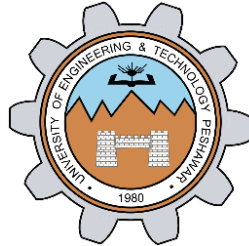


MICROPROCESSOR BASED SYSTEM DESIGN LAB

Lab #04



Spring 2021

CSE307L MBSD Lab

Submitted by: **Shah Raza**

Registration No.: **18PWCSE1658**

Class Section: **B**

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Student Signature: _____

Submitted to:

Engr. Amaad Khalil

Saturday, May 29, 2021

Department of Computer Systems Engineering
University of Engineering and Technology, Peshawar

Task 1:

Interface Push buttons to 8051 microcontroller and blink even and odd LEDs using input buttons.

Code:

```
ORG 0000H
```

```
MOV P2,#00H
```

```
Start:
```

```
JB P2.0,Even
```

```
Check:
```

```
JB P2.1,Odd
```

```
SJMP Start
```

```
Even:
```

```
CLR P2.1
```

```
MOV R1,#0AAH
```

```
MOV P1,R1
```

```
SJMP Check
```

```
Odd:
```

```
CLR P2.0
```

```
MOV R2,#55H
```

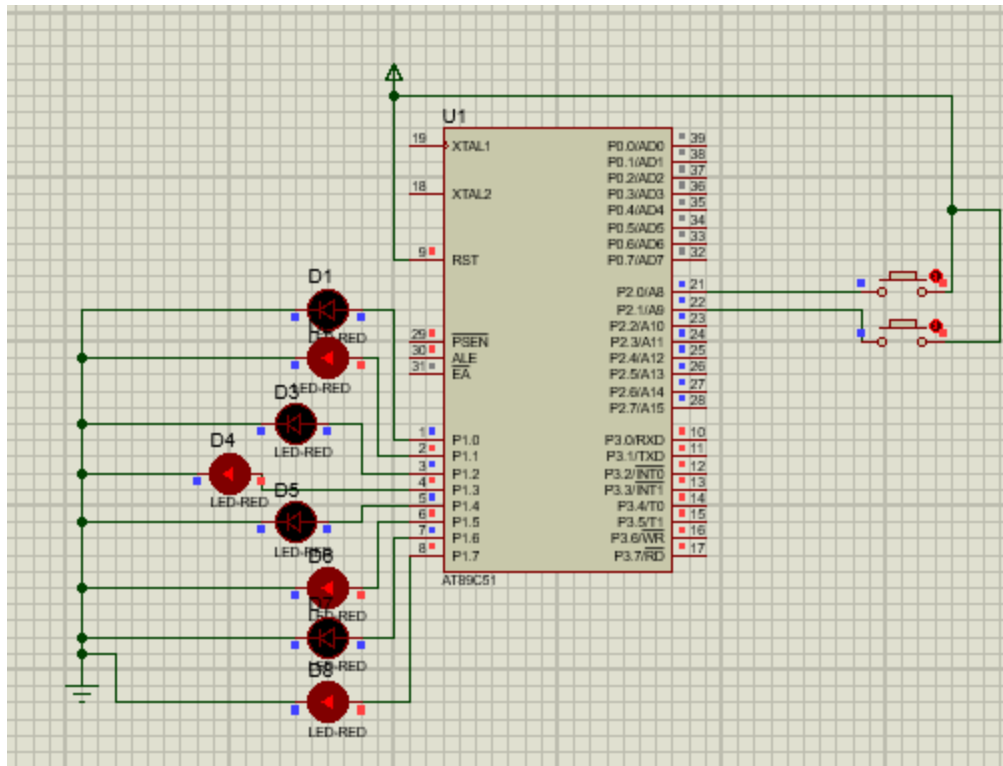
```
MOV P1,R2
```

```
SJMP Start
```

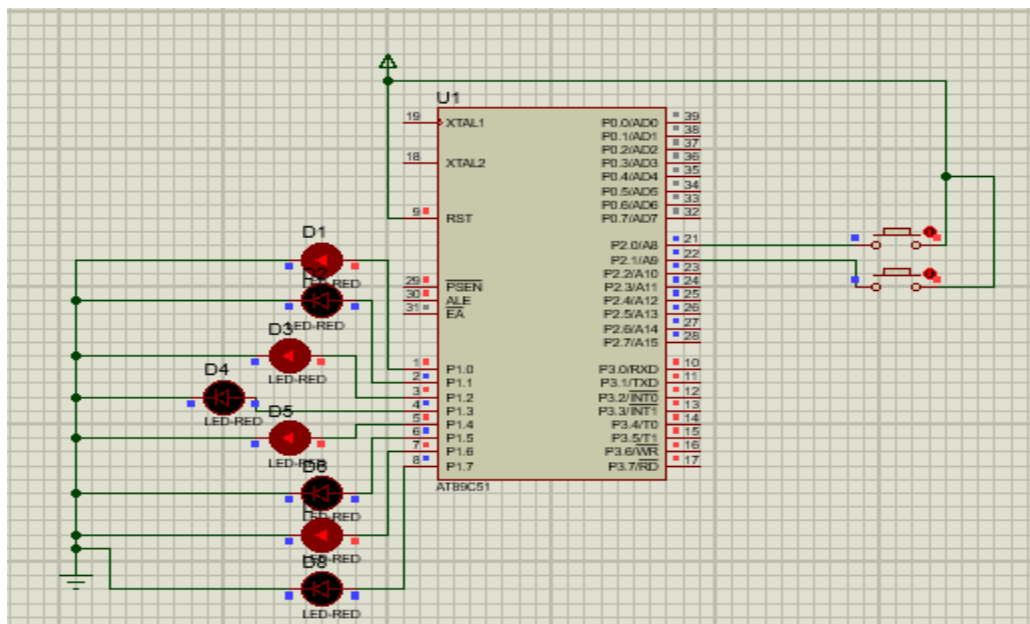
```
END
```

Output / Graphs / Plots / Results:

Pressing the button at P2.0:



Pressing the button at P2.1:



Task 2:

Interface Push buttons to 8051 microcontroller and display up counting and down counting using seven segment display using input buttons.

Code:

ORG 0

MOV P2,#00H

START:

JB P2.0,UP

JB P2.1,DOWN

SJMP START

UP:

MOV R1,#3FH

ACALL DISPLAY

MOV R1,#06H

ACALL DISPLAY

MOV R1,#5BH

ACALL DISPLAY

MOV R1,#4FH

ACALL DISPLAY

MOV R1,#66H

ACALL DISPLAY

MOV R1,#6DH

ACALL DISPLAY

MOV R1,#7DH

ACALL DISPLAY

MOV R1,#07H

ACALL DISPLAY

MOV R1,#7FH

ACALL DISPLAY

MOV R1,#6FH

ACALL DISPLAY

SJMP START

DOWN:

MOV R1,#6FH
ACALL DISPLAY

MOV R1,#7FH
ACALL DISPLAY

MOV R1,#07H
ACALL DISPLAY

MOV R1,#7DH
ACALL DISPLAY

MOV R1,#6DH
ACALL DISPLAY

MOV R1,#66H
ACALL DISPLAY

MOV R1,#4FH
ACALL DISPLAY

MOV R1,#5BH
ACALL DISPLAY

MOV R1,#06H
ACALL DISPLAY

MOV R1,#3FH
ACALL DISPLAY

SJMP START

DISPLAY:

MOV P1,R1
ACALL DELAY
RET

DELAY:

MOV R2,#255

AGAIN:

MOV R3,#255

HERE:

NOP

```

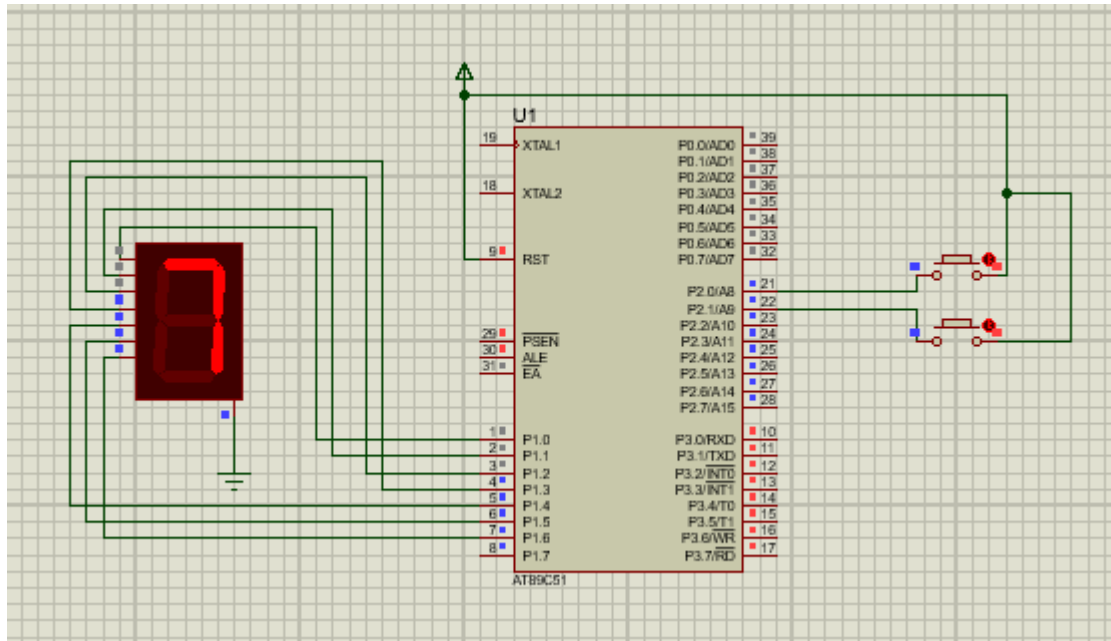
NOP
DJNZ R3,HERE
DJNZ R2,AGAIN
RET

```

END

Output / Graphs / Plots / Results:

Upcounting(Pressing button at P2.0):



Downcounting(Pressing button at P2.1):

