Getting Started with Solidity

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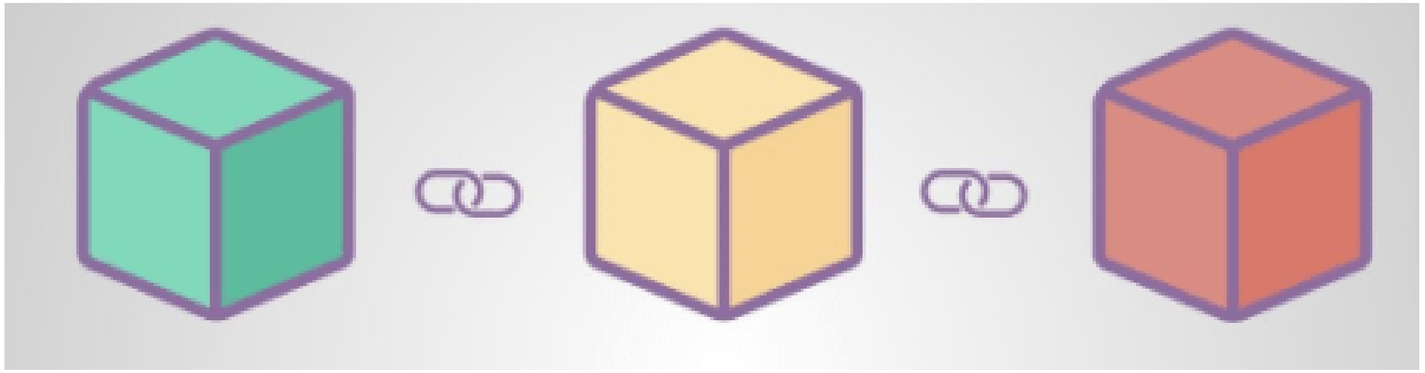
Class Structure

- Explaination of terms
- Prerequirements & installations
- First solidity program & deployment on remix

Imp Terms

- Blockchain
- Solidity
- Smart Contracts
- Web 3
- Remix IDE



Blockchain

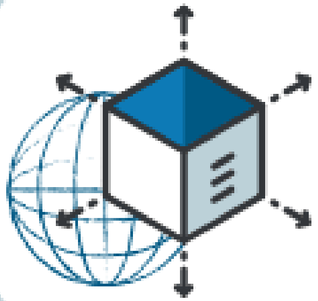
Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system. A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain. Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant’s ledger.

The Properties of Distributed Ledger Technology (DLT)

Programmable
A blockchain is programmable (i.e. Smart Contracts)

Secure
All records are individually encrypted

Anonymous
The identity of participants is either anonymous or pseudonymous



Distributed
All network participants have a copy of the ledger for complete transparency

Immutable
Any validated records are irreversible and cannot be changed

Time-stamped
A transaction timestamp is recorded on a block

Unanimous
All network participants agree to the validity of

Smart Contracts

A smart contract is a computer program or a transaction protocol which is intended to automatically execute, control or document legally relevant events and actions according to the terms of a contract or an agreement.

Solidity

Solidity is an object-oriented programming language for writing smart contracts. It is used for implementing smart contracts on various blockchain platforms, most notably, Ethereum

Web3 js

The web3 JavaScript library interacts with the Ethereum blockchain. It can retrieve user accounts, send transactions, interact with smart contracts, and more.

Remix IDE

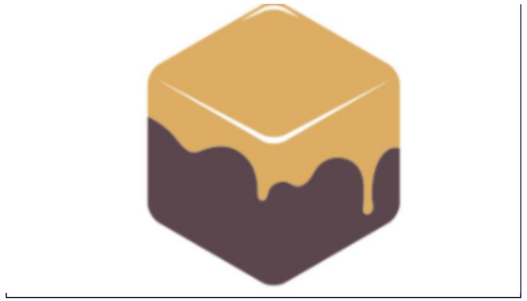
Remix IDE is a powerful open source tool that helps you write Solidity contracts straight from the browser. It is written in JavaScript

Prerequisites & Installations

CHROME BROWSER

BRAVE WEB BROWSER

REMIX IDE



GANACHE

METAMASK

GANACHE

Ganache is a personal blockchain for rapid Ethereum and Corda distributed application development

METAMASK

MetaMask is a software cryptocurrency wallet used to interact with the Ethereum blockchain. MetaMask equips you with a key vault, secure login, token wallet, and token exchange etc.

Now we will see the installations

then implement our First basic program in Solidity

Thank
you!