CPSC457 - PRINCIPLES OF OPERATING SYSTEMS

University of Calgary
Assignment 2

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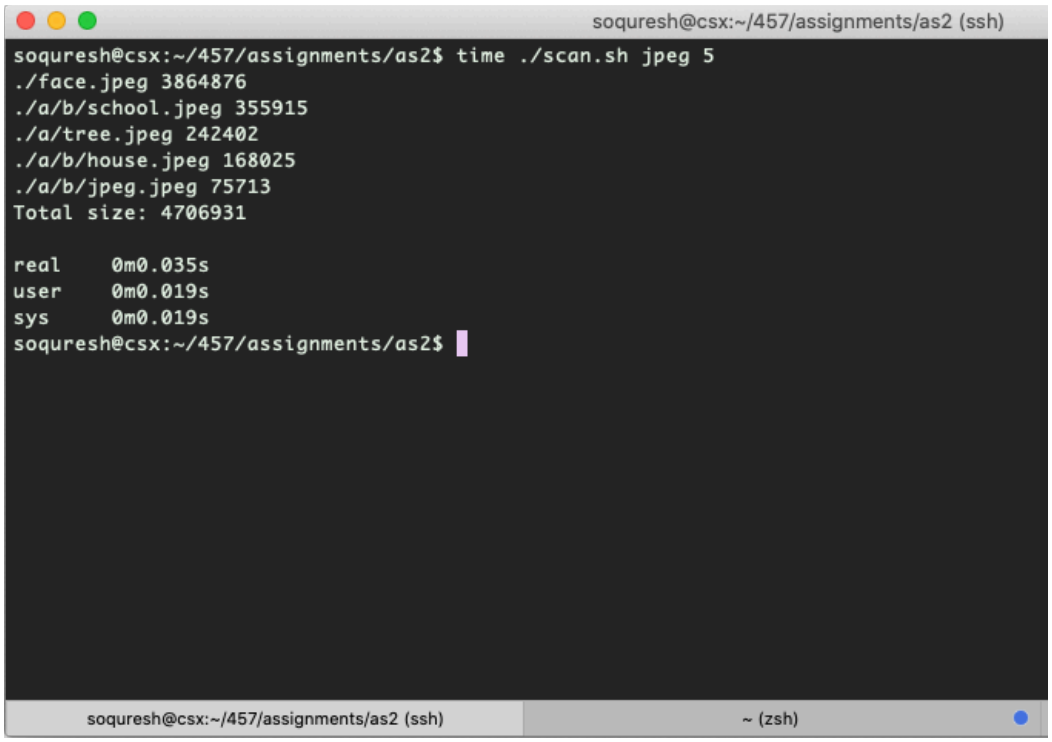
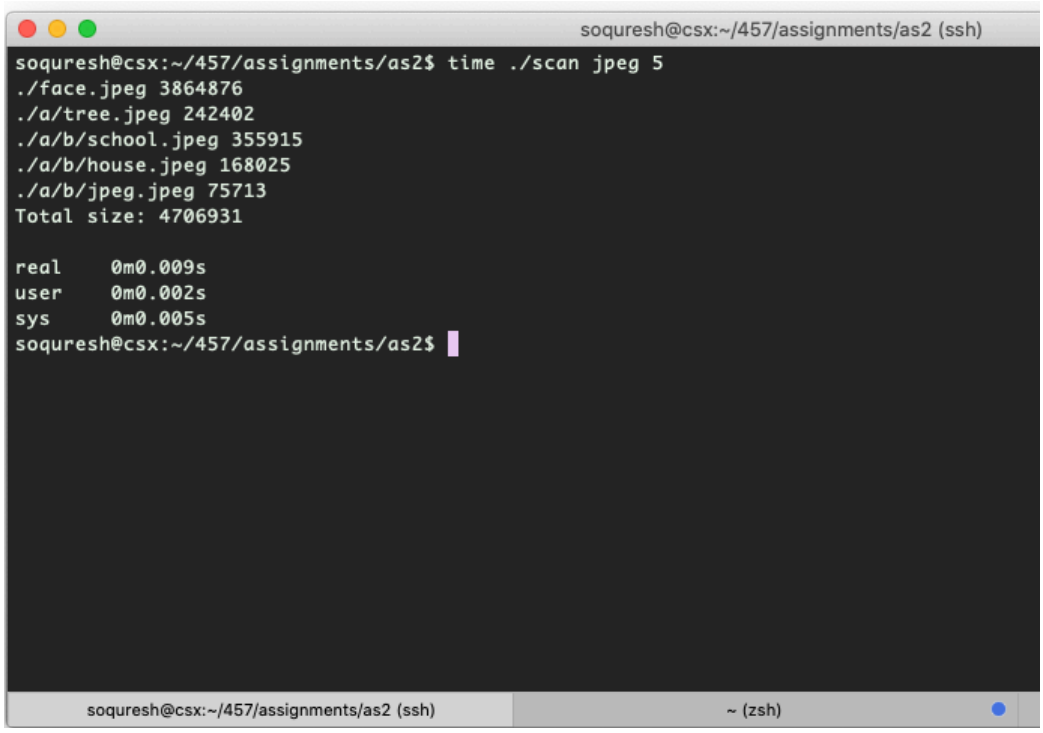
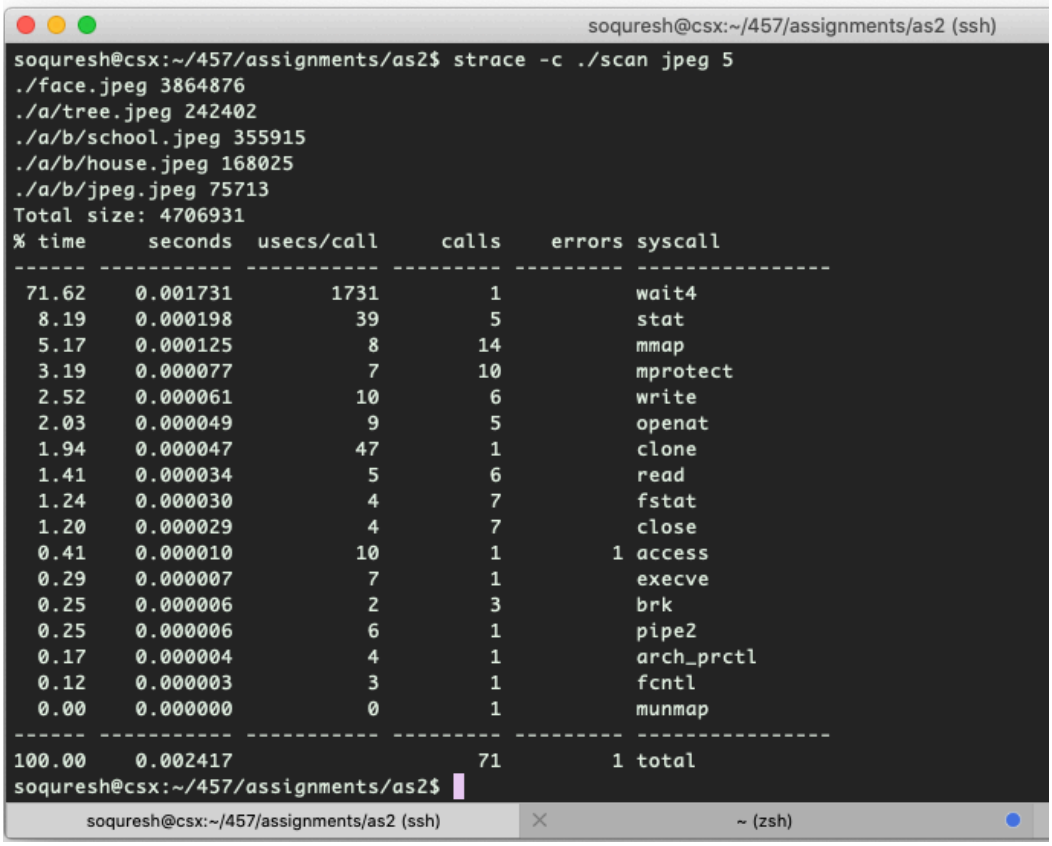
Q4 - Run "strace -c" and "time" on your bash script from Q1 and your C/C++ program from Q3 and compare the results. Include the output of the above commands in your report, and explain why the results are different.







Note: I tried to do ‘strace -c ./scan.sh jpeg 5’ very hard but I could not figure out how to strace shell scripts.

We can see from the outputs of time that the c++ program is much faster than the shell script. This is essentially due to the shell script requiring the use of 4 different processes, such as find, sort, head and awk. They all need to have their own separate memory allocations and due to this there is latency accessing data across, which gives more time for the shell script. In comparison, the c++ program is simply 1 program and does not require as many resources.