

day84-sol-tokenproject

≡ 태그	
📅 날짜	@2023년 1월 26일

- npx create-react-app tokenproject

리믹스

MintAnimalToken.sol 파일 생성

기본세팅

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.7;

import "@openzeppelin/contracts/token/ERC721/extensions/ERC721Enumerable.sol";
```

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.7;

import "@openzeppelin/contracts/token/ERC721/extensions/ERC721Enumerable.sol";

contract MintAnimalToken is ERC721Enumerable {

    constructor() ERC721("h662Animals", "HAS") {}

    mapping(uint256=>uint256) public animalTypes;

    function mintAnimalToken() public {
        uint256 animalTokenId = totalSupply() + 1;

        uint256 animalType = uint256(keccak256(abi.encodePacked(block.timestamp,msg.sender, animalTokenId))%5+1;

        animalTypes[animalTokenId] = animalType;

        _mint(msg.sender, animalTokenId);
    }

}
```

SaleAinalToken.sol

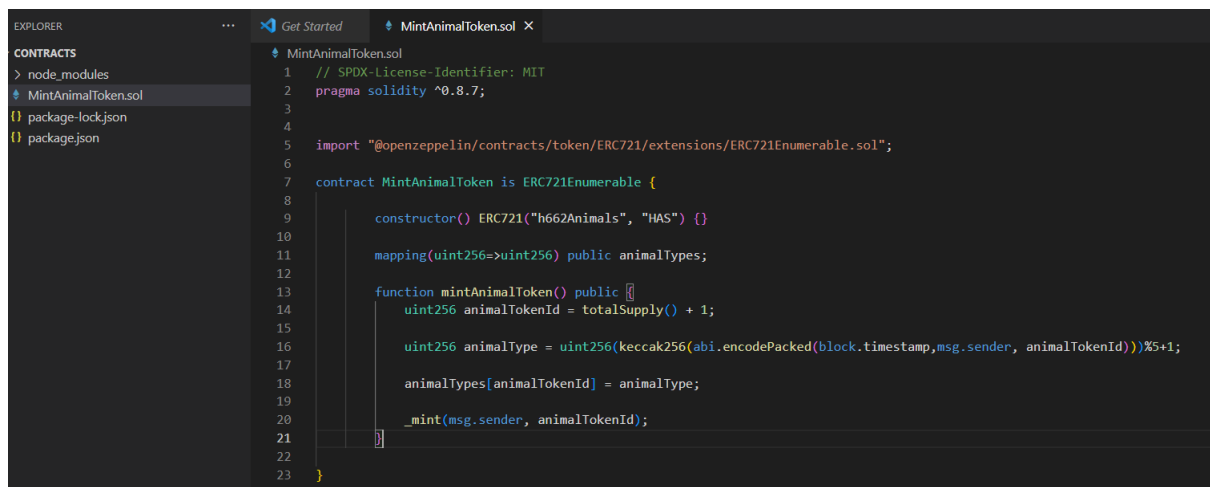
```
PS C:\Blockchain> mkdir contracts

디렉터리: C:\Blockchain

Mode                LastWriteTime         Length Name
----                -
d-----         2023-01-26 오전 11:40             contracts

PS C:\Blockchain> cd contracts
```

- `npm i @openzeppelin/contracts`
- `code .`

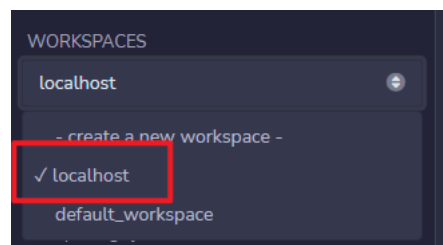


remix 설치

- `npm install -g @remix-project/remixd`

remix 접속

- `remixd -s . --remix-ide https://remix.ethereum.org`



로컬호스트로 연결

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.7;
3
4
5 import "@openzeppelin/contracts/token/ERC721/extensions/ERC721Enumerable.sol";
6
7 contract MintAnimalToken is ERC721Enumerable {
8
9     constructor() ERC721("h662Animals", "HAS") {}
10
11     mapping(uint256=>uint256) public animalTypes;
12
13     function mintAnimalToken() public {
14         uint256 animalTokenId = totalSupply() + 1;
15
16         uint256 animalType = uint256(keccak256(abi.encodePacked(block.timestamp, msg.sender, animalTokenId))) % 5 + 1;
17
18         animalTypes[animalTokenId] = animalType;
19
20         _mint(msg.sender, animalTokenId);
21     }
22
23 }

```

SaleAnimalToken.sol파일 생성

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.7;
3
4
5 import "MintAnimalToken.sol";
6
7 contract SaleAnimalToken {
8     MintAnimalToken public mintAnimalTokenAddress;
9
10
11 }

```

SaleAnimalToken.sol

```

// SPDX-License-Identifier: MIT
pragma solidity ^0.8.7;

import "MintAnimalToken.sol";

contract SaleAnimalToken {
    MintAnimalToken public mintAnimalTokenAddress;

    constructor(address _mintAnimalTokenAddress) {
        mintAnimalTokenAddress = MintAnimalToken(_mintAnimalTokenAddress);
    }

    mapping(uint256=>uint256) public animalTokenPrices;

    uint256[] public onSaleAnimalTokenArray;

    function setForSaleAnimalToken(uint256 _animalTokenId, uint256 _price) public {
        //토큰 주인
        address animalTokenOwner = mintAnimalTokenAddress.ownerOf(_animalTokenId);

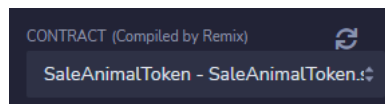
        //토큰 주인이 현재 메타마스크 sign 하는 사람하고 같으면 통과
        require(animalTokenOwner == msg.sender, "Caller is not animal token owner.");
        require(_price > 0, "Price is zero or lower.");
        require(animalTokenPrices[_animalTokenId] == 0, "This animal token is already on sale.");
        require(mintAnimalTokenAddress.isApprovedForAll(animalTokenOwner, address(this)), "Animal token owner did not approve token.")

        animalTokenPrices[_animalTokenId] = _price;

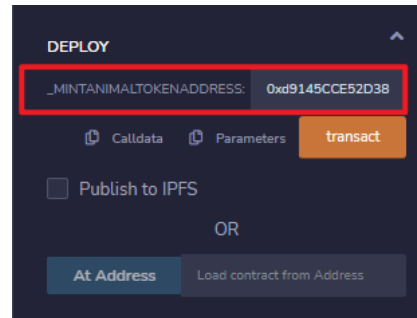
        onSaleAnimalTokenArray.push(_animalTokenId);
    }
}

```

MintAnimalToken.sol을 deploy

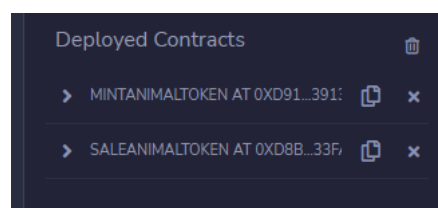
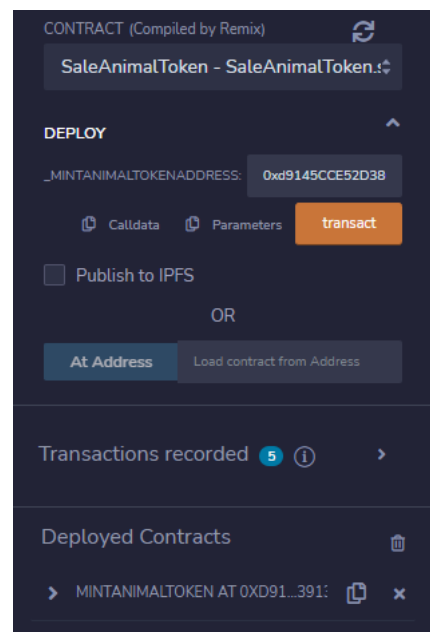


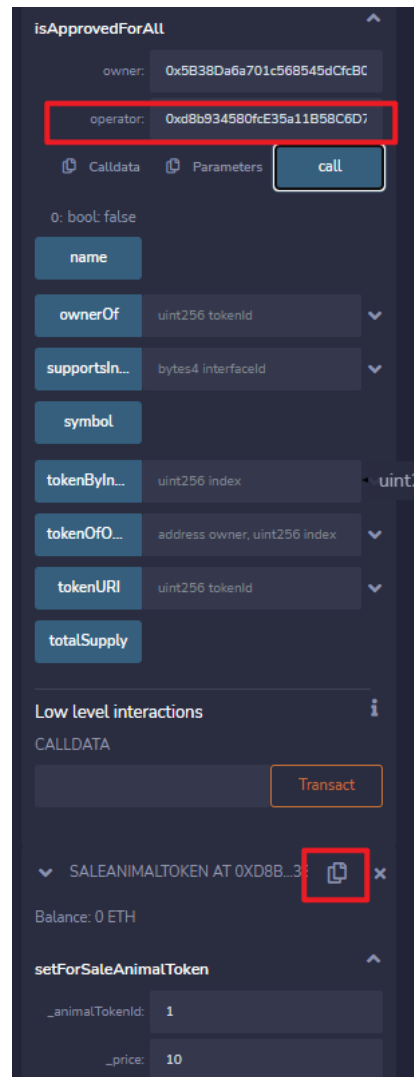
컨트랙트 변경



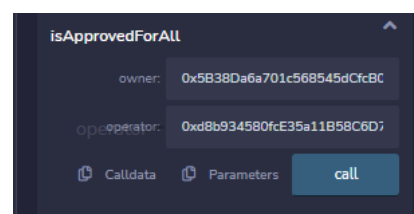
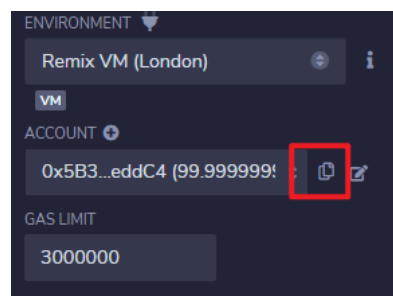
MintAnimal 의 컨트랙트 주소를 넣기
이후 transact

연결 끝!



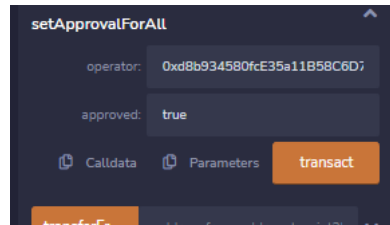


카피 붙혀 넣기



카피 위에 붙혀넣기

승인 실패가 뜬다

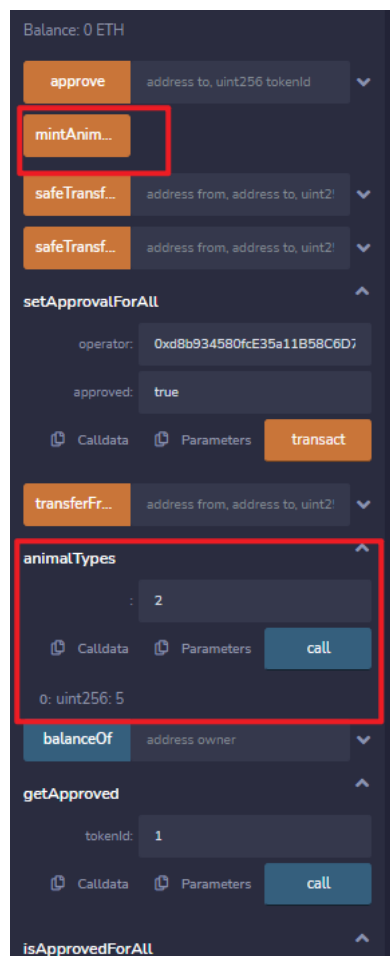


sale 컨트렉트를 불러 넣고 true 로 승인해줘야한다.

해줘도 에러가 난다.

```
[vm] from: 0x583...edd04 to: SaleAnimalToken.setForSaleAnimalToken(uint256,uint256) 0xd8b...33fa8 value: 0 wei data: 0x498...0000a logs: 0 hash: 0x318...b0303
transact to SaleAnimalToken.setForSaleAnimalToken errored: VM error: revert.

revert
  The transaction has been reverted to the initial state.
Reason provided by the contract: "ERC721: invalid token ID".
Debug the transaction to get more information.
transact to MintAnimalToken.mintAnimalToken pending ...
```



민팅으로 발행하여 실행하니 잘 해결 되었다.