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Task M2.T1P (Parallel Matrix Multiplication)

Codes are available on attached files.

Time taken for:

1. Sequential:
   1. Size 10 x 10:



* 1. Size 100 x 100:



* 1. Size 1000 x 1000:



1. Pthread:
   1. Size 10 x 10:



* 1. Size 100 x 100:



* 1. Size 1000 x 1000:



1. OpenMP:
   1. Size 10 x 10:



* 1. Size 100 x 100:



* 1. Size 1000 x 1000:



Based on my findings:

1. Using parallel programming does improve performance on matrix multiplication, which is how it must be compared with sequential programming. However, OpenMP improves the performance significantly compared with pthread implementation.
2. Size of the matrices also affects the performance. In size 10 x 10, sequential has the lowest execution time. In both size 100 x 100 and 1000 x 1000, OpenMP has the lowest execution time. In addition, surprisingly, in size 100 x 100, pthread has higher execution time compared with sequential, which makes it the least efficient. Pthread also has the highest execution time in size 10 x 10.