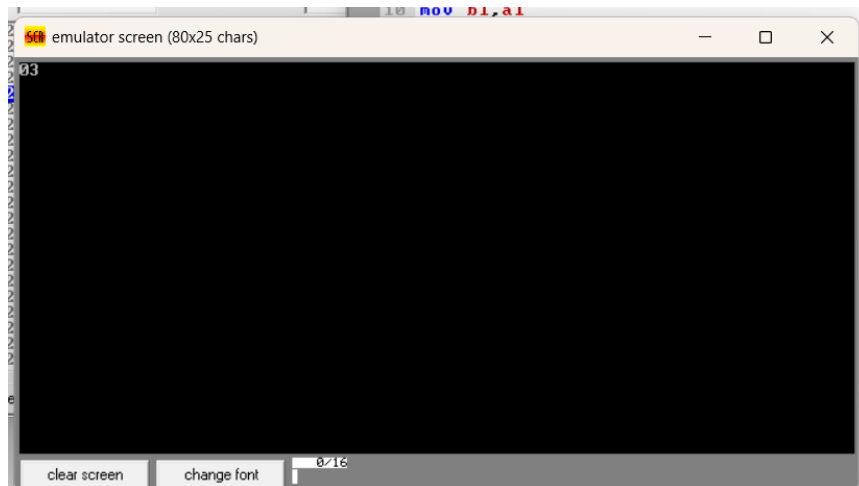# COMPUTER ORGANISATION & ARCHITECHTURE - LABTASK3

K NIKITHA SRI

AP22110010351

1. **Write a program in assembly language to perform subtraction of 8-bit data.**

```
org 100h
num1 db 24h
num2 db 21h
start:
    mov al,num1
    sub al,num2
mov bl,al
mov ah,al
and ah,0f0h
shr ah,4
add ah,30h
cmp ah,39h
jle print_first_digit
add ah,7
print_first_digit:
    mov dl,ah
    mov ah,02h
    int 21h
mov ah,bl
and ah,0Fh
add ah,30h
cmp ah,39h
jle print_second_digit
add ah,7
print_second_digit:
    mov dl,ah
    mov ah,02h
    int 21h
mov ah,4Ch
int 21h
2
```

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

org 100h

num1 dw 5678h

num2 dw 2024h

start:

 mov ax, num1

 sub ax, num2

 mov bx, ax

 mov ah, bh

 shr ah, 4

 add ah, 30h

 cmp ah, 39h

 jle print_high_nibble

 add ah, 7

print_high_nibble:

 mov dl, ah

 mov ah, 02h

 int 21h

```asm
    mov ah, bh
    and ah, 0fh
    add ah, 30h
    cmp ah, 39h
    jle print_low_nibble
    add ah, 7
print_low_nibble:
    mov dl, ah
    mov ah, 02h
    int 21h


    mov ah, bl
    shr ah, 4
    add ah, 30h
    cmp ah, 39h
    jle print_high_nibble2
    add ah, 7
print_high_nibble2:
    mov dl, ah
    mov ah, 02h
    int 21h


    mov ah, bl
    and ah, 0fh
    add ah, 30h
    cmp ah, 39h
    jle print_low_nibble2
    add ah, 7
print_low_nibble2:
```
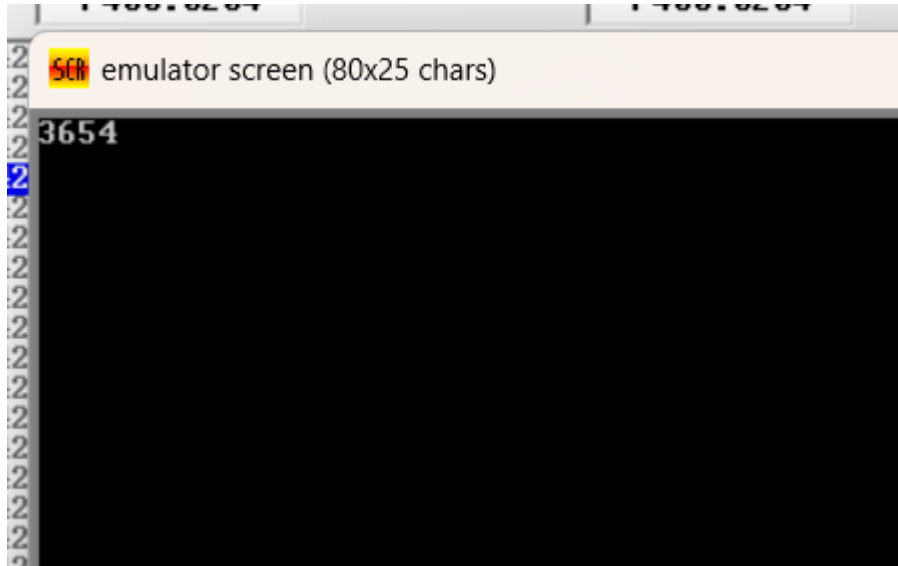
mov dl, ah

mov ah, 02h
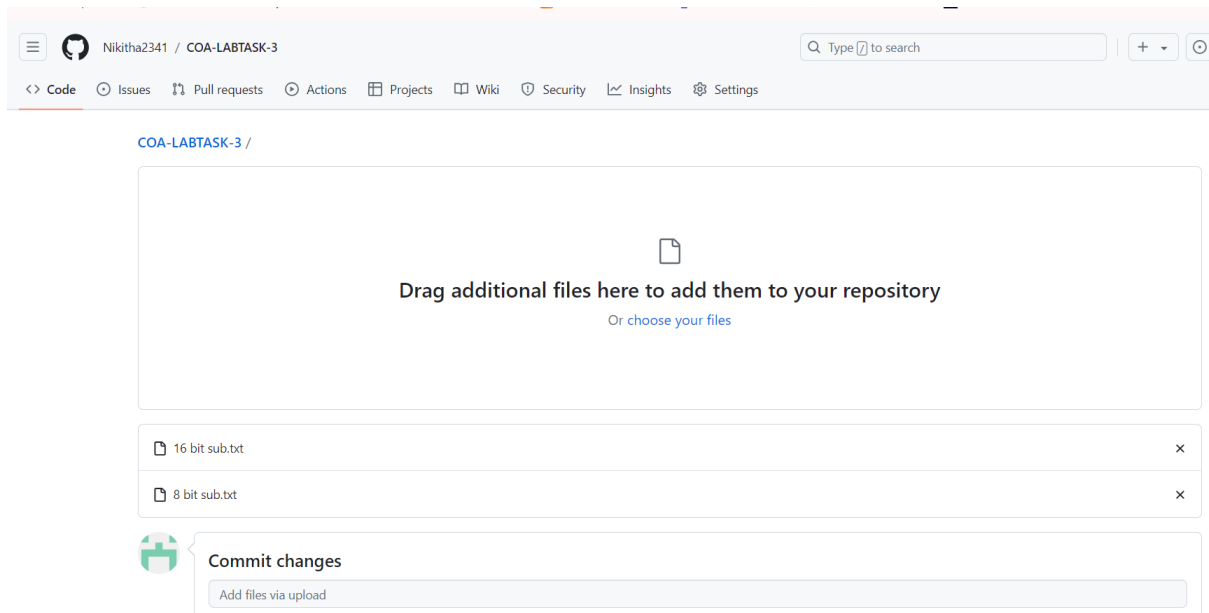
int 21h

mov ah, 4ch

int 21h

SCREENSHOT:

GITHUB LINK: https://github.com/Nikitha2341/COA-LABTASK-3/upload