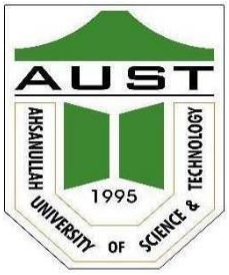

Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

Course No: CSE3108
Course Title: Microprocessors Lab
Assignment No: 4

Date of Performance: 01.03.21
Date of Submission: 15.03.21

Submitted to: Md. Farzad Ahmed

Submitted By-

Group: A_2
Name: Nushrat Jahan Shorna
Id: 18.01.04.032
Section: A

Question no 1: display dot matrix & seven segment

Ans:

```
S SEGMENT PARA PUBLIC 'CODE'
ASSUME CS:S
ORG 1000H

START:
;control Register turn on
MOV AL,80H
OUT 1FH,AL

TOP1:
MOV SI,OFFSET DATA
MOV BX,20H


TOP:      PORT A;
 MOV AL,BYTE PTR CS:[SI]
OUT 18H,AL
 INC SI
DEC BX

PORT B;
 MOV AL,BYTE PTR CS:[SI]
 OUT 1AH,AL
 INC SI
```

DEC BX

PORT C;

```
MOV AL,BYTE PTR CS:[SI]
OUT 1CH,AL
INC SI
DEC BX
```

SEVEN SEGMENT DISPLAY;

```
MOV AL,BYTE PTR CS:[SI]
OUT 19H,AL
INC SI
DEC BX
```

;Delay

```
MOV CX,0FFFFH
L1:LOOP L1 MOV
CX,0FFFFH
L2:LOOP L2 MOV
CX,0FFFFH
L3:LOOP L3
MOV CX,0FFFFH
MOV CX,0FFFFH
L4:LOOP L4
```

```
CMP BX,0000H
JE TOP1
JMP TOP
```

```
DATA:

DB FFH
DB 7DH
DB 10H
DB F8H

DB FFH
DB 7DH
DB 10H
DB FCH

DB FFH
DB BFH
DB 44H
DB 82H

DB FFH
DB FBH
DB 44H
DB A4H

DB FFH
DB EFH
DB 82H
DB 99H

EXIT :

S ENDS
END START
```

Question no 2: display dot matrix and LED

Ans:

```
S SEGMENT PARA PUBLIC 'CODE'

ASSUME CS:S
ORG 1000H

START:

;control Register turn on
MOV AL,80H
OUT 1FH,AL

;Segment address forcefully off
MOV AL,0FFH
OUT 19H,AL

TOP1:
MOV SI,OFFSET DATA
MOV BX,20H


TOP:      PORT A;
MOV AL,BYTE PTR CS:[SI]
OUT 18H,AL
INC SI
```

```
DEC BX

PORT B;

 MOV AL,BYTE PTR CS:[SI]
 OUT 1AH,AL
 INC SI
DEC BX

PORT C;

 MOV AL,BYTE PTR CS:[SI]
 OUT 1CH,AL
 INC SI
DEC BX

LED DISPLAY;

 MOV AL,BYTE PTR CS:[SI]
 OUT 1BH,AL
 INC SI
DEC BX


;Delay

MOV CX,0FFFFH
L1:LOOP L1 MOV
CX,0FFFFH
L2:LOOP L2 MOV
CX,0FFFFH
L3:LOOP L3
MOV CX,0FFFFH
MOV CX,0FFFFH
```

```
L4:LOOP L4

CMP BX,0000H
JE TOP1
JMP TOP

DATA:

DB FFH
DB 7DH
DB 10H
DB 04H

DB FFH
DB BFH
DB 44H
DB 06H

DB FFH
DB FBH
DB 44H
DB 04H

DB FFH
DB EFH
DB 82H
DB 0DH

EXIT :

S ENDS END START
```