Claims:

1. A method for adding transaction data into a blockchain, comprising:

obtaining a plurality of pieces of transaction data to be added into the blockchain;

assigning transaction data of the plurality of pieces of transaction data with an overlapping range of data change into a same level I transaction subset and transaction data of the plurality of pieces of transaction data without the overlapping range of data change into different level I transaction subsets;

assigning transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a transaction type, wherein for each of the level I transaction subsets, pieces of transaction data, in the corresponding level I transaction subset, with a same transaction type are assigned in a same level II transaction subset, and pieces of the transaction data, in the corresponding level I transaction subset, with different transaction types are assigned into different level II transaction subsets; and

executing the one or more level II transaction subsets in parallel, and storing results of the execution into the blockchain.

2. The method according to claim 1, wherein the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the different level II transaction subsets in parallel using multithreading or a machine cluster.

3. The method according to claim 1, wherein each piece of the plurality of pieces of transaction data corresponds to a timestamp, and the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the same level II transaction subset in series according to a temporal order corresponding to the timestamps.

4. The method according to claim 1, wherein the assigning the transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a transaction type comprises:

traversing a transaction type of each piece of transaction data in each of the level I transaction subsets;

in response to that a transaction type of a second piece of transaction data is the same as a transaction type of one or more pieces of transaction data of a first level II transaction subset, adding the second piece of transaction data into the first level II transaction subset; and

in response to that the transaction type of the second piece of transaction data is different from the transaction type of all pieces of transaction data of the first level II transaction subset, creating a second level II transaction subset and adding the second piece of transaction data into the second level II transaction subset.

5. The method according to claim 4, wherein there is a corresponding relationship between the plurality of pieces of transaction data and timestamps, and the traversing the transaction type comprises:

traversing the transaction type of each piece of transaction data in each of the level I transaction subsets in a temporal order corresponding to the timestamps according to the timestamps of the transaction data.

6. The method according to claim 1, wherein the plurality of pieces of transaction data to be executed are obtained to form a transaction set to be executed comprising the plurality of pieces of transaction data, and the transaction set is determined by a preset data processing amount and preset transaction data time.

7. The method according to claim 6, wherein the preset data processing amount is determined according to an amount of data allowed to be written into the blockchain.

8. A method for adding transaction data into a blockchain, comprising:

obtaining a plurality of pieces of transaction data to be added into the blockchain;

assigning transaction data of the plurality of pieces of transaction data with a same transaction type into a same level I transaction subset and transaction data of the plurality of pieces of transaction data with different transaction types into different level I transaction subsets;

assigning transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a range of data change, wherein for each of the level I transaction subsets, pieces of transaction data, in the corresponding level I transaction subset, with an overlapping range of data change are assigned in a same level II transaction subset, and pieces of the transaction data, in the corresponding level I transaction subset, with no overlapping range of data change are assigned into different level II transaction subsets; and

executing the one or more level II transaction subsets in parallel, and storing results of the execution into the blockchain.

9. The method according to claim 8, wherein the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the

different level II transaction subsets in parallel using multithreading or a machine cluster.

10. The method according to claim 8, wherein each piece of the plurality of pieces of transaction data corresponds to a timestamp, and the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the same level II transaction subset in series according to a temporal order corresponding to the timestamps.

11. The method according to claim 8, wherein the assigning the transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a range of data change comprises:

traversing a range of data change of each piece of transaction data in each of the level I transaction subsets;

in response to that a range of data change of a second piece of transaction data overlaps with a range of data change of a first level II transaction subset, adding the second piece of transaction data into the first level II transaction subset; and

in response to that the range of data change of the second piece of transaction data does not overlap with the range of data change of the first level II transaction subset, creating a second level II transaction subset and adding the second piece of transaction data into the second level II transaction subset.

12. The method according to claim 11, wherein there is a corresponding relationship between the one or more pieces of transaction data and timestamps, and the traversing the transaction type comprises:

traversing the range of data change of each piece of transaction data in each of the level I transaction subsets in a temporal order corresponding to the timestamps according to the timestamps of the transaction data.

13. The method according to claim 8, wherein the plurality of pieces of transaction data to be executed are obtained to form a transaction set to be executed comprising the plurality of pieces of transaction data, and the transaction set is determined by a preset data processing amount and preset transaction data time.

14. The method according to claim 13, wherein the preset data processing amount is determined according to an amount of data allowed to be written into the blockchain.

15. A system for adding transaction data into a blockchain, comprising one or more processors and one or more non-transitory computer-readable memories coupled to the one or more processors and configured with instructions executable by the one or more processors to

cause the system to perform operations comprising:

obtaining a plurality of pieces of transaction data to be added into the blockchain;

assigning transaction data of the plurality of pieces of transaction data with an overlapping range of data change into a same level I transaction subset and transaction data of the plurality of pieces of transaction data without the overlapping range of data change into different level I transaction subsets;

assigning transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a transaction type, wherein for each of the level I transaction subsets, pieces of transaction data, in the corresponding level I transaction subset, with a same transaction type are assigned in a same level II transaction subset, and pieces of the transaction data, in the corresponding level I transaction subset, with different transaction types are assigned into different level II transaction subsets; and

executing the one or more level II transaction subsets in parallel, and storing results of the execution into the blockchain.

16. The system according to claim 15, wherein the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the different level II transaction subsets in parallel using multithreading or a machine cluster.

17. The system according to claim 15, wherein each piece of the plurality of pieces of transaction data corresponds to a timestamp, and the executing the one or more level II transaction subsets in parallel comprises:

executing at least a portion of the plurality of pieces of transaction data assigned in the same level II transaction subset in series according to a temporal order corresponding to the timestamps.

18. The system according to claim 15, wherein the assigning the transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a transaction type comprises:

traversing a transaction type of each piece of transaction data in each of the level I transaction subsets;

in response to that a transaction type of a second piece of transaction data is the same as a transaction type of one or more pieces of transaction data of a first level II transaction subset, adding the second piece of transaction data into the first level II transaction subset; and

in response to that the transaction type of the second piece of transaction data is different

from the transaction type of all pieces of transaction data of the first level II transaction subset, creating a second level II transaction subset and adding the second piece of transaction data into the second level II transaction subset.

19. The system according to claim 18, wherein there is a corresponding relationship between the plurality of pieces of transaction data and timestamps, and the traversing the transaction type comprises:

traversing the transaction type of each piece of transaction data in each of the level I transaction subsets in a temporal order corresponding to the timestamps according to the timestamps of the transaction data.

20. The system according to claim 15, wherein the plurality of pieces of transaction data to be executed are obtained to form a transaction set to be executed comprising the plurality of pieces of transaction data, and the transaction set is determined by a preset data processing amount and preset transaction data time.

21. A system for adding transaction data into a blockchain, comprising one or more processors and one or more non-transitory computer-readable memories coupled to the one or more processors and configured with instructions executable by the one or more processors to cause the system to perform operations comprising:

obtaining a plurality of pieces of transaction data to be added into the blockchain;

assigning transaction data of the plurality of pieces of transaction data with a same transaction type into a same level I transaction subset and transaction data of the plurality of pieces of transaction data with different transaction types into different level I transaction subsets;

assigning transaction data that is assigned under the level I transaction subsets into one or more level II transaction subsets according to a range of data change, wherein for each of the level I transaction subsets, pieces of transaction data, in the corresponding level I transaction subset, with an overlapping range of data change are assigned in a same level II transaction subset, and pieces of the transaction data, in the corresponding level I transaction subset, with no overlapping range of data change are assigned into different level II transaction subsets; and

executing the one or more level II transaction subsets in parallel, and storing results of the execution into the blockchain.