Chapter 8.1 Serializable and Recoverable

*Background:*

In Chapter Six, only discuss the Log creation and how to recover the Database System Status by using Logging when crash happened. Also, introduce one method of Database Calculation, which means the value moving among Non - Volatile Disk, Volatile Disk, and the Local Address Space in the Transaction. The Logging System does not support the Serializable; It just rebuild and commit Transaction according to the Disk Copy in the Database. Actually, the Commercial Database System does not always support Serializable, in some system, only when the user acclaims, then the Serializable can be realized.

In the Chapter Seven, it only discussed Serializable. According to Principle Design of Schedule, it may need to do some intolerant things for Logging Manager. The much more worse thing is that even crash has not happened, and in principle, the Schedule maintain Serializable. After the Transaction which writes the Database Element aborts, but the thing written before has not been undone, then this may easily cause the Database Element inconsistent.

Chapter 8.1.1 Dirty Data

Chapter 8.1.2 Cascade Rollback

Chapter 8.1.3 Recoverable Schedule

Chapter 8.1.4 Schedule to Avoid Cascade Rollback

Chapter 8.1.5 Management on Rollback Based on Lock

Chapter 8.1.6 Commit based on Array

Chapter 8.1.7 Logical Logging

Chapter 8.1.8 Recover from Logical Logging