Name: Khan Arshad Abdulla **Date – 26/03/2022**
Roll No: 20CO24

Experiment No. 8

AIM – Write a ALP to display a string using INT 10H & INT 21 H.

Program - (1)

```
; this is an example of bios function: int 10h / ah=13h.
                        name "int10h"
                        org    100h
                        ; set es (just in case):
                        push   cs
                        pop    es
                        mov    bh, 0   ; page.
                        lea    bp, msg  ; offset.
                        mov    bl, 0f3h ; default attribute.
                        mov    cx, 12   ; char number.
                        mov    dl, 2   ; col.
                        mov    dh, 1   ; row.
                        mov    ah, 13h  ; function.
                        mov    al, 1   ; sub-function.
                        int    10h
                        ; show current cursor position:
                        mov    al, '<'
                        mov    ah, 0eh
                        int    10h
                        mov    bh, 0   ; page.
                        lea    bp, cmsg ; offset of string with attributes.
                        mov    bl, 0f3h ; default attribute (not used when al=3).
                        mov    cx, 12   ; char number.
                        mov    dl, 2   ; col.
                        mov    dh, 3   ; row.
                        mov    ah, 13h  ; function.
                        mov    al, 3   ; sub-function.
                        int    10h
                        ; show current cursor position:
                        mov    al, '<'
                        mov    ah, 0eh
                        int    10h
                        ; wait for any key press....
                        mov    ah, 0
                        int    16h
                        ret  ; return control to the operating system.
                        msg db 'hello world!'
                        cmsg   db 'h', 0cfh, 'e', 8bh, 'l', 0f0h, 'l', 5fh, 'o', 3ch, ' ', 0e0h
                            db 'w', 0b3h, 'o', 2eh, 'r', 0cah, 'l', 1ah, 'd', 0ach, '!', 2fh
```

----------end----------

Program (2)

```
; The easiest way to print out "Hello, World!"
name "hi"
```

Name: Khan Arshad Abdulla **Date – 26/03/2022**
Roll No: 20CO24

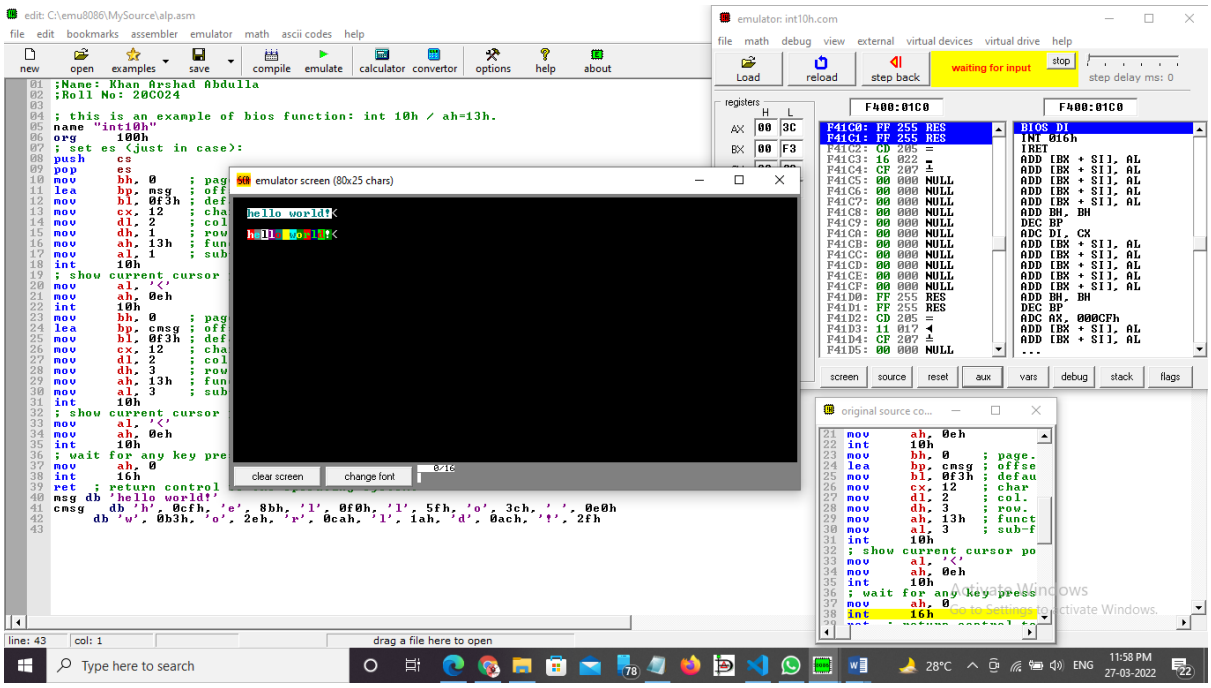
```
org 100h
jmp start      ; jump over data declaration
msg:   db      "Hello, World!", 0Dh,0Ah, 24h
start: mov     dx, msg  ; load offset of msg into dx.
       mov     ah, 09h  ; print function is 9.
       int     21h      ; do it!
           ret ; return to operating system.
```

Procedure –

1. **Launch emu8086 IDE** from menu.
2. **Edit** your program , save as file_name.asm
3. **Compile** your program to check for syntax errors, rectify if any error is present. Save and recompile your program.
4. **Run** to observe output of your program.

Output –

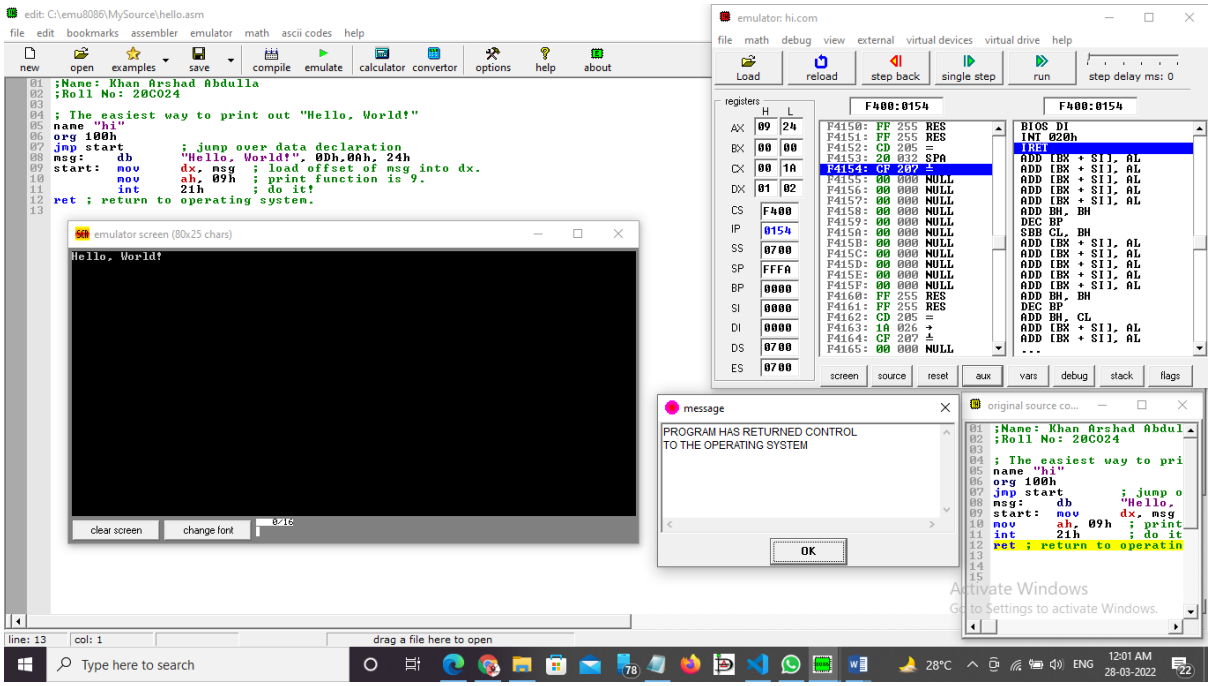
1. Program(a)



2. Program(b)

Name: Khan Arshad Abdulla **Date – 26/03/2022**

Roll No: 20CO24



Conclusion – To display a string “HELLO WORLD!” using INT 10H & INT 21 H.

----------end ----------