

Batch 1 3:00AM 10/21/19

Workload 1 ~ Variable List Size; Group Size = 250

List Size	Minimum	
	W/ Processes	W/Threads
500	140	25
1000	205	32
10000	1437	630
20000	3040	1330
25000	3769	1673

List Size	Average	
	W/ Processes	W/ Threads
500	153.1	102.96
1000	227.05	40.62
10000	1773.45	677.19
20000	3592.72	1359.42
25000	4110.84	1723.13

List Size	Maximum	
	W/ Processes	W/ Threads
500	243	297
1000	305	69
10000	2111	876
20000	4245	1462
25000	4577	1908

List Size	Standard Deviation	
	W/ Processes	W/ Threads
500	14.11276	39.747181
1000	14.295017	5.155153
10000	159.577403	57.911604
20000	287.629174	19.332449
25000	151.465	38.244648

Workload 2 ~ Variable Group Size; List Size = 500

Group Size	Minimum	
	W/ Processes	W/Threads
50	572	74
100	336	26
150	200	27
200	238	48
250	396	134

Group Size	Average	
	W/ Processes	W/Threads
50	668.39	106.01
100	435.56	83.22
150	280.59	32.57
200	252.15	54.78
250	435.82	143.67

Group Size	Maximum	
	W/ Processes	W/Threads
50	874	335
100	767	205
150	480	49
200	375	89
250	585	172

Group Size	Standard Deviation	
	W/ Processes	W/Threads
50	57.398936	29.947118
100	116.239092	48.243876
150	90.838218	3.917282
200	19.201758	4.691652
250	27.652262	5.531826

Workload 3 ~ Compare 1 Process w/Thread ~ List Size = 250

W/ Processes

Group Size	Minimum	Average	Maximum	Standard Dev.
250	285	410.2	630	105.728331

W/Threads

Group Size	Minimum	Average	Maximum	Standard Dev.
5	761	874.89	981	36.995917
20	188	224.588	307	30.303855
50	75	124.71	261	34.370713
125	51	76.81	181	23.959839
250	57	77.71	273	25.627834

Batch 2 3:45PM 10/22/2019

Workload 1 ~ Variable List Size; Group Size = 250

Minimum			Average		
List Size	W/ Processes	W/Threads	List Size	W/ Processes	W/ Threads
500	538	27	500	659.26	42.58
1000	207	63	1000	314.12	77.91
10000	1533	644	10000	1864.8	824.96
20000	2997	1326	20000	3523.5	1382.34
25000	3759	1704	25000	4106.65	1772.29

Maximum			Standard Deviation		
List Size	W/ Processes	W/ Threads	List Size	W/ Processes	W/ Threads
500	869	147	500	69.943923	15.167188
1000	828	122	1000	155.137119	11.88407
10000	2145	1613	10000	109.2215	283.065643
20000	4092	1467	20000	254.264882	22.788251
25000	4403	1863	25000	135.112721	31.819584

Workload 2 ~ Variable Group Size; List Size = 500

Minimum			Average		
Group Size	W/ Processes	W/Threads	Group Size	W/ Processes	W/ Threads
50	508	73	50	658.79	103.99
100	428	76	100	632.74	115.46
150	224	45	150	295.1	66.7
200	250	60	200	300.47	77.31
250	456	134	250	510.89	146.17

Group Size	Maximum	
	W/ Processes	W/ Threads
50	869	308
100	737	179
150	566	131
200	403	131
250	658	177

Group Size	Standard Deviation	
	W/ Processes	W/ Threads
50	86.941854	30.636088
100	54.467535	20.694647
150	73.894587	15.070833
200	19.643551	10.489704
250	36.916905	9.732477

Workload 3 ~ Compare 1 Process w/ Thread; List Size = 250

W/Process

Group Size	Minimum	Average	Maximum	Standard Dev.
250	398	563.42	722	60.793944

W/ Threads

Group Size	Minimum	Average	Maximum	Standard Dev.
5	771	807.18	855	12.48149
20	179	218.81	311	33.928659
50	82	130.06	291	39.699829
125	65	100.49	216	27.208636
250	57	80.53	281	27.517433

Batch 3

Workload 1 ~ Variable List Size; Group Size = 250;

List Size	Minimum	
	W/ Processes	W/ Threads
500	329	21
1000	247	30
10000	1713	623
20000	3338	1356
25000	4283	1700..0

List Size	Average	
	W/ Processes	W/ Threads
500	473.18	90.36
1000	355.27	37.9
10000	1890.4	662.87
20000	3831.84	1422.13
25000	4819.29	1781.12

List Size	Maximum	
	W/ Processes	W/ Threads
500	812	333
1000	560	64
10000	2086	770
20000	4648	1621
25000	5238	1918

List Size	Standard Deviation	
	W/ Processes	W/ Threads
500	123.534317	45.283887
1000	102.37762	4.419276
10000	79.92534	28.950183
20000	247.827106	42.959436
25000	193.920153	40.868638

Workload 2 ~ Variable Group Size; List Size = 500;

Group Size	Minimum	
	W/ Processe	W/Threads
50	450	138
100	278	53
150	219	28
200	173	26
250	143	19

Group Size	Average	
	W/ Processe	W/Threads
50	542.32	159.06
100	303.81	63.18
150	255.86	32.42
200	198.09	33.05
250	161.25	27.8

Group Size	Maximum	
	W/ Processe	W/Threads
50	653	219
100	420	100
150	357	55
200	242	58
250	352	78

Group Size	Standard Deviation	
	W/ Processe	W/Threads
50	33.469353	16.921477
100	26.373356	11.554549
150	20.765365	4.673714
200	16.118992	7.467764
250	26.559132	10.748023

Workload 3 ~ Compare 1 Process w/Thread ~ List Size = 250

W/Processes

Group Size	Minimum	Average	Maximum	Standard Dev.
250	297	459.57	698	102.316788

W/Threads

Group Size	Minimum	Average	Maximum	Standard Dev.
5	802	870.09	982	36.509751
20	189	209.96	253	12.56815
50	51	64.71	100	10.712885
125	19	26.97	65	7.013494
250	14	17.98	95	10.647047

Workload Averages

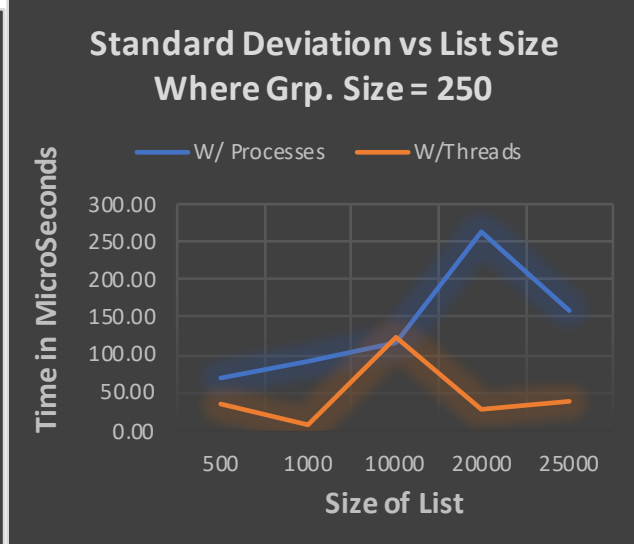
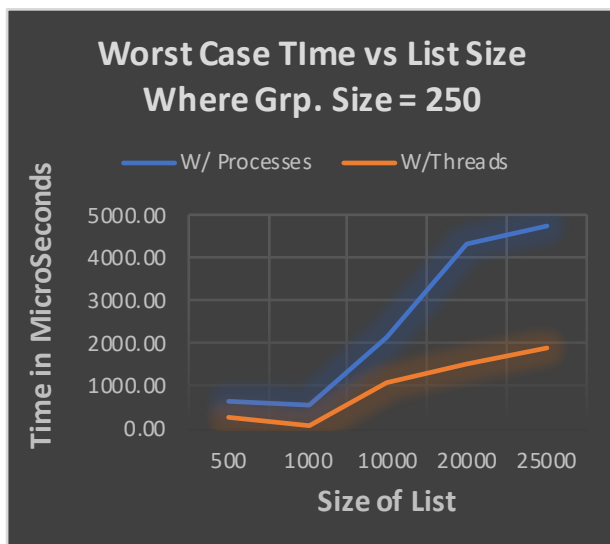
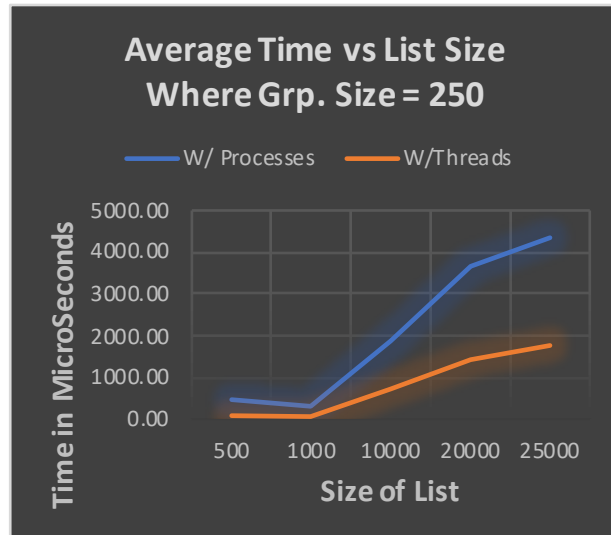
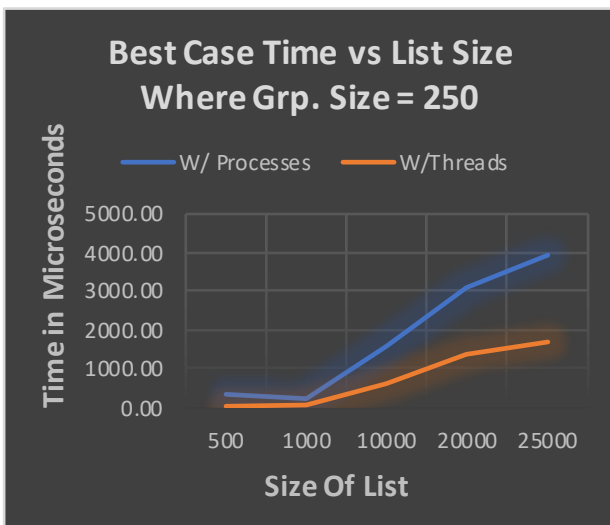
Workload 1

List Size	Minimum	
	W/ Processe	W/Threads
500	335.67	24.33
1000	219.67	41.67
10000	1561.00	632.33
20000	3125.00	1337.33
25000	3937.00	1688.50

List Size	Average	
	W/ Processe	W/Threads
500	428.51	78.63
1000	298.81	52.14
10000	1842.88	721.67
20000	3649.35	1387.96
25000	4345.59	1758.85

List Size	Maximum	
	W/ Processe	W/Threads
500	641.33	259.00
1000	564.33	85.00
10000	2114.00	1086.33
20000	4328.33	1516.67
25000	4739.33	1896.33

List Size	Standard Deviation	
	W/ Processe	W/Threads
500	69.20	33.40
1000	90.60	7.15
10000	116.24	123.31
20000	263.24	28.36
25000	160.17	36.98



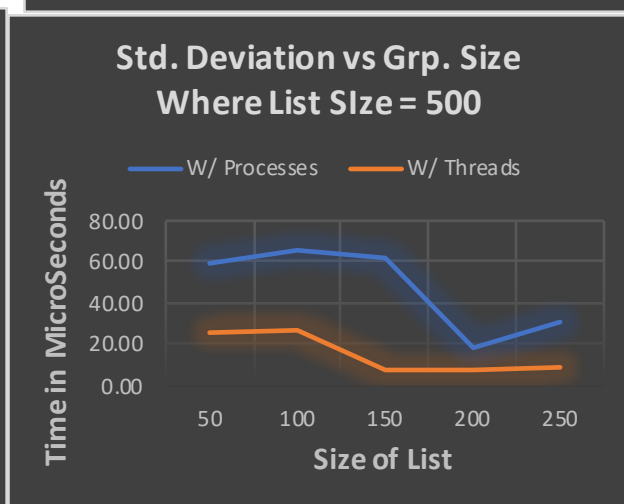
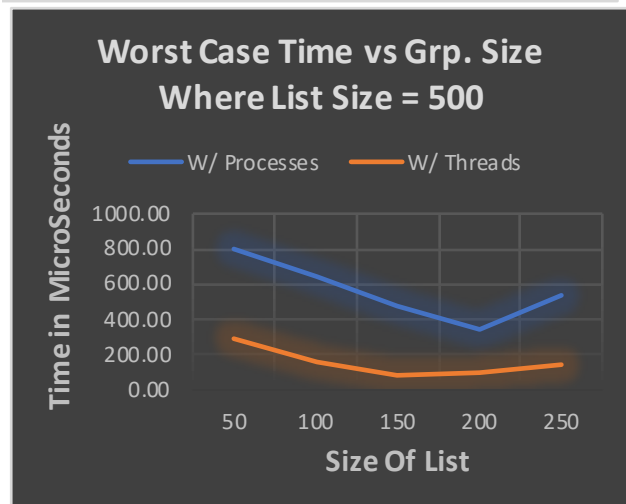
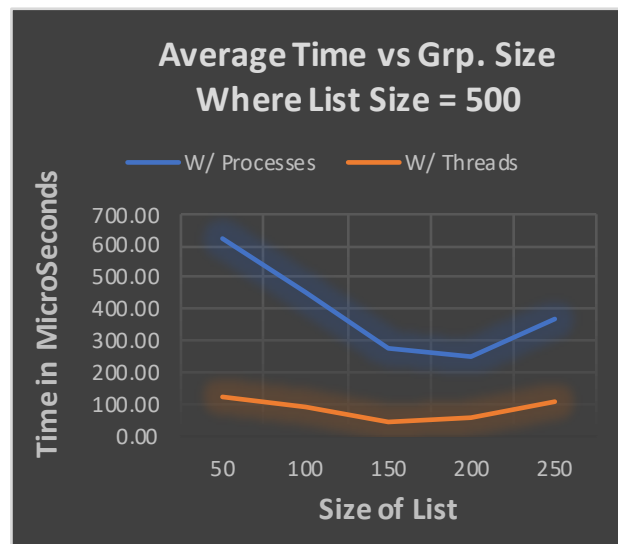
Workload 2

Group Size	Minimum	
	W/ Processe	W/ Threads
50	510.00	95.00
100	347.33	51.67
150	214.33	33.33
200	220.33	44.67
250	331.67	95.67

Group Size	Average	
	W/ Processe	W/ Threads
50	623.17	123.02
100	457.37	87.29
150	277.18	43.90
200	250.24	55.05
250	369.32	105.88

Group Size	Maximum	
	W/ Processe	W/ Threads
50	798.67	287.33
100	641.33	161.33
150	467.67	78.33
200	340.00	92.67
250	531.67	142.33

Group Size	Standard Deviation	
	W/ Processe	W/ Threads
50	59.27	25.83
100	65.69	26.83
150	61.83	7.89
200	18.32	7.55
250	30.38	8.67



Workload 3

W/Process

Group Size	Minimum	Average	Maximum	Standard Dev.
250	326.67	477.73	683.33	89.61

W/Threads

Group Size	Minimum
5	778.00
20	185.33
50	69.33
125	45.00
250	42.67

Group Size	Average
5	850.72
20	217.79
50	106.49
125	68.09
250	58.74

	Maximum
5	939.33
20	290.33
50	217.33
125	154.00
250	216.33

	Standard Dev.
5	28.66
20	25.60
50	28.26
125	19.39
250	21.26

