DATA SEGMENT  
PORTA EQU 120H  
PORTB EQU 121H  
PORTC EQU 122H  
CWRD EQU 123H  
TABLE DB 8CH,0C7H,86H,89H

DATA ENDS

CODE SEGMENT

ASSUME CS:CODE, DS:DATA

START: MOV AX, DATA; initialize data segment

MOV DS, AX  
MOV AL, 80H; initialize 8255 port-b and port-c as o/p  
MOV DX,CWRD  
OUT DX,AL  
MOV BH, 04; BH = no of digits to be displayed  
LEA SI, TABLE; SI = starting address of lookup table

NEXTDIGIT:MOV CL, 08; CL = no of segments = 08

MOV AL,[SI]

NEXTBIT: ROL AL,01

MOV CH, AL; save al  
MOV DX, PORTB; one bit is sent out on portb  
OUT DX,AL  
MOV AL,01  
MOV DX, PORTC; one clock pulse sent on pc0  
OUT DX,AL  
DEC AL  
MOV DX,PORTC  
OUT DX,AL  
MOV AL,CH; get the seven segment code back in al  
DEC CL; send all 8 bits, thus one digit is displayed  
JNZ NEXTBIT  
DEC BH  
INC SI; display all the four digits  
JNZ NEXTDIGIT  
MOV AH, 4CH; exit to dos  
INT 21H  
CODE ENDS  
END START