

CSC209 A3 REPORT

Initially, I expected that the running time would be decreased while the number of child processes is increased. Below are the test results:

num_child	time
1	87.8210
10	87.4731
15	87.6054
20	87.7102
30	87.6498

However the results surprises me because they 're unexpected too much. I think the problem results from my algorithm about the communication between parent and child process.

When each child process reads input files and counts sub_strings, it stores the results to an array. Next I code that such child process sends to the parent the data ONE by ONE through a loop of traversing the array. I believe this causes the pipe is pretty crowed provided the number of data and therefore slows down the running time. Furthermore this causes other child processes have to wait the parent to receive their data. So I will try to find more efficient way of communicating between parent and child process.