

CLAIMS

1. A method for processing a database data modification request, the method comprising:
receiving, from a user and at a primary database, a data modification request for modifying data in the primary database (S101), wherein the data modification request specifies one or more updated values of one or more respective database records;
modifying, in response to the data modification request, one or more previous values of the one or more respective database records to have the one or more updated values;
generating, based on the data modification request, a first log and a second log, wherein the second log comprises the one more updated values and the one or more previous values, and wherein the first log is a version of the second log that comprises only the one or more updated values for use in database recovery or synchronization (S102);
performing persistence processing to store the first log in persistent storage; and
returning a modification result to the user that is indicative of having successfully modified the data in the primary database in response to receiving the data modification request (S103).
2. The method according to claim 1, wherein the second log further comprises first data.
3. The method according to claim 2, wherein generating a first log and a second log is based on:
generating the first log and the second log in a memory (S203).
4. The method according to claim 2, further comprising:
performing persistence processing on the second log (S204).
5. The method according to claim 2, further comprising:
in response to sending the second log to a data analysis system, performing data analysis by the data analysis system based on the second log.
6. The method according to claim 2, wherein before returning a modification result to the user, the method further comprises:
synchronizing, by a secondary database, the first log to a secondary database of the database, based on the first log.

7. The method according to claim 6, further comprising in response to synchronizing the first log to a secondary database of the database, synchronizing, by the secondary database, the modification and generating the second log based on the first log.

8. The method according to claim 7, further comprising:
performing, by the secondary database, persistence processing on the first log obtained through synchronization and/or the second log generated based on the first log.

9. The method according to any one of claims 1 to 5, wherein the first data and the second data each belong to at least one database record; and
the second log further comprises data other than the first data in the database record that the first data belongs to, and/or data other than the second data in the database record that the second data belongs to.

10. The method according to any one of claims 1 to 8, wherein persistence processing is based on storing a log in a nonvolatile storage device.

11. The method according to any one of claims 1 to 4, wherein persistence processing is based on storing a log in a nonvolatile storage device; and
the first log and the second log are separately stored in different nonvolatile storage devices by using the persistence processing.

12. The method according to any one of claims 1 to 8, wherein the data modification request is a data update request, a data deletion request, or a data addition request; and
neither the first data nor the second data is null when the data modification request is a data update request; or
the first data is null and the second data is not null when the data modification request is a data deletion request; or
the first data is not null and the second data is null when the data modification request is a data addition request.

13. The method according to any one of claims 1 to 8, wherein the data modification request comprises a request for reducing a total volume of data in the database based on one or more policies.

14. The method according to any one of claims 1 to 8, further comprising sending the second log to an external system (S404).

15. An apparatus for processing a database data modification request, the apparatus comprising a plurality of modules configured to perform the method of any one of claims 1 to 10.