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Question no 1:

.model small

.stack 100h

.data

x db 'Enter First Digit : \$'

y db 'Enter Second Digit : \$'

z db 'The Swapped Values are : \$'

.code

main proc

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

mov ds,ax

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

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

lea dx,z

int 21h

mov ah,2 ; NewLine

mov dl,10

int 21h

mov dl,13

int 21h

mov bl,x ;Sorting data

```

mov cl,y

mov y,bl    ;Swapping
mov x,cl

mov ah,2    ; Output
mov dl,bl
int 21h

exit:
mov ah,4ch
int 21h
main endp
end main

```

Question no 2:

```

.model small
.stack 100h
.data

x db 'Enter First Digit : $'
y db 'Enter Second Digit : $'
z db 'The Sum   : $'

.code

main proc
    mov ax,@data    ; Initialize data segment into code segment

```

```
mov ds,ax
```

```
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

exit:
mov ah,4ch
int 21h
main endp
end main

```

Question no 3:

.model small

.stack 100h

.data

msg db 10,13, "The sum of \$"

var db ?, "and"

var2 db ?, "is"

sum db ?, "\$"

.code

main proc

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

mov ds,ax

mov ah,2 ;display ? to screen

mov dl,"?"

int 21h

mov ah,1

int 21h

mov var,al ;sorting var another reg

int 21h

mov var2,al

add al,var

sub al,30h ;there is ascci code

mov sum,al

lea dx,msg

mov ah,9

int 21h

exit:

mov ah,4ch

int 21h

main endp

end main

Question no 4:

.model small

.stack 100h

.data

msg db "?\$"

msg1 db 10,13,"00000\$"

msg2 db 10,13, "0"

ch3 db ?, "0\$"

.code

main proc

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

mov ds,ax

mov ah,2

mov dl,msg

int 21h

mov ah,9 ;Output

lea dx,msg1

int 21h

lea dx,msg2

int 21h

int 21h

int 21h

lea dx,msg1

int 21h

exit:

mov ah,4ch

int 21h

main endp

end main