
GDB

DEALING WITH MINIX

- ▶ Minix is a bit of a mess to deal with
- ▶ Try to modify files on your machine, check for errors, compile if possible, and then add them back to Minix.
- ▶ Take snapshots whenever you get something working.

WHAT IS THE GNU DEBUGGER (GDB)?

- ▶ Most popular debugger for UNIX systems to debug C and C++ programs
- ▶ Allows you to see what is going on `inside' another program while it executes -- or what another program was doing at the moment it crashed.
- ▶ Lets you find and fix bugs in your code.

INSTALLATION

▶ Mac

- ▶ http://wiki.lazarus.freepascal.org/GDB_on_OS_X_Mavericks_or_newer_and_Xcode_5_or_newer

▶ Windows

- ▶ <http://stackoverflow.com/questions/1779247/how-to-add-gdb-to-cygwin>

HOW TO USE

- ▶ Compile your program with the -g flag to get the debugging information. Use GDB from the command line. (https://www.tutorialspoint.com/gnu_debugger/gdb_debugging_programs.htm)
- ▶ Common GDB commands:
 - ▶ https://www.tutorialspoint.com/gnu_debugger/gdb_commands.htm
- ▶ Step through code until you find where the crash occurs
- ▶ See what line the crash occurred in, what the variables were set to, etc. to be able to fix the errors

EXERCISE

- ▶ Install GDB on your computer
- ▶ Watch this video:
 - ▶ https://www.youtube.com/watch?v=sCtY--xRUyl&index=2&list=LLh1CVbhi8O4P5E2JT0a__KA
- ▶ Download the C++ program from the repo
- ▶ Compile it and you should get a core dump
- ▶ Explain why the core dump is happening, what gdb commands you used and how you debugged the program
- ▶ Submit a txt or pdf file with the above **(include your name)**

SOURCES

- ▶ https://www.tutorialspoint.com/gnu_debugger/what_is_gdb.htm
- ▶ https://en.wikipedia.org/wiki/GNU_Debugger
- ▶ <https://www.gnu.org/software/gdb/>
- ▶ https://www.tutorialspoint.com/gnu_debugger/gdb_debugging_example1.htm ★