Ahsanullah University of Science & Technology

Department of Computer Science and Engineering

Course No	**:**	CSE3108
Course Title	**:**	Microprocessors
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Section : A1

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Assignment 1:

Write an assembly code to display A, 6, L in Seven Segment Display (SSD) respectively. After each segment a delay occur.

Solution:

```
S SEGMENT PARA PUBLIC 'CODE'

ASSUME CS: S

ORG 1000H


START:

;control register turn on

MOV AL,80H

OUT 1FH,AL

SSD:


;display A

MOV AL,088H

OUT 19H,AL


;for delay

MOV CX,0FFFFH

L0:LOOP L0
```

```
;display 6
MOV AL,082H
OUT 19H,AL

;for delay
MOV CX,0FFFFH
L1:LOOP L1

;display L
MOV AL,0C7H
OUT 19H,AL

;for delay
MOV CX,0FFFFH
L2:LOOP L2

JMP SSD
S ENDS
END START
```

Assignment2:

Write an assembly code to glow R2 and Y in LED Display respectively. After a delay G turn ON and then after a delay Y turn OFF. Again after a delay R1 turn ON.

Solution:

```
L SEGMENT PARA PUBLIC 'CODE'

ASSUME CS: L

ORG 1000H


START:

 ;control register turn on

 MOV AL,80H

 OUT 1FH,AL


;segment address forcefully off

 MOV AL,0FFH

 OUT 19H,AL


LED:

;R2 AND Y LED turn on

 MOV AL,0CH

 OUT 1BH,AL
```

```
;for delay
MOV CX,0FFFFH
LR1:LOOP LR1

;G LED turn ON
MOV AL,0EH
OUT 1BH,AL

;for delay
MOV CX,0FFFFH
LG:LOOP LG

;Y LED turn OFF
MOV AL,0AH
OUT 1BH,AL

;for delay
MOV CX,0FFFFH
LY:LOOP LY

;R1 LED turn ON
MOV AL,0BH
OUT 1BH,AL
```

```
;for delay
MOV CX,0FFFFH
LR2:LOOP LR2

JMP LED
L ENDS
END START
```