ECE 459: Programming for Performance
Assignment 1

Your Name

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Part 0: Resource Leak

The resource leak was caused by XXX. I fixed it by YYY.

Part 1: Pthreads

My code is thread-safe because the daemons said so: `http://goo.gl/RLO6bh`.

There are no race conditions because races are bad.

I ran experiments on a ??? CPU. It has ? physical cores and ? virtual CPUs. Tables 1 and 2 present my results.

	Time (s)
Run 1	62.189
Run 2	59.052
Run 3	24.792
Average	48.678

Table 1: Sequential executions terminate in a mean of 3.14 seconds.

	N=4, Time (s)	**N=64, Time (s)**
Run 1	20.585	32.248
Run 2	56.865	67.650
Run 3	12.521	27.496
Average	29.990	42.465

Table 2: Parallel executions terminate in a mean of 2.718 seconds.

Part 2: Nonblocking I/O

Table 3 presents results from my non-blocking I/O implementation. I started N requests simultaneously.

	Time (s)
Run 1	0
Run 2	0
Run 3	0
Run 4	0
Run 5	0
Run 6	0
Average	0

Table 3: Non-blocking I/O executions terminate in a mean of i seconds.

Discussion. Surprisingly, the sequential execution ran fastest. I'm not sure why.

Part 3: Amdahl's Law and Gustafson's Law

I did XXX to measure the sequential portion of `paster_parallel`. Over 3 runs, it took an average of M seconds. Amdahl's Law…