IS 2nd material

Database 2

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ASSUMES THAT CONFLICTS WILL HAPPEN?

- PESSIMISTIC CONCURRENCY CONTROL (LOCK)
- OPTIMISTIC CONCURRENCY CONTROL (NO-LOCK)

ASSUMES THAT CONFLICTS BETWEEN TRANSACTIONS ARE RARE?

- **PESSIMISTIC CONCURRENCY CONTROL (LOCK)**
- **OPTIMISTIC CONCURRENCY CONTROL (NO-LOCK)**

DETECT CONFLICTS AS SOON AS THEY OCCUR?

- **OPTIMISTIC CONCURRENCY CONTROL (NO-LOCK)**
- **PESSIMISTIC CONCURRENCY CONTROL (LOCK)**

TRANSACTION EXECUTED WITHOUT RESTRICTIONS?

- **OPTIMISTIC CONCURRENCY CONTROL (NO-LOCK)**
- **PESSIMISTIC CONCURRENCY CONTROL (LOCK)**

HECK FOR CONFLICTS JUST BEFORE COMMIT?

- **PESSIMISTIC CONCURRENCY CONTROL (LOCK)**
- **OPTIMISTIC CONCURRENCY CONTROL (NO-LOCK)**

THERE IS A LOCK FOR EACH DATA ITEM IN THE DATABASE?

- **TRUE**
- **FALSE**

USED FOR SYNCHRONISING THE ACCESS BY CONCURRENT TRANSACTIONS TO THE DATABASE ITEMS?

- TIMESTAMP
- LOCK

WHEN AN OBJECT IS LOCKED BY ANOTHER TRANSACTION, THE REQUESTING TRANSACTION MUST WAIT?

- TRUE
- FALSE

A …….. CAN HAVE TWO STATES OR VALUES: LOCKED AND UNLOCKED (1- 0)

- A BINARY LOCK
- SHARED/EXCLUSIVE (READ/WRITE) LOCKS

IN BINARY LOCK ITEMS NOT IN THE LOCK TABLE ARE CONSIDERED TO BE LOCKED?

- T
- F

binary lock In its simplest form, each lock can be a record with …… field(s)?

- **1**
- **2**
- **3**

THE ….. HAS A LOCK MANAGER SUBSYSTEM TO KEEP TRACK OF AND CONTROL ACCESS TO LOCKS?

- TIMESTAMP
- LOCK
- DBMS
- DATA BASE MEANGMEAT SYSTEM
- C AND D

IN BINARY LOCK TWO TRANSACTIONS CAN ACCESS THE SAME ITEM CONCURRENTLY?

- T
- F

if the simple binary locking scheme is used, A transaction T must issue the operation lock_item(X) after any read_item(X) or write_item(X) operations are performed in T?

- **T**
- **F**

if the simple binary locking scheme is used, A transaction T must issue the operation lock_item(X) after all read_item(X) and write_item(X) operations are completed in T?

- **T**
- **F**

If the simple binary locking scheme is used, A transaction T will not issue an unlock_item(X) operation unless it already holds the lock on item X?

- **T**
- **F**

in binary-lock A transaction T must issue the operation read_lock(X) or write_lock(X) before any read_item(X) operation is performed in T?

- **T**
- **F**

There are three locking operations: read_lock(X), write_lock(X), and unlock(X)?

- **SHARED/EXCLUSIVE**
- **(READ/WRITE) LOCKS**
- **BOTH**

A read-locked item is also called?

- **EXCLUSIVE**
- **SHARED**

A write-locked item is called ....?

- EXCLUSIVE
- SHARED

in ..... A transaction T must issue the operation write_lock(X) before any write_item(X) operation is performed in T?

- BINARY LOCK
- SHARED/EXCLUSIVE

in SHARED/EXCLUSIVE LOCKS A transaction T will not issue a read_lock(X) operation if it already holds a read (shared) lock or a write (exclusive) lock on item X?

- T
- F

......is a transaction that already holds a lock on item X is allowed under certain conditions to convert the lock from one locked state to another?

- lock conversion
- SHARED/EXCLUSIVE
- BINARY LOCK

GUARANTEEING SERIALIZABILITY BY TWO-PHASE LOCKING......?

- Locking , Unlocking
- Growing , (Shrinking)
- Locking , Growing
- ALL of the above

A transaction applies locks (read or write) on desired data items one at a time?

- Locking phase
- Unlocking phase

A transaction unlocks its locked data items one at a time?

- Locking phase
- Unlocking phase

Transaction locks data items incrementally. This may cause deadlock which is dealt with?

- Basic algorithms
- Strict algorithms
- Conservative algorithms

This is the most commonly used two-phase locking algorithm?

- Basic algorithms
- Strict algorithms
- Conservative algorithms

Prevents deadlock by locking all desired data items before transaction begins execution?

- Basic algorithms
- Strict algorithms

Conservative algorithms

Deadlock prevention is A transaction locks all data items it refers to after it begins execution?

- T
- F

In Deadlock avoidance Wound-Wait and Wait-Die algorithms use timestamps to avoid deadlocks by rolling-back victim?

- T
- F

...... occurs when a particular transaction consistently waits or restarted and never gets a chance to proceed further?

- Starvation
- Deadlock detection and resolution

.is a unique identifier created by the DBMS to identify a transaction?

- Timestamp
- Starvation
- Deadlock detection and resolution

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