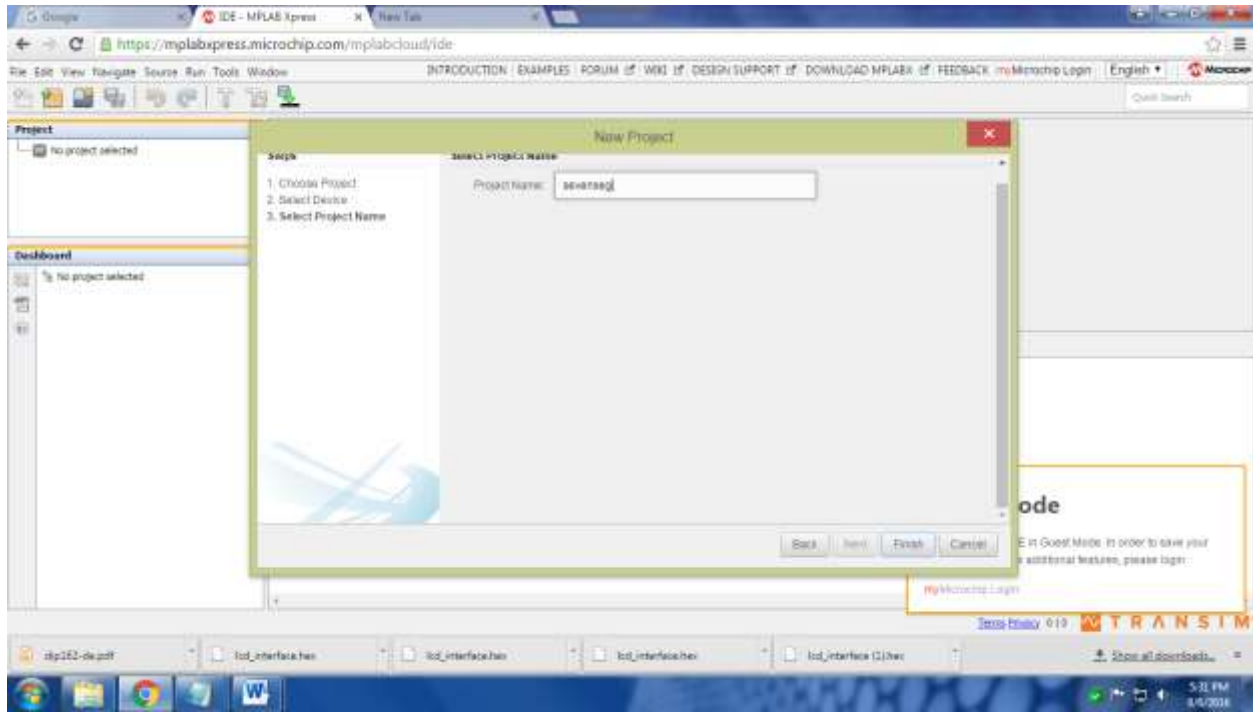**Step 4:** Then give project name and click finish**.**

Figure 4: Give project name

Step 5: Now choose MPLAB Xpress code configurator if it's not present in your Device please

Download and install it.

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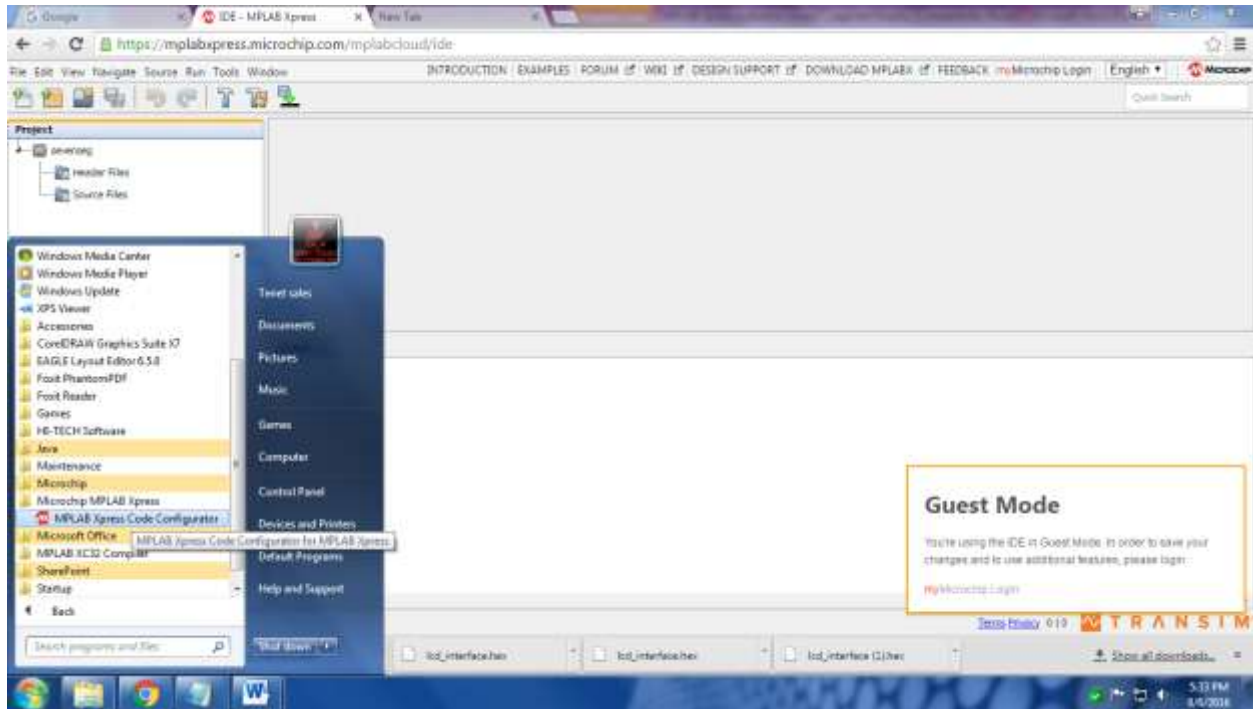
Figure 5: Select MPLAB Xpress code configurator

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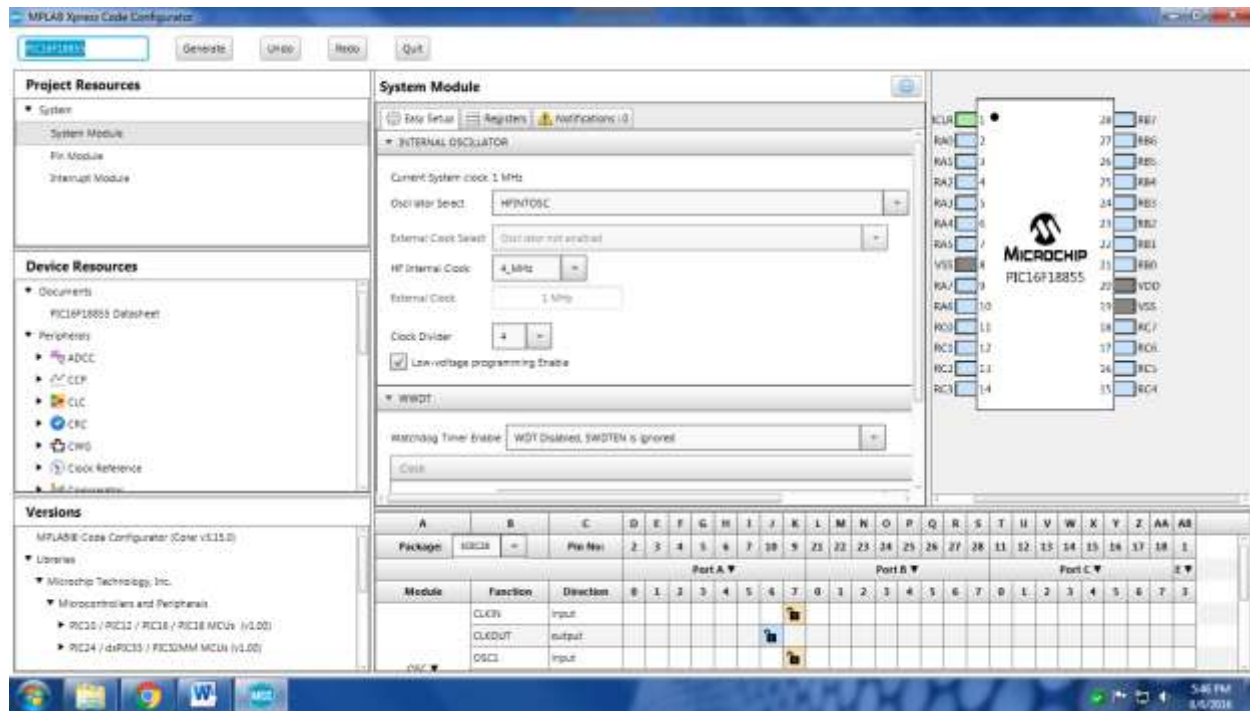
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Figure 6: Configuration window

Step 8: Select RA0, RA1, RA2, RA3, RA4, RC7 select pin module in MPLAB Xpress configuration window and deselect Analog in pin make RC7 as input and remaining as output   like following example

Figure 7: pin configuration set

SOURCE CODE:

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

void main(void)

{

  SYSTEM_Initialize();              // initialize the device

  int i=1,j;

  RA0==RA1==RA2==RA3==0;

  while (1)

  {

  if(RC7==1)

          {

          RA3=0;

          for(j=0;j<=10000;j++); // DELAY

          if(i==1)

              {

              RA0=1;  //LED1 glow

              }

      else if(i==2)
```

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```
                {

                RA1=1;    //LED2 glow

                 }

        else if(i==3)

                   {

                   RA2=1;  //LED3 glow

                   }

        i++;

          }

          else

          {

               RA3=1;

          }    } }
```

Step 10: Go to your MPLAP Xpress IDE Erase all existing code and copy above code past there then make clean and build for Export. If you done this go to download you can see hex file for your project.
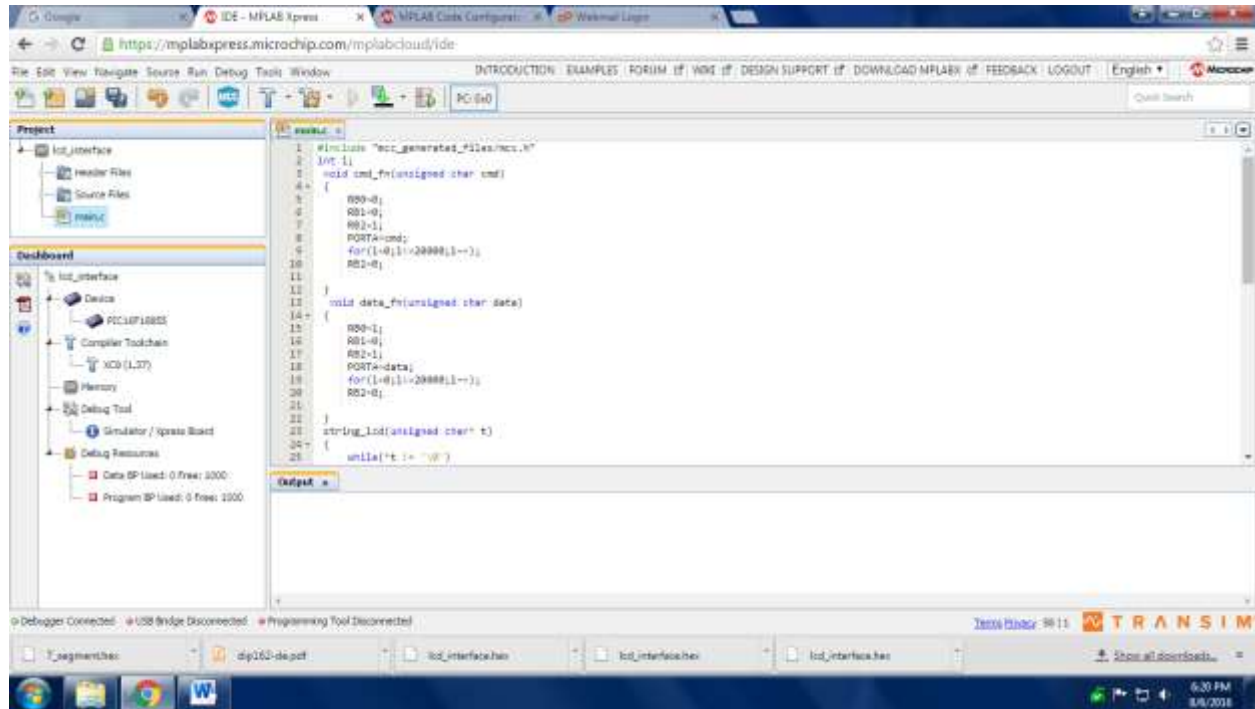
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Figure 10: Build the project

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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.
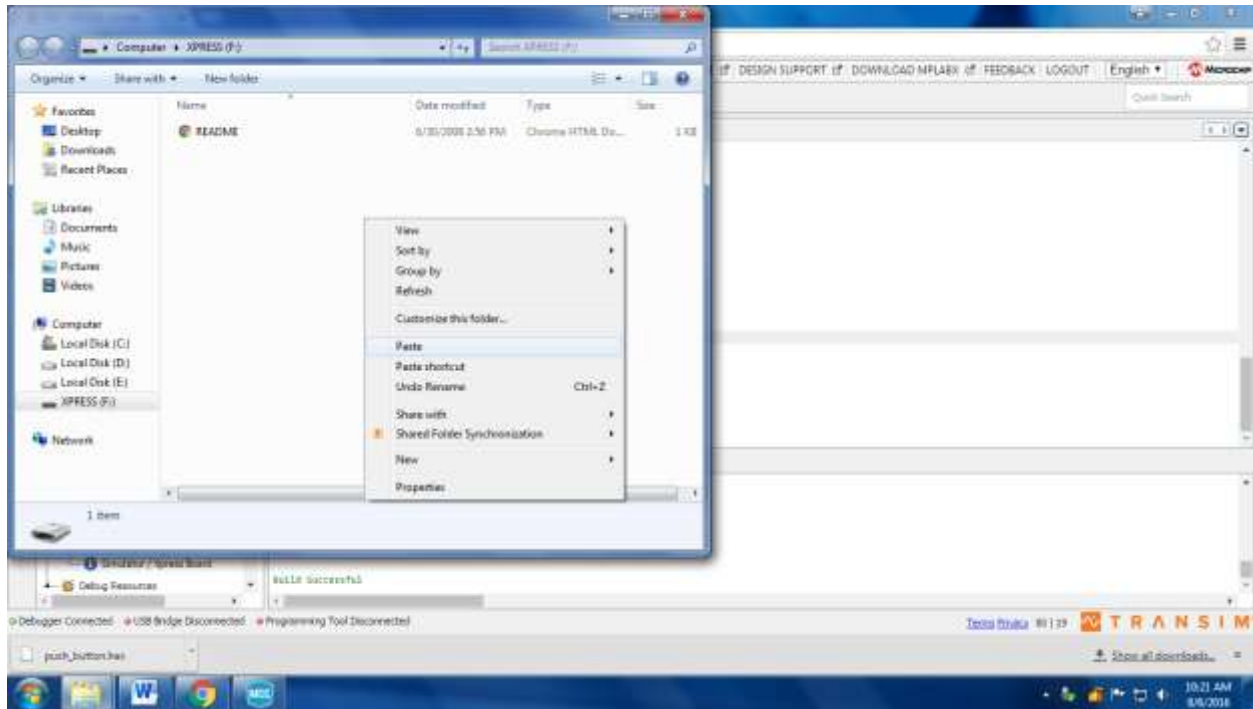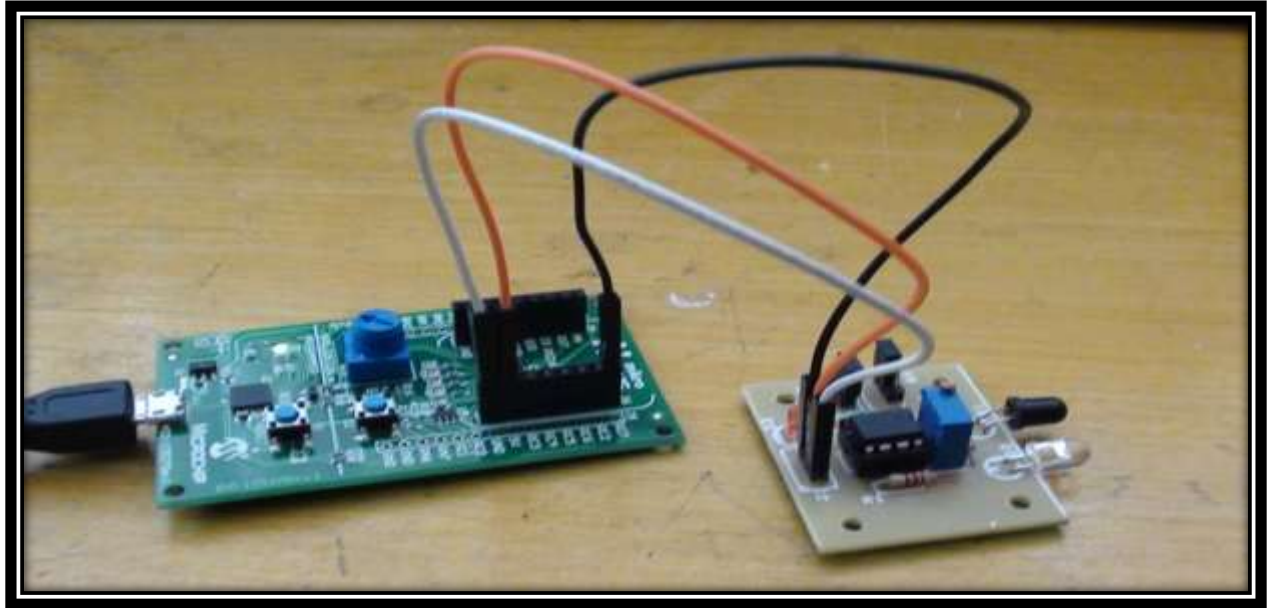

Figure 11: Run the project

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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

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