Post-Lab 8 Report **Aditya Chetan**
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Prof. Vivek Kumar Due Date: 05/11/17

Measuring speed up by increasing thread pool size (Fly-Weight implementation)

- $n = 20, k = 10$

Pool Size	Time taken (in milliseconds)
1	25
2	18
3	12

Speed-up from increasing pool size from 1 to 2 = $\frac{25}{18} = 1.389$

Speed-up from increasing pool size from 2 to 3 = $\frac{18}{12} = 1.5$

Speed-up from increasing pool size from 1 to 3 = $\frac{25}{12} = 2.0833$

- $n = 30, k = 20$

Pool Size	Time taken (in milliseconds)
1	28
2	19
3	17

Speed-up from pool increasing size from 1 to 2 = $\frac{28}{19} = 1.4736$

Speed-up from pool increasing size from 2 to 3 = $\frac{18}{12} = 1.1176$

Speed-up from pool increasing size from 1 to 3 = $\frac{25}{12} = 1.6470$

Measuring speed up by increasing thread pool size (Non Fly-Weight implementation)

- $n = 20, k = 10$

Pool Size	Time taken (in milliseconds)
1	72
2	66
3	58

Speed-up from increasing pool size from 1 to 2 = $\frac{72}{66} = 1.091$

Speed-up from increasing pool size from 2 to 3 = $\frac{66}{58} = 1.138$

Speed-up from increasing pool size from 1 to 3 = $\frac{72}{58} = 1.241$

- $n = 30, k = 20$

Pool Size	Time taken (in milliseconds)
1	1988
2	1845
3	1781

Speed-up from pool increasing size from 1 to 2 = $\frac{1988}{1845} = 1.077$

Speed-up from pool increasing size from 2 to 3 = $\frac{1845}{1781} = 1.036$

Speed-up from pool increasing size from 1 to 3 = $\frac{1988}{1781} = 1.116$

1 Comparison of runtime for fixed pool thread sizes for Fly-Weight and Non Fly-weight implementations

Speed-up on using fly-weight implementation is given below:

- $n = 20, k = 10$

Speed-up when pool-size is 1 = $\frac{72}{25} = 2.880$

Speed-up when pool-size is 2 = $\frac{66}{18} = 3.667$

Speed-up when pool-size is 3 = $\frac{58}{12} = 4.834$

- $n = 30, k = 20$

Speed-up when pool-size is 1 = $\frac{1988}{28} = 71$

Speed-up when pool-size is 2 = $\frac{1845}{19} = 97.105$

Speed-up when pool-size is 3 = $\frac{1781}{17} = 104.765$