

Step 1:

The screenshot shows the Remix IDE interface. On the left, the 'FILE EXPLORER' sidebar displays the 'default_workspace' with a file tree containing 'contracts', 'scripts', 'tests', '.prettierrc.json', and 'README.txt'. The main workspace area is titled 'REMIX' and features a search bar for documentation. Below this, there are sections for 'Files' (with buttons for 'Start Coding', 'Open File', and 'Access File System'), 'Recent workspaces' (listing 'connect to localhost' and 'default_workspace'), 'Load from' (with buttons for 'GitHub', 'Gist', 'IPFS', and 'HTTPS'), and 'Learn' (with a 'Remix Basics' link and a 'Get Started' button). On the right, the 'Featured' section highlights the 'v0.38.0 RELEASE HIGHLIGHTS' and includes a 'What's New' button. Below this, 'Project Templates' are shown for 'MULTISIG' (Gnosis Safe), 'ERC20' (0xProject), and 'ERC20' (OpenZeppelin). 'Featured Plugins' include 'SOLIDITY ANALYZERS', 'COOKBOOK', and 'SOLIDITY'. A 'Scam Alert' section is also present. At the bottom, a terminal window displays a welcome message for Remix 0.39.0, stating that files are stored in indexedDB and providing a search bar for transaction hashes or addresses.

Step 2:

The screenshot shows the Remix IDE interface with a Solidity contract being edited. The 'FILE EXPLORER' sidebar on the left shows the 'default_workspace' with a file tree containing 'contracts', 'artifacts', '1_Storage.sol', '2_Owner.sol', '3_Ballots.sol', 'scripts', 'tests', '.prettierrc.json', and 'README.txt'. The main workspace area displays the code for '1_Storage.sol'. The code is as follows:

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.8.2 <0.9.0;
4
5 /**
6  * @title Storage
7  * @dev Store & retrieve value in a variable
8  * @custom:dev-run-script ./scripts/deploy_with_ethers.ts
9  */
10 contract Storage {
11
12     uint256 number;
13
14     /**
15      * @dev Store value in variable
16      * @param num value to store
17      */
18     function store(uint256 num) public { 22520 gas
19         number = num;
20     }
21
22     /**
23      * @dev Return value
24      * @return value of 'number'
25      */
26     function retrieve() public view returns (uint256){ 2415 gas
27         return number;
28     }
29 }
```

At the bottom, a terminal window displays a welcome message for Remix 0.39.0, stating that files are stored in indexedDB and providing a search bar for transaction hashes or addresses.

File Edit View Window Help

SOLIDITY COMPILER

COMPILER: 0.8.22+commit.4fc1097e

☐ Include nightly builds

☐ Auto compile

☐ Hide warnings

Advanced Configurations

Compile 1_Storage.sol

Compile and Run script

CONTRACT: Storage (1_Storage.sol)

Publish on Ipfs

Publish on Swarm

Compilation Details

ABI Bytecode

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.8.2 <0.9.0;
4
5 /**
6  * @title Storage
7  * @dev Store & retrieve value in a variable
8  * @custom:dev-run-script ./scripts/deploy_with_ethers.ts
9  */
10 contract Storage {
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15      * @dev Store value in variable
16      * @param num value to store
17      */
18     function store(uint256 num) public { 22520 gas
19         number = num;
20     }
21
22     /**
23      * @dev Return value
24      * @return value of 'number'
25      */
26     function retrieve() public view returns (uint256){ 2415 gas
27         return number;
28     }
29 }
```

0 ☐ listen on all transactions Search with transaction hash or address

Welcome to Remix 0.39.0

Your files are stored in indexedDB, 109.45 KB / 107.95 GB used

You can use this terminal to:

>

Step 3:

File Edit View Window Help

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT: Remix VM (Shanghai)

VM

ACCOUNT: 0x5B3...eddC4 (100 ether)

GAS LIMIT: 3000000

VALUE: 0 Wei

CONTRACT: Storage - contracts/1_Storage.sol

evm version: shanghai

Deploy

☐ Publish to IPFS

At Address: Load contract from Address

Transactions recorded 0

Deployed Contracts

Currently you have no contract instances to interact with.

```
1 // SPDX-License-Identifier: GPL-3.0
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3 pragma solidity >=0.8.2 <0.9.0;
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5 /**
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7  * @dev Store & retrieve value in a variable
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9  */
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14     /**
15      * @dev Store value in variable
16      * @param num value to store
17      */
18     function store(uint256 num) public { 22520 gas
19         number = num;
20     }
21
22     /**
23      * @dev Return value
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25      */
26     function retrieve() public view returns (uint256){ 2415 gas
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```

0 ☐ listen on all transactions Search with transaction hash or address

Welcome to Remix 0.39.0

Your files are stored in indexedDB, 109.45 KB / 107.95 GB used

You can use this terminal to:

>

Step 4:

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel is active, showing the contract 'Storage - contracts/1_Storage.sol' and a 'Deploy' button. The main editor displays the Solidity code for the 'Storage' contract, which includes a pragma statement for Solidity version 0.8.2 and a contract definition with a 'uint256 number' variable. The bottom panel shows the transaction details for the deployment, including the block number (2), from address, to address, gas cost, and execution cost.

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.8.2 <0.9.0;
4
5 /**
6  * @title Storage
7  * @dev Store & retrieve value in a variable
8  * @custom:dev-run-script ./scripts/deploy_with_ethers.ts
9  */
10 contract Storage {
11
12     uint256 number;
13
14 }
```

Transaction details:

- block number: 2
- from: 0x5B38De6a701c568545dCfcb03FcB875f56beddC4
- to: Storage.store(uint256) 0xd9145CCE52D386f254917e81eB44e9943F39138
- gas: gas
- transaction cost: 49718 gas
- execution cost: 22514 gas
- input: 0x605...000c8
- decoded input: {"uint256 num": "200"}
- decoded output: ()
- logs: []

Step 5:

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' panel is active, showing the contract 'Storage - contracts/1_Storage.sol' and a 'retrieve' button. The main editor displays the Solidity code for the 'Storage' contract. The bottom panel shows the transaction details for the 'retrieve' function call, including the call data, from address, to address, gas cost, and execution cost.

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.8.2 <0.9.0;
4
5 /**
6  * @title Storage
7  * @dev Store & retrieve value in a variable
8  * @custom:dev-run-script ./scripts/deploy_with_ethers.ts
9  */
10 contract Storage {
11
12     uint256 number;
13
14 }
```

Transaction details:

- call to Storage.retrieve
- call [call] from: 0x5B38De6a701c568545dCfcb03FcB875f56beddC4 to: Storage.retrieve() data: 0x2e6...4cec1
- from: 0x5B38De6a701c568545dCfcb03FcB875f56beddC4
- to: Storage.retrieve() 0xd9145CCE52D386f254917e81eB44e9943F39138
- execution cost: 2410 gas (Cost only applies when called by a contract)
- input: 0x2e6...4cec1
- decoded input: {}
- decoded output: {"": "uint256: 200"}
- logs: []

Deposit Money:

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' sidebar is active. It displays 'Transactions recorded' (2), 'Pinned Contracts' (none), and 'Deployed/Unpinned Contracts' (BANK AT 0XCD6...99DF9 (MEM)). The contract's balance is 0 ETH. The 'deposit' function is called with a value of 2000. The 'Low level interactions' section shows the 'CALLDATA' field with a 'Transact' button. The main editor shows the Solidity code for the 'Bank' contract. The right sidebar displays the transaction details for the successful deposit.

```
1 // SPDX-License-Identifier: UNLICENSED
2 pragma solidity ^0.8.0;
3
4 contract Bank {
5     int private bal;
```

transaction hash	0xa7a48e0c773c4e1282e2d01acd3bdf1bc04ac6e9a2e144e676c37b38049249db
block hash	0x180b3ff84cd640912a5dc4c50ed8e0a08950d3b042084b25d0808004a001f4
block number	14
from	0x56380a6a701c568545dcfc803fc8075f56bedd4c4
to	Bank.deposit(int256) 0xc06a42782d23007c13a74ddec5d0140e55490f9
gas	30949 gas
transaction cost	26912 gas
execution cost	5696 gas
input	0xf04...007d0
output	0x
decoded input	{ "Int256 amt": "2000" }
decoded output	{}
logs	[]

Withdraw Money:

The screenshot shows the Remix IDE interface. On the left, the 'DEPLOY & RUN TRANSACTIONS' sidebar is active. It displays 'Transactions recorded' (1), 'Pinned Contracts' (none), and 'Deployed/Unpinned Contracts' (BANK AT 0XCD6...99DF9 (MEM)). The contract's balance is 0 ETH. The 'withdraw' function is called with a value of 1000. The 'Low level interactions' section shows the 'CALLDATA' field with a 'Transact' button. The main editor shows the Solidity code for the 'Bank' contract. The right sidebar displays the transaction details for the successful withdrawal.

```
1 // SPDX-License-Identifier: UNLICENSED
2 pragma solidity ^0.8.0;
3
4 contract Bank {
5     int private bal;
```

status	0x1 Transaction mined and execution succeed
transaction hash	0xa0f3eb352e100900afc525c35d73e04f46a260d5b5d4a0631d0a01b1343511fb9
block hash	0x1d0744919e7b1713e24d34246c5f6d5795d6526a51e720842a2e5c9645fa237e
block number	15
from	0x56380a6a701c568545dcfc803fc8075f56bedd4c4
to	Bank.withdraw(int256) 0xc06a42782d23007c13a74ddec5d0140e55490f9
gas	31064 gas
transaction cost	27012 gas
execution cost	5796 gas
input	0x7e6...003e8
output	0x
decoded input	{ "Int256 amt": "1000" }
decoded output	{}

Balance:

[illegible]