The performance metric that we measured was the total runtime of the program under varying time quanta. We found that a time quantum of 8 was the best. (The time quantum is defined as the number of instructions read before the process is timed out.) We are unsure why this is. Perhaps it has to do with the balance between the time it takes for context switching and the fact that if the CPUs run less, the other threads in the program can run more, generating more resources, or perhaps it is by chance.

We hypothesize that the average wait time for processes at time quantum 8 would be the least as well. The traps to I/O in the simulation are roughly 10% of the instructions, so roughly 80% of processes would not time out during that quantum. 80% was the number that in class, the professor claimed was optimal for process wait times.