Database Questions and Answers – Lock Release and Undo Operations

« Prev Next »

This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Lock Release and Undo Operations”.

1. Which lock should be obtained to prevent a concurrent transaction from executing a conflicting read, insert or delete operation on the same key value.
a) Higher-level lock
b) Lower-level lock
c) Read only lock
d) Read write

View Answer

Answer: a
Explanation: Operations acquire lower-level locks while they execute, but release them when they complete; the corresponding transaction must however retain a higher-level lock in a two-phase manner to prevent concurrent transactions from executing conflicting actions.

2. Once the lower-level lock is released, the operation cannot be undone by using the old values of updated data items, and must instead be undone by executing a compensating operation; such an operation is called
a) Logical operation
b) Redo operation
c) Logical undo operation
d) Undo operation

View Answer

Answer: a
Explanation: It is important that the lower-level locks acquired during an operation are sufficient to perform a subsequent logical undo of the operation.

3. Which of the following is used for undo operations alone?
a) Logical logging
b) Physical logging
c) Physical log records
d) Physical logging and Physical log records

View Answer

Answer: a
Explanation: If the operation inserted an entry in a B+-tree, the undo information U wo indicate that a deletion operation is to be performed, and would identify the B+-tree and what entry to delete from the tree. Such logging of information about operations is called logical logging.

4. Redo operations are performed exclusively using
a) Logical logging
b) Physical logging
c) Physical log records
d) Both Physical logging and Physical log records

View Answer

Answer: d
Explanation: Logging of old-value and new-value information is called physical logging.

5. To perform logical redo or undo, the database state on disk must be operation _____ that is, it should not have partial effects of any operation.
a) Persistent
b) Resistant
c) Consistent
d) None of the mentioned

View Answer

Answer: c
Explanation: Data structures such as B+-trees would not be in a consistent state, and neither logical redo nor logical undo operations can be performed on an inconsistent data structure.

6. An operation is said to be _____ if executing it several times in a row gives the same result as executing it once.
a) Idempotent
b) Changed
c) Repetitive

d) All of the above

View Answer

Answer: a
Explanation: Operations such as inserting an entry into a B+-tree may not be idempotent, and the recovery algorithm must therefore make sure that an operation that has already been performed is not performed again.

7. Immediate database modification technique uses
a) Both undo and redo
b) Undo but no redo
c) Redo but no undo
d) Neither undo nor redo

View Answer

Answer: a
Explanation: Undo erases all the changes and redo makes the deleted changes.

8. Shadow paging has
a) no redo
b) no undo
c) redo but no undo
d) neither redo nor undo

View Answer

Answer: a
Explanation: Undo erases all the changes and redo makes the deleted changes.

9. For correct behaviour during recovery, undo and redo operation must be
a) Commutative
b) Associative
c) Idempotent
d) Distributive

View Answer

Answer: c
Explanation: Undo erases all the changes and redo makes the deleted changes.

10. If _____ are not obtained in undo operation it will cause problem in undo-phase.
a) Higher-level lock
b) Lower-level lock
c) Read only lock
d) Read write

View Answer

Answer: b
Explanation: Operations acquire lower-level locks while they execute, but release them when they complete; the corresponding transaction must however retain a higher-level lock in a two-phase manner to prevent concurrent transactions from executing conflicting actions.

Sanfoundry Global Education & Learning Series – Database Management System.

To practice all areas of Database Management System, here is complete set on 1000+ Multiple Choice Questions and Answers on Database Management System.

Participate in the Sanfoundry Certification contest to get free Certificate of Merit. Join our social networks below and stay updated with latest contests, videos, internships and jobs!

Telegram | Youtube | LinkedIn | Instagram | Facebook | Twitter | Pinterest

« Prev - Database Questions and Answers – ARIES
» Next - Database Questions and Answers – Remote Backup Systems

Recommended Posts:

1. C# Programming Examples on Functions
2. SQL Server Questions and Answers
3. C# Programming Examples on Matrix
4. Java Programming Examples on Utility Classes
5. C Programming Examples on Arrays
6. C Programming Examples on Matrix
7. C Programming Examples on Linked List
8. C# Programming Examples on Data Structures
9. Java Programming Examples on Multithreading
10. MongoDB Questions and Answers
11. RDBMS Questions and Answers
12. C Programming Examples on Stacks & Queues
13. C# Programming Examples on Strings

14. Mechanical Operations Questions and Answers
15. C# Programming Examples on Threads
16. Heat Transfer Operations Questions and Answers
17. MySQL Database Questions and Answers
18. C Programming Examples on Bitwise Operations
19. Oracle Database Questions and Answers
20. Database Management System Questions and Answers

Manish Bhojasia, a technology veteran with 20+ years @ Cisco & Wipro, is Founder and CTO at Sanfoundry. He is Linux Kernel Developer & SAN Architect and is passionate about competency developments in these areas. He lives in Bangalore and delivers focused training sessions to IT professionals in Linux Kernel, Linux Debugging, Linux Device Drivers, Linux Networking, Linux Storage, Advanced C Programming, SAN Storage Technologies, SCSI Internals & Storage Protocols such as iSCSI & Fiber Channel. Stay connected with him @ LinkedIn | Youtube | Instagram | Facebook | Twitter

Subscribe