CS210 Fall 2023: PS2B BONUS

Instructions

THESE ARE BONUS QUESTIONS

For all the questions, we encourage you to login into the provided UNIX environment and explore your answers. For some questions, you must use the UNIX environment to answer them.

All pages must have your name and id written on it. Unidentified pages will not be graded.

There is a total of 2 questions, for a total of 3 points.

First Name: _____ Last Name: _____

BU ID: _____

First Name: _____ Last Name: _____ BU ID: _____

Bonus 1

1. (1 point) **On q4.gdb**

   (a) How many test cases does q4 have ?

   _____

   (b) (2 points) What values, in base 16 notation, does q4test.sh run 'popcnt' on ? Please state your answers on the lines provided, skip leading zeros, and do not prefix your answer. For example, if you think the value is '00000000000dead' in hex, then your answer would be 'dead'.

   _____

   _____

   _____

   (c) What should be the correct result for each test case ? Please state your answer as a comma-separated list of base 10, decimal values. You should skip leading zeros in your answer. For example, if you think there are two test cases where they result in the values 3 and 7, respectively, then your answer would be: '3, 7'.

   _____

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2. **On q5.gdb**

This question is about q5.gdb. Assume that 'rax=0xb00fdeadfadedeed', 'rbx=0xcafed00dacedead', 'rip=_start' and that memory has been initialized by your 'q5' gdb command. Answer the following, assuming that two instruction steps are executed. All numeric values should be given in hex, base 16, notation.

(a) What is the value of 'rax' ? Skip leading zeros and do not prefix your answer. For example, if you think the value is '00000000000dead' in hex, then your answer would be 'dead'.

_____

(b) What is the value of 'rbx' ? Skip leading zeros and do not prefix your answer. For example, if you think the value is '00000000000dead' in hex, then your answer would be 'dead'.

_____

(c) What is the value of 'rip' ? Skip leading zeros and do not prefix your answer. For example, if you think the value is '00000000000dead' in hex, then your answer would be 'dead'.

_____

(d) What are the byte values at the locations listed below ? Each answer should be a single two-digit hex value.

1. 'rip + 0' _____
2. 'rip + 1' _____
3. 'rip + 2' _____
4. 'rip + 3' _____
5. 'rip + 4' _____
6. 'rip + 5' _____
7. 'rip + 6' _____
8. 'rip + 7' _____