**Assignment Name: Write an assembly code to glow the first character of every member of a group on Dot Matrix Display scrolling every character and showing the member number in SSD and also the color of dot matrix in LED.**

**Solution:**

A8 SEGMENT PARA PUBLIC 'CODE'

ASSUME CS:A8

ORG 1000H

START:

;control register turn on

MOV AL,80H

OUT 1FH,AL

MOV AL,80H

OUT 1EH,AL

M: MOV SI,OFFSET DATA

MOV DL,00H

M1: MOV BX,00H

M2:

MOV AL,BYTE PTR CS:[SI]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+1]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+2]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+3]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+4]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+5]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+6]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+7]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+8]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+9]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+10]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+11]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+12]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+13]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+14]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+15]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+16]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+17]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+18]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+19]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+20]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+21]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+22]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+23]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+24]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+25]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+26]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+27]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+28]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+29]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+30]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+31]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+32]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+33]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+34]

OUT 1BH,AL

MOV AL,BYTE PTR CS:[SI+35]

OUT 18H,AL

MOV AL,BYTE PTR CS:[SI+36]

OUT 1AH,AL

MOV AL,BYTE PTR CS:[SI+37]

OUT 1CH,AL

MOV AL,BYTE PTR CS:[SI+38]

OUT 19H,AL

MOV AL,BYTE PTR CS:[SI+39]

OUT 1BH,AL

INC BX

CMP BX,0FFFH

JNE M2

ADD SI,40

INC DL

CMP DL,16H

JNE M1

JMP M

DATA:

;0.8

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0F3H

DB 080H

DB 0F9H

DB 01H

;0.9

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0F3H

DB 040H

DB 0F9H

DB 01H

DB 0FFH

DB 0FDH

DB 080H

DB 0F9H

DB 01H

;1

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0FFH

DB 00H

DB 0F9H

DB 01H

DB 0FFH

DB 0F3H

DB 020H

DB 0F9H

DB 01H

DB 0FFH

DB 0FDH

DB 040H

DB 0F9H

DB 01H

DB 0FFH

DB 081H

DB 080H

DB 0F9H

DB 01H

;2

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0F3H

DB 010H

DB 0A4H

DB 02H

DB 0FFH

DB 0FDH

DB 020H

DB 0A4H

DB 02H

DB 0FFH

DB 083H

DB 040H

DB 0A4H

DB 02H

DB 0C1H

DB 0FFH

DB 080H

DB 0A4H

DB 02H

;3

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0F3H

DB 08H

DB 0A4H

DB 02H

DB 0FFH

DB 0FDH

DB 010H

DB 0A4H

DB 02H

DB 0FFH

DB 083H

DB 020H

DB 0A4H

DB 02H

DB 0C1H

DB 0FFH

DB 040H

DB 0A4H

DB 02H

DB 0B7H

DB 0FFH

DB 080H

DB 0A4H

DB 02H

;4

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0F3H

DB 04H

DB 0A4H

DB 02H

DB 0FFH

DB 0FDH

DB 08H

DB 0A4H

DB 02H

DB 0FFH

DB 083H

DB 010H

DB 0A4H

DB 02H

DB 0C1H

DB 0FFH

DB 020H

DB 0A4H

DB 02H

DB 0B7H

DB 0FFH

DB 040H

DB 0A4H

DB 02H

DB 0B7H

DB 0FFH

DB 080H

DB 0A4H

DB 02H

;5

DB 0FFH

DB 0FFH

DB 00H

DB 0A4H

DB 02H

DB 0FFH

DB 0F3H

DB 02H

DB 0A4H

DB 02H

DB 0FFH

DB 0FDH

DB 04H

DB 0A4H

DB 02H

DB 0FFH

DB 083H

DB 08H

DB 0A4H

DB 02H

DB 0C1H

DB 0FFH

DB 010H

DB 0A4H

DB 02H

DB 0B7H

DB 0FFH

DB 020H

DB 0A4H

DB 02H

DB 0B7H

DB 0FFH

DB 040H

DB 0A4H

DB 02H

DB 0C1H

DB 0FFH

DB 080H

DB 0A4H

DB 02H

;6

DB 0FFH

DB 0F3H

DB 01H

DB 0B0H

DB 0C0H

DB 0FFH

DB 0FDH

DB 02H

DB 0B0H

DB 0C0H

DB 0FFH

DB 083H

DB 04H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 08H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 010H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 020H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 040H

DB 0B0H

DB 0C0H

DB 0DBH

DB 0DBH

DB 080H

DB 0B0H

DB 0C0H

;7

DB 0FFH

DB 0FDH

DB 01H

DB 0B0H

DB 0C0H

DB 0FFH

DB 083H

DB 02H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 04H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 08H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 010H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 020H

DB 0B0H

DB 0C0H

DB 0DBH

DB 0DBH

DB 040H

DB 0B0H

DB 0C0H

DB 0ADH

DB 0ADH

DB 080H

DB 0B0H

DB 0C0H

;8

DB 0FFH

DB 083H

DB 01H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 02H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 04H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 08H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 010H

DB 0B0H

DB 0C0H

DB 0DBH

DB 0DBH

DB 020H

DB 0B0H

DB 0C0H

DB 0ADH

DB 0ADH

DB 040H

DB 0B0H

DB 0C0H

DB 0B5H

DB 0B5H

DB 080H

DB 0B0H

DB 0C0H

;9

DB 0C1H

DB 0FFH

DB 01H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 02H

DB 0B0H

DB 0C0H

DB 0B7H

DB 0FFH

DB 04H

DB 0B0H

DB 0C0H

DB 0C1H

DB 0FFH

DB 08H

DB 0B0H

DB 0C0H

DB 0DBH

DB 0DBH

DB 010H

DB 0B0H

DB 0C0H

DB 0ADH

DB 0ADH

DB 020H

DB 0B0H

DB 0C0H

DB 0B5H

DB 0B5H

DB 040H

DB 0B0H

DB 0C0H

DB 0DBH

DB 0DBH

DB 080H

DB 0B0H

DB 0C0H

;10...........

;c0;

DB B7H

DB FFH

DB 01H

DB 99H

DB 01H

;c1;

DB B7H

DB FFH

DB 02H

DB 99H

DB 01H

;c2;

DB C1H

DB FFH

DB 04H

DB 99H

DB 01H

;c3;

DB DBH

DB DBH

DB 08H

DB 99H

DB 01H

;c4;

DB ADH

DB ADH

DB 10H

DB 99H

DB 01H

;c5;

DB B5H

DB B5H

DB 20H

DB 99H

DB 01H

;c6;

DB DBH

DB DBH

DB 40H

DB 99H

DB 01H

;c7;

DB FFH

DB DBH

DB 80H

DB 99H

DB 01H

;11...........;

;c0;

DB B7H

DB FFH

DB 01H

DB 99H

DB 01H

;c1;

DB C1H

DB FFH

DB 02H

DB 99H

DB 01H

;c2;

DB DBH

DB DBH

DB 04H

DB 99H

DB 01H

;c3;

DB ADH

DB ADH

DB 08H

DB 99H

DB 01H

;c4;

DB B5H

DB B5H

DB 10H

DB 99H

DB 01H

;c5;

DB DBH

DB DBH

DB 20H

DB 99H

DB 01H

;c6;

DB FFH

DB DBH

DB 40H

DB 99H

DB 01H

;c7;

DB FFH

DB ADH

DB 80H

DB 99H

DB 01H

;11.5............;

c0;

DB C1H

DB FFH

DB 01H

DB 99H

DB 01H

;c1;

DB DBH

DB DBH

DB 02H

DB 99H

DB 01H

;c2;

DB ADH

DB ADH

DB 04H

DB 99H

DB 01H

;c3;

DB B5H

DB B5H

DB 08H

DB 99H

DB 01H

;c4;

DB DBH

DB DBH

DB 10H

DB 99H

DB 01H

;c5;

DB FFH

DB DBH

DB 20H

DB 99H

DB 01H

;c6;

DB FFH

DB ADH

DB 40H

DB 99H

DB 01H

;c7;

DB FFH

DB B5H

DB 80H

DB 99H

DB 01H

;12.........;

;c0;

DB DBH

DB DBH

DB 01H

DB 99H

DB 01H

;c1;

DB ADH

DB ADH

DB 02H

DB 99H

DB 01H

;c2;

DB B5H

DB B5H

DB 04H

DB 99H

DB 01H

;c3;

DB DBH

DB DBH

DB 08H

DB 99H

DB 01H

;c4;

DB FFH

DB DBH

DB 10H

DB 99H

DB 01H

;c5;

DB FFH

DB ADH

DB 20H

DB 99H

DB 01H

;c6;

DB FFH

DB B5H

DB 40H

DB 99H

DB 01H

;c7;

DB FFH

DB DBH

DB 80H

DB 99H

DB 01H

;13......................;

;c0;

DB ADH

DB ADH

DB 01H

DB 99H

DB 01H

;c1;

DB B5H

DB B5H

DB 02H

DB 99H

DB 01H

;c2;

DB DBH

DB DBH

DB 04H

DB 99H

DB 01H

;c3;

DB FFH

DB DBH

DB 08H

DB 99H

DB 01H

;c4;

DB FFH

DB ADH

DB 10H

DB 99H

DB 01H

;c5;

DB FFH

DB B5H

DB 20H

DB 99H

DB 01H

;c6;

DB FFH

DB DBH

DB 40H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;14..............;

;c0;

DB B5H

DB B5H

DB 01H

DB 99H

DB 01H

;c1;

DB DBH

DB DBH

DB 02H

DB 99H

DB 01H

;c2;

DB FFH

DB DBH

DB 04H

DB 99H

DB 01H

;c3;

DB FFH

DB ADH

DB 08H

DB 99H

DB 01H

;c4;

DB FFH

DB B5H

DB 10H

DB 99H

DB 01H

;c5;

DB FFH

DB DBH

DB 20H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;15...............;

;c0;

DB DBH

DB DBH

DB 01H

DB 99H

DB 01H

;c1;

DB FFH

DB DBH

DB 02H

DB 99H

DB 01H

;c2;

DB FFH

DB ADH

DB 04H

DB 99H

DB 01H

;c3;

DB FFH

DB B5H

DB 08H

DB 99H

DB 01H

;c4;

DB FFH

DB DBH

DB 10H

DB 99H

DB 01H

;c5;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;16.............;

;c0;

DB FFH

DB DBH

DB 01H

DB 99H

DB 01H

;c1;

DB FFH

DB ADH

DB 02H

DB 99H

DB 01H

;c2;

DB FFH

DB B5H

DB 04H

DB 99H

DB 01H

;c3;

DB FFH

DB DBH

DB 08H

DB 99H

DB 01H

;c4;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c5;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;17...............;

;c0;

DB FFH

DB ADH

DB 01H

DB 99H

DB 01H

;c1;

DB FFH

DB B5H

DB 02H

DB 99H

DB 01H

;c2;

DB FFH

DB DBH

DB 04H

DB 99H

DB 01H

;c3;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c4;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c5;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;18........;

;c0;

DB FFH

DB B5H

DB 01H

DB 99H

DB 01H

;c1;

DB FFH

DB DBH

DB 02H

DB 99H

DB 01H

;c2;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c3;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c4;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c5;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;19........;

;c0;

DB FFH

DB DBH

DB 01H

DB 99H

DB 01H

;c1;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c2;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c3;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c4;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c5;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c6;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

;c7;

DB FFH

DB FFH

DB 00H

DB 99H

DB 01H

EXIT:

A8 ENDS

END START