## Chapter 6.2 Undo Logging

*Definition:*

Logging is the file that consists of Logging Records, each logging records the situation that records about some things that Transaction has done.

*If logging records has appeared in the Non-Volatile storage, then after crash happens, we can use them to recover Database System into Consistent Status. Our first Logging type is Undo Logging, it can be used to Undo Transaction that happens before crash to repair database status.*

*Other Contents:*

* Introduce the basic thinking of Logging Records, including Commit and its influence on Database Status and Logging.
* Create Logging into the main memory and flush logging to copy the logging to Disk.
* Check undo Logging, learn to use it to recover from the crash.
* In order to avoid checking all logging, so introduce ‘Checkpoint’ and it can be used to throw the old logging part.

### Chapter 6.2.1 Logging Record

### Chapter 6.2.2 Rule of Logging Record

### Chapter 6.2.3 Using Undo Logging to Recover

### Chapter 6.2.4 Checkpoint

### Chapter 6.2.5 Non - Static Checkpoint