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Dr. Ahmed

CSCE 313.503

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Programming Assignment Five Report

Graphs

Data Transfer (N = 15000, B = 100)

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| --- | --- | --- | --- |
| Programming Assignment Four | | Programming Assignment Five | |
| Thread Count | Time(s) | Thread Count | Time(s) |
| 10 | 3.936340 | 10 | 3.928262 |
| 20 | 1.998774 | 20 | 1.940654 |
| 50 | 0.875128 | 50 | 0.788585 |
| 100 | 0.688599 | 100 | 0.434862 |
| 125 | 1.108962 | 125 | 0.429887 |
| 150 | 0.900557 | 150 | 0.412085 |
| 200 | 0.984176 | 200 | 0.440065 |
| 250 | 1.40765 | 250 | 0.452009 |
| 500 | 1.591703 | 500 | 0.491040 |

File Transfer (F = 10.csv, N = 15000, M = 256)

|  |  |  |  |
| --- | --- | --- | --- |
| Programming Assignment Four | | Programming Assignment Five | |
| Thread Count | Time(s) | Thread Count | Time(s) |
| 10 | 0.53310 | 10 | 0.53900 |
| 20 | 0.54442 | 20 | 0.54413 |
| 50 | 0.107689 | 50 | 0.61420 |
| 100 | 0.220200 | 100 | 0.61972 |
| 125 | 0.277260 | 125 | 0.69112 |
| 150 | 0.343989 | 150 | 0.71814 |
| 200 | 0.439082 | 200 | 0.74188 |
| 250 | 0.553197 | 250 | 0.76768 |
| 500 | 1.116977 | 500 | 1.105834 |

Report

When the command is data requests, the runtime of PA5 is not slower but in fact faster at some points than PA4’s runtime. While PA5 is faster at requesting data, the point of diminishing return for both programming assignments is about the same (approximately one hundred to two hundred thread count). When the command is file transfers, the runtime of PA5 is roughly the same as PA4’s runtime. Even though PA4 has a drastic drop in runtime between twenty and fifty thread count that PA5 does not have, both programming assignments follow the same pattern of increasing slowly until they have the same runtime at around five hundred thread count.

Demo Video Link:

<https://drive.google.com/file/d/1ispCaNDaeJvYeUnq3IFveoYmSf4houvn/view?usp=sharing>