CS 211: Computer Architecture, Spring 2021
Programming Assignment 5: Bomblab (100 points)

Instructor: David Pham

Due: August 18, 2021 at 11:55pm.

1 Assignment Introduction

This assignment is designed to give you some experience with reading Assembly. You will be defusing a binary "bomb" by analyzing the given assembly and entering the correpct inputs to defuse the phases of the bomb.

2 Bomblab

In this assignment, you will be given a binary bomb. There will be 6 phases. Each phase will require a specific input(s) in order to defuse that phase and move on to the next phase. The bomb will be considered defused when all 6 phases have been defused. In order to defuse the bomb you will have to analyze the assembly code both before and during runtime. Before runtime you can use the following command to inspect the contents of the bomb.

objdump -d bomb

In order to inspect the bomb during runtime you will have to use the debugger. You can use the following command to run the debugger on the bomb.

gdb bomb

Use a combination of these tools and other commands to find the proper solution to the bomb.

You can run the bomb with a txt file as a parameter. Doing so will consecutively pass 1 line at a time from your text file to each consecutive phase of the bomb. Your textfile should be called:

`my_solution.txt`

Structure of your submission

Your submission for this assignment will only consist of your

`my_solution.txt`

which should contain the inputs that diffuse each phase of your bomb.

Submission

You have to e-submit the assignment using Sakai. Your submission should be a text file named

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my_solution.txt
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Do not include any other miscellaneous items in your submission such as the bomb, c file, or extra text files.

Grading Guidelines

Scoring

You will receive credit for each phase you defuse with a fully defused bomb receiving full credit. Vertification of your defusal will be checked by running your submission with the given bomb.

Grading Policy

The bomblab is to be completed individually and without the assistance of any other students or outside resources.

- **You should not see or use your friend's code either partially or fully. We will run state of the art plagiarism detectors. We will report everything caught by the tool to Office of Student Conduct**.

Be careful to follow all instructions. If something doesn't seem right, ask on discussion forum.