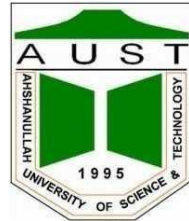


Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

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Lab Assignment Microprocessors lab CSE 3108

Assignment No: 04

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Section: A1

QUESTION 01:

AN ASSEMBLY CODE TO DRAW THE GIVEN SHAPE IN DOT MATIX DISPLAY.THE ROW NUMBER OF THE GLOWING DOTS WILL APPEAR ON SEVEN SEGMENT DISPLAY.

**DM SEGMENT PARA PUBLIC 'CODE'
ASSUME CS: DM
ORG 1000H**

**START:
MOV AL , 80H
OUT 1FH, AL**

**TOP1:
MOV SI, OFFSET DATA
MOV BX, 10H**

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

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

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

**MOV AL, BYTE PTR CS: [SI]
OUT 19H, AL
; DELAY
MOV DX,FFFFH
L1:
MOV CX,FFFFH**

**L2:
LOOP L2
DEC DX
JNZ L1**

**INC SI
DEC BX
CMP BX, 0000H
JE TOP1
JMP TOP**

DATA:

**DB FFH
DB BFH
DB 08H
DB 82H**

**DB FFH
DB DFH
DB 14H
DB 92H**

**DB FFH
DB EFH
DB 22H
DB 99H**

```
DB FFH
DB F7H
DB 1CH
DB B0H
```

```
DM ENDS
    END START
```

Question 02:

AN ASSEMBLY CODE TO DRAW THE GIVEN SHAPE IN DOT MATIX DISPLAY. THE COLOUR OF THE GLOWING DOTS WILL GLOW ON LED DISPLAY.

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

```
START:
MOV AL, 80H
OUT 1FH, AL
TOP1:
MOV SI, OFFSET DATA
MOV BX, 10H
```

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

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

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

**MOV AL, BYTE PTR CS: [SI]
OUT 1BH, AL
; DELAY
MOV DX, FFFFH
L1:
MOV CX, FFFFH
L2:
LOOP L2
DEC DX
JNZ L1**

**INC SI
DEC BX**

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

**DATA:
DB FFH
DB BFH
DB 08H
DB 01H**

**DB FFH
DB DFH
DB 14H**

DB 01H

DB EFH

DB EFH

DB 22H

DB OCH

DB FFH

DB F7H

DB 1CH

DB 01H

DM ENDS

END START