Fall 2021 COP5615

Project 1 Report

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1.

|  |  |  |  |
| --- | --- | --- | --- |
| Work Unit | CPU | REAL | CPU utilization |
| 125 | 214.729 | 119.117 | 1.803 |
| 1250 | 131.324 | 27.799 | 4.724 |
| 12500 | 128.693 | 23.373 | 5.506 |
| 125000 | 153.601 | 23.800 | 6.454 |
| 1250000 | 85.987 | 18.384 | 4.677 |

Based on the table above, the larger size of work unit is, the relative higher ratio we get. The ratio increases from 1.803 to 6.454, and then decreases to 4.667.

When the work unit is 125000, the performance for our implementation is the best because the ratio is the highest.

2.

The result of running your program for input 4 is:

Text

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3.

Text

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Ratio = CPU / Real = 10.441 / 2.225 = 4.693

4.

The coin with the most 0s we managed to find is 6.

Text

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5.

The largest number of working machines we were able to run our code with is 1.