

Ahsanullah University of Science & Technology

Department of Computer Science and Engineering

Course No : CSE3108

Course Title : Microprocessors Lab

Set no : 14 & 5

Date of Submission: 21.03.2021

Submitted To : Farzad Ahmed and Junaed Younus Khan

Submitted By:

Name: Nusrat Jahan

Id : 18.01.04.020

Section : A1

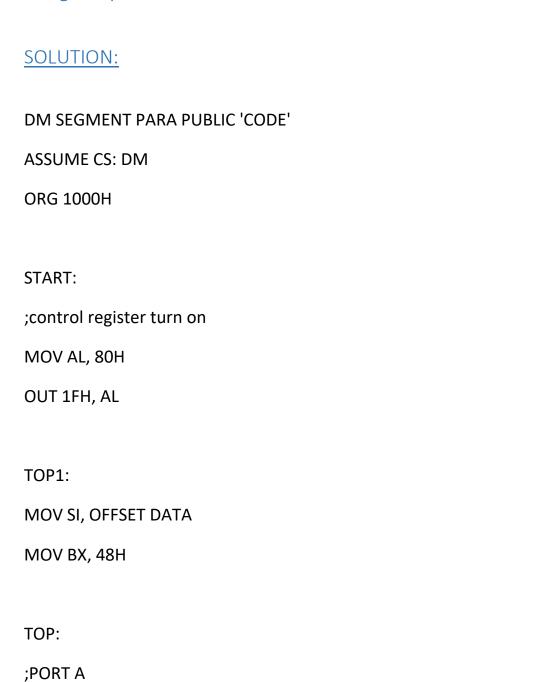
Year : 3rd

Semester: 1st

Experiment No: 01

MOV AL, BYTE PTR CS:[SI]

Write an assembly code to glow dots on Dot Matrix Display Left Sided Arrow shape in Green color with its corresponding row number in SSD using array.



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

;for delay					
MOV CX,FFFFH					
L1:LOOP L1					
MOV CX,FFFFH					
L2:LOOP L2					
MOV CX,FFFFH					
L3:LOOP L3					
MOV CX,FFFFH					
L4:LOOP L4					
CMP BX,0000H					
JE TOP1					
JMP TOP					
DATA:					
DB BFH ; R6 C2					
DB FFH					
DB 04H					
DB 04H DB 82H ; Show 6 in SSD					

DB DFH ; R5 C1

DB FFH

DB 02H

DB 92H ; Show 5 in SSD

DB EFH ; R4 C0

DB FFH

DB 01H

DB 99H ; Show 4 in SSD

DB F7H ; R3 C1

DB FFH

DB 02H

DB BOH ; Show 3 in SSD

DB FBH ; R2 C2

DB FFH

DB 04H

DB A4H ; Show 2 in SSD

DB F7H ; R3 C2

DB 04H

DB BOH ; Show 3 in SSD

DB F7H ; R3 C3

DB FFH

DB 08H

DB BOH ; Show 3 in SSD

DB F7H ; R3 C4

DB FFH

DB 10H

DB BOH ; Show 3 in SSD

DB F7H ; R3 C5

DB FFH

DB 20H

DB BOH ; Show 3 in SSD

DB F7H ; R3 C6

DB FFH

DB 40H

DB BOH ; Show 3 in SSD

DB F7H ; R3 C7

DB FFH

DB 80H

DB BOH ; Show 3 in SSD

DB EFH ; R4 C7

DB FFH

DB 80H

DB 99H ; Show 4 in SSD

DB DFH ; R5 C7

DB FFH

DB 80H

DB 92H ; Show 5 in SSD

DB DFH ; R5 C6

DB FFH

DB 40H

DB 92H ; Show 5 in SSD

DB DFH ; R5 C5

DB 20H

DB 92H ; Show 5 in SSD

DB DFH ; R5 C4

DB FFH

DB 10H

DB 92H ; Show 5 in SSD

DB DFH ; R5 C3

DB FFH

DB 08H

DB 92H ; Show 5 in SSD

DB DFH ; R5 C2

DB FFH

DB 04H

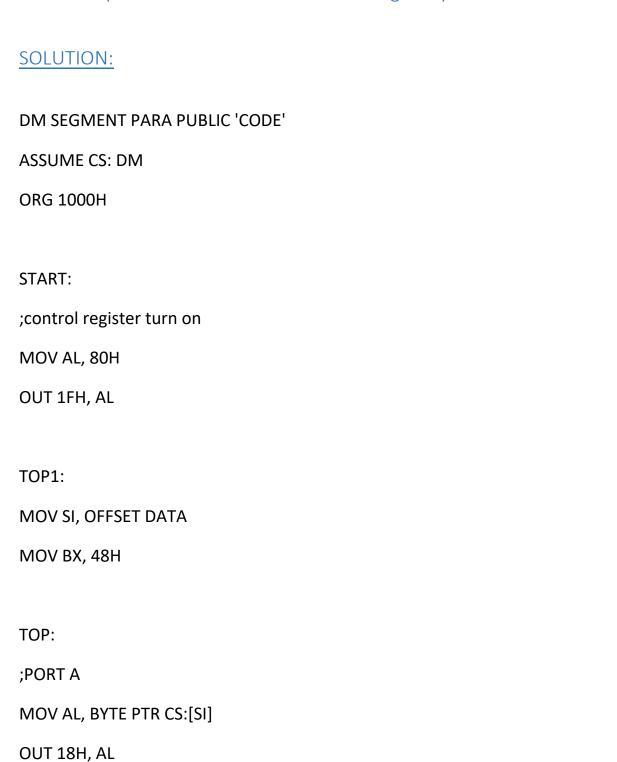
DB 92H ; Show 5 in SSD

DM ENDS

END START

Experiment No: 02

Write an assembly code to glow dots on Dot Matrix Display Left Sided Arrow shape in different color and LED using array.



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

MOV CX,FFFFH					
L1:LOOP L1					
MOV CX,FFFFH					
L2:LOOP L2					
MOV CX,FFFFH					
L3:LOOP L3					
MOV CX,FFFFH					
L4:LOOP L4					
CMP BX,0000H					
JE TOP1					
JMP TOP					
DATA:					
DB FFH ; R6 C2 (RED)					
DB BFH					
DB 04H					
DB 01H ;Turn on R1 in LED					

DB FFH ; R5 C1 (RED)

DB DFH

DB 02H

DB 01H ;Turn on R1 in LED

DB FFH ; R4 CO (RED)

DB EFH

DB 01H

DB 01H ;Turn on R1 in LED

DB FFH ; R3 C1 (RED)

DB F7H

DB 02H

DB 01H ;Turn on R1 in LED

DB FFH ; R2 C2 (RED)

DB FBH

DB 04H

DB 01H ;Turn on R1 in LED

DB F7H ; R3 C2 (GREEN)

DB 04H

DB 02H ;Turn on G in LED

DB F7H ; R3 C3 (GREEN)

DB FFH

DB 08H

DB 02H ;Turn on G in LED

DB F7H ; R3 C4 (GREEN)

DB FFH

DB 10H

DB 02H ;Turn on G in LED

DB F7H ; R3 C5 (GREEN)

DB FFH

DB 20H

DB 02H ;Turn on G in LED

DB F7H ; R3 C6 (GREEN)

DB FFH

DB 40H

DB 02H ;Turn on G in LED

DB F4H ; R3 C7 (ORANGE)

DB F4H

DB 80H

DB OCH ;Turn on Y and R2 in LED

DB EFH ; R4 C7 (ORANGE)

DB EFH

DB 80H

DB OCH ;Turn on Y and R2 in LED

DB DFH ; R5 C7 (ORANGE)

DB DFH

DB 80H

DB OCH ;Turn on Y and R2 in LED

DB DFH ; R5 C6 (GREEN)

DB FFH

DB 40H

DB 02H ;Turn on G in LED

DB DFH ; R5 C5 (GREEN)

DB 20H

DB 02H ;Turn on G in LED

DB DFH ; R5 C4 (GREEN)

DB FFH

DB 10H

DB 02H ;Turn on G in LED

DB DFH ; R5 C3 (GREEN)

DB FFH

DB 08H

DB 02H ;Turn on G in LED

DB DFH ; R5 C2 (GREEN)

DB FFH

DB 04H

DB 02H ;Turn on G in LED

DM ENDS

END START