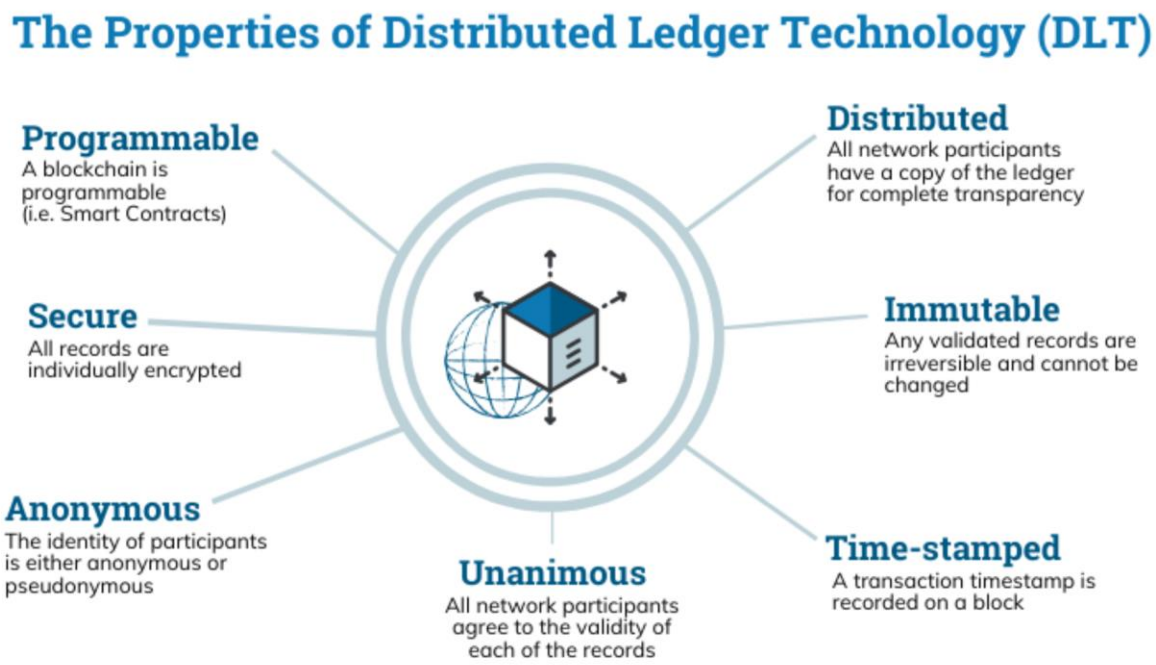
Altruist Token ALT

What is a Blockchain

A blockchain is a system of recording information in such a way that makes it difficult or even 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 that are 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 decentralized database managed by multiple participants is known as 'Distributed Ledger Technology' (DLT). A blockchain is a type of DLT in which transactions are recorded within an immutable cryptographic signature called a hash. This means that if one block in the chain was changed, it would be immediately apparent it had been tampered with. If hackers wanted to corrupt a blockchain system, they would have to change every block in the chain, across all distributed versions of the chain. As a chain grows, it only becomes more and more secure.



There have been many attempts to create digital money in the past, but they have always failed. Blockchain is the only technology that succeeded because in a blockchain, nobody is in charge, it is run by the people who use it.
Although the main reason Blockchain is renowned is payment processing and cryptocurrency transfers, it can serve as a home to a wide array of useful or entertainment-oriented applications. Blockchain has many such applications: digital ids, data sharing, copyright protection, digital voting, medical recordkeeping, weapons tracking, etc.

Transactions on the blockchain

In order for a transaction to be executed on the blockchain, the block that contains it must be added to the blockchain by a miner. The miner that adds the new block receives a reward - usually, a number of tokens. The miner that adds the new block is chosen, usually, by proof of work or proof of stake.
When using a proof of work approach, the miners are given a complex mathematical equation to solve, which requires a lot of computing power. The node that answers the question first, gets to add the next block to the blockchain. This approach is not very environmentally friendly because it consumes a lot of energy. The growing demand for electrical resources and chips has led some cryptocurrencies to develop new, less energy dependent consensus mechanisms.
Proof of stake came about as a direct result of the insane amount of electricity Bitcoin miners were consuming.Proof of stake eliminates the step in which computers compete over who is next to add a block to the blockchain. The protocol chooses nodes randomly or based on their holdings, size, or time in operation.

The Ethereum blockchain

Although Bitcoin was the first cryptocurrency to use the blockchain technology, soon, many others followed. Ethereum is a decentralized, open source blockchain, with smart contract functionality. Ether is the native cryptocurrency of the platform. It is the second-largest cryptocurrency by market capitalization, after Bitcoin. Ethereum was proposed in 2013 by programmer Vitalik Buterin. Development was crowdfunded in 2014, and the network went live on 30 July 2015, with an initial supply of 72 million coins. Decentralized finance (DeFi) applications provide a broad array of financial services without the need for typical financial intermediaries such as brokerages, exchanges, or

banks, such as allowing cryptocurrency users to borrow against their holdings or lend them out for interest. Ethereum also allows for the creation and exchange of NFTs, which are non-interchangeable tokens that can be connected to digital works of art or other real-world items and sold as unique digital property. Ethereum has started implementing a series of upgrades called Ethereum 2.0, which includes a transition to proof of stake and aims to increase transaction throughput using sharding. The founder of the Ethereum blockchain argued that Bitcoin and blockchain technology could benefit from other applications besides money and needed a scripting language for application development.

The Ethereum Virtual Machine is the runtime environment for smart contracts. Gas is a unit of account within the EVM used in the calculation of a transaction fee, which is the amount of ETH a transaction's sender must pay to the miner who includes the transaction in the blockchain. When creating a transaction, the sender must specify a gas limit and gas price. The gas limit is the maximum amount of gas the sender is willing to use in the transaction, and the gas price is the amount of ETH the sender wishes to pay to the miner per unit of gas used. The higher the gas price, the more incentive a miner has to include the transaction in their block, and thus the quicker the transaction will be included in the blockchain. If at any point the transaction does not have enough gas to perform the next operation, the transaction is reverted but the sender still pays for the gas used. This fee mechanism is designed to mitigate transaction spam, prevent infinite loops during contract execution, and provide for a market-based allocation of network resources.

Altruist Token

Altruism is the principle and moral practice of concern for happiness of other human beings or other animals, resulting in a quality of life both material and spiritual. It is a traditional virtue in many cultures and a core aspect of various religious traditions and secular worldviews, though the concept of "others" toward whom concern should be directed can vary among cultures and religions.

We implemented ALT (Altruist Token), a cryptocurrency that donates 5% of every transaction to a noble cause. It uses the ERC20 interface and SafeMath. We were motivated by the increasing selfishness and laziness in our generation to make a change, and the rising in popularity of cryptocurrencies should work in our favour. We think there are a lot of people who would agree

to the 5% donation if there are no required extra steps and everything is done in the background, so they won't have to spend any extra time for this.

Altruist Token Transaction

The transaction's implementation in backend is similar to other cryptocurrencies, the big difference being that here are actually two destinations, 5% being sent to the NOBLE CAUSE. Everything is done in the back-end, so the user does not have to spend any time for this.

```
    function withdraw(uint amount) public {
        balances[msg.sender] = safeSub(balances[msg.sender], amount);
        balances[myAddress] = safeAdd(balances[myAddress], amount);

        emit Transfer(msg.sender, myAddress, amount);
    }

    function withdrawFrom(uint amount, address from) public {
        balances[from] = safeSub(balances[from], amount);
        allowed[from][msg.sender] = safeSub(allowed[from][msg.sender], amount);
        balances[myAddress] = safeAdd(balances[myAddress], amount);
        emit Transfer(from, myAddress, amount);
    }

    function transfer(address to, uint tokens) public returns (bool success) {
        withdraw((tokens*5)/100);

        balances[msg.sender] = safeSub(balances[msg.sender], tokens);
        balances[to] = safeAdd(balances[to], tokens);

        emit Transfer(msg.sender, to, tokens);
        return true;
    }

    function transferFrom(address from, address to, uint tokens) public returns (bool success) {
        withdrawFrom((tokens*5)/100, from);

        balances[from] = safeSub(balances[from], tokens);
        allowed[from][msg.sender] = safeSub(allowed[from][msg.sender], tokens);
        balances[to] = safeAdd(balances[to], tokens);
        emit Transfer(from, to, tokens);
        return true;
    }
}
```

As you can see , when transfer function is called, it calls the withdraw function which donates 5% of the sum , then it continues the transaction normally.

ERC20Interface

The ERC20Interface is a standard that allows implementation of a standard API for tokens with smart contracts. It provides basic functionality to transfer tokens , as well as allow tokens to be approved so they can be spent by another on-chain third party.

SafeMath Interface

The SafeMath Interface is an interface we used for safe adding/substracting and so on ; It uses require to check different conditions , making the cod safe.