School of Computer Science
University of Guelph

CIS*3490 The Analysis and Design of Algorithms

Winter 2017
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Assignment 3 Guide

You can develop your programs using any C system, as long as your programs can be correctly executed on the Linux system in SOCS.

You are allowed to use standard library functions. Your programs should be submitted as a tar file containing files like

readme.txt, main.c, P11.c, P12.c, P21.c, P22.c, P23.c, makefile.

Any compilation error or warning will result in a mark deduction. There will be some marks allocated for documentation.

Each file should have a comment at the beginning containing your name, id, date, and the assignment name.

The readme file should contain the following:

- Name, id and assignment number
- A brief description of how to run each program.
- Comparison and analysis for Q2.4, if you choose to do it.

Each function should have a brief comment describing its purpose. Also, any section of code where it is not easily apparent what the code does should have a short comment.

C function `ftime()` can be used to get the system time usage.

Hints for individual questions:

1.1 If you choose to read strings in `data_4.txt` as integers, you may use `sprintf()` to convert the integers into character strings.

1.2 You may use a double *presorting* method: sort digits of each string into its *signature*, and then sort the signatures. Strings in the same anagram set stay together in the sorting result.

2.1, 2.2, 2.3 Follow the algorithms in the textbook.