CSSE 132 – Introduction to Computer Systems
Rose-Hulman Institute of Technology
Computer Science and Software Engineering Department
Lab 4 – Question Sheet

For each of these questions, clearly explain your answers and write out any commands the questions request. Turn this document in at the end of the lab period.

Name:_____   Date of Lab:_____

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2.1.1 What code did you add to the Makefile? (The new rule.)

2.2.1 What happens when you give the program one argument, `AAA`?

What happens when you give it 100 `A`'s?

2.3.1 How many `A`'s were required to change the program's behavior (break it)?

2.4.1 Before you run the modified program:
How big did you make the buffer?

How many A's do you think you need to break it?

2.4.2 After you run the modified program:
How many A's were needed to break it?

Does this surprise you? Why or why not?

2.5.1 What happens after you append the alternate value (how does the program's output change)? Explain why you think it happened.

2.5.2 What function executes even though it was not explicitly called?

2.6.1 What happened right before the unexpected function started executing?

2.6.2 What do you think caused the jump into the unexpected function?

2.6.3 Explain how you used GDB to make an educated guess about what happened.

2.7.1 What did you change in `copyIntoBuffer` to prevent "over-copying"? (Show the changes below)

```
void
copyIntoBuffer(char* src, char* dest)
{

    int i=0;

    while(src[i] != '\0') {

        dest[i] = src[i];

        i++;

    }

}
```

2.7.2 After your changes to `copyIntoBuffer`, can you make the program crash? Explain how you did, or explain why you think you can't.

Don't forget to commit all your changed code to SVN. Ensure your names are on the files you change, and if you create any new code files, make sure to `svn add` them. Do *NOT* commit your executable files for part1 or part2.