Problem statement: Input 3 uppercase letters and print them in lowercase letters.

Code:

```
.MODEL SMALL
.STACK 100H
.DATA
   MSG1 DW "ENTER 3 INITIALS:$"
.CODE
MAIN PROC
   MOV AX,@DATA
   MOV DS,AX
   LEA DX,MSG1
   MOV AH,9
   INT 21H
   ;INPUT 1ST CHARACTER
   MOV AH,1
   INT 21H
   MOV BL,AL
   ADD BL,32
   ;INPUT 2ND CHARACTER
   MOV AH,1
   INT 21H
   MOV BH,AL
   ADD BH,32
;INPUT 3RD CHARACTER
   MOV AH,1
   INT 21H
   MOV CL,AL
   ADD CL,32
;GOTO NEW LINE
   MOV AH,2
   MOV DL,0DH
   INT 21H
   MOV DL,0AH
   INT 21H
;----------------
;OUTPUT LOWERCASE 1ST
   MOV AH,2
   MOV DL,BL
   INT 21H
;GOTO NEW LINE
   MOV AH,2
   MOV DL,0DH
   INT 21H
   MOV DL,0AH
   INT 21H
;OUTPUT LOWERCASE 2ND
   MOV AH,2
   MOV DL,BH
   INT 21H
;GOTO NEW LINE
   MOV AH,2
   MOV DL,0DH
   INT 21H
   MOV DL,0AH
   INT 21H
;OUTPUT LOWERCASE 3RD
   MOV AH,2
   MOV DL,CL
   INT 21H

;RETURN TO
   MOV AH,4CH
   INT 21H

   MAIN ENDP
END MAIN
```

Output:
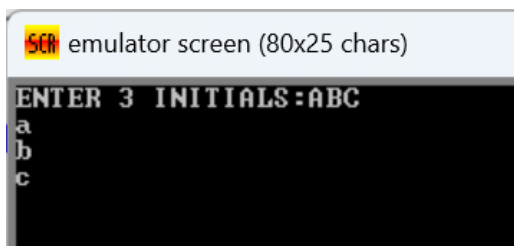
Problem statement: Input Hexadecimal (A-F) and print their decimal value.

Code:

```
.MODEL SMALL
.STACK 100H
.DATA
  A DB "ENTER A HEX DIGIT: $"
  MSG DB 10,13,"1$"
.CODE
MAIN PROC

    MOV AX,@DATA
    MOV DS,AX

    LEA DX,A
    MOV AH,9
    INT 21H

    ;INPUT A CHARACTER
    MOV AH,1
    INT 21H
    MOV BL,AL

    SUB BL,17

    ;PRINT 1
    MOV AH,9
    LEA DX,MSG
    INT 21H

    MOV AH,2
    MOV DI,BL
    INT 21H

    ;RETURN TO
    MOV AH,4CH
    INT 21H

MAIN ENDP
END MAIN
```

Output: