Programming Assignment 5

CSCE 313-503

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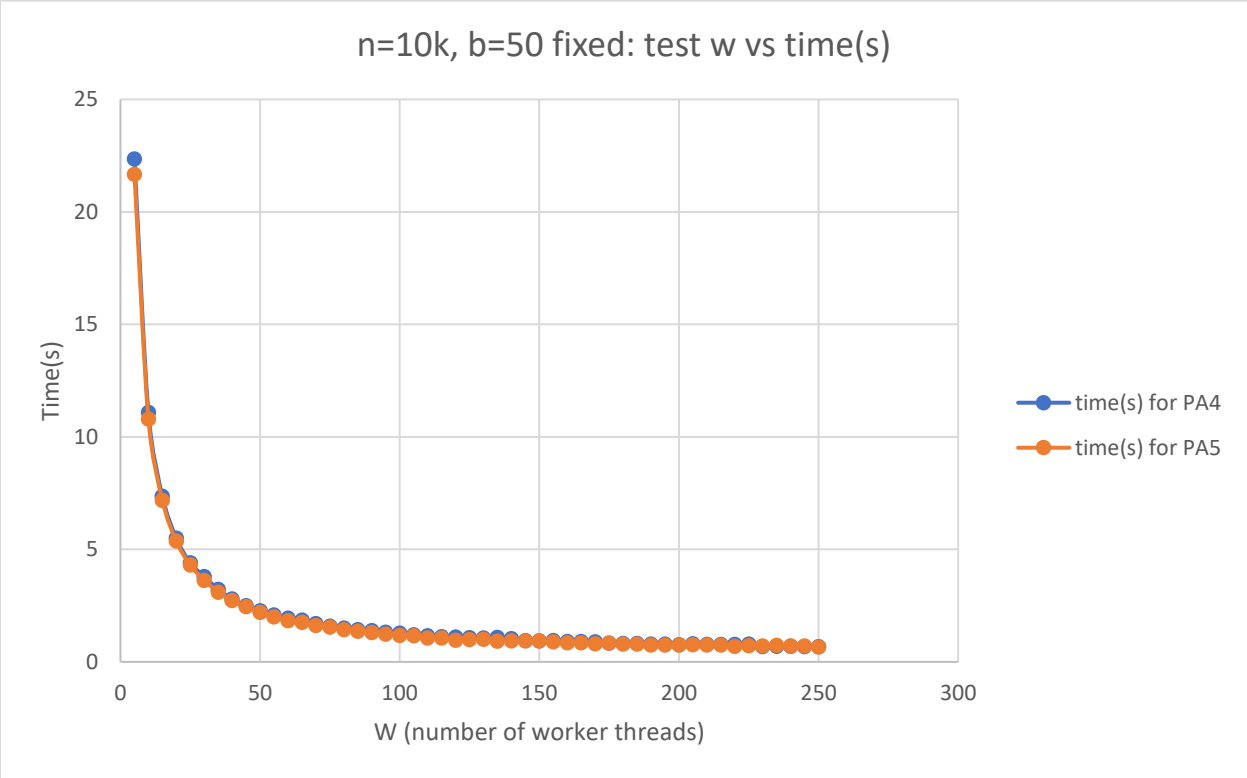
This table is the results collected from both PA4 and PA5 with the fixed number of requests(10000), fixed buffer size (5), and increasing number of worker threads. Both PA's were ran on Ubuntu installed on my personal computer:

test.sh results	with n=10k, b=50	
w	time(s) for PA4	time(s) for PA5
5	22.35698	21.67724
10	11.09	10.79319
15	7.3737	7.181765
20	5.504534	5.368874
25	4.403469	4.301861
30	3.790703	3.631179
35	3.231393	3.10386
40	2.798102	2.72734
45	2.499317	2.461547
50	2.278127	2.208755
55	2.0927	2.002561
60	1.944695	1.837908
65	1.857902	1.768593
70	1.699158	1.625
75	1.597411	1.549998
80	1.512779	1.437514
85	1.43268	1.366997
90	1.394121	1.302182
95	1.316433	1.235248
100	1.283623	1.178475
105	1.210263	1.165981
110	1.165291	1.067454
115	1.123334	1.065277
120	1.10245	0.972671
125	1.085334	0.996905
130	1.067159	1.009772
135	1.090014	0.928047
140	1.039637	0.935939
145	0.947392	0.943714
150	0.939459	0.936136
155	0.953246	0.899152
160	0.905213	0.852507
165	0.909927	0.846903
170	0.88845	0.814475
175	0.843838	0.834277
180	0.827398	0.789472

185	0.825066	0.792414
190	0.797439	0.757969
195	0.791124	0.752007
200	0.761222	0.751695
205	0.81448	0.765415
210	0.780194	0.754353
215	0.776044	0.755735
220	0.77972	0.696134
225	0.788753	0.718541
230	0.686699	0.708419
235	0.69843	0.732669
240	0.700885	0.70916
245	0.677965	0.708801
250	0.677008	0.660957



The graph comparing results of PA4 and PA5

For the graph above, it's hard to tell that there is any significant improvement in term of performance between PA4 and PA5. If we look at the raw data table above, we can see that the performance in PA5 is slightly better (even though not much, but noticeable if looking at the table). If we increase the number of worker threads from 1 to 50, the performance is greatly

increased. After the number of worker threads reaches 100 or more, there's not much change in term of performance. In my opinion, the best number of worker threads to have in this program should be around 50. The program can run much faster at this amount of worker threads and also doesn't consume too much resource from the computer.