45 Lecture - CS403

Important Mcqs

1. **What is locking in a database management system?**
   a. A mechanism to prevent transactions from accessing shared resources
   b. A mechanism to prevent transactions from accessing only exclusive resources
   c. A mechanism to allow transactions to access shared resources simultaneously
   d. A mechanism to allow transactions to access exclusive resources simultaneously
   Answer: a

   Which of the following is not a type of lock?
   a. Shared lock
   b. Exclusive lock
   c. Read lock
   d. Write lock
   Answer: c

   What is the purpose of a shared lock?
   a. To allow multiple transactions to read the same resource simultaneously
   b. To prevent multiple transactions from reading the same resource simultaneously
   c. To allow multiple transactions to write to the same resource simultaneously
   d. To prevent multiple transactions from writing to the same resource simultaneously
   Answer: a

   What is the purpose of an exclusive lock?
   a. To allow multiple transactions to read the same resource simultaneously
   b. To prevent multiple transactions from reading the same resource simultaneously
   c. To allow multiple transactions to write to the same resource simultaneously
   d. To prevent multiple transactions from writing to the same resource simultaneously
   Answer: d

   What is a deadlock?
   a. A situation where two or more transactions are waiting for each other to release locks
   b. A situation where a transaction is waiting for a lock that is held by another transaction
   c. A situation where a transaction is waiting for a lock that has already been released
   d. A situation where a transaction is waiting for a resource that is not available
   Answer: a

   What is a timeout in locking?
   a. A mechanism to release a lock after a specified time period
   b. A mechanism to acquire a lock after a specified time period
   c. A mechanism to prevent a transaction from acquiring a lock
   d. A mechanism to prevent a transaction from releasing a lock
   Answer: a

   What is the purpose of lock escalation?
   a. To reduce the number of locks held by a transaction

b. To increase the number of locks held by a transaction
c. To release all locks held by a transaction
d. To prevent a transaction from acquiring any locks
Answer: a

What is the difference between a shared lock and an exclusive lock?
a. A shared lock allows multiple transactions to read the same resource, while an exclusive lock prevents multiple transactions from writing to the same resource simultaneously
b. A shared lock allows multiple transactions to write to the same resource simultaneously, while an exclusive lock prevents multiple transactions from reading the same resource simultaneously
c. A shared lock allows multiple transactions to access the same resource simultaneously, while an exclusive lock prevents any other transactions from accessing the resource until the lock is released
d. A shared lock allows a transaction to access a resource exclusively, while an exclusive lock allows multiple transactions to access the same resource simultaneously
Answer: c

What is the purpose of lock granularity?
a. To determine the size of the resource that will be locked
b. To determine the type of lock that will be used
c. To determine the duration of the lock
d. To determine the transaction that will hold the lock
Answer: a

What is the purpose of a lock manager in a database management system?
a. To manage the acquisition and release of locks
b. To manage the execution of transactions
c. To manage the storage of data
d. To manage the retrieval of data
Answer: a