Abstract

Sieving prime numbers is an idle example of linear time algorithm since the first sieve of this kind proposed by Eratosthenes. Afterward many sieving algorithm are proposed such as:-: Sieve of Sundaram, Sieve of Atkin, Sieve of Sorenson and wheel factorization of prime number. In this paper we have proposed the integration of parallelism with these sieving algorithm. We have proposed MPI_Info object with memoization to avoid redundant steps during prime number processing and adding them into the sieve. Nevertheless this paper also demonstrates the MPI Binding with familiar/popular object oriented programming language such as:-: C++ and Java. This binding done through the two different tools which includes OpenMPI and MPJ Express.

References

Performance Optimization by Integrating Memoization and MPI_Info Object for Sieve of Prime Numbers


Index Terms

Computer Science Algorithms

Keywords

Java, Open MPI, Prime Table, Java Native Interface, Message Passing