CSSE 132 – Introduction to Systems Programming
Rose-Hulman Institute of Technology

Exam 1 Practice Coding Part

Name (Print):_____   RHIT Username:_____

This part of the two-part exam is **closed book**, but you are allowed to use only these acceptable sources:

- Your computer
- Your assignments and labs submitted in your individual repository for this term
- The CSSE 132 course website and things directly linked from it

You are not allowed to use:

- Other Internet resources, instant messaging.

- Your smartphone, or other communication means.

- Any modern integrated development environment (IDE), like *VSCode*, *Atom*, and etc.

Using these resources is considered academic dishonesty and will result in a penalty grade.

Your tasks for this coding part are described on the back of this page.

IMPORTANT: When you are finished with this part of the exam:

1. Submit any files you created or modified to GradeScope.
2. Read and sign this paper below.
3. Give this paper to your instructor.

I attest that all of my code for this exam is submitted and I have not received help on this exam from any source other than the acceptable sources listed above.

Your Signature:_____   Date:_____

> **IMPORTANT: Using any functions that have not been explicitly taught in this class will result in a zero grade for the involved part(s).**

First: Type `git pull` in your Git repo to fetch the exam code. Look for files in the `exam1practice` directory.

Problem 1 (6 pts) In your repository, change to the `exam1practice/problem1` directory. Then issue this command:

`head -n 18 nappy/bawdy/data | tail -n 9 | head -n 1`

Write the output:

Change to the `exam1practice/problem1` directory again, and go in to `keelhaul`, then change to the `selfish` directory.

Write a *command-line expression* that, when run in the `selfish` directory, will print only the 10-th line of the `data` file.

Hint: this command-line expression should print out
`25025`

Your command-line expression:

Problem 2 (4 pts) Go to the `problem2 directory`. Check in the `numbers.txt` file for the only line that begins with 1154 (*not the 1154-th line*). Write the entire line in the space below.

Write the result:

Problem 3 (45 pts) On your Linux, go to the `problem3` directory.

- Complete the ARM assembly functions in `problems.s`
  Run `make` to compile and run `make run` to run the test.
- Complete the C functions in `problems.c`
  Run `make` to compile and run `./test` to run the test.