Database Questions and Answers – Transaction Concept

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Transaction Concept”.

1. Consider money is transferred from (1)account-A to account-B and (2) account-B to account-A. Which of the following form a transaction?
a) Only 1
b) Only 2
c) Both 1 and 2 individually
d) Either 1 or 2

View Answer

Answer: c
Explanation: The term transaction refers to a collection of operations that form a single logical unit of work.

2. A transaction is delimited by statements (or function calls) of the form _____
a) Begin transaction and end transaction
b) Start transaction and stop transaction
c) Get transaction and post transaction
d) Read transaction and write transaction

View Answer

Answer: a
Explanation: The transaction consists of all operations executed between the begin transaction and end transaction.

3. Identify the characteristics of transactions
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

View Answer

Answer: d
Explanation: Because of the above three properties, transactions are an ideal way of structuring interaction with a database.

4. Which of the following has “all-or-none” property?
a) Atomicity
b) Durability
c) Isolation

d) All of the mentioned

View Answer

Answer: a
Explanation: Either all operations of the transaction are reflected properly in the database, or none are.

5. The database system must take special actions to ensure that transactions operate properly without interference from concurrently executing database statements. This property is referred to as
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

View Answer

Answer: c
Explanation: Even though multiple transactions may execute concurrently, the system guarantees that, for every pair of transactions Ti and Tj, it appears to Ti that either Tj finished execution before Ti started or Tj started execution after Ti finished.

6. The property of a transaction that persists all the crashes is
a) Atomicity
b) Durability
c) Isolation
d) All of the mentioned

View Answer

Answer: b
Explanation: After a transaction completes successfully, the changes it has made to the database persist, even if there are system failures.

7. _____ states that only valid data will be written to the database.
a) Consistency
b) Atomicity
c) Durability
d) Isolation

View Answer

Answer: a
Explanation: If for some reason, a transaction is executed that violates the database's consistency rules, the entire transaction will be rolled back and the database will be restored to a state consistent with those rules.

8. Transaction processing is associated with everything below except
a) Producing detail summary or exception reports
b) Recording a business activity
c) Confirming an action or triggering a response
d) Maintaining a data

View Answer

Answer: c
Explanation: Collections of operations that form a single logical unit of work are called

transactions.

9. The Oracle RDBMS uses the ____ statement to declare a new transaction start and its properties.
a) BEGIN
b) SET TRANSACTION
c) BEGIN TRANSACTION
d) COMMIT

View Answer

Answer: b
Explanation: Commit is used to store all the transactions.

10. ____ means that the data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.
a) Consistency
b) Atomicity
c) Durability
d) Isolation

View Answer

Answer: d
Explanation: Even though multiple transactions may execute concurrently, the system guarantees that, for every pair of transactions Ti and Tj, it appears to Ti that either Tj finished execution before Ti started or Tj started execution after Ti finished.

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Database Questions & Answers – A Simple Transaction Model

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “A Simple Transaction Model”.

1. In SQL, which command is used to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction?
a) CREATE PACKAGE
b) CREATE SCHEMA
c) CREATE CLUSTER
d) All of the mentioned

View Answer

Answer: b
Explanation: A database schema of a database system is its structure described in a formal language supported by the database management system and refers to the organization of data as a blueprint of how a database is constructed.

2. In SQL, the CREATE TABLESPACE is used
a) To create a place in the database for storage of scheme objects, rollback segments, and naming the data files to comprise the tablespace
b) To create a database trigger
c) To add/rename data files, to change storage
d) All of the mentioned

View Answer

Answer: a
Explanation: Triggers are used to initialize the actions for an activity.

3. Which character function can be used to return a specified portion of a character string?
a) INSTR
b) SUBSTRING
c) SUBSTR
d) POS

View Answer

Answer: c
Explanation: SUBSTR are used to match the particular characters in a string.

4. Which of the following is TRUE for the System Variable $date$?
a) Can be assigned to a global variable
b) Can be assigned to any field only during design time
c) Can be assigned to any variable or field during run time

d) Can be assigned to a local variable

View Answer

Answer: b
Explanation: A database schema of a database system is its structure described in a formal language supported by the database management system and refers to the organization of data as a blueprint of how a database is constructed.

5. What are the different events in Triggers?
a) Define, Create
b) Drop, Comment
c) Insert, Update, Delete
d) Select, Commit

View Answer

Answer: c
Explanation: A database trigger is a procedural code that is automatically executed in response to certain events on a particular table or view in a database.

6. Which is the subset of SQL commands used to manipulate Oracle Database Structures, including tables?
a) Data Definition Language
b) Data Manipulation Language
c) Data Described Language

d) Data Retrieval Language

View Answer

Answer: a
Explanation: DDL are used to define schema and table characters.

7. The SQL statement SELECT SUBSTR('123456789', INSTR('abcabcabc','b'), 4) FROM EMP; prints
a) 6789
b) 2345
c) 1234
d) 456789

View Answer

Answer: b
Explanation: SUBSTR are used to match the particular characters in a string.

8. Which of the following SQL command can be used to modify existing data in a database table?
a) MODIFY
b) UPDATE
c) CHANGE
d) NEW

View Answer

Answer: b
Explanation: Syntax : UPDATE table_name

SET column1=value1,column2=value2,...
WHERE some_column=some_value; .

9. When SQL statements are embedded inside 3GL, we call such a program as
a) Nested query
b) Nested programming
c) Distinct query
d) Embedded SQL

View Answer

Answer: d
Explanation: SQL-99 is the most recent version of standard SQL prescribed by the ANSI.

10. _____ provides option for entering SQL queries as execution time, rather than at the development stage.
a) PL/SQL
b) SQL*Plus
c) SQL
d) Dynamic SQL

View Answer

Answer: d
Explanation: Dynamic SQL enables you to write programs that reference SQL statements whose full text is not known until runtime.

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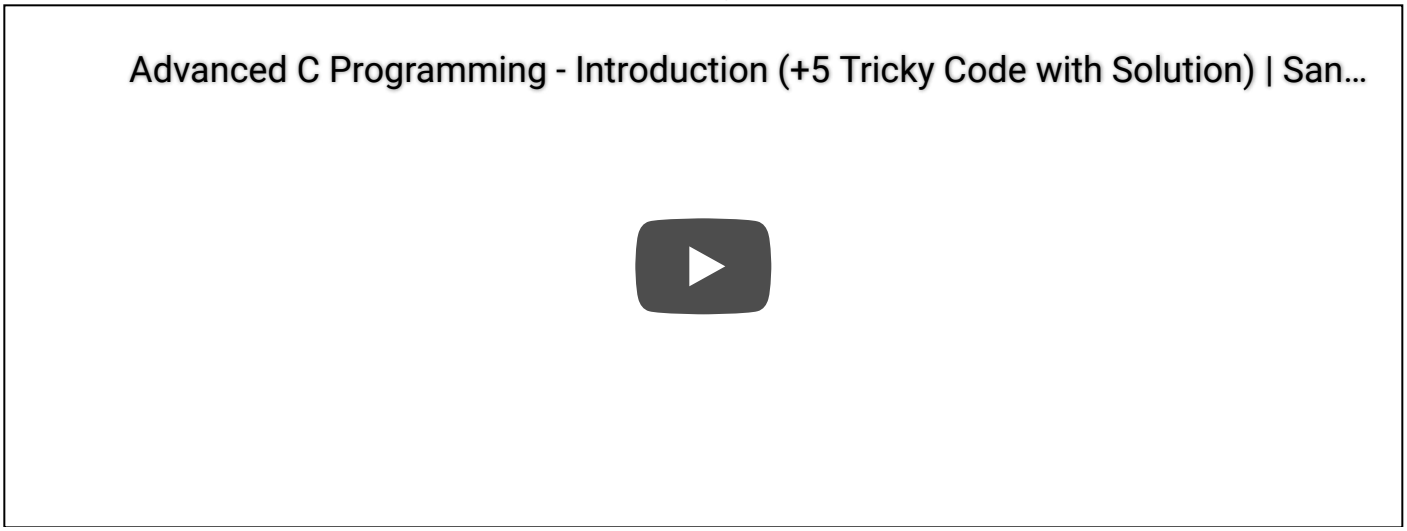

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Database Questions and Answers – Transaction Atomicity and Durability

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Transaction Atomicity and Durability”.

1. A transaction may not always complete its execution successfully. Such a transaction is termed
a) Aborted
b) Terminated
c) Closed
d) All of the mentioned

View Answer

Answer: a
Explanation: If we are to ensure the atomicity property, an aborted transaction must have effect on the state of the database.

2. If an transaction is performed in a database and committed, the changes are taken to the previous state of transaction by
a) Flashback
b) Rollback
c) Both Flashback and Rollback
d) Cannot be done

View Answer

Answer: d
Explanation: Once committed the changes cannot be rolled back.

3. Each modification done in database transaction are first recorded into the
a) Harddrive
b) Log
c) Disk
d) Datamart

View Answer

Answer: b
Explanation: After commit is issued the data are stored in a database and stored in drive.

4. When the transaction finishes the final statement the transaction enters into
a) Active state
b) Committed state
c) Partially committed state
d) Abort state

View Answer

Answer: c
Explanation: The commit statement has to be issued to enter into committed state.

5. The name of the transaction file shall be provided by the operator and the file that contains the edited transactions ready for execution shall be called
a) Batch. Exe
b) Trans. Exe
c) Opt. Exe
d) Edit.Exe

View Answer

Answer: c
Explanation: Transactions has to be managed by the executable files.

6. Which of the following is an atomic sequence of database actions?
a) Transaction
b) Concurrency
c) Relations
d) All of the mentioned

View Answer

Answer: a
Explanation: Transaction is a collection of operations that provides single logical function in database.

7. If the state of the database no longer reflects a real state of the world that the database is supposed to capture, then such a state is called

a) Consistent state

b) Parallel state

c) Atomic state

d) Inconsistent state

View Answer

Answer: d

Explanation: If the state of the database no longer reflects a real state of the world that the database is supposed to capture, then such a state is called in a consistent state.

8. _____ means that data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.

a) Serializability

b) Atomicity

c) Isolation

d) Time stamping

View Answer

Answer: c

Explanation: Isolation means that data used during the execution of a transaction can't be u by a second transaction until the first one is completed.

Database Questions and Answers – Transactions as SQL Statements

« Prev Next »

This set of Basic Database Questions and Answers focuses on “Transactions as SQL Statements”.

1. Which of the following is not a property of transactions?
a) Atomicity
b) Concurrency
c) Isolation
d) Durability

View Answer

Answer: d
Explanation: ACID properties are the properties of transactions.

2. SNAPSHOT is used for (DBA)
a) Synonym
b) Tablespace
c) System server
d) Dynamic data replication

View Answer

Answer: d
Explanation: Snapshot gets the instance of the database at that time.

3. Isolation of the transactions is ensured by
a) Transaction management
b) Application programmer
c) Concurrency control
d) Recovery management

View Answer

Answer: c
Explanation: ACID properties are the properties of transactions.

4. Constraint checking can be disabled in existing _____ and _____ constraints so that any data you modify or add to the table is not checked against the constraint.
a) CHECK, FOREIGN KEY
b) DELETE, FOREIGN KEY
c) CHECK, PRIMARY KEY
d) PRIMARY KEY, FOREIGN KEY

View Answer

Answer: a
Explanation: Check and foreign constraints are used to constraint the table data.

5. Problems occurs if we don't implement a proper locking strategy
a) Dirty reads
b) Phantom reads
c) Lost updates
d) Unrepeatable reads

View Answer

Answer: d
Explanation: In a concurrent execution of these transactions, it is intuitively clear that they conflict, but this is a conflict not captured by our simple model. This situation is referred to as the phantom phenomenon, because a conflict may exist on "phantom" data.

6. Which of the following fixed database roles can add or remove user IDs?
a) db_accessadmin
b) db_securityadmin
c) db_setupadmin
d) db_sysadmin

View Answer

Answer: a
Explanation: The database can be accessed by assigning the roles.

7. By default sql server has _____ isolation level
a) READ COMMITTED
b) READ UNCOMMITTED
c) SERIALIZABLE
d) REPEATABLE READ

View Answer

Answer: a
Explanation: Read committed is used to commit the default read operation.

8. Which of the following statements is/are not true for SQL profiler?
a) Enables you to monitor events
b) Check if rows are being inserted properly
c) Check the performance of a stored procedure
d) ALL of the mentioned

View Answer

Answer: c
Explanation: Read committed is used to commit the default read operation.

9. Which of the following is the original purpose of SQL?
a) To specify the syntax and semantics of SQL data definition language
b) To specify the syntax and semantics of SQL manipulation language
c) To define the data structures

d) All of the mentioned

View Answer

Answer: d
Explanation: Read committed is used to commit the default read operation.

10. SQL can be used to:
a) Create database structures only
b) Query database data only
c) Modify database data only
d) All of the mentioned

View Answer

Answer: d
Explanation: In a concurrent execution of these transactions, it is intuitively clear that they conflict, but this is a conflict not captured by our simple model. This situation is referred to as the phantom phenomenon, because a conflict may exist on “phantom” data.

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Database Questions and Answers – Deadlocks

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Deadlocks”.

1. A system is in a _____ state if there exists a set of transactions such that every transaction in the set is waiting for another transaction in the set.
a) Idle
b) Waiting
c) Deadlock
d) Ready

View Answer

Answer: c
Explanation: When one data item is waiting for another data item in a transaction then system is in deadlock.

2. The deadlock state can be changed back to stable state by using _____ statement.
a) Commit
b) Rollback
c) Savepoint
d) Deadlock

View Answer

Answer: b
Explanation: Rollback is used to rollback to the point before lock is obtained.

3. What are the ways of dealing with deadlock?
a) Deadlock prevention
b) Deadlock recovery
c) Deadlock detection
d) All of the mentioned

View Answer

Answer: d
Explanation: Deadlock prevention is also called as deadlock recovery. Prevention is commonly used if the probability that the system would enter a deadlock state is relatively high; otherwise, detection and recovery are more efficient.

4. When transaction Ti requests a data item currently held by Tj, Ti is allowed to wait only if it has a timestamp smaller than that of Tj (that is, Ti is older than Tj). Otherwise, Ti is rolled back (dies). This is
a) Wait-die
b) Wait-wound
c) Wound-wait

d) Wait

View Answer

Answer: a
Explanation: The wait–die scheme is a non-preemptive technique.

5. When transaction Ti requests a data item currently held by Tj, Ti is allowed to wait only if it has a timestamp larger than that of Tj (that is, Ti is younger than Tj). Otherwise, Tj is rolled back (Tj is wounded by Ti). This is
a) Wait-die
b) Wait-wound
c) Wound-wait
d) Wait

View Answer

Answer: c
Explanation: The wound–wait scheme is a preemptive technique. It is a counterpart to the wait–die scheme.

6. The situation where the lock waits only for a specified amount of time for another lock to be released is
a) Lock timeout
b) Wait-wound
c) Timeout

d) Wait

View Answer

Answer: a
Explanation: The timeout scheme is particularly easy to implement, and works well if transactions are short and if longwaits are likely to be due to deadlocks.

7. The deadlock in a set of a transaction can be determined by
a) Read-only graph
b) Wait graph
c) Wait-for graph
d) All of the mentioned

View Answer

Answer: a
Explanation: Each transaction involved in the cycle is said to be deadlocked.

8. A deadlock exists in the system if and only if the wait-for graph contains a _____
a) Cycle
b) Direction
c) Bi-direction
d) Rotation

View Answer

Answer: a
Explanation: Each transaction involved in the cycle is said to be deadlocked.

9. Selecting the victim to be rollbacked to the previous state is determined by the minimum cost. The factors determining cost of rollback is
a) How long the transaction has computed, and how much longer the transaction will compute before it completes its designated task
b) How many data items the transaction has used
c) How many more data items the transaction needs for it to complete
d) All of the mentioned

View Answer

Answer: d
Explanation: We should roll back those transactions that will incur the minimum cost.

10. _____ rollback requires the system to maintain additional information about the state of all the running transactions.
a) Total
b) Partial
c) Time
d) Commit

View Answer

Answer: b
Explanation: In total rollback abort the transaction and then restart it.

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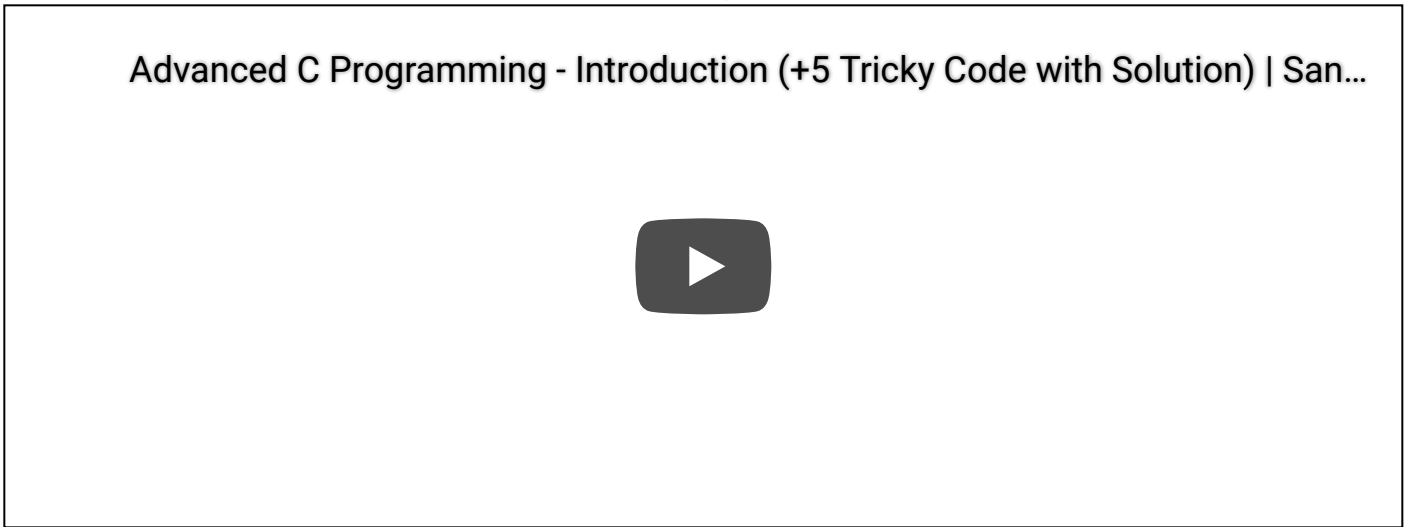

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Database Questions and Answers – Concurrency in Index Structures

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This set of Database Question Bank focuses on “Concurrency in Index Structures”.

1. The method of access that uses key transformation is called as
a) Direct
b) Hash
c) Random
d) Sequential

View Answer

Answer: b
Explanation: Hash technique uses particular hash key value.

2. Why do we need concurrency control on B+ trees ?
a) To remove the unwanted data
b) To easily add the index elements
c) To maintain accuracy of index
d) All of the mentioned

View Answer

Answer: c
Explanation: Indices do not have to be treated like other database structures.

3. How many techniques are available to control concurrency on B+ trees?
a) One
b) Three
c) Four
d) None of the mentioned

View Answer

Answer: d
Explanation: Two techniques are present.

4. In crabbing protocol locking
a) Goes down the tree and back up
b) Goes up the tree and back down
c) Goes down the tree and releases
d) Goes up the tree and releases

View Answer

Answer: a
Explanation: It moves in a crab like manner.

5. The deadlock can be handled by
a) Removing the nodes that are deadlocked
b) Restarting the search after releasing the lock
c) Restarting the search without releasing the lock
d) Resuming the search

View Answer

Answer: b
Explanation: Crabbing protocol moves in a crab like manner.

6. In crabbing protocol, the lock obtained on the root node is in _____ mode.
a) Shared
b) Exclusive
c) Read only
d) None of the mentioned

View Answer

Answer: a
Explanation: Crabbing protocol moves in a crab like manner down the index tree.

7. If needed to split a node or coalesce it with its siblings, or redistribute key values betwe siblings, the crabbing protocol locks the parent of the node in _____ mode.
a) Shared
b) Exclusive
c) Read only

d) None of the mentioned

View Answer

Answer: b
Explanation: Crabbing protocol moves in a crab like manner down the index tree.

8. In crabbing protocol to inset or delete a key value the leaf node has to be locked in _____ mode.
a) Shared
b) Exclusive
c) Read only
d) None of the mentioned

View Answer

Answer: b
Explanation: Crabbing protocol moves in a crab like manner down the index tree.

9. B-link tree requires a pointer to its _____ sibling.
a) Upper
b) Lower
c) Right
d) Left

View Answer

Answer: c
Explanation: This pointer is required because a lookup that occurs while a node is being split may have to search not only that node but also that node's right sibling.

10. Instead of locking index leaf nodes in a two-phase manner, some index concurrency-control schemes use _____ on individual key values, allowing other key values to be inserted or deleted from the same leaf.
a) B+ tree locking
b) Link level locking
c) Key-value locking
d) Next value locking

View Answer

Answer: c
Explanation: Key-value locking thus provides increased concurrency.

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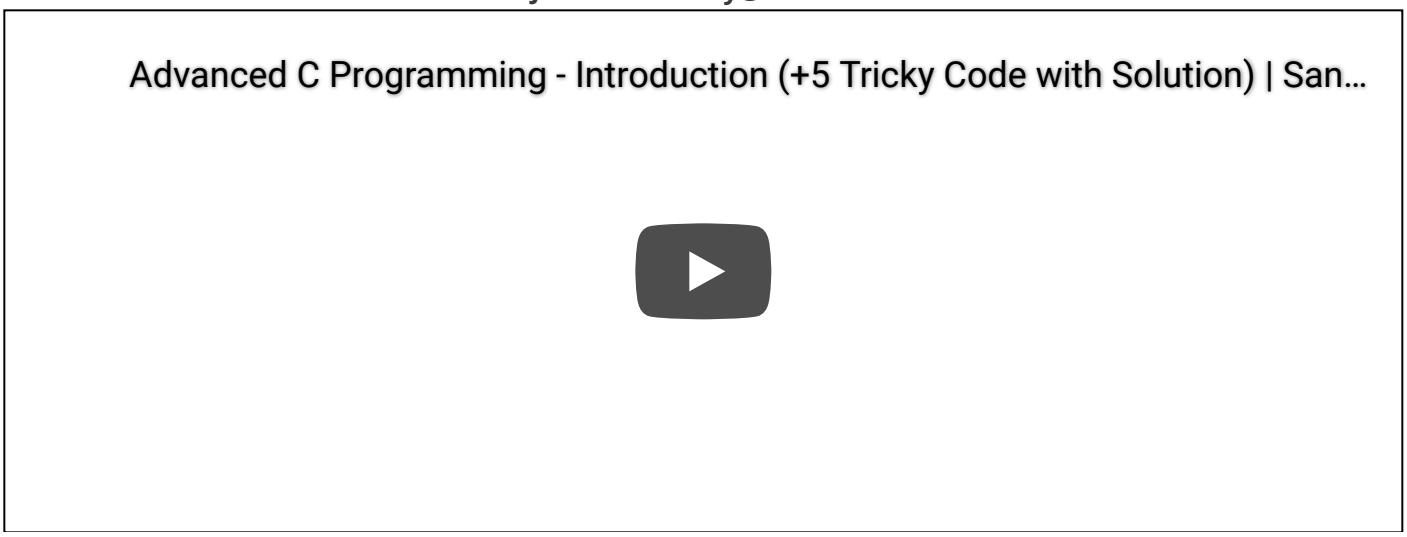

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Database Questions and Answers – Lock-Based Protocols

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Lock-Based Protocols”.

1. In order to maintain transactional integrity and database consistency, what technology does a DBMS deploy?
a) Triggers
b) Pointers
c) Locks
d) Cursors

View Answer

Answer: c
Explanation: Locks are used to maintain database consistency.

2. A lock that allows concurrent transactions to access different rows of the same table is known as a

a) Database-level lock
b) Table-level lock
c) Page-level lock
d) Row-level lock

View Answer

Answer: d
Explanation: Locks are used to maintain database consistency.

3. Which of the following are introduced to reduce the overheads caused by the log-based recovery?

a) Checkpoints
b) Indices
c) Deadlocks
d) Locks

View Answer

Answer: a
Explanation: Checkpoints are introduced to reduce overheads caused by the log-based recovery.

4. Which of the following protocols ensures conflict serializability and safety from deadlocks?

a) Two-phase locking protocol
b) Time-stamp ordering protocol
c) Graph based protocol
d) None of the mentioned

View Answer

Answer: b
Explanation: Time-stamp ordering protocol ensures conflict serializability and safety from deadlocks.

5. Which of the following is the block that is not permitted to be written back to the disk?
a) Dead code
b) Read only
c) Pinned
d) Zapped

View Answer

Answer: c
Explanation: A block that is not permitted to be written back to the disk is called pinned.

6. If transaction Ti gets an explicit lock on the file Fc in exclusive mode, then it has an _____ on all the records belonging to that file.
a) Explicit lock in exclusive mode
b) Implicit lock in shared mode
c) Explicit lock in shared mode
d) Implicit lock in exclusive mode

View Answer

Answer: d
Explanation: If transaction Ti gets an explicit lock on the file Fc in exclusive mode, then it has an implicit lock in exclusive mode on all the records belonging to that file.

7. Which refers to a property of computer to run several operation simultaneously and possible as computers await response of each other

a) Concurrency
b) Deadlock
c) Backup
d) Recovery

View Answer

Answer: a
Explanation: Concurrency is a property of systems in which several computations are executing simultaneously, and potentially interacting with each other.

8. All lock information is managed by a _____ which is responsible for assigning and policing the locks used by the transactions.

a) Scheduler
b) DBMS
c) Lock manager
d) Locking agent

View Answer

Answer: c
Explanation: A distributed lock manager (DLM) provides distributed software applications wit means to synchronize their accesses to shared resources.

9. The ____ lock allows concurrent transactions to access the same row as long as they require the use of different fields within that row.
a) Table-level
b) Page-level
c) Row-level
d) Field-level

View Answer

Answer: d
Explanation: Lock is limited to the attributes of the relation.

10. Which of the following is a procedure for acquiring the necessary locks for a transaction where all necessary locks are acquired before any are released?
a) Record controller
b) Exclusive lock
c) Authorization rule
d) Two phase lock

View Answer

Answer: d
Explanation: Two-phase lock is a procedure for acquiring the necessary locks for a transaction where all necessary locks are acquired before any are released.

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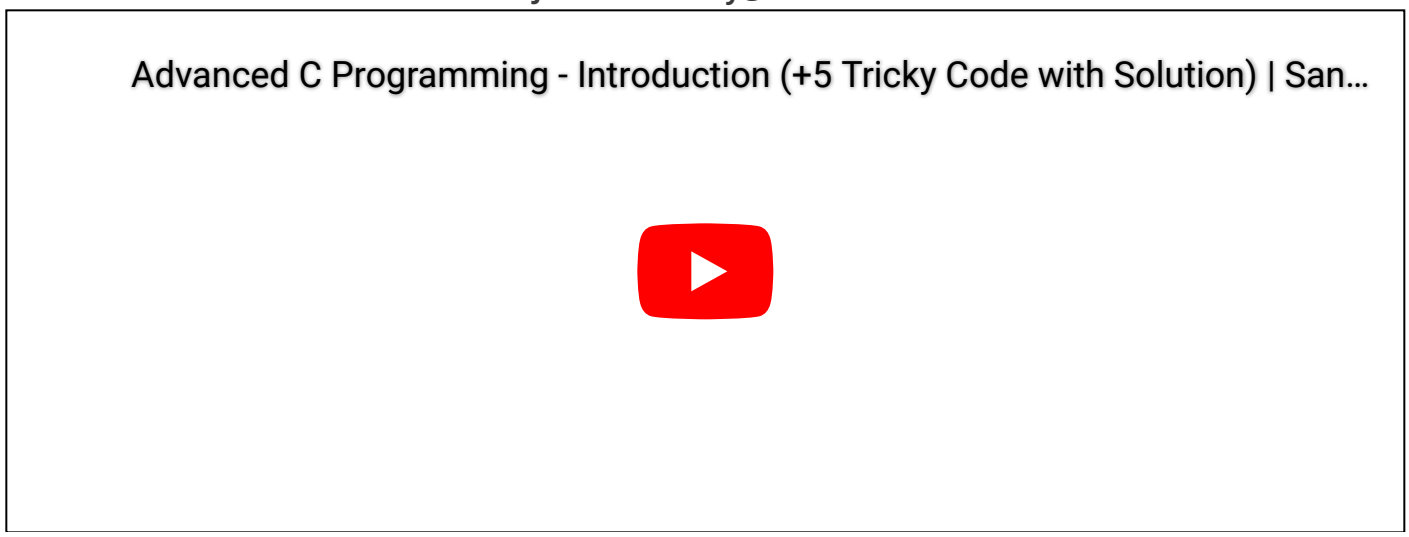

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20. **Database Questions and Answers – Recovery**

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Database Questions and Answers – Recovery

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Recovery”.

1. The log is a sequence of _____ recording all the update activities in the database.
a) Log records
b) Records
c) Entries
d) Redo

View Answer

Answer: a
Explanation: The most widely used structure for recording database modifications is the log.

2. In the _____ scheme, a transaction that wants to update the database first creates a complete copy of the database.
a) Shadow copy
b) Shadow Paging
c) Update log records
d) All of the mentioned

View Answer

Answer: a
Explanation: If at any point the transaction has to be aborted, the system merely deletes the new copy. The old copy of the database has not been affected.

3. The _____ scheme uses a page table containing pointers to all pages; the page table itself and all updated pages are copied to a new location.
a) Shadow copy
b) Shadow Paging
c) Update log records
d) All of the mentioned

View Answer

Answer: b
Explanation: Any page which is not updated by a transaction is not copied, but instead the new page table just stores a pointer to the original page.

4. The current copy of the database is identified by a pointer, called _____ which is stored on disk.
a) Db-pointer
b) Update log
c) Update log records

d) All of the mentioned

View Answer

Answer: a
Explanation: Any page which is not updated by a transaction is not copied, but instead the new page table just stores a pointer to the original page.

5. If a transaction does not modify the database until it has committed, it is said to use the _____ technique.
a) Deferred-modification
b) Late-modification
c) Immediate-modification
d) Undo

View Answer

Answer: a
Explanation: Deferred modification has the overhead that transactions need to make local copies of all updated data items; further, if a transaction reads a data item that it has updated, it must read the value from its local copy.

6. If database modifications occur while the transaction is still active, the transaction is said to u the _____technique.
a) Deferred-modification
b) Late-modification
c) Immediate-modification

d) Undo

View Answer

Answer: c
Explanation: We say a transaction modifies the database if it performs an update on a disk buffer, or on the disk itself; updates to the private part of main memory do not count as database modifications.

7. _____ using a log record sets the data item specified in the log record to the old value.
a) Deferred-modification
b) Late-modification
c) Immediate-modification
d) Undo

View Answer

Answer: d
Explanation: Undo brings the previous contents.

8. In the _____ phase, the system replays updates of all transactions by scanning the log forward from the last checkpoint.
a) Repeating
b) Redo
c) Replay
d) Undo

View Answer

Answer: b
Explanation: Undo brings the previous contents.

9. The actions which are played in the order while recording it is called _____ history.
a) Repeating
b) Redo
c) Replay
d) Undo

View Answer

Answer: a
Explanation: Undo brings the previous contents.

10. A special redo-only log record < Ti, Xj, V1> is written to the log, where V1 is the value being restored to data item Xj during the rollback. These log records are sometimes called
a) Log records
b) Records
c) Compensation log records
d) Compensation redo records

View Answer

Answer: c
Explanation: Such records do not need undo information since we never need to undo such an undo operation.

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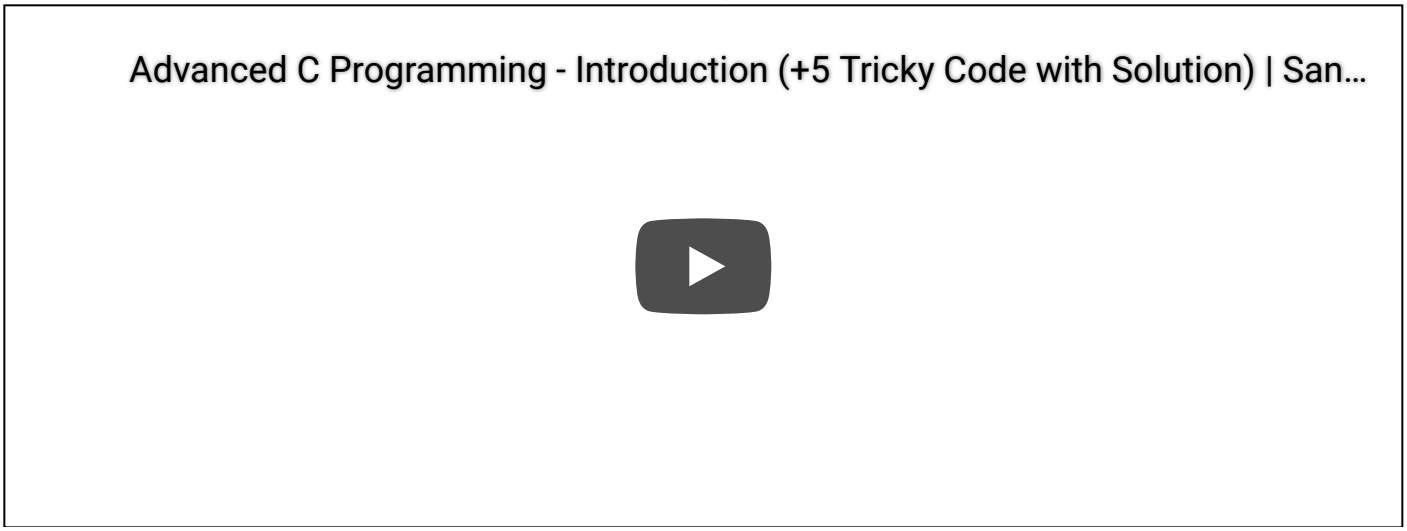

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Database Questions and Answers – Buffer Management

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Buffer Management”.

1. In order to reduce the overhead in retrieving the records from the storage space we use
a) Logs
b) Log buffer
c) Medieval space
d) Lower records

View Answer

Answer: b
Explanation: The output to stable storage is in units of blocks.

2. The order of log records in the stable storage _____ as the order in which they were written to the log buffer.
a) Must be exactly the same
b) Can be different
c) Is opposite
d) Can be partially same

View Answer

Answer: a
Explanation: As a result of log buffering, a log record may reside in only main memory (volatile storage) for a considerable time before it is output to stable storage.

3. Before a block of data in main memory can be output to the database, all log records pertaining to data in that block must have been output to stable storage. This is
a) Read-write logging
b) Read-ahead logging
c) Write-ahead logging
d) None of the mentioned

View Answer

Answer: c
Explanation: The WAL rule requires only that the undo information in the log has been output to stable storage, and it permits the redo information to be written later.

4. Writing the buffered log to _____ is sometimes referred to as a log force.
a) Memory
b) Backup
c) Redo memory

d) Disk

View Answer

Answer: d
Explanation: If there are insufficient log records to fill the block, all log records in main memory are combined into a partially full block and are output to stable storage.

5. The _____ policy, allows a transaction to commit even if it has modified some blocks that have not yet been written back to disk.
a) Force
b) No-force
c) Steal
d) No-steal

View Answer

Answer: b
Explanation: No-force policy allows faster commit of transactions.

6. _____ policy allows multiple updates to accumulate on a block before it is output to stable storage, which can reduce the number of output operations greatly for frequently updated blocks.
a) Force
b) No-force
c) Steal
d) No-steal

View Answer

Answer: b
Explanation: No-force policy allows faster commit of transactions.

7. The _____ policy, allows the system to write modified blocks to disk even if the transactions that made those modifications have not all committed.
a) Force
b) No-force
c) Steal
d) No-steal

View Answer

Answer: c
Explanation: The no-steal policy does not work with transactions that perform a large number of updates.

8. Locks on buffer blocks are unrelated to locks used for concurrency-control of transactions, and releasing them in a non-two-phase manner does not have any implications on transaction serializability. This is
a) Latches
b) Swap Space
c) Dirty Block
d) None of the mentioned

View Answer

Answer: a
Explanation: These locks, and other similar locks that are held for a short duration.

9. The _____ contains a list of blocks that have been updated in the database buffer.
a) Latches
b) Swap Space
c) Dirty Block
d) None of the mentioned

View Answer

Answer: c
Explanation: Dirty blocks are those that have been updated in memory, and the disk version is not up-to-date.

10. The operating system reserves space on disk for storing virtual-memory pages that are not currently in main memory; this space is called
a) Latches
b) Swap Space
c) Dirty Block
d) None of the mentioned

View Answer

Answer: b
Explanation: Almost all current-generation operating systems retain complete control of virtual memory.

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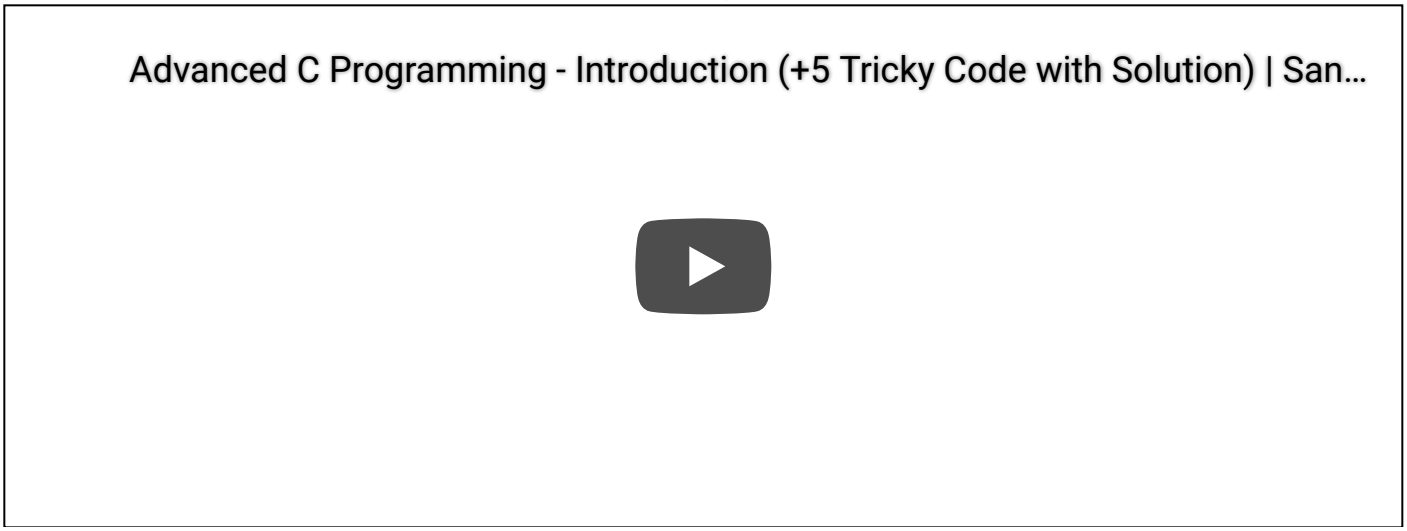

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Database Questions and Answers – Failure with Nonvolatile Storage

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Failure with Nonvolatile Storage”.

1. The silicon chips used for data processing are called
a) RAM chips
b) ROM chips
c) Micro processors
d) PROM chips

View Answer

Answer: d
Explanation: PROM is Programmable Read Only Memory.

2. Which of the following is used for manufacturing chips?
a) Control bus
b) Control unit
c) Parity unit
d) Semiconductor

View Answer

Answer: d
Explanation: A semiconductor is a material which has electrical conductivity between that of a conductor such as copper and that of an insulator such as glass.

3. What was the name of the first commercially available microprocessor chip?
a) Intel 308
b) Intel 33
c) Intel 4004
d) Motorola 639

View Answer

Answer: c
Explanation: The Intel 4004 is a 4-bit central processing unit (CPU) released by Intel Corporation in 1971

4. The magnetic storage chip used to provide non-volatile direct access storage of data and that have no moving parts are known as
a) Magnetic core memory
b) Magnetic tape memory
c) Magnetic disk memory

d) Magnetic bubble memory

View Answer

Answer: d
Explanation: Bubble domain visualization by using CMOS-MagView.

5. The ALU of a computer normally contains a number of high speed storage element called
a) Semiconductor memory
b) Registers
c) Hard disks
d) Magnetic disk

View Answer

Answer: b
Explanation: External control unit tells the ALU what operation to perform on that data, and then the ALU stores its result into an output register.

6. Which of the following is used only for data entry and storage, and never for processing?
a) Mouse
b) Dumb terminal
c) Micro computer
d) Dedicated data entry system

View Answer

Answer: b
Explanation: Dumb terminals are those that can interpret a limited number of control codes.

7. Non-volatile storage needs to have a _____ where the loses in future can be recovered.
a) Dump
b) Recover place
c) Disk
d) Redo plan

View Answer

Answer: a
Explanation: The basic scheme is to dump the entire contents of the database to stable storage periodically—say, once per day.

8. A dump of the database contents is also referred to as an _____ dump.
a) Archival
b) Fuzzy
c) SQL
d) All of the mentioned

View Answer

Answer: a
Explanation: We can archive the dumps and use them later to examine old states of the database.

9. _____ dump, writes out SQL DDL statements and SQL insert statements to a file, which can then be reexecuted to re-create the database.
a) Archival
b) Fuzzy
c) SQL
d) All of the mentioned

View Answer

Answer: c
Explanation: Such dumps are useful when migrating data to a different instance of the database, or to a different version of the database software, since the physical locations and layout may be different in the other database instance or database software version.

10. _____ dump schemes have been developed that allow transactions to be active while the dump is in progress.
a) Archival
b) Fuzzy
c) SQL
d) All of the mentioned

View Answer

Answer: b
Explanation: The simple dump procedure described here is costly and so fuzzy dump is used.

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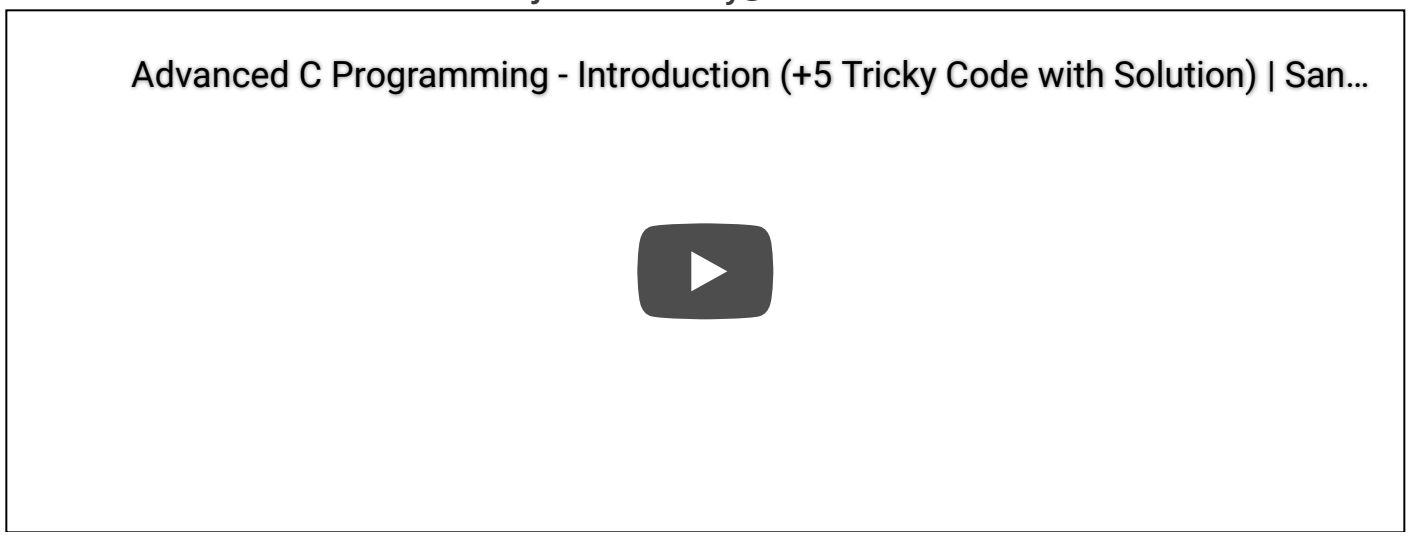

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Database Questions and Answers – ARIES

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “ARIES”.

1. ARIES uses a _____ to identify log records, and stores it in database pages.
a) Log sequence number
b) Log number
c) Lock number
d) Sequence

View Answer

Answer: b
Explanation: LSN is used to identify which operations have been applied to a database page.

2. ARIES supports _____ operations, which are physical in that the affected page is physically identified, but can be logical within the page.
a) Physiological redo
b) Physiological undo
c) Logical redo
d) Logical undo

View Answer

Answer: a
Explanation: The deletion of a record from a page may result in many other records in the page being shifted, if a slotted page structure is used.

3. _____ is used to minimize unnecessary redos during recovery.
a) Dirty page table
b) Page table
c) Dirty redo
d) All of the mentioned

View Answer

Answer: a
Explanation: Dirty pages are those that have been updated in memory, and the disk version is not up-to-date.

4. _____ scheme that records only information about dirty pages and associated information and does not even require of writing dirty pages to disk.
a) Fuzzy logic
b) Checkpoints
c) Fuzzy-checkpoint
d) Logical checkpoint

View Answer

Answer: c
Explanation: It flushes dirty pages in the background, continuously, instead of writing them during checkpoints.

5. Whenever an update operation occurs on a page, the operation stores the LSN of its log record in the _____ field of the page.
a) LSN
b) ReadLSN
c) PageLSN
d) RedoLSN

View Answer

Answer: c
Explanation: Each page maintains an identifier called the PageLSN.

6. There are special redo-only log records generated during transaction rollback, called _____ in ARIES.
a) Compensation log records
b) Read log records
c) Page log records
d) Redo log records

View Answer

Answer: a
Explanation: These serve the same purpose as the redo-only log records in our earlier recovery

scheme.

7. The _____ contains a list of pages that have been updated in the database buffer.
a) Dirty page table
b) Page table
c) Dirty redo
d) All of the mentioned

View Answer

Answer: a
Explanation: Dirty pages are those that have been updated in memory, and the disk version is not up-to-date.

8. _____ determines which transactions to undo, which pages were dirty at the time of the crash, and the LSN from which the redo pass should start.
a) Analysis pass
b) Redo pass
c) Undo pass
d) None of the mentioned

View Answer

Answer: a
Explanation: The analysis pass finds the last complete checkpoint log record, and reads in the DirtyPageTable from this record.

9. _____ starts from a position determined during analysis, and performs a redo, repeating history, to bring the database to a state it was in before the crash.
a) Analysis pass
b) Redo pass
c) Undo pass
d) None of the mentioned

View Answer

Answer: b
Explanation: The redo pass repeats history by replaying every action that is not already reflected in the page on disk.

10. _____ rolls back all transactions that were incomplete at the time of crash.
a) Analysis pass
b) Redo pass
c) Undo pass
d) None of the mentioned

View Answer

Answer: c
Explanation: It performs a single backward scan of the log, undoing all transactions in undo-list.

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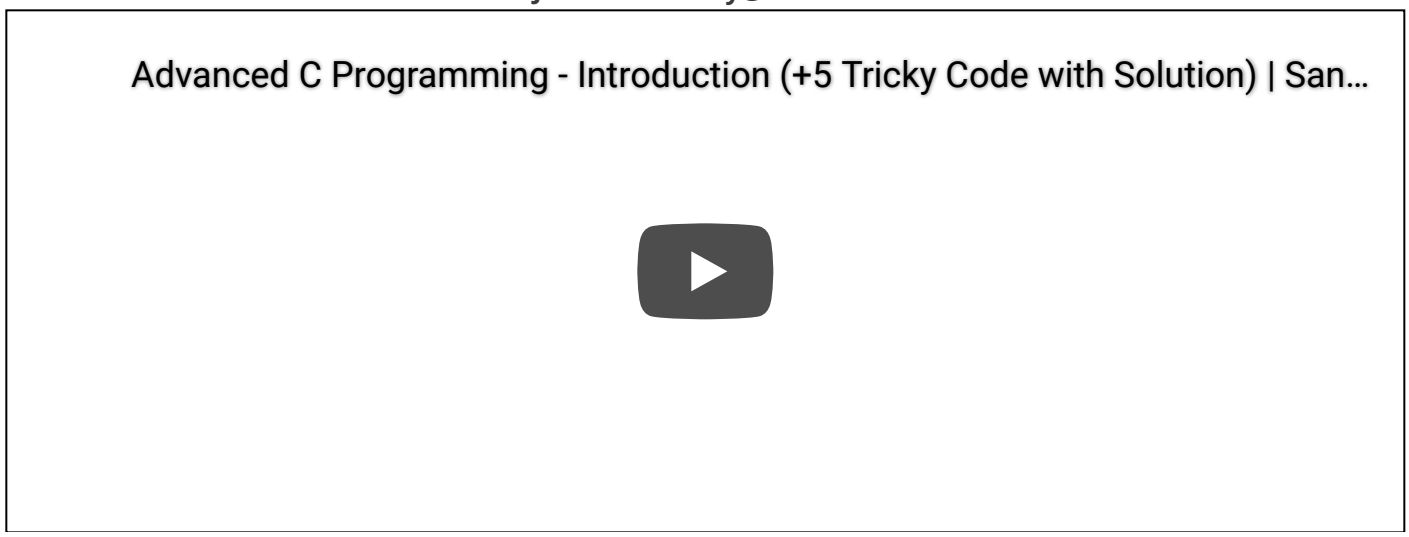

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Database Questions and Answers – Failure Classification

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Failure Classification”.

1. The recovery scheme must also provide
a) High availability
b) Low availability
c) High reliability
d) High durability

View Answer

Answer: a
Explanation: It must minimize the time for which the database is not usable after a failure.

2. Which one of the following is a failure to a system
a) Boot crash
b) Read failure
c) Transaction failure
d) All of the mentioned

View Answer

Answer: c
Explanation: Types of system failure are transaction failure, system crash and disk failure.

3. Which of the following belongs to transaction failure
a) Read error
b) Boot error
c) Logical error
d) All of the mentioned

View Answer

Answer: c
Explanation: Types of system transaction failure are logical and system error.

4. The system has entered an undesirable state (for example, deadlock), as a result of which a transaction cannot continue with its normal execution. This is
a) Read error
b) Boot error
c) Logical error
d) System error

View Answer

Answer: c
Explanation: The transaction, can be re-executed at a later time.

5. The transaction can no longer continue with its normal execution because of some internal condition, such as bad input, data not found, overflow, or resource limit exceeded. This is
a) Read error
b) Boot error
c) Logical error
d) System error

View Answer

Answer: c
Explanation: The transaction, can be re-executed at a later time.

6. The assumption that hardware errors and bugs in the software bring the system to a halt, but do not corrupt the nonvolatile storage contents, is known as the
a) Stop assumption
b) Fail assumption
c) Halt assumption
d) Fail-stop assumption

View Answer

Answer: d
Explanation: Well-designed systems have numerous internal checks, at the hardware and the

software level, that bring the system to a halt when there is an error. Hence, the fail-stop assumption is a reasonable one.

7. Which kind of failure loses its data in head crash or failure during a transfer operation.
a) Transaction failure
b) System crash
c) Disk failure
d) All of the mentioned

View Answer

Answer: c
Explanation: Copies of the data on other disks, or archival backups on tertiary media, such as DVD or tapes, are used to recover from the failure.

8. The failure occurred sufficiently early during the transfer that the destination block remains intact.
a) Partial Failure
b) Total failure
c) Successful completion
d) Data transfer failure

View Answer

Answer: a
Explanation: Copies of the data on other disks, or archival backups on tertiary media, such as DVD or tapes, are used to recover from the failure.

9. The database is partitioned into fixed-length storage units called
a) Parts
b) Blocks
c) Reads
d) Build

View Answer

Answer: b
Explanation: Blocks are the units of data transfer to and from disk, and may contain several data items.

10. Which of the following causes system to crash
a) Bug in software
b) Loss of volatile data
c) Hardware malfunction
d) All of the mentioned

View Answer

Answer: d
Explanation: The content of non-volatile storage remains intact, and is not corrupted.

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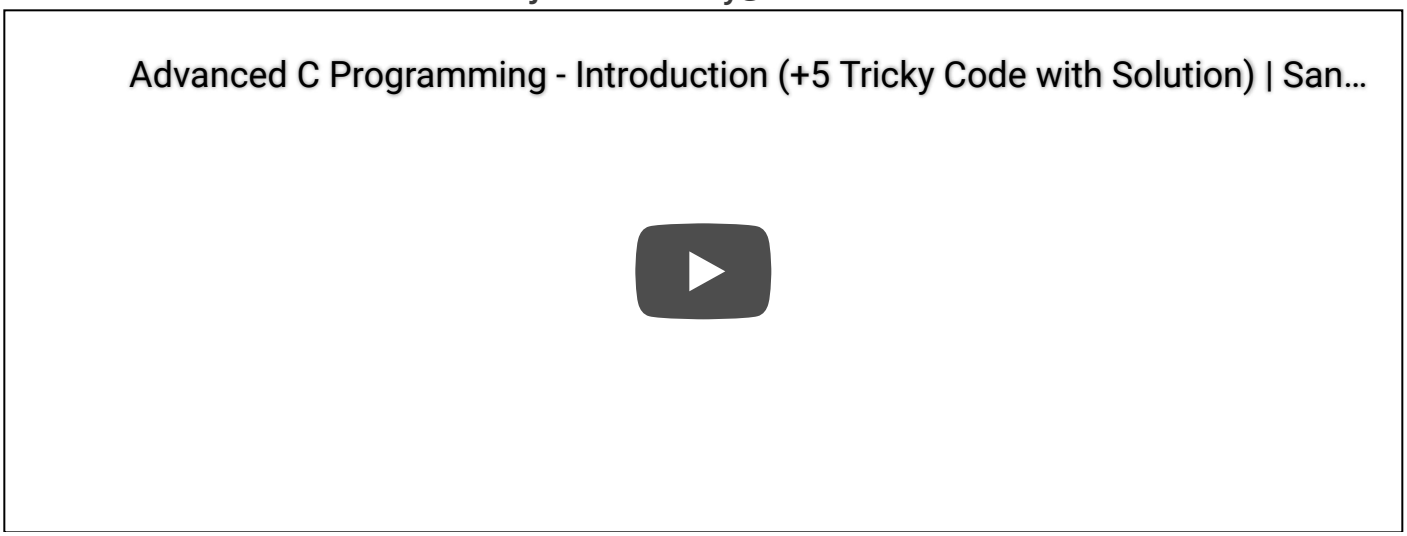

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Database Questions and Answers – Remote Backup Systems

« Prev

This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Remote Backup Systems”.

1. The remote backup site is sometimes also called the
a) Primary Site
b) Secondary Site
c) Tertiary Site
d) None of the mentioned

View Answer

Answer: b
Explanation: We can achieve high availability by performing transaction processing at one s called the primary site, and having a remote backup site where all the data from the primary site are replicated.

2. Remote backup system must be _____ with the primary site.
a) Synchronised
b) Separated
c) Connected
d) Detached but related

View Answer

Answer: a
Explanation: We can achieve high availability by performing transaction processing at one site, called the primary site, and having a remote backup site where all the data from the primary site are replicated.

3. The backup is taken by
a) Erasing all previous records
b) Entering the new records
c) Sending all log records from primary site to the remote backup site
d) Sending selected records from primary site to the remote backup site

View Answer

Answer: c
Explanation: We can achieve high availability by performing transaction processing at one site, called the primary site, and having a remote backup site where all the data from the primary site are replicated.

4. When the _____ the backup site takes over processing and becomes the primary.
a) Secondary fails

b) Backup recovers
c) Primary fails
d) None of the mentioned

View Answer

Answer: c
Explanation: When the original primary site recovers, it can either play the role of remote backup, or take over the role of primary site again.

5. The simplest way of transferring control is for the old primary to receive _____ from the old backup site.
a) Undo logs
b) Redo Logs
c) Primary Logs
d) All of the mentioned

View Answer

Answer: c
Explanation: If control must be transferred back, the old backup site can pretend to have failed, resulting in the old primary taking over.

6. The time to process the remote backup can be reduced by
a) Flags
b) Breakpoints
c) Redo points

d) Checkpoints

View Answer

Answer: d
Explanation: If the log at the remote backup grows large, recovery will take a long time. The remote backup site can periodically process the redo log records that it has received and can perform a checkpoint, so that earlier parts of the log can be deleted.

7. A _____ configuration can make takeover by the backup site almost instantaneous.
a) Hot-spare
b) Remote
c) Direct
d) Spare

View Answer

Answer: d
Explanation: In this configuration, the remote backup site continually processes redo log records as they arrive, applying the updates locally.

8. A transaction commits as soon as its commit log record is written to stable storage at the primary site. This is
a) One Safe
b) Two Safe
c) Two-very Safe

d) Very Safe

View Answer

Answer: a
Explanation: The problem with this scheme is that the updates of a committed transaction may not have made it to the backup site, when the backup site takes over processing.

9. A transaction commits as soon as its commit log record is written to stable storage at the primary and the backup site. This is
a) One Safe
b) Two Safe
c) Two-very Safe
d) Very Safe

View Answer

Answer: c
Explanation: The problem with this scheme is that transaction processing cannot proceed if either the primary or the backup site is down.

10. If only the primary is active, the transaction is allowed to commit as soon as its commit log record is written to stable storage at the primary site. This is
a) One Safe
b) Two Safe
c) Two-very Safe
d) Very Safe

View Answer

Answer: b
Explanation: This scheme provides better availability than does two-very-safe, while avoiding the problem of lost transactions faced by the one-safe scheme.

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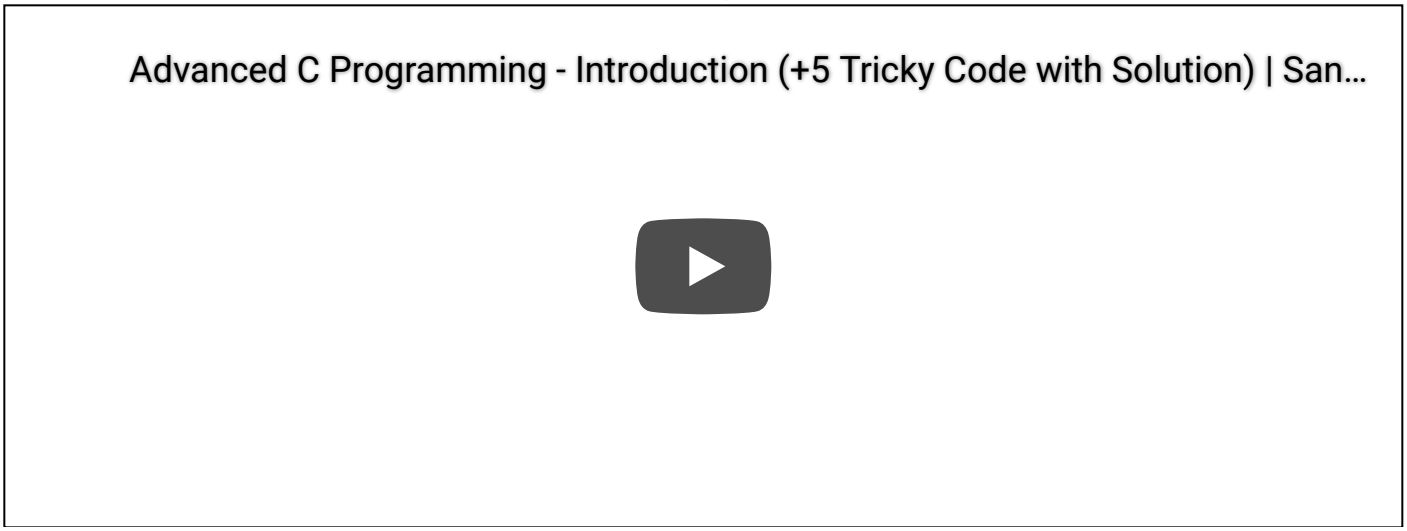

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Database Questions and Answers – Lock Release and Undo Operations

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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.

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Database Questions and Answers – Multiple Granularity

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Multiple Granularity”.

1. In a granularity hierarchy the highest level represents the
a) Entire database
b) Area
c) File
d) Record

View Answer

Answer: a
Explanation: This level is the root of the tree.

2. In a database the file is contained in _____
a) Entire database
b) Two area
c) One area
d) more than one area

View Answer

Answer: c
Explanation: This level is below the root of the tree.

3. If a node is locked in an intention mode, explicit locking is done at a lower level of the tree. This is called
a) Intention lock modes
b) Explicit lock
c) Implicit lock
d) Exclusive lock

View Answer

Answer: a
Explanation: There is an intention mode associated with shared mode, and there is one with an exclusive mode.

4. If a node is locked in _____ explicit locking is being done at a lower level of the tree, but with only shared-mode locks.
a) Intention lock modes
b) Intention-shared-exclusive mode
c) Intention-exclusive (IX) mode
d) Intention-shared (IS) mode

View Answer

Answer: a
Explanation: There is an intention mode associated with shared mode, and there is one with an exclusive mode.

5. If a node is locked in _____ then explicit locking is being done at a lower level, with exclusive-mode or shared-mode locks.
a) Intention lock modes
b) Intention-shared-exclusive mode
c) Intention-exclusive (IX) mode
d) Intention-shared (IS) mode

View Answer

Answer: c
Explanation: There is an intention mode associated with shared mode, and there is one with an exclusive mode.

6. If a node is locked in _____ the subtree rooted by that node is locked explicitly in shared mode, and that explicit locking is being done at a lower level with exclusive-mode locks.
a) Intention lock modes
b) shared and intention-exclusive (SIX) mode
c) Intention-exclusive (IX) mode
d) Intention-shared (IS) mode

View Answer

Answer: b
Explanation: There is an intention mode associated with shared mode, and there is one with an exclusive mode.

7. _____ denotes the largest timestamp of any transaction that executed write(Q) successfully.
a) W-timestamp(Q)
b) R-timestamp(Q)
c) RW-timestamp(Q)
d) WR-timestamp(Q)

View Answer

Answer: a
Explanation: The most common method for doing ordering transaction is to use a timestamp-ordering scheme.

8. The _____ ensures that any conflicting read and write operations are executed in timestamp order.
a) Timestamp-ordering protocol
b) Timestamp protocol
c) W-timestamp
d) R-timestamp

View Answer

Answer: a
Explanation: The most common method for doing ordering transaction is to use a timestamp-

ordering scheme.

9. The _____ requires that each transaction Ti executes in two or three different phases in its lifetime, depending on whether it is a read-only or an update transaction.
a) Validation protocol
b) Validation-based protocol
c) Timestamp protocol
d) Timestamp-ordering protocol

View Answer

Answer: a
Explanation: A concurrency-control scheme imposes the overhead of code execution and possible delay of transactions. It may be better to use an alternative scheme that imposes less overhead.

10. This validation scheme is called the _____ scheme since transactions execute optimistically, assuming they will be able to finish execution and validate at the end.
a) Validation protocol
b) Validation-based protocol
c) Timestamp protocol
d) Optimistic concurrency-control

View Answer

Answer: a
Explanation: A concurrency-control scheme imposes the overhead of code execution and possible delay of transactions. It may be better to use an alternative scheme that imposes less overhead.

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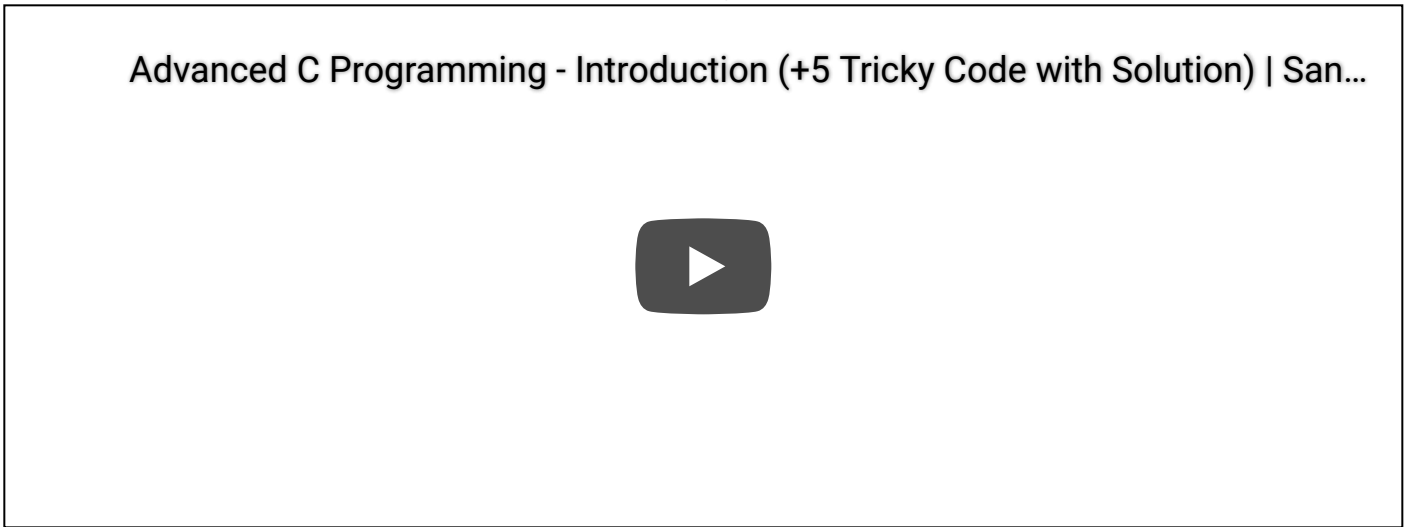

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Database Questions and Answers – Multiversion Schemes

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Multiversion Schemes”.

1. The most recent version of standard SQL prescribed by the American National Standards Institute is
a) SQL 2016
b) SQL 2002
c) SQL – 4
d) SQL2

View Answer

Answer: a
Explanation: SQL-2016 is the most recent version of standard SQL prescribed by the ANSI.

2. ANSI-standard SQL allows the use of special operators in conjunction with the WHERE clause. A special operator used to check whether an attribute value is null is
a) BETWEEN
b) IS NULL
c) LIKE
d) IN

View Answer

Answer: b
Explanation: Exists is used to check whether an attribute value is null or not in conjunction with the where clause.

3. A lock that prevents the use of any tables in the database from one transaction while another transaction is being processed is called a
a) Database-level lock
b) Table-level lock
c) Page-level lock
d) Row-level lock

View Answer

Answer: a
Explanation: Data base-level lock prevents the use of any tables in the data base from one transaction while another transaction is being processed.

4. A condition that occurs when two transactions wait for each other to unlock data is known as a(n)
a) Shared lock
b) Exclusive lock

c) Binary lock
d) Deadlock

View Answer

Answer: d
Explanation: Deadlock occurs when two transactions wait for each other to unlock data.

5. _____ means that data used during the execution of a transaction cannot be used by a second transaction until the first one is completed.
a) Serializability
b) Atomicity
c) Isolation
d) Time stamping

View Answer

Answer: c
Explanation: Isolation means that data used during the execution of a transaction can't be used by a second transaction until the first one is completed.

6. A unit of storage that can store one or more records in a hash file organization is denoted as
a) Buckets
b) Disk pages
c) Blocks
d) Nodes

View Answer

Answer: a
Explanation: Buckets are used to store one or more records in a hash file organization.

7. The file organization which allows us to read records that would satisfy the join condition by using one block read is
a) Heap file organization
b) Sequential file organization
c) Clustering file organization
d) Hash files organization

View Answer

Answer: c
Explanation: Clustering file organization allows us to read records that would satisfy the join condition by using one block read.

8. Which of the following is not true about B+ trees?
a) B+ tree index takes the form of balanced tree
b) Performance of B+ tree degrades as the file grows
c) Look-up in B+ tree is straightforward and efficient
d) Insertion and deletion in B+ tree is complicated but efficient

View Answer

Answer: b
Explanation: The answer is evident.

9. The extent of the database resource that is included with each lock is called the level of
a) Impact
b) Granularity
c) Management
d) DBMS control

View Answer

Answer: b
Explanation: The extent of the data base resource that is included with each lock is called the level of Granularity.

10. DBMS periodically suspends all processing and synchronizes its files and journals through the use of
a) Checkpoint facility
b) Backup facility
c) Recovery manager
d) Database change log

View Answer

Answer: a
Explanation: DBMS periodically suspends all processing and synchronizes its files and journals through the use of Check point facility.

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Database Questions and Answers – Snapshot Isolation

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This set of Database Multiple Choice Questions & Answers (MCQs) focuses on “Snapshot Isolation”.

1. Snapshot isolation is a particular type of _____ scheme.
a) Concurrency-control
b) Concurrency-allowance
c) Redirection
d) Repetition-allowance

View Answer

Answer: a
Explanation: It has gained wide acceptance in commercial and open-source systems, including Oracle, PostgreSQL, and SQL Server.

2. Snapshot isolation is used to give
a) Transaction a snapshot of the database
b) Database a snapshot of the transaction
c) Database a snapshot of committed values in the transaction
d) Transaction a snapshot of the database and Database a snapshot of committed values in the transaction

View Answer

Answer: d
Explanation: The data values in the snapshot consist only of values written by committed transactions.

3. Lost update problem is
a) Second update overwrites the first
b) First update overwrites the second
c) The updates are lost due to conflicting problem
d) None of the mentioned

View Answer

Answer: a
Explanation: Lost update problem has to be resolved.

4. Under first updater wins the system uses a _____ mechanism that applies only to updates.
a) Close
b) Read
c) Locking
d) Beat

View Answer

Answer: c
Explanation: Reads are unaffected by this, since they do not obtain locks.

5. When a transaction Ti attempts to update a data item, it requests a _____ on that data item.
a) Read lock
b) Update lock
c) Write lock
d) Chain lock

View Answer

Answer: c
Explanation: Reads are unaffected by this, since they do not obtain locks.

6. Each of a pair of transactions has read data that is written by the other, but there is no data written by both transactions, is referred to as
a) Read skew
b) Update skew
c) Write lock
d) None of the mentioned

View Answer

Answer: d
Explanation: Write skew is the issue addressed here.

7. An application developer can guard against certain snapshot anomalies by appending a _____ clause to the SQL select query.
a) For update
b) For read
c) For write
d) None of the mentioned

View Answer

Answer: a
Explanation: Adding the for update clause causes the system to treat data that are read as if they had been updated for purposes of concurrency control.

8. Evaluate the CREATE TABLE statement:

```
CREATE TABLE products
(product_id NUMBER(6) CONSTRAINT prod_id_pk PRIMARY KEY, product_name VARCHAR2(15));
```

Which statement is true regarding the PROD_ID_PK constraint?
a) It would be created only if a unique index is manually created first
b) It would be created and would use an automatically created unique index
c) It would be created and would use an automatically created no unique index
d) It would be created and remains in a disabled state because no index is specified in the command

View Answer

Answer: b
Explanation: Syntax: create table table_name(name constraint).

9. Evaluate the following CREATE SEQUENCE statement:

```
CREATE SEQUENCE seq1
START WITH 100
INCREMENT BY 10
MAXVALUE 200
CYCLE
NOCACHE;
```

The sequence SEQ1 has generated numbers up to the maximum limit of 200. You issue the following SQL statement:
SELECT seq1.nextval FROM dual;
What is displayed by the SELECT statement?
a) 1
b) 10
c) 100
d) an error

View Answer

Answer: a
Explanation: Sequence is used to generate a series of values.

10. In which scenario would you use the ROLLUP operator for expression or columns within GROUP BY clause?
a) To find the groups forming the subtotal in a row
b) To create group-wise grand totals for the groups specified within a GROUP BY clause
c) To create a grouping for expressions or columns specified within a GROUP BY clause in one

direction, from
right to left for calculating the subtotals
d) To create a grouping for expressions or columns specified within a GROUP BY clause in all possible
directions, which is cross-tabular report for calculating the subtotals

View Answer

Answer: c
Explanation: Sequence is used to generate a series of values.

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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 & Sto Protocols such as iSCSI & Fiber Channel. Stay connected with him @ Linke

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