

Week 8: Discussion Question

What is a lock and how, in general, does it work?

A lock occurs when two transactions attempt to access the same resource and one or both of them are attempting to add, edit, or delete from that resource. Locks can occur at the database, table, page, row, or field level, but as the DBMS manages locks at a more granular level, the more overhead is required to manage it. When one transaction has resources locked and needs access to a locked resource and the transaction locking that resource needs access to the other transactions locked resources, a deadlock can occur, where neither transaction can continue as each waits for the other to release the resource. Locks may be binary, either on or off, or they be classified as shared and exclusive. A shared lock allows read transactions to occur on the resource locked, while an exclusive lock prohibits any transaction to occur with the resource.