IT465: Cryptocurrencies and Blockchain Technologies
Lab Assignment 2

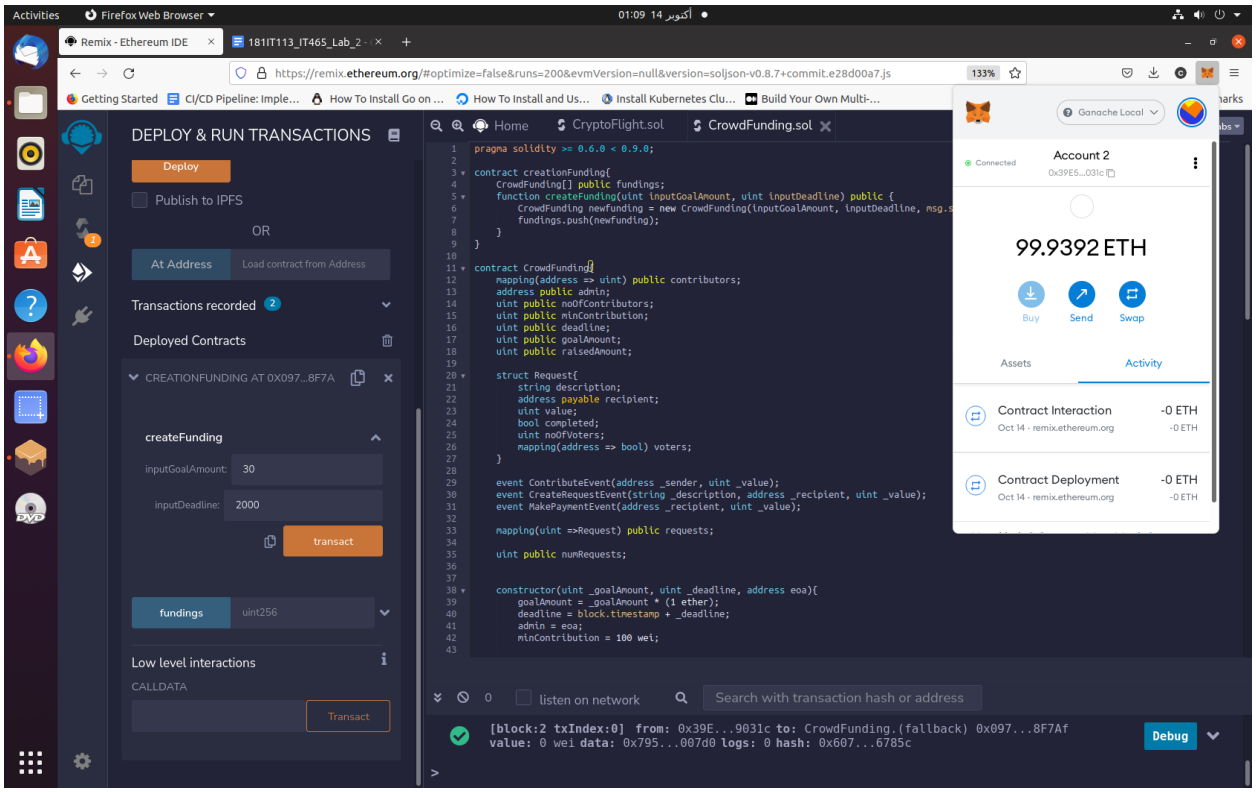
Name: Chinmayi C. Ramakrishna
Roll No.: 181IT113

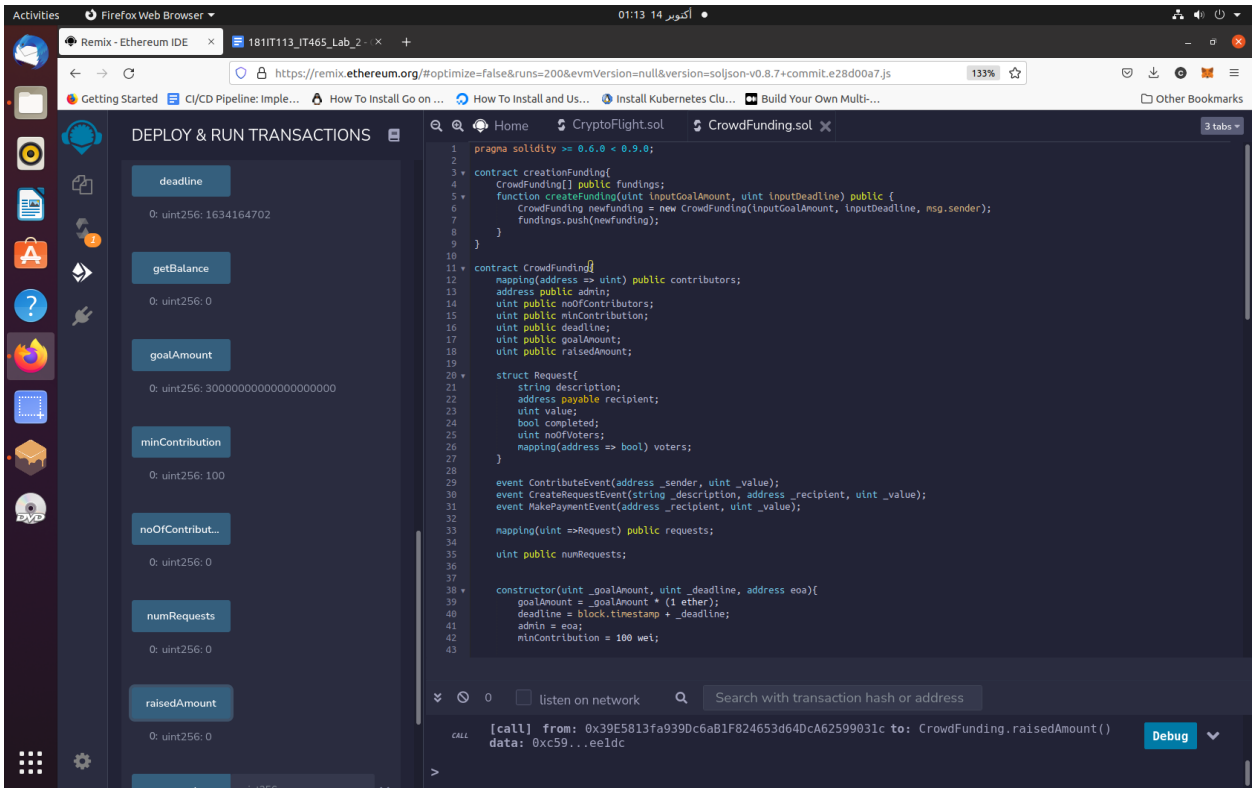
Date: 18th Oct, 2021

Ganache and Metmask Implementation of the two applications:

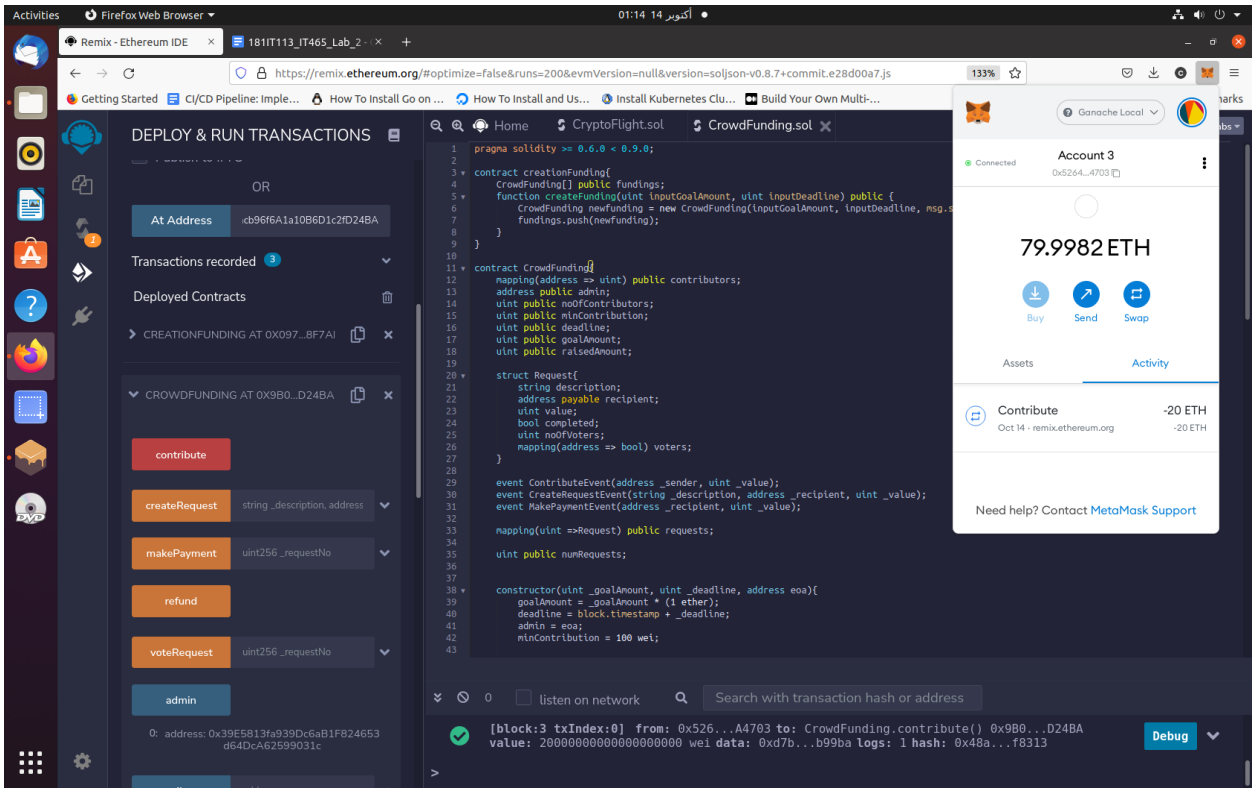
1) CrowdFunding

Deploying creationFunding contract with Account 2 as admin.

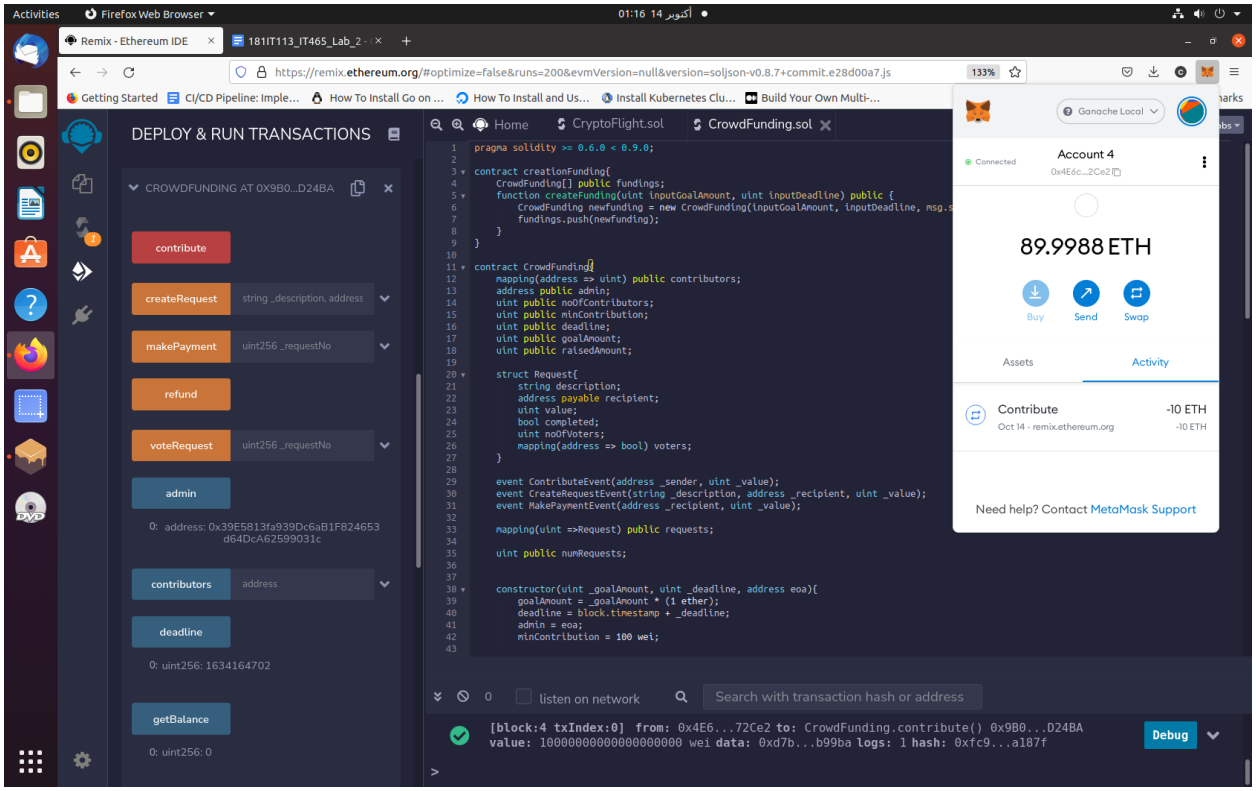


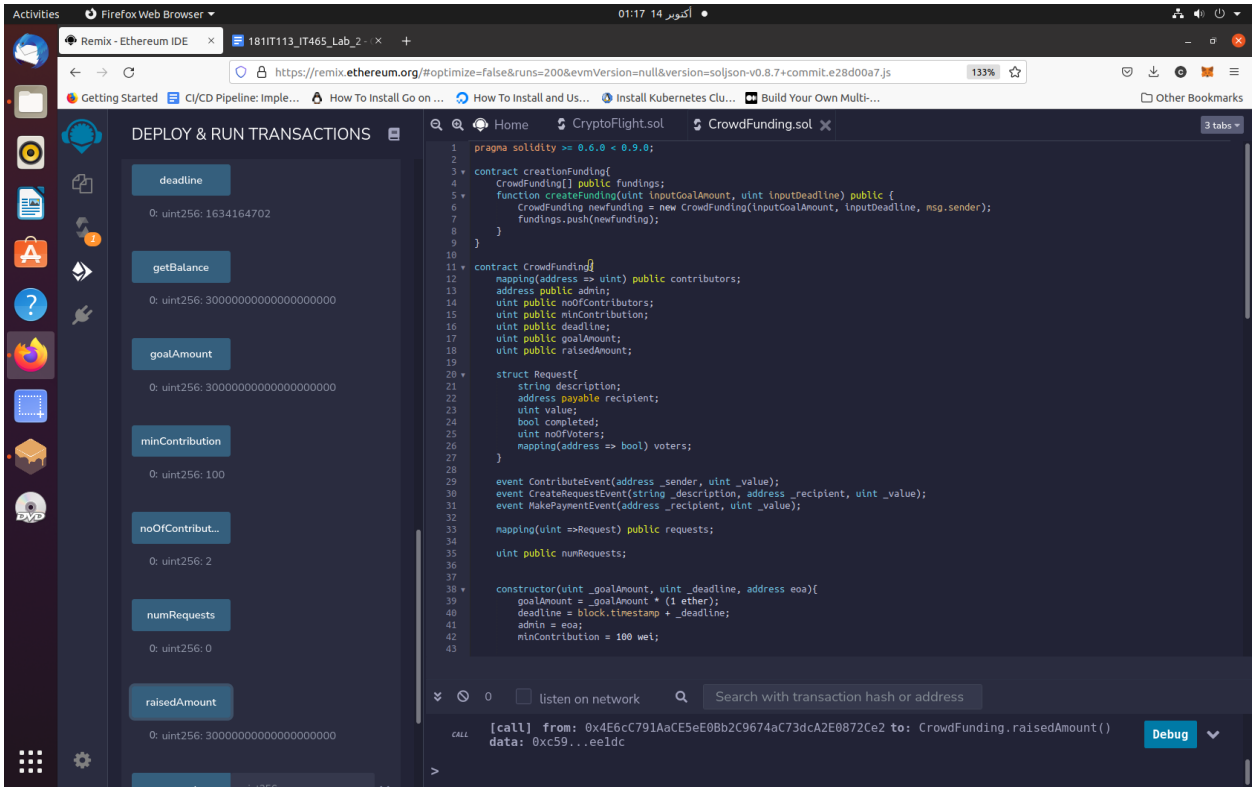


20 ethers contributed by Account 3.

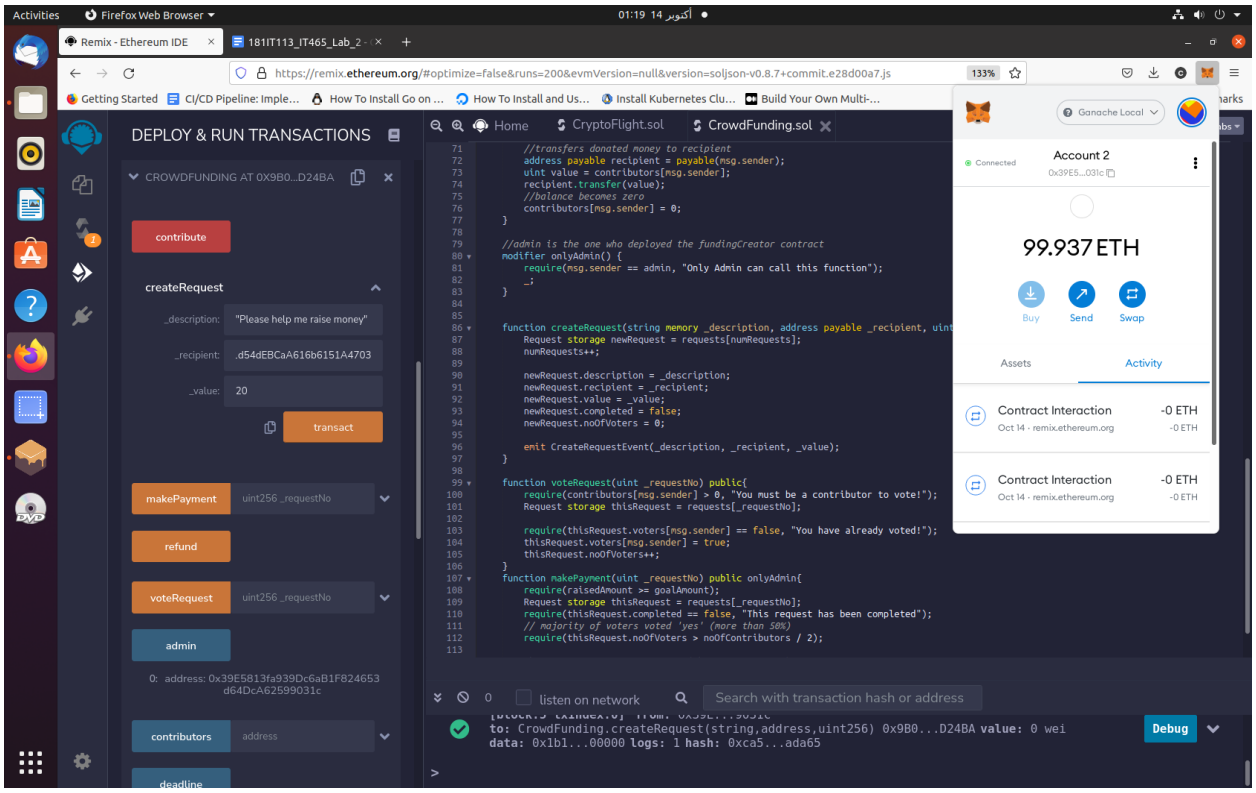


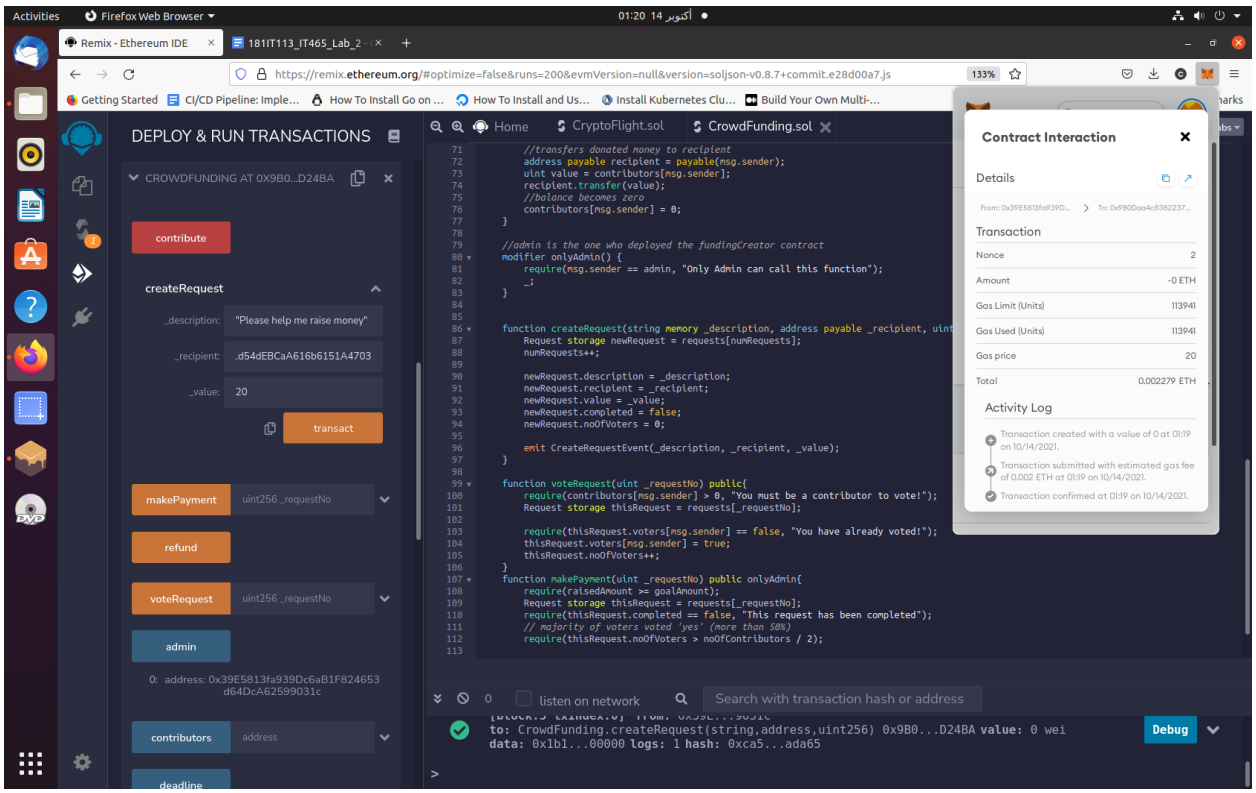
10 ethers contributed by Account 4.



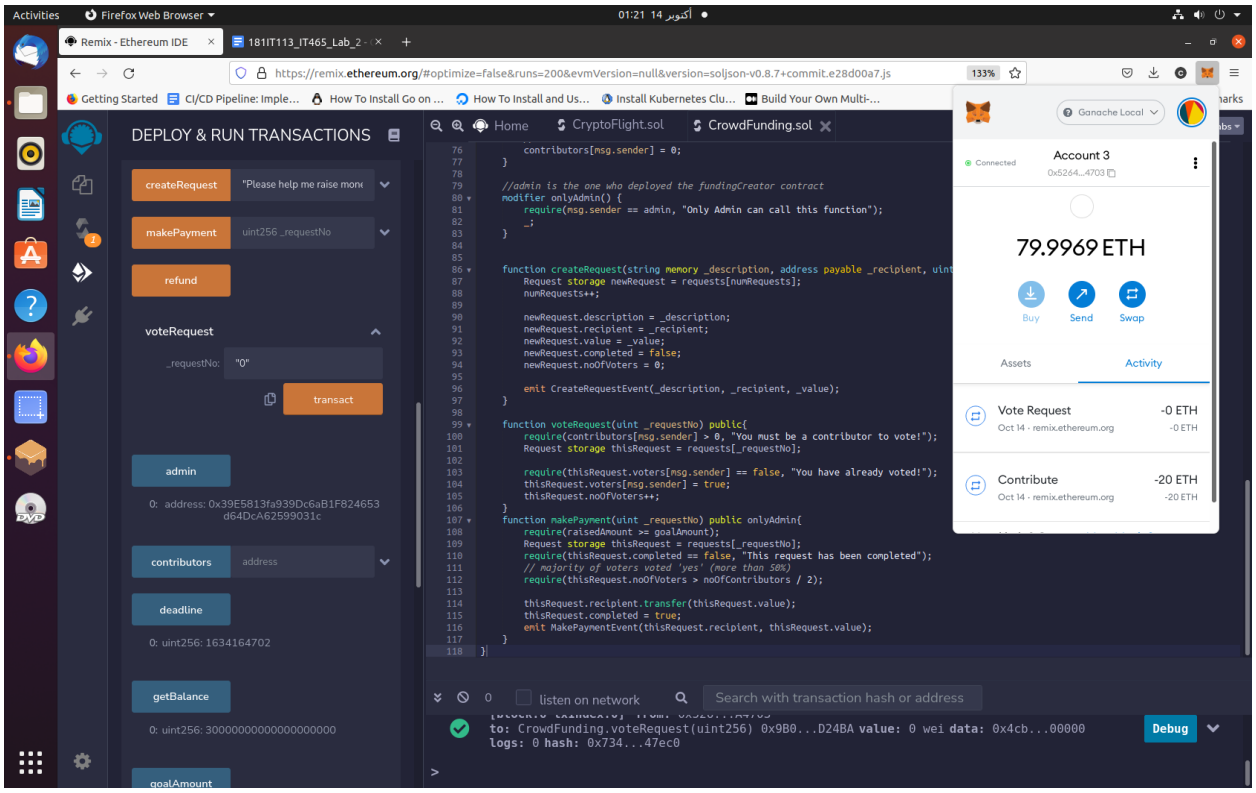


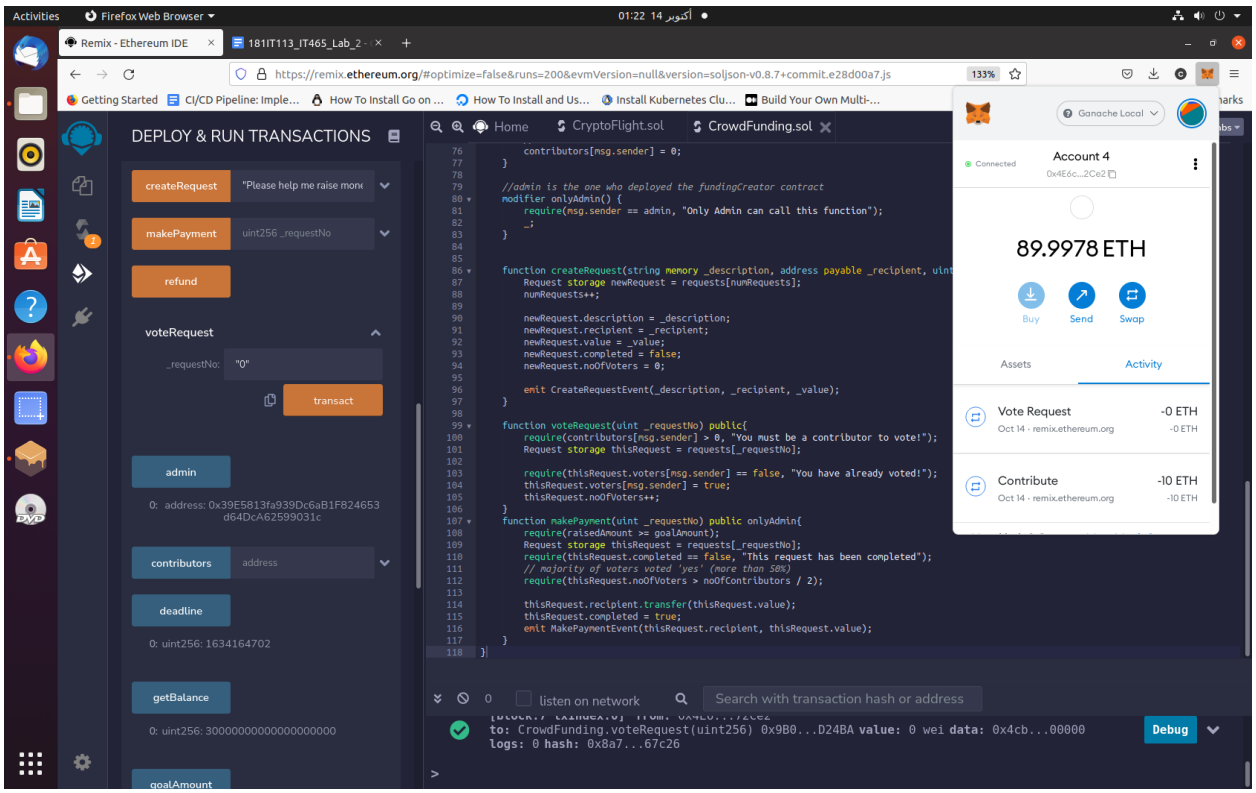
createRequest by admin(Account 2) for 20 wei with Account 3 as recipient.



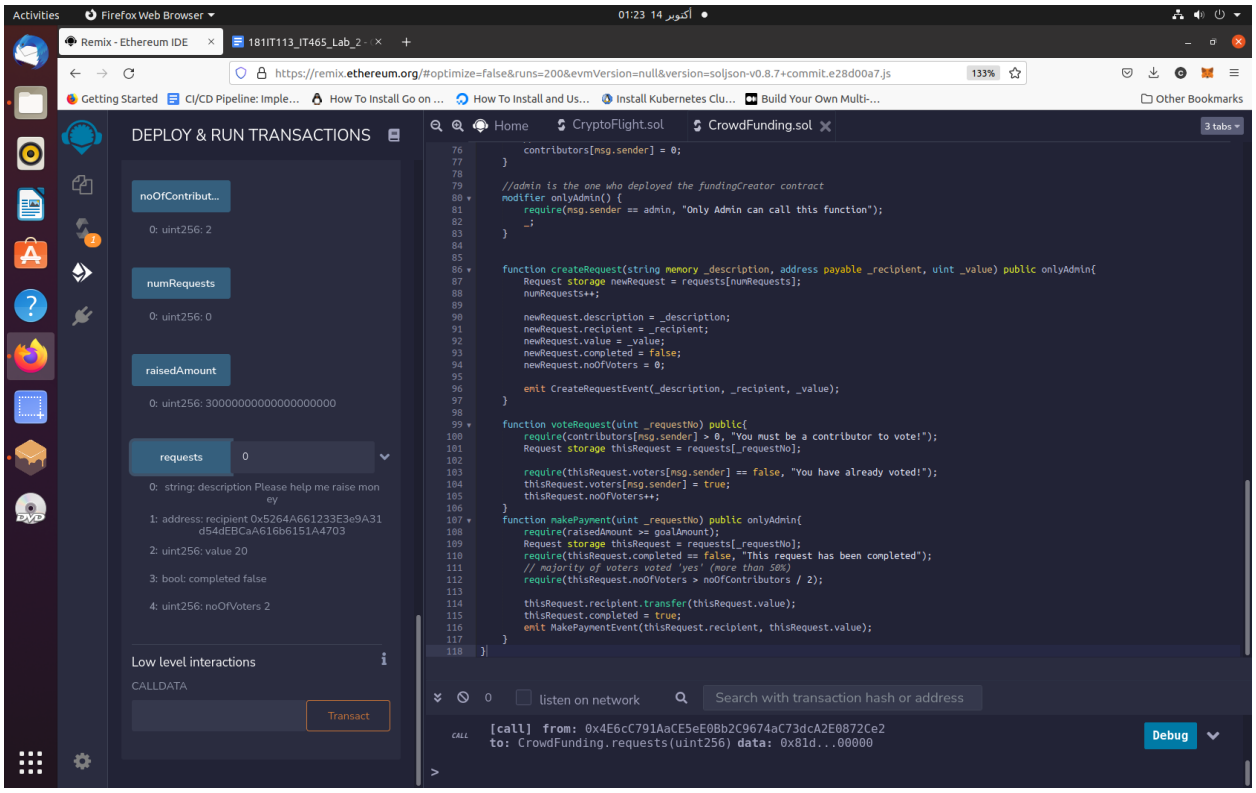


voteRequests by the two accounts so that makePayment can be approved.

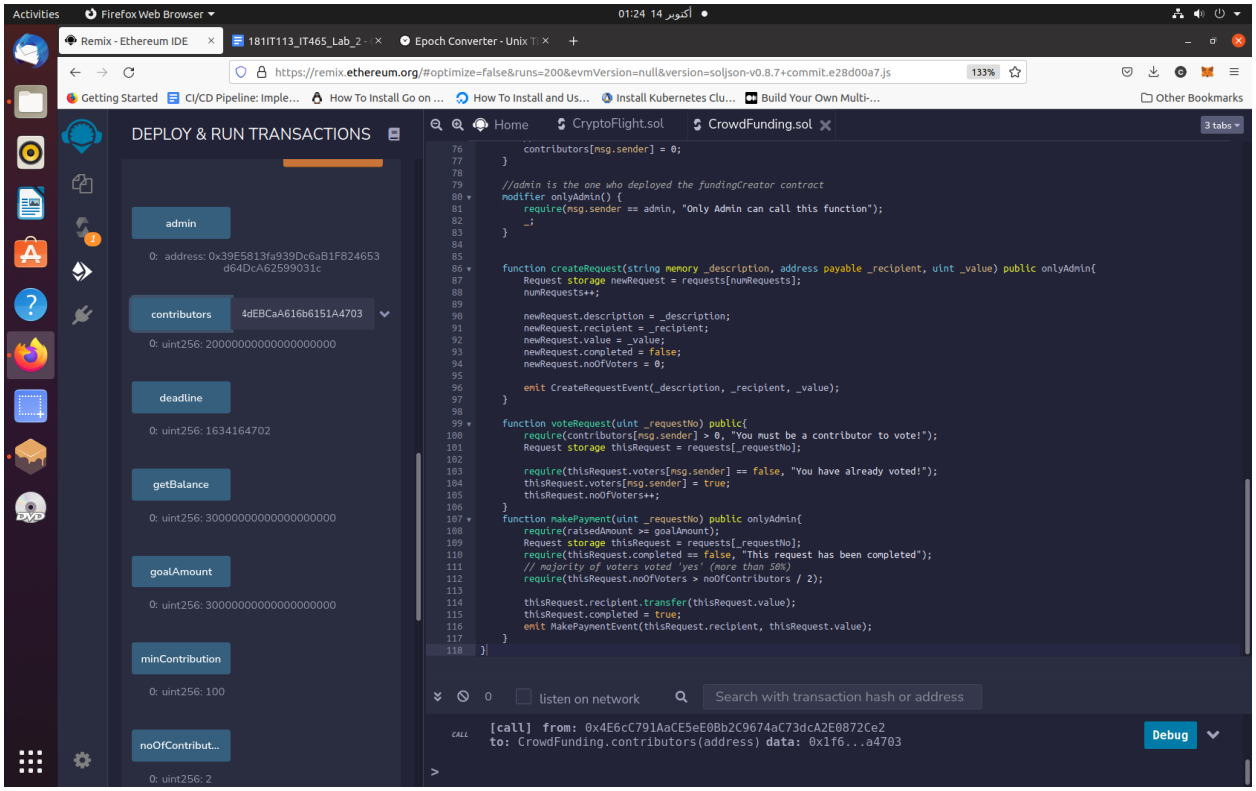


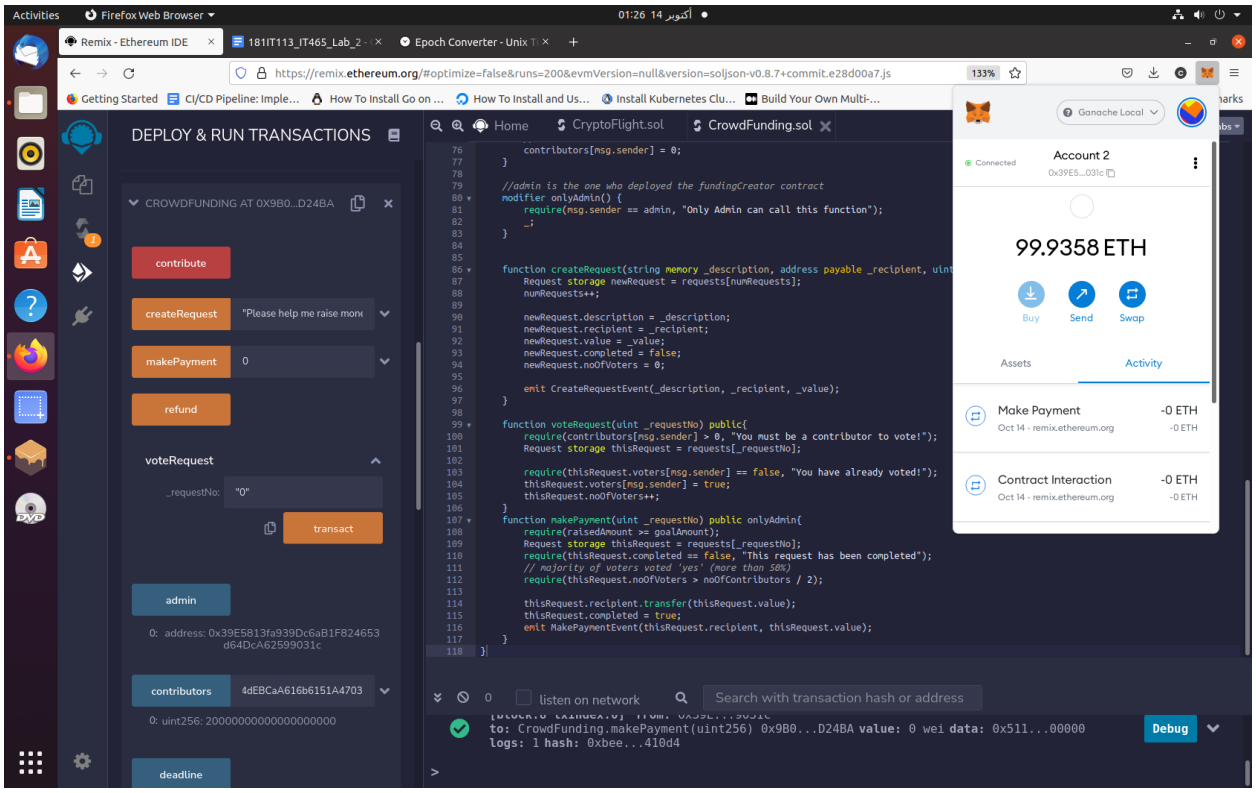


Details after creating request by admin.

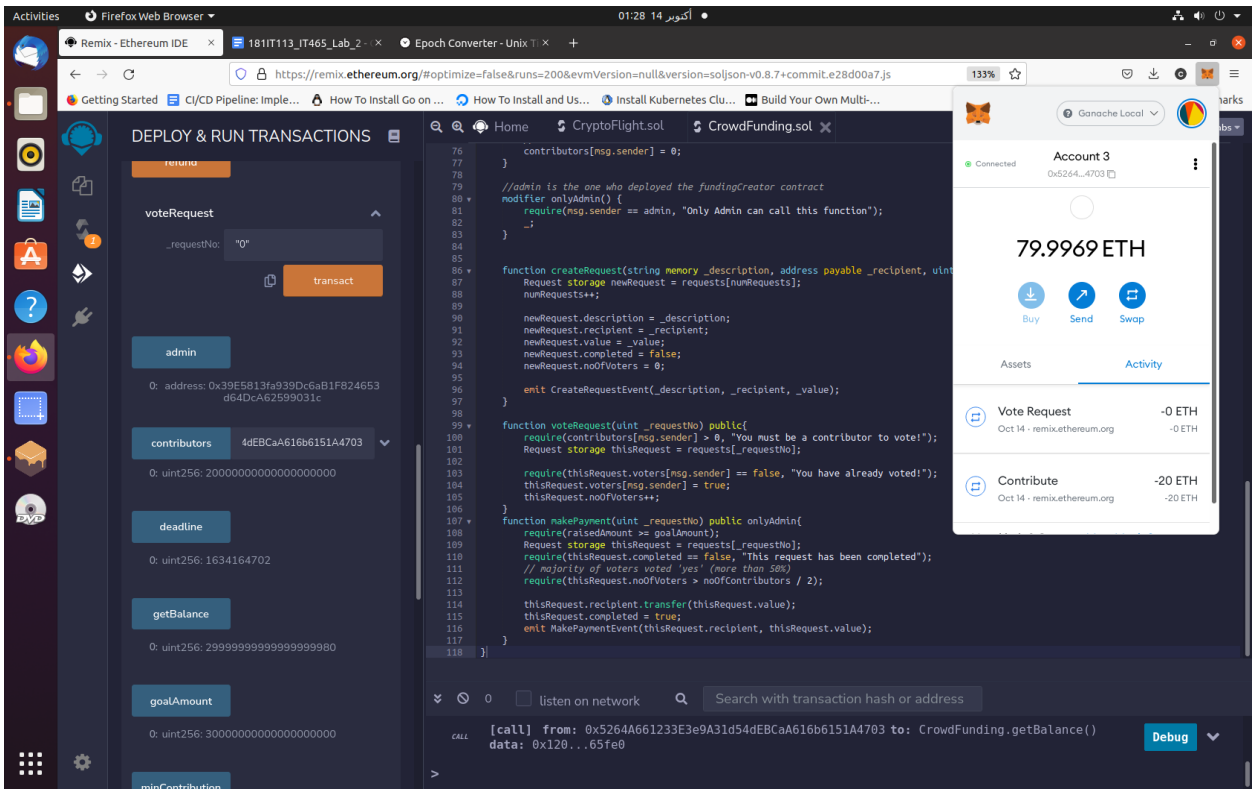


Contributors take the address and return the amount they contributed.

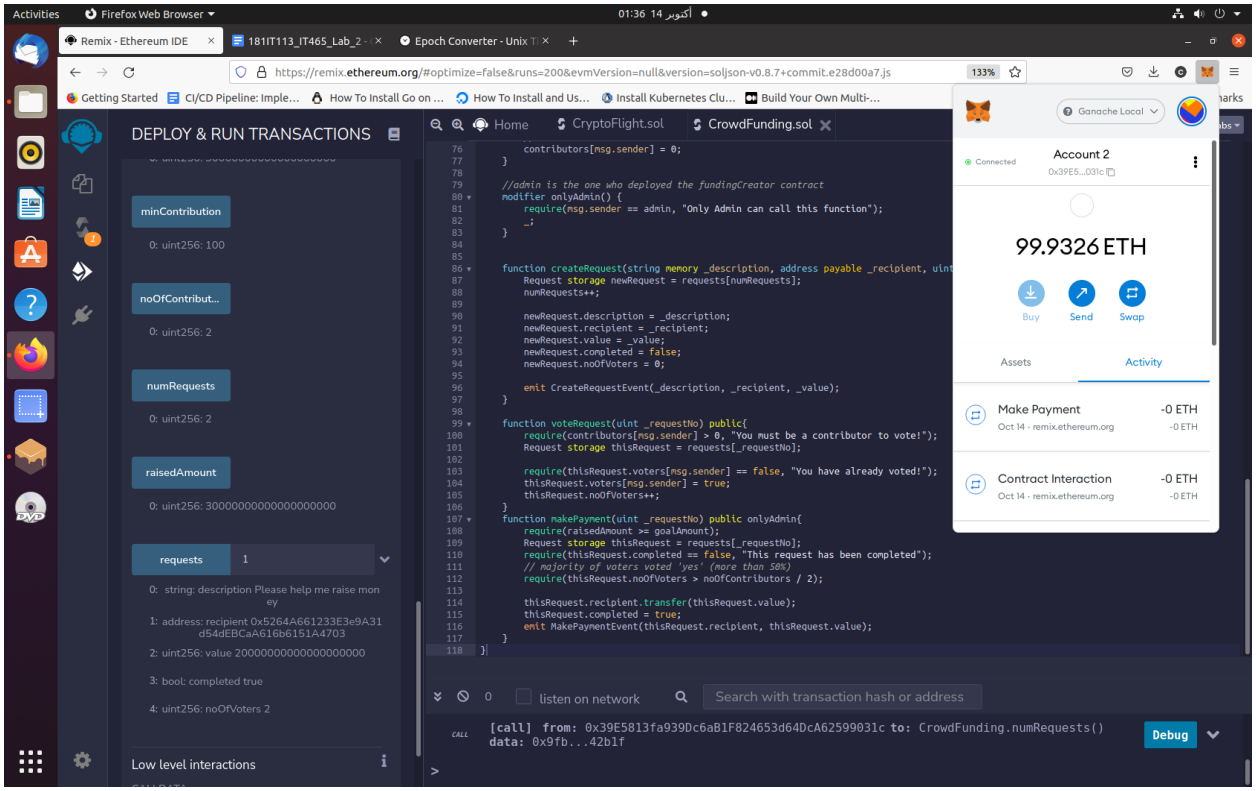


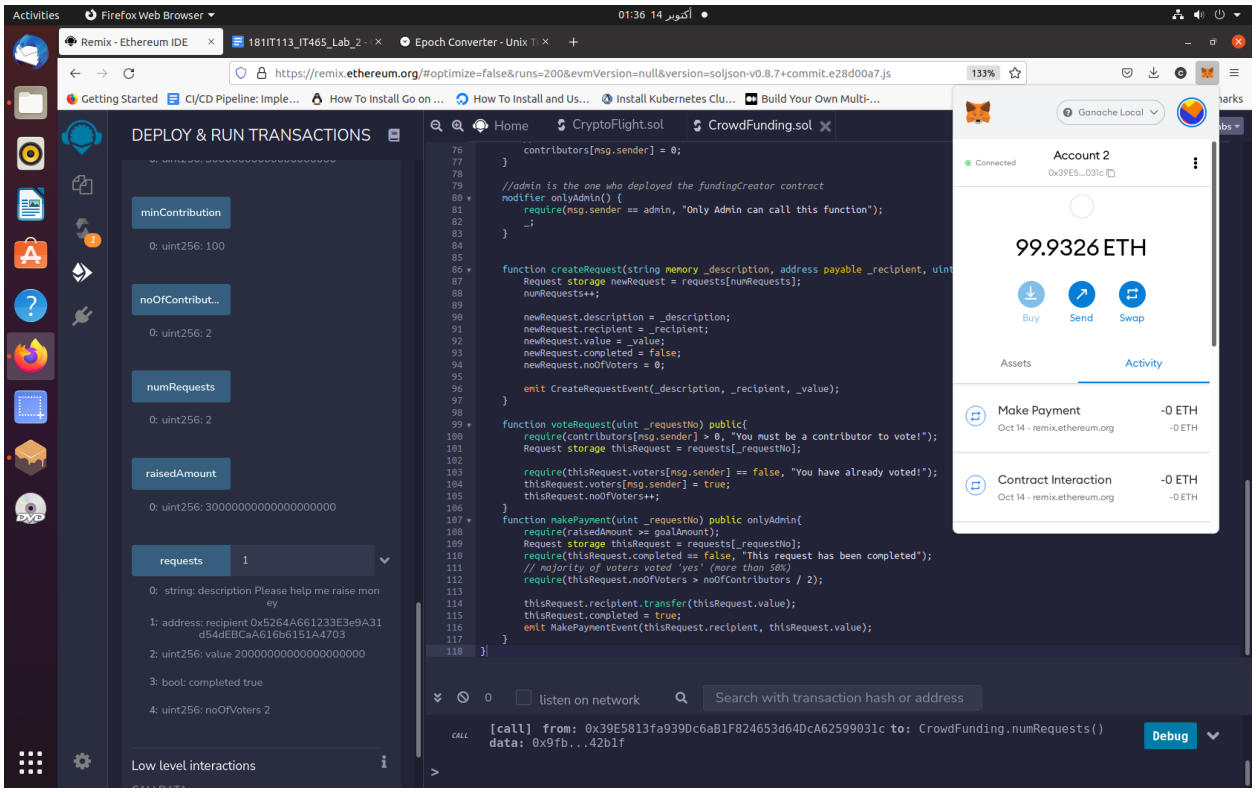


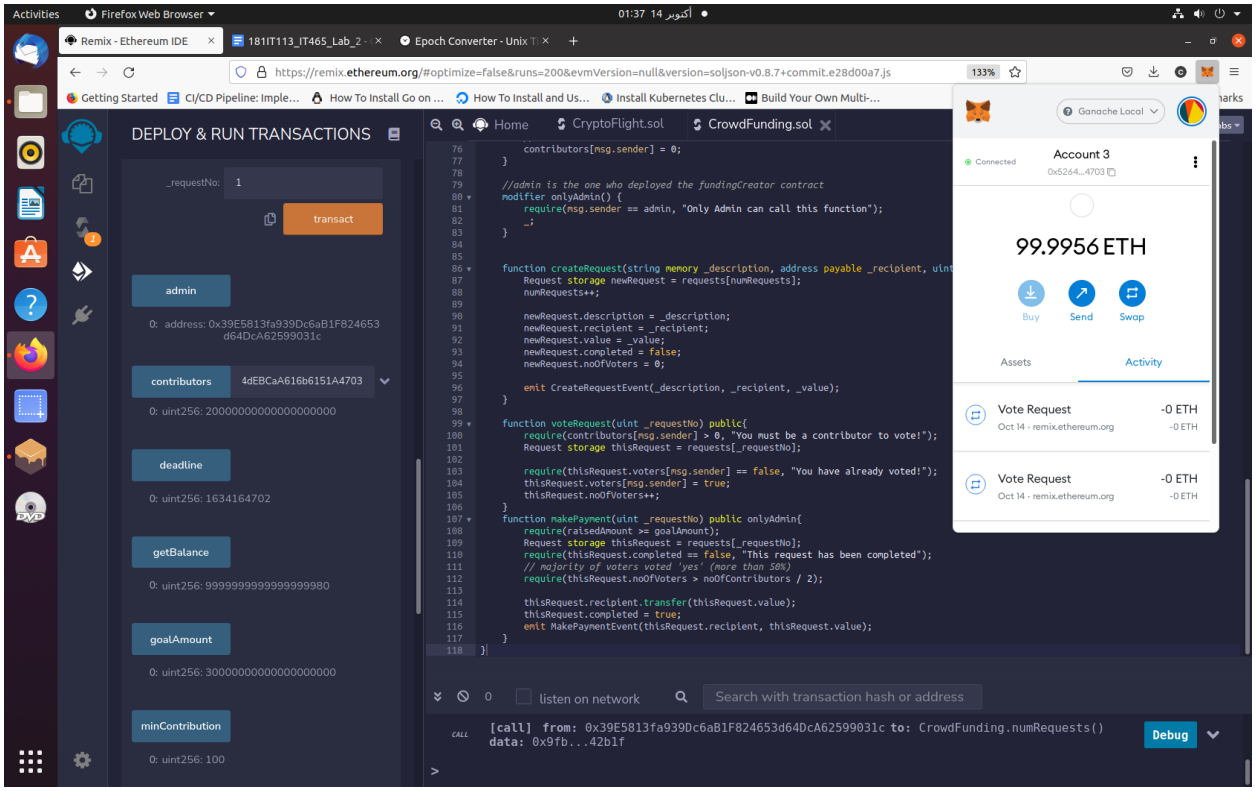
Balance of Account 3 after making payment with 20 wei.



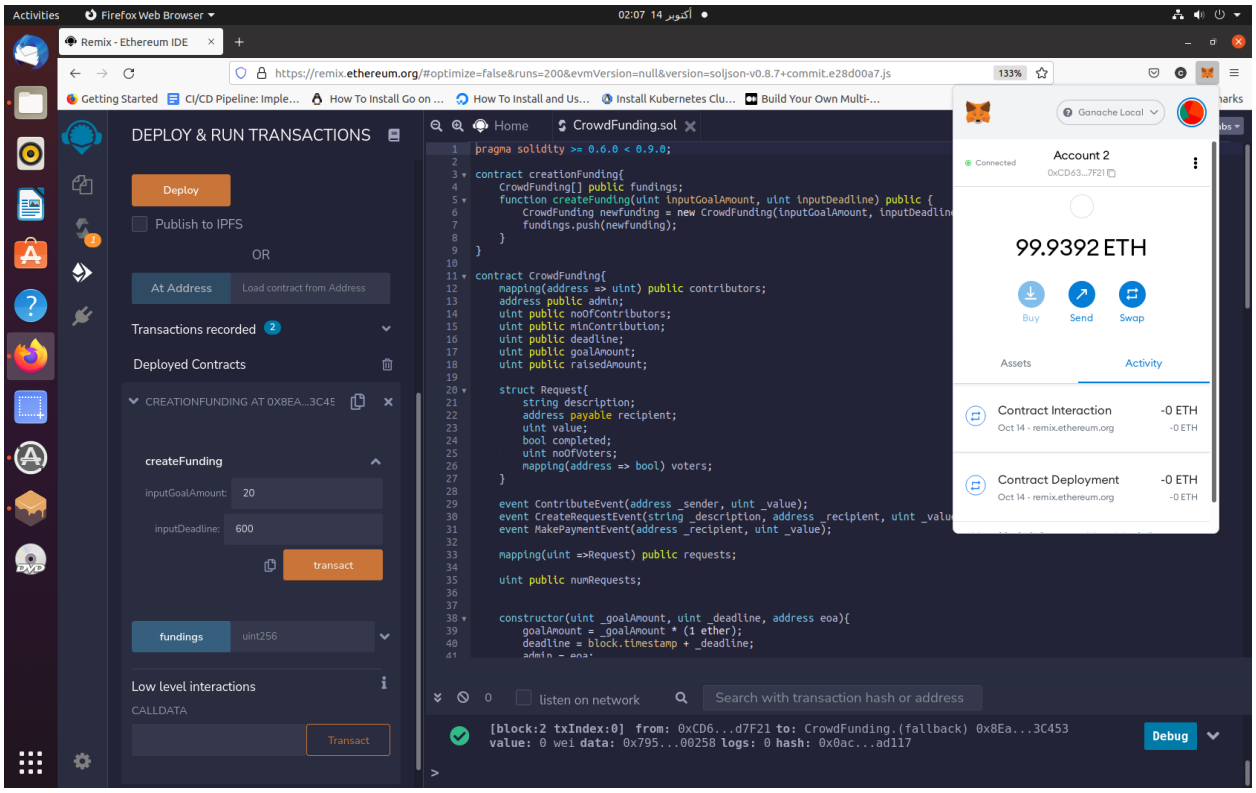
Request 1 makes a payment of 20 ethers. The completed value has been set to true in requests. The number of requests is 2.

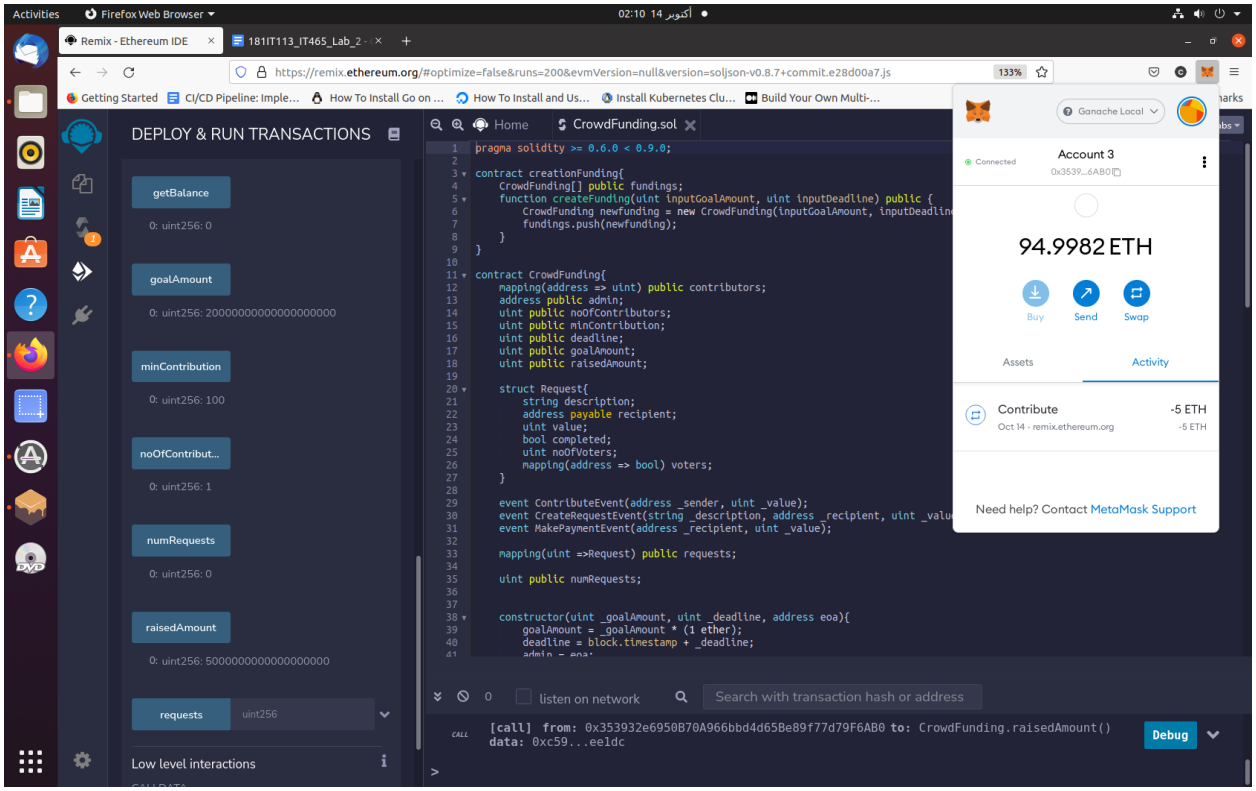


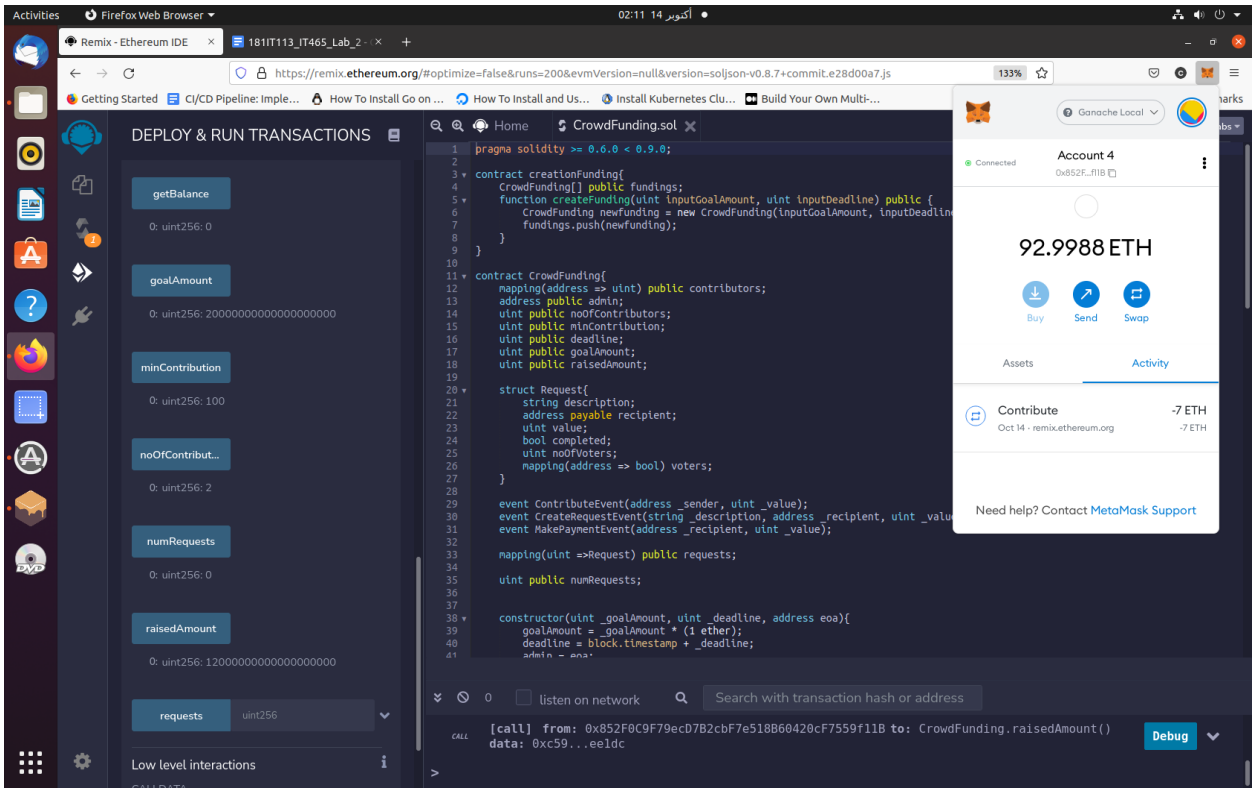

Activities
Firefox Web Browser
01:36 14 أكتوبر
Remix - Ethereum IDE
181IT113_IT465_Lab_2
Epoch Converter - Unix
https://remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js
133%
Getting Started
CI/CD Pipeline: Imple...
How To Install Go on ...
How To Install and Us...
Install Kubernetes Clu...
Build Your Own Multi-...
DEPLOY & RUN TRANSACTIONS
minContribution
0: uint256: 100
noOfContribut...
0: uint256: 2
numRequests
0: uint256: 2
raisedAmount
0: uint256: 3000000000000000000
requests
1
0: string: description Please help me raise money
1: address: recipient 0x5264A661233E3e9A31d54dEBCaA616b6151A4703
2: uint256: value 2000000000000000000
3: bool: completed true
4: uint256: noOfVoters 2
Low level interactions
Home
CryptoFlight.sol
CrowdFunding.sol
contributors[msg.sender] = 0;
}
//admin is the one who deployed the fundingCreator contract
modifier onlyAdmin() {
require(msg.sender == admin, "Only Admin can call this function");
_;
}
function createRequest(string memory _description, address payable _recipient, uint
Request storage newRequest = requests[numRequests];
numRequests++;
newRequest.description = _description;
newRequest.recipient = _recipient;
newRequest.value = _value;
newRequest.completed = false;
newRequest.noOfVoters = 0;
emit CreateRequestEvent(_description, _recipient, _value);
}
function voteRequest(uint _requestNo) public{
require(contributors[msg.sender] > 0, "You must be a contributor to vote!");
Request storage thisRequest = requests[_requestNo];
require(thisRequest.voters[msg.sender] == false, "You have already voted!");
thisRequest.voters[msg.sender] = true;
thisRequest.noOfVoters++;
}
function makePayment(uint _requestNo) public onlyAdmin{
require(raisedAmount >= goalAmount);
Request storage thisRequest = requests[_requestNo];
require(thisRequest.completed == false, "This request has been completed");
// majority of voters voted 'yes' (more than 50%)
require(thisRequest.noOfVoters > noOfContributors / 2);
thisRequest.recipient.transfer(thisRequest.value);
thisRequest.completed = true;
emit MakePaymentEvent(thisRequest.recipient, thisRequest.value);
}
}
listen on network
Search with transaction hash or address
[call] from: 0x39E5813fa939Dc6aB1F824653d64DcA62599031c to: CrowdFunding.numRequests()
data: 0x9fb...42b1f
Debug
Ganache Local
Account 2
0x39E5...031c
99.9326 ETH
Buy
Send
Swap
Assets
Activity
Make Payment
Oct 14 · remix.ethereum.org
-0 ETH
Contract Interaction
Oct 14 · remix.ethereum.org
-0 ETH


Activities
Firefox Web Browser
01:37 14 أكتوبر
Remix - Ethereum IDE
181IT113_IT465_Lab_2
Epoch Converter - Unix
https://remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js
133%
DEPLOY & RUN TRANSACTIONS
_requestNo: 1
transact
admin
0: address: 0x39E5813fa939Dc6aB1F824653d64DcA62599031c
contributors
4dEBCaA616b6151A4703
0: uint256: 2000000000000000000
deadline
0: uint256: 1634164702
getBalance
0: uint256: 9999999999999999980
goalAmount
0: uint256: 3000000000000000000
minContribution
0: uint256: 100
Home
CryptoFlight.sol
CrowdFunding.sol
contributors[msg.sender] = 0;
}
//admin is the one who deployed the fundingCreator contract
modifier onlyAdmin() {
require(msg.sender == admin, "Only Admin can call this function");
_;
}
function createRequest(string memory _description, address payable _recipient, uint
Request storage newRequest = requests[numRequests];
numRequests++;
newRequest.description = _description;
newRequest.recipient = _recipient;
newRequest.value = _value;
newRequest.completed = false;
newRequest.noOfVoters = 0;
emit CreateRequestEvent(_description, _recipient, _value);
}
function voteRequest(uint _requestNo) public{
require(contributors[msg.sender] > 0, "You must be a contributor to vote!");
Request storage thisRequest = requests[_requestNo];
require(thisRequest.voters[msg.sender] == false, "You have already voted!");
thisRequest.voters[msg.sender] = true;
thisRequest.noOfVoters++;
}
function makePayment(uint _requestNo) public onlyAdmin{
require(raisedAmount >= goalAmount);
Request storage thisRequest = requests[_requestNo];
require(thisRequest.completed == false, "This request has been completed");
// majority of voters voted 'yes' (more than 50%)
require(thisRequest.noOfVoters > noOfContributors / 2);
thisRequest.recipient.transfer(thisRequest.value);
thisRequest.completed = true;
emit MakePaymentEvent(thisRequest.recipient, thisRequest.value);
}
}
listen on network
Search with transaction hash or address
[call] from: 0x39E5813fa939Dc6aB1F824653d64DcA62599031c to: CrowdFunding.numRequests()
data: 0x9fb...42b1f
Debug
Ganache Local
Account 3
0x5264...4703
99.9956 ETH
Buy
Send
Swap
Assets
Activity
Vote Request
Oct 14 · remix.ethereum.org
-0 ETH
Vote Request
Oct 14 · remix.ethereum.org
-0 ETH

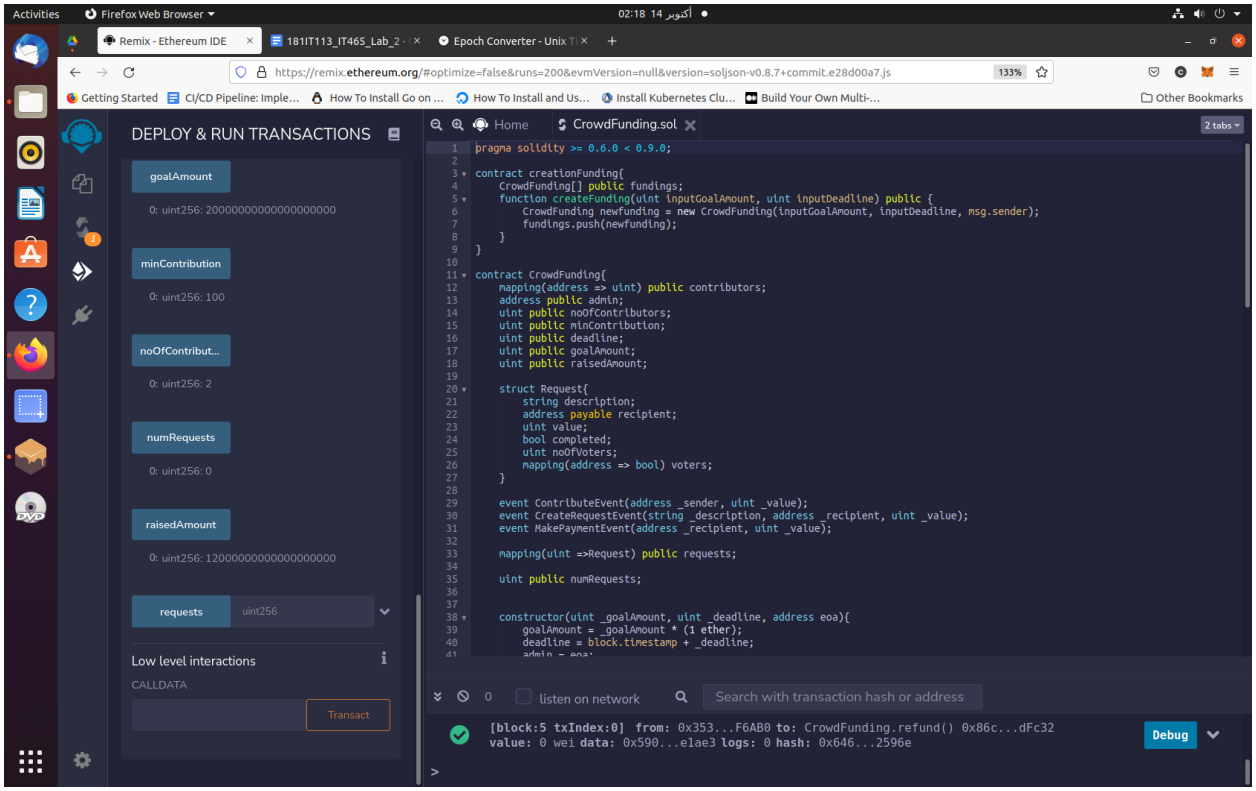
New deployment to check the functionality of refund.



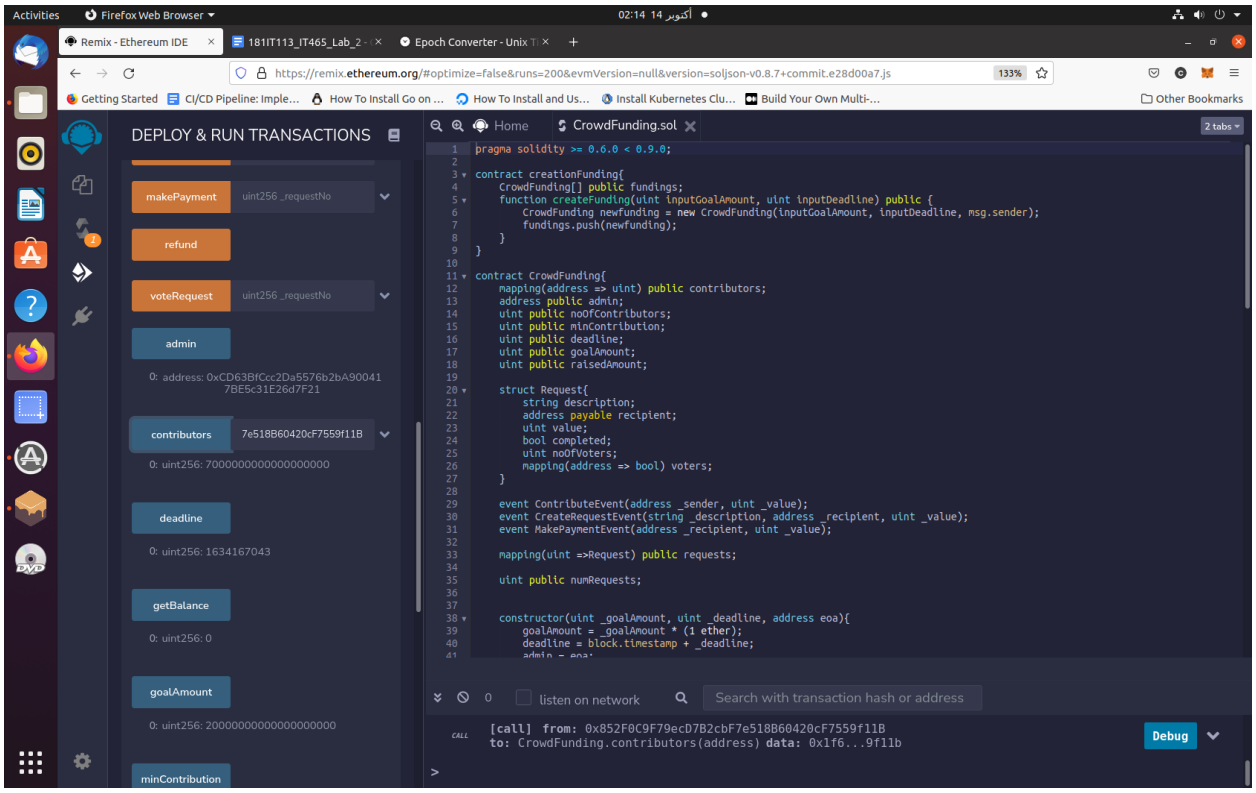




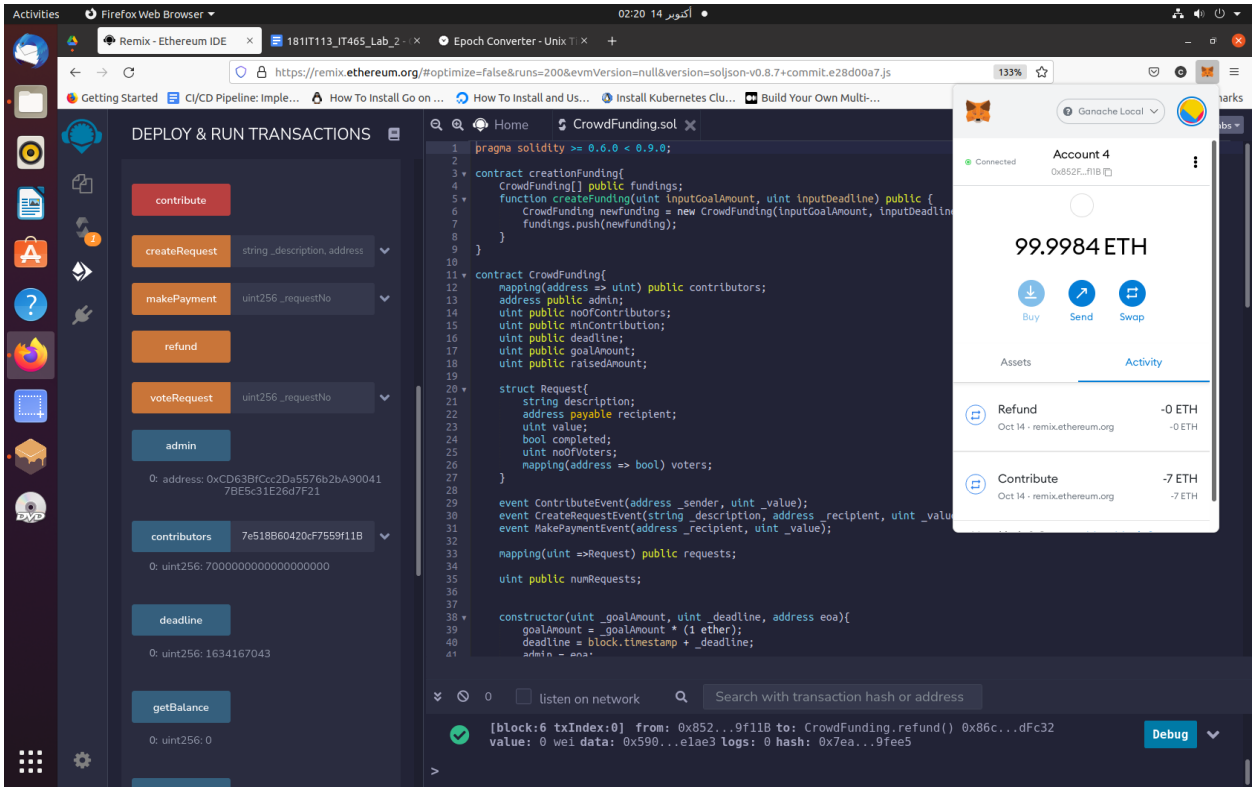
Raised Amount is: 12ethers (goal Amount is 20 ethers)



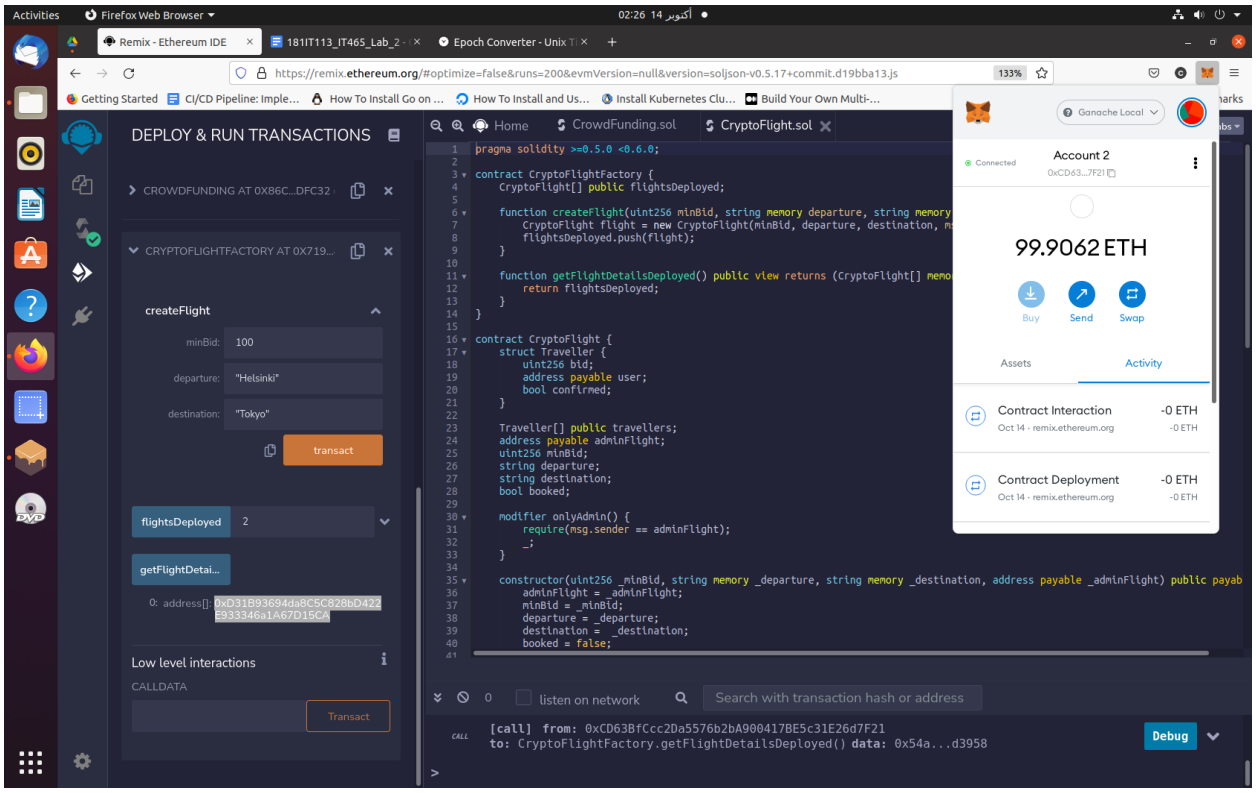
Refund requested by Account 3 after deadline.



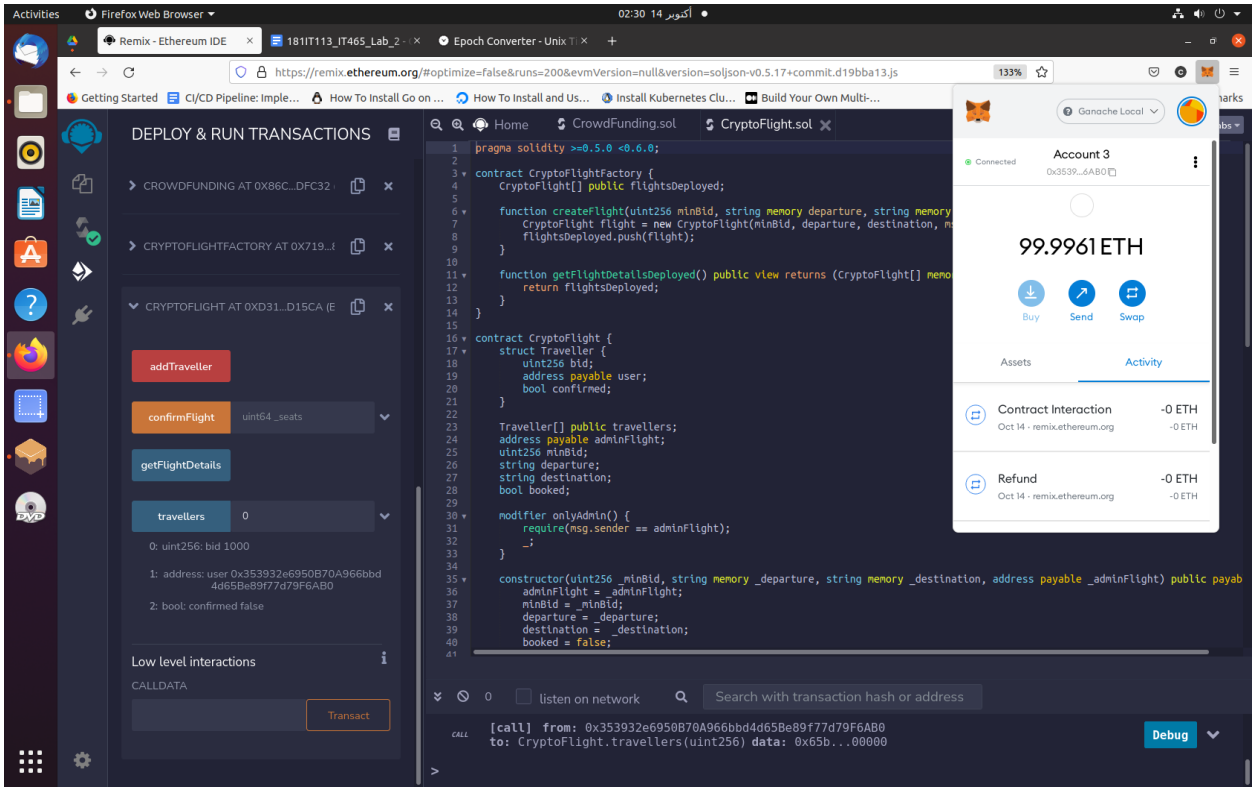
Refund to Account 4 after deadline.



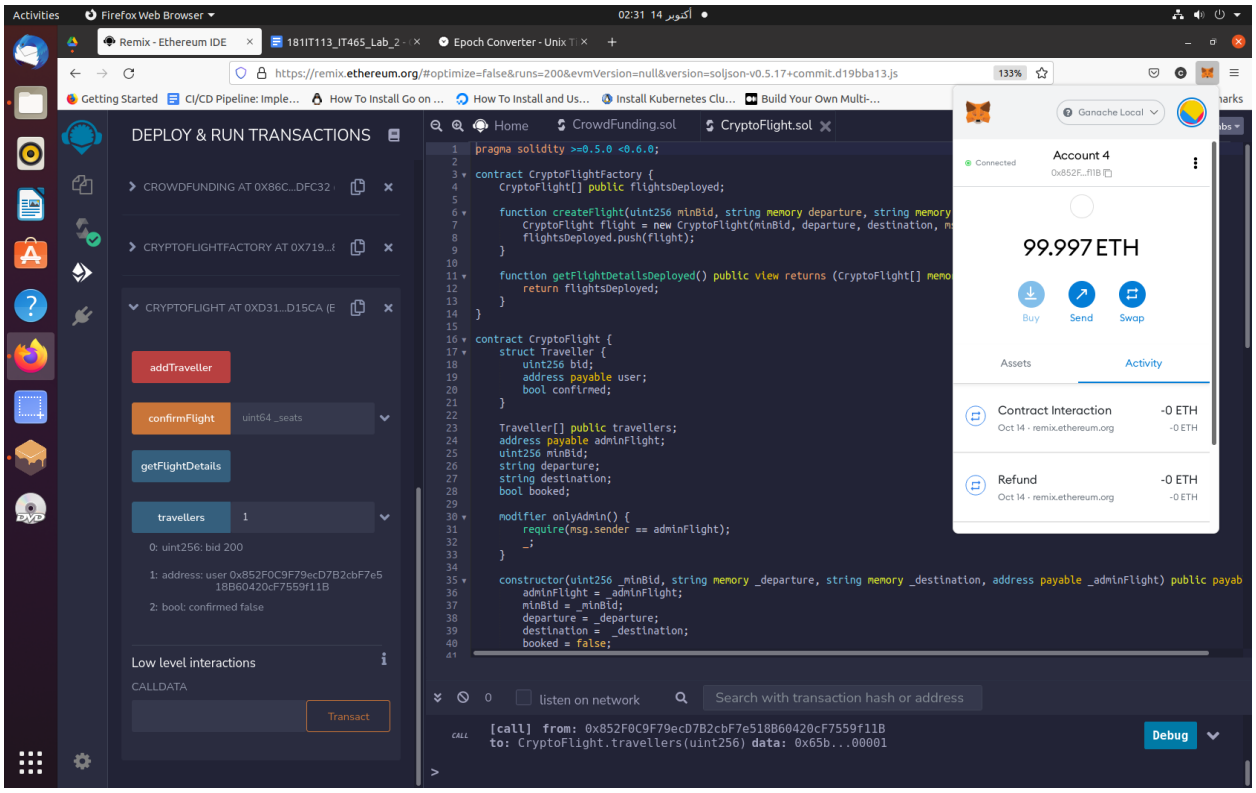
2) CryptoFlight



Add Traveller 1



Add Traveller 2.



Confirmed is set to true after flight is confirmed by the admin.