An Enhanced Ant Colony-based Approach for Query Optimization

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Abstract

One of the mandatory processes for all those types of applications is the inquiry process of the stored huge amounts of data. Such process is either a predefined or an ad-hoc query. From the logical point of view, the query process depends mainly on many algebraic operations, including selection, projection and joining operations. The most important one of them is the join operation, which represents the key factor of the inquiry process to retrieve the related information from different data tables. Many approaches have been proposed aiming to reduce the cost of join operations. Yet, there is still a need for more query optimizing processes in order to reduce the query response time. This paper proposes an enhanced optimal query processing approach for inner and outer join, where the proposed model exploits an adopted Ant Colony Optimization.

References

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Index Terms

Computer Science Information Sciences

Keywords

Query Optimization, Ant Colony, Logical Optimizer, Query Access Plan, outer join.