Experiment. No. 15

Title: write a smart contract on a test network, for Bank account of a customer for following operations.

* Deposite money
* withdraw money
* show balance

objective: To learn new technology such as metamask. Its application and implementations.

theory:

First of all, we need to understand the difference between a paper contract and a smart contract and the reason why smart contracts becomes increasingly popular and implemented important in recent years.

A contract by definition, is a written or spoken (mostly written) law-enforced agreement containing the rights and tricky. the parties need to hire professional agents or lawyers for protecting their own right.

However, if we hire those professionals every time we sign contracts, it is going to be extremely costly and inefficient.

smart contracts perfectly solve this by working on, If-then principle & also as escrow service.

All participants need to put their money, ownership right on other tradable assests into smart contracts before any successful transaction.

As long as all participating parties meet the requirements. smart contracts will simultaneously distribute stored assests to recepients and the distribution

process will be witnessed and verified by the nodes on Ethereum network.

There are a couple of languages we can use program smart contract.

solidity an object-oriented and high-level lan is by far the most famous and well maintained one.

we can use solidity to create various smart con which can be used in different scenario, including voting, blind auctions & safe remote purchase

After deciding the coding language we need to pic appropriate compiler

Among various compilers like visual code studio, w will use Remix IDE in this & following labs becau it can be directly assessed from browser where we can test, debug & deploy smart contracts without any installation.

steps to execute solidity smart contract using Remix IDE.

1. open Remix IDE on any of your browser, select on New File & click solidity to choose the environ ment.
2. write the smart contract in code section & click compile the contract.
3. To execute the code, click on deploy button under Deploy & Run Transactions window. After deploying the code click on the dropdown on the console.

Sample output :

After deploying the contract successful you can observe following buttons create_account, deposit, sent_amt, transfer, account_exist, user account, user_balance & user exists.

* check Account Exists
* check User Account Exists
* check User balance
* check user exists
* send amount
* check user Account balance
* withdraw amount and check user account balance
* Transfer Amount & check Bank user Amount balance

Conclusion :

Hence, we studied a smart contract on a test network for Bank account of a customer