Homework Report

Concurrent Programming
Homework 2

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Group members:
Malte Berg, maltebe@kth.se
Alexander Timsäter, timsater@kth.se

Finding palindromes and semordnilaps

In this assigment our task was to create a simple palindrome and semordnilaps checker utilizing parallelization from the openMP library. The function should take an integer as a parameter which decides how many threads will be used. In the table below the runtime of varying numbers of threads and wordlist lengths are shown. The algorithm used in the function is unoptimized and has a time complexity of n^2, in order to improve the functionality an hashmap or presorting can be applied.

Runtime of Parallelized Section	No. Threads	Word Count
2.872574	1	25 143
1.805895	2	25 143
1.037859	4	25 143
0.726223	8	25 143
1.028900	1	12 571
0.527615	2	12 571
0.266294	4	12 571
0.189094	8	12 571
0.270893	1	6 686
0.137425	2	6 686
0.067112	4	6 686
0.049732	8	6 686

Table 1: Runtime of Parallelized Section