

Timestamp-based Optimistic Concurrency Control Algorithm For Online Hotel Reservation System

Ei Ei Phyu, Phyu Phyu, Thin Thin Swe

Computer University, Patheingyi

maeieiphyu.09@gmail.com, phyuucsp@gmail.com,

thinswe.ucsp@gmail.com

Abstract

Concurrency control is the activity of coordinating concurrent access to a database in a multi user database management system. These applications are used concurrently by more than one user. Online hotel reservations are becoming a very popular method for booking hotel rooms. Each users of the system need to process the data without interfering each other as much as possible. Moreover users can reserve the same room simultaneously. Therefore concurrency control is needed in the reservation process of hotel rooms. In order to operate concurrently on a database for transaction, a protocol must be adopted to coordinate their activities. Optimistic concurrency control (OCC) is generally used in environments with low data contention. When conflicts are rare, transactions can complete without the expense of managing locks and without having transactions wait for other transactions' locks to clear, leading to higher throughput than pessimistic concurrency control methods. The data driven base timestamp management algorithm is timestamp based optimistic concurrency control approach. Instead of assigning timestamps to transactions, this protocol assigns read and write timestamps to data items and uses them to lazily compute a valid commit timestamp for each transaction. The proposed system presents the concurrency control for online hotel reservation system by applying data driven based timestamp management algorithm.