



**The Islamic University of Gaza
Computer Department
Embedded System Lab**

Homework_2

Student name

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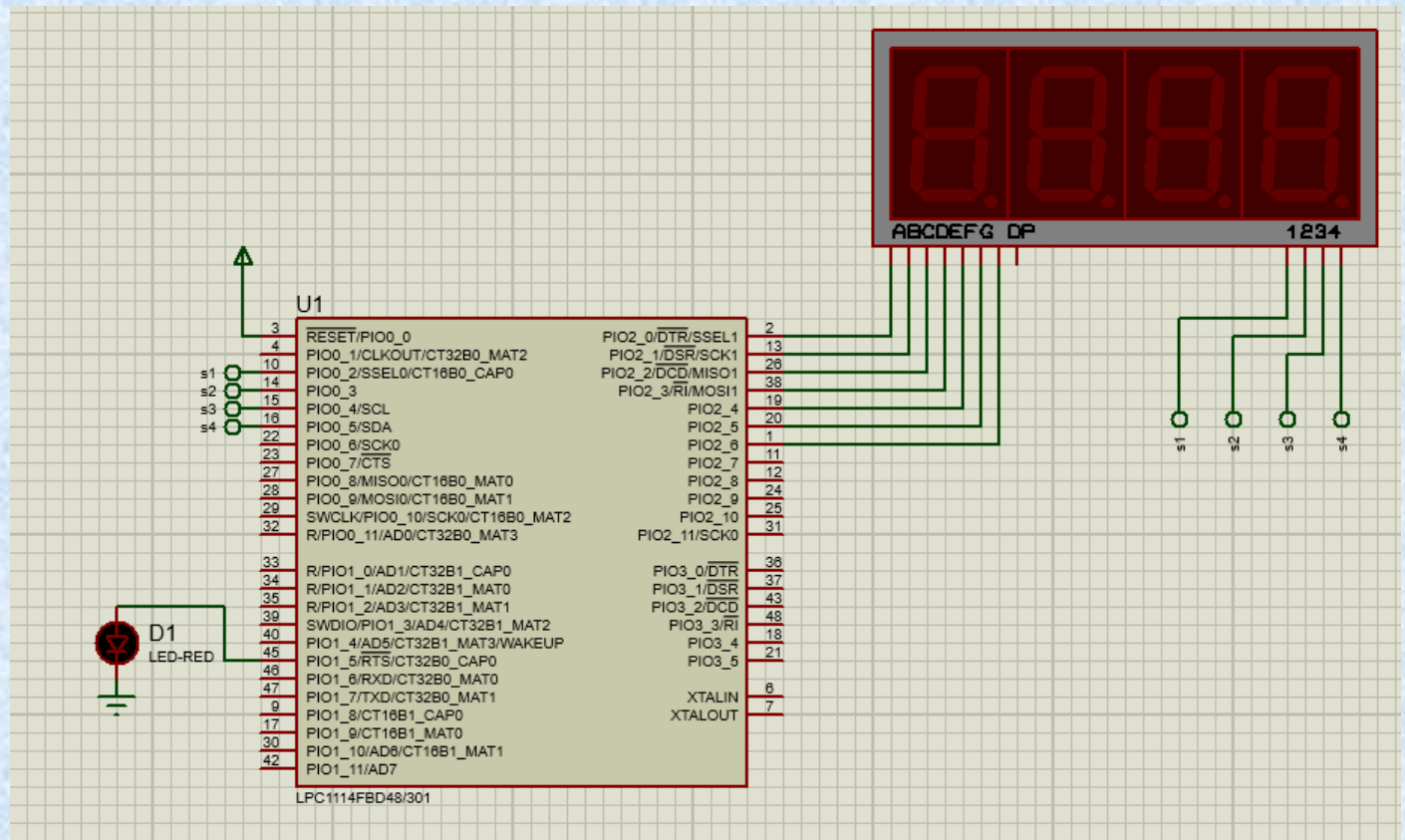
Supervisor

Eng. Amal Abu Jasser

Date

2/12/2024

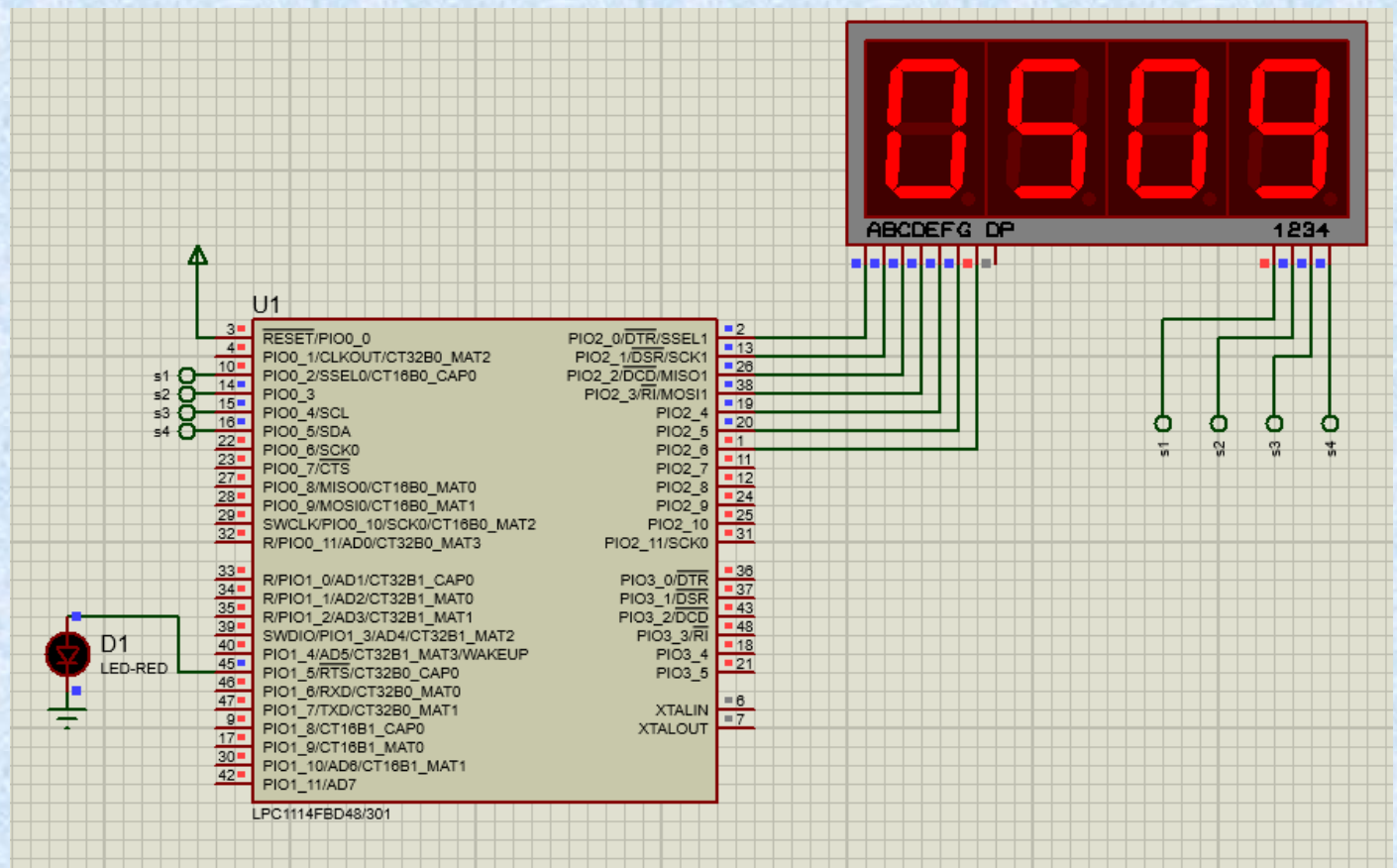
Compmnents:



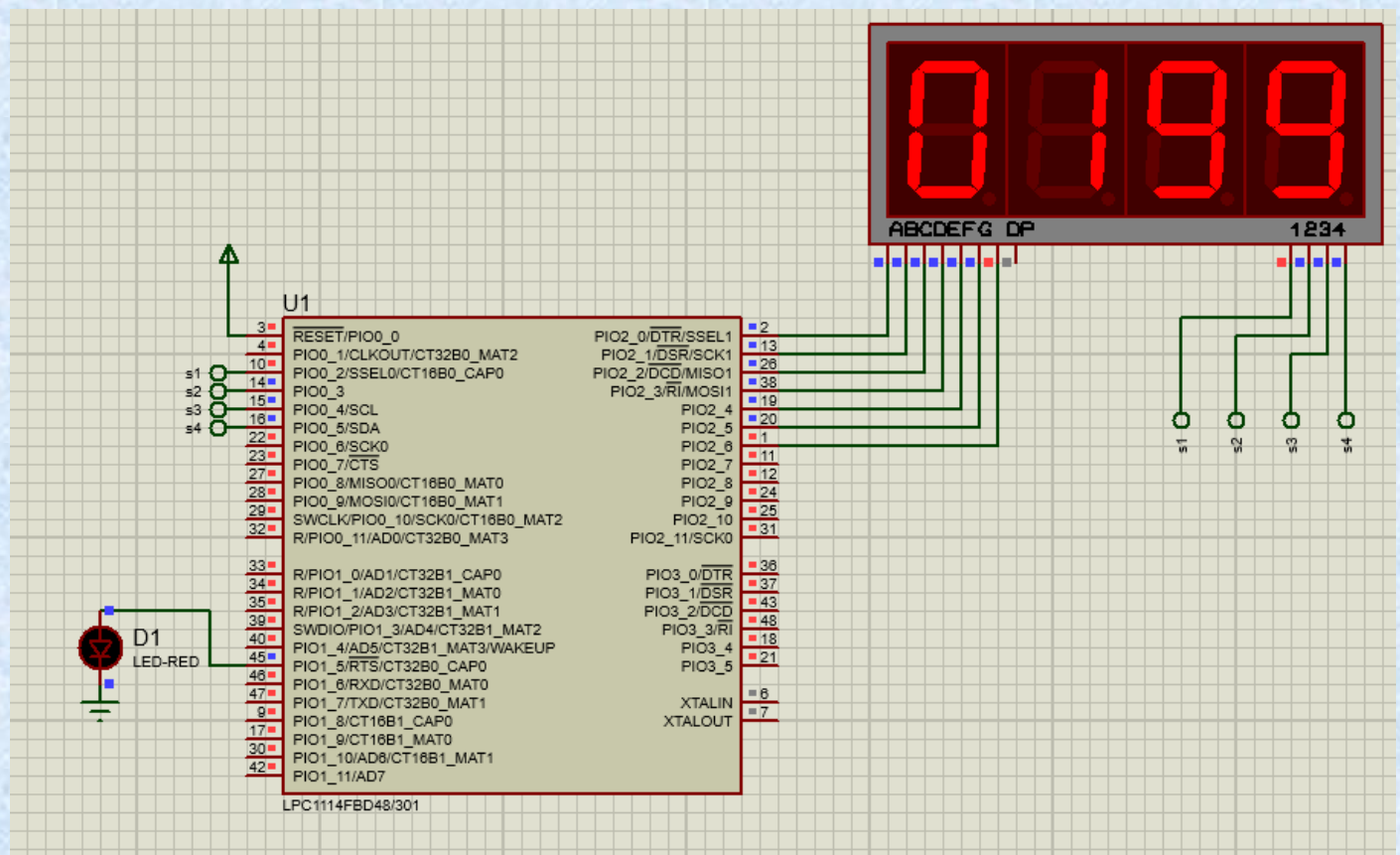
Code:

```
main.c x
1  #include <LPC11xx.h>
2
3  #define GPIO0DIR *((volatile unsigned long *)0x50008000)
4  #define GPIO0DATA *((volatile unsigned long *)0x50003ffc)
5
6  #define GPIO1DIR *((volatile unsigned long *)0x50018000)
7  #define GPIO1DATA *((volatile unsigned long *)0x50013ffc)
8
9  #define GPIO2DIR *((volatile unsigned long *)0x50028000)
10 #define GPIO2DATA *((volatile unsigned long *)0x50023ffc)
11
12
13
14 int main (void)
15 {
16     GPIO2DIR |= 0b1111111 ;
17     GPIO0DIR |= 0b111100 ;
18     GPIO1DIR |= 0b100000;
19     GPIO1DATA = 0b000000;
20
21     int seven_seg_encoder [] = {
22         ~0x3f,
23         ~0x06,
24         ~0x5b,
25         ~0x4f,
26         ~0x66,
27         ~0x6d,
28         ~0x7d,
29         ~0x07,
30         ~0xff,
31         ~0x6f
32     };
33     int num=555;
34     int i = 0;
35     while (1) {
36
37         if(num == 0){
38             GPIO1DATA = 0b100000;
39             for (i=0; i<3000; i++);
40
41             break;
42         }
43
44         num--;
45         if(num < 0)
46         {
47             num =555 ;
48         }
49
50
51         GPIO0DATA=0b100000;
52         GPIO2DATA = seven_seg_encoder[(num)%10];
53         for (i=0; i<3000; i++);
54
55         GPIO0DATA=0b010000;
56         GPIO2DATA = seven_seg_encoder[(num/10) %10];
57         for (i=0; i<3000; i++);
58
59         GPIO0DATA=0b001000;
60         GPIO2DATA = seven_seg_encoder[(num/100) %10];
61         for (i=0; i<3000; i++);
62
63         GPIO0DATA=0b000100;
64         GPIO2DATA = seven_seg_encoder[(num/1000) %10];
65         for (i=0; i<3000; i++);
66
67
68     }
69     return 0;
70 }
71
```

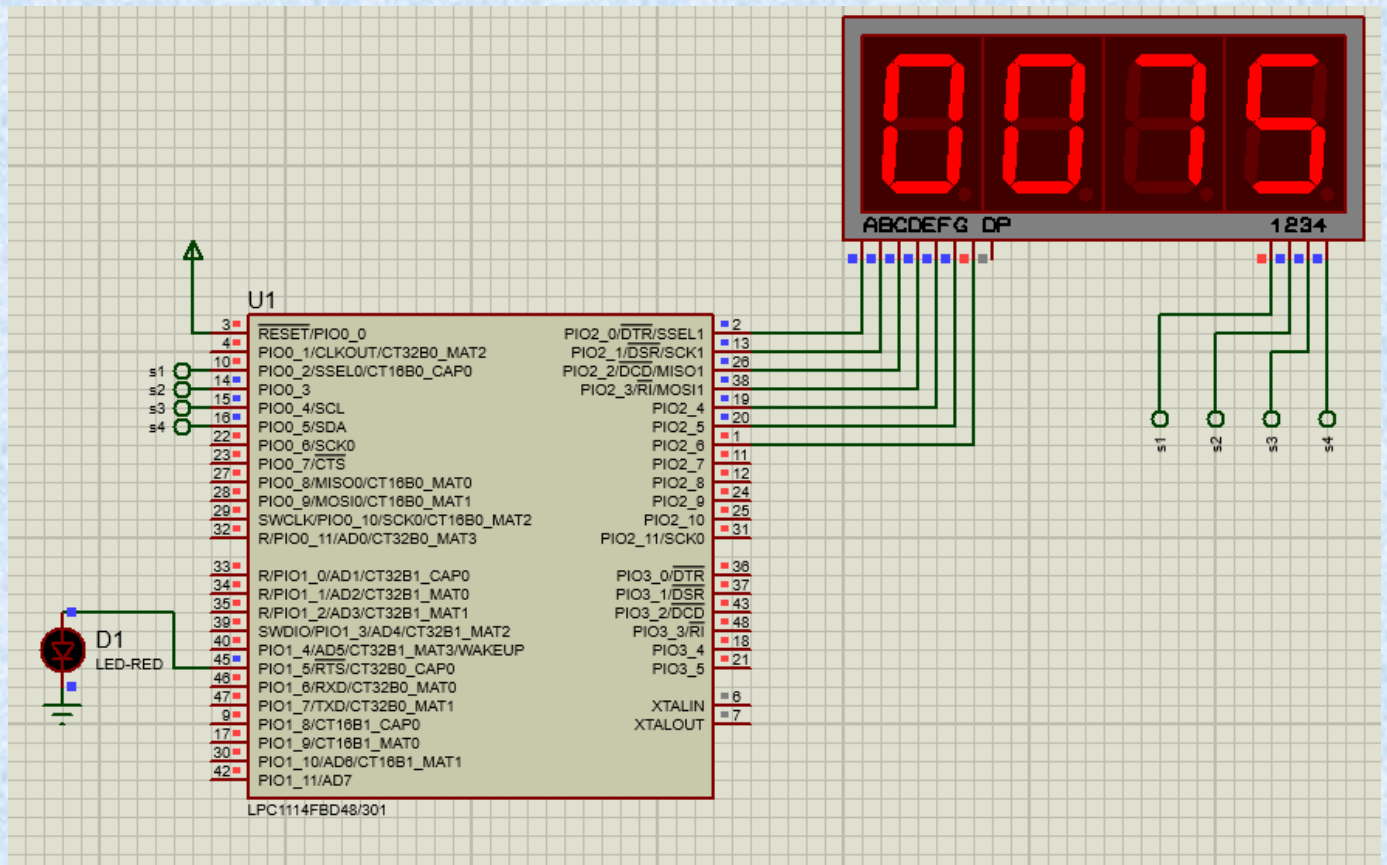
Sample 1:



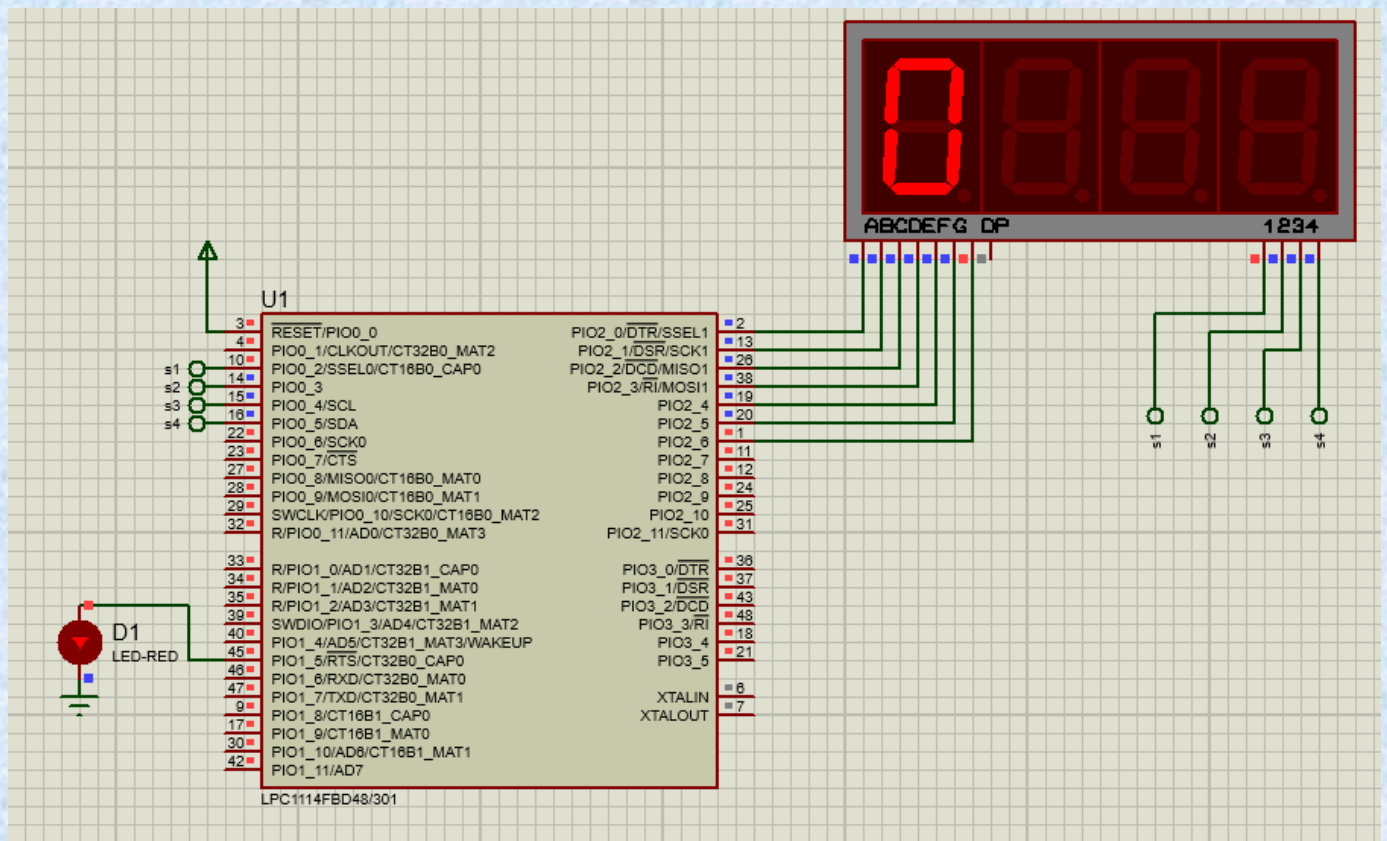
Sample 2:



Sample 3:



Sample 3:



تم بحمد الله