TUTORIEL SOLIDITY

ETAPES



Contrat Solana minimal

```
// SPDX-License-Identifier: MIT
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";

contract Portfolio is ERC20 {
    constructor() ERC20("Portfolio", "MTK") {}

    string public titre;
    function setTitre(string memory _titre) public
    {
        titre = _titre;
    }
    function getTitre() public view returns (string memory)
    {
        return titre;
    }
}
```

Étapes pour déployer le contrat sur TestNET

https://remix.ethereum.org/







Dans la page **Solidity compiler** :

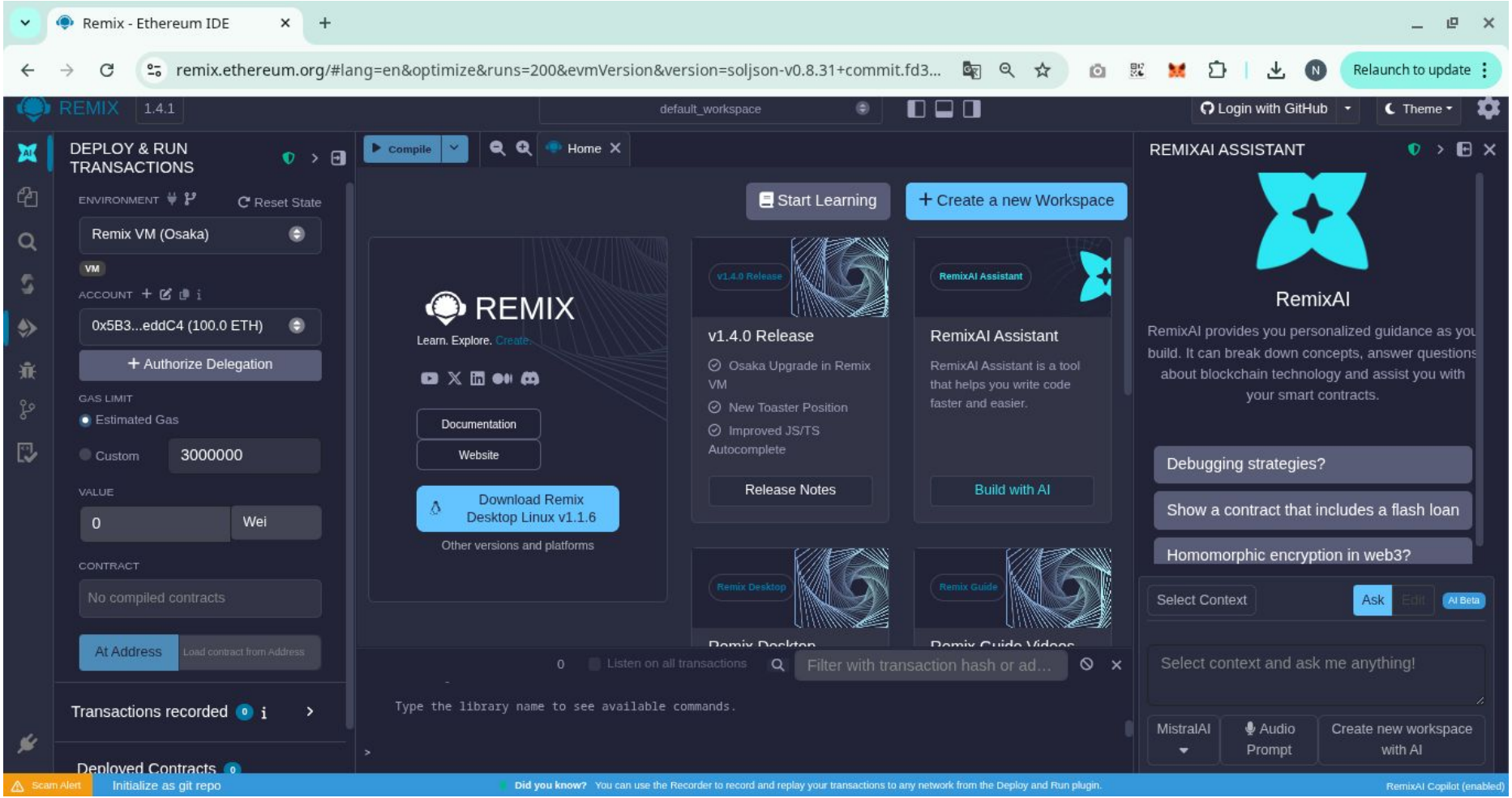
- Compiler le contrat Portfolio.sol

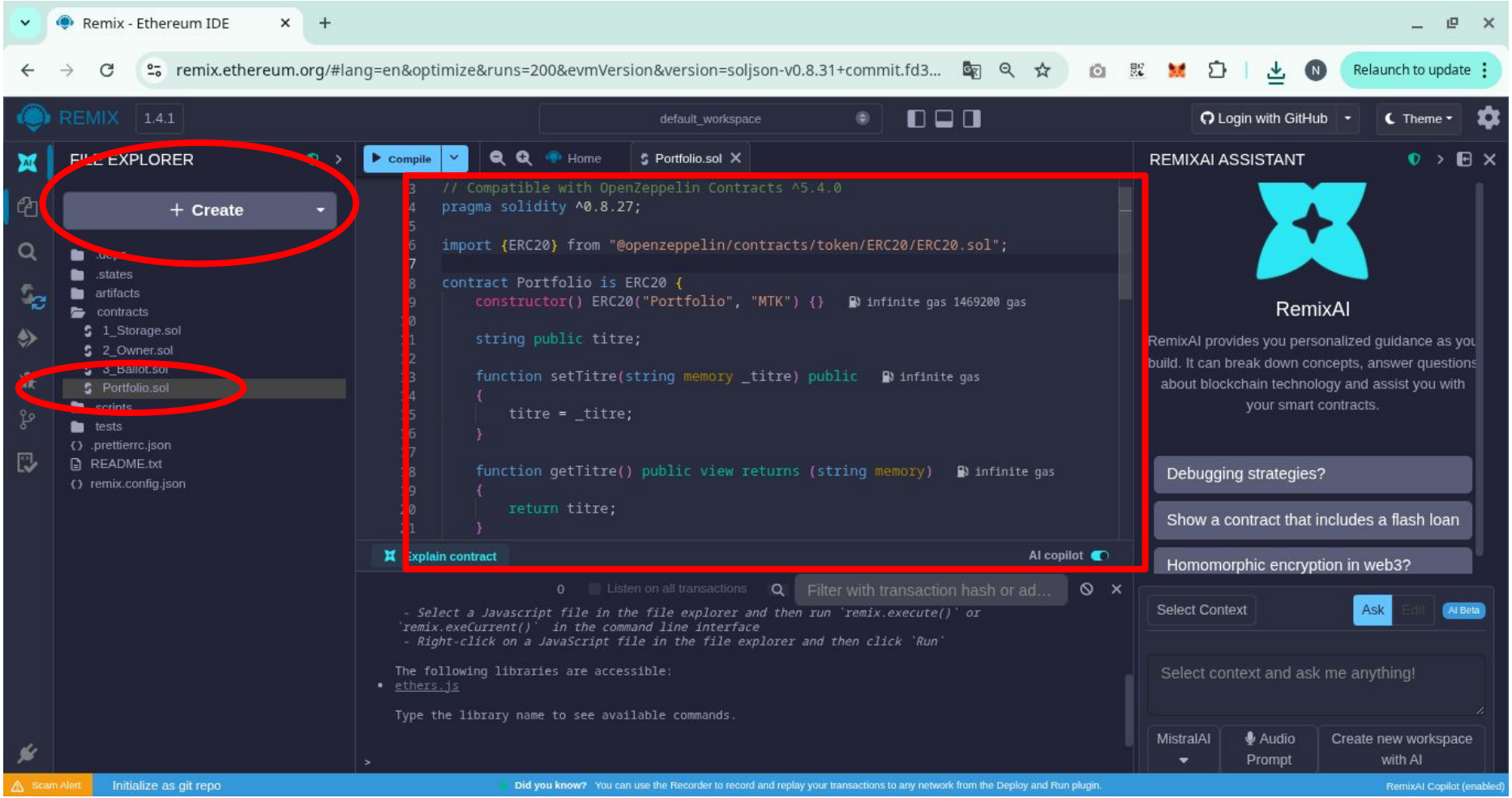
Dans la page **Deploy and run transactions** ::

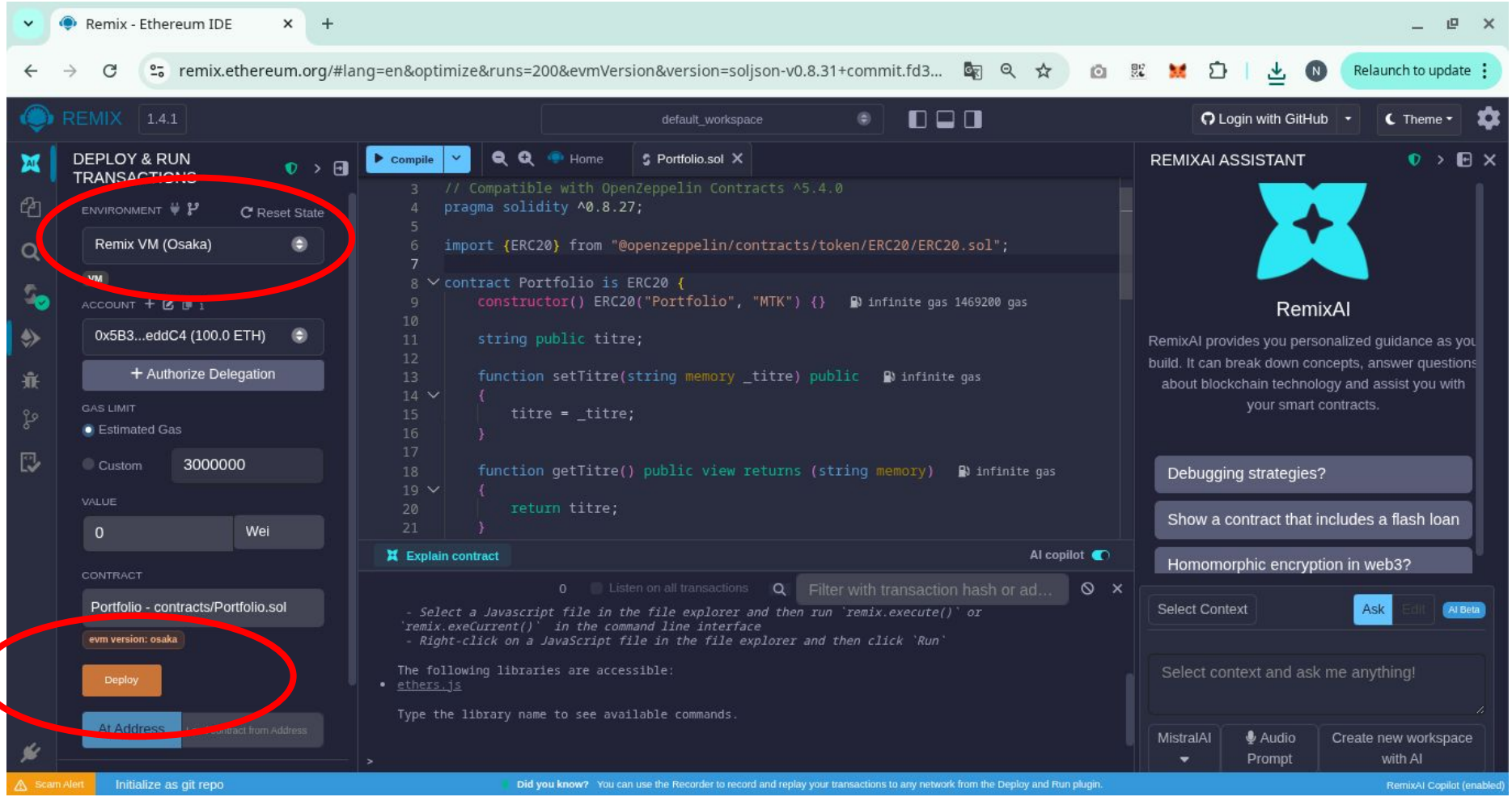
- Déployer dans Remix VM

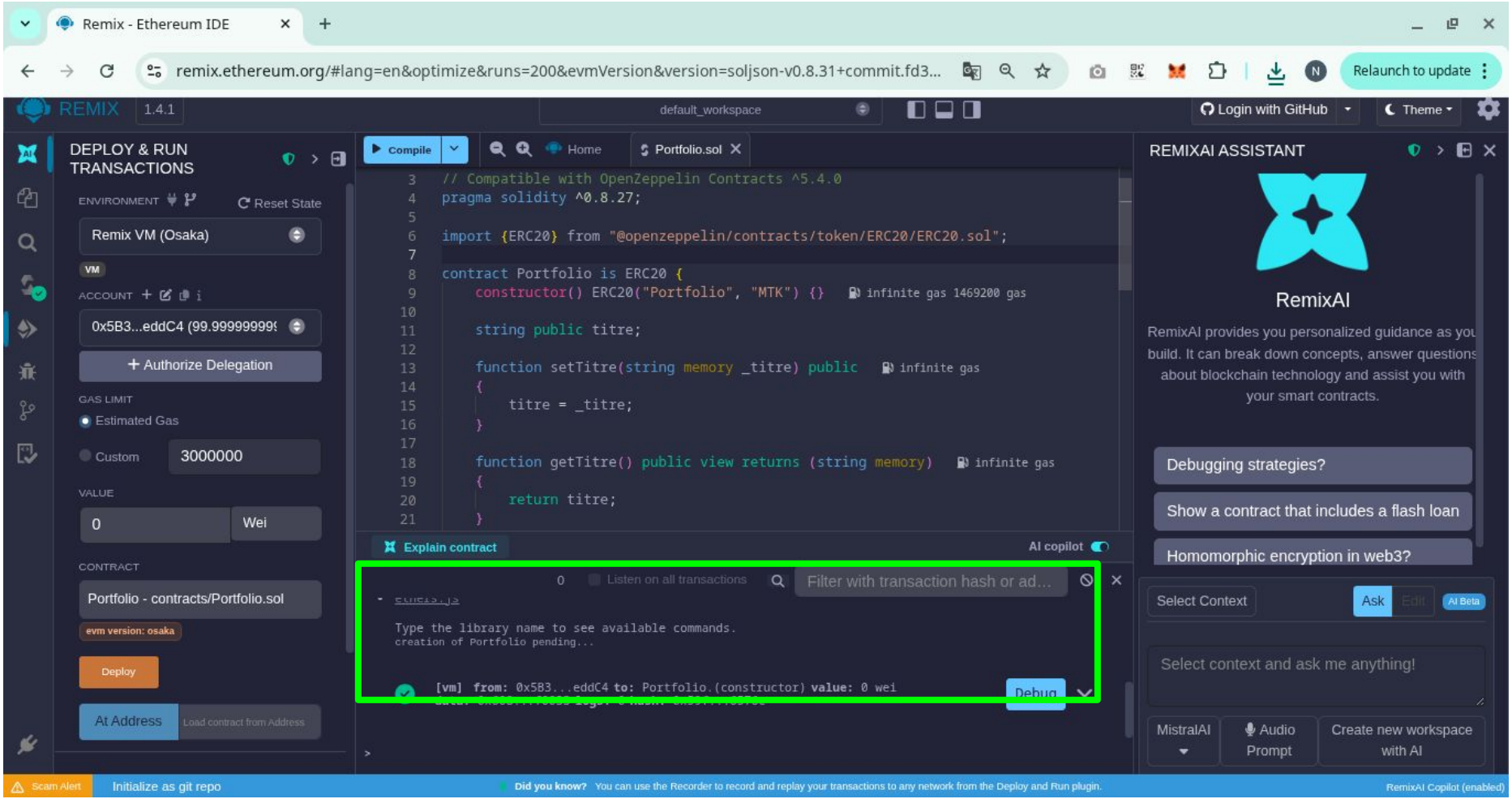
Plus bas dans la page dans **Deployed contracts** : dérouler le contrat

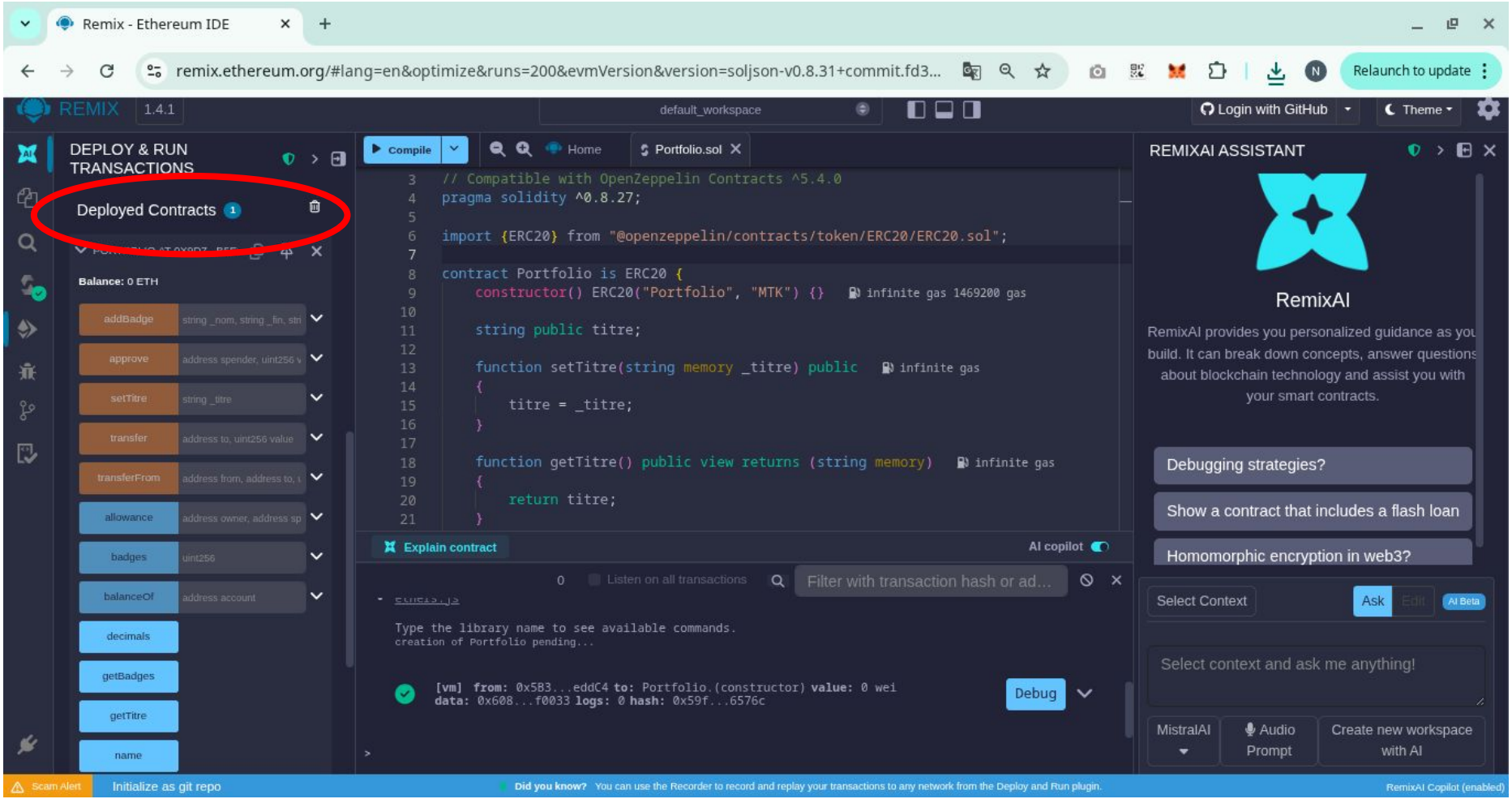
- Tester la fonction setTitre() avec un texte au choix
- Tester avec la fonction getTitre() que le même titre et retourné.

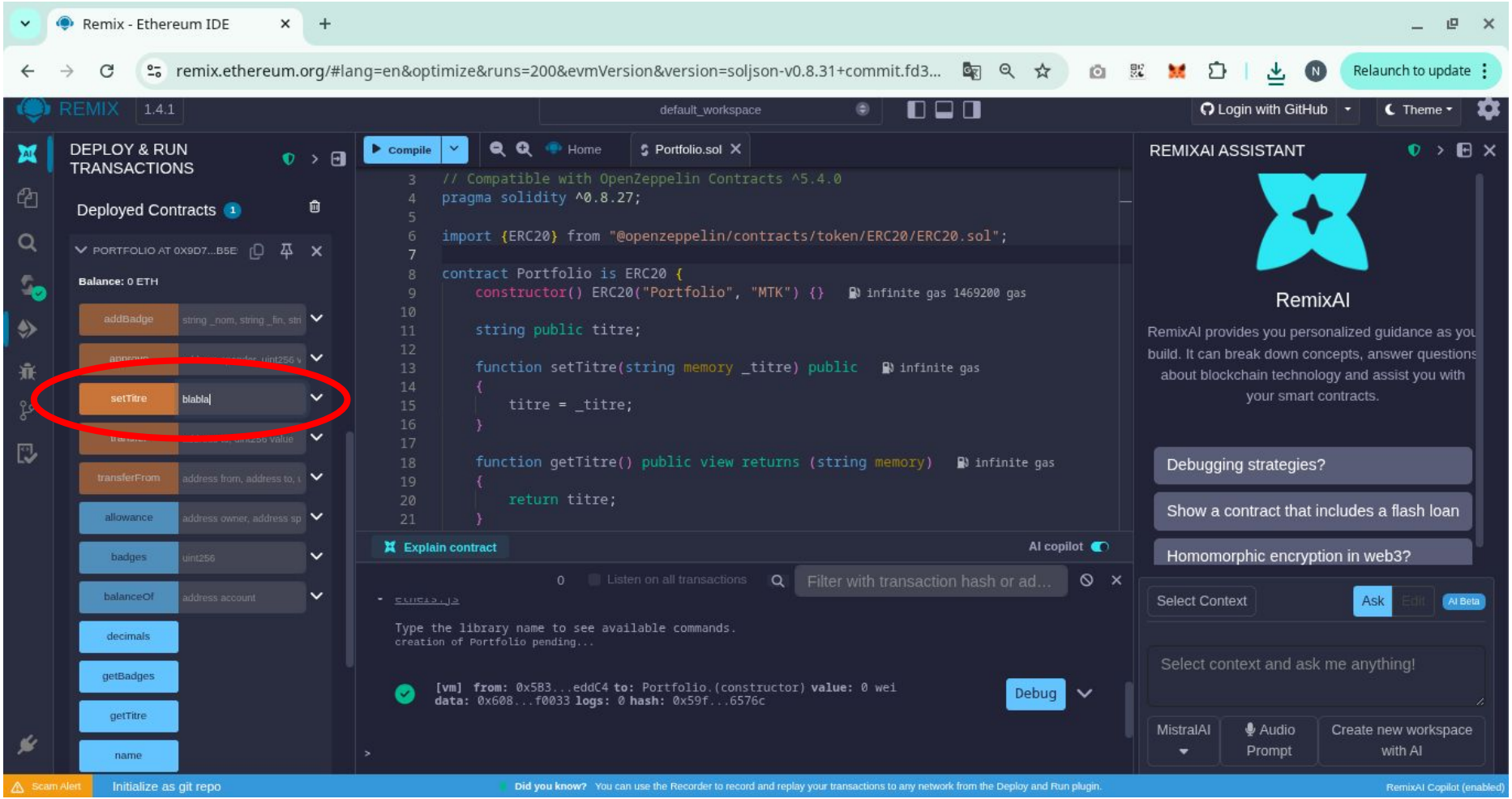

Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Reset State
Remix VM (Osaka)
VM
ACCOUNT
0x5B3...eddC4 (100.0 ETH)
Authorize Delegation
GAS LIMIT
Estimated Gas
Custom
3000000
VALUE
0
Wei
CONTRACT
No compiled contracts
At Address
Load contract from Address
Transactions recorded 0
Deployed Contracts 0
Compile
Home
Start Learning
Create a new Workspace
REMIX
Learn. Explore. Create.
Documentation
Website
Download Remix Desktop Linux v1.1.6
Other versions and platforms
v1.4.0 Release
v1.4.0 Release
Osaka Upgrade in Remix VM
New Toaster Position
Improved JS/TS Autocomplete
Release Notes
RemixAI Assistant
RemixAI Assistant
RemixAI Assistant is a tool that helps you write code faster and easier.
Build with AI
Remix Desktop
Remix Guide
0
Listen on all transactions
Filter with transaction hash or ad...
Type the library name to see available commands.
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)

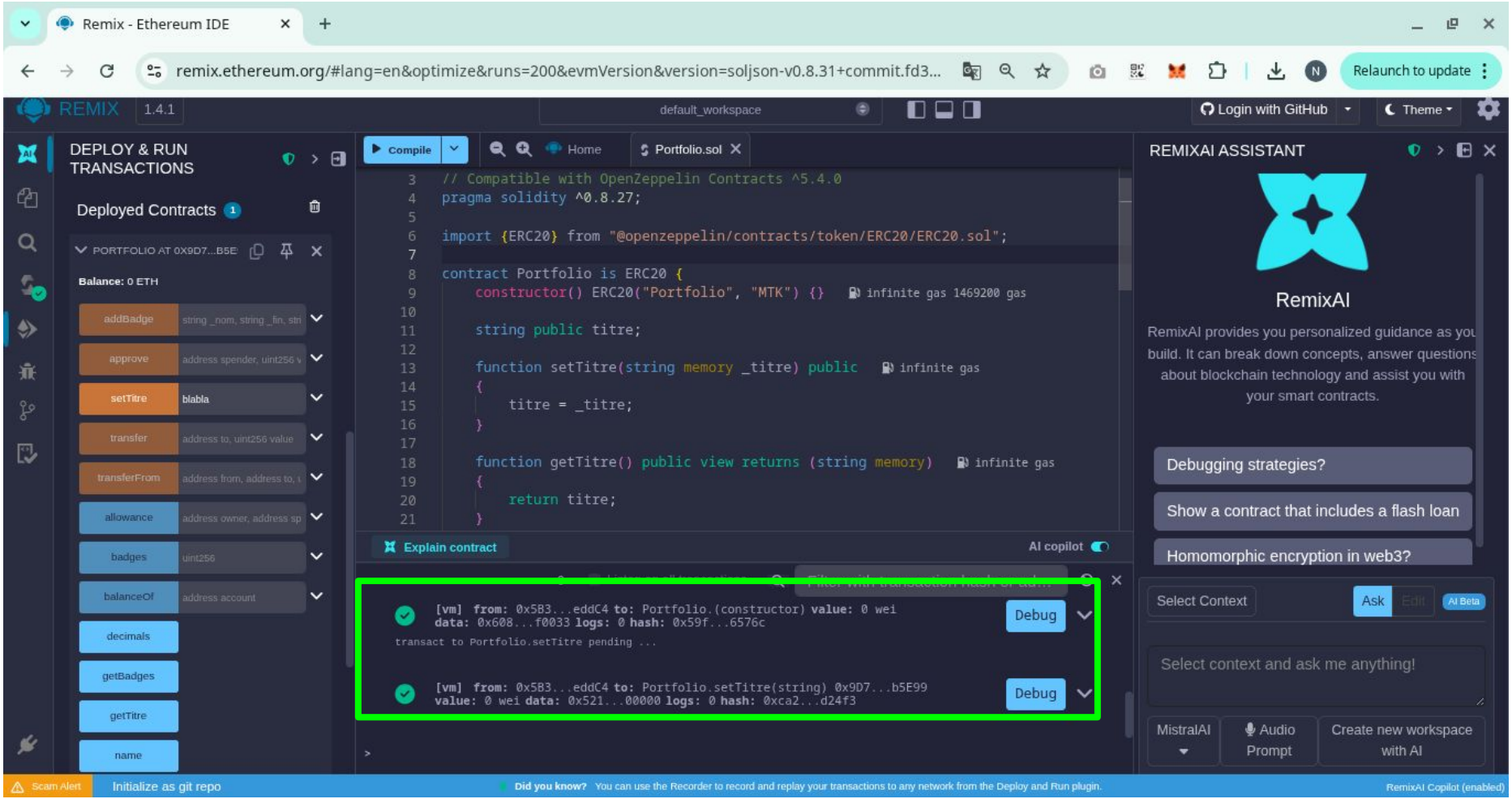

Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
FILE EXPLORER
+ Create
.states
artifacts
contracts
1_Storage.sol
2_Owner.sol
3_Ballot.sol
Portfolio.sol
scripts
tests
.prettierrc.json
README.txt
remix.config.json
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public infinite gas
titre = _titre;
function getTitre() public view returns (string memory) infinite gas
return titre;
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
- Select a Javascript file in the file explorer and then run `remix.execute()` or `remix.exeCurrent()` in the command line interface
- Right-click on a JavaScript file in the file explorer and then click `Run`
The following libraries are accessible:
ethers.js
Type the library name to see available commands.
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)

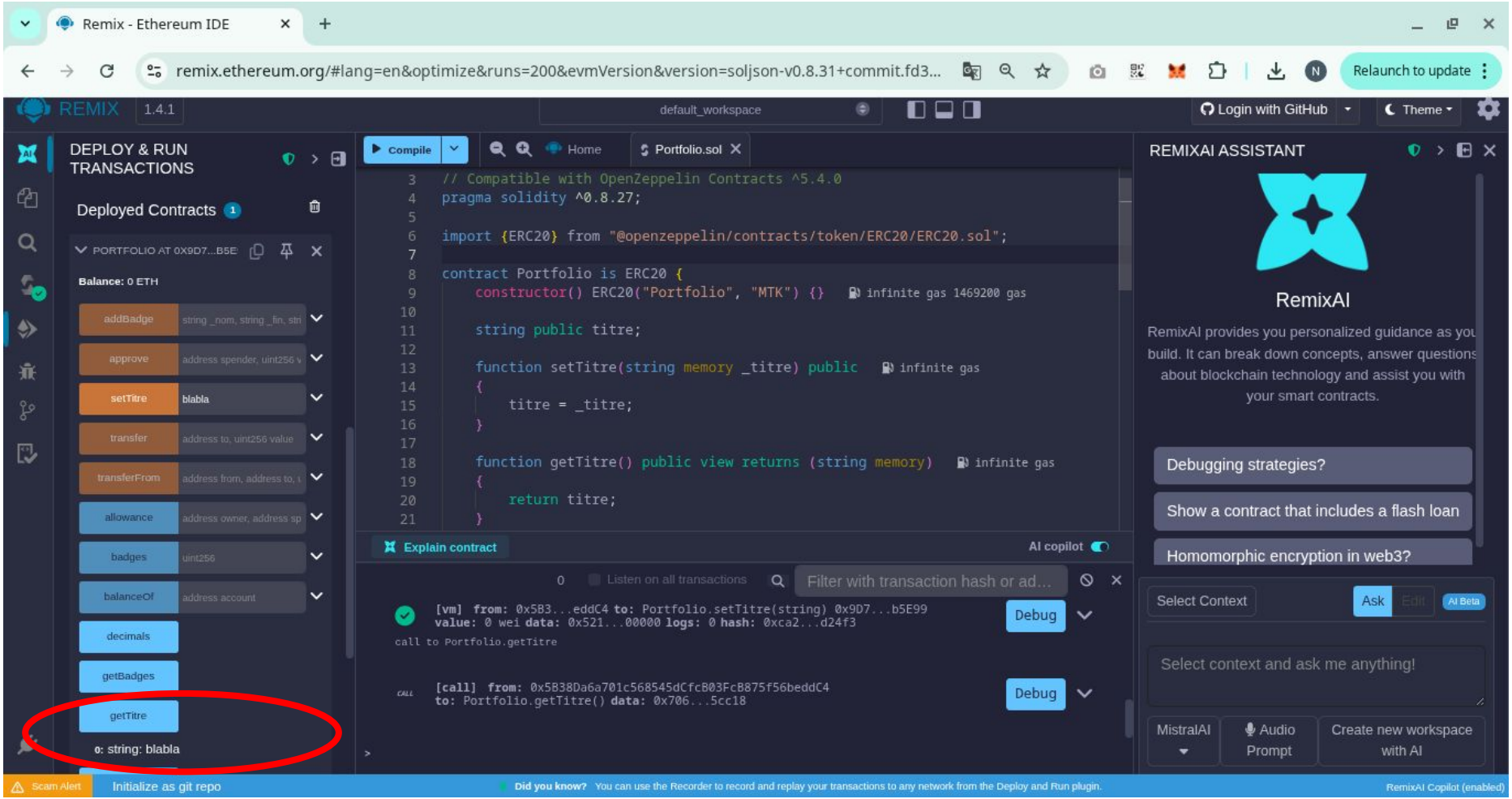

Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Reset State
Remix VM (Osaka)
VM
ACCOUNT
0x5B3...eddC4 (100.0 ETH)
+ Authorize Delegation
GAS LIMIT
Estimated Gas
Custom
3000000
VALUE
0
Wei
CONTRACT
Portfolio - contracts/Portfolio.sol
evm version: osaka
Deploy
At Address
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {}
infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public
infinite gas
titre = _titre;
function getTitre() public view returns (string memory)
infinite gas
return titre;
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
- Select a Javascript file in the file explorer and then run `remix.execute()` or `remix.exeCurrent()` in the command line interface
- Right-click on a JavaScript file in the file explorer and then click `Run`
The following libraries are accessible:
ethers.js
Type the library name to see available commands.
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)


Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Reset State
Remix VM (Osaka)
VM
ACCOUNT
0x5B3...eddC4 (99.99999999
+ Authorize Delegation
GAS LIMIT
Estimated Gas
Custom
3000000
VALUE
0
Wei
CONTRACT
Portfolio - contracts/Portfolio.sol
evm version: osaka
Deploy
At Address
Load contract from Address
Compile
Home
Portfolio.sol
3 // Compatible with OpenZeppelin Contracts ^5.4.0
4 pragma solidity ^0.8.27;
5
6 import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
7
8 contract Portfolio is ERC20 {
9 constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
10
11 string public titre;
12
13 function setTitre(string memory _titre) public infinite gas
14 {
15 titre = _titre;
16 }
17
18 function getTitre() public view returns (string memory) infinite gas
19 {
20 return titre;
21 }
Explain contract
AI copilot
0
Listen on all transactions
Filter with transaction hash or ad...
Type the library name to see available commands.
creation of Portfolio pending...
[vm] from: 0x5B3...eddC4 to: Portfolio.(constructor) value: 0 wei
Debug
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)


Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
Deployed Contracts 1
Balance: 0 ETH
addBadge
approve
setTitre
transfer
transferFrom
allowance
badges
balanceOf
decimals
getBadges
getTitre
name
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public infinite gas
titre = _titre;
function getTitre() public view returns (string memory) infinite gas
return titre;
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
Type the library name to see available commands.
creation of Portfolio pending...
[vm] from: 0x583...eddC4 to: Portfolio.(constructor) value: 0 wei
data: 0x608...f0033 logs: 0 hash: 0x59f...6576c
Debug
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)


Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
Deployed Contracts 1
PORTFOLIO AT 0X9D7...B5E
Balance: 0 ETH
addBadge
setTitre
blabla
transferFrom
allowance
badges
balanceOf
decimals
getBadges
getTitre
name
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public infinite gas
titre = _titre;
function getTitre() public view returns (string memory) infinite gas
return titre;
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
Type the library name to see available commands.
creation of Portfolio pending...
[vm] from: 0x583...eddC4 to: Portfolio.(constructor) value: 0 wei
data: 0x608...f0033 logs: 0 hash: 0x59f...6576c
Debug
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)


Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
Deployed Contracts 1
PORTFOLIO AT 0X9D7...B5E
Balance: 0 ETH
addBadge
approve
setTitre
blabla
transfer
transferFrom
allowance
badges
balanceOf
decimals
getBadges
getTitre
name
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public infinite gas
titre = _titre;
function getTitre() public view returns (string memory) infinite gas
return titre;
Explain contract
AI copilot
[vm] from: 0x5B3...eddC4 to: Portfolio.(constructor) value: 0 wei
data: 0x608...f0033 logs: 0 hash: 0x59f...6576c
Debug
transact to Portfolio.setTitre pending ...
[vm] from: 0x5B3...eddC4 to: Portfolio.setTitre(string) 0x9D7...b5E99
value: 0 wei data: 0x521...00000 logs: 0 hash: 0xca2...d24f3
Debug
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)


Remix - Ethereum IDE
remix.ethereum.org/#lang=en&optimize&runs=200&evmVersion&version=soljson-v0.8.31+commit.fd3...
Relaunch to update
REMIX 1.4.1
default_workspace
Login with GitHub
Theme
DEPLOY & RUN TRANSACTIONS
Deployed Contracts 1
PORTFOLIO AT 0X9D7...B5E
Balance: 0 ETH
addBadge
approve
setTitre
blabla
transfer
transferFrom
allowance
badges
balanceOf
decimals
getBadges
getTitre
0: string: blabla
Compile
Home
Portfolio.sol
// Compatible with OpenZeppelin Contracts ^5.4.0
pragma solidity ^0.8.27;
import {ERC20} from "@openzeppelin/contracts/token/ERC20/ERC20.sol";
contract Portfolio is ERC20 {
constructor() ERC20("Portfolio", "MTK") {} infinite gas 1469200 gas
string public titre;
function setTitre(string memory _titre) public infinite gas
titre = _titre;
function getTitre() public view returns (string memory) infinite gas
return titre;
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
[vm] from: 0x5B3...eddC4 to: Portfolio.setTitre(string) 0x9D7...b5E99
value: 0 wei data: 0x521...00000 logs: 0 hash: 0xca2...d24f3
Debug
call to Portfolio.getTitre
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to: Portfolio.getTitre() data: 0x706...5cc18
Debug
REMIXAI ASSISTANT
RemixAI
RemixAI provides you personalized guidance as you build. It can break down concepts, answer questions about blockchain technology and assist you with your smart contracts.
Debugging strategies?
Show a contract that includes a flash loan
Homomorphic encryption in web3?
Select Context
Ask
Edit
AI Beta
Select context and ask me anything!
MistralAI
Audio Prompt
Create new workspace with AI
Scam Alert
Initialize as git repo
Did you know? You can use the Recorder to record and replay your transactions to any network from the Deploy and Run plugin.
RemixAI Copilot (enabled)