CLAIMS

1. A computer-implemented method for blockchain-based decentralized application development, comprising:

generating a blockchain contract and an interface specification associated with the blockchain contract based on a plurality of first inputs;

deploying the blockchain contract on a blockchain;

generating a client-side application based on a plurality of second inputs and the interface specification associated with the blockchain contract, wherein the client-side application is executable to invoke the blockchain contract deployed on the blockchain; and

storing the client-side application in an online storage system.

2. The method of claim 1, further comprising:

providing an integrated development environment (IDE) for blockchain-contract development and application development;

receiving the plurality of first inputs in the IDE; and

receiving the plurality of second inputs in the IDE.

3. The method of any one of the claims 1-2, wherein the generating a blockchain contract comprises:

obtaining source code associated with the blockchain contract based on the plurality of first inputs; and

compiling the obtained source code to generate bytecode associated with the blockchain contract.

4. The method of claim 3, wherein the generating a blockchain contract further comprises, prior to compiling the obtained source code to generate bytecode:

analyzing the obtained source code to identify one or more grammar issues; or

analyzing the obtained source code to identify one or more security issues associated with the blockchain contract.

5. The method of any one of the claims 1-4, wherein the interface specification associated with the blockchain contract comprises:

a specification of an application binary interface (ABI) associated with the blockchain contract, wherein the specification of the ABI comprises a description of each of one or more interface functions associated with the blockchain contract.

6. The method of any one of the claims 1-5, wherein the generating a blockchain contract comprises:

generating one or more unit test cases associated with the blockchain contract based on a plurality of third inputs; and

executing the one or more unit test cases to test the blockchain contract.

7. The method of any one of the claims 1-6, wherein the generating a client-side application comprises:

generating an object associated with the blockchain contract based on the interface specification, wherein the object comprises one or more methods associated with the interface specification;

obtaining the plurality of second inputs, wherein one or more of the second inputs comprises source code invoking the one or more methods associated with the interface specification; and

including the object associated with the blockchain contract and the source code in the client-side application.

8. The method of any one of the claims 1-7, wherein the generating a client-side application comprises:

integrating a software development kit (SDK) associated with the blockchain in the client-side application.

9. The method of any one of the claims 1-8, wherein:

one or more of the second inputs comprise one or more references to one or more blockchain-based programs associated with the blockchain; and

the client-side application is executable to invoke the one or more blockchain-based programs.

10. The method of claim 9, wherein the generating a client-side application comprises:

integrating one or more SDKs associated with the one or more blockchain-based programs in the client-side application.

11. The method of any one of the claims 1-10, wherein the generating a client-side application comprises:

providing one or more simulators for testing the blockchain contract or the client-side application; and

executing the client-side application or the blockchain contract using the one or more simulators to identify one or more issues associated with the client-side application or the blockchain contract.

12. The method of any one of the claims 1-11, wherein the online storage system comprises:

a distributed file system according to the InterPlanetary File System (IPFS) protocol; or

a cloud-based storage system.

13. A system for blockchain-based decentralized application development, 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 1-12.

14. 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 one of the claims 1-12.

15. An apparatus for blockchain-based decentralized application development comprising a plurality of modules for performing the method of any one of the claims 1-12.