|  |
| --- |
| pragma solidity ^0.6.6; |
|  |  |
|  | contract BankContract { |
|  |  |
|  | struct client\_account{ |
|  | int client\_id; |
|  | address client\_address; |
|  | uint client\_balance\_in\_ether; |
|  | } |
|  |  |
|  | client\_account[] clients; |
|  |  |
|  | int clientCounter; |
|  | address payable manager; |
|  | mapping(address => uint) public interestDate; |
|  |  |
|  | modifier onlyManager() { |
|  | require(msg.sender == manager, "Only manager can call this!"); |
|  | \_; |
|  | } |
|  |  |
|  | modifier onlyClients() { |
|  | bool isclient = false; |
|  | for(uint i=0;i<clients.*length*;i++){ |
|  | if(clients[i].client\_address == msg.sender){ |
|  | isclient = true; |
|  | break; |
|  | } |
|  | } |
|  | require(isclient, "Only clients can call this!"); |
|  | \_; |
|  | } |
|  |  |
|  | constructor() public{ |
|  | clientCounter = 0; |
|  | } |
|  |  |
|  | receive() external payable { } |
|  |  |
|  | function setManager(address managerAddress) public returns(string memory){ |
|  | manager = payable(managerAddress); |
|  | return ""; |
|  | } |
|  |  |
|  | function joinAsClient() public payable returns(string memory){ |
|  | interestDate[msg.sender] = now; |
|  | clients.push(client\_account(clientCounter++, msg.sender, address(msg.sender).balance)); |
|  | return ""; |
|  | } |
|  |  |
|  | function deposit() public payable onlyClients{ |
|  | payable(address(*this*)).transfer(msg.value); |
|  | } |
|  |  |
|  | function withdraw(uint amount) public payable onlyClients{ |
|  | msg.sender.transfer(amount \* 1 ether); |
|  | } |
|  |  |
|  | function sendInterest() public payable onlyManager{ |
|  | for(uint i=0;i<clients.*length*;i++){ |
|  | address initialAddress = clients[i].client\_address; |
|  | uint lastInterestDate = interestDate[initialAddress]; |
|  | if(now < lastInterestDate + 10 seconds){ |
|  | revert("It's just been less than 10 seconds!"); |
|  | } |
|  | payable(initialAddress).transfer(1 ether); |
|  | interestDate[initialAddress] = now; |
|  | } |
|  | } |
|  |  |
|  | function getContractBalance() public view returns(uint){ |
|  | return address(*this*).balance; |
|  | } |
|  | } |