

→ Building a Mod 99 counter and displaying the count using Seven segment Display via AT89C51 (8051 Microcontroller family) in keil Micro-vision Software and stimulation using proteus software:

software:-

Code:

```
org 00h
start:
mov r1,#10h
mov dptr,#400h

back:
clr a
movc a,@a+dptr
mov b,a
mov p2,b
push dpl

bit2:
mov r5,#10
mov dptr,#400h

back2:
mov a,00h
movc a,@a+dptr
mov p3,a
acall delay
inc dptr
djnz r5,back2

pop dpl
inc dptr
mov a,dpl
    cjne a,#0Ah,label
        mov dpl,#00h

label:
djnz r1,back
sjmp start

org 400h
db 3fh,06h,5bh,4fh,66h,6dh,7dh,07h,7fh,6fh
```

```
delay:
mov r2,#08h
up2:
mov r4,#0ffh
```

```
up1:
mov r3,#08fh
```

```
here:
djnz r3,here
djnz r4,up1
djnz r2,up2
ret
end
```

## Screenshots:-

```
1 org 00h
2 start:
3 mov r1,#10h
4 mov dptr,#400h
5
6 back:
7 clr a
8 movc a,@a+dptr
9 mov b,a
10 mov p2,b
11 push dpl
12
13 bit2:
14 mov r5,#10
15 mov dptr,#400h
16
17 back2:
18 mov a,00h
19 movc a,@a+dptr
20 mov p3,a
21 acall delay
22 inc dptr
23 djnz r5,back2
24
25 pop dpl
26 inc dptr
27 mov a,dpl
28     cjne a,#0Ah,label
29     mov dpl,#00h
30 label:
31 djnz r1,back
32 sjmp start
33
34 org 400h
35 db 3fh,06h,5bh,4fh,66h,6dh,7dh,07h,7fh,6fh
36
37 delay:
38
39 mov r2,#08h
40 up2:
41 mov r4,#0ffh
42
43 up1:
44 mov r3,#08fh
45
46 here:
47 djnz r3,here
48 djnz r4,up1
49 djnz r2,up2
50 ret
51 end
52
```







