Lab6 documentation

Normal alg:

-complexity: O(n^2)

-implementation: 2 for loops

-used thread pools for parallelizing the work : 1,n,nXn threads

Ex:

Test1:

-1 thread

-length: 100

-time: 00:00:00.7983556 sec

Test2:

-n threads

-length:100

-time: 00:00:00.9546457 sec

Test3:

-nXn threads

-length:100

-time: 00:00:01.1790728 sec

Test4:

-1 thread

-length: 1000

-time: 00:00:01.6724134 sec

Test5:

-n thread

-length: 1000

-time: 00:00:03.1908070 sec

Test6:

-nXn thread

-length: 1000

-time: 00:00:04.9289813 sec

Karatsuba alg:

-complexity: O(n^lg3)

-implementation: divide&conquer

- divide: divide the polynomials in 2

-conquer: compute and make the result

-used threadpools for parallelizing the work : 1,n,nXn threads

-used manual and auto reset event for sync the threads

Ex:

Test1:

-1 thread

-length: 100

-time: 00:00:00.0524133 sec

Test2:

-n threads

-length:100

-time: 00:00:00.1046937 sec

Test3:

-nXn threads

-length:100

-time: 00:00:00.2216310 sec

Test4:

-1 thread

-length: 1000

-time: 00:00:00.4430238 sec

Test5:

-n thread

-length: 1000

-time: 00:00:00.9133649 sec

Test6:

-nXn thread

-length: 1000

-time: 00:00:01.3783922 sec