Task 1:

A screen shot of a computer

Description automatically generated

Open MP conversion is working on 10x10 matrix of 1s.

When switching to the 1000 I was getting errors initializing the matricies so I switched to dynamically allocated memory:

A screenshot of a computer program

Description automatically generated

Now working as expected, I turned off the printMatrix function due to output size.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Task 1 | | | | | | |
|  | Sequential | 1 thread | 2 thread | 5 thread | 7 thread | 9 thread |
| Time |  |  |  |  |  |  |
| pThread |  | 5.40 | 2.66 | 1.25 | .987 | .954 |
| Open MP |  | 5.89 | 2.73 | 1.268 | 1.023 | 1.049 |

For this task, the static and guided open MP loops took about the same but the dynamic was around 10-15% faster. Also as expected, the pThread implementation was faster than the OpenMP static but about the same as the dynamic speed, if not slightly slower.

Task 2:

A black screen with yellow text

Description automatically generated

Estimate matches pi. The time was so high because I was using dynamic scheduling, switching to static saved 10x and was running at 2.9 s vs 22.1 s for 1 thread.

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| --- | --- | --- | --- | --- | --- | --- |
| Task 2 | | | | | | |
|  | Sequential | 1 thread | 2 thread | 5 thread | 7 thread | 9 thread |
| Time |  | 2.93 | 1.52 | 0.758 | 0.593 | 0.555 |