.MODEL SMALL

.386

.DATA

ARRAY DB 99 DUP(?)

A1 DB ?

EL DB ?

FLAG DB 0

MSG1 DB 10,13,"ENTER LENGTH OF ARRAY (MAX 9) : $"

MSG2 DB 10,13,"ENTER ARRAY (MAX 2 DIGIT NUMBERS) : $"

MSG3 DB 10,13,"ENTER ARRAY ELEMENT TO LOOK FOR(LINEAR SEARCH) : $"

MSG4 DB 10,13,"ENTER ELEMENT $"

MSG5 DB 10,13,"ELEMENT FOUND AT POSITION : $"

MSG6 DB 10,13,"ELEMENT NOT FOUND!$"

.CODE

.STARTUP

;LENGTH

MOV DX,OFFSET MSG1

MOV AH,09

INT 21H

MOV DL,10

MOV AH,02

INT 21H

MOV BL,0

MOV CX,2

L1 : SHL BL,4

MOV AH,01

INT 21H

CMP AL,39H

JBE L2

SUB AL,7

L2 : SUB AL,30H

ADD BL,AL

LOOP L1

MOV DL,10

MOV AH,02

INT 21H

MOV A1,BL

;ARRAY1

MOV DX,OFFSET MSG2

MOV AH,09

INT 21H

MOV DL,10

MOV AH,02

INT 21H

MOV SI,OFFSET ARRAY

MOV CX,0

MOV CL,A1

LI1 :

MOV DX,OFFSET MSG4

MOV AH,09

INT 21H

MOV DL,A1

ADD DL,1

SUB DL,CL

ADD DL,30H

MOV AH,02

INT 21H

MOV DL,10

MOV AH,02

INT 21H

MOV AH,01

INT 21H

MOV BX,0

CMP AL,39H

JBE LI1X

SUB AL,7H

LI1X:

SUB AL,30H

ADD BL,AL

SHL BL,4

MOV AH,01

INT 21H

CMP AL,39H

JBE LI1Y

SUB AL,7H

LI1Y:

SUB AL,30H

ADD BL,AL

MOV [SI],BL

INC SI

MOV DL,10

MOV AH,02

INT 21H

LOOP LI1

MOV DL,10

MOV AH,02

INT 21H

;SEARCH ELEMENT INPUT

MOV DX,OFFSET MSG3

MOV AH,09

INT 21H

MOV DL,10

MOV AH,02

INT 21H

MOV BX,0

MOV CX,2

L3 : SHL BL,4

MOV AH,01

INT 21H

CMP AL,39H

JBE L4

SUB AL,7

L4 : SUB AL,30H

ADD BL,AL

LOOP L3

MOV DL,10

MOV AH,02

INT 21H

MOV EL,BL

;SEARCH

MOV SI,OFFSET ARRAY

MOV CX,0

MOV CL,A1

MOV DL,EL

SRH:

CMP DL,[SI]

JNE NF

MOV AL,A1

SUB AL,CL

MOV FLAG,AL

ADD FLAG,1

JMP FN

NF :

INC SI

LOOP SRH

FN:

CMP FLAG,0

JE NA

MOV DX,OFFSET MSG5

MOV AH,09

INT 21H

MOV BL,FLAG

ROL BL,4

AND BL,0FH

CMP BL,9

JBE LS1

ADD BL,7

LS1 :

ADD BL,30H

MOV DL,BL

MOV AH,02

INT 21H

MOV BL,FLAG

AND BL,0FH

CMP BL,9

JBE LS2

ADD BL,7

LS2 :

ADD BL,30H

MOV DL,BL

MOV AH,02

INT 21H

MOV DL,10

MOV AH,02

INT 21H

JMP DONE

NA :

MOV DX,OFFSET MSG6

MOV AH,09

INT 21H

MOV DL,10

MOV AH,02

INT 21H

DONE :

.EXIT

END