WHAT IS CLAIMED IS:

1. A method, comprising:

a key-value storage device receiving a first command from a host, the first command including a first key, a first value, and a first snapshot identification (ID);

in response to the received first command, the key-value storage device generating a first snapshot entry including the first snapshot ID, the first key, and a first physical address in a non-volatile memory of the key-value storage device at which the first value is written;

the key-value storage device receiving a second command from the host, the second command including the first key, a second value, and a second snapshot ID; and

in response to the received second command, the key-value storage device generating a second snapshot entry including the second snapshot ID, the first key, and a second physical address in the non-volatile memory of the key-value storage device at which the second value is written,

wherein the first and second snapshot entries are implemented as a linked list in an order of the second snapshot entry to the first snapshot entry,

the key-value storage device comprises a memory into which a mapping table storing the first and second snapshot entries is loaded, and

the second snapshot entry further comprises a link region configured to store a memory address in the memory at which the first snapshot entry is stored.

2. The method of claim 1, further comprising:

the key-value storage device receiving a read command including the first key from the host; and

in response to the received read command, the key-value storage device reading the

second value from the non-volatile memory, based on the second snapshot entry.

3. The method of claim 1, further comprising at least one of:

in response to a first read command including the first snapshot ID and the first key received from the host, the key-value storage device reading the first value from the non-volatile memory, based on the first snapshot entry; and

in response to a second read command including the second snapshot ID and the first key received from the host, the key-value storage device reading the second value from the non-volatile memory, based on the second snapshot entry.

4. The method of claim 1, wherein the mapping table storing a plurality of snapshot entries is loaded, and the method further comprises at least one of:

in response to a first delete command, including the first snapshot ID, received from the host, the key-value storage device deleting at least one snapshot entry corresponding to the first snapshot ID from among the plurality of snapshot entries; and

in response to a second delete command including the first snapshot ID and the first key received from the host, the key-value storage device deleting the first snapshot entry from among the plurality of snapshot entries.

5. The method of claim 4, further comprising at least one of:

in response to a first read command including the first key received from the host, the key-value storage device reading the second value from the non-volatile memory, based on the second snapshot entry; and

in response to a second read command including the first snapshot ID and the first key received from the host, the key-value storage device providing a fail message to the host.

6. The method of claim 1, further comprising:

in response to the first command, the key-value storage device writing the first value at the first physical address of the non-volatile memory; and

in response to the second command, the key-value storage device writing the second value at the second physical address of the non-volatile memory.

7. The method of claim 1, wherein the first snapshot entry further comprises a link region configured to store state information indicating that there is no snapshot entry generated before the first snapshot entry.

8. The method of claim 1, wherein:

each of the first and second snapshot entries further comprises a flag,

the flag of the second snapshot entry has a first flag value indicating that the second snapshot entry is a latest snapshot entry, and

the flag of the first snapshot entry has a second flag value indicating that the first snapshot entry is not the latest snapshot entry.

9. The method of claim 1, wherein:

the key-value storage device further comprises dynamic random access memory (DRAM) and static random access memory (SRAM), and

the first snapshot entry is stored in the DRAM, and the second snapshot entry is stored in the SRAM.

10. A method, comprising:

a key-value storage device storing in a mapping table a plurality of snapshot entries for a first key, the plurality of snapshot entries respectively corresponding to a plurality of snapshot identifications (IDs);

the key-value storage device receiving a first read command from a host, the first read command including the first key;

in response to the received first read command, the key-value storage device performing a read operation on a non-volatile memory, based on a latest snapshot entry of the plurality of snapshot entries;

the key-value storage device receiving a second read command from the host, the second read command including a first snapshot ID and the first key; and

in response to the received second read command, the key-value storage device performing a second read operation on the non-volatile memory, based on a first snapshot entry corresponding to the first snapshot ID among the plurality of snapshot entries,

wherein the plurality of snapshot entries are implemented as a linked list in an order of the latest snapshot entry to a previous snapshot entry,

the key-value storage device comprises a memory into which a mapping table storing the plurality of snapshot entries is loaded, and

the latest snapshot entry comprises a link region configured to store a memory address in the memory at which the previous snapshot entry is stored.

11. The method of claim 10, wherein the first snapshot entry comprises the first snapshot ID, the first key, and a first physical address in the non-volatile memory at which a first value corresponding to the first key is written.

12. The method of claim 10, wherein the plurality of snapshot IDs comprise the

first snapshot ID and a second snapshot ID, and wherein the storing of the plurality of snapshot entries in the mapping table comprises:

receiving a first command from the host, the first command including the first key, a first value, and the first snapshot ID;

in response to the received first command, the key-value storage device generating the first snapshot entry including the first snapshot ID, the first key, and a first physical address in the non-volatile memory at which the first value is written;

receiving a second command from the host, the second command including the first key, a second value, and the second snapshot ID; and

in response to the received second command, the key-value storage device generating a second snapshot entry including the second snapshot ID, the first key, and a second physical address in the non-volatile memory at which the second value is written.

13. A key-value storage device capable of communicating with a host, the key-value storage device comprising:

a non-volatile memory configured to store a value corresponding to a key;

a controller configured to receive from the host a command including a snapshot identification (ID), the key, and the value, and in response to the command to generate a snapshot entry including the snapshot ID, the key, and a physical address in the non-volatile memory at which the value is written; and

a memory into which a mapping table storing the snapshot entry is loaded,

wherein the controller is further configured to implement a plurality of snapshot entries corresponding to the key as a linked list in an order of a latest snapshot entry to a previous snapshot entry, and

the latest snapshot entry comprises a link region configured to store a memory address

in the memory at which the previous snapshot entry is stored.

14. The key-value storage device of claim 13, wherein the controller is further configured such that:

when a first read command including the key is received from the host, in response to the first read command, the controller controls a first read operation on the non-volatile memory, based on the latest snapshot entry corresponding to the key, and

when a second read command including the key and the snapshot ID is received from the host, in response to the second read command, the controller controls a second read operation on the non-volatile memory, based on the snapshot entry corresponding to the snapshot ID.

15. The key-value storage device of claim 13, wherein the mapping table stores the plurality of snapshot entries, and wherein the controller is further configured such that:

when a first delete command including the snapshot ID is received from the host, in response to the first delete command, the controller deletes at least one snapshot entry corresponding to the snapshot ID in the mapping table, and

when a second delete command including the key and the snapshot ID is received from the host, in response to the second delete command, the controller deletes a snapshot entry corresponding to the key and the snapshot ID in the mapping table.