#Conversions

.8086

.model small

.data

num db 37h

num1 db 35h

num2 db 22h

num3 db 35h

res db ?

res1 db ?

res2 db ?

result db ?

msg2 db 'option 1: Ascii to BCD [ascii value is 37 ] $'

msg3 db 'option 2: BCD to Ascii [ascii value is 35 ] $'

msg4 db 'option 3: Hex to BCD [ascii value is 22 ] $'

msg5 db 'option 4: BCD to Hex [ascii value is 35 ] $'

msg1 db 'Enter option $'

.code

Start:

mov ax,@data

mov ds, ax

lea dx,msg2

mov ah,09h

int 21h

lea dx,msg3

mov ah,09h

int 21h

lea dx,msg4

mov ah,09h

int 21h

lea dx,msg5

mov ah,09h

int 21h

lea dx,msg1

mov ah,09h

int 21h

mov ah,08h

int 21h

cmp al,31h

jnz next

;AsciiToBCD

mov al, num

sub al, 30h

mov res ,al

jmp exit

next :cmp al,32h

jnz next1

;BCDtoAscii

mov al,num1

and al,0F0h

ror al, 4

add al,30h

mov bl,num1

and bl,0Fh

add bl,30h

mov res1, al

mov res2, bl

jmp exit

next1:cmp al,33h

jnz next2

;HextoBCD

mov al,num2

mov ah,00h

mov bl,0Ah

div bl

ror al,04h

add al,ah

jmp exit

next2:cmp al,34h

;BCDtoHEX

mov al,num3

mov dl,00h

mov bl,al

and bl, 0F0h

mov cl,04h

ror bl,cl

back: add dl, 0Ah

dec bl

jnz back

and al,0Fh

add dl, al

mov result ,dl

jmp exit

exit:int 3h

end start

OUTPUT:

Option 1: Ascii to BCD [ascii value is 37]

option 2:BCD to Ascii [bcd value is 35]

option 3:Hex to BCD [hex value is 22]

option 4:BCD to Hex [bcd value is 35] Enter option

1=>ax 0707

2=>ax 0733 bx 0035

3=>ax 0434

4=>ax 0023