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CS 5959

Assignment 2

Less is a Unix program similar to more, but allows backward movement in a file as well as forward movement. In addition, less does not have to read the entire input file before starting, making it faster than text editors in terms of large input files. [1] I used less, version 436 standard build on cade.

When I run valgrind –leak-check=yes less [filename], there are several errors. These errors include two dozen invalid reads, several uses of uninitialized variables, and a dozen conditional jump or move depends on uninitialized values. There were a total of 105 errors from 77 contexts. Also, when I ran a test to search for a pattern, i.e. /test, it correctly highlighted the word(s) but said pattern was not found. It did this several times for several different inputs. Finally, after running valgrind –leak-check=full –show-reachable=yes less [filename], there were 45 blocks or 10,090 bytes of reachable code still left over.

I will say that when I just ran the less [filename] command I always got the output I expected. I successfully tested all of the normal commands such as next page, next line, previous line, etc. In addition, I used clang to compile and used the –fsanitize=undefined and received no errors. So, it appears to work correctly, but there seems to be many problems behind the scenes of the program.

[1] http://www.gnu.org/software/less