

Short Example UNDO phase

LOG
Start
1
2
3
4
5
6
7
8
9



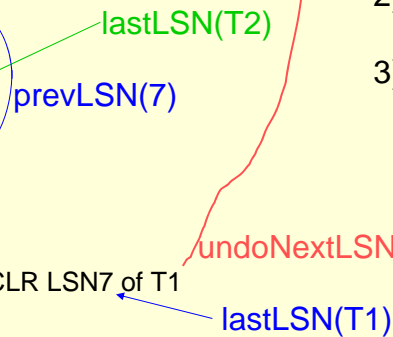
- T1 and T2 to undo
- Assume neither an ABORT

Queued to undo:
LSN 7
LSN 5

1

Short Example UNDO phase

LOG
Start
1
2
3
4
5
6
7
8
9
10 CLR LSN7 of T1

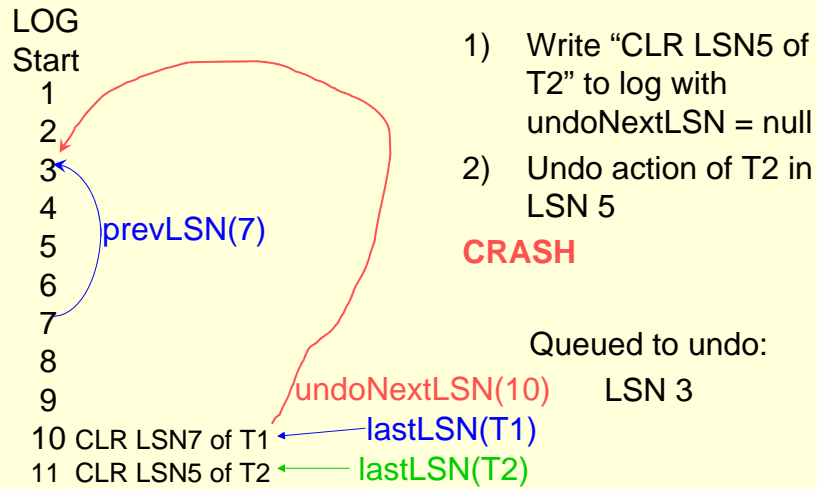


- 1) Write "CLR LSN7 of T1" to log with undoNextLSN = 3
- 2) Undo action of T1 in LSN 7
- 3) Queue prevLSN(7) to undo

Queued to undo:
LSN 5
LSN 3

2

Short Example UNDO phase



3

Short Example UNDO phase

CRASH

Assume log through entry 11 was written to disk

Look at new UNDO phase

4

Short Example UNDO phase

LOG

Start

1

2

3

4

5

6

7

8

9

10 CLR LSN7 of T1

11 CLR LSN5 of T2

- T1 and T2 to undo

Queued to undo:

LSN 11

LSN 10

prevLSN(7)

undoNextLSN(10)

lastLSN(T1)

lastLSN(T2)

5

Short Example UNDO phase

LOG

Start

1

2

3

4

5

6

7

8

9

10 CLR LSN7 of T1

11 CLR LSN5 of T2

12 END T2 ABORT

- Write "END T2 ABORT" to log

Queued to undo:

LSN 10

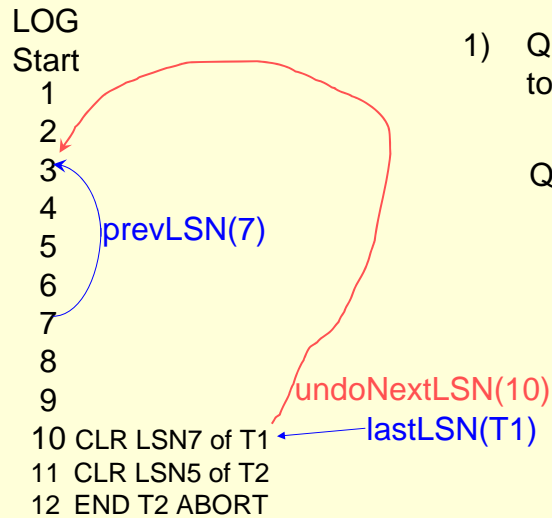
prevLSN(7)

undoNextLSN(10)

lastLSN(T1)

6

Short Example UNDO phase

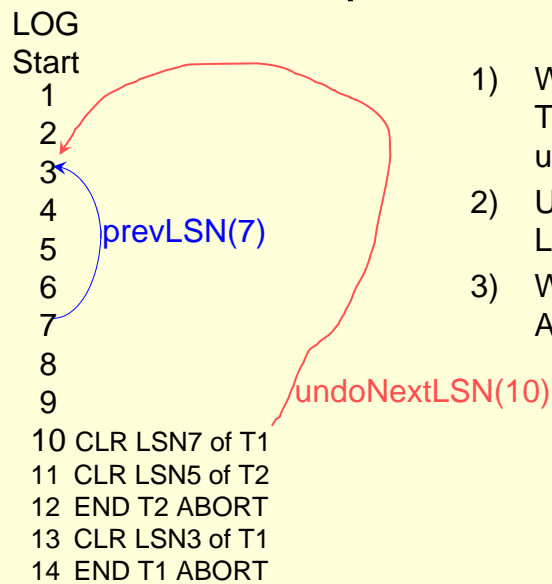


- 1) Queue undoNext(10) to undo

Queued to undo:
LSN 3

7

Short Example UNDO phase



- 1) Write "CLR LSN3 of T1" to log with undoNextLSN = null
- 2) Undo action of T1 in LSN 3
- 3) Write "END T1 ABORT" to log

Queue Empty

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