An Optimal Goal Programming Model to Recovery from Deadlocks

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Abstract

Process termination is a common strategy that is used to recover from deadlocks. However, terminating processes during their execution may affect and degrade the performance of the underlying system. The proposed solution in this paper is to select particular processes that can reduce the potential consequences of process termination in order to be terminated. A goal programming (GP) model is constructed to identify and select the best processes that can break a deadlock at lowest consequences of process termination. Several experimental tests are performed and the results showed that the proposed solution maintains the performance of the system during deadlock recovery compared to the other related methods.

References


27. Weikum, G., & Vossen, G. Transactional information systems. ACM, 2002
Index Terms

Computer Science                           Programming Languages

Keywords

Goal Programming, Deadlock Recovery, Process Termination, Termination Cost.