



Ahsanullah University of Science & Technology

Department of Computer Science & Engineering

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Submitted To : Ms. Qamrun Nahar Eity & Ms. Tahsin Aziz

Submitted By-

Group : A₂

Name : Minhajul Islam Jim

Id : 17.01.04.001

Section : A

DSEG SEGMENT 'DATA'

```
dot db 00111110b,01000001b,01000001b,01000001b,00111110b, 01111111b
,00001000b,00001000b,00001000b,01111111b,
00111110b,01000001b,01000001b,01000001b,00111110b, 01111111b
,00001001b,00001001b,00001001b,01111111b, 00000000b,01000010b,01111111b,
01000000b,00000000b
```

DSEG ENDS

SSEG SEGMENT STACK 'STACK'

DW 100h DUP(?)

SSEG ENDS

CSEG SEGMENT 'CODE'

,*****

START PROC FAR

; Store return address to OS:

PUSH DS

MOV AX, 0

PUSH AX

; set segment registers:

MOV AX, DSEG

MOV DS, AX

```
MOV ES, AX
; dot
MOV DX, 2000h
MOV AL, 00000010b
OUT DX, AL
MOV CX, 20H
L0: LOOP L0
; dot
MOV DX, 2001h
MOV AL, 00000001b
OUT DX, AL
MOV CX, 20H
L1: LOOP L1
; dot
MOV DX, 2002h
MOV AL, 00000001b
OUT DX, AL
MOV CX, 20H
L2: LOOP L2
; dot
MOV DX, 2003h
MOV AL, 00000001b
OUT DX, AL
MOV CX, 20H
L3: LOOP L3
; ssd
MOV DX, 2030h ; first Seven Segment Display
```

```

        MOV AL,00000001b
        OUT DX,AL
        MOV CX, 20H
        L4:LOOP L4
; dot
        MOV DX,2004h
        MOV AL,00000010b
        OUT DX,AL
        MOV CX, 20H
        L5:LOOP L5
; dot
        MOV DX,2004h
        MOV AL,00000110b
        OUT DX,AL
        MOV CX, 20H
        L6:LOOP L6
; dot
        MOV DX,2004h
        MOV AL,00001110b
        OUT DX,AL
        MOV CX, 20H
        L7:LOOP L7
; ssd
        MOV DX, 2030h    ; first Seven Segment Display
        MOV AL,00000011b
        OUT DX,AL
        MOV CX, 20H

```

```

    L8:LOOP L8
; dot
    MOV DX,2004h
    MOV AL,00011110b
    OUT DX,AL
    MOV CX, 20H
    L9:LOOP L9
; dot
    MOV DX,2004h
    MOV AL,00111110b
    OUT DX,AL
    MOV CX, 20H
    L10:LOOP L10
; ssd
    MOV DX, 2030h    ; first Seven Segment Display
    MOV AL,00000111b
    OUT DX,AL
    MOV CX, 20H
    L11:LOOP L11
; dot
    MOV DX,2003h
    MOV AL,01000001b
    OUT DX,AL
    MOV CX, 20H
    L12:LOOP L12

; dot

```

```
MOV DX,2002h
MOV AL,01000001b
OUT DX,AL
MOV CX, 20H
L13:LOOP L13
; dot
MOV DX,2001h
MOV AL,01000001b
OUT DX,AL
MOV CX, 20H
L14:LOOP L14
; dot
MOV DX,2000h
MOV AL,00100010b
OUT DX,AL
MOV CX, 20H
L15:LOOP L15

; ssd
MOV DX, 2030h    ; first Seven Segment Display
MOV AL,00001111b
OUT DX,AL
MOV CX, 20H
L16:LOOP L16
```

; dot

MOV DX,2000h

MOV AL,00110010b

OUT DX,AL

MOV CX, 20H

L17:LOOP L17

; dot

MOV DX,2000h

MOV AL,00111010b

OUT DX,AL

MOV CX, 20H

L18:LOOP L18

; ssd

MOV DX, 2030h ; first Seven Segment Display

MOV AL,00011111b

OUT DX,AL

MOV CX, 20H

L19:LOOP L19

; dot

MOV DX,2000h

MOV AL,00111110b

OUT DX,AL

MOV CX, 20H

L20:LOOP L20

; ssd

MOV DX, 2030h ; first Seven Segment Display

MOV AL,00111111b

```
        OUT DX,Al
MOV CX, 20H
L21:LOOP L21
; led
MOV DX, 2070h    ; first Seven Segment Display
        MOV AL, 1000b
        OUT DX,Al
MOV CX, 20H
L22:LOOP L22
;-----
; dot
MOV DX,2005h
MOV AL,00000001b
OUT DX,AL
MOV CX, 20H
L23:LOOP L23
; ssd
MOV DX,2031h
MOV AL,00100000b
OUT DX,AL
MOV CX, 20H
L24:LOOP L24
; dot
MOV DX,2005h
MOV AL,00000011b
OUT DX,AL
MOV CX, 20H
```


L25:LOOP L25

; ssd

MOV DX,2031h

MOV AL,00110000b

OUT DX,AL

MOV CX, 20H

L26:LOOP L26

; dot

MOV DX,2005h

MOV AL,00000111b

OUT DX,AL

MOV CX, 20H

L27:LOOP L27

; ssd

MOV DX,2031h

MOV AL,00110010b

OUT DX,AL

MOV CX, 20H

L28:LOOP L28

; dot

MOV DX,2005h

MOV AL,00001111b

OUT DX,AL

MOV CX, 20H

L29:LOOP L29

; ssd

MOV DX,2031h

MOV AL,00110110b

OUT DX,AL

MOV CX, 20H

L30:LOOP L30

; dot

MOV DX,2005h

MOV AL,00011111b

OUT DX,AL

MOV CX, 20H

L31:LOOP L31

; ssd

MOV DX,2031h

MOV AL,01110110b

OUT DX,AL

MOV CX, 20H

L32:LOOP L32

; dot

MOV DX,2005h

MOV AL,00111111b

OUT DX,AL

MOV CX, 20H

L33:LOOP L33

; dot

MOV DX,2005h

MOV AL,01111111b

OUT DX,AL

MOV CX, 20H

L34:LOOP L34

; dot

MOV DX,2009h

MOV AL,00000001b

OUT DX,AL

MOV CX, 20H

L35:LOOP L35

; dot

MOV DX,2009h

MOV AL,00000011b

OUT DX,AL

MOV CX, 20H

L36:LOOP L36

; dot

MOV DX,2009h

MOV AL,00000111b

OUT DX,AL

MOV CX, 20H

L37:LOOP L37

; dot

MOV DX,2009h

```
MOV AL,00001111b
OUT DX,AL
MOV CX, 20H
L38:LOOP L38
; dot
MOV DX,2009h
MOV AL,00011111b
OUT DX,AL
MOV CX, 20H
L39:LOOP L39
; led
MOV DX, 2070h    ; first Seven Segment Display
MOV AL, 1001b
OUT DX,AL
MOV CX, 20H
L40:LOOP L40
; dot
MOV DX,2009h
MOV AL,01111111b
OUT DX,AL
MOV CX, 20H
L41:LOOP L41
; dot
MOV DX,2006h
MOV AL,00001000b
OUT DX,AL
MOV CX, 20H
```

```
L71:LOOP L71
; dot
MOV DX,2007h
MOV AL,00001000b
OUT DX,AL
MOV CX, 20H
L44:LOOP L44
; dot
MOV DX,2008h
MOV AL,00001000b
OUT DX,AL
MOV CX, 20H
L45:LOOP L45
;-----
; dot
MOV DX,200Ah
MOV AL,00000010b
OUT DX,AL
MOV CX, 20H
L46:LOOP L46
; dot
MOV DX,200Bh
MOV AL,00000001b
OUT DX,AL
MOV CX, 20H
L47:LOOP 47
; dot
```

```
MOV DX,200Ch
MOV AL,00000001b
OUT DX,AL
MOV CX, 20H
L48:LOOP L48
; dot
MOV DX,200Dh
MOV AL,00000001b
OUT DX,AL
MOV CX, 20H
L49:LOOP L49
; ssd
MOV DX, 2032h    ; first Seven Segment Display
    MOV AL,00000001b
    OUT DX,AL
MOV CX, 20H
L50:LOOP L50
; dot
MOV DX,200Eh
MOV AL,00000010b
OUT DX,AL
MOV CX, 20H
L51:LOOP L51
; dot
MOV DX,200Eh
MOV AL,00000110b
OUT DX,AL
```

```
MOV CX, 20H
L52:LOOP L52
; dot
MOV DX,200Eh
MOV AL,00001110b
OUT DX,AL
MOV CX, 20H
L53:LOOP L53
; ssd
MOV DX, 2032h    ; first Seven Segment Display
MOV AL,00000011b
OUT DX,AL
MOV CX, 20H
L54:LOOP L54
; dot
MOV DX,200Eh
MOV AL,00011110b
OUT DX,AL
MOV CX, 20H
L55:LOOP L55
; dot
MOV DX,200Eh
MOV AL,00111110b
OUT DX,AL
MOV CX, 20H
L56:LOOP L56
; ssd
```

```
MOV DX, 2032h    ; first Seven Segment Display
    MOV AL,00000111b
    OUT DX,AL
MOV CX, 20H
L57:LOOP L57
; dot
    MOV DX,200Dh
    MOV AL,01000001b
    OUT DX,AL
    MOV CX, 20H
    L58:LOOP L58

; dot
    MOV DX,200Ch
    MOV AL,01000001b
    OUT DX,AL
    MOV CX, 20H
    L59:LOOP L59
; dot
    MOV DX,200Bh
    MOV AL,01000001b
    OUT DX,AL
    MOV CX, 20H
    L60:LOOP L60
; dot
    MOV DX,200Ah
    MOV AL,00100010b
```



```
OUT DX,AL
MOV CX, 20H
L61:LOOP L61
; ssd
MOV DX, 2032h    ; first Seven Segment Display
    MOV AL,00001111b
    OUT DX,AL
MOV CX, 20H
L62:LOOP L62
; dot
MOV DX,200Ah
MOV AL,00110010b
OUT DX,AL
MOV CX, 20H
L63:LOOP L63
; dot
MOV DX,200Ah
MOV AL,00111010b
OUT DX,AL
MOV CX, 20H
L64:LOOP L64
; ssd
MOV DX, 2032h    ; first Seven Segment Display
    MOV AL,00011111b
    OUT DX,AL
MOV CX, 20H
L65:LOOP L65
```

```

; dot
MOV DX,200Ah
MOV AL,00111110b
OUT DX,AL
MOV CX, 20H
L66:LOOP L66

; ssd
MOV DX, 2032h    ; first Seven Segment Display
    MOV AL,00111111b
    OUT DX,AL
MOV CX, 20H
L67:LOOP L67

; led
MOV DX, 2070h    ; first Seven Segment Display
    MOV AL, 1001b
    OUT DX,AL
MOV CX, 20H
L68:LOOP L68

;-----
; dot
MOV DX,200Fh
MOV AL,01000000b
OUT DX,AL
MOV CX, 20H
L69:LOOP L69

; ssd
MOV DX, 2033h    ; first Seven Segment Display

```

```

        MOV AL,00010000b

        OUT DX,AL

    MOV CX, 20H

    L74:LOOP L74

; dot

    MOV DX,200Fh

    MOV AL,01100000b

    OUT DX,AL

    MOV CX, 20H

    L75:LOOP L75

; ssd

    MOV DX, 2033h    ; first Seven Segment Display

        MOV AL,00110000b

        OUT DX,AL

    MOV CX, 20H

    L76:LOOP L76

; dot

    MOV DX,200Fh

    MOV AL,01110000b

    OUT DX,AL

    MOV CX, 20H

    L77:LOOP L77

; ssd

    MOV DX, 2033h    ; first Seven Segment Display

        MOV AL,00110001b

        OUT DX,AL

    MOV CX, 20H

```

L78:LOOP L78

; dot

MOV DX,200Fh

MOV AL,01111000b

OUT DX,AL

MOV CX, 20H

L79:LOOP L79

; ssd

MOV DX, 2033h ; first Seven Segment Display

MOV AL,00110011b

OUT DX,AL

MOV CX, 20H

L80:LOOP L80

; led

MOV DX, 2070h ; first Seven Segment Display

MOV AL,00001001b

OUT DX,AL

MOV CX, 20H

L3688:LOOP L3688

; dot

MOV DX,200Fh

MOV AL,01111100b

OUT DX,AL

MOV CX, 20H

L81:LOOP L81

```
; ssd
MOV DX, 2033h    ; first Seven Segment Display
    MOV AL,00110111b
    OUT DX,AL
MOV CX, 20H
L82:LOOP L82

; dot
MOV DX,200Fh
MOV AL,01111110b
OUT DX,AL
MOV CX, 20H
L83:LOOP L83


; dot
MOV DX,200Fh
MOV AL,01111111b
OUT DX,AL
MOV CX, 20H
L84:LOOP L84


; dot
MOV DX,2010h
MOV AL,00000001b
OUT DX,AL
MOV CX, 20H
```

L85:LOOP L85

; ssd

MOV DX, 2033h ; first Seven Segment Display

MOV AL,01110111b

OUT DX,AL

MOV CX, 20H

L86:LOOP L86

; dot

MOV DX,2011h

MOV AL,00000001b

OUT DX,AL

MOV CX, 20H

L87:LOOP L87

; dot

MOV DX,2012h

MOV AL,00000001b

OUT DX,AL

MOV CX, 20H

L88:LOOP L88

; dot

MOV DX,2013h

MOV AL,00000001b

OUT DX,AL

MOV CX, 20H

L89:LOOP L89

; dot

MOV DX,2013h

MOV AL,00000011b

OUT DX,AL

MOV CX, 20H

L290:LOOP L290

; dot

MOV DX,2013h

MOV AL,00000111b

OUT DX,AL

MOV CX, 20H

L291:LOOP L291

; dot

MOV DX,2013h

MOV AL,00001111b

OUT DX,AL

MOV CX, 20H

L292:LOOP L292

; dot

MOV DX,2013h

MOV AL,00011111b

OUT DX,AL

MOV CX, 20H

L293:LOOP L293

; dot

MOV DX,2013h

MOV AL,00111111b

OUT DX,AL

MOV CX, 20H

L294:LOOP L294

; dot

MOV DX,2013h

MOV AL,01111111b

OUT DX,AL

MOV CX, 20H

L295:LOOP L295

; dot

MOV DX,2010h

MOV AL,00001001b

OUT DX,AL

MOV CX, 20H

L2951:LOOP L2951

; dot


```
MOV DX,2011h
MOV AL,00001001b
OUT DX,AL
MOV CX, 20H
L2952:LOOP L2952
; dot
MOV DX,2012h
MOV AL,00001001b
OUT DX,AL
MOV CX, 20H
L2953:LOOP L2953
;-----
; dot
MOV DX,2015h
MOV AL,00000010b
OUT DX,AL
MOV CX, 20H
L5034:LOOP L5034
; ssd
MOV DX, 2034h    ; first Seven Segment Display
    MOV AL,00000010b
    OUT DX,AL
MOV CX, 20H
L5035:LOOP L5035
; dot
MOV DX,2016h
MOV AL,00000001b
```

```
OUT DX,AL
MOV CX, 20H
L5036:LOOP L5036
; ssd
MOV DX, 2034h    ; first Seven Segment Display
    MOV AL,00000110b
    OUT DX,AL
MOV CX, 20H
L5037:LOOP L5037
; dot
MOV DX,2016h
MOV AL,00000011b
OUT DX,AL
MOV CX, 20H
L5039:LOOP L5039

; dot
MOV DX,2016h
MOV AL,00000111b
OUT DX,AL
MOV CX, 20H
L5040:LOOP L5040

; dot
MOV DX,2016h
MOV AL,00001111b
OUT DX,AL
```

```
MOV CX, 20H
L5041:LOOP L5041
; dot
MOV DX,2016h
MOV AL,00011111b
OUT DX,AL
MOV CX, 20H
L5042:LOOP L5042
; dot
MOV DX,2016h
MOV AL,00111111b
OUT DX,AL
MOV CX, 20H
L5043:LOOP L5043
; dot
MOV DX,2016h
MOV AL,01111111b
OUT DX,AL
MOV CX, 20H
L5044:LOOP L5044
; dot
MOV DX,2015h
MOV AL,01000010b
OUT DX,AL
MOV CX, 20H
L5045:LOOP L5045
```

```

; dot
MOV DX,2017h
MOV AL,01000000b
OUT DX,AL
MOV CX, 20H
L6045:LOOP L6045
; led
MOV DX, 2070h    ; first Seven Segment Display
    MOV AL,00001011b
    OUT DX,AL
MOV CX, 20H
L6046:LOOP L6046
;-----
REPAT:

; MOV DX, 2000h    ; first Seven Segment Display
    ;MOV SI, 0
;    MOV CX, 25

;NEXT0:
;    MOV AL,Dot[SI]
;    out dx,al
;    ;inc SI
;    ;inc DX

;LOOP NEXT0

```

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 23

MOV CX, 25

NEXT:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT

MOV DX, 2000h ; first Seven Segment Display

MOV SI, 24

MOV CX, 1

NEXT91:

MOV AL, Dot[SI]

out dx, al

dec SI

inc DX

LOOP NEXT91

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 22

MOV CX, 24

NEXT1:

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT1
```

```
MOV DX, 2001h ; first Seven Segment Display
```

```
MOV SI, 24
```

```
MOV CX, 2
```

```
NEXT92:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT92
```

```
MOV DX, 2018h ; first Seven Segment Display
```

```
MOV SI, 21
```

```
MOV CX, 23
```

```
NEXT2:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT2
```

MOV DX, 2002h ; first Seven Segment Display

MOV SI, 24

MOV CX, 3

NEXT93:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT93

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 20

MOV CX, 22

NEXT3:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT3

MOV DX, 2003h ; first Seven Segment Display

MOV SI, 24

MOV CX, 4

NEXT94:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT94

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 19

MOV CX, 21

NEXT4:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT4

MOV DX, 2004h ; first Seven Segment Display

MOV SI, 24

MOV CX, 5

NEXT95:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT95

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 18

MOV CX, 20

NEXT5:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT5

MOV DX, 2005h ; first Seven Segment Display

MOV SI, 24

MOV CX, 6

NEXT96:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT96

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 17

MOV CX, 19

NEXT6:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT6

MOV DX, 2006h ; first Seven Segment Display

MOV SI, 24

MOV CX, 7

NEXT97:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT97

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 16

MOV CX, 18

NEXT7:

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT7
```

```
MOV DX, 2007h ; first Seven Segment Display
```

```
MOV SI, 24
```

```
MOV CX, 8
```

```
NEXT98:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT98
```

```
MOV DX, 2018h ; first Seven Segment Display
```

```
MOV SI, 15
```

```
MOV CX, 17
```

```
NEXT8:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

dec DX

LOOP NEXT8

MOV DX, 2008h ; first Seven Segment Display

MOV SI, 24

MOV CX, 9

NEXT99:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT99

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 14

MOV CX, 16

NEXT9:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT9

MOV DX, 2009h ; first Seven Segment Display

MOV SI, 24

MOV CX, 10

NEXT100:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT100

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 13

MOV CX, 15

NEXT10:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT10

MOV DX, 200Ah ; first Seven Segment Display

MOV SI, 24

MOV CX, 11

NEXT101:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT101

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 12

MOV CX, 14

NEXT11:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT11

MOV DX, 200Bh ; first Seven Segment Display

MOV SI, 24

MOV CX, 12

NEXT102:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT102

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 11

MOV CX, 13

NEXT12:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT12

MOV DX, 200Ch ; first Seven Segment Display

MOV SI, 24

MOV CX, 13

NEXT103:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT103

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 10

MOV CX, 12

NEXT13:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT13

MOV DX, 200Dh ; first Seven Segment Display

MOV SI, 24

MOV CX, 14

NEXT104:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT104

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 9

MOV CX, 11

NEXT14:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT14

MOV DX, 200Eh ; first Seven Segment Display

MOV SI, 24

MOV CX, 15

NEXT105:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT105

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 8

MOV CX, 10

NEXT15:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT15

MOV DX, 200Fh ; first Seven Segment Display

MOV SI, 24

MOV CX, 16

NEXT106:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT106

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 7

MOV CX, 9

NEXT16:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT16

MOV DX, 2010h ; first Seven Segment Display

MOV SI, 24

MOV CX, 17

NEXT107:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT107

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 6

MOV CX, 8

NEXT17:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT17

MOV DX, 2011h ; first Seven Segment Display

MOV SI, 24

MOV CX, 18

NEXT108:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT108

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 5

MOV CX, 7

NEXT18:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT18

MOV DX, 2012h ; first Seven Segment Display

MOV SI, 24

MOV CX, 19

NEXT109:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT109

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 4

MOV CX, 6

NEXT19:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT19

MOV DX, 2013h ; first Seven Segment Display

MOV SI, 24

MOV CX, 20

NEXT110:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT110

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 3

MOV CX, 5

NEXT20:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT20

MOV DX, 2014h ; first Seven Segment Display

MOV SI, 24

MOV CX, 21

NEXT111:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT111

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 2

MOV CX, 4

NEXT21:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT21

MOV DX, 2015h ; first Seven Segment Display

MOV SI, 24

MOV CX, 22

NEXT112:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT112

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 1

MOV CX, 3

NEXT22:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT22

MOV DX, 2016h ; first Seven Segment Display

MOV SI, 24

MOV CX, 23

NEXT113:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT113

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 0

MOV CX, 2

NEXT23:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT23

MOV DX, 2017h ; first Seven Segment Display

MOV SI, 24

MOV CX, 24

NEXT114:

MOV AL, Dot[SI]

out dx, al

dec SI

dec DX

LOOP NEXT114

MOV DX, 2018h ; first Seven Segment Display

MOV SI, 24


```
MOV CX, 1
```

```
NEXT24:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT24
```

```
MOV DX, 2018h ; first Seven Segment Display
```

```
MOV SI, 24
```

```
MOV CX, 25
```

```
NEXT115:
```

```
MOV AL, Dot[SI]
```

```
out dx, al
```

```
dec SI
```

```
dec DX
```

```
LOOP NEXT115
```

```
; CLEAR SSD & LED
```

```
MOV DX, 2030H
```

MOV AL,00H

out dx,al

MOV CX, 16H

L199: LOOP L199

MOV DX, 2031H

MOV AL,00H

out dx,al

MOV CX, 16H

L201: LOOP L201

MOV DX, 2032H

MOV AL,00H

out dx,al

MOV CX, 16H

L198: LOOP L198

MOV DX, 2033H

MOV AL,00H

out dx,al

MOV CX, 16H

L202: LOOP L202

MOV DX, 2034H

MOV AL,00H

out dx,al

MOV CX, 16H

L203: LOOP L203

MOV DX, 2070H

MOV AL,00H

out dx,al

MOV CX, 25H

L204: LOOP L204

CMP DI , 05H

JE EXIT

MOV DX, 2030H

MOV AL,00111111b

out dx,al

MOV DX, 2031H

MOV AL,01110110b

out dx,al

MOV DX, 2032H

MOV AL,00111111b

```

    out dx,al
    MOV DX, 2033H
    MOV AL,01110111b
    out dx,al
    MOV DX, 2034H
    MOV AL,00000110b
    out dx,al
    MOV DX, 2070H
    MOV AL,00001011B
    out dx,al
    INC DI
    JMP REPAT
EXIT:
    MOV DX,2000H

ALL:
    MOV AL,00H
    OUT DX,AL
    INC DX
    CMP DX ,2019H
    JE EX
    LOOP ALL
EX:
; return to operating system:
    RET
START  ENDP

```

```
,*****
```

```
CSEG ENDS
```

```
END START ; set entry point.
```