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Question no :1

.model small

.stack 100h

.data

x db 'Enter First Number : \$'

y db 'Enter Second Number : \$'

z db 'Resut (Addition) : \$'

a db 'Enter First Number : \$'

b db 'Enter Second Number : \$'

c db 'Resut (Subtract) : \$'

mult1 dw 2521H

dw 3206H

mult2 dw 0A26H

dw 6400H

```
ans dw 0,0,0,0
```

```
p db 28h
```

```
q db 02h
```

```
r dw ?
```

```
m db 'Enter First Number : $'
```

```
n db 'Enter Second Number : $'
```

```
o db 'Resut (Division) : $'
```

```
.code
```

```
main proc
```

```
    mov ax,@data    ; Initialize data segment into code segment
```

```
    mov ds,ax
```

```
;=====Addition=====
```

```
    mov ah,9        ; Show on screen, value of x
```

```
    lea dx,x
```

```
    int 21h
```

```
    mov ah,1        ; User Input
```

int 21h

mov bl,al

mov ah,2 ; NewLine

mov dl,10

int 21h

mov dl,13

int 21h

mov ah,9 ; Show on screen, value of y

lea dx,y

int 21h

mov ah,1 ; Input

int 21h

mov bh,al

mov ah,2 ; NewLine

mov dl,10

int 21h

mov dl,13

int 21h

; Show on screen, value of z

mov ah,9

lea dx,z

int 21h

add bl,bh ; bl = bl+bh

sub bl,48

mov ah,2 ; Output

mov dl,bl

int 21h

;=====Subtract=====

mov ah,9

lea dx,a

int 21h

mov ah,1

int 21h

mov bl,al

mov ah,9

lea dx,b

int 21h

mov ah,1

int 21h

mov bh,al

mov ah,9

lea dx,c

int 21h

sub bl,bh

add bl,48 ;bl=bl-bh

mov ah,2

mov dl,bl

int 21h

;=====Multiply=====

LEA SI,ans

mov ax,mult1

mul mult2

mov ans,ax

mov ans+2,dx

mov ax,mult1+2

mul mult2

add ans+2,ax

adc ans+4,dx

adc ans+6,0

mov ax,mult1

mul mult2+2

add ans+2,ax

adc ans+4,dx

adc ans+6,0

mov ax,mult1+2

mul mult2+2

add ans+4,ax

adc ans+6,dx

;=====Division=====

mov ax,0000h

mov bx,0000h

mov al,p

mov bl,q

div b

mov r,ax

;=====

exit:

mov ah,4ch

int 21h

main endp

end main

Question no :3

.model small

.stack 100h

.data

d1 db 9ah,0abh

d2 db ?

d3 db '9ah+0abh=\$'

d4 db '0123456789abcdef'

.code

main proc

mov ax, @data

mov ds, ax

; display the initial string

mov ah, 9

lea dx, d3

int 21h

lea bx, d4

; show carry

mov al,d1

add al,d1+1

mov d2,al

mov al,0

adc al,0

;or al,30h

; lookup table


```
xlat
mov dl,al
mov ah,2
int 21h
```

```
; display ten digits
mov al,byte ptr d2
mov cl,4
ror al,cl
and al,0fh
```

```
;or al,30h
xlat
mov dl,al
mov ah,2
int 21h
```

```
; display single digits
mov al,byte ptr d2
and al,0fh
xlat
mov dl,al
```

```
mov ah,2
```

```
int 21h
```

```
;fill16base h
```

```
mov dl,'h'
```

```
mov ah,2
```

```
int 21h
```

```
exit:
```

```
mov ah,4ch
```

```
int 21h
```

```
main endp
```

```
end main
```

Question no :4

```
.model small
```

```
.stack 100h
```

```
.data
```

```
msg db 10,13, "Enter three initials: $"
```

```
a db ?
```

```
b db ?
```

```
c db ?
```

```
.code
```

```
main proc
```

```
    mov ax,@data ;inti data segment to code segment
```

```
    mov ds,ax
```

```
    mov ah,9 ;display lines
```

```
    lea dx,msg
```

```
    int 21h
```

```
    mov ah,1 ;1st input
```

```
    int 21h
```

```
    mov a,al
```

```
    mov ah,1 ;2nd input
```

```
    int 21h
```

```
    mov b,al
```

```
    mov ah,1 ;3rd input
```

```
    int 21h
```

```
    mov c,al
```

```
    mov ah,2      ; NewLine
```

mov dl,10

int 21h

mov dl,13

int 21h

mov ah,2

mov dl,c

int 21h

mov ah,2

mov dl,b

int 21h

mov ah,2

mov dl,a

int 21h

exit:

mov ah,4ch

int 21h

main endp

end main