

Blockchain

Remix IDE & Export Smart Contract

2024

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Remix IDE

Remix

The screenshot displays the Remix Ethereum IDE web interface. The browser's address bar shows the URL `remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.26+commit.8a97fa7ajs`. The interface is divided into several sections:

- FILE EXPLORER:** Located on the left, it shows a 'default_workspace' with files like `contracts`, `scripts`, `tests`, `.prettierrc.json`, and `README.txt`.
- REMIX Header:** Features the Remix logo, the tagline 'The Native IDE for Web3 Development', and links to the Website, Documentation, Remix Plugin, and Remix Desktop. It also includes a 'Search Documentation' bar.
- Files Section:** Contains buttons for 'Start Coding', 'Open File', and 'Access File System'. Below these are 'Recent workspaces' (listing 'default_workspace') and 'Load from' options (GitHub, Gist, IPFS, HTTPS).
- Learn Section:** Offers learning resources such as 'Remix Basics' (with a 'Get Started' button), 'Intro to Solidity', and 'Deploying with Libraries'.
- Featured Section:** Promotes 'BETA TESTING' with a 'Sign up' button and displays 'Project Templates' including MULTISIG (Gnosis Safe), ERC20 (0xProject), and ERC721 (OpenZeppelin).
- Featured Plugins:** Lists plugins like SOLIDITY ANALYZERS, COOKBOOK, SOLIDITY, and SOURCIFY.
- Scam Alert:** A red banner warning that 'The only URL Remix uses is remix.ethereum.org'.
- Terminal:** At the bottom, it shows a welcome message for Remix 0.50.0, file storage information, and instructions on how to use the terminal for checking transactions, debugging, and executing JavaScript scripts.



Export Smart Contract

Smart Contract

■ 以在ethereum production上的smart contract 來說明如何export ERC-721A
<https://etherscan.io/address/0xd4299e6df45a393dc3104d02bb92dcd984f0f40f>

■ 本例ERC-721A smart contract address:
0xD4299e6DF45A393dc3104D02BB92DCd984f0F40f

■ 共有Read Contract : 14個, Write contract : 10個。

The image displays two screenshots from the Etherscan website, showing the 'Read Contract' and 'Write Contract' interfaces for the ERC-721A smart contract at address 0xd4299e6df45a393dc3104d02bb92dcd984f0f40f.

Read Contract Interface (Left Screenshot):

- 1. balanceOf
- 2. baseURI
- 3. getApproved
- 4. isApprovedForAll
- 5. mintRate
- 6. name
- 7. owner
- 8. ownerOf
- 9. supportsInterface
- 10. symbol
- 11. tokenByIndex
- 12. tokenOfOwnerByIndex
- 13. tokenURI
- 14. totalSupply

Write Contract Interface (Right Screenshot):

- 1. approve (0x095ea7b3)
- 2. mint (0xa0712d68)
- 3. renounceOwnership (0x715018a6)
- 4. safeTransferFrom (0x4284e0e)
- 5. safeTransferFrom (0xb88d4fde)
- 6. setApprovalForAll (0xa22cb465)
- 7. setMintRate (0xdb2193f)
- 8. transferFrom (0x23b872dd)
- 9. transferOwnership (0xf2fde38b)
- 10. withdraw (0x3ccfd60b)

Export Smart Contract

The screenshot shows the Etherscan.io interface for a smart contract. The browser address bar (1) contains the URL: `etherscan.io/address/0xd4299e6df45a393dc3104d02bb92dcd984f0f40f#code`. The page title is "inverted_mfers | Address 0xd4299e6df45a393dc3104d02bb92dcd984f0f40f". The "Code" button (2) is highlighted in the top navigation bar. Below the navigation bar, the "Contract Source Code Verified (Exact Match)" status is shown. The contract details table lists the Contract Name as "inverted_mfers", Compiler Version as "v0.8.4+commit.c7e474f2", and Optimization Enabled as "Yes with 1000 runs". The "Contract Source Code (Solidity Standard Json-Input format)" section shows the source code for "File 1 of 12: inverted_mfers.sol". The code includes imports for "ERC721A.sol" and "Ownable.sol", and defines the "inverted_mfers" contract with functions "mint" and "withdraw". A dropdown menu (3) is open, showing options for "BlocksScan IDE", "Code Reader Beta", and "Remix IDE".

1 etherscan.io/address/0xd4299e6df45a393dc3104d02bb92dcd984f0f40f#code

2 Code

3

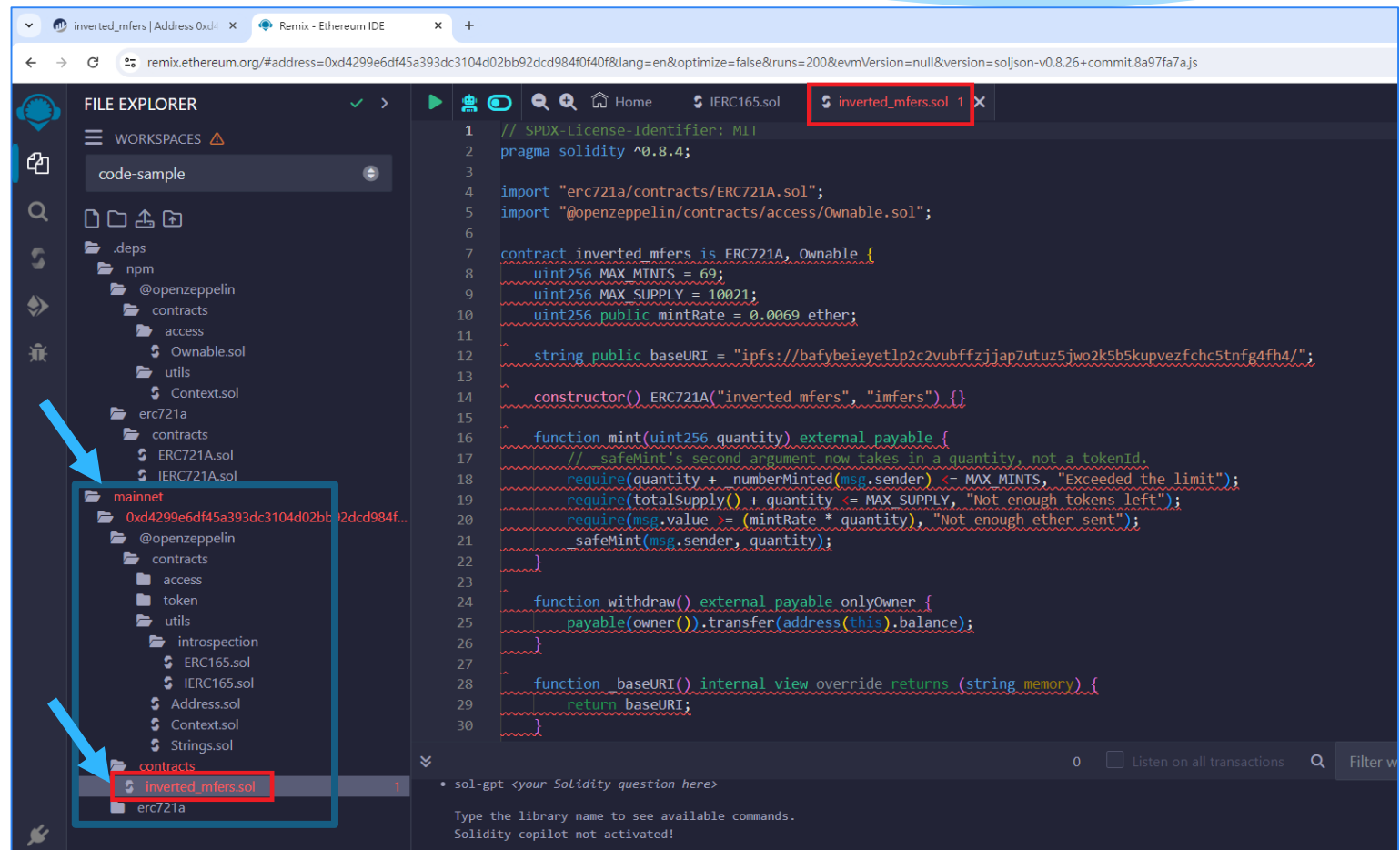
```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.4;
3
4 import "erc721a/contracts/ERC721A.sol";
5 import "@openzeppelin/contracts/access/Ownable.sol";
6
7 contract inverted_mfers is ERC721A, Ownable {
8     uint256 MAX_MINTS = 69;
9     uint256 MAX_SUPPLY = 10021;
10    uint256 public mintRate = 0.0069 ether;
11
12    string public baseURI = "ipfs://bafybeleyetlp2c2vubffzjjap7utuz5jwo2k5b5kupvezfchc5tnfg4fh4/";
13
14    constructor() ERC721A("inverted mfers", "imfers") {}
15
16    function mint(uint256 quantity) external payable {
17        // _safeMint's second argument now takes in a quantity, not a tokenId.
18        require(quantity + _numberMinted(msg.sender) <= MAX_MINTS, "Exceeded the limit");
19        require(totalSupply() + quantity <= MAX_SUPPLY, "Not enough tokens left");
20        require(msg.value >= (mintRate * quantity), "Not enough ether sent");
21        _safeMint(msg.sender, quantity);
22    }
23
24    function withdraw() external payable onlyOwner {
25        payable(owner()).transfer(address(this).balance);
26    }
27 }
```

Remix IDE

- 它會把source code 自動載入到Remix內。

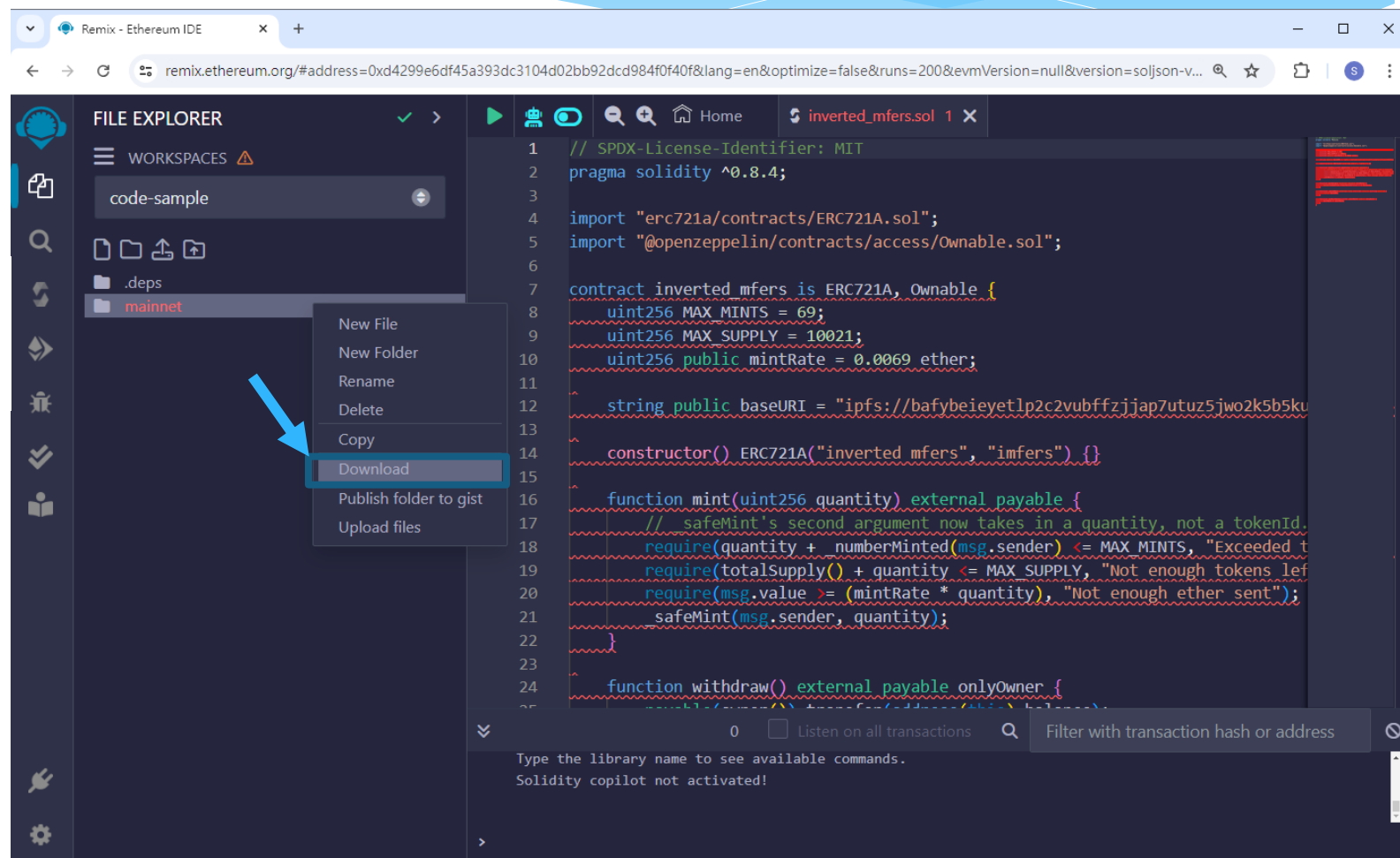
- 打開contracts下的inverted_mfers.sol 即可看到主程式。

- 右邊藍框內的mainnet下，就是完整的檔案。



Download

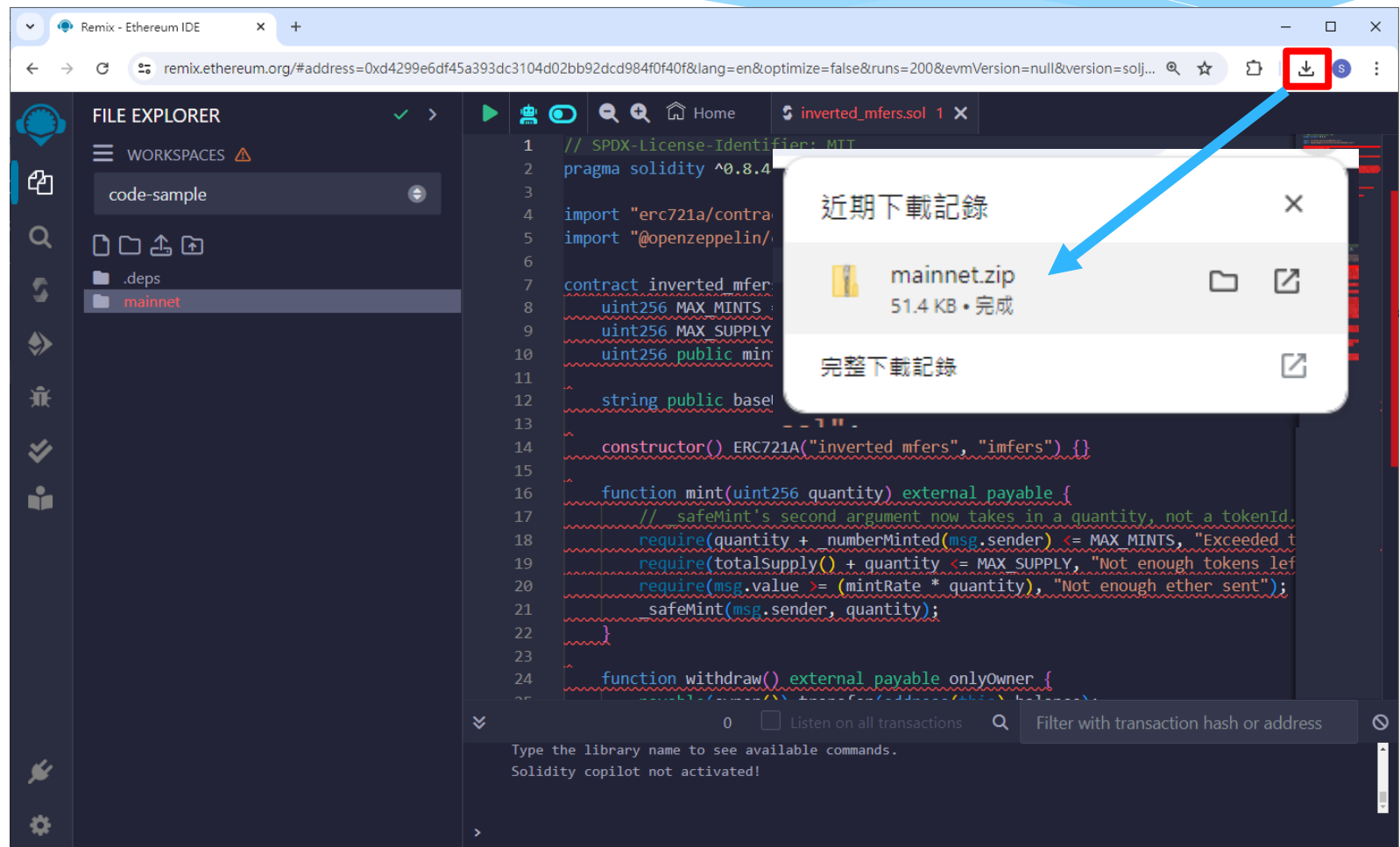
■ 在mainnet位置下，按
mouse右鍵，選
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mainnet.zip。

■ Unzip mainnet.zip即可
看到所有的source
code。



Thank you !

