CLAIMS

1. A computer-implemented method for blockchain-based consensus management, comprising:

obtaining a request for creating a consensus template, wherein the request comprises information about a plurality of participating entities associated with the consensus template;

generating, based on the request, a dataset representing a hierarchical structure of the participating entities associated with the consensus template;

creating a blockchain transaction for registering the consensus template to a blockchain, wherein the blockchain transaction comprises the dataset representing the hierarchical structure of the participating entities, wherein:

the hierarchical structure comprises a tree structure that comprises a plurality of nodes, and

one or more of the plurality of nodes each corresponds to one of the participating entities associated with the consensus template; and

sending, to one or more blockchain nodes associated with the blockchain for adding to the blockchain, the blockchain transaction for registering the consensus template to the blockchain.

2. The method of claim 1, wherein the information about the plurality of participating entities comprises:

an identifier associated with each of one or more of the participating entities;

a public key of a blockchain account associated with each of one or more of the participating entities;

contact information associated with each of one or more of the participating entities;

information associated with the hierarchical structure of the participating entities; or

a weight assigned to each of one or more of the participating entities.

3. The method of claim 1 or 2, further comprising:

obtaining, from the request for creating the consensus template, one or more criteria for determining achievement of consensus; and

storing the one or more criteria for determining achievement of consensus.

4. The method of any one of the claims 1-3, wherein the request for creating the consensus template comprises a JavaScript Object Notation (JSON) file.

5. The method of any one of the claims 1-4, wherein the generating a dataset representing a hierarchical structure of the participating entities associated with the consensus template comprises:

parsing the request for creating the consensus template to obtain the tree structure; and

generating one or more arrays corresponding to the tree structure.

6. The method of claim 5, wherein:

the plurality of nodes of the tree structure comprises a root node, one or more branch nodes, and a plurality of leaf nodes;

the tree structure comprises one or more weights respectively associated with one or more of the nodes of the tree structure; and

each of the leaf nodes corresponds to one of the participating entities associated with the consensus template.

7. The method of claim 6, wherein:

one or more of the leaf nodes each corresponds to an individual associated with an entity; and

a parent node of the one or more of the leaf nodes corresponds to the entity.

8. The method of claim 6 or 7, wherein the one or more arrays comprise:

an array comprising one or more serial numbers associated with one or more of the nodes of the tree structure;

an array comprising one or more serial numbers associated with one or more parent nodes of the one or more of the nodes of the tree structure; or

an array comprising the one or more weights respectively associated with the one or more of the nodes of the tree structure.

9. The method of any one of the claims 1-8, wherein the blockchain transaction for registering the consensus template to a blockchain is executable to invoke a blockchain contract configured to register one or more consensus templates to the blockchain.

10. The method of any one of the claims 1-9, wherein:

the obtaining a request for creating a consensus template comprises obtaining the request for creating the consensus template from a computing device associated with one of the participating entities associated with the consensus template; and

the method further comprises returning a confirmation for creation of the consensus template to the computing device associated with the one of the participating entities.

11. A system, comprising:

one or more processors; and

one or more computer-readable memories coupled to the one or more processors and having instructions stored thereon that are executable by the one or more processors to perform the method of any of claims 1 to 10.

12. A non-transitory computer-readable storage medium configured with instructions executable by one or more processors to cause the one or more processors to perform the method of any of claims 1 to 10.

13. An apparatus comprising a plurality of modules for performing the method of any of claims 1 to 10.