

BlockChain Technology

Practical - 5

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Aim : To perform thorough study and installation of Remix IDE and Truffle IDE for deploying Smart Contracts and Decentralized Applications (dapps) and create and deploy a Smart Contract for any application such as finance, healthcare etc.

Solidity Code :

```
pragma solidity ^0.4.21;

contract AVTax
{
    struct Owner
    {

        string name_of_owner;
        int tax_amount;
        int have_amount;
    }

    mapping(address => Owner) public owners;

    function add(string _name_of_owner, int _have_amount) public
    {
        owners[msg.sender] = Owner(_name_of_owner, 0, _have_amount);
    }

    function add_tax(int x) public {

        if(owners[msg.sender].have_amount >= x)
```

```
        owners[msg.sender].have_amount = owners[msg.sender].have_amount -  
x;  
        else owners[msg.sender].tax_amount = owners[msg.sender].have_amount +  
x;  
    }  
}
```

Input and Output:

I have used remixIDE for compiling the solidity file and then made one person and taken the tax input from user and as a result we will see the updated amount from user.



ScreenShots

DEPLOY & RUN TRANSACTIONS

be saved and replayed in another environment. e.g Transactions created in Javascript VM can be replayed in the Injected Web3.



Deployed Contracts

▼ AVTAX AT 0xE11...033D3 (BLOCKCHAI  

add 

_name: Jenish

_total_amount: 200



transact

add_tax

100



owners

0x45c535eB6E0fFC79cA06f



0: string: name Jenish

1: int256: total_tax 0

2: int256: total_amount 100

Low level interactions

CALLDATA

Transact

```
pragma solidity ^0.4.11;

contract AVTax
{
    struct Owner
    {
        string name;
        int total_tax;
        int total_amount;
    }

    mapping(address => Owner) public owners;

    function add(string _name, int _total_amount) public
    {
        owners[msg.sender] = Owner(_name, 0, _total_amount);
    }

    function add_tax(int x) public {
        if(owners[msg.sender].total_amount > x)

0 ☐ listen on network 

sact to AVTax.add_tax errored: Error encoding arguments: Error: invalid BigNumber string (argument="value" value="" code=INVALID_ARGUMENT versi
sact to AVTax.add_tax pending ...

to AVTax.owners errored: Error encoding arguments: Error: invalid address (argument="address" value="" code=INVALID_ARGUMENT version=address/5
e="" code=INVALID_ARGUMENT version=abi/5.4.1)

[block: txIndex:] from: 0x45c...c7Ff7 to: AVTax.add_tax(int256) 0xe11...033d3 value: 0 wei data: 0xb83...00064 logs: 0 hash:

to AVTax.owners
```

Conclusion :

After completion of this practical, I learnt how to deploy smart contracts using RemixIDE.