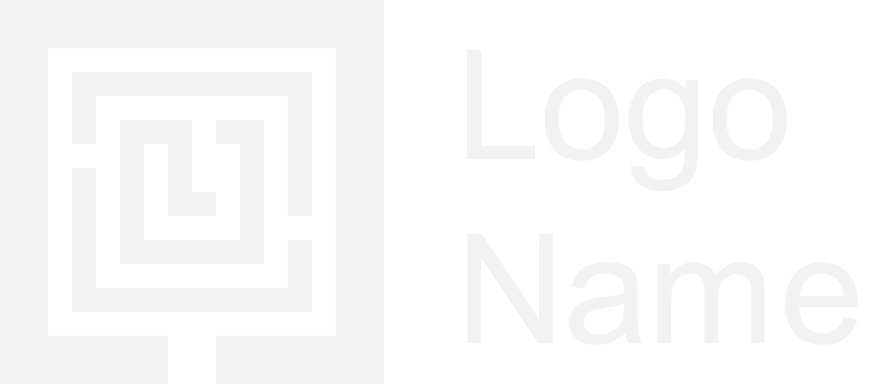


İstanbul Kültür Üniversitesi

Software Engineering

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| APXEIA  Smart Contracts |
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What are Smart Contracts?

Just like any contract, Smart Contracts lay out the terms of an agreement or deal. What makes smart contracts “smart”, however, is the terms are established and executed as code running on a blockchain, rather than a paper sitting on a lawyer’s desk. Smart Contracts are automatically executed when predetermined terms and condition are met. It is a collection of code and data that resides at a specific address on the blockchain.

How Do Smart Contracts Work?

Smart contracts are a type of Ethereum account. This means they have a balance, and they can send transactions over the network. However, they are not controlled by a user, instead they are deployed to the network and run as programmed. User accounts can then interact with a smart contract by submitting transaction that execute a function defined on the smart contract. Smart contracts can define rules, like regular contract and automatically enforce them via the code. Smart contracts cannot be deleted by default, and interactions with them are irreversible.

What Are Some Benefits of Smart Contracts?

* Advantage
  + Autonomy and saving

Smart contracts do not need brokers or other intermediaries to confirm agreement; thus, they reduce the risk of manipulation by third parties. Moreover, the absence of intermediary in smart contracts results in cost saving.

* + Backup

All documents stored on blockchain are duplicated multiple times; thus, originals can be restored in the event of any data loss.

* + Safety

Smart contracts are Encrypted, and cryptography keeps all the documents safe from infiltration.

* + Speed

Smart contracts automate tasks by using computer protocols, saving hours of various business process.

* Disadvantage
* Difficult to change

Changing smart contract processes is almost impossible, any error in the code can be time-consuming and expensive to correct.

* Third Party

Although Smart contracts look to take third parties’ contribution, it is absurd to expect to dispense with them totally. Third parties accept various jobs from the ones they take in conventional agreements; in any case, they will be required by engineers to comprehend the terms to make codes for Smart contracts.

* vague terms

Since contracts include terms that are not always understood, smart contracts are not always able to handle terms and conditions that are vague.

Smart Contracts on Apxiea

Smart contracts examples:

* Real Estate: Smart contracts can be used to record property ownership and helps with the currency trades while contracting.
* Financial Security: currencies will remain safe. No risk of losing.
* Government: Can be used on voting system to secure voter’s ID and prevent shortcutting.
* Clinic trial: Highly sensitive data such medical research and patient record will be kept safe.
* Product Development: Another exciting use of smart contracts is to keep a ledger regarding the stages of development of a product.

Smart contracts examples that might be used on Apxiea:

* Upload: Can be used to help with uploading data to blockchain.
* Save User Information: Smart contracts will directly save user information and wallet details on blockchain.
* Trading currencies: Trading and exchanging currency comes first when we talk about smart contracts. Apxiea will be using a smart contract system for its payments and exchange trades.
* Chat box: All the messages and conversations that has been occurred between users will be stored and saved on with smart contract
* Membership payments: any amount of money that will be received from the user such as membership payments will be transferred by cryptocurrencies with the help of smart contracts.

References

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