1>Solution:

```
.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
```

2> solution:

```
.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,a
int 21h
```

```
    mov ah,2
    mov dl,10
    int 21h
    mov dl,13
    int 21h

    mov ah,2
    int 21h

    mov ah,2
    mov dl,10
    int 21h
    mov dl,13
    int 21h

    mov ah,2
    mov dl,c
    int 21h


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

3>Solution:

```
.model small
```

```
.stack 100h
.data

   msg db "Enter a hex digit"
   A db ?,"$"

   msg2 db,10,13, "In decimal it is: 1"
   A2 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

      sub al,11h
      mov A2,al

      mov ah,9
```

```
    lea dx,msg2
    int 21h



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

4>Solution:

```
.model small
.stack 100h
.data

  msg dw 10,13, "##########$"



.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
```

```
    int 21h
    int 21h
    int 21h
    int 21h
    int 21h
    int 21h
    int 21h
    int 21h
    int 21h


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

5>Solution:

```
.model small
.stack 100h
.data
  msg db "?$"
  msg1 db 10,13,"##########$"
  msg2 db 10,13, "###"
  ch1 db ?
  ch2 db ?
  ch3 db ?,"####$"
```

```
.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,1
      int 21h

      mov ch1,al
      int 21h

      mov ch2,al
      int 21h

      mov ch3,al
      int 21h

      mov ah,9  ;Output
      lea dx,msg1
      int 21h

      int 21h
```

```
    int 21h
    int 21h
    int 21h
    int 21h

    lea dx,msg2
    int 21h
    lea dx,msg1

    int 21h
    int 21h
    int 21h
    int 21h
    int 21h

    mov ah,2 ;Beep the counter
    mov dl,7h
    int 21h



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