Algorithms & Data Structures: Lab 10

week of 10th December 2018

1 Setup

1.1 Saving your work from last week

By now you should be familiar with the operations needed to save your work. Make sure you commit your work to version control often, and always have a backup copy, ideally remotely (for example in your own account on the department's gitlab installation.)

1.2 No new code this week

As this week's lab is devoted to finishing off all the outstanding pieces of work, there is no new material (other than this labsheet itself) to be pulled. If you do nevertheless pull from gitlab, this labsheet will be in the `10/` directory alongside the existing directories.

2 Module evaluation and feedback

At this point in the term, you have the opportunity to leave feedback on this module through the anonymous module evaluation process. A link to the survey is available on the main learn.gold page for this module. The feedback from this process is considered by Department management and by the Department's Learning & Teaching Committee, which try to improve our teaching practices across the board. Please complete your module evaluation surveys for all your modules, including this one, by the end of this term.

3 Assessed submissions

The remaining pieces of work this term all have a deadline of **16:00** on **Friday 14th December**; no extensions are possible.

A reminder: if you have missed any assessments this term for reasons which are valid extenuating circumstances (*e.g.* due to hospitalisation or bereavement), you can be excused from those assessments on the condition that you have provided adequate evidence of the circumstances to the Student Office in 25 St James (or by e-mail to computing@gold.ac.uk). If you believe that you have extenuation for any of this term's assignments, please would you let me know by e-mail so that I can check with the Student Office and adjust my records of your marks?

3.1 Hash tables

The submission area for hash tables, based on the sheet for lab 08, is open. A very good grade is awarded for an implementation of the required methods `insert`, `find` and `loadFactor` with the specified collision

resolution scheme; an outstanding grade requires in addition a robust implementation of `delete` and handling the situation where the hash table becomes full. The deadline for submissions is **16:00** on **Friday 14th December**; as usual, you may submit more than once, and your highest score is retained.

3.2 String matching

The submission area for string matching, based on the sheet for lab 09, is open. A very good grade is awarded for a correct implementation of naïve string matching and correctly counting character memory accesses in that algorithm; an outstanding grade requires in addition implementations of Rabin-Karp (with the specified rolling hash function) and Knuth-Morris-Pratt matching exactly as specified in lectures, along with correct counting of memory operations for those algorithms. The deadline for submissions is **16:00** on **Friday 14th December**; as usual, you may submit more than once, and your highest score is retained.

3.3 Binary trees quiz

The binary trees quiz closes at **16:00** on **Friday 14th December**.

4 Vacation

It is important that you get a break over the vacation: please do rest and enjoy yourselves. A little time spent reading, thinking, practicing or consolidating this term's work (by finishing or redoing lab implementations, reading the given sections of the textbooks and attempting exercises, or reviewing your quiz attempts) will stand you in good stead. Lectures restart at **10:00** (note earlier time) on 7th January 2019!