**TASK1**

.model small

.stack 100h

.data

val1 db "Enter 1ST Number: ", '$'

val2 db "Enter 2ND Number: ", '$'

pro db "Product", '$'

result db 0

.code

mov ax,@data

mov ds,ax

mov ax,0

lea dx, val1

mov ah, 09h

int 21h

mov ah, 01h

int 21h

mov bl, al

sub bl, 48

mov ah,02h

mov dl,10

int 21h

lea dx, val2

mov ah, 09h

int 21h

mov ah, 01h

int 21h

sub al, 30h

mov cx,8

l1:

Shr al,1

jnc shiftL

add result,bl

shiftL:

Shl bl, 1

Loop l1

mov ah,02h

mov dl,10

int 21h

lea dx, pro

mov ah, 09h

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ah, 02h

mov dl, ":"

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ax, 0

mov al, result

mov bl, 10

div bl

mov ch, ah

mov cl, al

mov ax, 0

mov ah, 02h

mov dl, cl

add dl, "0"

int 21h

mov ax, 0

mov ah, 02h

mov dl, ch

add dl, "0"

int 21h

mov ah,04ch

int 021h

end

**task 2**

.model small

.stack 100h

Employe struct

id db 6 dup (0)

name db 15 dup (0)

year db 4 dup (0)

salary dw 4 dup (0)

occupation db 20 dup (0)

Employe ends

.data

Employe1 Employe <>

Employe2 Employe 4 dup (<>)

s1 db ?

l1 db ?

t1 db ?

s2 db ?

l2 db ?

t2 db ?

.code

mov ax,@data

mov ds,ax

mov s1,sizeof Employe1

mov l1,lengthof Employe1

mov t1,type Employe1

mov ah, 02h

mov dl, s1

add dl, 48

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ah, 02h

mov dl, l1

add dl, 48

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ah, 02h

mov dl, t1

add dl, 48

int 21h

mov ah, 02h

mov dl, 10

int 21h

mov s2,sizeof Employe2

mov l2,lengthof Employe2

mov t2,type Employe2

mov ah, 02h

mov dl, s2

add dl, 48

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ah, 02h

mov dl, l2

add dl, 48

int 21h

mov ah, 02h

mov dl, " "

int 21h

mov ah, 02h

mov dl, t2

add dl, 48

int 21h

mov ah, 02h

mov dl, 10

int 21h

mov ah, 4ch

int 21h

end

**TASK 3**

.model small

.stack 100h

Time struct

Hours db ?

Minutes db ?

Seconds db ?

Time ends

.data

currTime Time <>

Hour db ?

Min db ?

sec db ?

.code

output Macro p1, p2, p3

mov hour, p1

mov min, p2

mov sec, p3

lea dx, hour ;code to print strings

add dl,48

mov ah, 02h

int 21h

mov ah, 02h

mov dl, ":"

int 21h

lea dx, min ;code to print strings

add dl,48

mov ah, 02h

int 21h

mov ah, 02h

mov dl, ":"

int 21h

lea dx, sec ;code to print strings

add dl,48

mov ah, 02h

int 21h

endm

main proc

mov ax,@data

mov ds,ax

mov ah, 2ch

int 21h

mov currTime.Hours, ch

mov currTime.Minutes, cl

mov currTime.Seconds, dh

output ch, cl, dh

mov ah, 4ch

int 21h

main endp

end main

**TASK 4**

.model small

.stack 100h

Shopkeeper struct

name db "Hamza",'$'

id db "0707",'$'

bill db "1000",'$'

items db 10

dis-per db 17

Shopkeeper ends

.data

Shopkeeper1 Shopkeeper <>

string1 db "Name : ", '$'

string2 db "ID : ", '$'

string3 db "Bill : ", '$'

string4 db "Items : ", '$'

string5 db "Discount Percentage: ", '$'

.code

mov ax,@data

mov ds,ax

mov ax,0

lea dx, string1

mov ah, 09h

int 21h

lea dx, Shopkeeper1.name

mov ah, 09h

int 21h

mov ah, 02h

mov dl, 10

int 21h

lea dx, string2

mov ah, 09h

int 21h

lea dx, Shopkeeper1.id

mov ah, 09h

int 21h

mov ah, 02h

mov dl, 10

int 21h

lea dx, string3

mov ah, 09h

int 21h

lea dx, Shopkeeper1.bill

mov ah, 09h

int 21h

mov ah, 02h

mov dl, 10

int 21h

lea dx, string4

mov ah, 09h

int 21h

mov ax, 0

mov al, Shopkeeper1.items

mov bl, 10

div bl

mov ch, ah

mov cl, al

mov ax, 0

mov ah, 02h

mov dl, cl

add dl, "0"

int 21h

mov ax, 0

mov ah, 02h

mov dl, ch

add dl, "0"

int 21h

mov ah, 02h

mov dl, 10

int 21h

lea dx, string5

mov ah, 09h

int 21h

mov ax, 0

mov al, Shopkeeper1.dis-per

mov bl, 10

div bl

mov ch, ah

mov cl, al

mov ax, 0

mov ah, 02h

mov dl, cl

add dl, "0"

int 21h

mov ax, 0

mov ah, 02h

mov dl, ch

add dl, "0"

int 21h

mov ah, 02h

mov dl, 10

int 21h

mov ah, 4ch

int 21h

end