University of Engineering and Technology, Peshawar

Department of Computer Systems Engineering.

Course : CSE-303 Microprocessor Based System Design

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Section		A
Batch		21 (Spring_2022)
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Task 01

- **Create a delay of 20msec**
- **Turn ON an LED for 12msec and then turn OFF for 8msec. Do it continuously.**

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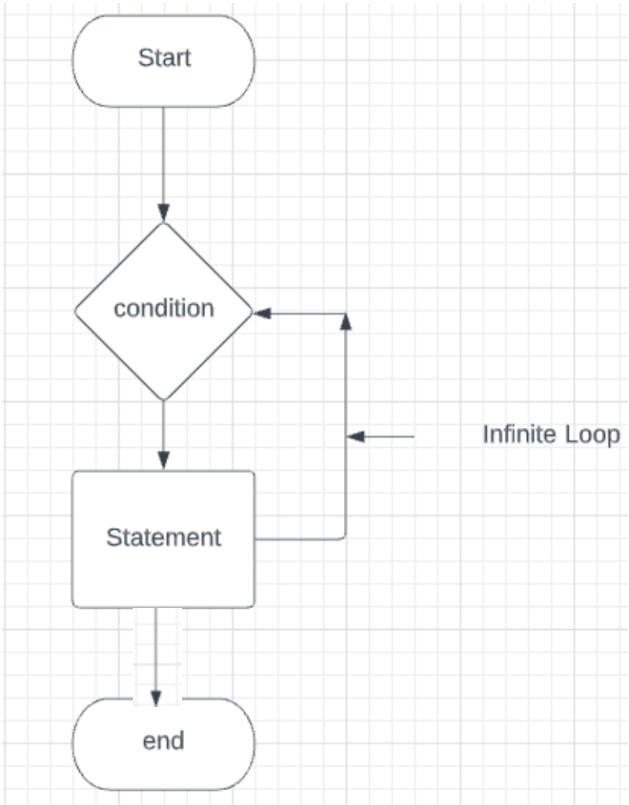
Verify the above two tasks on Proteus using an oscilloscope.

Task 01_a

Source Code

```
#include <reg51.h>

void Delay_Fun(unsigned int);

void main(void){
        Delay_Fun(20);
        // Program will wait for 20ms
        Delay_Fun(10);
        // Program will wait for 10ms
}

void Delay_Fun(unsigned int mili_sec){
    int i, j;
    for(i = 0 ; i < mili_sec; i++){
        for(j = 0; j < 257; j++);
    }
}
```

Flow Chart

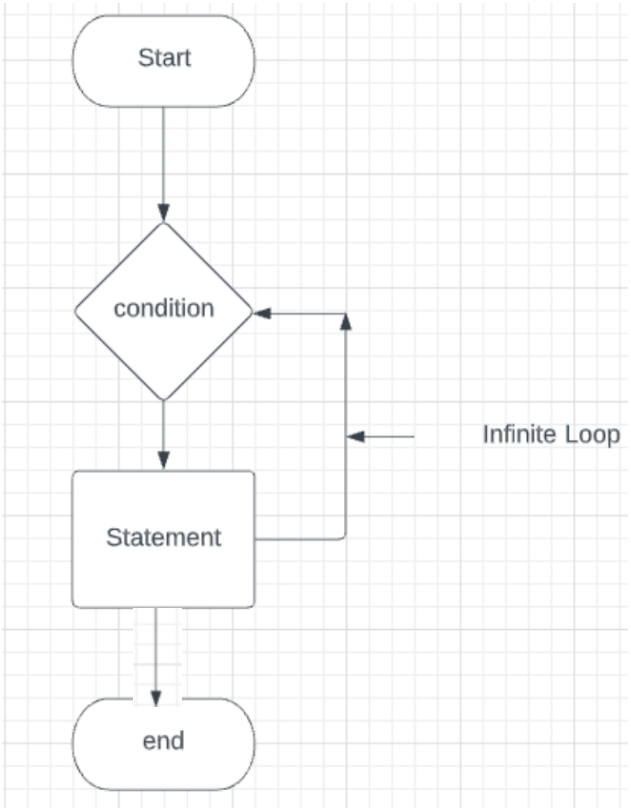


Task 01_b

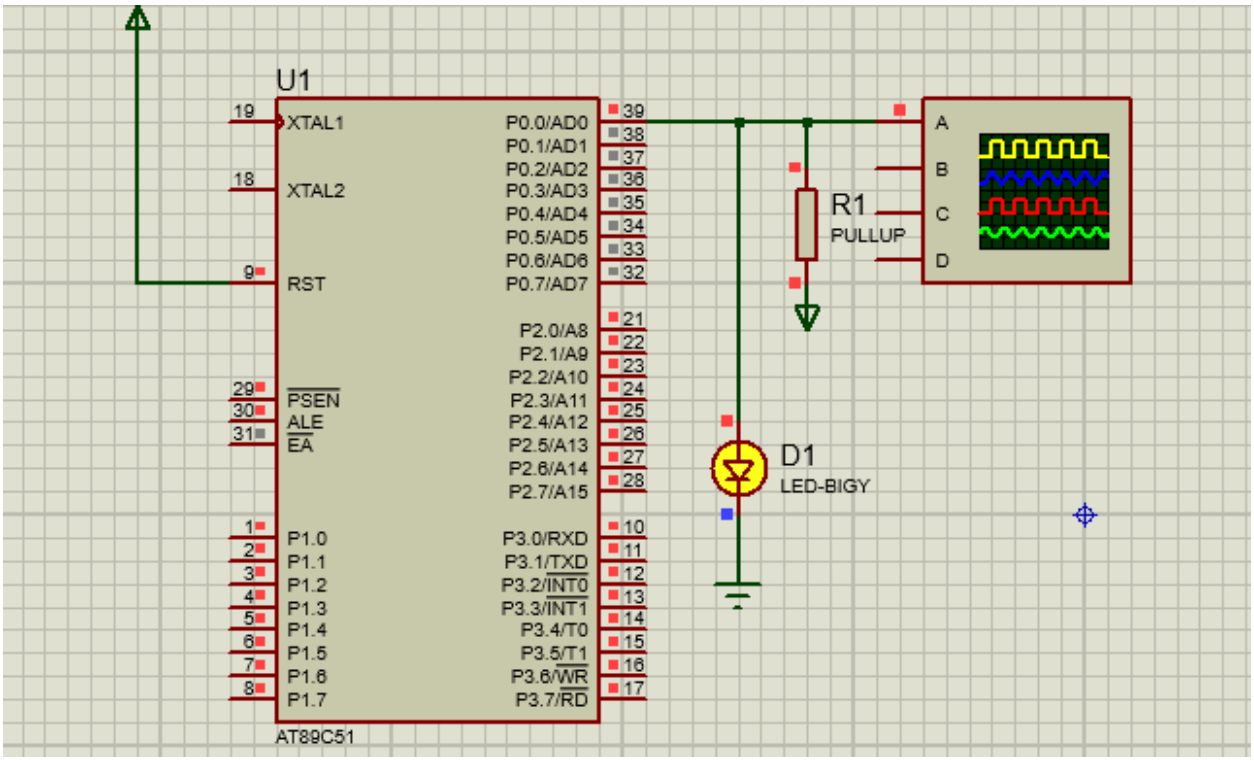
Source Code

```
#include <reg51.h>

sbit My_Single_Bit = P0^0;
void Delay_Fun(unsigned int);

void main(void){
    while(1){
        My_Single_Bit = 1;
        Delay_Fun(12);
        My_Single_Bit = 0;
        Delay_Fun(8);
    }
    //return 0; // No need of return as code is unreachable
}

void Delay_Fun(unsigned int mili_sec){
    int i, j;
    for(i = 0 ; i < mili_sec; i++){
        for(j = 0; j < 257; j++);
    }
}
```

Flow Chart



Schematic Diagram



Oscilloscope wave form