**Notes about Valgrind:**

Valgrind: Extensively used for memory management and heap allocation issues.

Example: illegal memory access, forget to initialize variables, freeing heap memory many times, forget to free heap memory, etc. The tool displays the errors as HEAP SUMMARY and ERROR SUMMARY. In addition, details the error message with respect to the line number, the method, etc. Runs only on binary executables not on compiled files.

* ***Softwares and accesses:***

1. University Lab access link: [**http://www.uwb.edu/css/facilities/unix**](http://www.uwb.edu/css/facilities/unix)
2. Machine access: **uw1-320-lab.uwb.edu**
3. Putty: <http://www.putty.org/>
4. Valgrind can be downloaded on your personal machines directly from <http://valgrind.org/> if using your own Linux machine and in that case no need of putty also.

* ***Steps to run program:***

1. Open putty and enter “uw1-320-lab.uwb.edu” in Host Name and click on Open option.
2. Enter your net id username and password. If you get some warning message; click on Yes.
3. Write the c/cpp program.
4. Compile it:

g++ progname.cpp –g –o progname

1. Run it without valgrind:

./progname

1. Run it with Valgrind:

valgrind ./progname

1. To see more detailed issue in case of memory leak in HEAP SUMMARY:

valgrind --leak-check=full ./program

Note: Don’t forget –g option when compiling using g++ else line numbers would not be displayed in Valgrind output.

The three programs we discussed in class have been attached in separate folder. Please copy them into your drive and play around with the programs using the tool. Any problem, please let me know.