Problem Statement:-1

1). Write an assembly language program to perform addition of 8-bit data.

```
org 100h
num1 db 50h
num2 db 20h
start:
   mov al, [num1]
   add al, [num2]
   mov bl, al
   call print_hex
   mov ah, 4Ch
   int 21h

print_hex:
   mov ah, al
   and al, 0F0h
   shr al, 4
   add al, '0'
   cmp al, '9'
   jbe print_hex_low
   add al, 7

print_hex_low:
   mov dl, al
   mov ah, 02h
   int 21h
   mov al, bl
   and al, 0Fh
   add al, '0'
   cmp al, '9'
   jbe print_hex_done
   add al, 7

print_hex_done:
   mov dl, al
   mov ah, 02h
   int 21h
   ret
```

Problem Statement:-2

2). Write a program in assembly language to perform addition of 16bit data.

```
org 100h
num1 dw 1892h
num2 dw 4562h
start:
    mov ax, [num1]
    add ax, [num2]
    mov bx, ax
    mov ah, 0
    mov al, ah
    call print_hex
    mov al, bl
    call print_hex
    mov ah, 4Ch
    int 21h

print_hex:
    mov ah, al
    and al, 0F0h
    shr al, 4
    add al, '0'
    cmp al, '9'
    jbe print_hex_low
    add al, 7
```

```
print_hex_low:
    mov dl, al
    mov ah, 02h
    int 21h
    mov al, ah
    and al, 0Fh
    add al, '0'
    cmp al, '9'
    jbe print_hex_done
    add al, 7

print_hex_done:
    mov dl, al
    mov ah, 02h
    int 21h
    ret
```