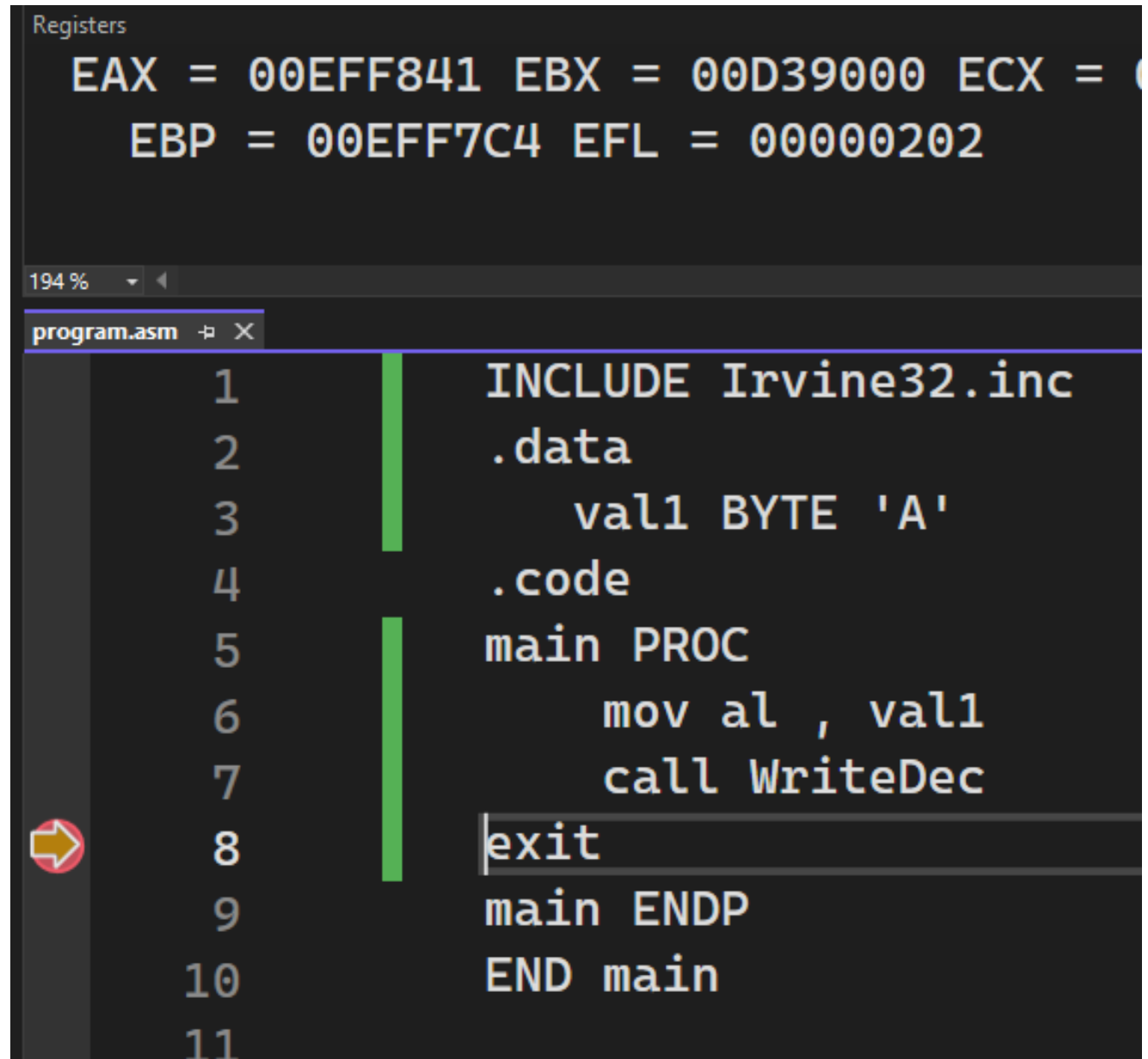


LAB 03

Q1



The image shows a debugger window with two panes. The top pane, titled 'Registers', displays the following values: EAX = 00EFF841, EBX = 00D39000, ECX = 00000000, EBP = 00EFF7C4, and EFL = 00000202. The bottom pane shows the assembly code for 'program.asm' at 194% zoom. The code is as follows:

```
1  INCLUDE Irvine32.inc
2  .data
3      val1 BYTE 'A'
4  .code
5  main PROC
6      mov al, val1
7      call WriteDec
8  exit
9  main ENDP
10 END main
11
```

A yellow arrow icon is visible on the left side of the assembly pane, pointing to line 8.

Q2

```
INCLUDE Irvine32.inc
.data
    num1 SBYTE -128
    num2 BYTE 255
    temp BYTE ?
.code
main PROC
exit
main ENDP
END main
```

Q3

```
INCLUDE Irvine32.inc
.data
    greeting BYTE "Good Night" , 0
.code
main PROC
exit
main ENDP
END main
```

Q4

```
INCLUDE Irvine32.inc
.data
    zeros BYTE 10 DUP(0)
    words BYTE 5 DUP(?)
.code
main PROC
exit
main ENDP
END main
```

Q5

Registers

EAX = 012FFA30 EBX = 00000041 ECX = 0
EBP = 012FF9E8 EFL = 00000246

194 %

program.asm

```
1  INCLUDE Irvine32.inc
2  .data
3  .code
4  main PROC
5      mov ebx, 0
6      mov bx, 65
7  exit
8  main ENDP
9  END main
10
```

Registers

EAX = 006AFB90 EBX = 00000041 ECX = 00
EBP = 006AFB48 EFL = 00000246

194 %

program.asm

```
1  INCLUDE Irvine32.inc
2  .data
3  .code
4  main PROC
5      mov ebx, 0
6      mov bx, 41h
7  exit
8  main ENDP
9  END main
10
```

Registers

EAX = 007BF9AC EBX = 00000041 ECX = 00000000
EDX = 00000000 EIP = 00401000
EBP = 007BF964 EFL = 00000246

194 %

program.asm

```
1  INCLUDE Irvine32.inc
2  .data
3  .code
4  main PROC
5      mov ebx, 0
6      mov bx, 01000001b
7  exit
8  main ENDP
9  END main
10
```

Registers

EAX = 00CFFEC4 EBX = 00000041 ECX = 00000000
EDX = 00000000 EIP = 00401000
EBP = 00CFFE7C EFL = 00000246

194 %

program.asm

```
1  INCLUDE Irvine32.inc
2  .data
3  .code
4  main PROC
5      mov ebx, 0
6      mov bx, 'A'
7  exit
8  main ENDP
9  END main
10
```

Q6

Registers

EAX = 00000017 EBX = 00957000 ECX = 00E
EBP = 007CFE00 EFL = 00000206

194 %

program.asm

```
1      INCLUDE Irvine32.inc
2      .data
3      .code
4      main PROC
5          mov eax , 0
6          mov ax , 10
7          add ax , 20
8          sub ax, 5
9          sub ax, 2
10     exit
11     main ENDP
12     END main
```

Q7

```
INCLUDE Irvine32.inc
```

```
.data
```

```
.code
```

```
main PROC
```

```
    mov eax,10000h
```

```
    add eax,40000h
```

```
    sub eax,20000h
```

```
    call DumpRegs
```

```
exit
```

```
main ENDP
```

```
END main
```

Q8

```
.data
str1    BYTE "Computer",0
str2    BYTE "Science",0

msg1    BYTE "Before copy: ",0
msg2    BYTE "After copy : ",0
nl       BYTE 13,10,0
```

```
.code
main PROC
    mov edx, OFFSET msg1
    call WriteString
    mov edx, OFFSET str2
    call WriteString
    mov edx, OFFSET nl
    call WriteString

    mov esi, OFFSET str1
    mov edi, OFFSET str2
    mov ecx, LENGTHOF str1
    cld
    rep movsb
```

```
    mov edx, OFFSET msg2
    call WriteString
    mov edx, OFFSET str2
    call WriteString
    mov edx, OFFSET nl
    call WriteString
```

Microsoft Visual Studio Debug Console

Before copy: Science
After copy : Computer

E:\SetUp Project\Debug\SetUp Project.exe (process 126...)
To automatically close the console when debugging stops,
press any key to close this window . . .