Department of Computer Science
University of Massachusetts Lowell
91.102 Computing II
Fall 2015

Lab 10: valgrind

In this lab, you will learn to detect memory leaks and other bad memory operations using the tool valgrind. The files for this lab may be found under:

http://www.cs.uml.edu/~kseethar/Fall2015/91.102/labs/lab10/

There are a number of tools available to detect memory leaks and other run time issues. Valgrind is a popular tool in the Linux environment. It is also free!

Some links for valgrind:
https://en.wikipedia.org/wiki/Valgrind
http://valgrind.org/docs/manual/quick-start.html
http://valgrind.org/docs/manual/manual.html

The following will be detected:

- compile using -g flag
- valgrind --tool=memcheck --leak-check=full –show-reachable=yes <executable>
- you may need to comment out some calls to f? Functions in main to get through all the test cases.
- Use valgrind to detect the following in the supplied sample code:
    - Using uninitialized memory
    - Memory leak
    - Using memory after it has been freed
    - Using memory beyond end of allocated blocks
    - Doubly freed memory
    - [happens when you start using both C and C++] Mixed use of malloc/new and free/delete . **Use g++ to compile for this task.**
- following source files will be used
    - main.c

Deliverables

a report of the observations

Extra Credit

do this on Windows