CLAIMS

What is claimed is:

1. A computer-implemented method for resource allocation based on a blockchain, wherein the blockchain stores a mapping relationship between a digital digest of an invoice and a resource allocation state corresponding to the invoice, the method comprising:

receiving (110) a target transaction submitted by a client to participate in resource allocation based on a target invoice, wherein a user of the client takes a picture of the target invoice, obtains an invoice image of the target invoice, wherein invoice data is recognized by image recognition of the client from the obtained invoice image, and wherein the invoice data obtained by the image recognition is included in the target transaction;

in response to the target transaction, calculating (120) a digital digest of the target invoice, and querying a resource allocation state stored in the blockchain and corresponding to the digital digest; and

in response to the detected resource allocation state is an unallocated state, invoking (130) resource allocation logic declared in a smart contract published in the blockchain, to allocate resources to the client from a predetermined resource pool based on a predetermined allocation rule, and returning a resource allocation result to the client~~.~~

~~2. The~~, the computer-implemented method ~~according to claim 1,~~ further including:

receiving an invoice creation request submitted by the client, the invoice creation request including invoice creation information input by the~~a~~ user;

in response to the invoice creation request, invoking invoice creation logic declared in the smart contract published in the blockchain to create an invoice based on the invoice creation information; and

calculating a digital digest of the invoice, and storing a mapping relationship between the digital digest and a resource allocation state of the invoice in the blockchain, an initial resource allocation state of the invoice being an unallocated state~~.~~,

wherein the digital digest of the invoice includes:

a hash value obtained through hash calculation based on invoice content of the invoice or unique information in the invoice content.

~~3~~2. The computer-implemented method according to claim 1, wherein the calculating the digital digest of the target invoice, and the querying the resource allocation state stored in the blockchain and corresponding to the digital digest includes:

invoking state query logic declared in the smart contract published in the blockchain to calculate the~~a~~ digital digest of the target invoice, and querying the~~a~~ resource allocation state stored in the blockchain and corresponding to the digital digest.

~~4~~3. The computer-implemented method according to claim ~~2~~1, further including:

after target resources are allocated to the client from the predetermined resource pool, further invoking resource allocation state update logic declared in the smart contract published in the blockchain to change the resource allocation state of the target invoice from the unallocated state to an allocated state.

~~5~~4. The computer-implemented method according to claim ~~4~~3, wherein the blockchain further stores a corresponding relationship between each category of resources in the resource pool and a~~the~~ number of resources, the method further comprising:

after the target resources are allocated to the client from the predetermined resource pool based on the predetermined allocation rule, updating a number of resources stored in the blockchain and corresponding to the target resource.

~~6. The method according to claim 2, wherein the digital digest of the invoice includes:~~

~~a hash value obtained through hash calculation based on invoice content of the invoice or unique information in the invoice content.~~

~~7~~5. The computer-implemented method according to claim ~~4~~6, wherein the target transaction includes the invoice content of the target invoice or the unique information in the invoice content;

the calculating the digital digest of the target invoice includes:

obtaining the invoice content of the target invoice in the target transaction or the unique information in the invoice content; and

performing the hash calculation based on the obtained invoice content of the target invoice or the obtained unique information in the invoice content, to obtain the hash value.

~~8~~6. The computer-implemented method according to claim 1, wherein the blockchain is a consortium blockchain.

~~9~~7. The computer-implemented method according to claim 1, wherein the resource pool includes a prize pool; the resources include virtual prizes; the resource allocation includes extracting the virtual prizes for the client from the prize pool; and the resource allocation state includes a lottery state.

~~10~~8. An apparatus for resource allocation based on a blockchain, wherein the blockchain stores a mapping relationship between a digital digest of an invoice and a resource allocation state corresponding to the invoice, the apparatus comprising~~:~~ a plurality of modules for performing the computer-implemented method of any of claims 1 to 7.

~~a receiving unit, configured to receive a target transaction submitted by a client to participate in resource allocation based on a target invoice;~~

~~a query unit, configured to: in response to the target transaction, calculate a digital digest of the target invoice, and query a resource allocation state stored in the blockchain and corresponding to the digital digest; and~~

~~an allocation unit, configured to: in response to the detected resource allocation state is an unallocated state, invoke resource allocation logic declared in a smart contract published in the blockchain, to allocate resources to the client from a predetermined resource pool based on a predetermined allocation rule, and return a resource allocation result to the client.~~

~~11. The apparatus according to claim 10, further including:~~

~~an invoice creation request receiving unit, configured to receive an invoice creation request submitted by the client, the invoice creation request including invoice creation information input by a user; and~~

~~an invoice creation response unit, configured to: in response to the invoice creation request, invoke invoice creation logic declared in the smart contract published in the blockchain to create an invoice based on the invoice creation information; calculate digital~~

digest of the invoice, and store a mapping relationship between the digital digest and a resource allocation state of the invoice in the blockchain, an initial resource allocation state of the invoice being an unallocated state.

12. The apparatus according to claim 10, wherein the query unit is specifically configured to:

in response to the target transaction, invoke state query logic declared in the smart contract published in the blockchain to calculate a digital digest of the target invoice, and query a resource allocation state stored in the blockchain and corresponding to the digital digest.

13. The apparatus according to claim 11, further including:

a state update subunit, configured to: after target resources are allocated to the client from the predetermined resource pool, further invoke resource allocation state update logic declared in the smart contract published in the blockchain, to change the resource allocation state of the target invoice from the unallocated state to an allocated state.

14. The apparatus according to claim 13, wherein the blockchain further stores a corresponding relationship between each category of resources in the resource pool and the number of resources; the apparatus further including:

a number update subunit, configured to: after the target resources are allocated to the client from the predetermined resource pool based on the predetermined allocation rule, update a number of resources stored in the blockchain and corresponding to the target resource.

15. The apparatus according to claim 11, wherein the digital digest of the invoice includes:

a hash value obtained through hash calculation based on invoice content of the invoice or unique information in the invoice content.

16. The apparatus according to claim 15, wherein the target transaction includes the invoice content of the target invoice or the unique information in the invoice content;

the calculating the digital digest of the target invoice includes:

~~obtaining the invoice content of the target invoice in the target transaction or the unique information in the invoice content; and~~

~~performing hash calculation based on the obtained invoice content of the target invoice or the obtained unique information in the invoice content to obtain the hash value.~~

~~17. The apparatus according to claim 10, wherein the blockchain is a consortium blockchain.~~

~~18. The apparatus according to claim 10, wherein the resource pool includes a prize pool; the resources include virtual prizes; the resource allocation includes extracting virtual prizes for the client from the prize pool; and the resource allocation state includes a lottery state.~~

~~19~~9. An electronic device, comprising:

a processor; and

a memory configured to store processor-executable instructions,

wherein the processor is configured, by executing the processor-executable instructions, to perform the computer-implemented method according to any one of claims 1 to ~~7~~9.