Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

Course No   : CSE3108

Course Title   : Microprocessors Sessional

Assignment No   : 03

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Submitted By-

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Section   : B

Question :

1 S 4 T 2	R2 + Y (ON) – G (ON) – Y (OFF) – R1 (ON)

Answer :

```
DSEG    SEGMENT   'DATA'

DSEG    ENDS

SSEG    SEGMENT  STACK   'STACK'

        DW          100h     DUP (?)

SSEG    ENDS

CSEG    SEGMENT   'CODE'

START   PROC    FAR

        PUSH    DS

        MOV     AX, 0

        PUSH    AX


        MOV   AX, DSEG

        MOV   DS, AX

        MOV   ES, AX
```

```
MAINLOOP :

        MOV DX, 2030h              ; first seven segment display

        MOV AL, 00000110b          ; show 1.

        OUT DX, AL

        MOV DX, 2070h

        MOV AL, OAH                ; R2 + Y (ON)

        OUT DX, AL

        MOV CX, 0100H

        L0: LOOP L0

        MOV DX, 2031h              ; second seven segment display

        MOV AL, 01101101b          ; show S

        OUT DX, AL

        MOV DX, 2070h

        MOV AL, OEH                ; R2 + Y (ON) - G (ON)

        OUT DX, AL

        MOV CX, 0100H

        L1: LOOP L1
```

```
MOV   DX,  2032h        ; thirrd seven segment display

MOV   AL,  01100110b    ; show 4

OUT   DX,  AL


MOV   DX,  2070h

MOV   AL,  OCH          ; R2+Y (ON) - G(ON) - Y(OFF)

OUT   DX,  AL

MOV   CX,  0100H

L2 : LOOP  L2


MOV   DX,  2033h        ; fourth seven segment display

MOV   AL,  01111000b    ; show T

OUT   DX,  AL


MOV   DX,  2070h

MOV   AL,  ODH          ; R2+Y(ON) - G(ON) - Y(OFF) - R1(ON)

OUT   DX,  AL


MOV   CX,  0100H

L3 : LOOP  L3
```

```asm
        MOV    DX,  2031h          ; 31h seven segment display

        MOV    AL,  01011011b      ; show 2

        OUT    DX,  AL


    RET

START    ENDP

CSEG     ENDS

        END    START
```