CSC 264 Fall, 2025 Unit 04 Name: ______________________________

Unit 04_010 – Increment

Video Length 7:00

1. What is the command to increment a quad by 1?

2. What is the command to decrement a quad by 1?

3. Can inrement and decrement commands be used to increment memory directly without referencing a register?

Unit 04_020 – RIP

Video Length 8:45

4. Is RIP a general purpose register?

5. What does the RIP contain? ____

6. What does the debugger mean when it say " _start+8

7. Why did I take out the _exit label in the first part of the video?

Unit 04_030 – jmp

Video Length 6:00

8. What does the jmp command do?

9. It is possible to jump a certain number of bytes. Why is it generally preferable to jump to a label instead of specifying the bytes?

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Unit 04_040 – eflags

Video Length

10. Why doesn’t the eflags register start with "R"?

11. When are flags set?

12. What does it mean to "set" a flag?

13. What is the ZF flag?

14. What types of instructions set the flags

15. Does the mov command set the ZF flag?

16. Does the xor command set the ZF flag?

17. Does the add command set the ZF flag?

18. It seems like the instruction to add 0 to a number is pointless. Why is it done? Explain how the "addq $0 trick" works.

Unit 04_050 – Conditional Jumps

Video Length 17:00

19. What does the "jz" command do?

20. What does the "jnz" command do?

21. In the video, I said that it is easier to create the loop with decrement than it would be to increment. Explain why that is the case? Try working out how the loop would work if we counted up. Would it be more complicated or simpler?

If you have any lingering questions or problems, please write them here or see me.