Part 2: Evaluation Report

- The purpose of this experimental setup is to show the benefits of multithreading.

- The speed of the program in execution increases as more threads are being utilized.

- There is a certain point where adding threads in the program does not increase the speed

which it finishes.

This is the table for:

A: mandel:

|  |  |  |  |
| --- | --- | --- | --- |
| Thread Amount | A: mandel | B: mandel | My mandel |
| 1 | 381264 | 9171055 | 672325 |
| 2 | 341711 | 4528555 | 353678 |
| 3 | 244365 | 3023051 | 234492 |
| 4 | 174612 | 2297971 | 181575 |
| 5 | 167318 | 1856840 | 143068 |
| 10 | 92905 | 1060439 | 77241 |
| 50 | 51167 | 835547 | 72177 |

* ./mandel -x -.5 -y .5 -s 1 -m 2000 -n (#of threads)

B: mandel

* ./mandel -x 0.2869325 -y 0.0142905 -s .000001 -W 1024 -H 1024 -m 1000 -n (#of threads)

My mandel

* ./mandel -x -0.55 -y .5 -s .0000000000001 -n (#of threads) -o mandel6.bmp

When comparing A and B side by side via data you can clearly see that the curve of B has a higher exponential decrease compared to curve A. Both curve A and B are exponentially decreasing thus creating that shape, however the curve of A and B are different because of the differences between each thread increment. The optimal number of threads for B is 10 and for A it is 50