

What is Claimed Is:

1. A computer-implemented method for processing certificates in a blockchain system, comprising:

causing a smart contract to be generated in the blockchain system, wherein the smart contract includes computer-readable instructions for processing certificates;

after the smart contract is generated, sending a first request for a first transaction to the blockchain system, the first transaction causing the blockchain system to execute the smart contract to generate a certificate specification based on the first request;

receiving, from the blockchain system, the certificate specification;

sending, to the blockchain system, a second request for a plurality of second transactions, the plurality of second transactions causing the blockchain system to execute the smart contract to generate a plurality of certificates, wherein the plurality of certificates comprise at least one of coupons, tickets, or vouchers;

sending, to the blockchain system, a third request for a third transaction, the third transaction causing the blockchain system to execute the smart contract to write off a target certificate of the plurality of certificates; and

receiving, from the blockchain system, a result indicating that the target certificate is written off.

2. The method of claim 1, further comprising:

generating the second request for the plurality of second transactions based on the certificate specification.

3. The method of any preceding claim, wherein the certificate specification indicates at least one of certificate types, a number of certificates for each certificate type, a total number of the certificates, or a valid period of each certificate.
4. The method of claim 3, further comprising:
 - causing the blockchain system to execute the smart contract to determine whether the plurality of certificates satisfy the certificate specification; and
 - after it is determined that the plurality of certificates satisfy the certificate specification, receiving a message indicating the plurality of certificates are successfully generated.
5. The method of any preceding claim, further comprising:
 - distributing the plurality of certificates to users.
6. The method of claim 1, further comprising:
 - asynchronously sending, to the blockchain system, a plurality of third requests for a plurality of third transactions, each of the plurality of third transactions causing the blockchain system to execute the smart contract to write off a corresponding target certificate of the plurality of certificates.
7. The method of any preceding claim, wherein the certificate specification includes a hash value representing execution of the first transaction, and each of the plurality of certificates includes a hash value representing execution of a corresponding second transaction.

8. The method of any preceding claim, wherein the blockchain system implements a consortium blockchain.

9. A device for processing certificates in a blockchain system, the device 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 8.

10. An apparatus for processing certificates in a blockchain system, the apparatus comprising a plurality of modules for performing the method of any of claims 1 to 8.

11. A non-transitory computer-readable medium having stored therein instructions that, when executed by a processor of a device, cause the device to perform the method of any of claims 1 to 8.