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1.

The best architecture is between the CPU and the CPU cache. This will reduce transport delay times in all scenarios.

2.

The performance Comparison of Pthreads versus OpenMP does exactly what the title implies. Both are implementations of parallel programming. The performance was measured by using quicksort, matrix multiplication, and integration. The results of this study were that both methods are significantly better than using a serial program however, OpenMP performs a bit better than Pthreads.

This is important because multitasking is an important aspect of this class. We got some experience with Pthreads but none with OpenMP. Getting experience with more of these tools will make us more versatile in industry.

3.

1234567/512 =2412 blocks

512b / 4b = 128 blocks

2412-8-128 = 2276 blocks

2276 / 128 = 18

Total = 8 + 128 + ((18*128) + 128) = 2568

2568 * 4 + 20 + 3*4 = 10304 bytes

b.

2412 blocks

2412 – 8 – 128 = 2276

2276 / 128 = 18

.78125 * 128 = 100

c.

4(128 + 128 + 8) + 20 + (3*4) = 1088 bytes

5.

Insertion takes O(logn). Finding the node with the lowest virtual time is o(1).