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Vellore Institute of Technology

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Microprocessors and Interfacing

(CSE – 3002)

LAB EXPERIMENT– 6

Name: **Vibhu Kumar Singh**

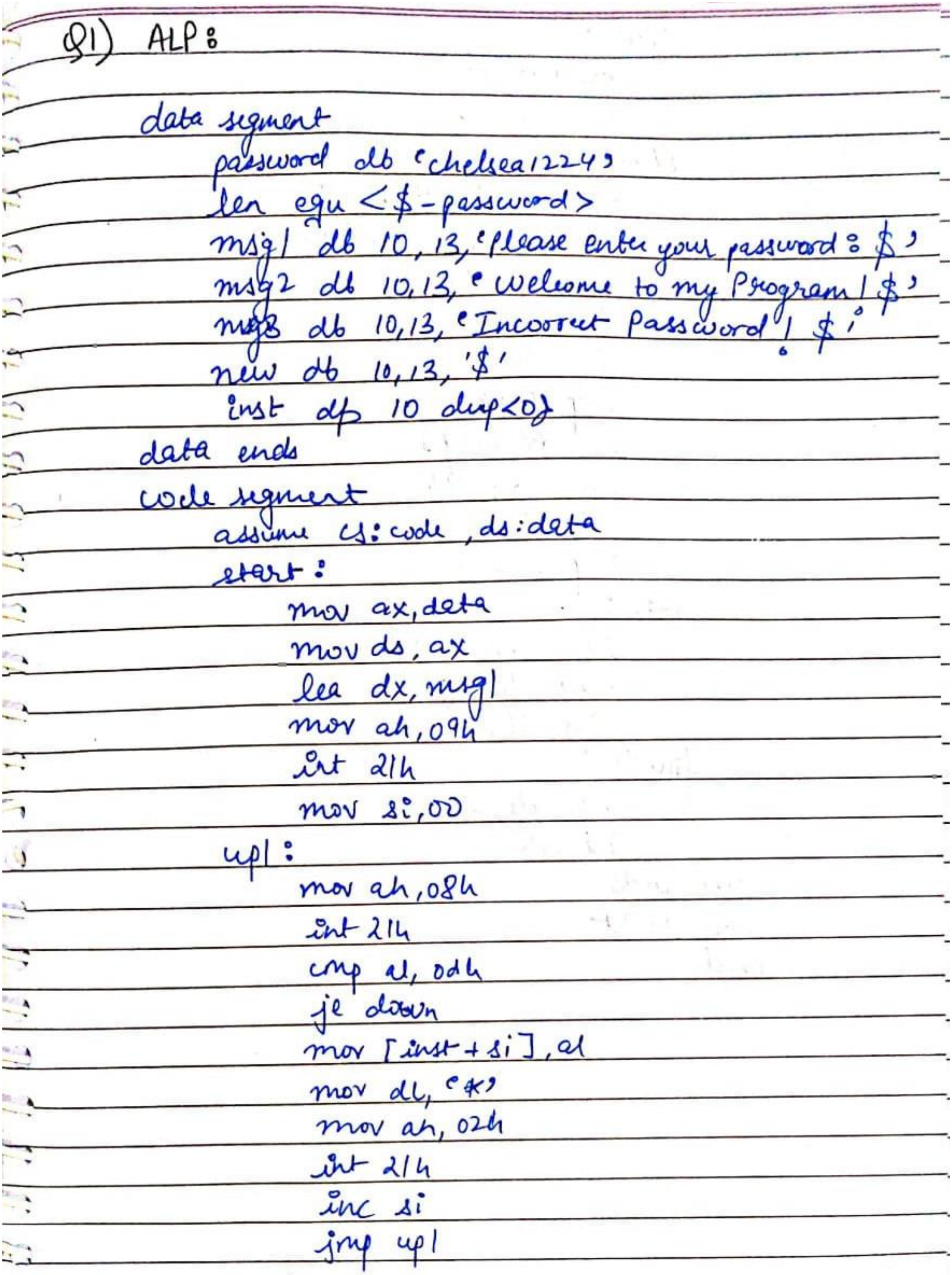
Reg. No: **19BCE0215**

Teacher: **Mr. Konguvel E.**

Q1) Write and execute 8086 ALP to verify the entered password. (Save a string as password and cross check with it to print “Entered Password is Correct or Entered Password is Incorrect”)

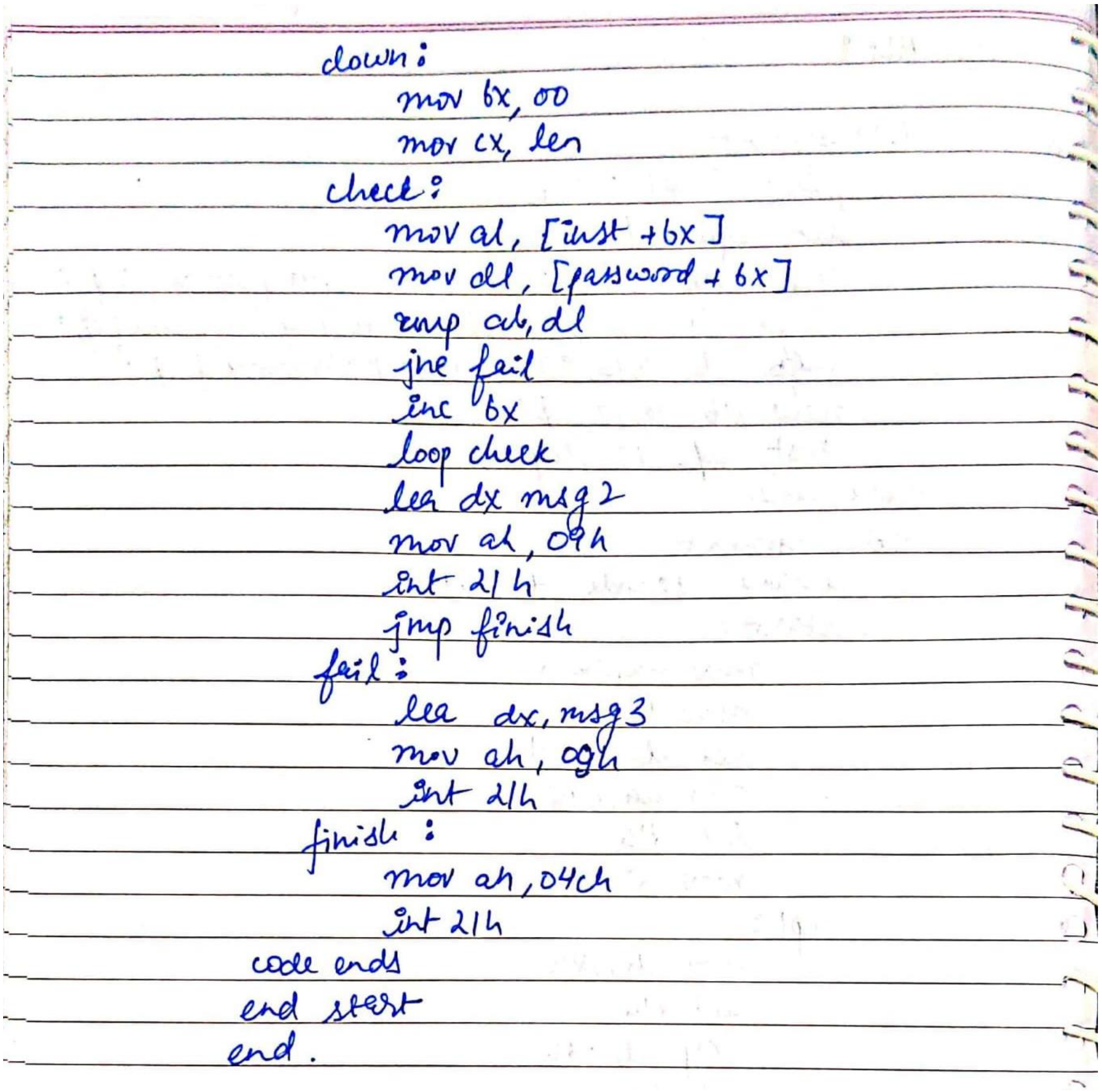
Ans1)

ALP:



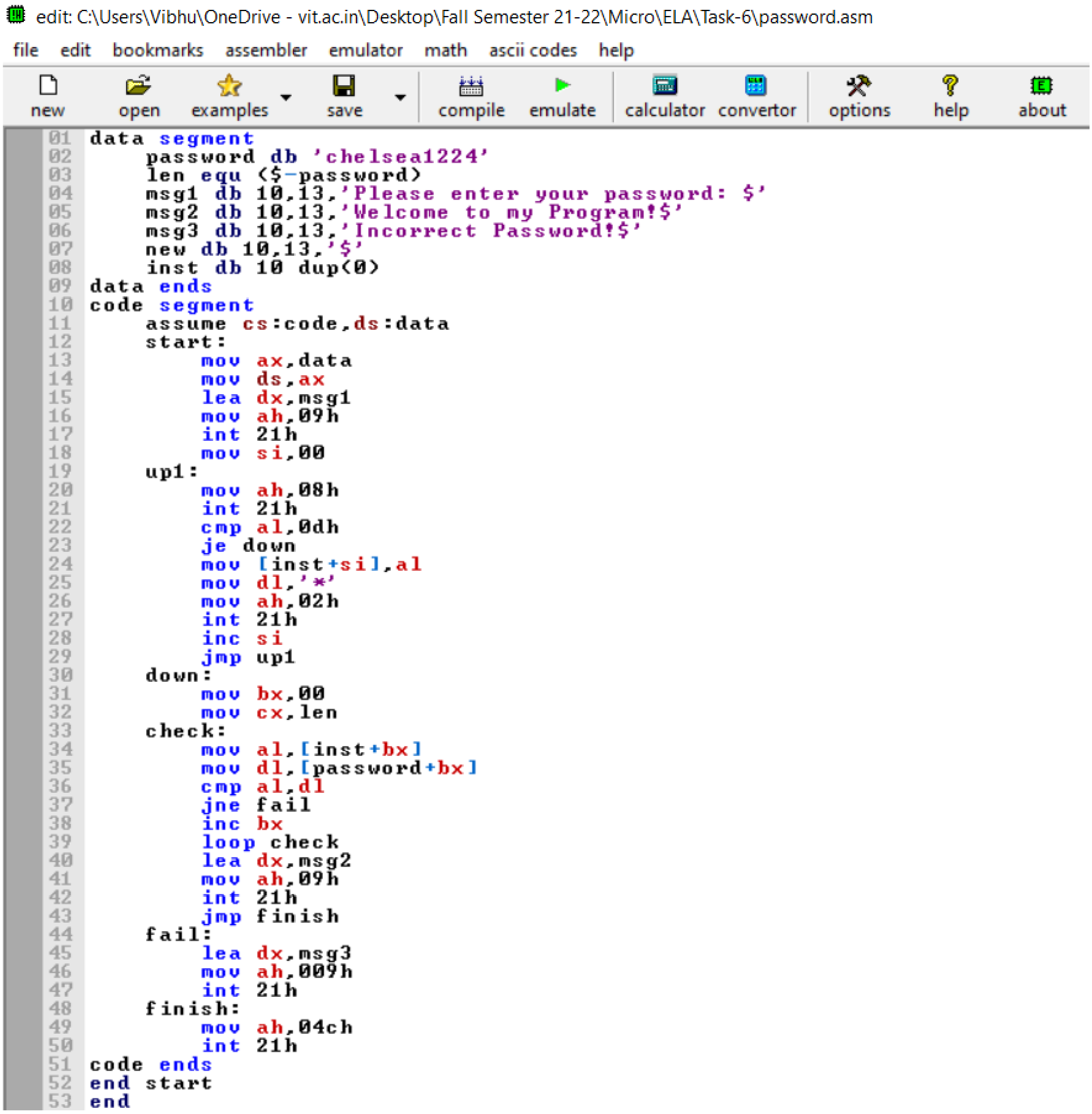
Q1) ALP:

```
data segment
    password db 'chelsea1224'
    len equ <$-password>
    msg1 db 10,13,'Please enter your password: $'
    msg2 db 10,13,'Welcome to my Program! $'
    msg3 db 10,13,'Incoorect Password! $'
    new db 10,13,'$'
    inst db 10 dup(0)
data ends
code segment
    assume cs:code ,ds:data
    start:
        mov ax,data
        mov ds,ax
        lea dx,msg1
        mov ah,09h
        int 21h
        mov si,00
    up1:
        mov ah,08h
        int 21h
        cmp al,0dh
        je down
        mov [inst+si],al
        mov dl,'*'
        mov ah,02h
        int 21h
        inc si
        jmp up1
```



```
        down:
            mov bx, 00
            mov cx, len
        check:
            mov al, [inst +bx]
            mov dl, [password + bx]
            cmp al, dl
            jne fail
            inc bx
            loop check
            lea dx msg2
            mov ah, 09h
            int 21h
            jmp finish
        fail:
            lea  dx, msg3
            mov ah, 09h
            int 21h
        finish:
            mov ah, 04ch
            int 21h
    code ends
    end start
    end.
```

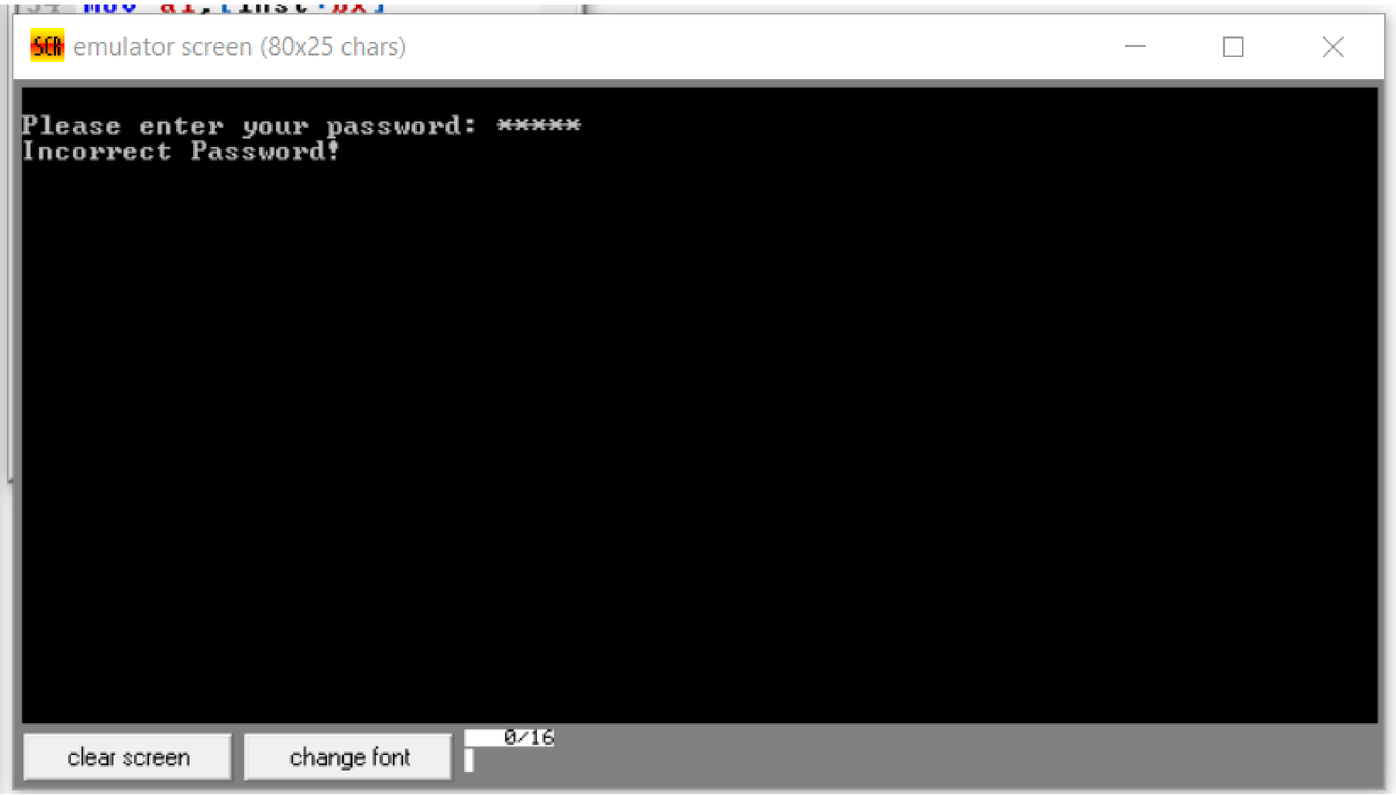
Screenshot of ALP:



```
data segment
    password db 'chelsea1224'
    len equ ($-password)
    msg1 db 10,13,'Please enter your password: $'
    msg2 db 10,13,'Welcome to my Program!$'
    msg3 db 10,13,'Incorrect Password!$'
    new db 10,13,'$'
    inst db 10 dup(0)
data ends
code segment
    assume cs:code,ds:data
    start:
        mov ax,data
        mov ds,ax
        lea dx,msg1
        mov ah,09h
        int 21h
        mov si,00
    up1:
        mov ah,08h
        int 21h
        cmp al,0dh
        je down
        mov [inst+si],al
        mov dl,'*'
        mov ah,02h
        int 21h
        inc si
        jmp up1
    down:
        mov bx,00
        mov cx,len
    check:
        mov al,[inst+bx]
        mov dl,[password+bx]
        cmp al,dl
        jne fail
        inc bx
        loop check
        lea dx,msg2
        mov ah,09h
        int 21h
        jmp finish
    fail:
        lea dx,msg3
        mov ah,009h
        int 21h
    finish:
        mov ah,04ch
        int 21h
code ends
end start
end
```

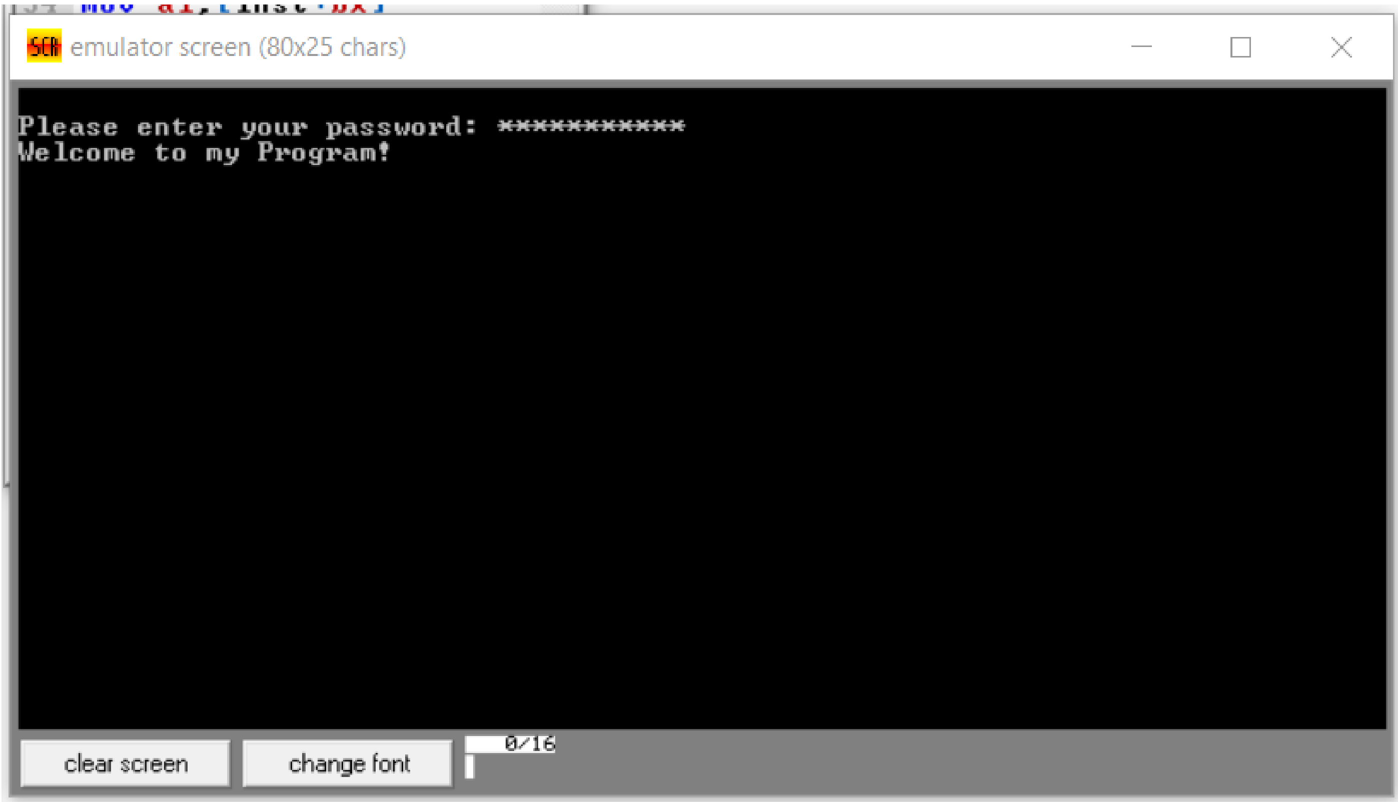
Output:

Incorrect Password



```
Please enter your password: *****
Incorrect Password!
```

Correct Password



```
Please enter your password: ************
Welcome to my Program!
```