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Dr. Ahmed

CSCE 313.503

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Programming Assignment Six Report

Graphs

Data Transfer (N = 15000, B = 100)

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| --- | --- | --- | --- |
| Programming Assignment Five | | Programming Assignment Six | |
| Thread Count | Time(s) | Thread Count | Time(s) |
| 10 | 3.928262 | 10 | 4.59553 |
| 20 | 1.940654 | 20 | 2.34018 |
| 50 | 0.788585 | 50 | 0.909426 |
| 100 | 0.434862 | 100 | 0.862668 |
| 125 | 0.429887 | 125 | 0.887209 |
| 150 | 0.412085 | 150 | 0.873510 |
| 200 | 0.440065 | 200 | 0.978641 |
| 250 | 0.452009 | 250 | 1.111835 |
| 500 | 0.491040 | 500 | 1.724717 |

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

|  |  |  |  |
| --- | --- | --- | --- |
| Programming Assignment Five | | Programming Assignment Six | |
| Thread Count | Time(s) | Thread Count | Time(s) |
| 10 | 0.53900 | 10 | 0.097076 |
| 20 | 0.54413 | 20 | 0.099974 |
| 50 | 0.61420 | 50 | 0.128894 |
| 100 | 0.61972 | 100 | 0.210868 |
| 125 | 0.69112 | 125 | 0.229032 |
| 150 | 0.71814 | 150 | 0.148518 |
| 200 | 0.74188 | 200 | 0.293187 |
| 250 | 0.76768 | 250 | 0.380831 |
| 500 | 1.105834 | 500 | 0716478 |

Report

There is a difference between PA5 and PA6 when it comes to runtimes with varying w (thread count). I believe that I am seeing this difference because of two separate terminals being used at the same time which may cause more delay than PA5 since PA5 only required one. Since I was not able to get the two VMs working, I was only able to do this assignment on the localhost. The runtimes have the same pattern as PA5’s FIFO but still do not match up. The point of diminishing return for both file transfer and data transfer is between one hundred to two hundred threads. This is like PA5 in data transfer but not in file transfer.

Demo Video Link:

<https://drive.google.com/file/d/12O0w7nA-RV6H6kd-TmPMTlHUuK3z1CfI/view?usp=sharing>