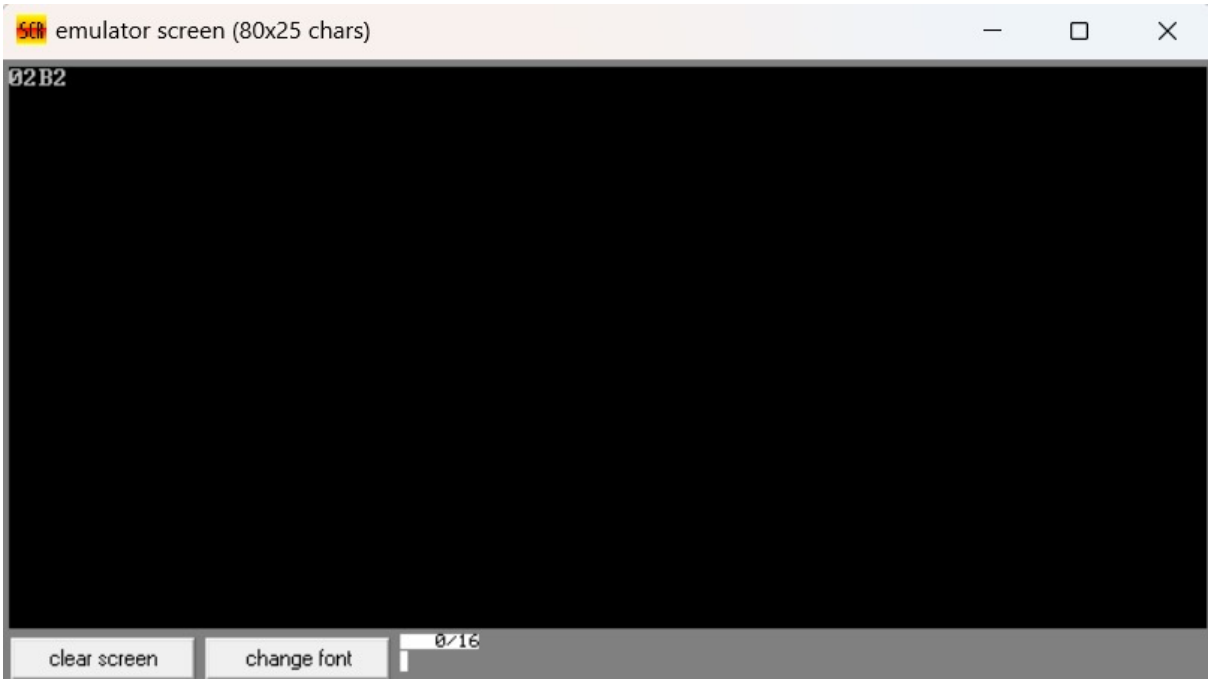
1. Write an assembly language program to perform addition of 8-bit data.

```
org 100h

num1 dw 1357h  ; Changed value for num1
num2 dw 9ABCh  ; Changed value for num2

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
```



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

```
org 100h

num1 dw 1A2Bh  ; Changed value for num1
num2 dw 3C4Dh  ; Changed value for num2

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
```