Database 2

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Recovery from transaction failures means that the database is restored to the least recent consistent state just before the time of failure?

- True
- False

To do the recovery the system should keep information about the changes that were applied to data items by the various transactions. (system log)?

- True
- False

The recover from ...?

- Physical
- Backup
- Non-physical
- All of the them
- None of the above

System log is the system must keep information about the changes that were applied to data items by the various transactions?

- **True**
- **False**

In deferred update use ....?

- **NO-UNDO/REDO**
- **UNDO/REDO**
- **UNDO/NO-REDO**

In immediate update we use .....?

- **NO-UNDO/REDO**
- **UNDO/REDO**
- **UNDO/NO-REDO**
- **A&C**

The flushing is controlled by modified only?

- **TRUE**
- **False**

The flushing is controlled by...?

- **Modified bit**
- **Pin-Unpin bit**
- **(dirty bit)**
- **A&C**
- **All of them**

We use dirty bit to indicate whether or the buffer has been modified?

- **True**
- **False**

We use pin-unpin to Instructs the operating system to flush the data item. (bit value I (one)) if it cannot be written back to disk as yet?

- **True**
- **False**

if it cannot be written back to disk as yet we use....?

- **Bit value = 1**
- **Bit value = 0**

Data items to be modified are first stored into database cache by the Cache Manager (CM) and after modification they are flushed (written) to the disk?

- **True**
- **False**

the recovery protocol may restrict certain buffer pages from being written back to the disk until the transactions that changed this buffer have aborted?

- **True**
- **False**

The type of data update based on time of update ..?

- **Deferred Update**
- **Immediate Update**
- **Shadow update**
- **A&B**
- **All of the above**

The type of data update based on update version ...?

- **Deferred Update**
- **Immediate Update**
- **Shadow update**
- **In-place update**
- **A&B**
- **All of the above**
- **D&C**

n immediate update as soon as adata item is modified in cache, the disk copy is update?

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

In deferred update all modified data item in the cache is written either before a transaction ends its execution or after a fixed number of transaction have completed their execution?

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

The disk version of the data items is overwritten by the cache version in.....?

- **Deferred Update**
- **Immediate Update**
- **Shadow update**
- **In-place update**

The modified version of a data item does not overwrite its disk copy but is written at a separate disk location in .....?

- **Deferred Update**
- **Immediate Update**
- **Shadow update**
- **In-place update**

when in-place update..... Is used then log is necessary for recovery and it must be available to recovery manager.

- **Deferred Update**
- **Immediate Update**
- **Immediate or Deferred**
- **Immediate and Deferred**

` Before data items AFIM is fluhed to the database disk (overwriting BFIM) its ABFIM must be written to the log and the log must be saved on a stable store (log disk) this consider a /an ....

- Undo
- Redo
- None of them

After a transaction executes its commit operation,all its AFIM must be written to the log and the log must be saved on a stable store this consider a Redo?

- True
- False

BFIM need for ....?

- Undo
- Redo
- Undo and Redo
- None of them

AFIM need for .....?

- **Undo**
- **Redo**
- **Undo and Redo**
- **None of them**

The possible ways for flushing database cache to database disk are....?

- **Steal**
- **No-Steal**
- **Force**
- **No-Force**
- **All of them**

Cache can be flushed before transaction commits this way is ?

- **Steal**
- **No-Steal**
- **Force**
- **No-Force**

In No-steal way cache cannot be flushed after transaction commit?

- True
- False

cache is immediately flushed to disk this way is ...?

- Steal
- No-Steal
- Force
- No-Force

Force way consider a ..... update?

- Immediately
- Deferred
- Shadow
- In-place

No-Force way consider a ..... update?

- Immediately
- Deferred
- Shadow
- In-place

steal/force approach is also referred as a ..... approach?

- **Undo/redo**
- **Redo /No undo**
- **Undo /No Redo**
- **NO Redo /NO undo**

steal/No-force approach is also referred as a ..... approach?

- **Undo/redo**
- **Redo /No undo**
- **Undo /No Redo**
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No-steal/force approach is also referred as a ..... approach?

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No-steal/No-force approach is also referred as a ..... approach?

- **Undo/redo**
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- **Undo /No Redo**
- **NO Redo /NO undo**

During recovery redo or undo is required to transaction appearing before [checkpoint]recorded?

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

If a transaction fails after updating the database,but before the transaction commits,it may be necessary to roll back the transaction?

- **True**
- **False**

if any data item values have been changed by the transaction and written to the data base,they must be restored to their previous value(BFIM)?

- **True**
- **False**

The .....type log entires are used to restore the old values of data item that must be rolled back?

- **Undo**
- **Redo**
- **No Undo/ No Redo**
- **No Undo/ Redo**

If the transaction T is rolled back, any transaction S that has read the value of some data item X written b T must also rolled back This is called cascadless rollback?

- **True**
- **False**

The undo-type log entires are used to restore the new values of data item that must be rolled back?

- **True**
- **False**

A transaction does not reach its commit point until all its ……type log entires ara recorded in the log and the log buffer is …… written to disk?

- **Undo && Redo && BFIM**
- **Undo && Redo && AFIM**
- **NO Undo && Redo && BFIM**
- **NO Undo && Redo && AFIM**

Procedure RDU_M use lists of transaction maintained by the system the lists are….?

- **commit list**
- **active list**
- **A&B**
- **none of them**

The commit transaction is an active list?

- **True**
- **False**

The active transaction is a commit list?

- **True**
- **False**

Write_op is redoing a write item operation write _op consists of examining its log entry [write_item X,T,X,new_value] and setting the value of item X in the database to new value,which is the before image (BFIM)?

- **True**
- **False**

All updates by transaction must be recorded on disk ..... the transaction commits, so the ..... Is never needes?

- **Before & Undo**
- **Before & Redo**
- **After & Redo**
- **After & Undo**

In a single user environment concurrency control is required but a log is maintained under WAL?

- **True**
- **False**

In concurrent execution environment control is required and log is maintained under WAL?

- **True**
- **False**

To minimize the work of the recovery manager check pointing is used?

- **True**
- **False**

اللهمَّ إني أحسنتُ بكَ الظَّن فاجبُرني ، ربي لا تدع لي أمراً إلا يسرته ولا حلماً إلا حققته ، ربي أنِر بصيرتي، وأرضني بقدري، وأحيني وأمتني مقبولًا مستوراً