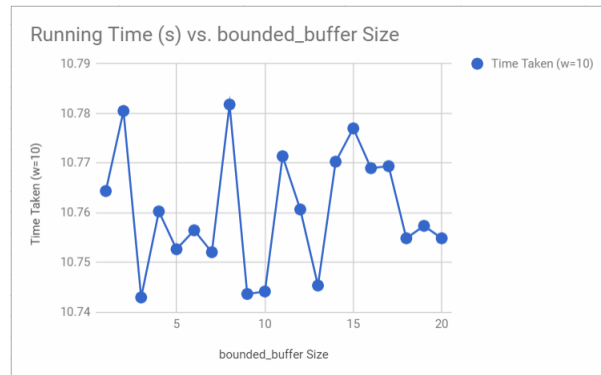


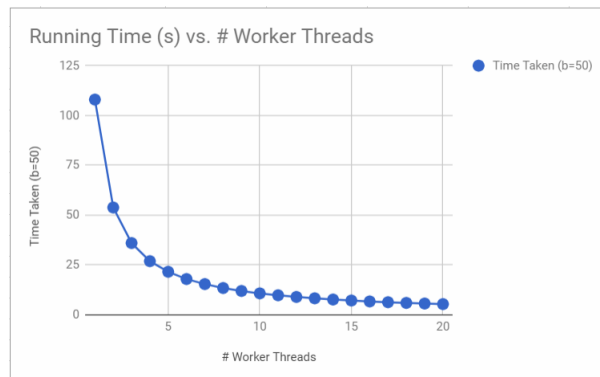
Programming Assignment 4 Report

March 23, 2018

1. Present a brief performance evaluation of your code. If there is a difference in performance from PA3, attempt to explain it. If the performance appears to have decreased, can it be justified as a necessary trade-off?
 - The performance between PA3 and PA4 is almost the same with variable buffer size, when number of requests and number of worker threads are the same. The bounded_buffer size does not have any effect on performance.
2. Make two graphs for the performance of your client program with varying numbers of worker threads and varying size of request buffer (i.e. different values of “w” and “b”) for $n = 10000$. Discuss how performance changes (or fails to change) with each of them, and offer explanations for both.



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- The average time taken with variable bounded_buffer sizes, 10 worker threads and 10,000 requests is 10.76048. The size of the buffer does not impact performance as it does not process any requests, it only makes sure there is no underflow and overflow.



- Performance changes as the number of worker threads increase. Each thread processes the requests, so time taken decreases as the number of worker threads increases.
3. Describe the platform that your data was gathered on and the operating system it was running. A simple description like “a Raspberry PI model B running Raspbian OS,” or “the CSE Linux server,” is sufficient. (Think of this as free points)
- The data was gathered on the CSE Linux server.