CS 300 In Class Valgrind Lab

Import the Valgrind Lab into Eclipse.

File | Import | SVN | Create a new repository location

URL: svn+ssh://zeus.cs.pacificu.edu/home/CS300Public/2014/SVNROOT_CS300_2014

Select project: CS300ValgrindLab

Team | Disconnect   to disconnect from the public SVN Repository

        SELECT: Also delete the SVN meta information from the file system

Team | Share   to put it in your own SVN Repository

The lab contains two C files, dynamicArrays.c and dynamicList.c, a Makefile and a data file, numbers.txt. You must find and fix memory errors in both files.

Use Valgrind to profile the code and see where some errors come from.

1) Build the project.

2)Run dynamicArrays from inside Eclipse. Very often if you have memory errors you will get no output on the console inside Eclipse.

3) Run dynamicArrays from the command line.
cd workspace/CS300ValgrindLab/bin
./dynamicArrays

4) Run dynamicArrays through valgrind at the command line
valgrind -v --leak-check=yes ./dynamicArrays
or
make valgrinda

5) Run dynamicArrays through valgrind in Eclipse
Right Click dynamicArrays | Profile as | Profile with Valgrind
►In the errors, look for lines of code in your source files (not in /libc-2.X.so)

6) Fix errors! Iterate! Memory errors may mask other memory errors!

7)Add a valgrind target to your StaticStack. Run valgrind. Show me the result of the first run.

8)Add a valgrind target to your DynamicStack. Run valgrind. Show me the result of the first run.

8) Use Valgrind to debug dynamicList as well. dynamicList may not crash, but does produce bad output!

For EACH fix you make, check your code into subversion documenting the fix. That is, you changed from what … to what.