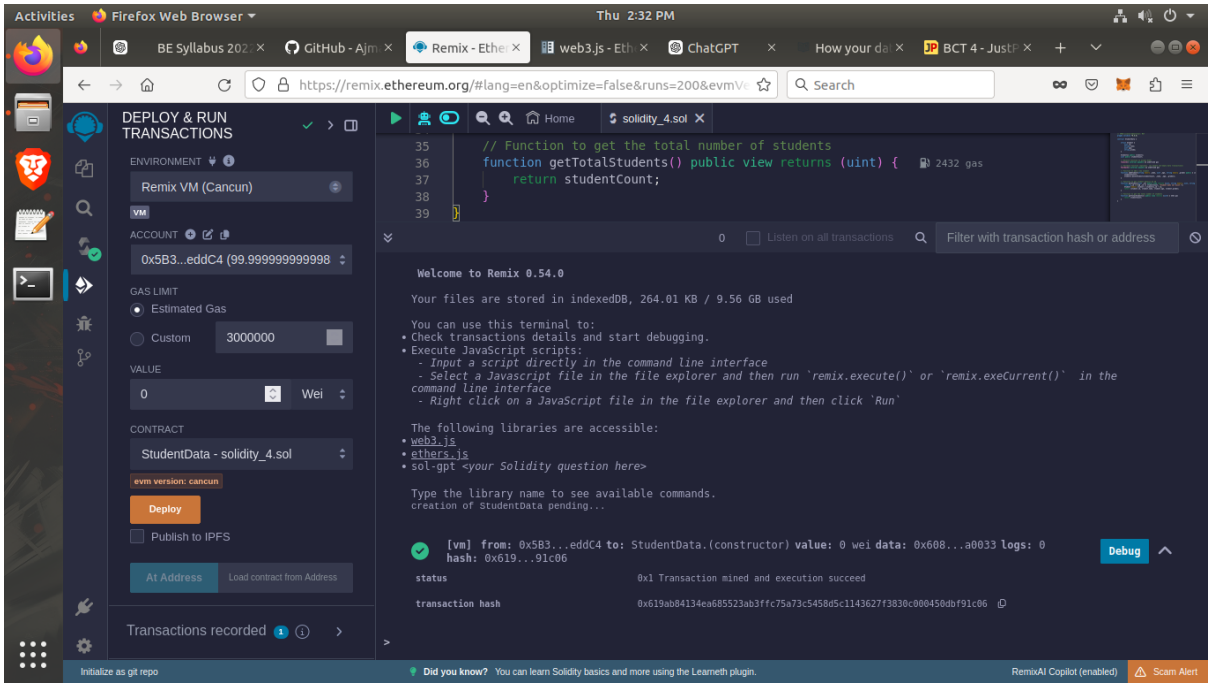
```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

contract StudentData {

        struct Student {
        uint id;
        string name;
        uint age;
        string grade;
        }

        Student[] public students;
        uint public studentCount;

        // Receive function to accept Ether
        receive() external payable {}

        // Fallback function (optional, can handle non-empty data transactions)
        fallback() external payable {}

        // Function to add a new student
        function addStudent(string memory _name, uint _age, string memory _grade)
public {
        studentCount++;
        students.push(Student(studentCount, _name, _age, _grade));
        }
         // Function to get student details by ID
        function getStudent(uint _id) public view returns (uint, string memory,
uint,string memory) {
        require(_id > 0 && _id <= studentCount, "Student does not exist.");
        Student memory student = students[_id - 1];
        return (student.id, student.name, student.age, student.grade);
        }

        // Function to get the total number of students
        function getTotalStudents() public view returns (uint) {
        return studentCount;
        }
}
```

---

## Output: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Search
DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Remix VM (Cancun)
VM
ACCOUNT
0x5B3...eddC4 (99.999999999998
GAS LIMIT
Estimated Gas
Custom
3000000
VALUE
0
Wei
CONTRACT
StudentData - solidity_4.sol
evm version: cancun
Deploy
Publish to IPFS
At Address
Load contract from Address
Transactions recorded
Home
solidity_4.sol
35 // Function to get the total number of students
36 function getTotalStudents() public view returns (uint) {
2432 gas
37 return studentCount;
38 }
39 }
0
Listen on all transactions
Filter with transaction hash or address
Welcome to Remix 0.54.0
Your files are stored in indexedDB, 264.01 KB / 9.56 GB used
You can use this terminal to:
• Check transactions details and start debugging.
• Execute JavaScript scripts:
- Input a script directly in the command line interface
- 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:
• web3.js
• ethers.js
• sol-gpt <your Solidity question here>
Type the library name to see available commands.
creation of StudentData pending...
[vm] from: 0x5B3...eddC4 to: StudentData.(constructor) value: 0 wei data: 0x608...a0033 logs: 0 hash: 0x619...91c06
Debug
status 0x1 Transaction mined and execution succeed
transaction hash 0x619ab84134ea685523ab3ffc75a73c5458d5c1143627f3830c000450dbf91c06
>
Initialize as git repo
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RemixAI Copilot (enabled)
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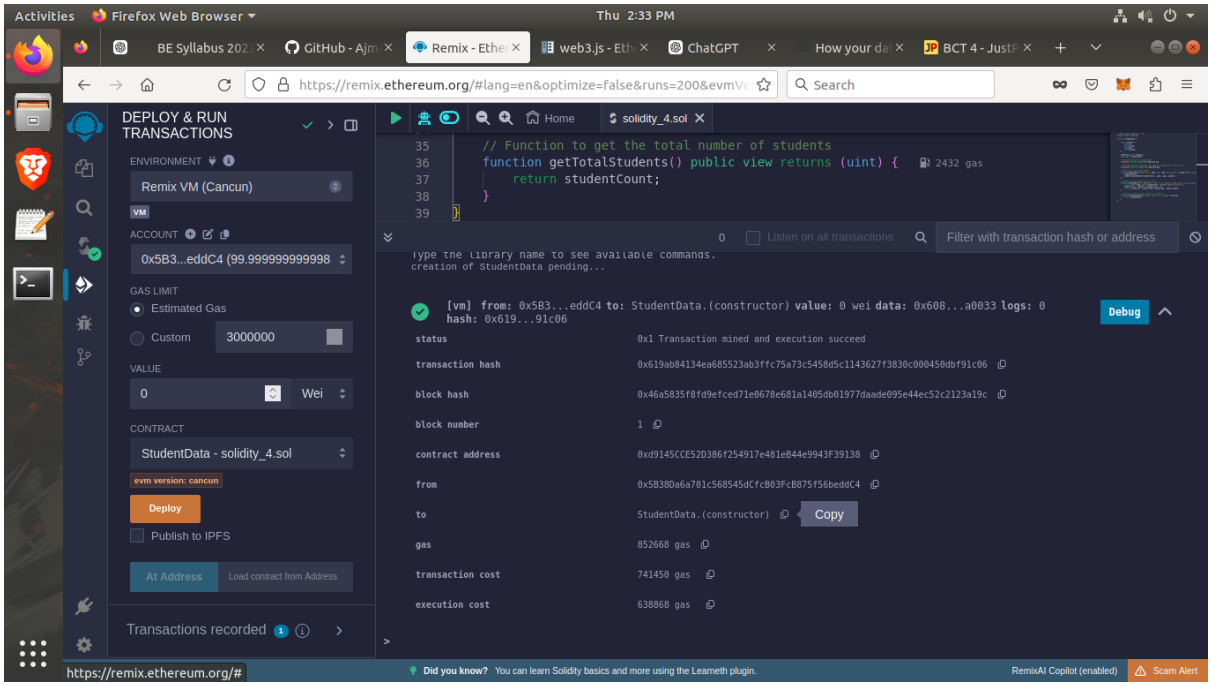
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https://remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVe
Search
DEPLOY & RUN TRANSACTIONS
ENVIRONMENT
Remix VM (Cancun)
VM
ACCOUNT
0x5B3...eddC4 (99.999999999998
GAS LIMIT
Estimated Gas
Custom
3000000
VALUE
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solidity_4.sol
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Listen on all transactions
Filter with transaction hash or address
creation of StudentData pending...
[vm] from: 0x5B3...eddC4 to: StudentData.(constructor) value: 0 wei data: 0x608...a0033 logs: 0
hash: 0x619...91c06
Debug
status 0x1 Transaction mined and execution succeed
transaction hash 0x619ab84134ea685523ab3ffc75a73c5458d5c1143627f3830c00045dbf91c06
block hash 0x46a5835f8fd9efced71e0678e681a1405db01977daade095e44ec52c2123a19c
block number 1
contract address 0xd9145CCE52D386f254917e481eB44e9943F39138
from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to StudentData.(constructor)
Copy
gas 852668 gas
transaction cost 741450 gas
execution cost 638868 gas
https://remix.ethereum.org/#
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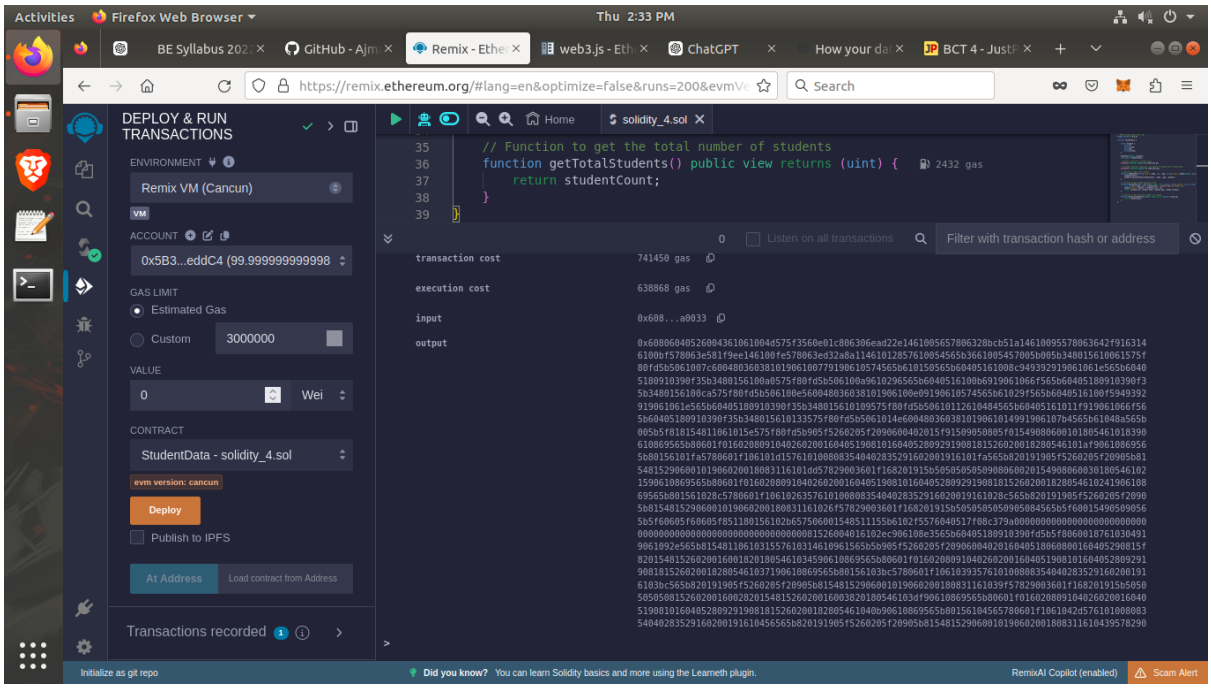
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Firefox Web Browser
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DEPLOY & RUN TRANSACTIONS
Remix VM (Cancun)
0x5B3...eddC4 (99.999999999998
3000000
StudentData - solidity_4.sol
Deploy
Publish to IPFS
At Address
Load contract from Address
Transactions recorded
35 // Function to get the total number of students
36 function getTotalStudents() public view returns (uint) { 2432 gas
37 return studentCount;
38 }
39 }
transaction cost 741450 gas
execution cost 638868 gas
input 0x608...a0033
output
Initialize as git repo
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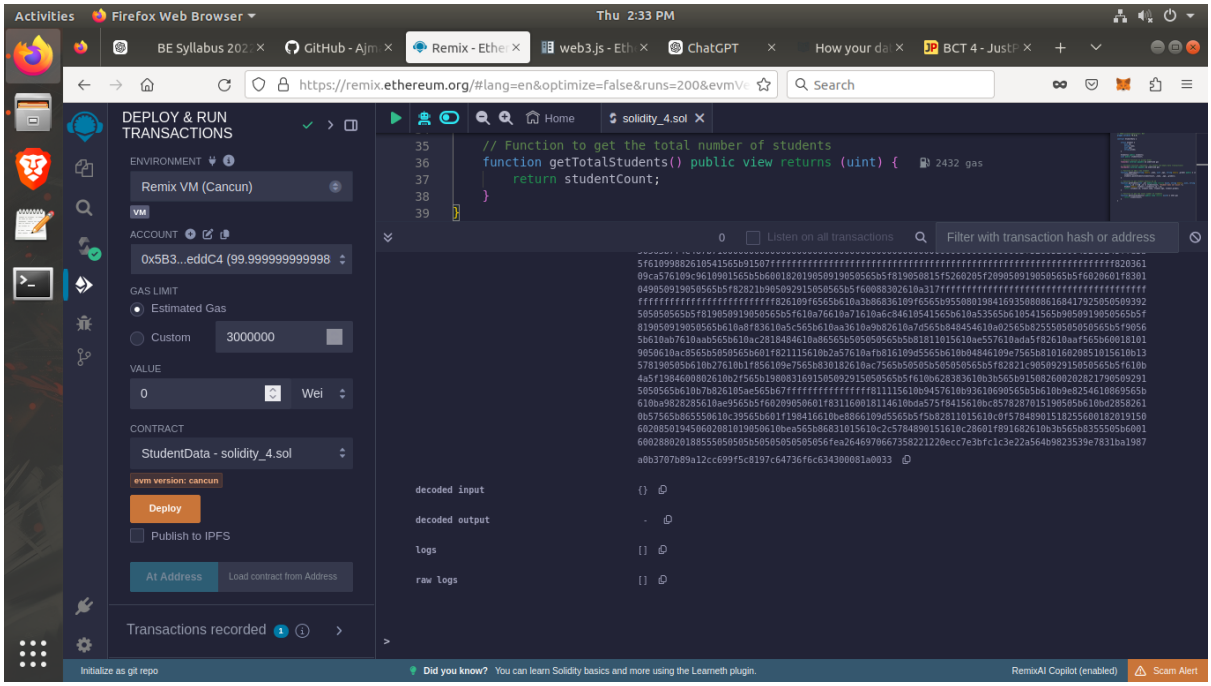
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Search
DEPLOY & RUN TRANSACTIONS
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ACCOUNT
0x5B3...eddC4 (99.999999999998
GAS LIMIT
Estimated Gas
Custom
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VALUE
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StudentData - solidity_4.sol
evm version: cancun
Deploy
Publish to IPFS
At Address
Load contract from Address
Transactions recorded 1
Home
solidity_4.sol
35 // Function to get the total number of students
36 function getTotalStudents() public view returns (uint) { 2432 gas
37 return studentCount;
38 }
39 }
0
Listen on all transactions
Filter with transaction hash or address
decoded input {}
decoded output -
logs []
raw logs []
Initialize as git repo
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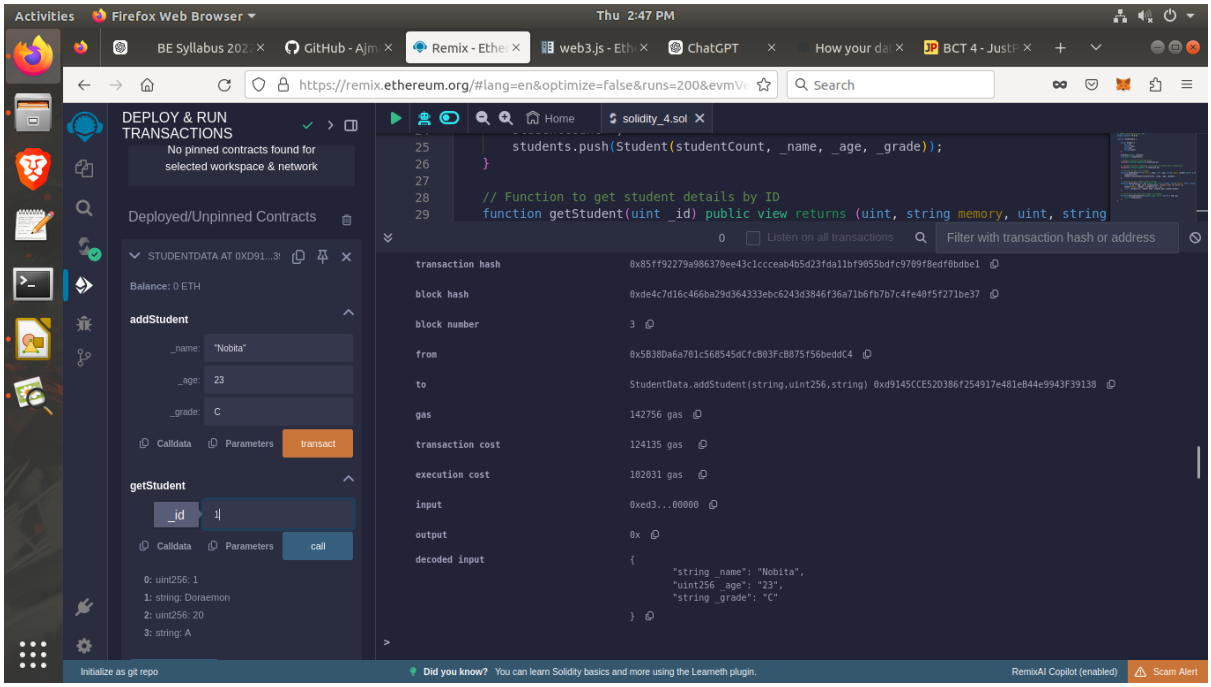
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https://remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVe
Search
DEPLOY & RUN TRANSACTIONS
No pinned contracts found for selected workspace & network
Deployed/Unpinned Contracts
STUDENTDATA AT 0XD91...3!
Balance: 0 ETH
addStudent
_name: "Nobita"
_age: 23
_grade: C
Calldata
Parameters
transact
getStudent
_id 1
Calldata
Parameters
call
0: uint256: 1
1: string: Doraemon
2: uint256: 20
3: string: A
Home
solidity_4.sol
25 students.push(Student(studentCount, _name, _age, _grade));
26 }
27
28 // Function to get student details by ID
29 function getStudent(uint _id) public view returns (uint, string memory, uint, string
0
Listen on all transactions
Filter with transaction hash or address
transaction hash 0x85ff92279a986370ee43c1ccceab4b5d23fda11bf9055bdfc9709f8edf0bdbe1
block hash 0xde4c7d16c466ba29d364333ebc6243d3846f36a71b6fb7b7c4fe40f5f271be37
block number 3
from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to StudentData.addStudent(string,uint256,string) 0xd9145CCE52D386f254917e481eB44e9943F39138
gas 142756 gas
transaction cost 124135 gas
execution cost 102031 gas
input 0xed3...00000
output 0x
decoded input
{
"string _name": "Nobita",
"uint256 _age": "23",
"string _grade": "C"
}
Initialize as git repo
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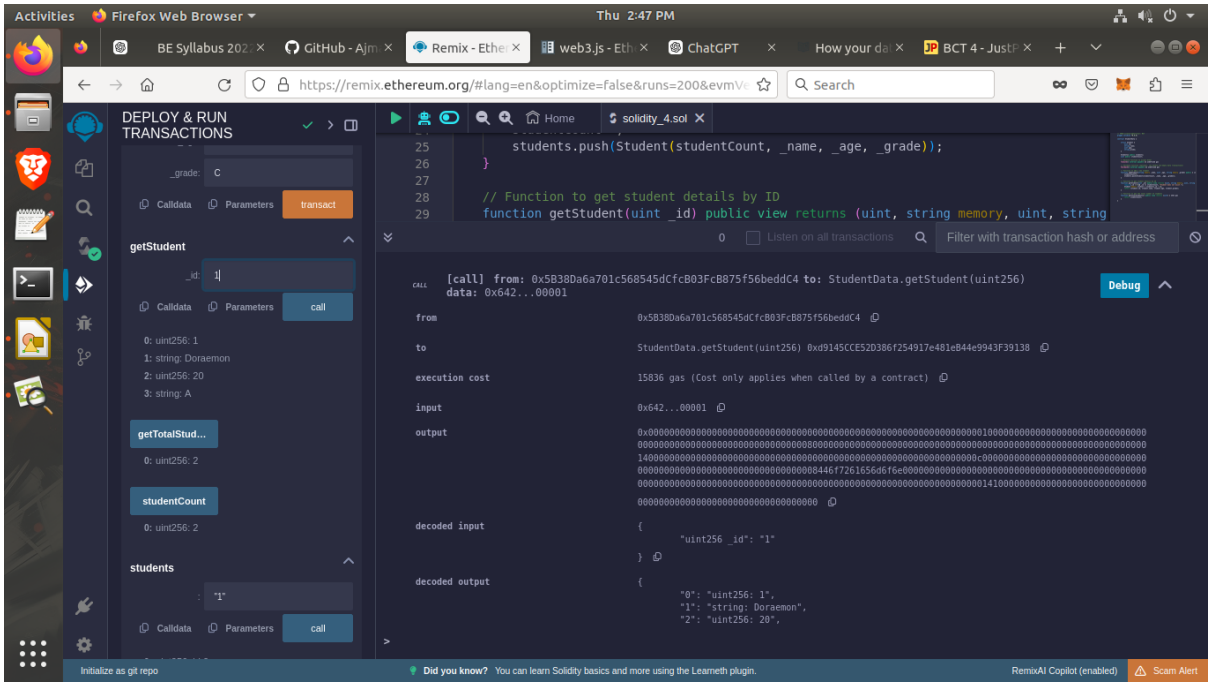
Activities
Firefox Web Browser
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https://remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVe
Search
DEPLOY & RUN TRANSACTIONS
_grade: C
Calldata
Parameters
transact
getStudent
_id: 1
call
0: uint256: 1
1: string: Doraemon
2: uint256: 20
3: string: A
getTotalStud...
0: uint256: 2
studentCount
0: uint256: 2
students
"1"
Home
solidity_4.sol
25 students.push(Student(studentCount, _name, _age, _grade));
26 }
27
28 // Function to get student details by ID
29 function getStudent(uint _id) public view returns (uint, string memory, uint, string
Listen on all transactions
Filter with transaction hash or address
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.getStudent(uint256)
data: 0x642...00001
Debug
from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to StudentData.getStudent(uint256) 0xd9145CCE52D386f254917e481eB44e9943F39138
execution cost 15836 gas (Cost only applies when called by a contract)
input 0x642...00001
output
decoded input
"uint256 _id": "1"
decoded output
"0": "uint256: 1",
"1": "string: Doraemon",
"2": "uint256: 20",
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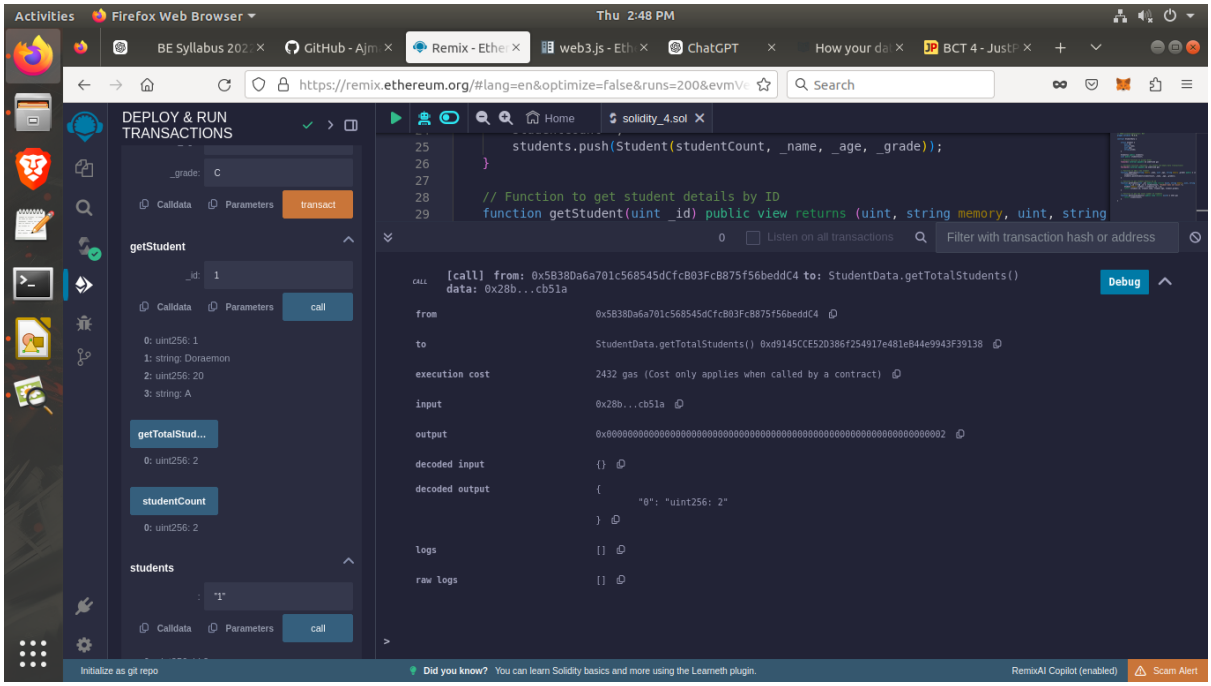
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DEPLOY & RUN TRANSACTIONS
_grade: C
Calldata
Parameters
transact
getStudent
_id: 1
call
0: uint256: 1
1: string: Doraemon
2: uint256: 20
3: string: A
getTotalStud...
0: uint256: 2
studentCount
0: uint256: 2
students
"1"
Home
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26 }
27
28 // Function to get student details by ID
29 function getStudent(uint _id) public view returns (uint, string memory, uint, string
Listen on all transactions
Filter with transaction hash or address
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.getTotalStudents()
data: 0x28b...cb51a
Debug
from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to StudentData.getTotalStudents() 0xd9145CCE52D386f254917e481eB44e9943F39138
execution cost 2432 gas (Cost only applies when called by a contract)
input 0x28b...cb51a
output 0x0000000000000000000000000000000000000000000000000000000000000002
decoded input {}
decoded output
"0": "uint256: 2"
logs []
raw logs []
Initialize as git repo
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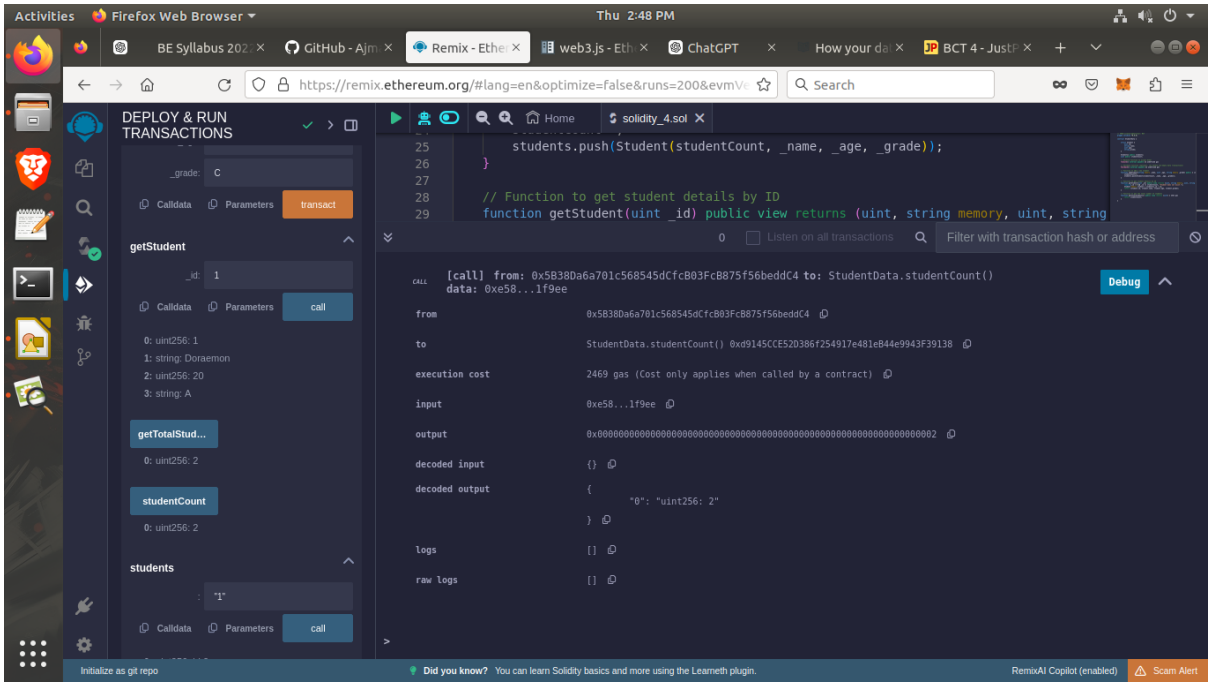
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_grade: C
Calldata
Parameters
transact
getStudent
_id: 1
Calldata
Parameters
call
0: uint256: 1
1: string: Doraemon
2: uint256: 20
3: string: A
getTotalStud...
0: uint256: 2
studentCount
0: uint256: 2
students
: "1"
Calldata
Parameters
call
Home
solidity_4.sol
25 students.push(Student(studentCount, _name, _age, _grade));
26 }
27
28 // Function to get student details by ID
29 function getStudent(uint _id) public view returns (uint, string memory, uint, string
0
Listen on all transactions
Filter with transaction hash or address
call
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.studentCount()
data: 0xe58...1f9ee
Debug
from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
to StudentData.studentCount() 0xd9145CCE52D386f254917e481eB44e9943F39138
execution cost 2469 gas (Cost only applies when called by a contract)
input 0xe58...1f9ee
output 0x0000000000000000000000000000000000000000000000000000000000000002
decoded input {}
decoded output {
"0": "uint256: 2"
}
logs []
raw logs []
>
Initialize as git repo
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