

External Practical

AIM:

Write the solidity program for auction system.

OUTPUT:

```
pragma solidity ^0.7.6;

contract Auction {
    uint[] public prices = new uint[](10);
    uint public count = 0;
    uint public winner;
    uint public price;
    string public cancelled;
    string public _status;

    constructor() {
        cancelled = "";
    }

    function cancelAuction () public {
        withdrawAuction();
        count = 0;
        cancelled = "Auction is cancelled";
    }

    function withdrawAuction() public {
        prices = new uint[](10);
    }

    function completeAuction() public {
        uint maxi = 0;
        uint win;
        for(uint x = 0; x < prices.length; x++)
        {
            if(prices[x] > maxi)
            {
                win = x;
                maxi = prices[x];
            }
        }
        withdrawAuction();
        count = 0;
        winner = win;
        price = maxi;
    }

    function placeBid(uint _price) public {
        prices[count] = _price;
```

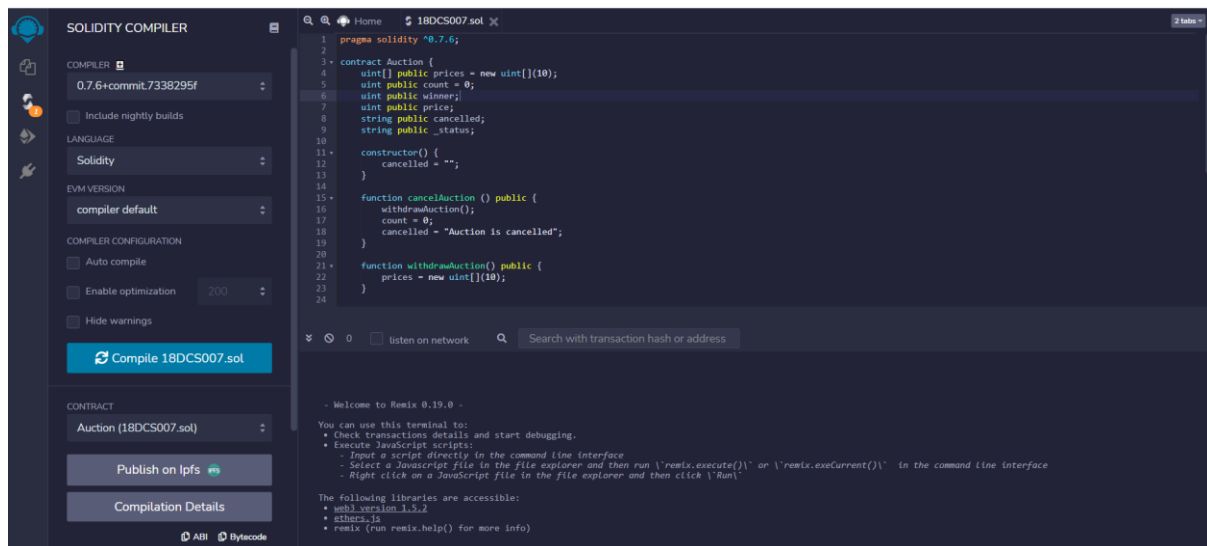
```

        _status = "Successful";
        count++;
    }
}

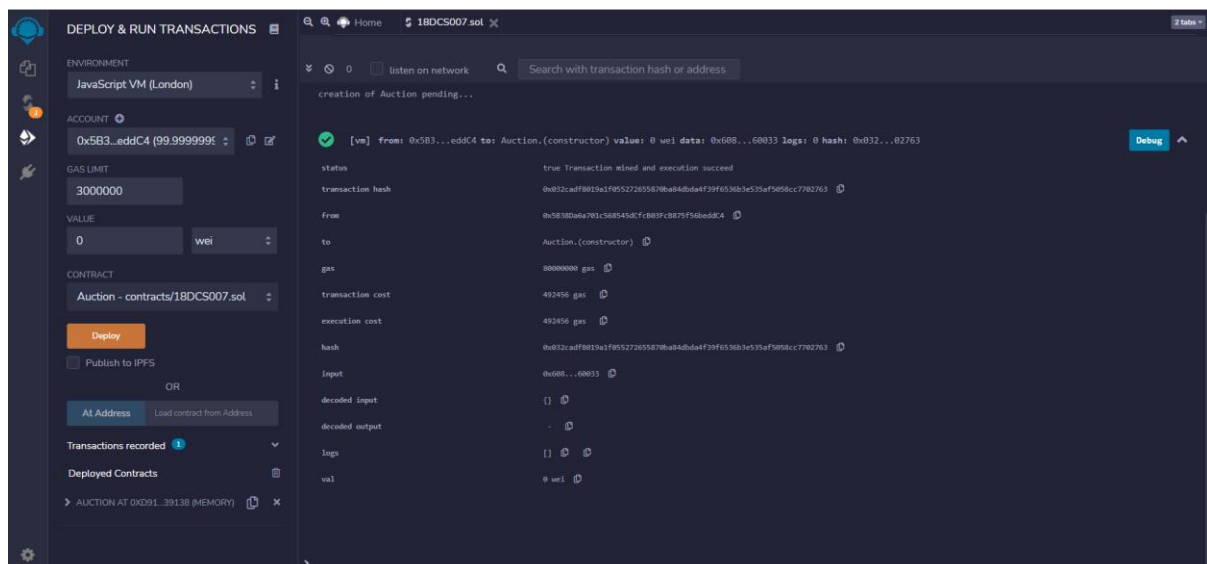
```

OUTPUT

Compiled Successfully



Deployed Successfully



Placed Bid of 17

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel displays a list of deployed contracts for 'AUCTION AT 0XD91...39138 (MEMORY)'. The 'placeBid' function is selected with a value of 17. The main panel shows the transaction details for 'transact to Auction.placeBid pending ...'. The transaction was successful, with the following details:

- status: true Transaction mined and execution succeed
- transaction hash: 0x28453e9fc441fa356a43c36058a1328497ff2c4801786714d5f9c45c58bf
- from: 0x5838D06a701c508545dcfc803fc8875f56bed8c4
- to: Auction.placeBid(uint256) 0xd9145cc52036f254917e481e44e9943f39138
- gas: 8000000 gas
- transaction cost: 90462 gas
- execution cost: 90462 gas
- hash: 0x28453e9fc441fa356a43c36058a1328497ff2c4801786714d5f9c45c58bf
- input: 0x997...00011
- decoded input: { "int256_price": { "_hex": "0x11", "_isSigned": true } }}
- decoded output: ()
- logs: []
- val: 0 wei

Placed Bid of 70

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel displays a list of deployed contracts for 'AUCTION AT 0XD91...39138 (MEMORY)'. The 'placeBid' function is selected with a value of 70. The main panel shows the transaction details for 'transact to Auction.placeBid pending ...'. The transaction was successful, with the following details:

- status: true Transaction mined and execution succeed
- transaction hash: 0x475221b2af931cf36fa1e3eac3b7d068d623f75238036c36323fe7d348134
- from: 0x5838D06a701c508545dcfc803fc8875f56bed8c4
- to: Auction.placeBid(uint256) 0xd9145cc52036f254917e481e44e9943f39138
- gas: 8000000 gas
- transaction cost: 55719 gas
- execution cost: 55719 gas
- hash: 0x475221b2af931cf36fa1e3eac3b7d068d623f75238036c36323fe7d348134
- input: 0x997...00046
- decoded input: { "int256_price": { "_hex": "0x46", "_isSigned": true } }}
- decoded output: ()
- logs: []
- val: 0 wei

Auction Completed

```

transact to Auction.completeAuction pending ...

[vm] from: 0x5B3...eddC4 to: Auction.completeAuction() 0xd91...39138 value: 0 wei data: 0x4d1...a2c54 logs: 0 hash: 0x721...7e14b

status      true Transaction mined and execution succeed
transaction hash  0x721b196a765c0849d810d2c8f79fdb3b64c9f1008705717eb6b3b478df07e14b
from        0x5B38Da6a701c568545dCfcB03FcB875F56beddC4
to          Auction.completeAuction() 0xd9145CCE52D386f254917e481eB44e9943F39138
gas         80000000 gas
transaction cost  91584 gas
execution cost   91584 gas
hash          0x721b196a765c0849d810d2c8f79fdb3b64c9f1008705717eb6b3b478df07e14b
input         0x4d1...a2c54
decoded input   {}
decoded output  {}
logs          []
val           0 wei
  
```

Final Price

The screenshot displays the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel shows various buttons for interacting with the auction, including 'cancelAuction', 'completeAuction', 'placebid' (set to 70), 'withdrawAuction', and 'price' (set to 0 wei256: 70). The main workspace shows the transaction details for a call to `Auction.price()`. The transaction hash is `0x68d5f9c905f93243b3a2aa49b1e3f8c68b1f247531e427a43fc5d3f9508ba`. The decoded output is `{ "p": "uint256: 70" }`, indicating the final price is 70.

CONCLUSION

Successfully completed the given practical.