

```

01  ORG 0100H
02  .DATA
03  N DB ?
04  RESULT DB ?
05  .CODE
06  MAIN PROC
07      MOV AX,@DATA
08      MOV DS,AX
09
10      MOV AH,1
11      INT 21H
12
13      MOV N,AL
14      SUB N,48
15      MOV CL,N
16
17      JCXZ SKIP
18      MOV BX,1
19      MOV DX,0
20
21  TOP:
22      ADD DL,BL
23      INC BL
24      LOOP TOP
25
26
27  SKIP:
28      MOV RESULT,DL
29      MOV AX,4CH
30      INT 21H
31
32      MAIN ENDP
33  END MAIN
34

```

emulator screen

clear screen

variables

size: byte

edit

N 5
RESULT 15

```

01  ORG 0100H
02  .DATA
03  N DB ?
04  RESULT DB ?
05  .CODE
06  MAIN PROC
07      MOV AX,@DATA
08      MOV DS,AX
09
10      MOV AH,1
11      INT 21H
12
13      MOV N,AL
14      SUB N,48
15      MOV CL,N
16
17      JCXZ SKIP
18      MOV BX,1
19      MOV DX,0
20
21  TOP:
22      MOV AL,BL
23      MUL BL
24      ADD DL,AL
25      INC BL
26      LOOP TOP
27
28
29  SKIP:
30      MOV RESULT,DL
31      MOV AX,4CH
32      INT 21H
33
34      MAIN ENDP
35  END MAIN
36

```

emulator screen

clear screen

variables

size: byte

edit

N 5
RESULT 55

```

001  ORG 0100H
002  .DATA
003  MS DW "ENTER A HEX DIGIT: $"
004  MSS DW "IN DECIMAL IS IT $"
005  MMS DW "DO YOU WANT TO DO IT AGAIN? $"
006  MMSS DW "ILLEGAL CHARACTER - ENTER 0 .. 9 OR A .. F: $"
007  X DB ?
008  A DW "10$"
009  B DW "11$"
010  C DW "12$"
011  D DW "13$"
012  E DW "14$"
013  F DW "15$"
014  .CODE
015  MAIN PROC
016      MOV AX,@DATA
017      MOV DS,AX
018  AGAIN:
019      MOV AH,9
020      LEA DX,MS
021      INT 21H
022      JMP INPUT
023  INVALID:
024      MOV AH,9
025      LEA DX,MMSS
026      INT 21H
027  INPUT:
028      MOV AH,1
029      INT 21H
030
031      MOV X,AL
032      ;NEW LINE
033      MOV AH,2
034      MOV DL,0AH
035      INT 21H
036      MOV DL,0DH
037      INT 21H
038      ;COMPARE
039      CMP X,'9'

```

line: 135

col: 1

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```

040      JG ALPHA
041      CMP X,'0'
042      JL INVALID
043      ;MESSAGE
044      MOV AH,9
045      LEA DX,MSS
046      INT 21H
047      ;OUTPUT
048      MOV AH,2
049      MOV DL,X
050      INT 21H
051      JMP TERMINAL
052  ALPHA:
053      CMP X,'A'
054      JL INVALID
055      CMP X,'F'
056      JG INVALID
057
058      MOV AH,9
059      LEA DX,MSS
060      INT 21H
061  LETTER:
062      CMP X,'A'
063      JZ AA
064      CMP X,'B'
065      JZ BB
066      CMP X,'C'
067      JZ CC
068      CMP X,'D'
069      JZ DD
070      CMP X,'E'
071      JZ EE
072      CMP X,'F'
073      JZ FF
074  AA:
075      MOV AH,9
076      LEA DX,A
077      INT 21H
078      JMP TERMINAL

```

line: 135

col: 1

```

079 BB:
080     MOV AH,9
081     LEA DX,B
082     INT 21H
083     JMP TERMINAL
084 CC:
085     MOV AH,9
086     LEA DX,C
087     INT 21H
088     JMP TERMINAL
089 DD:
090     MOV AH,9
091     LEA DX,D
092     INT 21H
093     JMP TERMINAL
094 EE:
095     MOV AH,9
096     LEA DX,E
097     INT 21H
098     JMP TERMINAL
099 FF:
100     MOV AH,9
101     LEA DX,F
102     INT 21H
103 TERMINAL:
104     ;NEW LINE
105     MOV AH,2
106     MOV DL,0AH
107     INT 21H
108     MOV DL,0DH
109     INT 21H
110     ;MESSAGE
111     MOV AH,9
112     LEA DX,MMS
113     INT 21H
114
115     MOV AH,1
116     INT 21H
117     MOV X,AL

```

```

118     ;NEW LINE
119     MOV AH,2
120     MOV DL,0AH
121     INT 21H
122     MOV DL,0DH
123     INT 21H
124
125     CMP X,'Y'
126     JZ AGAIN
127     CMP X,'y'
128     JZ AGAIN
129 SKIP:
130     MOV AX,4CH
131     INT 21H
132
133     MAIN ENDP
134 END MAIN
135

```

emulator screen (80x25 chars)

```

ENTER A HEX DIGIT: 9
IN DECIMAL IS IT 9
DO YOU WANT TO DO IT AGAIN? y
ENTER A HEX DIGIT: c
ILLEGAL CHARACTER - ENTER 0 .. 9 OR A .. F: C
IN DECIMAL IS IT 12
DO YOU WANT TO DO IT AGAIN? N

```

clear screen

change font

0/16