BLOCKCHAIN

EXPLAINER

Solidity

#BLOCKCHAIN
#ETHEREUM
#SOLIDITY

Solidity is a JavaScript-like statically-typed programming language designed for developing smart contracts that run on the Ethereum Virtual Machine (EVM).

Key Information

Type?

Programming language

What is it?

Solidity is the programming language that is used by developers to create and connect Smart Contracts that run on the Ethereum Virtual Machine (EVM). The syntax of Solidity is very much alike that of JavaScript. Solidity is a relatively new programming language that is created in 2014 by Gavin Wood. There is not a significant amount of published resources regarding Solidity but tutorials are available on YouTube and GitHub.

Who uses it?

Designers and developers when building smart contracts and associated business logic on Ethereum.

Strengths and Weaknesses

+ Solidity is easy to learn with a JavaScript background and built Dapps can be tested using the Mist Wallet
- The language is relatively new and as a result there are limited resources and publications

Capabilities

Solidity is compiled to bytecode that is executable on the EVM. With Solidity, developers are able to write applications that implement self-enforcing business logic. These are embodied by smart contracts, which leave a non-repudiable and authoritative record of transactions.

Code Sample

Solidity Smart Contract Example

```
pragma solidity ^0.4.0;

contract SimpleStorage {
    uint storedData;

    function set(uint x) {
        storedData = x;
    }

    function get() constant returns (uint retVal) {
        return storedData;
    }
}
```

Create a smart contract called “SimpleStorage”

Declare a state variable called “storedData” of type “uint”

Create a function called “set” to set a number x

Create a function that returns the number x

Sources: https://solidity.readthedocs.io/en/develop/
https://www.youtube.com/playlist?list=PLH4m2oS2ratdoHFEkGvwvd7TkeTv4sa7Z