

Token Contract

```
//SPDX-License-Identifier: MIT
pragma solidity ^0.4.24;

// Token Contract

contract Token {

    function totalSupply() public constant returns (uint256 supply) {}

    function balanceOf(address _owner) constant returns (uint256 balance) {}

    function transfer(address _to, uint256 _value) returns (bool success) {}

    function transferFrom (address _from, address _to, uint256 _value) returns (bool success) {}

    function approve(address _spender, uint256 _value) returns (bool success) {}

    function allowance (address _owner, address _spender) constant returns (uint256 remaining) {}

    // indexed keyword for searching logged events

    event Transfer (address indexed _from, address indexed _to, uint256 _value);

    event Approval (address indexed _owner, address indexed _spender, uint256 _value);

}

contract CT7Token is Token {
    // defining Data Types
    string public name;
    uint8 public decimals;
    string public symbol;
    uint256 public unitsOneEthCanBuy;
    uint256 public totalEthInWei;
    address public fundsWallet;
```

```

mapping (address => uint256) balances;
mapping (address => mapping (address => uint256)) allowed; // amount of unit allowed by address1 to be used by
address 2
uint256 public totalSupply;

// Constructor
// 1 ETH = 10^18 Weis
// 1 CT7 = 10^18
// Balances can be equal or less than totalSupply

constructor() public {
    balances[msg.sender] = 1000000000000000000;
    totalSupply = 1000000000000000000;
    name = "CT7Token";
    decimals = 18;
    symbol = "CT7";
    unitsOneEthCanBuy = 10;
    fundsWallet = msg.sender;
}

// Main Function with Safe Math

function transfer(address _to, uint256 _value) returns (bool success) {

    if (balances[msg.sender] >= _value && balances[_to] + _value > balances [_to]) {
        balances[msg.sender] -= _value;
        balances[_to] += _value;
        emit Transfer(msg.sender, _to, _value);
        return true;
    }
    else {
        return false;
    }
}

function transferFrom(address _from, address _to, uint256 _value) public returns (bool success){

```

```

    if (balances[_from] >= _value && allowed[_from][msg.sender] >= _value && balances[_to] + _value > balances
[_to]) {
        balances[_to] += _value;
        balances[_from] -= _value;
        allowed[_from][msg.sender] -= _value;
        emit Transfer (_from, _to, _value);
        return true;
    }
    else {
        return false;
    }
}

// constant is similar to view in the older version of Solidity
function balanceOf (address _owner) constant returns (uint256 balance) {
    return balances[_owner];
}

function approve (address _spender, uint256 _value) returns (bool success) {
    allowed[msg.sender][_spender] = _value;
    emit Approval(msg.sender, _spender, _value);
    return true;
}

//fallback function

function() payable{
    totalEthInWei = totalEthInWei + msg.value;

    uint256 amount = msg.value * unitsOneEthCanBuy;

    require(balances[fundsWallet] >= amount);

    balances[fundsWallet] = balances[fundsWallet] - amount;

    balances[msg.sender] = balances[msg.sender] + amount;

    emit Transfer (fundsWallet, msg.sender, amount);
}

```

```
fundsWallet.transfer(msg.value);
```

```
}
```

```
}
```

Transaction:

0.01 XYZ

DETAILSDATAHEX

EDIT

Estimated gas fee ⓘ

0.000062 RopstenETH

Site suggested

Very likely in < 15 seconds

Max fee: 0.0000617 RopstenETH

\$0.00

Total

0.01 XYZ + 0.000062 RopstenETH

Amount + gas fee

Max amount: 0.01 XYZ + 0.000061703 RopstenETH

Reject

Confirm

Approve Token spend limit

×

Status

Confirmed

View on block explorer

Copy Transaction ID

From

0x83f...41f0

→

0xA86...6f0d

To

Transaction

Nonce

25

Spend limit amount

0 RopstenETH

Gas Limit (Units)

46073

Gas Used (Units)

46073

Base Fee (GWEI)

0.000000007

Priority Fee (GWEI)

2.5

Total Gas Fee

0.000115 RopstenETH

Max Fee Per Gas

0.000000003 RopstenETH

Total

0.00011518 RopstenETH

MetaMask Notification


Ropsten Test Network

User Account 3 → 0x9F8...F1e6

New address detected! Click here to add to your address book.

https://remix.ethereum.org

0xA86...6f0d : TRANSFER FROM ⓘ

 100 XYZ

DETAILS DATA HEX

EDIT

Estimated gas fee ⓘ

0.00006176

0.000062 RopstenETH

Site suggested

Very likely in < 15 seconds

Max fee: 0.00006176 RopstenETH

Total

100 XYZ + 0.000062 RopstenETH

Amount + gas fee

Max amount: 100 XYZ + 0.000061763 RopstenETH

Reject

Confirm

\$0.00

Contract: 0x83fF719287C49cFC50BD02a01c3EDa4bb7da41f0
User 1: 0x83fF719287C49cFC50BD02a01c3EDa4bb7da41f0
User 2: 0x83675E0cC7f1f55cEFfEb0E794eFD45EfFc3cf31
User 3: 0x314aF8A911e39CA773F0ff9A94a2B4Fcfe83f62C

MetaMask Notification

Ropsten Test Network

User Account 1 → New Contract

https://remix.ethereum.org

CONTRACT DEPLOYMENT

DETAILS DATA

EDIT

Estimated gas fee ⓘ

0.0005635

0.000563 RopstenETH

Site suggested

Very likely in < 15 seconds

Max fee: 0.0005635 RopstenETH

Total

0.0005635

0.0005635 RopstenETH

Amount + gas fee

Max amount: 0.0005635 RopstenETH

Reject Confirm

MetaMask Notification

Ropsten Test Network

User Account 1 → New Contract

https://remix.ethereum.org

CONTRACT DEPLOYMENT

DETAILS DATA

EDIT

Estimated gas fee ⓘ

0.00269864

0.002699 RopstenETH

Site suggested

Very likely in < 15 seconds

Max fee: 0.00269864 RopstenETH

Total

0.00269864

0.00269864 RopstenETH

Amount + gas fee


Max amount: 0.00269864 RopstenETH

Reject Confirm


The image shows a MetaMask notification window titled "MetaMask Notification". At the top, it displays the user's address "0x314...f62c" and the network "Ropsten Test Network". The main heading is "Give permission to access your IND?". Below this, it states: "By granting permission, you are allowing the following account to access your funds". A permission request card shows the account "0x8367...cf31" with a lock icon and an "Edit Permission" link. The "Transaction fee" section shows a fee of "\$0.00" (0.000115 RopstenETH) with an "Edit" link and a "Hide full transaction details" link. The "Permission request" section shows the URL "https://remix.ethereum.org" and the "Approved amount: 1000000000000 IND". The "Granted to:" field shows "0x83675E0c...cf31". At the bottom, there are "Reject" and "Confirm" buttons. The "Confirm" button is highlighted in blue.

<https://remix.ethereum.org> may access and spend up

Additional Testing with STAR Tokens:



Ropsten Test Network ▾



0.2174 RopstenETH

⬇

Buy

➔


Send

↺↻


Swap

Assets

Activity

0.2174 RopstenETH

>

1006 STAR

>

Don't see your token?

[Import tokens](#)

Need help? Contact [MetaMask Support](#)



Ropsten Test Network ▾



Assets

Activity

0 CT7

>

0 XYZ

>

0 IND

>

999999998894 STAR

>

Don't see your token?

[Import tokens](#)

Need help? Contact [MetaMask Support](#)

MetaMask Notification

Ropsten Test Network

User Account 1

→

User Account 2

https://remix.ethereum.org

0x6c5...f575

 : TRANSFER FROM ⓘ

4 STAR

DETAILS

DATA

HEX

EDIT

Estimated gas fee ⓘ

0.40862476

0.408625 RopstenETH

Site suggested

Unknown processing time ⓘ

Max fee: 0.81714795 RopstenETH

Total

\$0.00

4 STAR + 0.408625 RopstenETH

Amount + gas fee

Max amount: 4 STAR + 0.817147947 RopstenETH

Transaction Details < >

Overview

Logs (1)

State

ⓘ

[This is a Ropsten Testnet transaction only]

① Transaction Hash:

0x05acdf4f0480e80009c979f5176e05f3e98a4bc228a667a23dea8aef45b3083b ⓘ

① Status:

✔ Success

① Block:

12453093 1 Block Confirmation

① Timestamp:

⌚ 17 secs ago (Jun-23-2022 03:17:36 PM +UTC)

① From:

0x83ff719287c49cfc50bd02a01c3eda4bb7da41f0 ⓘ

① Interacted With (To):

Contract 0x6c55b16876f8e771b9c285636986e725134af575 ✔ ⓘ

① Tokens Transferred:

➤ From 0x83ff719287c49c... To 0x83675e0cc7f1f5... For 4 Ⓢ STARToken (STAR)

① Value:

0 Ether (\$0.00)

① Transaction Fee:

0.398069575313167824 Ether (\$0.00)

① Gas Price:

0.000009796947610582 Ether (9,796.947610582 Gwei)



Ropsten Test Network ▾



0.1996 RopstenETH



Buy



Send



Swap

Assets

Activity



0.1996 RopstenETH



104 STAR



Don't see your token?

[Import tokens](#)

Need help? Contact [MetaMask Support](#)