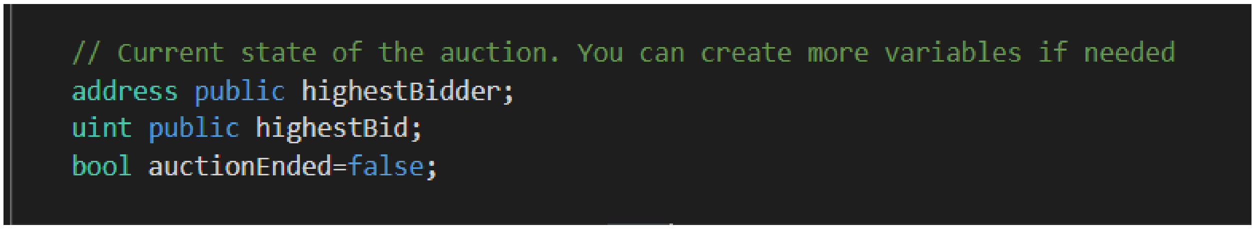
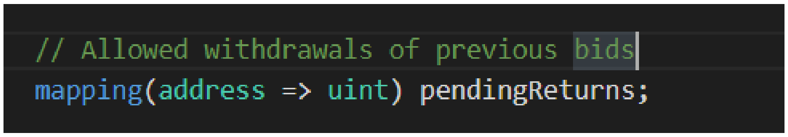
KRISHNA KIREETI RAYAPROLU (6303 1300)

Code Explanation:



```
// Current state of the auction. You can create more variables if needed
address public highestBidder;
uint public highestBid;
bool auctionEnded=false;
```

The following are state variables. The address of the highest bidder is represented using the variable highestBidder, variable highestBid contains the value of highestBid and the boolean variable auctionEnded is initially set to false.



```
// Allowed withdrawals of previous bids
mapping(address => uint) pendingReturns;
```

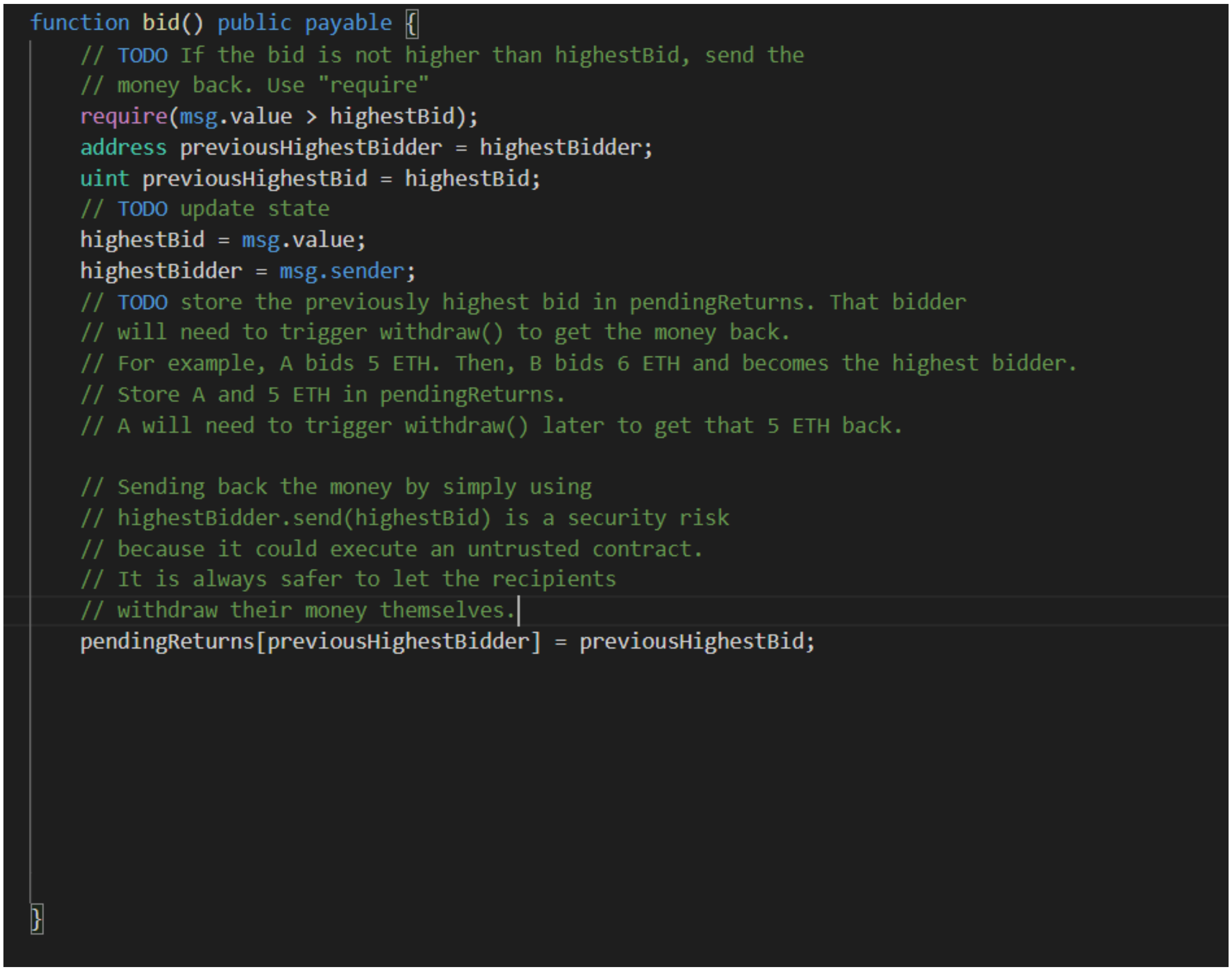
The addresses and the amounts to be withdrawn are mapped in the variable pendingReturns.

Bid Function:

Using require exception handling, the current bid will be checked if it is greater than the highestBid.

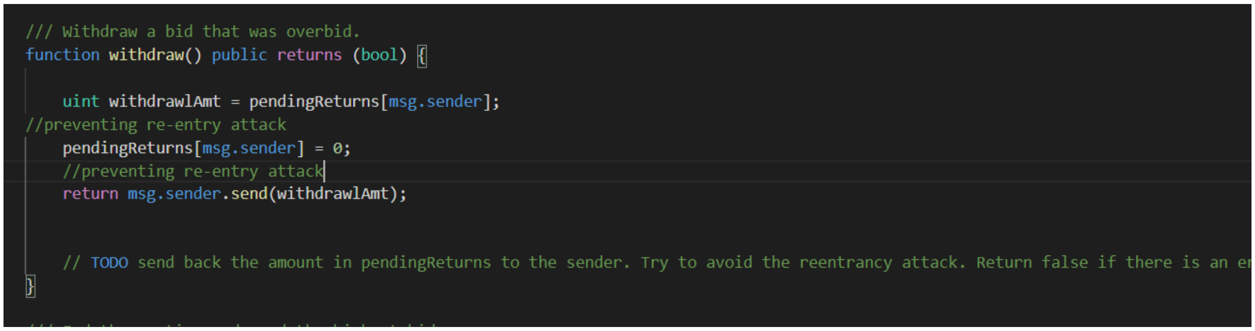
If the current bid is greater than the previous highestBid, the state is updated.

The previous highest bid is sent back to the previous highest bidder.



```
function bid() public payable {
    // TODO If the bid is not higher than highestBid, send the
    // money back. Use "require"
    require(msg.value > highestBid);
    address previousHighestBidder = highestBidder;
    uint previousHighestBid = highestBid;
    // TODO update state
    highestBid = msg.value;
    highestBidder = msg.sender;
    // TODO store the previously highest bid in pendingReturns. That bidder
    // will need to trigger withdraw() to get the money back.
    // For example, A bids 5 ETH. Then, B bids 6 ETH and becomes the highest bidder.
    // Store A and 5 ETH in pendingReturns.
    // A will need to trigger withdraw() later to get that 5 ETH back.

    // Sending back the money by simply using
    // highestBidder.send(highestBid) is a security risk
    // because it could execute an untrusted contract.
    // It is always safer to let the recipients
    // withdraw their money themselves.
    pendingReturns[previousHighestBidder] = previousHighestBid;









}
```

Withdraw function:

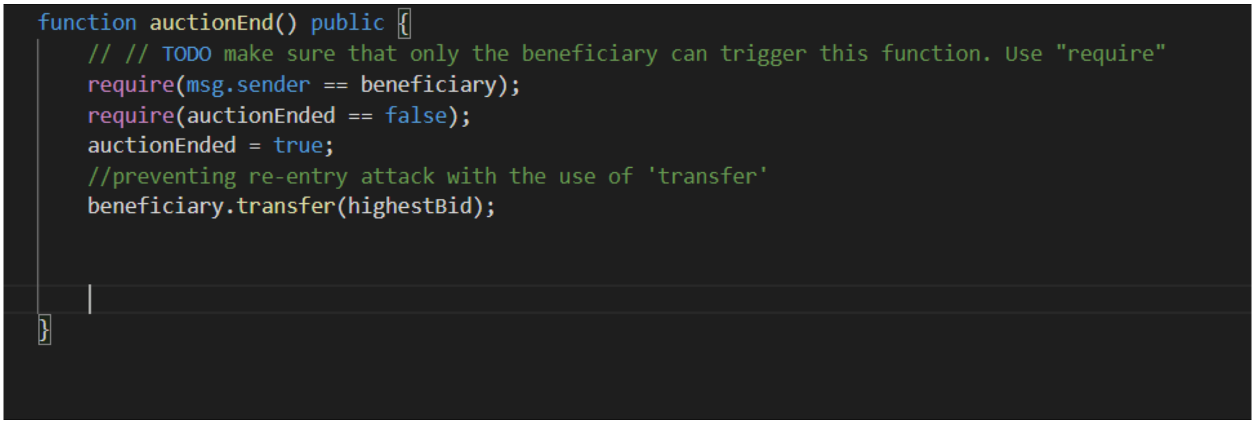


```
/// Withdraw a bid that was overbid.
function withdraw() public returns (bool) {

    uint withdrawlAmt = pendingReturns[msg.sender];
//preventing re-entry attack
    pendingReturns[msg.sender] = 0;
    //preventing re-entry attack
    return msg.sender.send(withdrawlAmt);


    // TODO send back the amount in pendingReturns to the sender. Try to avoid the reentrancy attack. Return false if there is an er
}
```

The pending amount will be stored in a variable withdrawlAmt and the account will be set to zero in order to prevent re-entry attack as ahown in the above code snippet.

‘send’ is used instead of ‘call’ to prevent re-entry attacks.

auctionEnd() function:

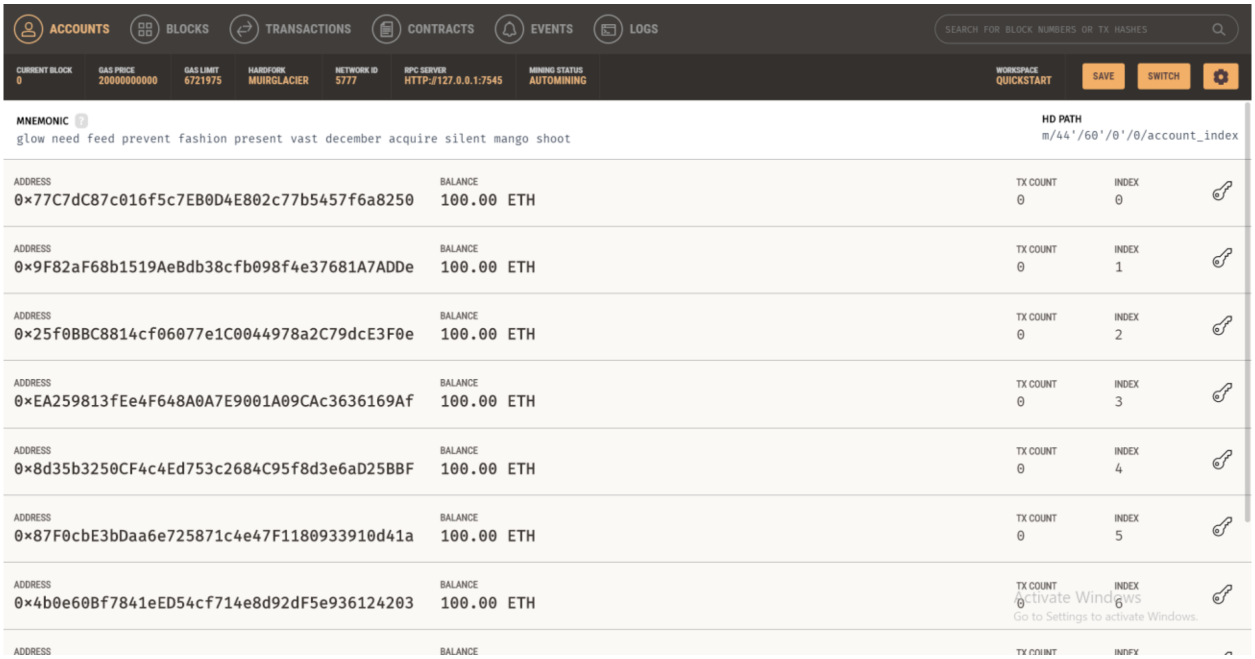


```
function auctionEnd() public {
    // // TODO make sure that only the beneficiary can trigger this function. Use "require"
    require(msg.sender == beneficiary);
    require(auctionEnded == false);
    auctionEnded = true;
    //preventing re-entry attack with the use of 'transfer'
    beneficiary.transfer(highestBid);


    
}
```

In the auctionEnd() function, initially it is made sure that only the beneficiary can call the function.

The highest bid is transferred into the beneficiary account.

Before deployment:



CURRENT BLOCK 0 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

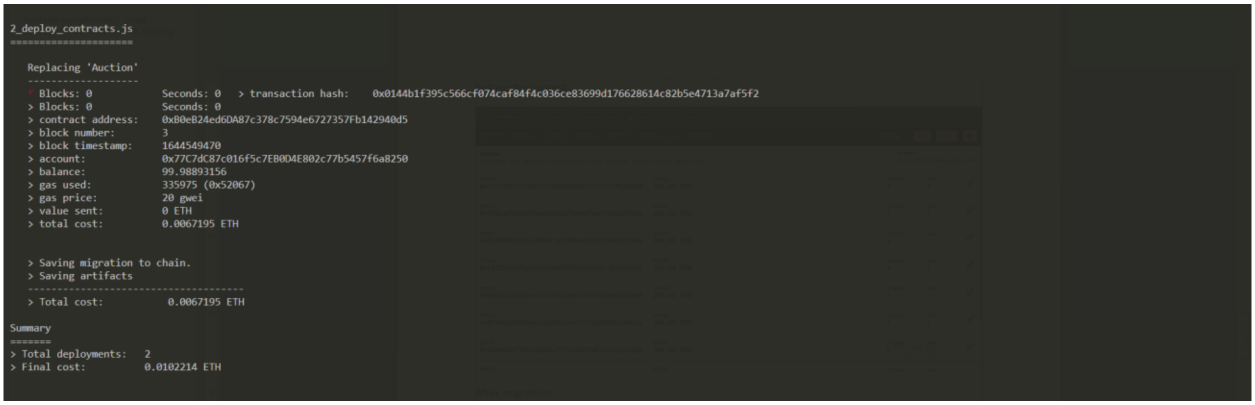
MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	100.00 ETH	0	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	100.00 ETH	0	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	100.00 ETH	0	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	100.00 ETH	0	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	0	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	0	6

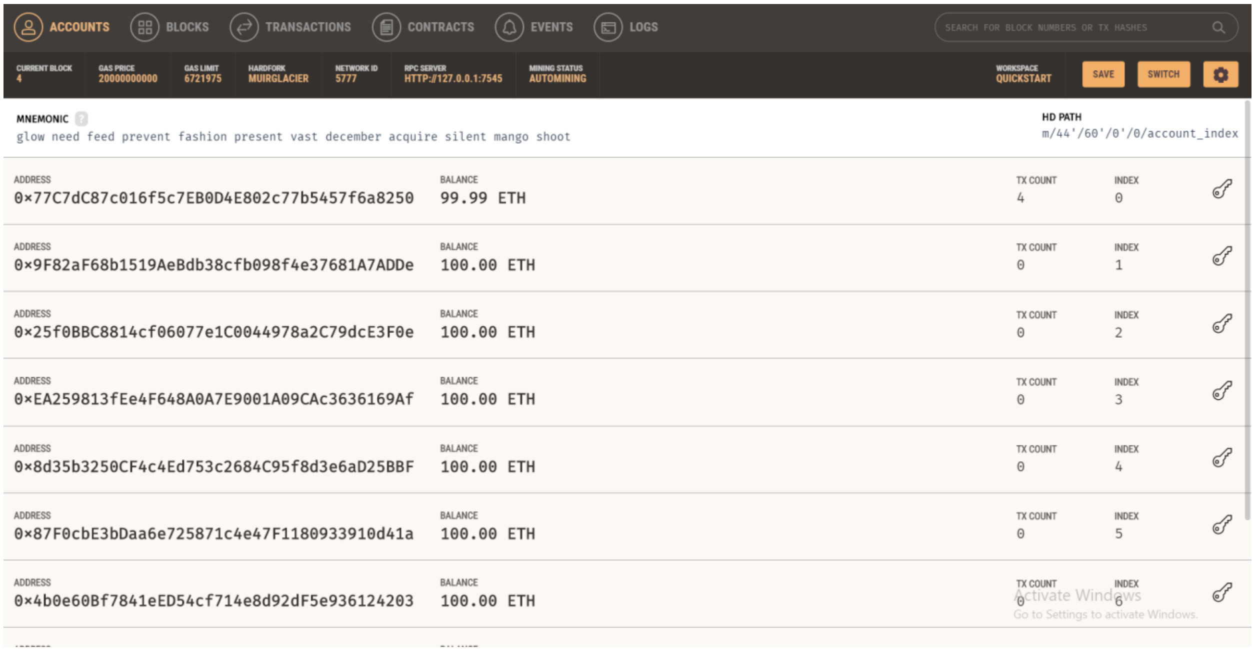
As you can see from the above picture, balance in all the accounts is 100ETH.

After Deployment:



```
2_deploy_contracts.js
=====================

   Replacing 'Auction'
   -------------------
     Blocks: 0            Seconds: 0   > transaction hash:    0x0144b1f395c566cf074caf84f4c036ce83699d176628614c82b5e4713a7af5f2
   > Blocks: 0            Seconds: 0
   > contract address:    0xB0eB24ed6DA87c378c7594e6727357Fb142940d5
   > block number:        3
   > block timestamp:     1644549470
   > account:             0x77C7dC87c016f5c7EB0D4E802c77b5457f6a8250
   > balance:             99.98893156
   > gas used:            335975 (0x52067)
   > gas price:           20 gwei
   > value sent:          0 ETH
   > total cost:          0.0067195 ETH


   > Saving migration to chain.
   > Saving artifacts
   -------------------------------------
   > Total cost:           0.0067195 ETH

Summary
=======
> Total deployments:   2
> Final cost:          0.0102214 ETH
```

As you can see from the above picture, in total there are two deployments and gas price is 20gwei.



CURRENT BLOCK	GAS PRICE	GAS LIMIT	HARDFORK	NETWORK ID	RPC SERVER	MINING STATUS	WORKSPACE
4	20000000000	6721975	MUIRGLACIER	5777	HTTP://127.0.0.1:7545	AUTOMINING	QUICKSTART

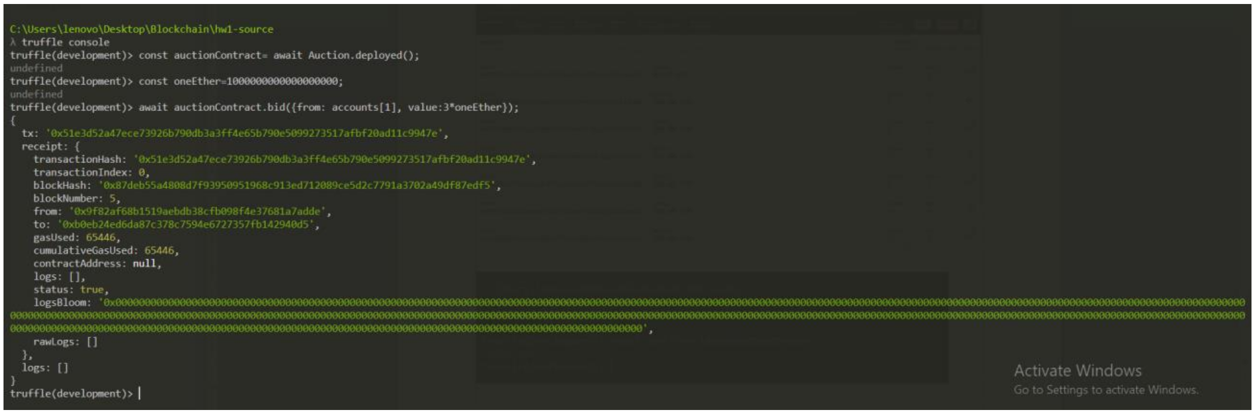
MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	99.99 ETH	4	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	100.00 ETH	0	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	100.00 ETH	0	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	100.00 ETH	0	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	0	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	0	6

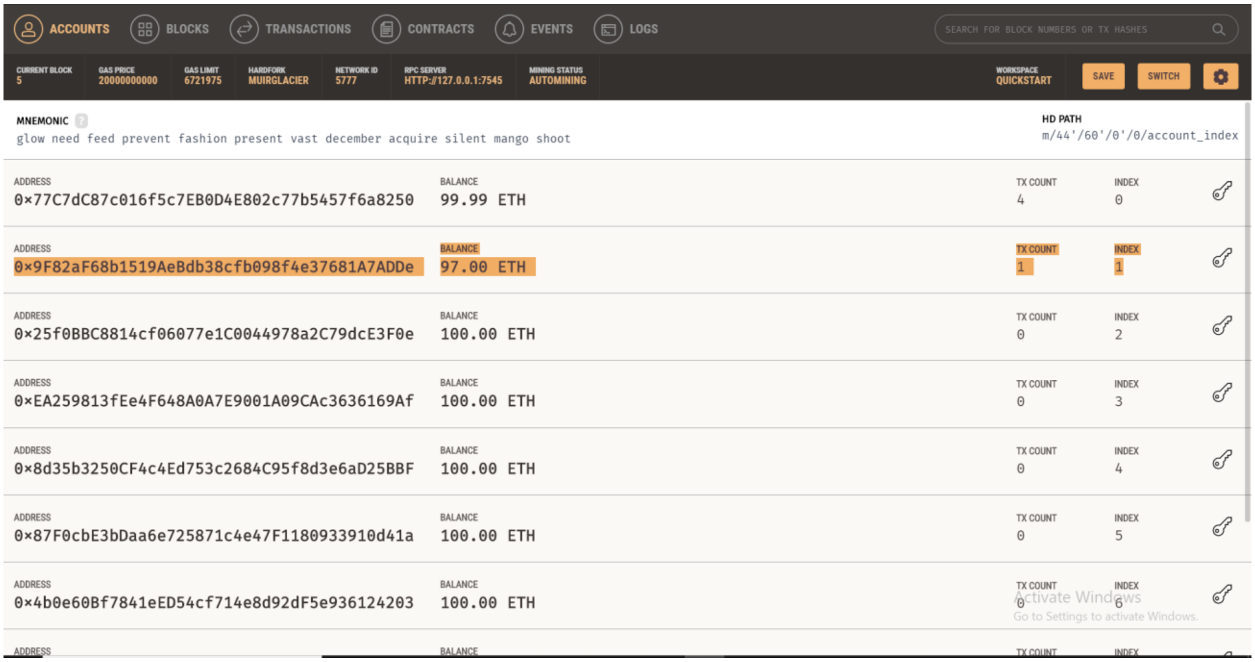
Balance got changed from the first account.

Calling the bid function:



```
C:\Users\lenovo\Desktop\Blockchain\hw1-source
λ truffle console
truffle(development)> const auctionContract= await Auction.deployed();
undefined
truffle(development)> const oneEther=1000000000000000000;
undefined
truffle(development)> await auctionContract.bid({from: accounts[1], value:3*oneEther});
{
  tx: '0x51e3d52a47ece73926b790db3a3ff4e65b790e5099273517afbf20ad11c9947e',
  receipt: {
    transactionHash: '0x51e3d52a47ece73926b790db3a3ff4e65b790e5099273517afbf20ad11c9947e',
    transactionIndex: 0,
    blockHash: '0x87deb55a4808d7f93950951968c913ed712089ce5d2c7791a3702a49df87edf5',
    blockNumber: 5,
    from: '0x9f82af68b1519aebdb38cfb098f4e37681a7adde',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 65446,
    cumulativeGasUsed: 65446,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)> |
```

3 times oneEther is bid by account 1. The gas used for this bid is 65446.



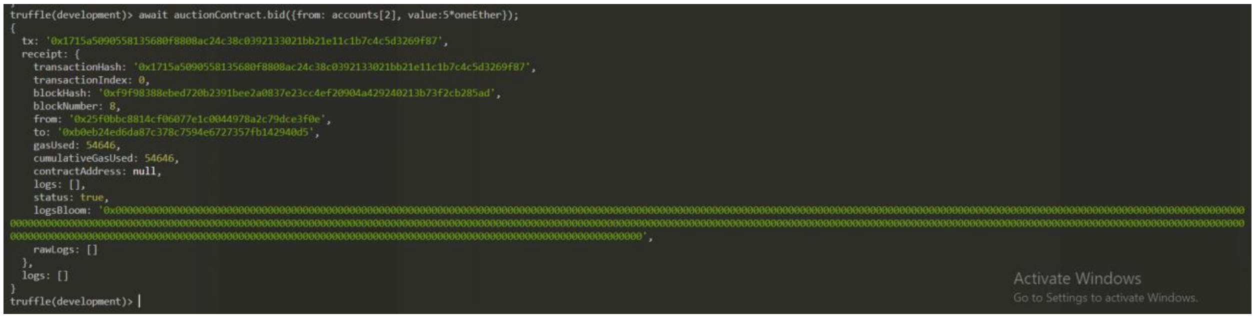
CURRENT BLOCK 5 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

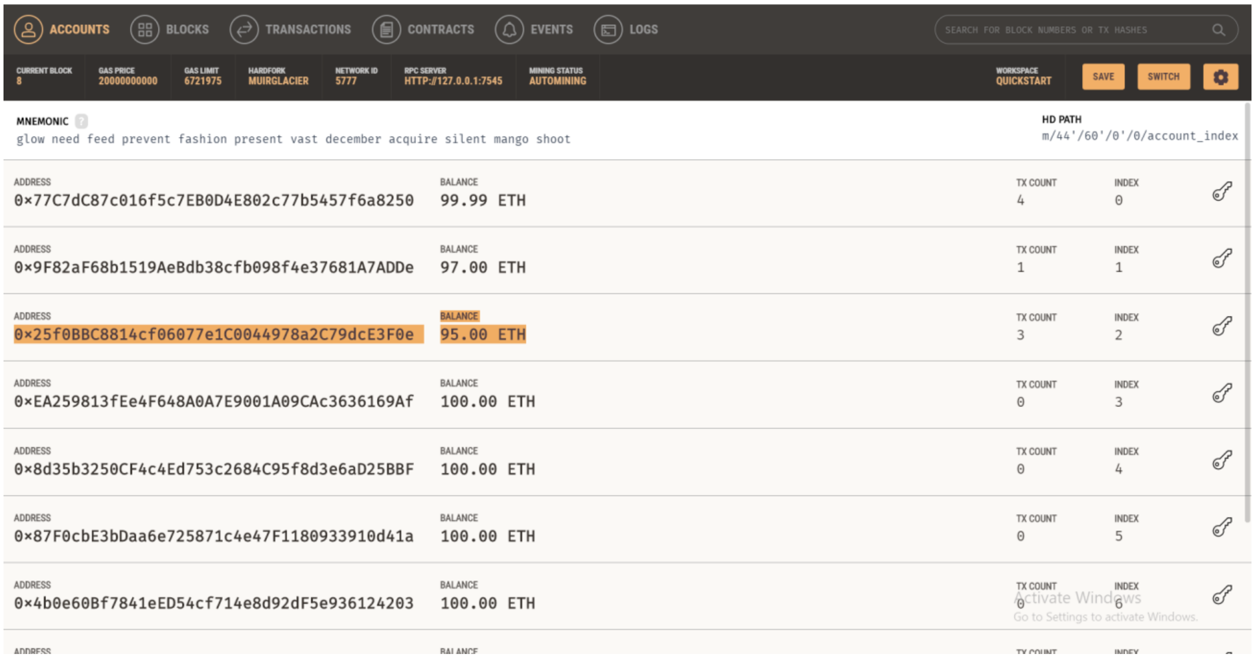
ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	99.99 ETH	4	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	97.00 ETH	1	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	100.00 ETH	0	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	100.00 ETH	0	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	0	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	0	6

Three ETH is deducted from address 1.



```
truffle(development)> await auctionContract.bid({from: accounts[2], value:5*oneEther});
{
  tx: '0x1715a5090558135680f8808ac24c38c0392133021bb21e11c1b7c4c5d3269f87',
  receipt: {
    transactionHash: '0x1715a5090558135680f8808ac24c38c0392133021bb21e11c1b7c4c5d3269f87',
    transactionIndex: 0,
    blockHash: '0xf9f98388ebed720b2391bee2a0837e23cc4ef20904a429240213b73f2cb285ad',
    blockNumber: 8,
    from: '0x25f0bbc8814cf06077e1c0044978a2c79dce3f0e',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 54646,
    cumulativeGasUsed: 54646,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)> |
```

Five ETH is deducted from account 2.The gas used is 54646.



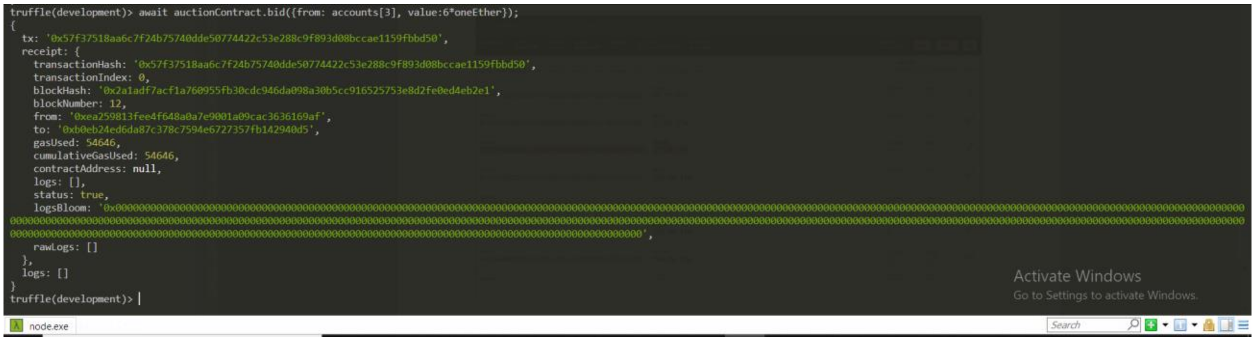
CURRENT BLOCK 8 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

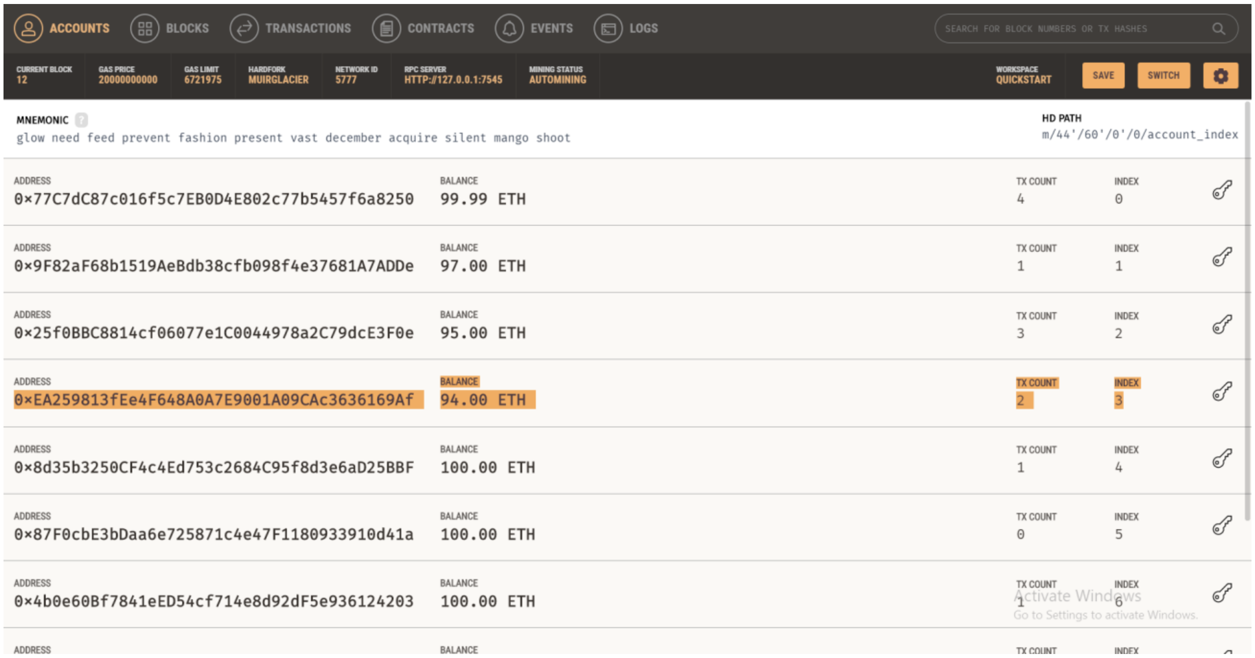
ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	99.99 ETH	4	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	97.00 ETH	1	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	95.00 ETH	3	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	100.00 ETH	0	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	0	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	0	6

5 ETH is deducted from account 2.



```
truffle(development)> await auctionContract.bid({from: accounts[3], value:6*oneEther});
{
  tx: '0x57f37518aa6c7f24b75740dde50774422c53e288c9f893d08bccae1159fbbd50',
  receipt: {
    transactionHash: '0x57f37518aa6c7f24b75740dde50774422c53e288c9f893d08bccae1159fbbd50',
    transactionIndex: 0,
    blockHash: '0x2a1adf7acf1a760955fb30cdc946da098a30b5cc916525753e8d2fe0ed4eb2e1',
    blockNumber: 12,
    from: '0xea259813fee4f648a0a7e9001a09cac3636169af',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 54646,
    cumulativeGasUsed: 54646,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)> |
```

6 ETH is bid by account 3. Gas used is 54646.


ACCOUNTS
BLOCKS
TRANSACTIONS
CONTRACTS
EVENTS
LOGS
SEARCH FOR BLOCK NUMBERS OR TX HASHES
SAVE
SWITCH
Activate Windows
Go to Settings to activate Windows.

CURRENT BLOCK 12 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

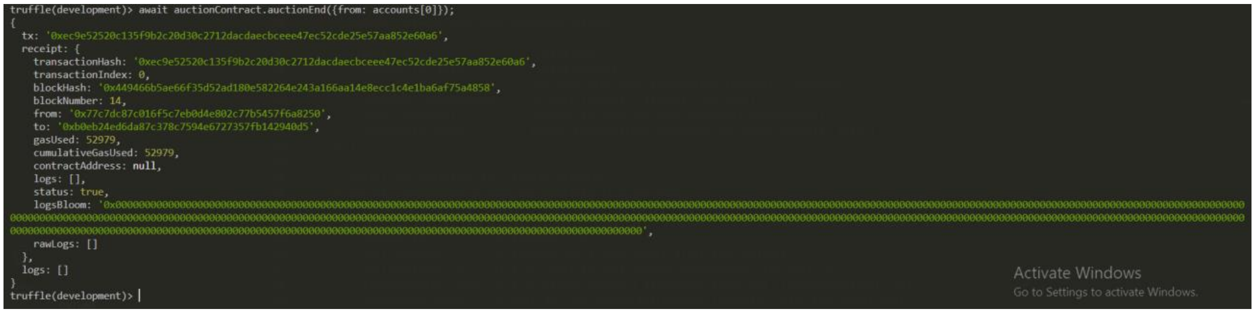
MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	99.99 ETH	4	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	97.00 ETH	1	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	95.00 ETH	3	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	94.00 ETH	2	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	1	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	1	6

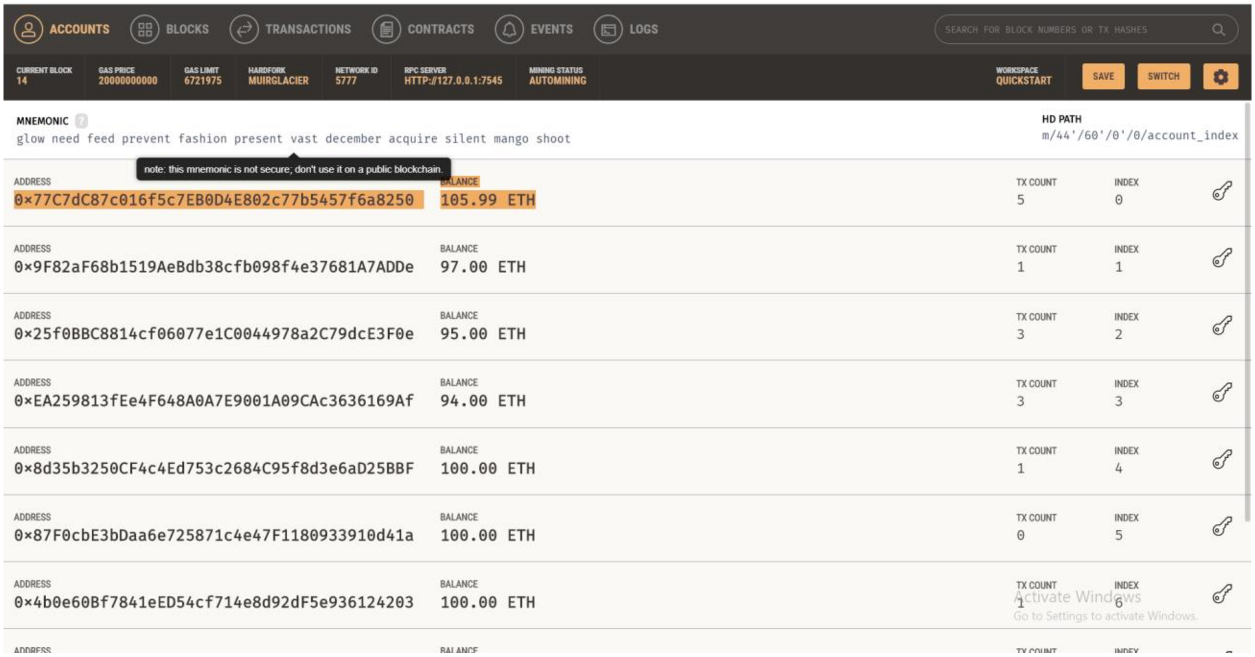
6 ETH is deducted from account 3.

Calling auctionEnd():



```
truffle(development)> await auctionContract.auctionEnd({from: accounts[0]});
{
  tx: '0xec9e52520c135f9b2c20d30c2712dacdaecbceee47ec52cde25e57aa852e60a6',
  receipt: {
    transactionHash: '0xec9e52520c135f9b2c20d30c2712dacdaecbceee47ec52cde25e57aa852e60a6',
    transactionIndex: 0,
    blockHash: '0x449466b5ae66f35d52ad180e582264e243a166aa14e8ecc1c4e1ba6af75a4858',
    blockNumber: 14,
    from: '0x77c7dc87c016f5c7eb0d4e802c77b5457f6a8250',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 52979,
    cumulativeGasUsed: 52979,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)> |
```

When account 0 calls auctionEnd() the highestBid of 6 ETH will be accumulated in his account.



CURRENT BLOCK 14 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

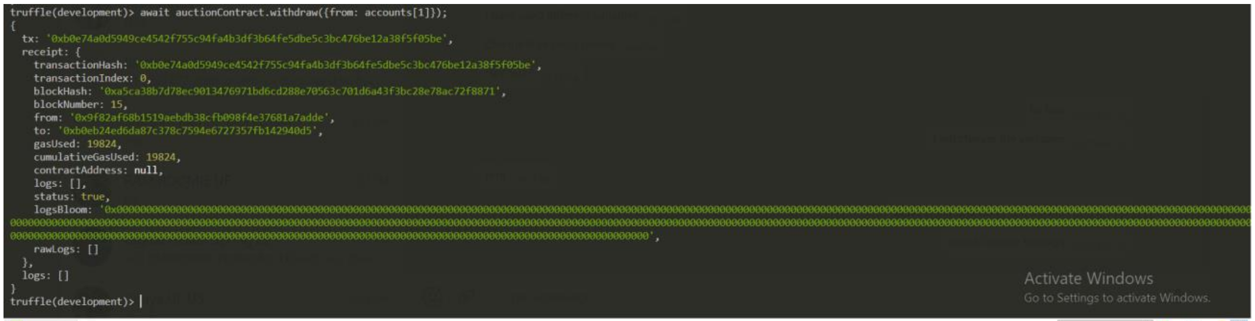
MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

HD PATH
m/44'/60'/0'/0/account_index

note: this mnemonic is not secure; don't use it on a public blockchain.

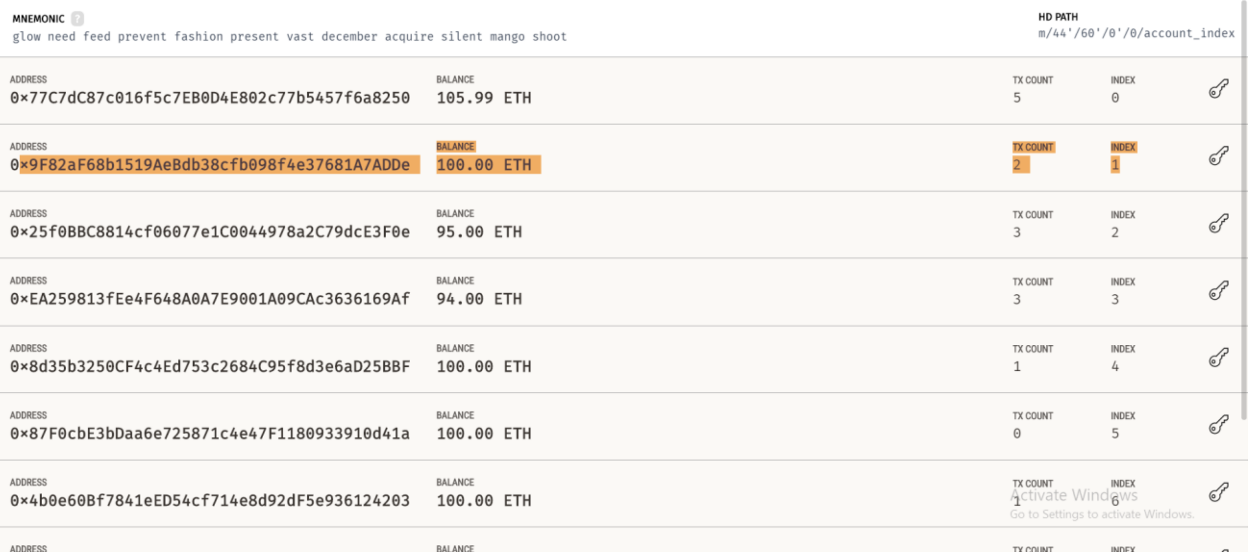
ADDRESS	BALANCE	TX COUNT	INDEX
0×77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	105.99 ETH	5	0
0×9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	97.00 ETH	1	1
0×25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	95.00 ETH	3	2
0×EA259813fEe4F648A0A7E9001A09CAc3636169Af	94.00 ETH	3	3
0×8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	1	4
0×87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0×4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	1	6

Calling withdraw() function:



```
truffle(development)> await auctionContract.withdraw({from: accounts[1]});
{
  tx: '0xb0e74a0d5949ce4542f755c94fa4b3df3b64fe5dbe5c3bc476be12a38f5f05be',
  receipt: {
    transactionHash: '0xb0e74a0d5949ce4542f755c94fa4b3df3b64fe5dbe5c3bc476be12a38f5f05be',
    transactionIndex: 0,
    blockHash: '0xa5ca38b7d78ec9013476971bd6cd288e70563c701d6a43f3bc28e78ac72f8871',
    blockNumber: 15,
    from: '0x9f82af68b1519aebdb38cfb098f4e37681a7adde',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 19824,
    cumulativeGasUsed: 19824,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)> |
```

When account one calls withdraw function, he gets back his bid.

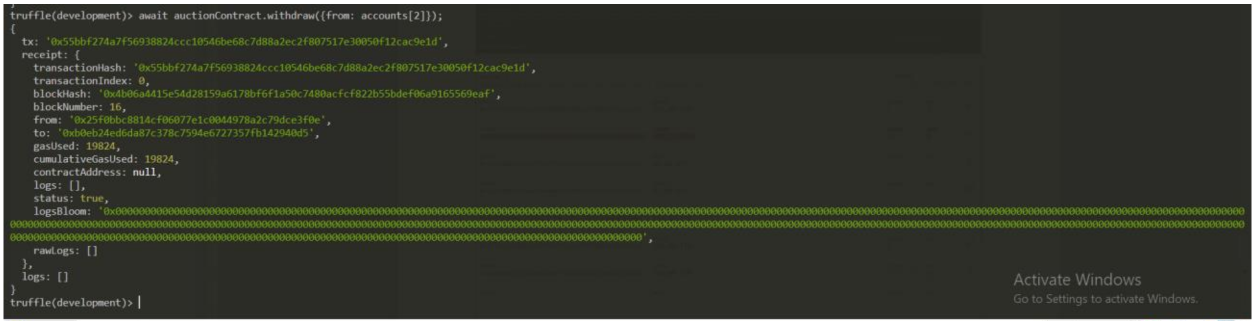


MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

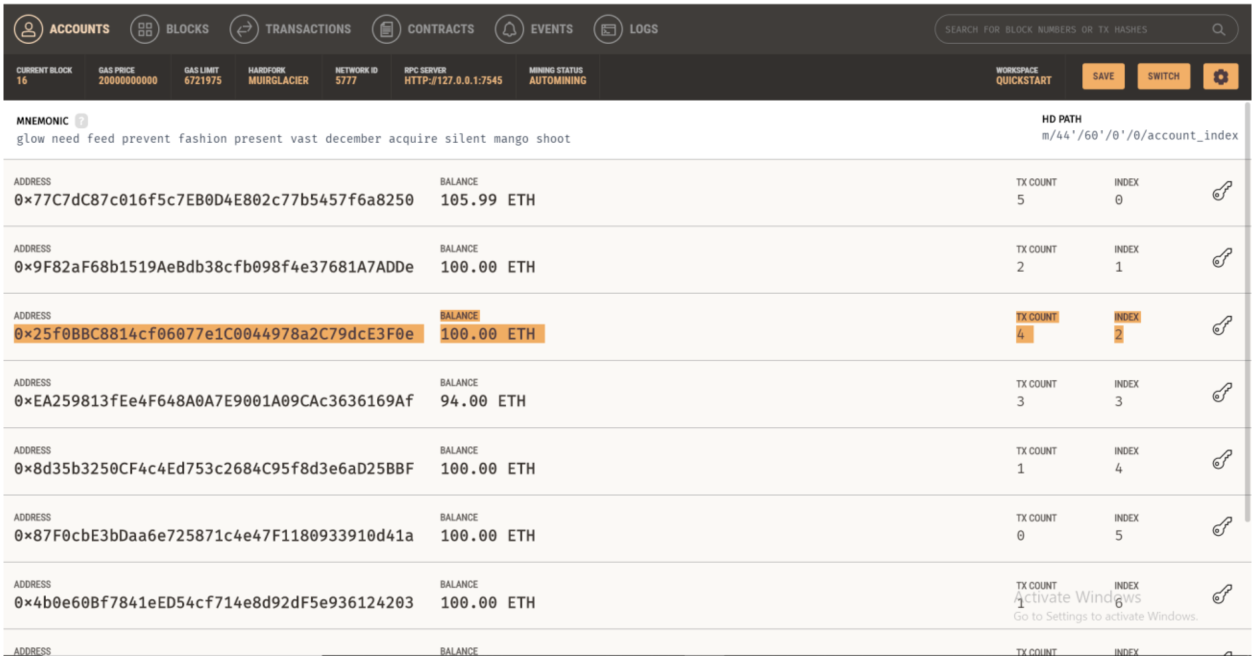
HD PATH
m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX
0x77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	105.99 ETH	5	0
0x9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	100.00 ETH	2	1
0x25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	95.00 ETH	3	2
0xEA259813fEe4F648A0A7E9001A09CAc3636169Af	94.00 ETH	3	3
0x8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	1	4
0x87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0x4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	1	6

When account 2 calls withdraw function, he gets back his bid.



```
truffle(development)> await auctionContract.withdraw({from: accounts[2]});
{
  tx: '0x55bbf274a7f56938824ccc10546be68c7d88a2ec2f807517e30050f12cac9e1d',
  receipt: {
    transactionHash: '0x55bbf274a7f56938824ccc10546be68c7d88a2ec2f807517e30050f12cac9e1d',
    transactionIndex: 0,
    blockHash: '0x4b06a4415e54d28159a6178bf6f1a50c7480acfcf822b55bdef06a9165569eaf',
    blockNumber: 16,
    from: '0x25f0bbc8814cf06077e1c0044978a2c79dce3f0e',
    to: '0xb0eb24ed6da87c378c7594e6727357fb142940d5',
    gasUsed: 19824,
    cumulativeGasUsed: 19824,
    contractAddress: null,
    logs: [],
    status: true,
    logsBloom: '0x000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000',
    rawLogs: []
  },
  logs: []
}
truffle(development)>
```



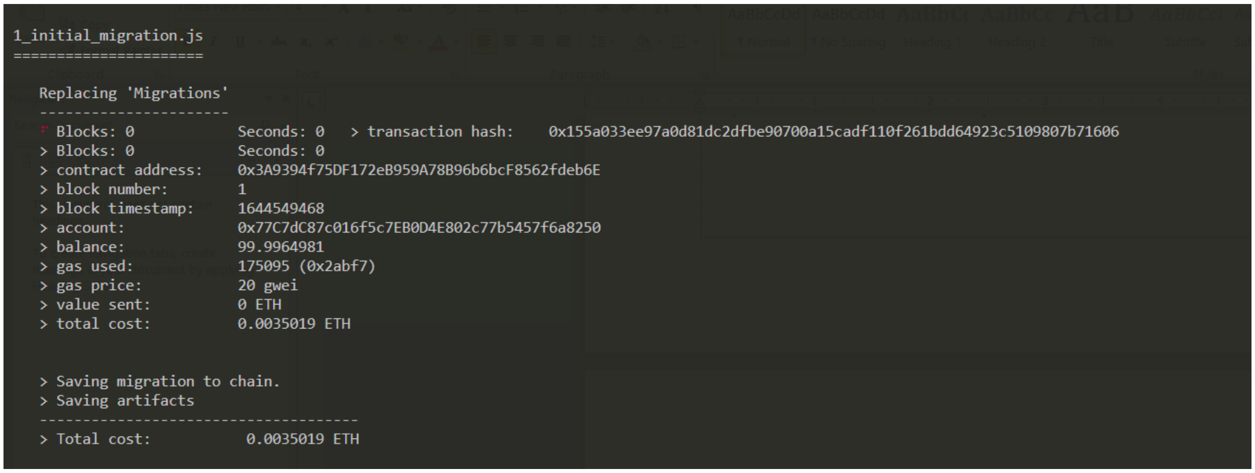
CURRENT BLOCK 16 | GAS PRICE 20000000000 | GAS LIMIT 6721975 | HARDFORK MUIRGLACIER | NETWORK ID 5777 | RPC SERVER HTTP://127.0.0.1:7545 | MINING STATUS AUTOMINING | WORKSPACE QUICKSTART

MNEMONIC
glow need feed prevent fashion present vast december acquire silent mango shoot

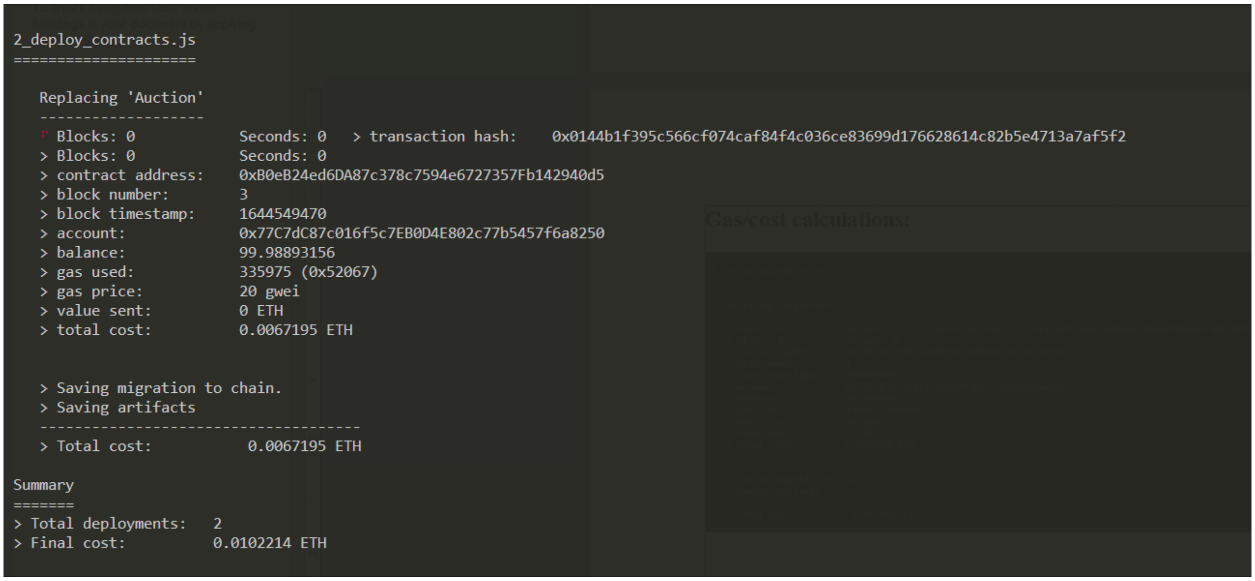
HD PATH
m/44'/60'/0'/0/account_index

ADDRESS	BALANCE	TX COUNT	INDEX
0x77C7dC87c016f5c7EB0D4E802c77b5457f6a8250	105.99 ETH	5	0
0x9F82aF68b1519AeBdb38cfb098f4e37681A7ADDe	100.00 ETH	2	1
0x25f0BBC8814cf06077e1C0044978a2C79dcE3F0e	100.00 ETH	4	2
0xEA259813fEe4F648A0A7E9001A09CAc3636169Af	94.00 ETH	3	3
0x8d35b3250CF4c4Ed753c2684C95f8d3e6aD25BBF	100.00 ETH	1	4
0x87F0cbE3bDaa6e725871c4e47F1180933910d41a	100.00 ETH	0	5
0x4b0e60Bf7841eED54cf714e8d92dF5e936124203	100.00 ETH	1	6

Gas/cost calculations:



```
1_initial_migration.js
======================

   Replacing 'Migrations'
   ----------------------
     Blocks: 0            Seconds: 0   > transaction hash:    0x155a033ee97a0d81dc2dfbe90700a15cadf110f261bdd64923c5109807b71606
   > Blocks: 0            Seconds: 0
   > contract address:    0x3A9394f75DF172eB959A78B96b6bcF8562fdeb6E
   > block number:        1
   > block timestamp:     1644549468
   > account:             0x77C7dC87c016f5c7EB0D4E802c77b5457f6a8250
   > balance:             99.9964981
   > gas used:            175095 (0x2abf7)
   > gas price:           20 gwei
   > value sent:          0 ETH
   > total cost:          0.0035019 ETH


   > Saving migration to chain.
   > Saving artifacts
   -------------------------------------
   > Total cost:           0.0035019 ETH
```



```
2_deploy_contracts.js
=====================

   Replacing 'Auction'
   -------------------
     Blocks: 0            Seconds: 0   > transaction hash:    0x0144b1f395c566cf074caf84f4c036ce83699d176628614c82b5e4713a7af5f2
   > Blocks: 0            Seconds: 0
   > contract address:    0xB0eB24ed6DA87c378c7594e6727357Fb142940d5
   > block number:        3
   > block timestamp:     1644549470
   > account:             0x77C7dC87c016f5c7EB0D4E802c77b5457f6a8250
   > balance:             99.98893156
   > gas used:            335975 (0x52067)
   > gas price:           20 gwei
   > value sent:          0 ETH
   > total cost:          0.0067195 ETH


   > Saving migration to chain.
   > Saving artifacts
   -------------------------------------
   > Total cost:           0.0067195 ETH

Summary
=======
> Total deployments:   2
> Final cost:          0.0102214 ETH
```

For initial migration and deploy contracts, total gas used is (175095+335975) and the gas price is 20 gwei

The total cost for deployments is (175095+335975)*20 gwei= 10,221,400 gwei

For bidding:

Account 1: 65446

Account 2: 54646

Account 3: 54646

Total cost for bidding=(65446+54646+54646)*20gwei=3,494,760 gwei

For auctionEnd():

Account 0:52979

Total Cost=52979*20gwei=1,059,580 gwei

For withdraw():

Account 1:19824

Account 2: 19824

Total Cost=(19824+19824)*20gwei=792,960 gwei