

Using GDB (GNU De-Bugger)

Compile your program with the debug flag: -g

```
g++ -g -o executableName sourceCodeName.cpp
```

Run the debugger:

gdb at the command line prompt

Within gdb:

`file executableName` – load your program to begin running in gdb

`run command line arguments` – start the program running, passing it command line arguments as appropriate

`quit` – Exit gdb

`bt` – At a break in the program (either because of an error, or a breakpoint installed), show the back-trace down the function call stack.

`break functionName` – insert a breakpoint (stopping point) at the start of a particular function

`break lineNumber` – insert a breakpoint (stopping point) at a particular line

`n` – execute the next line of code without tracing any subroutines that are called in that line

`s` – execute the next line of code, with tracing (stepping into) the subroutines that are called in that line

`info scope functionName` – show all variables that are visible to the function

`p variableName` (or `print variableName`) – show the current value of a variable