LAB TASK 9

1. Write a program in assembly language to take two single-digit numbers as input and display whether they are equal or not.

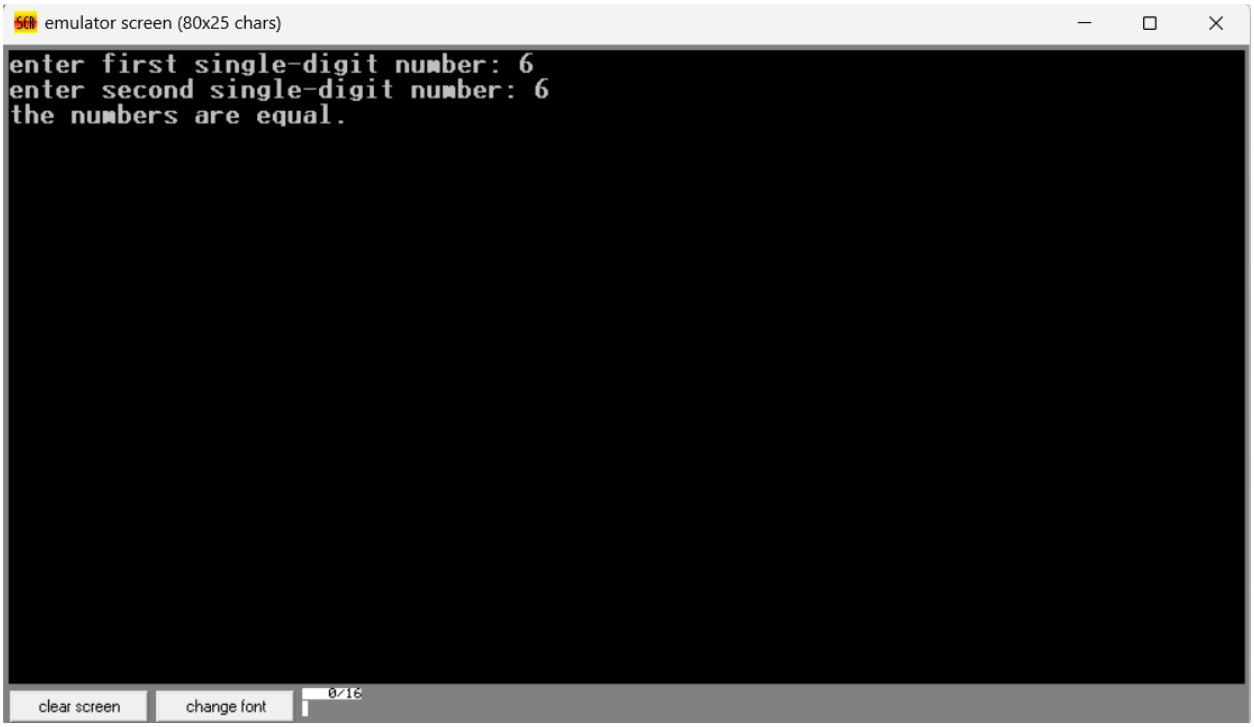
CODE:

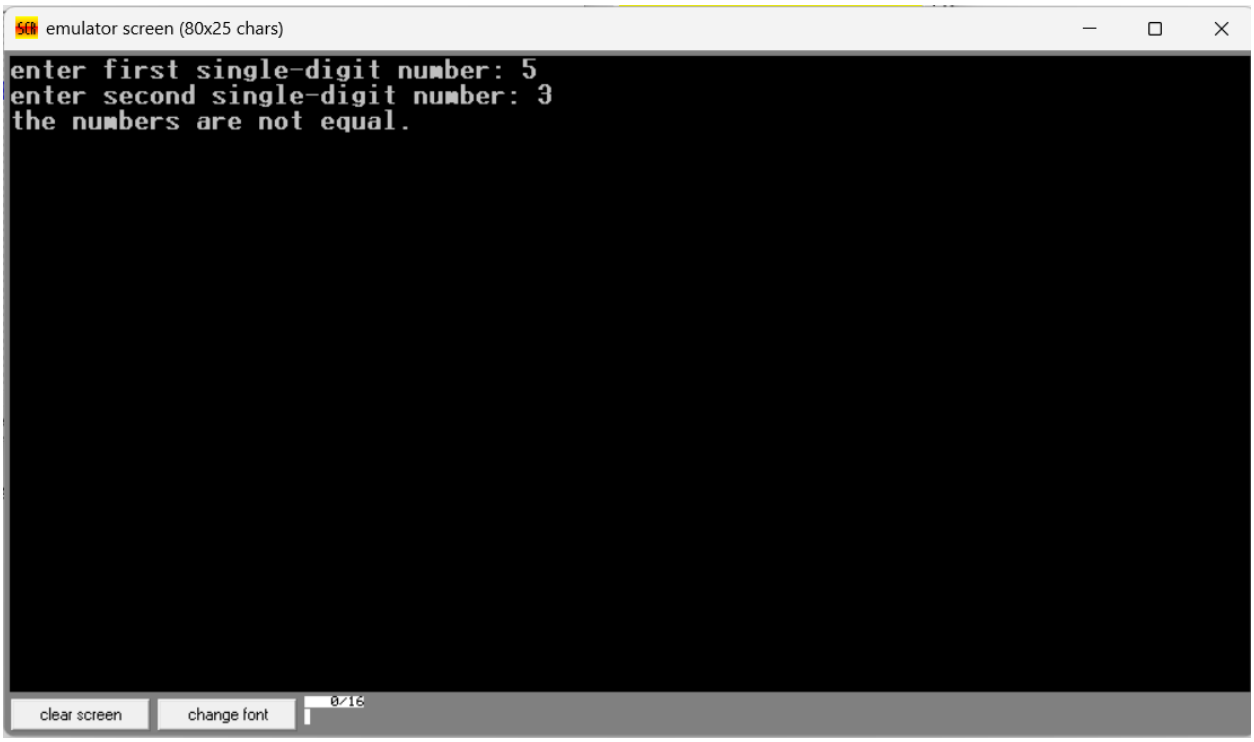
```
.model small
.stack 100h
.data
   prompt1 db 'enter first single-digit number: $'
   prompt2 db 0dh, 0ah, 'enter second single-digit number: $'
   equal_msg db 0dh, 0ah, 'the numbers are equal.$'
   not_equal_msg db 0dh, 0ah, 'the numbers are not equal.$'

.code
main proc
   mov ax, @data
   mov ds, ax

   lea dx, prompt1
   mov ah, 09h
   int 21h
   mov ah, 01h
   int 21h
   sub al, '0'
   mov bl, al
```

```
    lea dx, prompt2
    mov ah, 09h
    int 21h
    mov ah, 01h
    int 21h
    sub al, '0'

    cmp bl, al
    je equal

    lea dx, not_equal_msg
    mov ah, 09h
    int 21h
    jmp exit

equal:
    lea dx, equal_msg
    mov ah, 09h
    int 21h

exit:
    mov ah, 4ch
    int 21h

main endp
```

end main

OUTPUT::





2. Write a program in assembly language to check whether a single-digit number is odd or Even.

CODE:

```
ORG 100h

start:
  mov ah, 09h
  lea dx, prompt_msg
  int 21h

  mov ah, 01h
  int 21h
  sub al, 30h
  mov bl, al

  mov ah, 00h
  mov al, bl
  mov cl, 02h
  div cl

  cmp ah, 00h
  je even

odd:
  mov ah, 09h
  lea dx, odd_msg
```

```
    int 21h
    jmp done

even:
    mov ah, 09h
    lea dx, even_msg
    int 21h

done:
    mov ah, 4Ch
    int 21h

prompt_msg db 'Enter a single-digit number: $'
even_msg db 0Dh, 0Ah, 'The number is even.$'
odd_msg db 0Dh, 0Ah, 'The number is odd.$'
```
OUTPUT::


emulator screen (80x25 chars)
Enter a single-digit number: 2
The number is even.
clear screen
change font
0/16


emulator screen (80x25 chars)
Enter a single-digit number: 3
The number is odd.
clear screen
change font
0/16