

Assignment 5 (180 points)

A. Questions

1. Fill the blanks for the contents of the designated registers after manual execution of line of code.

```
.code
main PROC
    mov     EAX, 01FF5678h
    mov     EBX, 0FFFFFFFh
    mov     ECX, 11223344h
    mov     EDX, 0AABBCCDDh
    mov     BX, 0A69Bh      ; EBX= ( ) 1
    movzx   EDX, BL        ; EDX= ( ) 2
    movzx   EAX, BX        ; EAX= ( ) 3
    movzx   CX, BL         ; ECX= ( ) 4
    mov     BX, 0A69Bh     ; EBX= ( ) 5
    movsx   EAX, BX        ; EAX= ( ) 6
    movsx   EDX, BL        ; EDX= ( ) 7
    mov     BL, 70         ; EBX= ( ) 8
    movsx   CX, BL         ; ECX= ( ) 9
    mov     EAX, 12345678h
    mov     EDX, 11111111h
    mov     AL, 143        ; EAX= ( ) 10
    cbw                    ; EAX= ( ) 11
    cwde                   ; EAX= ( ) 12
    cwd                    ; EDX= ( ) 13
    cdq                    ; EDX= ( ) 14
    exit
main ENDP
END main
```

2(a). Fill the blanks for the contents of the designated registers after manual execution of each line of the code.

Memory	Code Part
	.data
0x401000	Value1 DWORD 0FFFFFFFFh
	Data1 WORD 1FFh
	Value2 DWORD ?
	Data2 BYTE 120
	Value3 DWORD ?
0x401020	.code
	main PROC
	mov EAX, 01FF5678h ; EAX= () 15
	mov EBX, 123456FFh
	mov AX, Data1 ; EAX= () 16
	mov BL, Data2 ; EBX= () 17
	mov AL, 100 ; EAX= () 18
	mov BL, -100 ; EBX= () 19
	mov AX, 1023 ; EAX= () 20
	mov BX, -1023 ; EBX= () 21
	movsx AX, BL ; EAX= () 22
	mov Value2, EAX
	mov EAX, 22334567h
	mov EBX, 11111111h
	mov EDX, 0AAAABBBBh
	mov AL, 200 ; EAX= () 23
	mov BX, 2047 ; EBX= () 24
	movsx AX,AL ; EAX= () 25
	movsx EBX,BX ; EBX= () 26
	mov Value3, EAX
	cwde ; EAX= () 27
	; EDX= () 28
	cdq ; EAX= () 29
	; EDX= () 30
	exit
	main ENDP
	END main

2(b). After the execution of the entire code, fill out the data memory section

0x401000	FFFFFFFF
0x401004	() 31
0x401008	() 32
0x40100C	() 33
0x401010	00000000

B. Score Distribution and Scoring Rubrics - Total points - 180

- #1. 14 blanks - max 5 points for each blank
- #2(a). 16 blanks - max 5 points for each blank
- #2(b). 3 blanks - max 10 points for each blank

	#1 and #2(a) (blank numbers. 1 - 30)	#2(b) (blank numbers: 31 - 33)
10 pts		Correct contents <u>with</u> sufficient manual work displayed
5 pts	Correct content <u>with</u> manual work displayed	Correct contents <u>without</u> sufficient manual work displayed
2 pts	Correct content <u>without</u> manual work displayed	Incorrect contents <u>with</u> sufficient manual work displayed
1 pt	Incorrect content <u>with</u> manual work displayed	
0 pt	None of the above	None of the above

C. Submission Instruction: work on a paper or on word processing software or drawing application, and send an electronic copy (file) of your work via email or Slack. Name your file as follows:
416Assign5_LastName.xxx (xxx for the file type of dcox, pdf, png, etc)

D. Submission Due: by 8:00pm Wednesday November 3, 2021

E. Extension of Submission: Usually granted upon request.