**LAB TASK – 3**

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

org 100h

mov al,20h

mov bl,50h

mul bl

mov bx, ax

mov ah, bh

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle first\_digit

add ah, 7

first\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, bh

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle sec\_digit

add ah, 7

sec\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, bl

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle third\_digit

add ah, 7

third\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, bl

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle four\_digit

add ah, 7

four\_digit:

mov dl, ah

mov ah, 02h

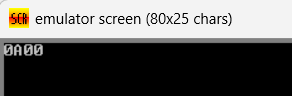
int 21h

mov ah, 4Ch

int 21h

ret

OUTPUT:



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

org 100h

s dw 5050h

h dw 2020h

mov ax, s

mov bx, h

mul bx

mov ah, dl

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle first\_digit

add ah, 7

first\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, dl

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle sec\_digit

add ah, 7

sec\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, dh

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle third\_digit

add ah, 7

third\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, dh

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle four\_digit

add ah, 7

four\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, al

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle fifth\_digit

add ah, 7

fifth\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, al

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle six\_digit

add ah, 7

six\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, ah

and ah, 0F0h

shr ah, 4

add ah, 30h

cmp ah, 39h

jle sev\_digit

add ah, 7

sev\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, ah

and ah, 0Fh

add ah, 30h

cmp ah, 39h

jle ei\_digit

add ah, 7

ei\_digit:

mov dl, ah

mov ah, 02h

int 21h

mov ah, 4Ch

int 21h

OUTPUT :

