1. (a) Write a program in assembly language to print the numbers from 0 to 9.

   -→Code:

   ```
   .MODEL SMALL
   .STACK 100h
   .DATA
      num DB '0'
   .CODE
   main PROC
      mov ax, @data
      mov ds, ax

      mov cx, 10

   print_loop:
      mov ah, 0Eh
      mov bh, 0
      mov bl, 7
      mov al, num
      int 10h

      inc num
      loop print_loop

      mov ax, 4C00h
      int 21h

   main ENDP
   END main
   ```

OUTPUT:

emulator screen (80x25 chars)

0123456789

clear screen | change font | 0/16

1. **(b)** Write an assembly language program to print the characters from A to Z in reverse order.

   →CODE:

   .MODEL SMALL
   .STACK 100h
   .DATA
      char DB 'Z'
   .CODE
   main PROC
      mov ax, @data
      mov ds, ax

      mov cx, 26

   print_loop:
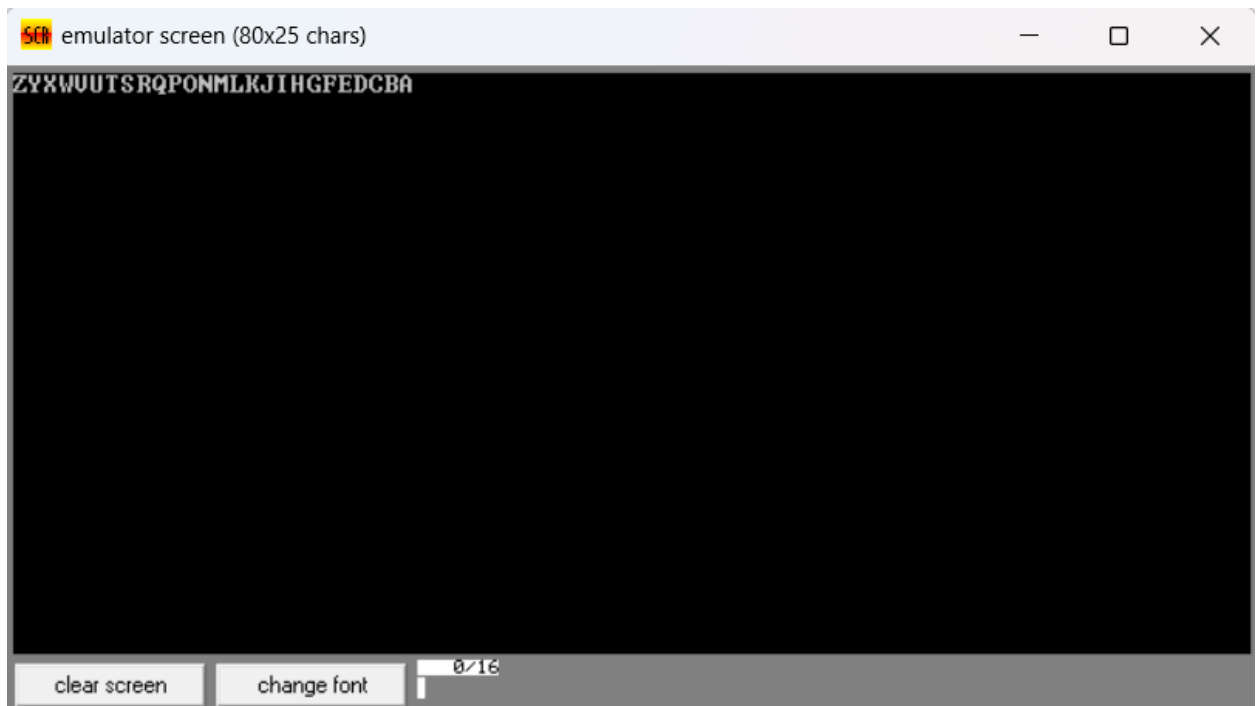   mov ah, 0Eh

```
    mov bh, 0
    mov bl, 7
    mov al, char
    int 10h

    dec char
    loop print_loop

    mov ax, 4C00h
    int 21h

main ENDP
END main
```

OUTPUT:

2. (a) Write a program in assembly language to print the numbers from 0 to 9 in reverse order.

→ CODE:

```
.MODEL SMALL
.STACK 100h
.DATA
    num DB '9'
.CODE
main PROC
    mov ax, @data
    mov ds, ax

    mov cx, 10

print_loop:
    mov ah, 0Eh
    mov bh, 0
    mov bl, 7
    mov al, num
    int 10h

    dec num
    loop print_loop

    mov ax, 4C00h
    int 21h

main ENDP
END main
```

OUTPUT:

(b) Write an assembly language program to print the characters from A to Z.

→CODE:

```
org 100h
mov cx, 26
mov dl, 'A'

print_loop:
    mov ah, 02h
    int 21h
    inc dl
    loop print_loop

mov ah, 4Ch
int 21h
```