**LAB TASK – 2**

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

org 100h

n1 db 24h

n2 db 29h

start:

mov al, n1

add al, n2

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\_sec\_digit

add ah,7

print\_sec\_digit:

mov dl,ah

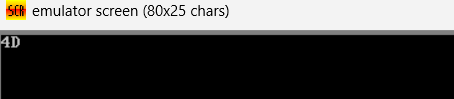
mov ah, 02h

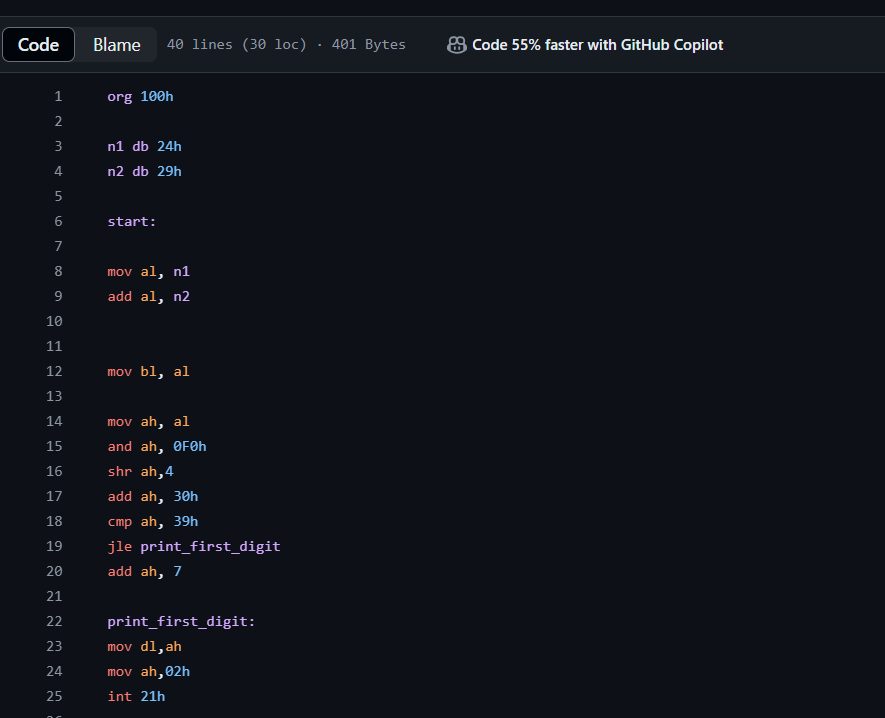
int 21h

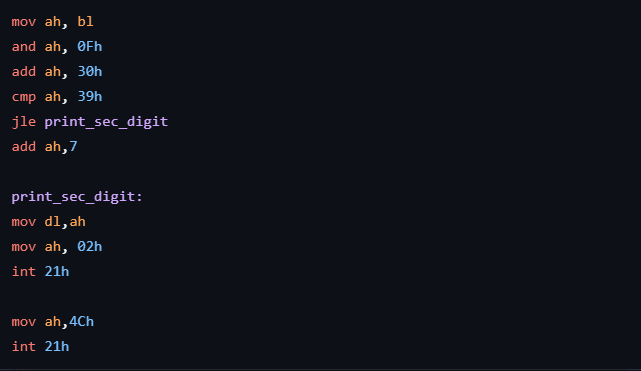
mov ah,4Ch

int 21h

OUTPUT:







1. Write a program in assembly language to add 16-bit data.

org 100h

num1 dw 1234h

num2 dw 5678h

start:

mov ax, num1

add 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

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

OUTPUT :



