Interfacing an LED with 8051 microcontroller using Keil µvision 5

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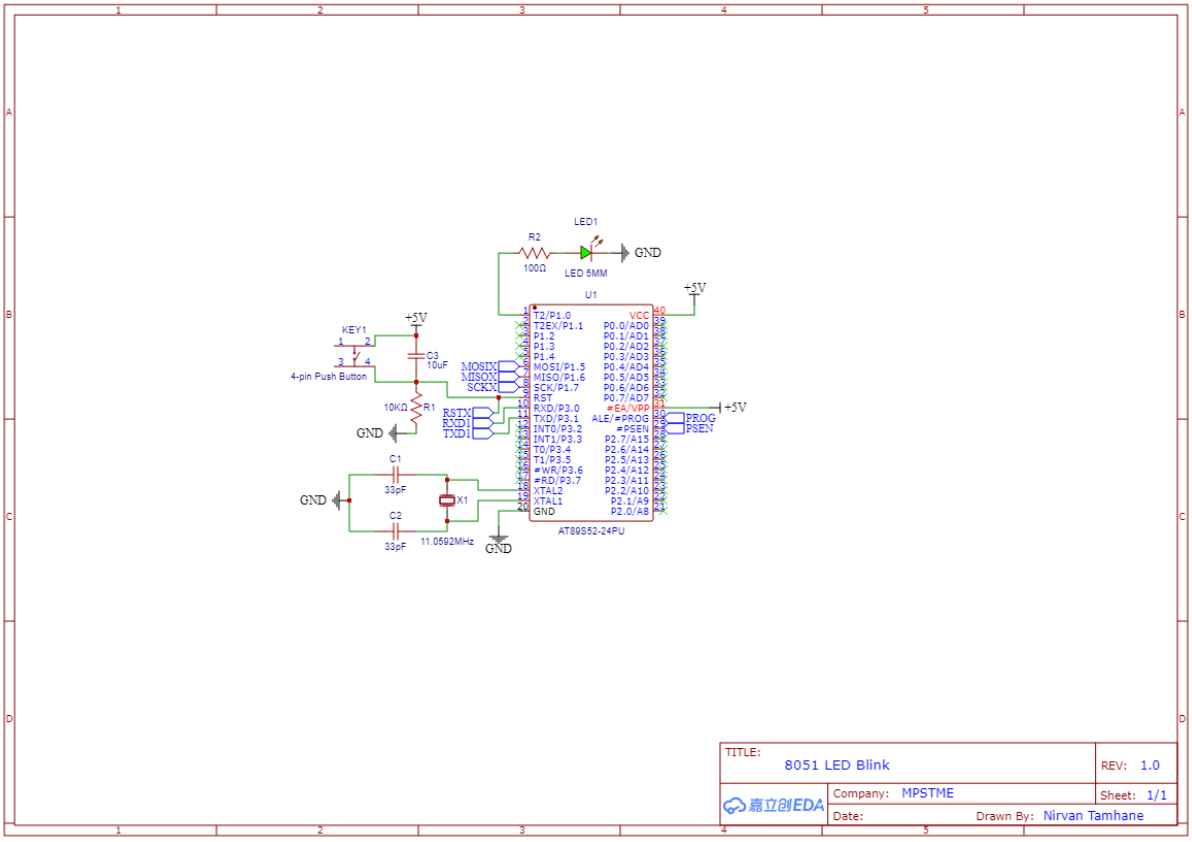
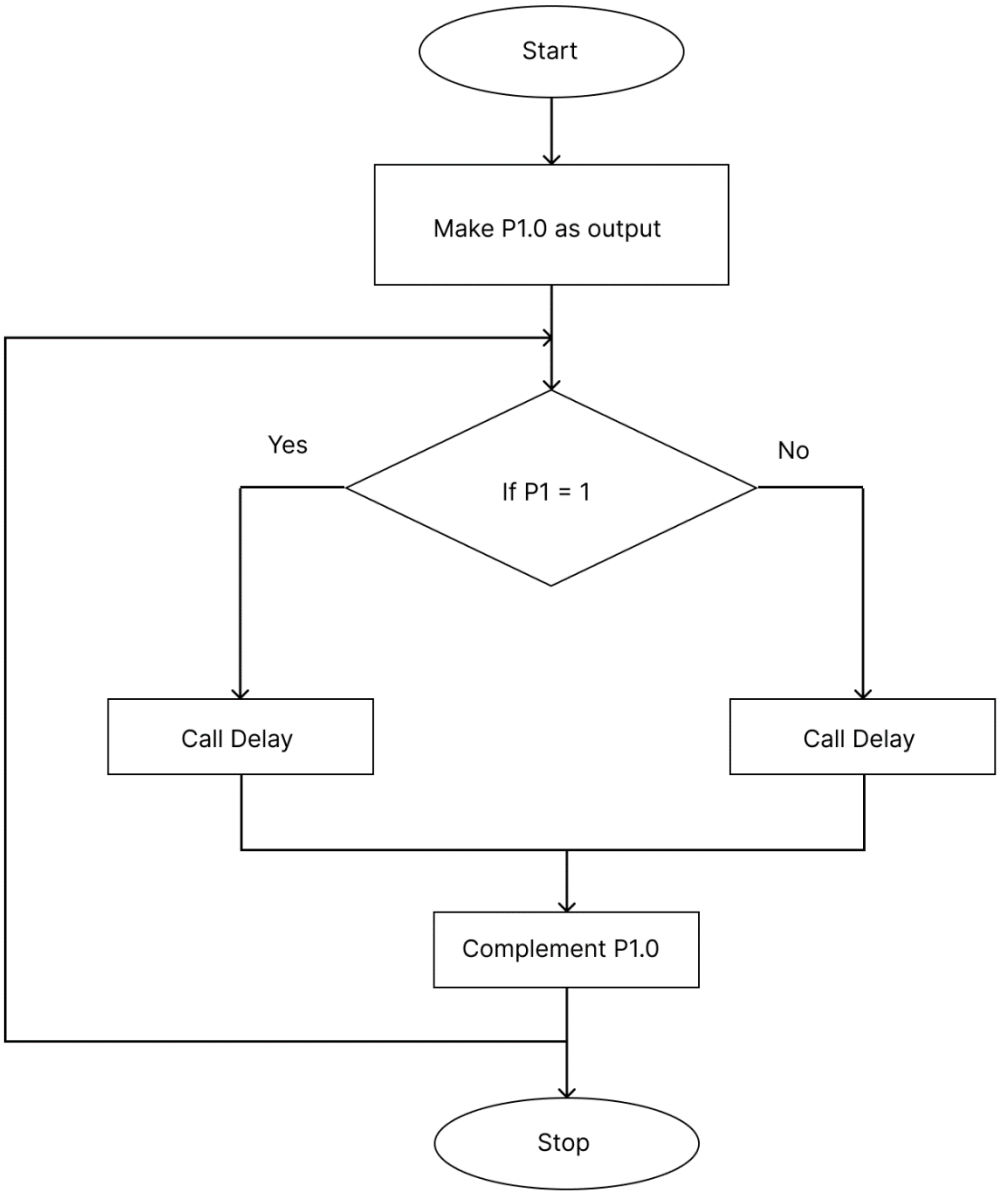
Aim: Write a program to toggle a LED on port 1, pin P1.0 with a delay using 8051 microcontroller and Keil µvision 5 software.

Interfacing/Schematic:



Program flowchart:



Embedded C program:

```
#include<reg52.h>          // special function register declarations
                           // for the intended 8051 derivative

sbit LED = P1^0;           // Defining LED pin

void Delay(void);          // Function prototype declaration

void main (void)
{
   while(1)                // infinite loop
   {
      LED = 0;             // LED ON
      Delay();
      LED = 1;             // LED OFF
      Delay();
   }
}

void Delay(void)
{
   int j;
   int i;
   for(i=0;i<20;i++)
   {
      for(j=0;j<10000;j++)
      {
      }
   }
}
```

Conclusion - We learnt the interfacing of LED connection to Port of 8051.Learned how to create a delay in the program with conditional instructions.