**Binary**

.MODEL SMALL

.STACK

.DATA

CR EQU 13

LF EQU 10

MSG1 DB 'Nhap so nhi phan: $'

MSG2 DB CR,LF,'So nhi phan vua nhap: $'

.CODE

MOV AX, @DATA

MOV DS, AX

XOR BX, BX

MOV AH, 9

LEA DX, MSG1

INT 21h

MOV AH, 1

N2:

INT 21h

CMP AL, CR

JE N8

AND AL, 0Fh

SHL BX, 1

OR BL, AL

JMP N2

N8:

MOV CX, 16

MOV AH, 9

LEA DX, MSG2

INT 21h

PrintLoop:

ROL BX, 1

JC Print1

MOV DL, '0'

MOV AH, 2

INT 21h

JMP Exit1

Print1:

MOV DL, '1'

MOV AH, 2

INT 21h

Exit1:

DEC CX

CMP CX, 0

JNE PrintLoop

MOV AH, 4Ch

INT 21h

END

**Hexa**

.MODEL SMALL

.DATA

NHAP DB 13, 'Nhap so Hexa(toi da 4 ki so): $'

TB DB 13,10, 'So Hexa vua nhap: $'

.STACK 100h

.CODE

MOV AX, @DATA

MOV DS, AX

LEA DX, NHAP

MOV AH, 9

INT 21h

XOR BX, BX

MOV CL, 4

MOV AH, 1

N2:

INT 21h

CMP AL, 13

JE N8

CMP AL, 39h

JG Letter

AND AL, 0Fh

JMP Shift

Letter:

SUB AL, 37h

Shift:

SHL BX, CL

OR BL, AL

JMP N2

N8:

LEA DX, TB

MOV AH, 9

INT 21h

MOV CX, 4

PrintHex:

MOV DL, BH

SHR DL, 4

CMP DL, 9

JG PrintLetter

OR DL, 30h

MOV AH, 2

INT 21h

JMP Exit

PrintLetter:

ADD DL, 37h

MOV AH, 2

INT 21h

Exit:

SHL BX, 4

LOOP PrintHex

MOV AH, 4Ch

INT 21h

END

**Thap phan**

.MODEL SMALL

.STACK

.DATA

TBAO1 DB 13,10,"NHAP SO THAP PHAN: $"

TBAO2 DB 13,10,"SO THAP PHAN VUA NHAP: $"

.CODE

MOV AX, @DATA

MOV DS, AX

CALL INPUT

CALL OUTPUT

MOV AH, 4CH

INT 21H

INPUT PROC

BATDAU:

XOR CX,CX

LEA DX,TBAO1

MOV AH,9

INT 21H

;NHAP 1 KY TU

MOV AH, 1

INT 21H

;SO SANH KY TU DO

CMP AL, '-'

JE DAUTRU

CMP AL, '+'

JE DAUCONG

;NEU KHONG NHAP DAU

JMP TIEPTUC

DAUTRU:

MOV CX, 1

DAUCONG:

INT 21H

TIEPTUC:

;SO SANH NEU NHO HON SO 0

CMP AL, '0'

JNGE KHONGPHAISO

CMP AL, '9'

;SO SANH NEU LON HON SO 9

JNLE KHONGPHAISO

;DOI KY SO THANH TRI

AND AX, 000FH

PUSH AX

;TINH TONG=10\*TONG+TRI

MOV AX, 10

MUL BX

MOV BX, AX

POP AX

ADD BX, AX

;NHAP 1 KY TU

MOV AH, 1

INT 21H

;SO SANH VOI ENTER, NEU KHONG PHAI THI TIEP TUC LAP

CMP AL, 13

JNE TIEPTUC

MOV AX, BX

;KIEM TRA CX CO GIA TRI (1 NEU AM)

OR CX, CX

JE TRAVE

NEG AX

TRAVE:

RET

KHONGPHAISO:

JMP BATDAU

INPUT ENDP

OUTPUT PROC

;AX LUC NAY DANG GIU GIA TRI (NEU LA AM) NEN GUI VAO STACK

PUSH AX

LEA DX,TBAO2

MOV AH,9

INT 21H

;LAY LAI GIA TRI CHO AX

POP AX

;SO SANH TONG VOI SO 0

CMP AX, 0

JGE DOIRATHAPPHAN

;NEU NHO HON 0

PUSH AX

MOV DL, '-'

MOV AH, 2

INT 21H

POP AX

NEG AX

;LAP CHIA CHO 10

DOIRATHAPPHAN:

XOR CX, CX

MOV BX, 10

CHIA:

XOR DX, DX

DIV BX

;SO DU CHO VAO NGAN XEP

PUSH DX

INC CX

;LAP CHO DEN KHI THUONG BANG 0

CMP AX, 0

JNE CHIA

MOV AH, 2

DOI:

;DOI SO THAP PHAN -> KY SO

POP DX

OR DL, 30H

INT 21H

LOOP DOI

RET

OUTPUT ENDP

END