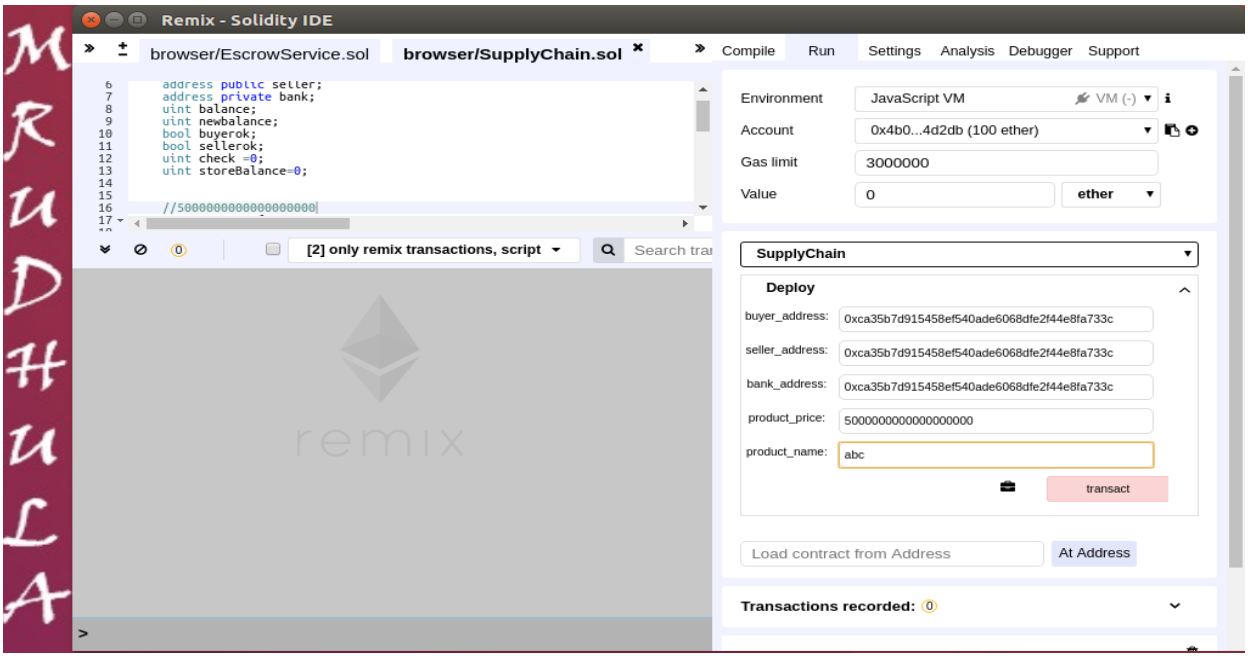
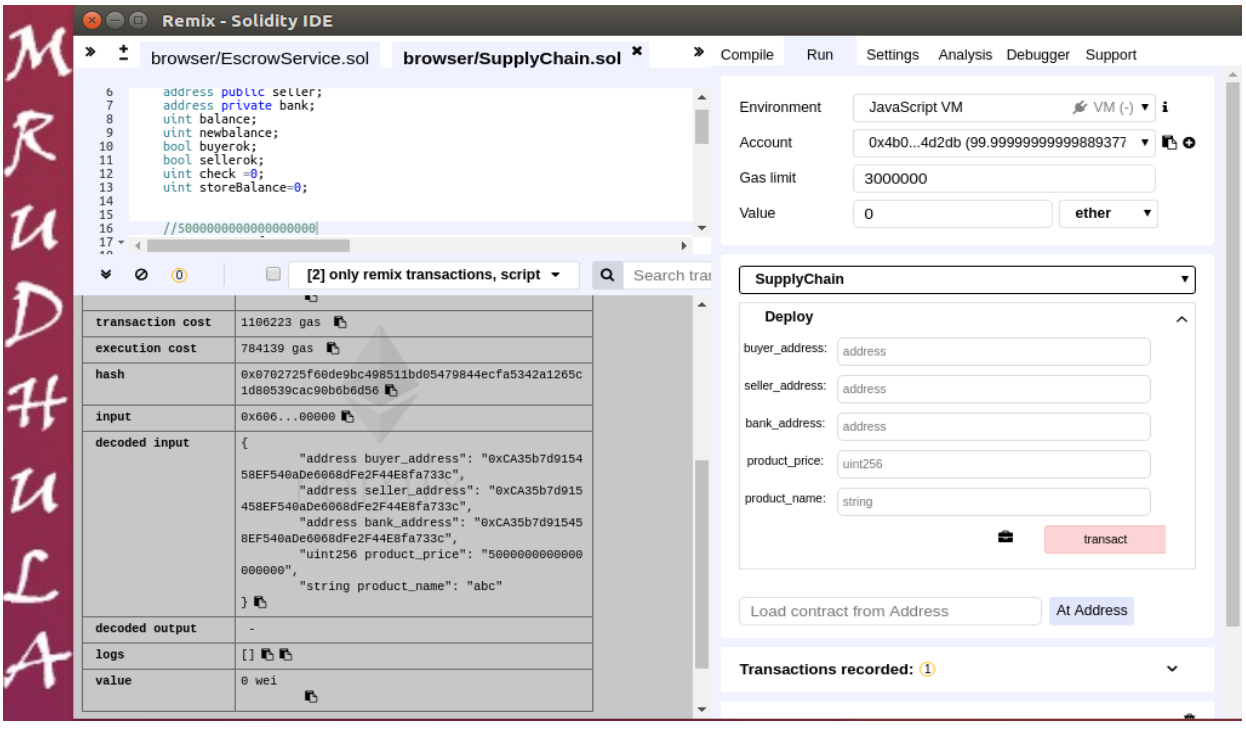
SUPPLY CHAIN WITH DEVICE BLOCKCHAIN

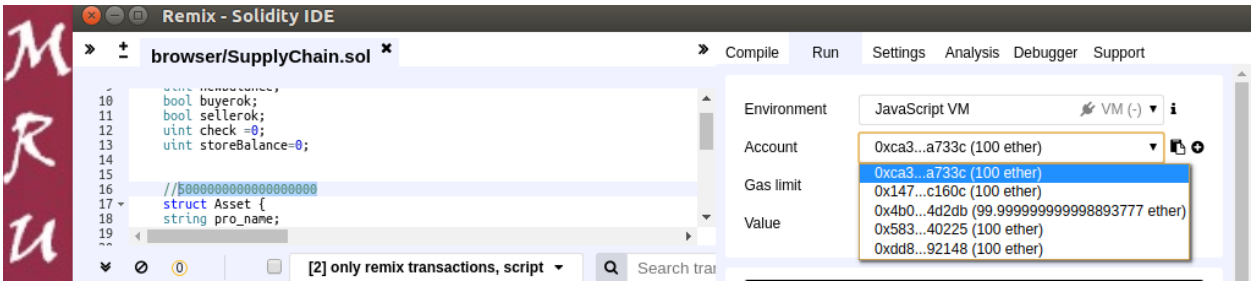
TASK 1: Create the products

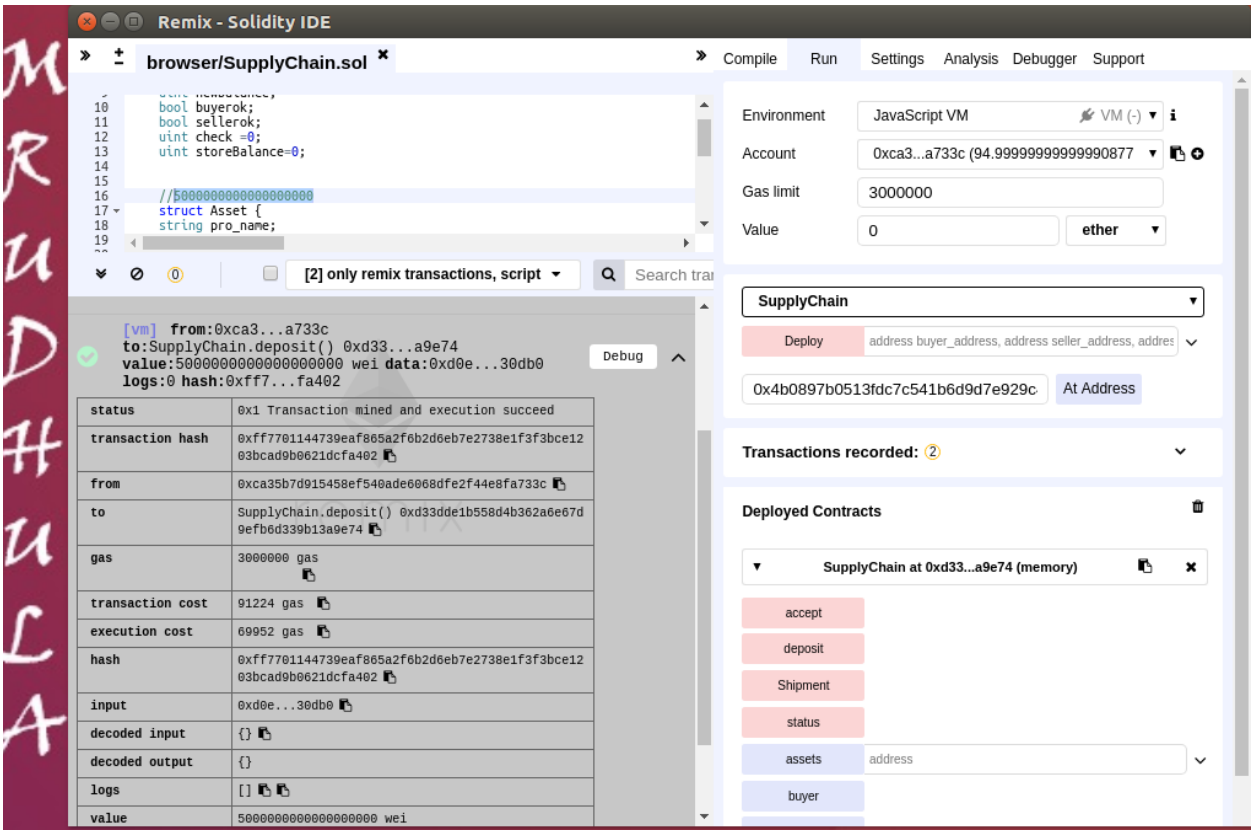


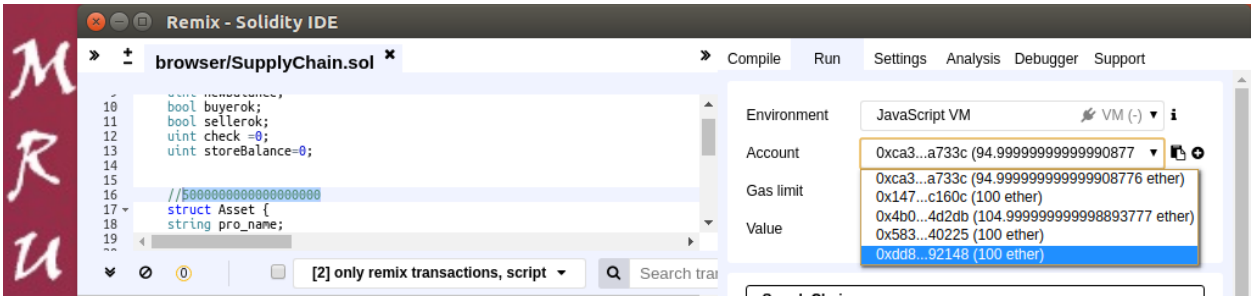


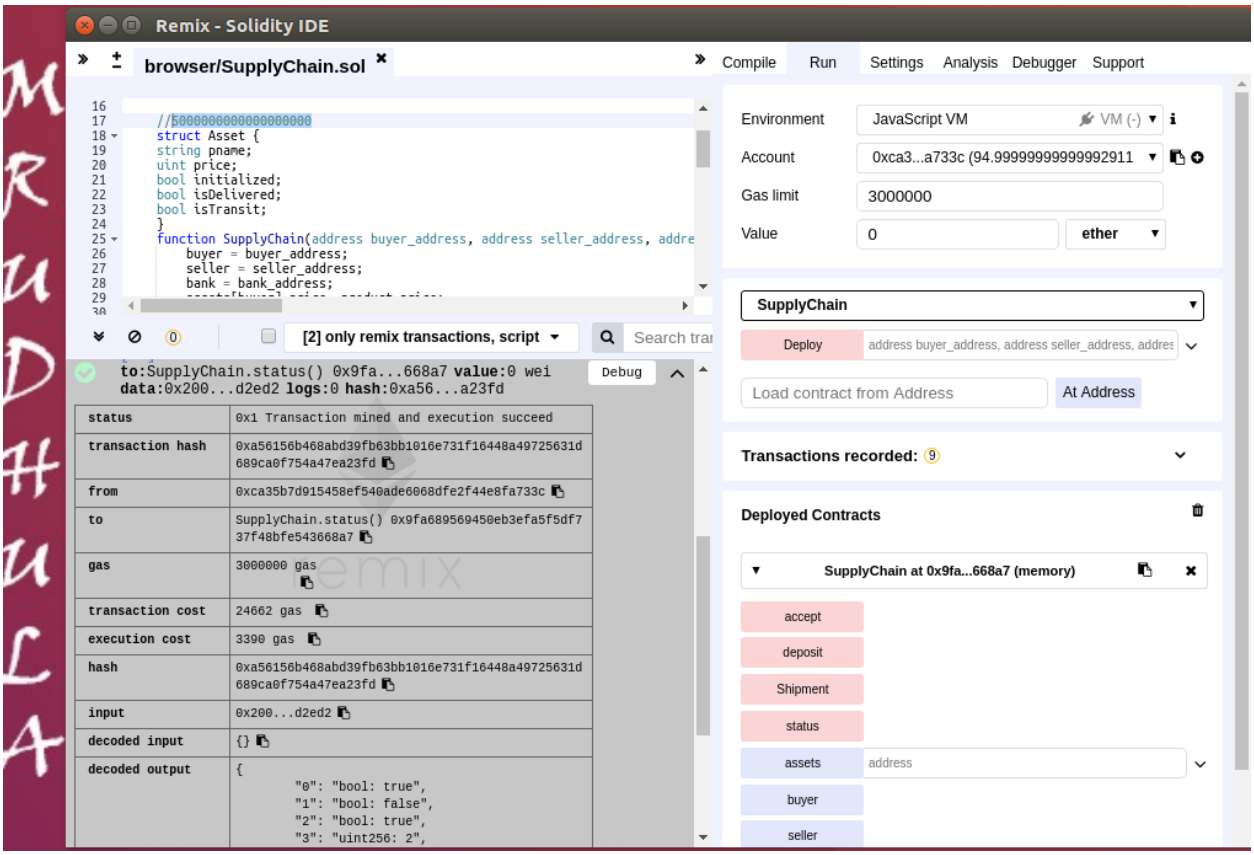
In the above screenshots we set up the buyer address, seller address, back address so as to deploy contract, product name and the product price. The product price initially is given in wei instead of ethers. Once we transact, we see that the input is decoded.

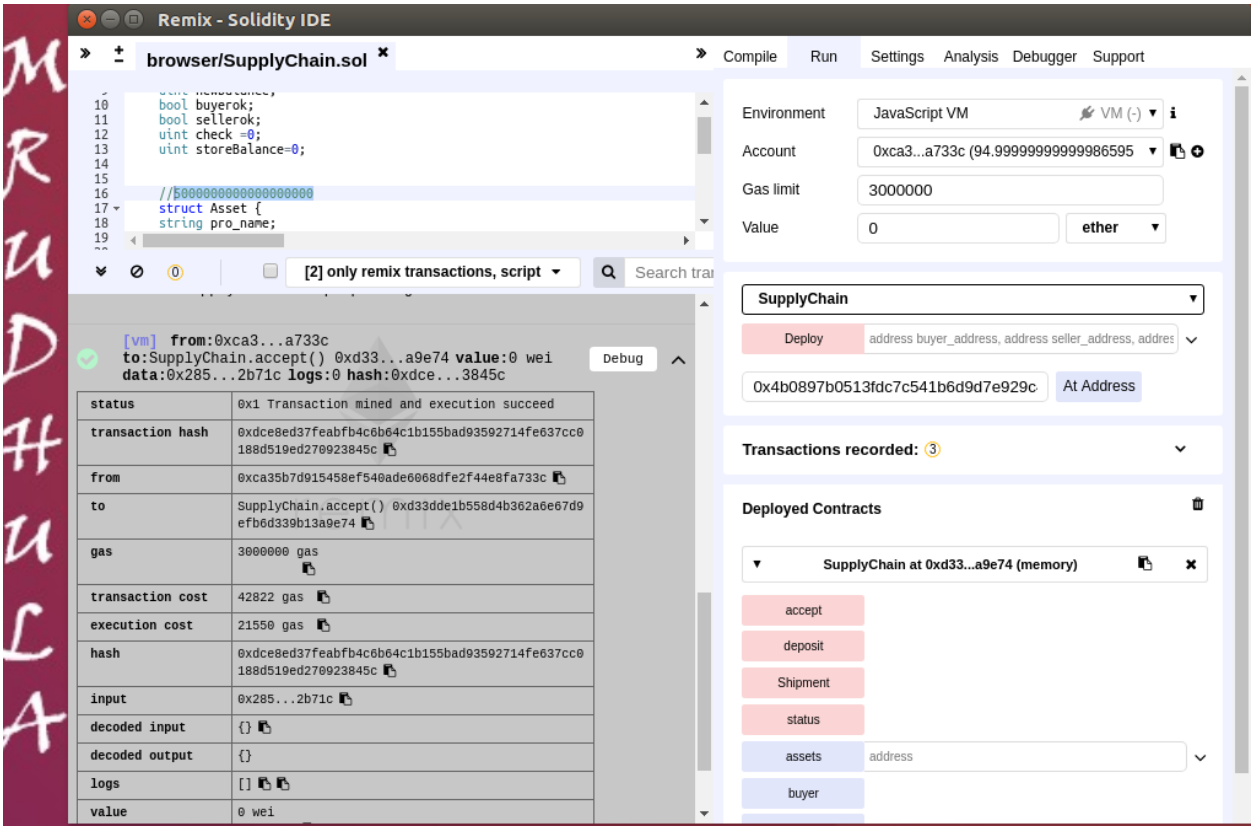
TASK 2: Shipment of the product

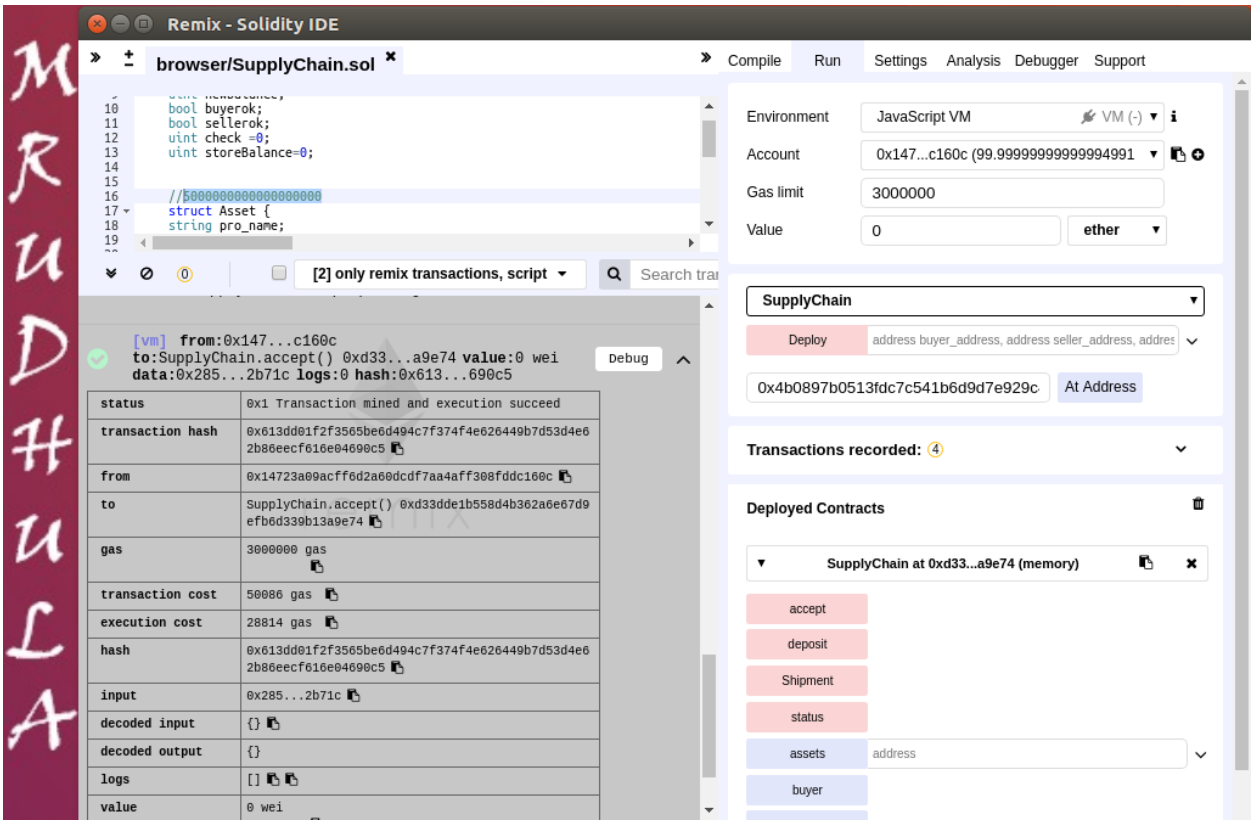


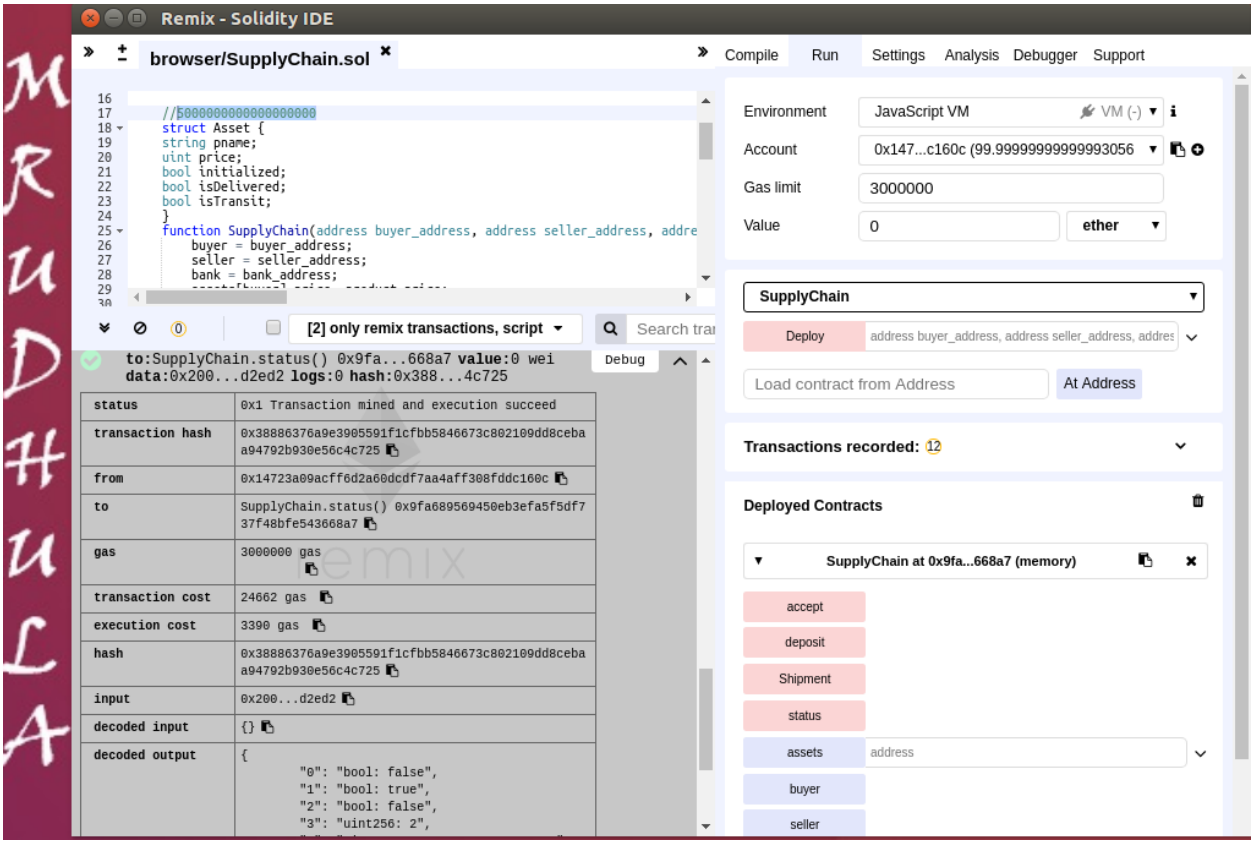





Remix - Solidity IDE
browser/SupplyChain.sol
Compile
Run
Settings
Analysis
Debugger
Support
//500000000000000000
struct Asset {
string pname;
uint price;
bool initialized;
bool isDelivered;
bool isTransit;
}
function SupplyChain(address buyer_address, address seller_address, addre
buyer = buyer_address;
seller = seller_address;
bank = bank_address;
[2] only remix transactions, script
Search tra
to:SupplyChain.status() 0x9fa...668a7 value:0 wei
data:0x200...d2ed2 logs:0 hash:0xa56...a23fd
Debug
status
0x1 Transaction mined and execution succeed
transaction hash
0xa56156b468abd39fb63bb1016e731f16448a49725631d689ca0f754a47ea23fd
from
0xca35b7d915458ef540ade6068dfe2f44e8fa733c
to
SupplyChain.status() 0x9fa689569450eb3efa5f5df737f48bfe543668a7
gas
3000000 gas
transaction cost
24662 gas
execution cost
3390 gas
hash
0xa56156b468abd39fb63bb1016e731f16448a49725631d689ca0f754a47ea23fd
input
0x200...d2ed2
decoded input
{}
decoded output
{
"0": "bool: true",
"1": "bool: false",
"2": "bool: true",
"3": "uint256: 2",
Environment
JavaScript VM
VM (-)
Account
0xca3...a733c (94.99999999999992911
Gas limit
3000000
Value
0
ether
SupplyChain
Deploy
address buyer_address, address seller_address, addres
Load contract from Address
At Address
Transactions recorded: 9
Deployed Contracts
SupplyChain at 0x9fa...668a7 (memory)
accept
deposit
Shipment
status
assets
address
buyer
seller

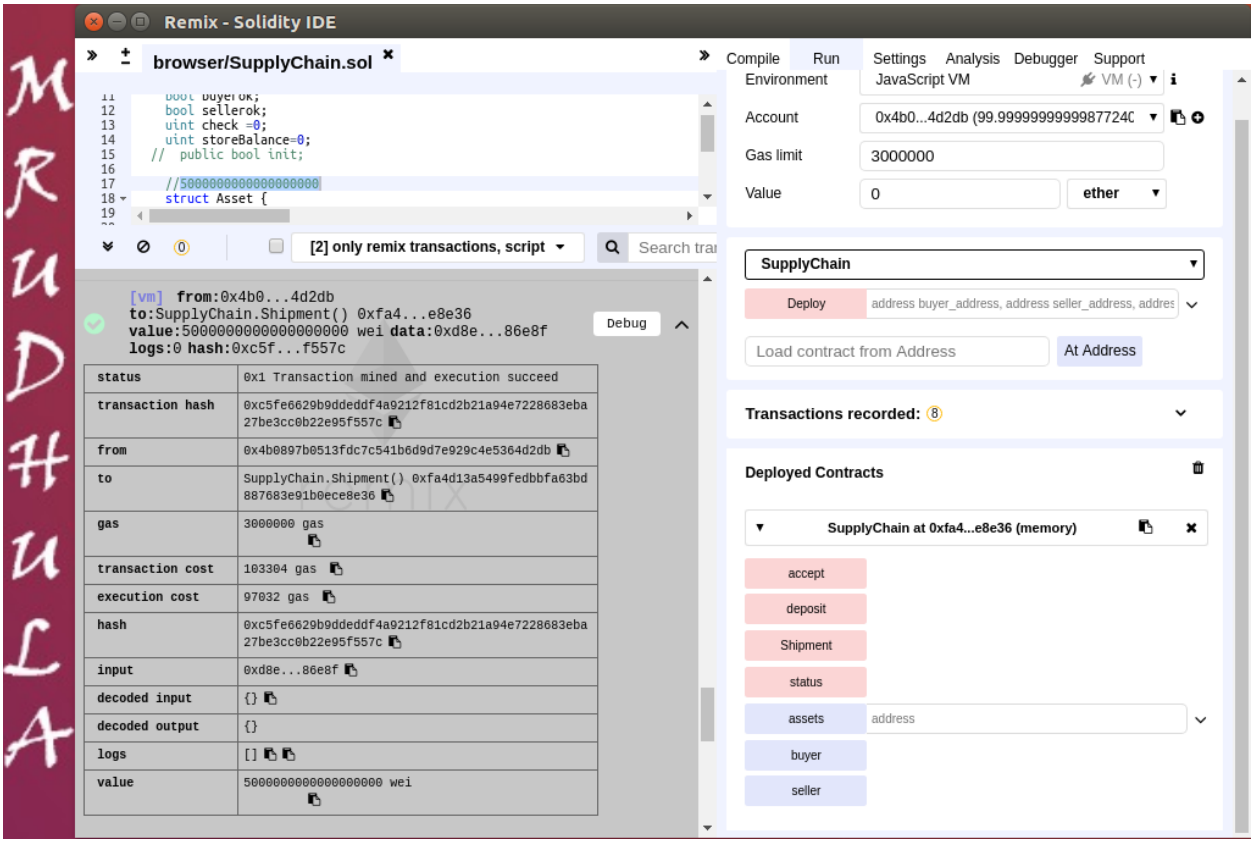

Remix - Solidity IDE
browser/SupplyChain.sol
Compile
Run
Settings
Analysis
Debugger
Support
bool buyerok;
bool sellerok;
uint check =0;
uint storeBalance=0;
//500000000000000000
struct Asset {
string pro_name;
[2] only remix transactions, script
Search tra
[vm] from:0xca3...a733c
to:SupplyChain.accept() 0xd33...a9e74 value:0 wei
data:0x285...2b71c logs:0 hash:0xdce...3845c
Debug
status
0x1 Transaction mined and execution succeed
transaction hash
0xdce8ed37feabfb4c6b64c1b155bad93592714fe637cc0188d519ed270923845c
from
0xca35b7d915458ef540ade6068dfe2f44e8fa733c
to
SupplyChain.accept() 0xd33dde1b558d4b362a6e67d9efb6d339b13a9e74
gas
3000000 gas
transaction cost
42822 gas
execution cost
21550 gas
hash
0xdce8ed37feabfb4c6b64c1b155bad93592714fe637cc0188d519ed270923845c
input
0x285...2b71c
decoded input
{}
decoded output
{}
logs
[]
value
0 wei
Environment
JavaScript VM
VM (-)
Account
0xca3...a733c (94.99999999999986595
Gas limit
3000000
Value
0
ether
SupplyChain
Deploy
address buyer_address, address seller_address, addres
0x4b0897b0513fdc7c541b6d9d7e929c
At Address
Transactions recorded: 3
Deployed Contracts
SupplyChain at 0xd33...a9e74 (memory)
accept
deposit
Shipment
status
assets
address
buyer

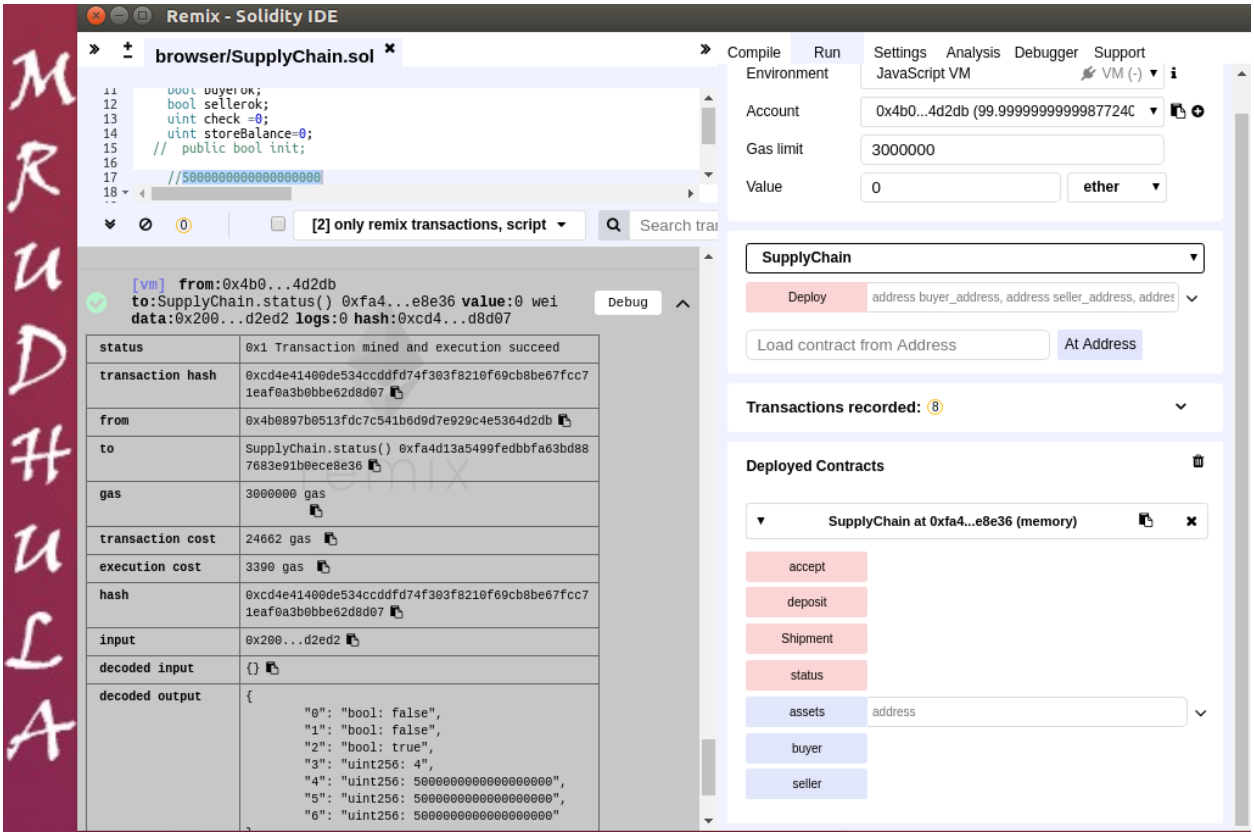

Remix - Solidity IDE
browser/SupplyChain.sol
bool buyerok;
bool sellerok;
uint check =0;
uint storeBalance=0;
//5000000000000000000
struct Asset {
string pro_name;
[2] only remix transactions, script
Search tra
[vm] from:0x147...c160c
to:SupplyChain.accept() 0xd33...a9e74 value:0 wei
data:0x285...2b71c logs:0 hash:0x613...690c5
Debug
status
0x1 Transaction mined and execution succeed
transaction hash
0x613dd01f2f3565be6d494c7f374f4e626449b7d53d4e62b86eecf616e04690c5
from
0x14723a09acff6d2a60dcdf7aa4aff308fddc160c
to
SupplyChain.accept() 0xd33dde1b558d4b362a6e67d9efb6d339b13a9e74
gas
3000000 gas
transaction cost
50086 gas
execution cost
28814 gas
hash
0x613dd01f2f3565be6d494c7f374f4e626449b7d53d4e62b86eecf616e04690c5
input
0x285...2b71c
decoded input
{}
decoded output
{}
logs
[]
value
0 wei
Compile
Run
Settings
Analysis
Debugger
Support
Environment
JavaScript VM
VM (-)
Account
0x147...c160c (99.99999999999994991
Gas limit
3000000
Value
0
ether
SupplyChain
Deploy
address buyer_address, address seller_address, addres
0x4b0897b0513fdc7c541b6d9d7e929c
At Address
Transactions recorded: 4
Deployed Contracts
SupplyChain at 0xd33...a9e74 (memory)
accept
deposit
Shipment
status
assets
address
buyer

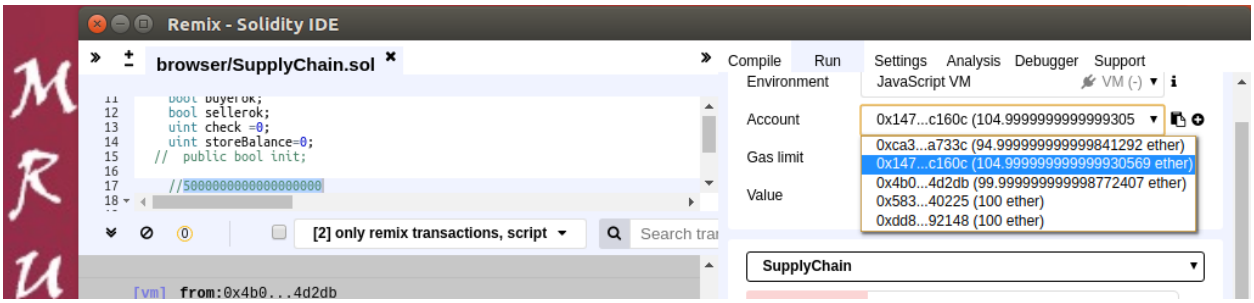

Remix - Solidity IDE
browser/SupplyChain.sol
//5000000000000000000
struct Asset {
string pname;
uint price;
bool initialized;
bool isDelivered;
bool isTransit;
}
function SupplyChain(address buyer_address, address seller_address, addre
buyer = buyer_address;
seller = seller_address;
bank = bank_address;
[2] only remix transactions, script
Search tra
to:SupplyChain.status() 0x9fa...668a7 value:0 wei
data:0x200...d2ed2 logs:0 hash:0x388...4c725
Debug
status
0x1 Transaction mined and execution succeed
transaction hash
0x38886376a9e3905591f1cfbb5846673c802109dd8ceba94792b930e56c4c725
from
0x14723a09acff6d2a60dcdf7aa4aff308fddc160c
to
SupplyChain.status() 0x9fa689569450eb3efa5f5df737f48bfe543668a7
gas
3000000 gas
transaction cost
24662 gas
execution cost
3390 gas
hash
0x38886376a9e3905591f1cfbb5846673c802109dd8ceba94792b930e56c4c725
input
0x200...d2ed2
decoded input
{}
decoded output
{
"0": "bool: false",
"1": "bool: true",
"2": "bool: false",
"3": "uint256: 2",
Compile
Run
Settings
Analysis
Debugger
Support
Environment
JavaScript VM
VM (-)
Account
0x147...c160c (99.99999999999993056
Gas limit
3000000
Value
0
ether
SupplyChain
Deploy
address buyer_address, address seller_address, addres
Load contract from Address
At Address
Transactions recorded: 12
Deployed Contracts
SupplyChain at 0x9fa...668a7 (memory)
accept
deposit
Shipment
status
assets
address
buyer
seller

In the above screenshots the buyer deposits 5 ethers to the bank. We see that the bank has received the amount and there is a deduction at the buyers end. Then buyer and the seller both agree and accept the transaction. Once both have agreed the bank generates the shipment. We keep a check the initially set price of the product and the amount transferred by the buyer is equal. A status is generated all the time to keep a track.

TASK 3: Delivery and Transfer







In the above screenshots once the bank generates the shipment of 5 ethers that was initially sent by the buyer. Once shipment successful we see that the seller gets the value in his account.