Advanced Programming Lab 8 Report

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Flyweight implementation: for

1 Thread – 43066287 ns == 0.043066287 s

2 Threads – 2761563 ns == 0.002761563 s

3 Threads – 156317 ns == 0.000156317 s

Speedup ratios amongst flyweight implementation:

Numerator -> Denominator ↓	1 Thread	2 Threads	3 Threads
1 Thread	1	0.0641	0.0036
2 Threads	15.59	1	0.0566
3 Threads	275.50	17.66	1

Conclusions:

Two threaded implementation is approximately 16 times faster than single threaded implementation

Three threaded implementation is approximately 275 times faster than single threaded implementation

Non Flyweight Parallelized implementation: for

1 Thread – 68724717458 ns == 68.724717458 s

2 Threads – 40530435995 ns == 40.530435995 s

3 Threads – 32581608325 ns == 32.581608325 s

Speedup ratios amongst non-flyweight parallel implementation:

Numerator -> Denominator ↓	1 Thread	2 Threads	3 Threads
1 Thread	1	0.589	0.474
2 Threads	1.695	1	0.803
3 Threads	2.109	1.244	1

Conclusions:

Two threaded implementation is approximately 1.6 times faster than single threaded implementation

Three threaded implementation is approximately 2.1 times faster than single threaded implementation