Department of Computer Engineering
Digital Hardware Systems
CpE 3104 - Microprocessors

Laboratory Report

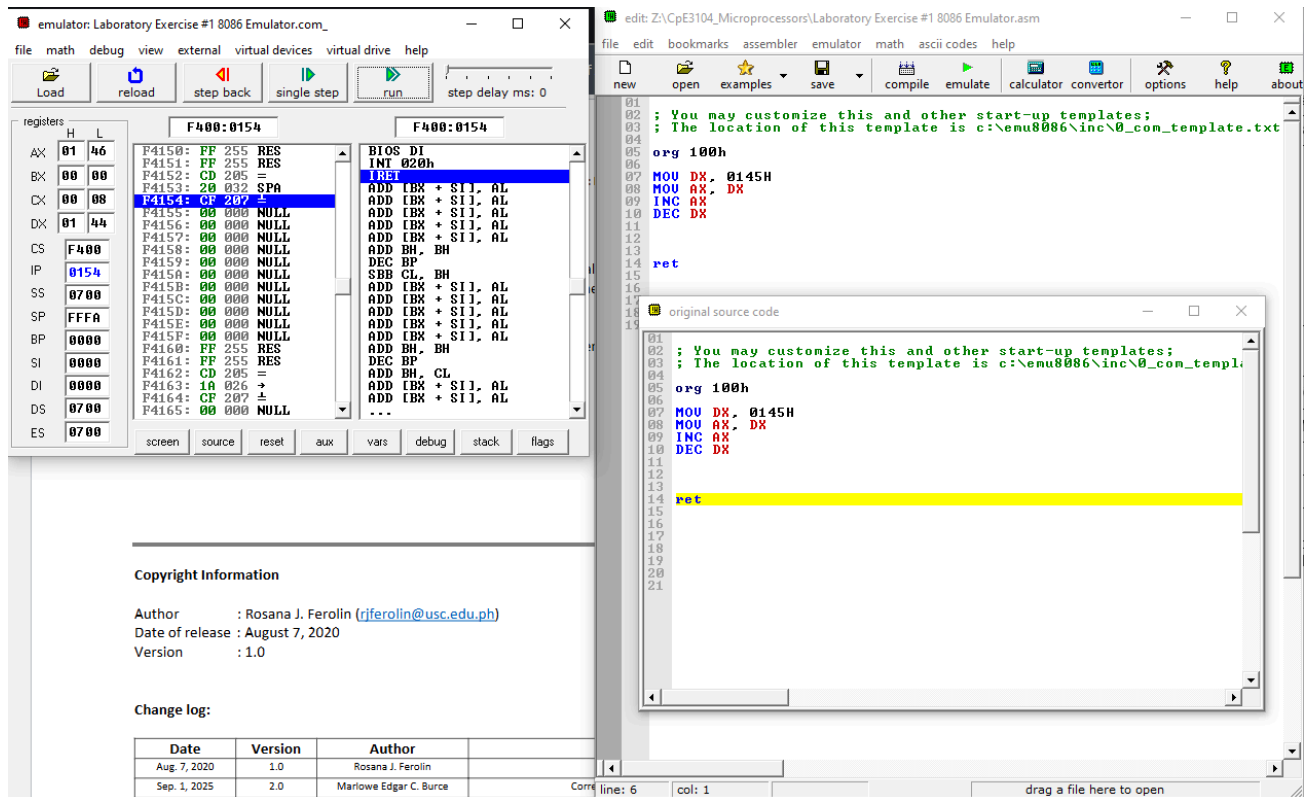| Laboratory Exercise No.:	1	Date Performed:	1 September 2025
Laboratory Exercise Title:	Using the EMU8086 Integrated Development Environment		
Name of Student:	Chrys Sean Sevilla	**Document Version:**	1.0

Activity #1

ORG 100H

MOV DX, 0145H

MOV AX, DX

INC AX

DEC DX

Instruction	Register value after the instruction is executed
MOV DX, 0145H	**DX = 0145H**
MOV AX, DX	**AX = 0145H**
INC AX	**AX = 0146H**
DEC DX	**DX = 0144H**

<Write the calculations and solutions performed in Activity #1. Include sources codes and schematic diagrams if required in the exercise.>
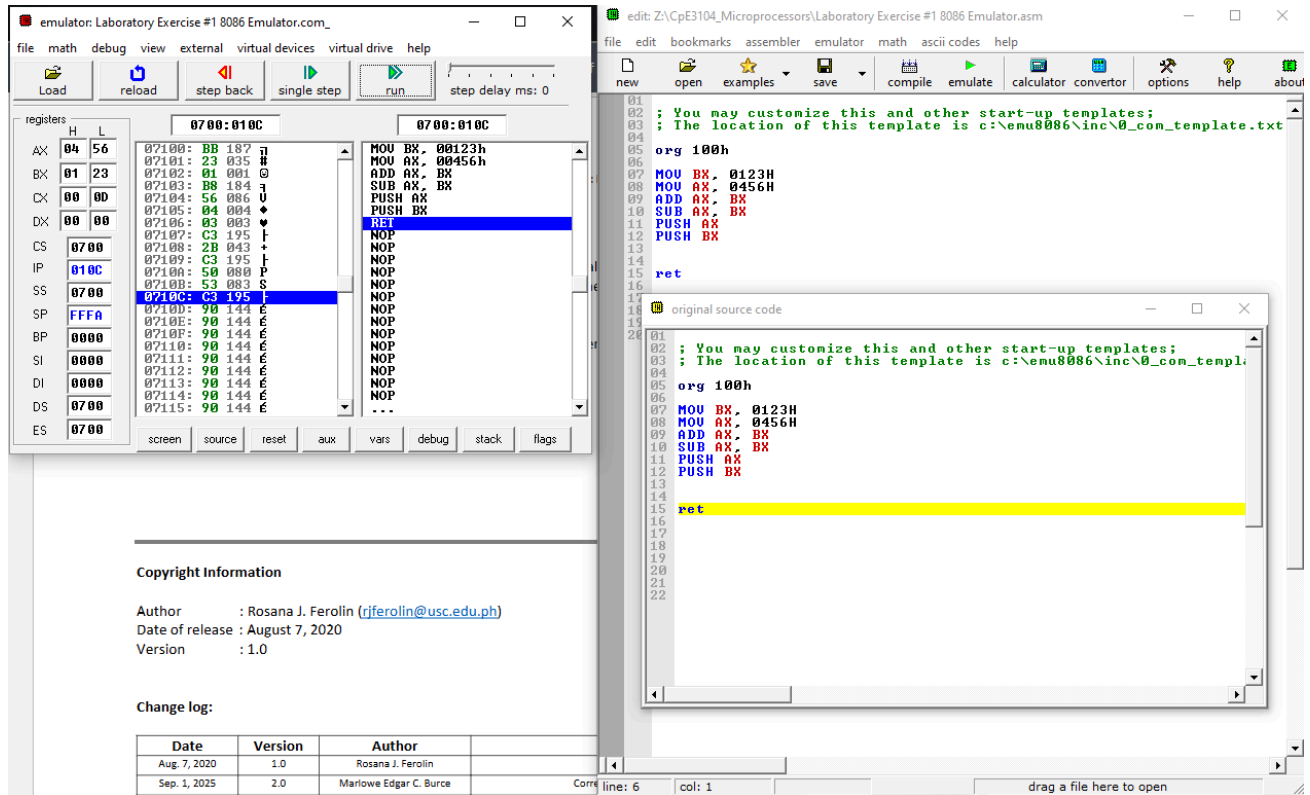
Activity #2

ORG 100H

MOV BX, 0123H

MOV AX, 0456H

ADD AX, BX

SUB AX, BX

PUSH AX

PUSH BX

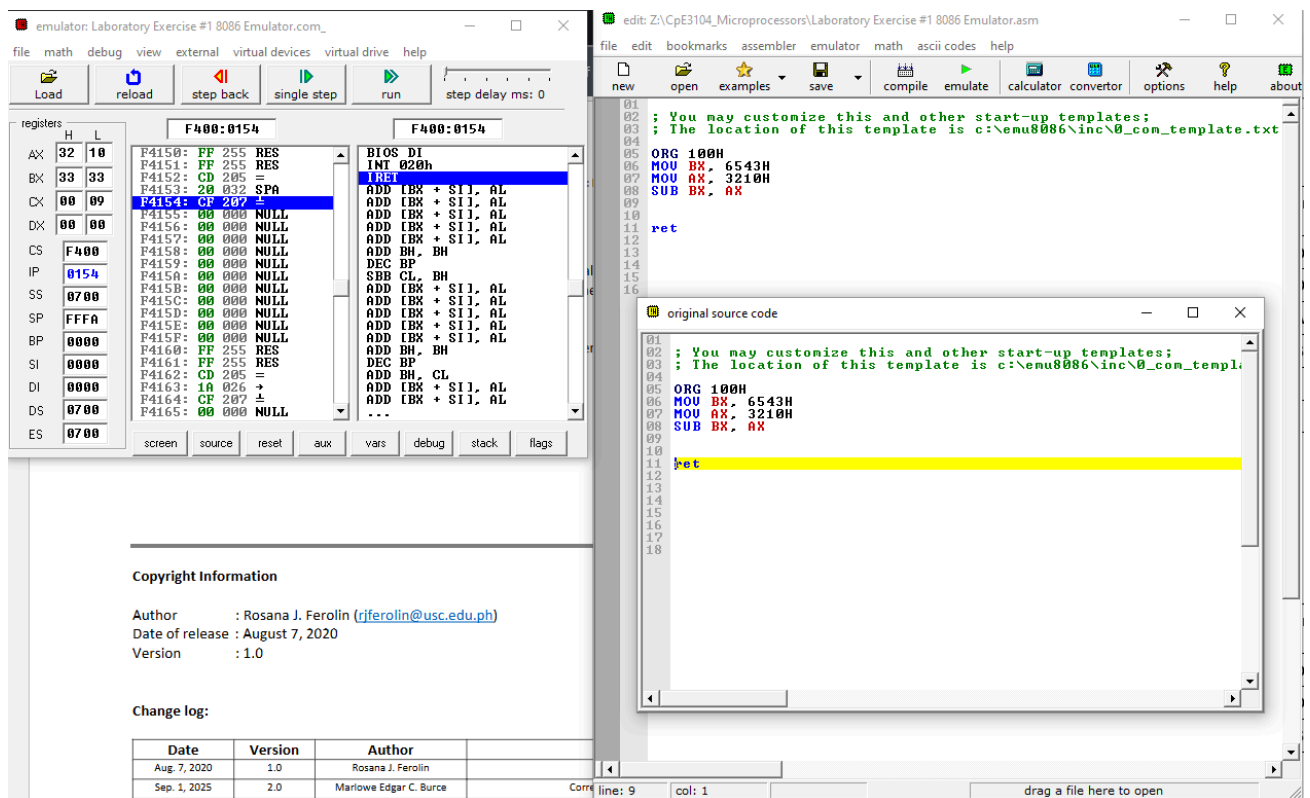| Instruction	Register value after the instruction is executed
MOV BX, 0123H	**BX = 0123H**
MOV AX, 0456H	**AX = 0456H**
ADD AX, BX	**AX = 0579H**
SUB AX, BX	**AX = 0456H**
PUSH AX	**SP = FFFCH**
PUSH BX	**SP = FFFAH**

ORG 100H

MOV BX, 6543H

MOV AX, 3210H

SUB BX, AX

Instruction	Register value after the instruction is executed
MOV BX, 6543H	**BX = 6543H**
MOV AX, 3210H	**AX = 3210H**
SUB BX, AX	**AX = 333H**

References

<Write the references you have used if any. References can be a textbook, web article (as long as reliable) and journals.>