Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

Course No   **: CSE3108**

Course Title   **: Microprocessors Sessional**

Assignment No   **: 07**

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Submitted By-

Group   **: A$_2$**

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Id   **: 17.01.04.001**

Section   **: A**

```
DSEG  SEGMENT  'DATA'

DM    DB  00001000b, 00000100b, 00000100b,
00000100b, 00000100b, 00010100b, 00010100b,
      00010100b

SSD   DB  00100000b, 00110000b, 00110010b, 00110100b
      01110111b

Clear_DM  DB  00000000b, 00010000b, 00010000b,
      00010000b, 00000000b, 00000000b, 00000000b,
      00000000b

Clear_SSD  DB  00110110b, 00110010b, 00110000b,
      00100000b, 00000000b.

DSEG  ENDS
SSEG  SEGMENT  STACK 'STACK'
          DW    1000H  DUP(?)
CSEG  ENDS

CSEG . SEGMENT  'CODE'

START     PROC  FAR

      PUSH  DS
      MOV   AX, O
      PUSH  AX
```

①

```asm
        MOV   AX, DSEG
        MOV   DS, AX
        MOV   ES, AX
        MOV   BX, 0

LOOP_1:
        MOV   DX, 2000H
        ADD   DX, SI
        MOV   AL, Dm[SI]
        OUT   DX, AL

        ; LED
        MOV   DX, 2070h
        MOV   AL, 01h
        OUT   DX, AL

        ; SSD
        MOV.  DX, 2030h
        MOV   AL, SSD[SI]

        OUT   DX, AL

        INC   SI

        CMP   SI, 5
        LOOPNE LOOP_1
        MOV   DX 2004h
```

```
LOOP_2:
    MOV   AL, DM [SI]
    DEC   DX
    OUT   DX, AL
    INC   SI
    CMP   SI, 8
    LOOPNE  LOOP_L
    MOV   SI, 0

LOOP_3:
    MOV   DX 2000 H
    ADD   DX , SI
    MOV   AL, Clean_DM [SI]
    OUT   DX, AL
    MOV   DX, 2030 h
    MOV   Clean _ SSD .[SI]
    OUT   DX, AL
    MOV   DX , 2070 h
    MOV   AL, 00 h
    OUT   DX, AL
    INC   SI
    CMP   SI ,5
    LOOPNE   LOOP_3
```

```asm
        MOV   DX, 2009h

LOOP_4:
        mov   AL, Clear _ DM [SI]

        DEC   DX

        OUT   DX, AL

        INC   SI
        CMP   SI, 8
        LOOPNE   LOOP_4

        mov   SI, 0

        INC   BX
        CMP   BX, 5
        LOOPNE   LOOP_1


    RET
START  END P

CSEG   ENDS

        END   START
```