# Task 1: Programming Tools

1. * 1. Command run *g++ -g marks.cpp, gdb a.out*
     2. Compiled and run through gdb, used command *run.* Issue found: line 17 when arguments a = -2, b = 0 and breaks on line 18 (a/b).
     3. Command run *gdb a.out*
     4. Command run *where*

Text

Description automatically generated



Text

Description automatically generated with low confidence

Graphical user interface, text

Description automatically generated

* + 1. Command run *up*

Text

Description automatically generated

* + 1. Command run *print highest*
    2. The problem that was found is he variable highest was set to 0 and used in the division mark divided by 0.
    3. Commands run: *g++ -g -Og capture.cpp -o capture*
    4. Command run *valgrind –leak-check=yes ./capture*

Text

Description automatically generated

* + 1. 203
    2. 40 Bytes have definitely been lost.
    3. The error has occurred in line 3 where the *new* keyword has been used and this was called from line 9.
    4. 40 Bytes has been lost because memory was allocated for the int array but not deallocated.
    5. In capture() I’d add before the function scope ends *delete marks;* to deallocate the memory.