Lab: 01

Department of Computer Science

Iqra University Islamabad

Computer Organization and Assembly Language

Maqsood Ahmed

ID: 38186

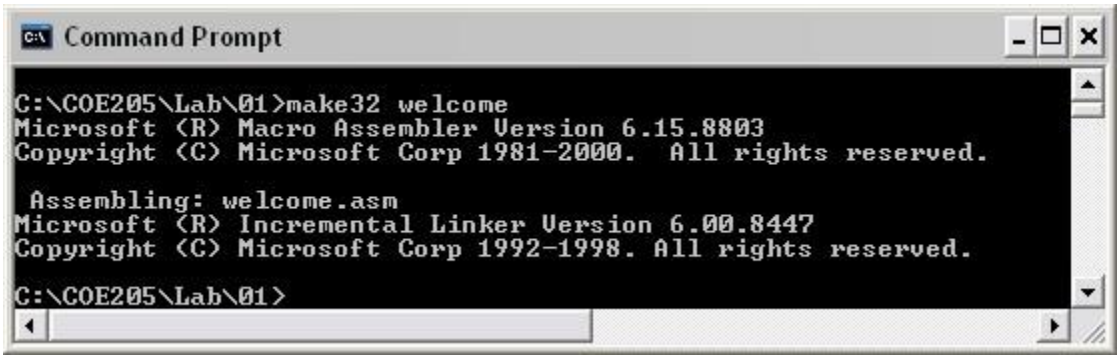
1.3 Displaying a Welcome Statement

The first assembly-language program that you will assemble, link, and run is *welcome.asm*. This program displays a welcome statement on the screen and terminates. You can open this program using any text editor. We will not go over the details of this program in this first lab. You will understand these details in future labs.

```
TITLE Displaying a Welcoming Message (welcome.asm)

.686
.MODEL flat, stdcall
.STACK

INCLUDE Irvine32.inc

.data

CR EQU      0Dh        ; carriage return
LF EQU      0Ah        ; line feed
 welcome BYTE "Welcome to COE 205",CR,LF
        BYTE "Computer Organization and Assembly Language",CR,LF
        BYTE "Enjoy this course and its lab",CR,LF,0

.code main
PROC
; Clear the screen call Clrscr  ; Call
    procedure Clrscr

; Write a null-terminated string to standard output lea edx,
    welcome ; load effective address of welcome into edx call
    WriteString       ; write string whose address is in edx
    exit
main ENDP END
main
```

1.3.1 Lab Work: Assembling and Linking a Program

Open a Command Prompt and type the following command. This command will assemble and link the *welcome.asm* program. **make32 welcome**



1.3.2 Lab Work: Running a Program

The **make32** command will generate is the *welcome.exe* executable file. You can now run the *welcome.exe* program by simply typing **welcome** at the command prompt. Watch the output of this program and write it down in the following box:

Console Output:

Welcome to COE 205 Computer Organization and Assembly Language Enjoy this course and its lab

The End