CS 232: Intro to C and Unix

Lecture 7

Functions

Motivation: DRY (Don’t Repeat Yourself)

In C: Pass-by-value -> stack memory

Different from Java:

No overloading in C

Declaration and Definition of a function

GNU Debugger (GDB)

Gdb program – the run program

Help gdb will give help on a specific command, in this case gdb

Breakpoints

* Break file.c:line – set a breakpoint on a given line
* Break function – set a breakpoint at the beginning of a function
* Watch expression – breaks if the value of expression changes
* Info breakpoints – lists breakpoints
* Delete # - enable or disable (but not delete) a breakpoint
* Cond # condition – the breakpoint …
* Run – start the program from the beginning
* Step – execute a statement, will step into functions
* Next – execute a statement without stepping into functions
* Cont – continue executing the program
* Kill – stop the program

Viewing Information

* P expression – prints the value of the expression to the screen
* Display expression – prints the value of the expression at every break in execution where the expression is valid.
* Display – list all expressions in the display set
* Undisplay # - removes item # from display set
* List – lists the lines of code around the current point
  + List - : lists code prior to the previous listing
* Info stack – display the call stack