BBM442 Assignment

OMP process times (s)

Thread\N	200k	500k	1M	2M	4M
1	0.0322	0.0813	0.2227	0.5464	1.4332
2	0.0542	0.1142	0.2141	0.3926	1.0234
4	0.0158	0.0538	0.1407	0.3363	0.7497
8	0.0180	0.0955	0.1211	0.2984	0.7538
Speed Up	**2x**	**1.5x**	**1.8x**	**1.8k**	**1.9k**

Pthread process times (s)

Thread\N	200k	500k	1M	2M	4M
1	0.0232	0.0810	0.2110	0.5678	1.4506
2	0.0190	0.0660	0.1667	0.4761	1.2088
4	0.0145	0.0460	0.1170	0.2987	0.7941
8	0.0140	0.0460	0.1190	0.3012	0.7943
Speed Up	**1.6k**	**2.0k**	**1.8k**	**1.9k**	**1.8k**

The most difficult part for me was balancing the paralel process work. In Omp pragma code it is not that hard for programmer because scheduling helps programmer but in Pthread code i build a small algorithm to make it more balanced that is a difference from omp code.

Algorithm is that every thread calculates values these come related to their number.For 4 threads i.e;

Thread 0 -> 0 , 4, 8, 12….

Thread 1 -> 1 , 5, 9, 13…

Thread 2 -> 2 , 6 , 10, 14...

Thread 3 -> 3, 7 , 11, 15...

(These calculations considered with knowledge of that there is no "2" the prime number and with listening music from PC)