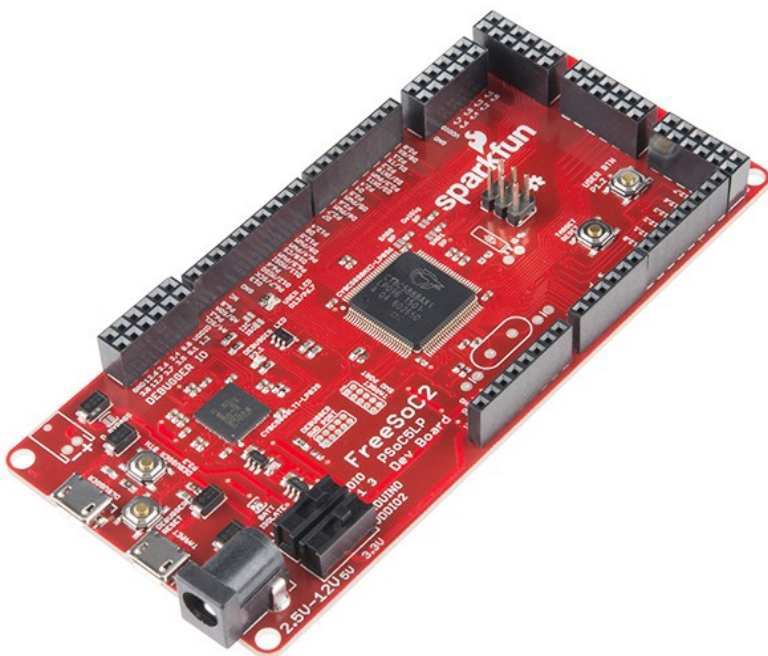# 2016

Getting Started with FreeSoc2 (PSoC5LP) and PSoC Creator IDE

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Version: 1.0

Introduction:

The FreeSoC2 micro-controller based on the PSoC 5LP (Programmable System on a Chip) brings together features of the programmable devices and micro-controller-type systems on chips into one package. By placing a programmable fabric between the peripherals and the pins, the FreeSoC2 allows any function to be routed to any pin! Moreover, the on-board PSoC includes a number of programmable blocks which allow the user to define arbitrary digital and analog circuits for their specific application. To get the most out of the device, you will need to use the PSoC Creator IDE.
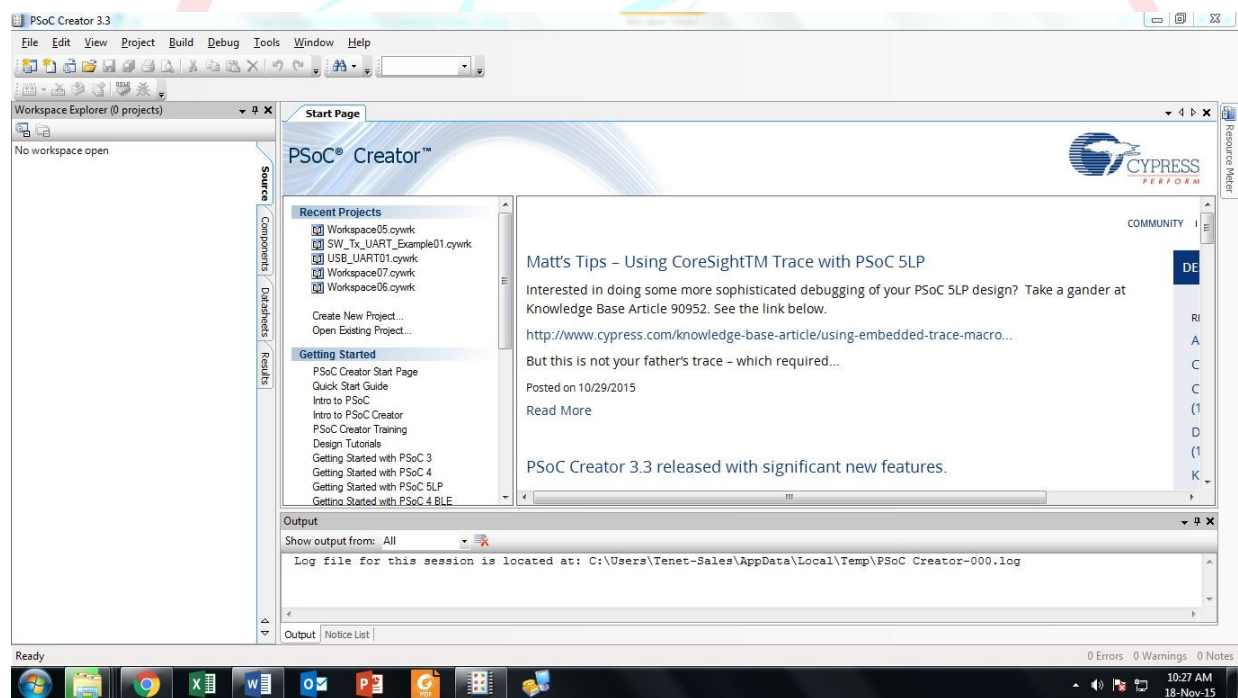
Step 1: Open PSOC creator IDE.

Figure 1

Step 2: File-> new project -> design -> PSoC 5LP design & save with desired name.
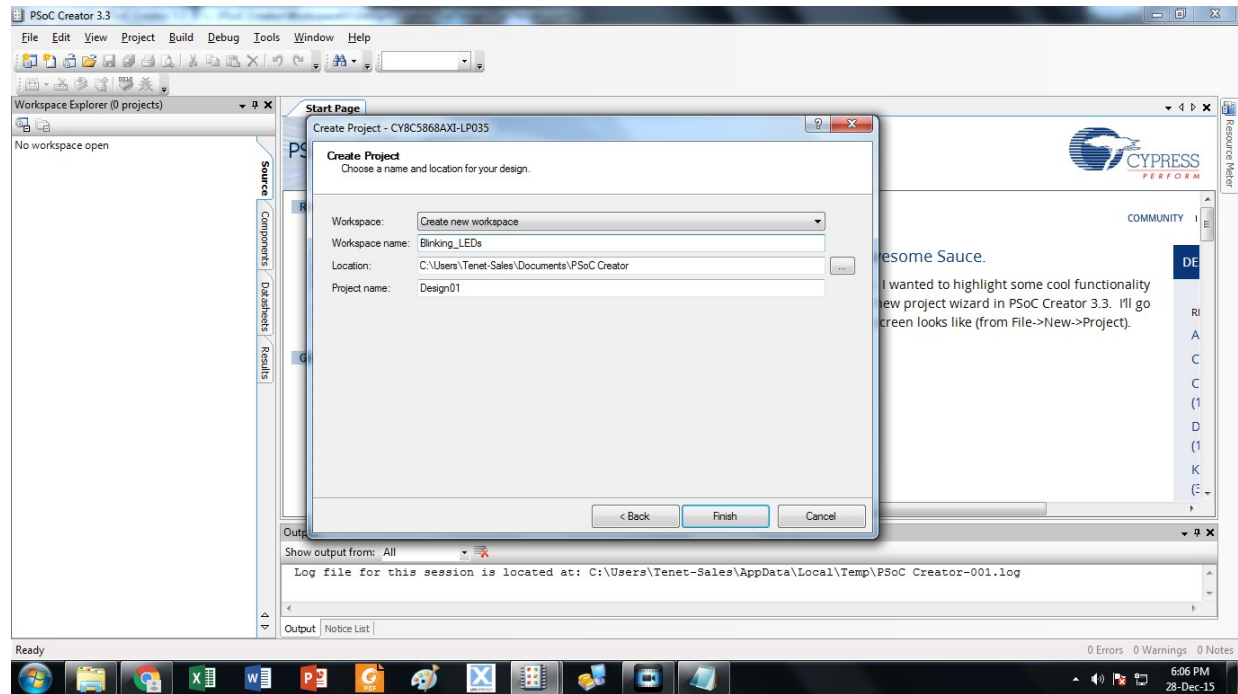

Figure 2

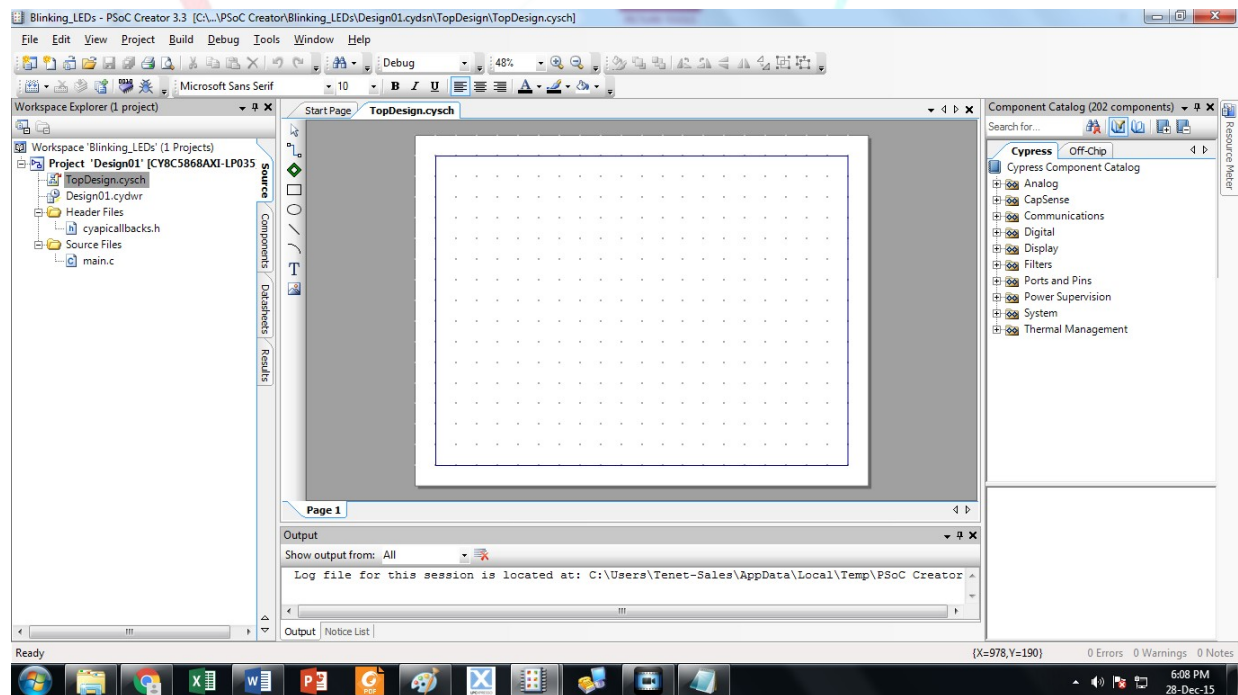## Step 3: Open TopDesign.cysch from workspace explorer.

Figure 3

Step 4: Search for Digital output pin from the Component catalog on right side of the window. Drag the Digital output pin onto the workspace
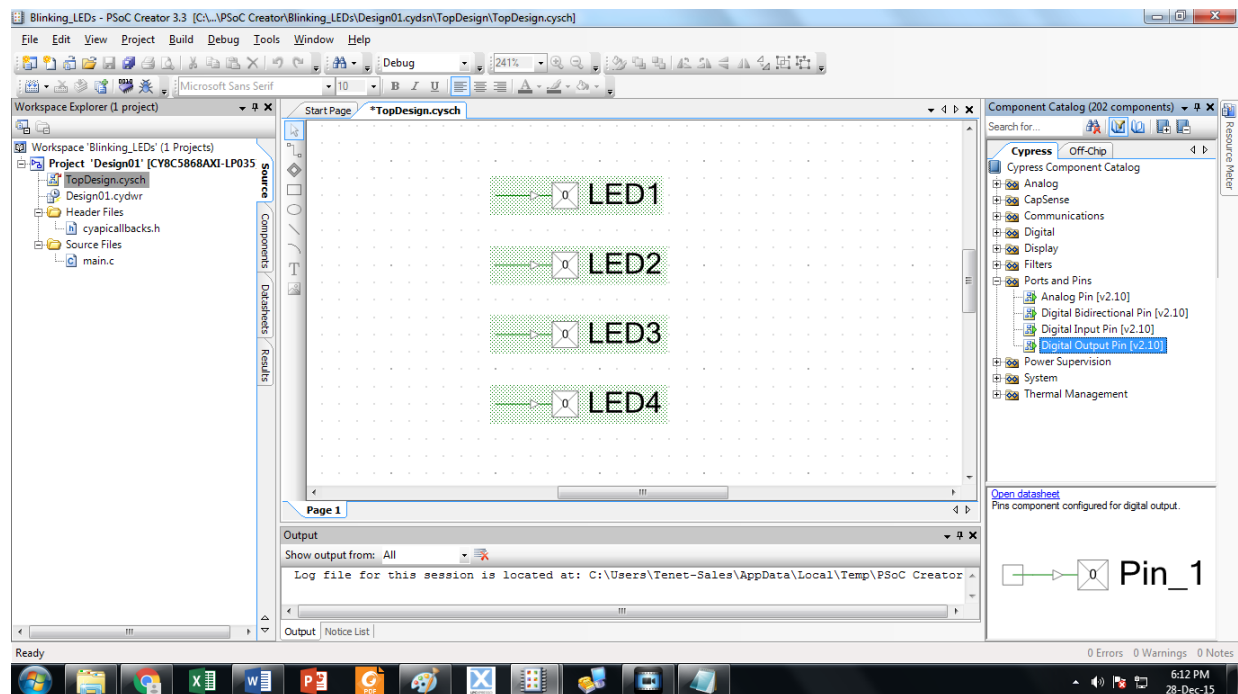

Figure 4

Step 5: Double click on the Digital output pin and change the name if you wish to. De-select HW connection.
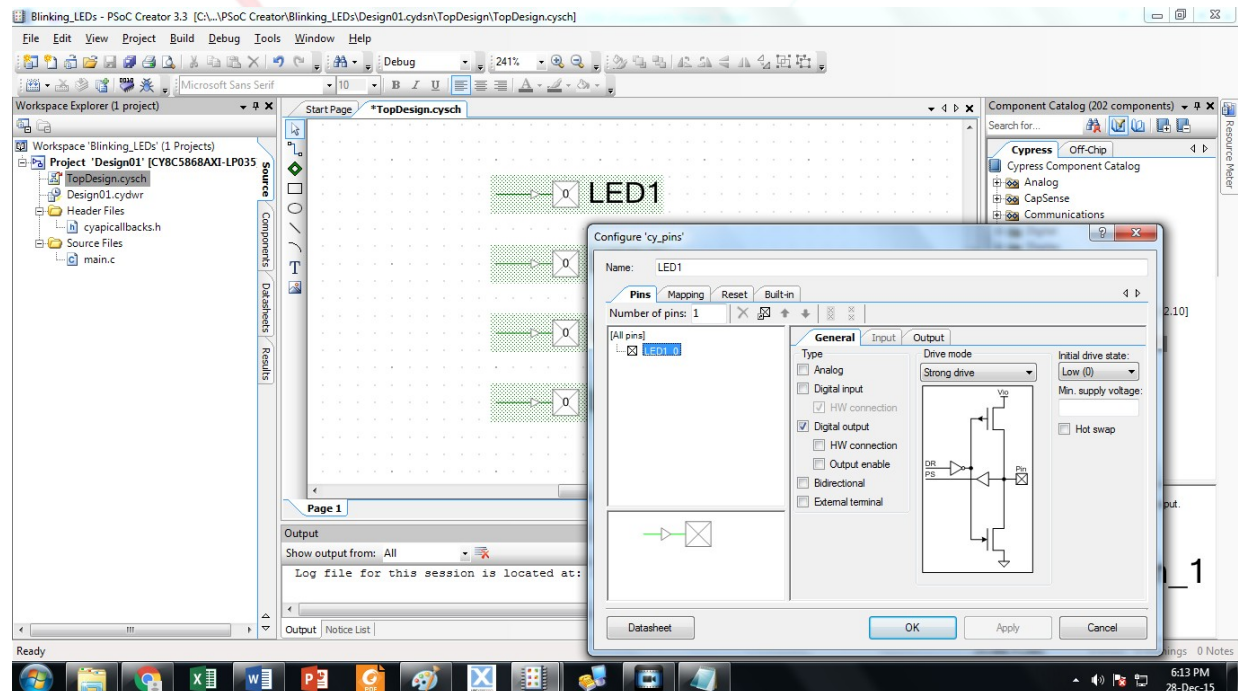

Figure 5

Step 6: After configuring build the project. As we can generate user-defined APIs which will ease us while writing code. We can see APIs generated in the Workspace Explorer on the left side of the window.
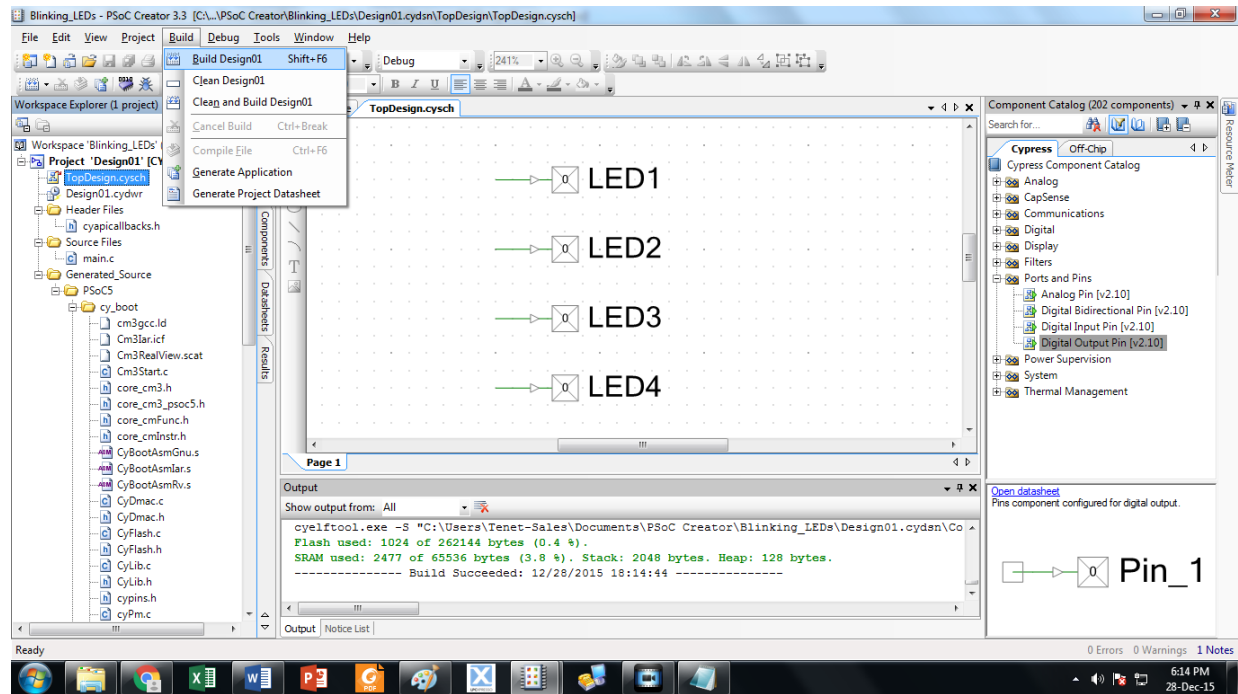

Figure 6

Step 7: Now click on main.c file and write the code and build it.

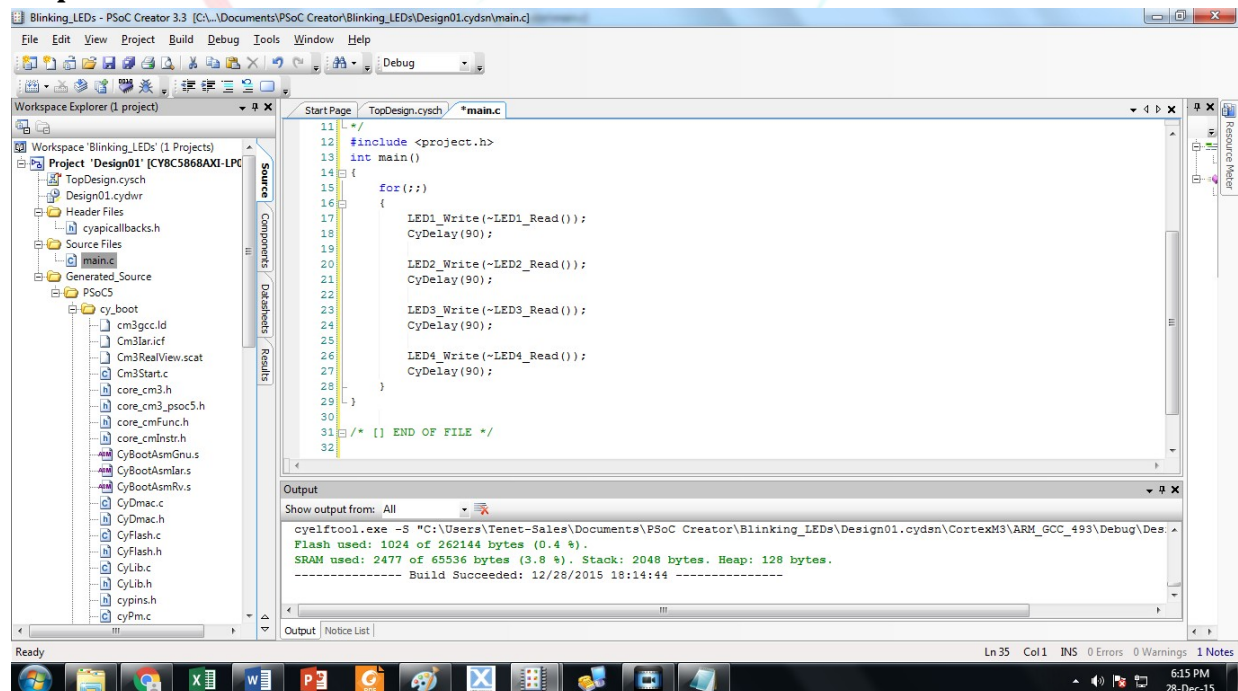Figure 7

CODE:

```
#include <project.h>
int main()
{
    for(;;)
    {
        LED1_Write(~LED1_Read());
        CyDelay(90);

        LED2_Write(~LED2_Read());
        CyDelay(90);

        LED3_Write(~LED3_Read());
        CyDelay(90);

        LED4_Write(~LED4_Read());
        CyDelay(90);
    }
}
```

Step 8: Finally double click on Design01.cydwr, assign pins to appropriate port and build it.
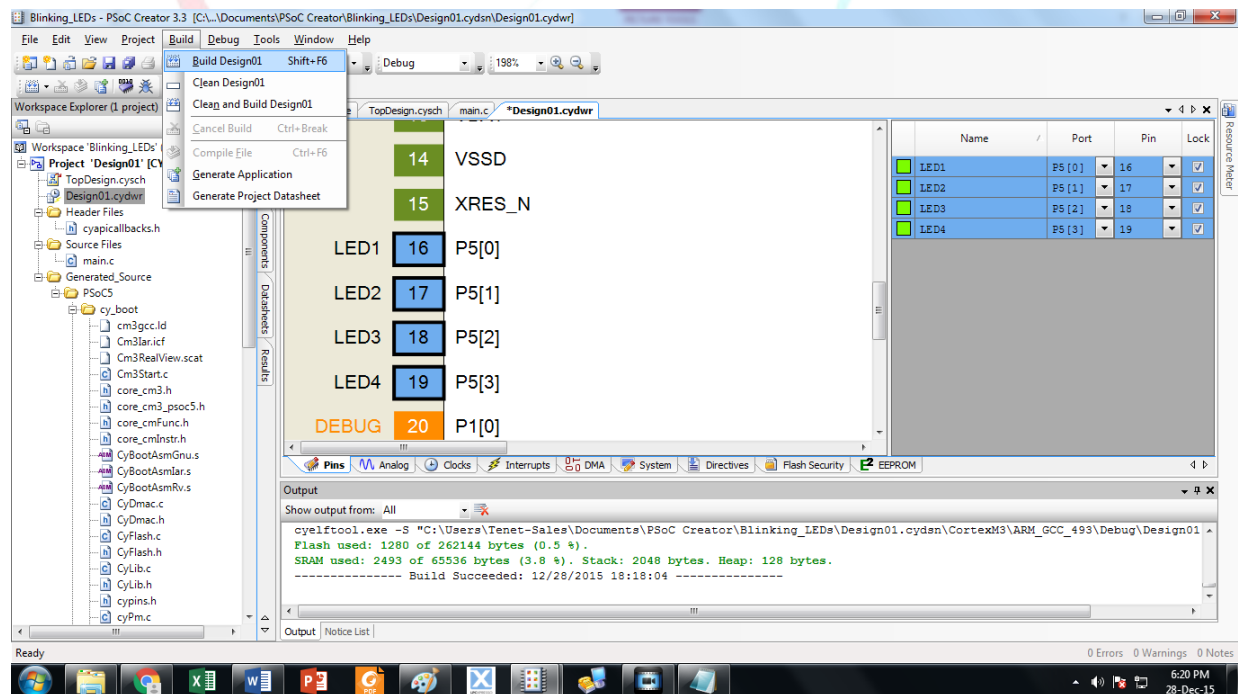

Figure 8

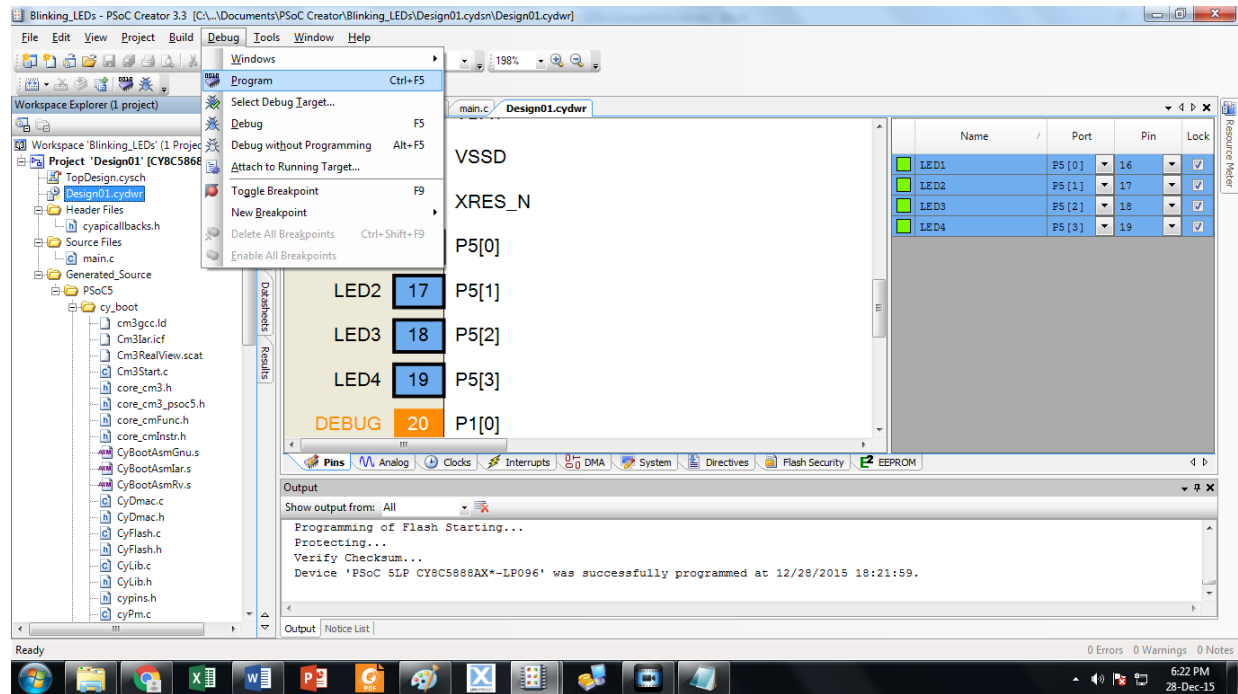**Step 9: If all goes well, goto to Debug and click on Program.**
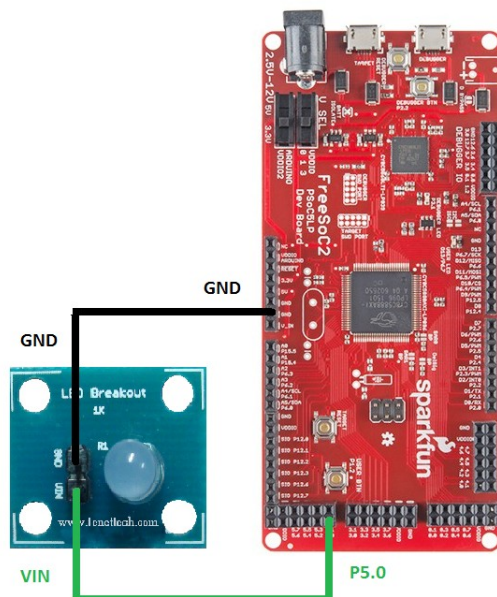

Figure 9

CONNECTION DIAGRAM:

Figure 10

OUTPUT:

Figure 11
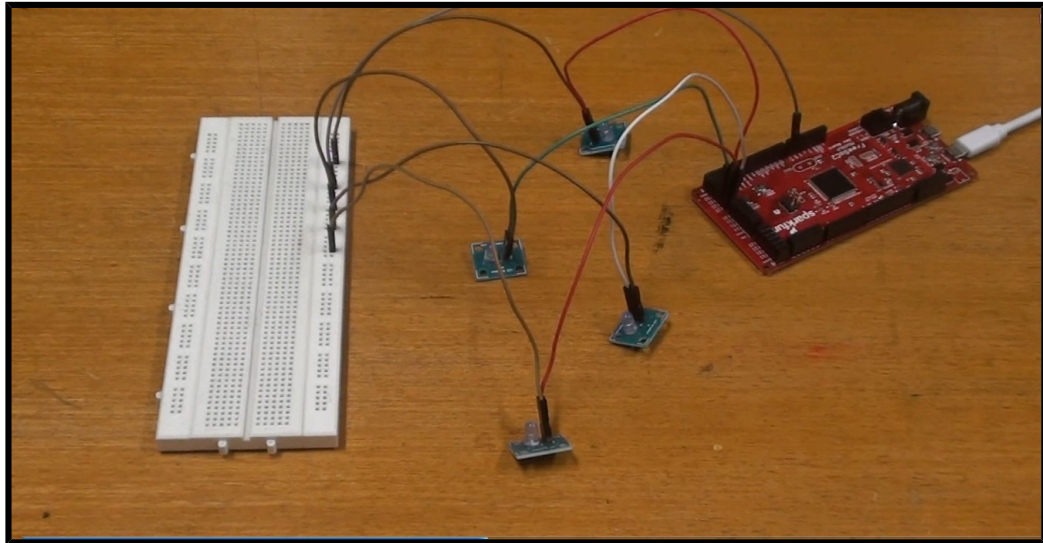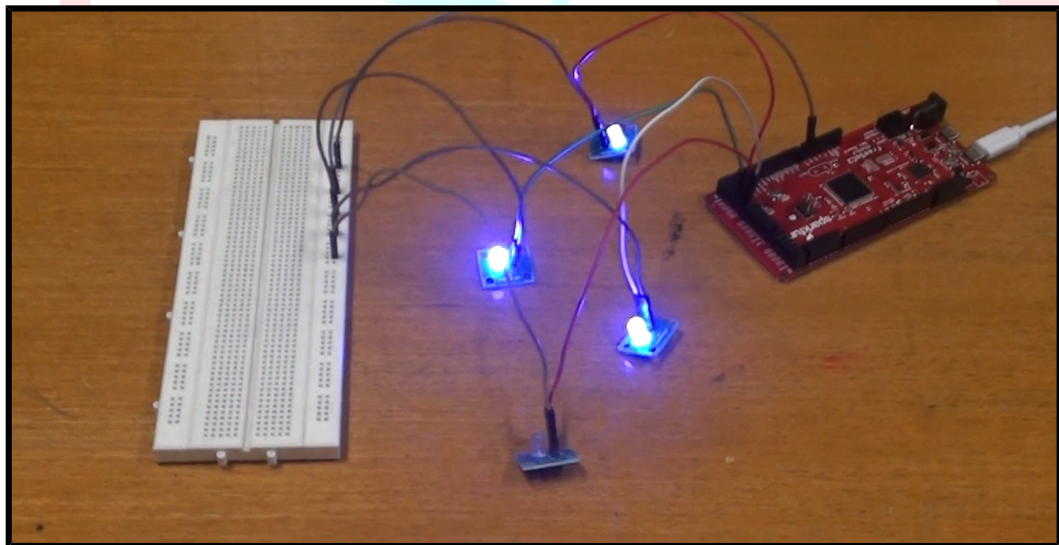

Figure 12

For product link:

1. **http://www.tenettech.com/product/7241/freesoc2-development-board-psoc5lp**

For more information please visit: www.tenettech.com

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

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