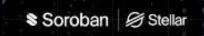What is Stellar ?
What is Smart Contracts ?
What is Soroban ?
Environment Setup ?
Build a Smart contract on Stellar ?

STELLAR BLOCKCHAIN

Stellar is a layer-1 open-source, decentralized, peer-to-peer blockchain network that provides a framework for developers to create applications, issue assets, write smart contracts, and connect to existing financial rails

Real Use Cases

- Cross border Payments

- Asset Tokenization

- On and off ramps

- DeFi

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SMART CONTRACTS

1. Smart contracts are self-executing programs with the terms of an agreement written directly into the code.

2. They automatically enforce and execute the terms of the contract when predefined conditions are met.

3. Developers must define the rules and logic of the contract while also ensuring security.

SMART CONTRACTS

Example: Simple Payment Agreement

Imagine you and a friend agree to pay $100 for a concert ticket. Instead of trusting each other to make the payment after the concert, you decide to use a smart contract to ensure the transaction happens automatically.

How It Works:

1. Creating the Smart Contract: You write a smart contract that states:
   1. If you pay $100 to the contract, it will release the concert ticket to you.
   2. If the concert is canceled, you will get your $100 back.

2. Executing the Contract:
   1. You send $100 to the smart contract.
   2. The smart contract checks that you have sent the correct amount.

3. Automatic Action:
   1. If everything is correct, the smart contract automatically transfers the concert ticket to you.
   2. If the concert is canceled, the smart contract returns your $100 to you.

What is Soroban?

Soroban is the smart contract platform built on the Stellar blockchain. It allows developers to create decentralized applications (dApps) by writing and deploying smart contracts on Stellar.

Environment Setup

1. WSL
   Link-
2. RUST
   Link-
3. STELLAR CLI
   Link-
4. SOROBAN SDK
   Link-

Hello World Smart Contract

Create a new project

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```
.
├── Cargo.lock
├── Cargo.toml
├── README.md
└── contracts
    └── hello_world
        ├── Cargo.toml
        └── src
            ├── lib.rs
            └── test.rs
```