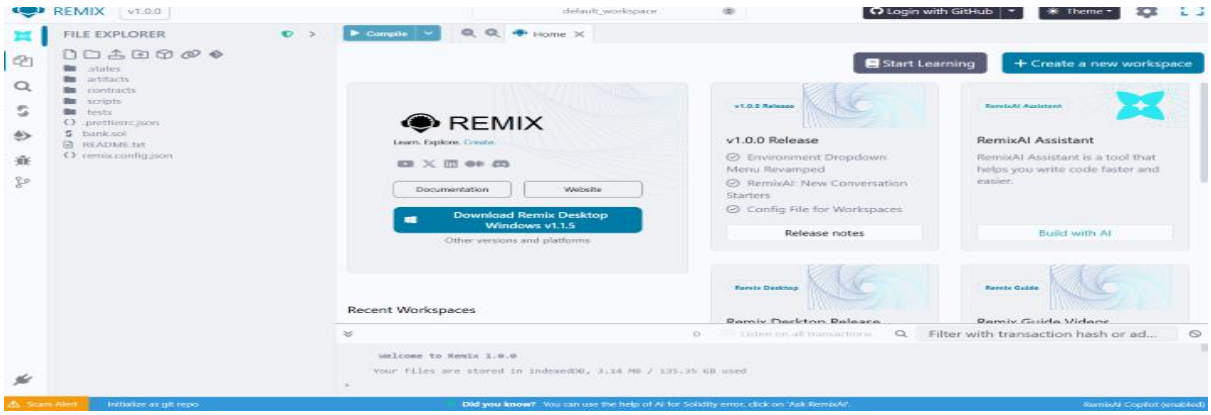
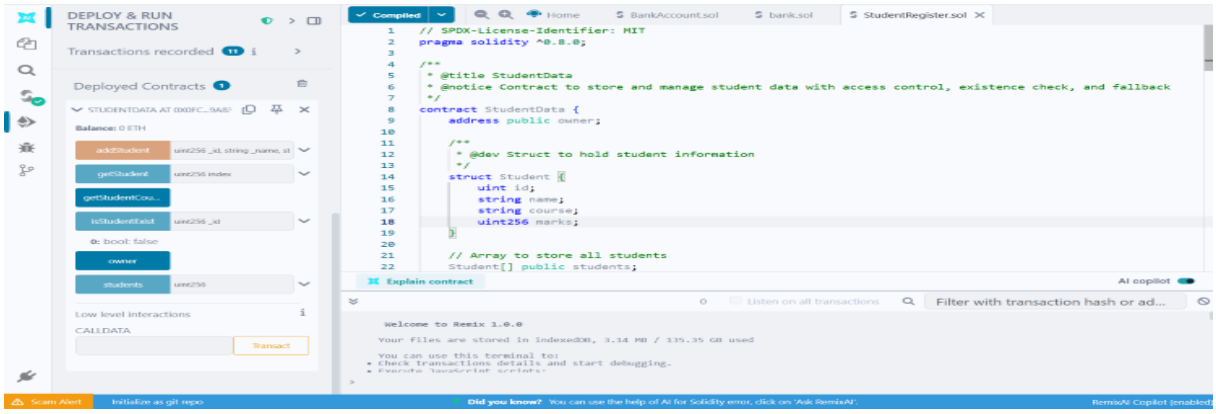
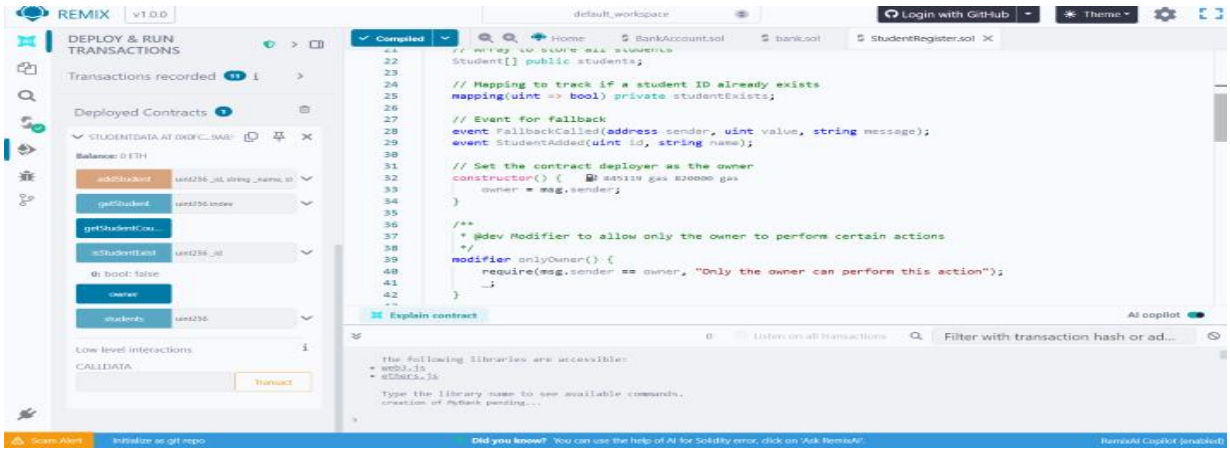
# ASSIGNMENT NO:04

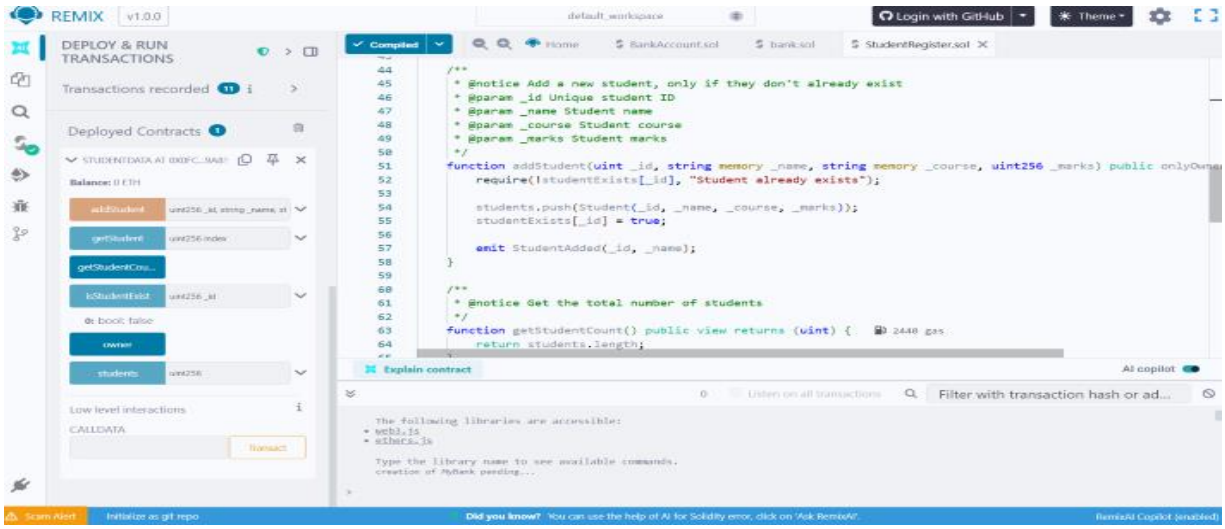
**AIM: Write a program in solidity to create Student data. Use the following constructs:**

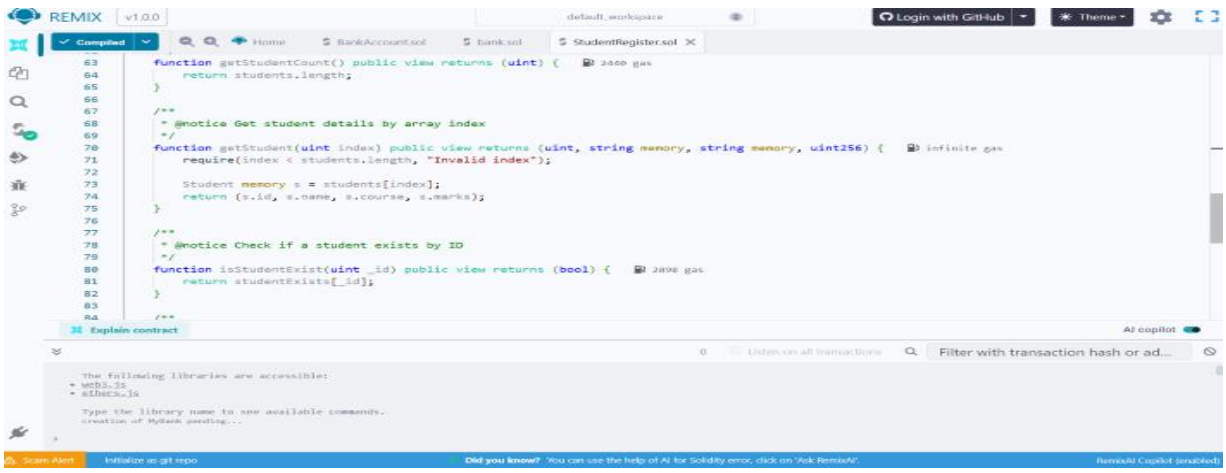
- **Structures**
- **Arrays**
- **Fallback Deploy this as smart contract on Ethereum and Observe the transaction fee and Gas values.**




REMIX
v1.0.0
DEPLOY & RUN TRANSACTIONS
Transactions recorded
Deployed Contracts
Compiled
StudentRegister.sol
/**
* @notice Add a new student, only if they don't already exist
* @param _id Unique student ID
* @param _name Student name
* @param _course Student course
* @param _marks Student marks
*/
function addStudent(uint _id, string memory _name, string memory _course, uint256 _marks) public onlyOwner {
require(!studentExists[_id], "Student already exists");
students.push(Student(_id, _name, _course, _marks));
studentExists[_id] = true;
emit StudentAdded(_id, _name);
}
/**
* @notice Get the total number of students
*/
function getStudentCount() public view returns (uint) {
return students.length;
}
Explain contract
AI copilot
Filter with transaction hash or ad...
The following libraries are accessible:
web3.js
ethers.js
Type the library name to see available commands.
Scam Alert
Initialize as git repo
Did you know? You can use the help of AI for Solidity error, click on 'Ask RemixAI'.
RemixAI Copilot (enabled)


REMIX
v1.0.0
Compiled
StudentRegister.sol
function getStudentCount() public view returns (uint) {
return students.length;
}
/**
* @notice Get student details by array index
*/
function getStudent(uint index) public view returns (uint, string memory, string memory, uint256) {
require(index < students.length, "Invalid index");
Student memory s = students[index];
return (s.id, s.name, s.course, s.marks);
}
/**
* @notice Check if a student exists by ID
*/
function isStudentExist(uint _id) public view returns (bool) {
return studentExists[_id];
}
Explain contract
AI copilot
Filter with transaction hash or ad...
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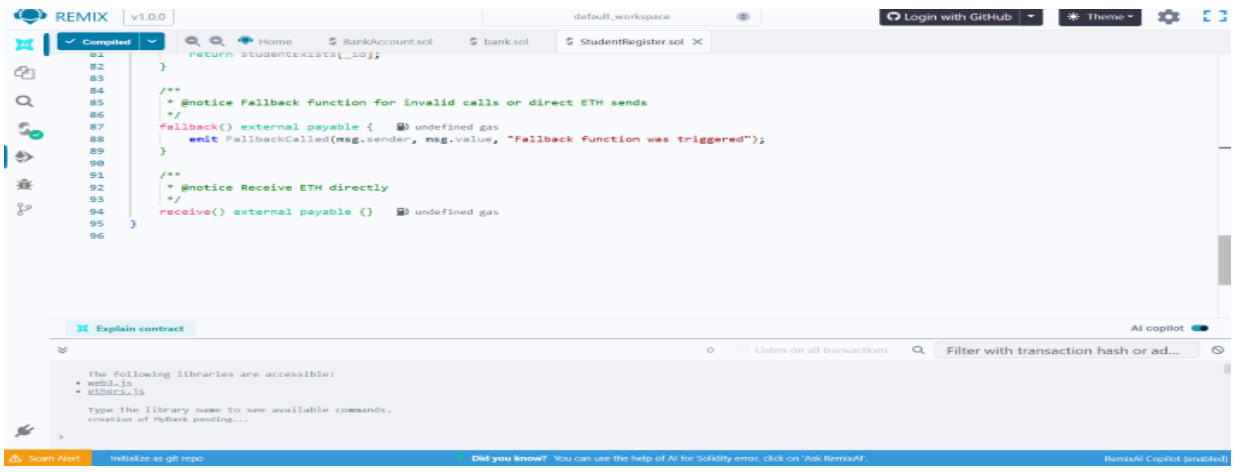
REMIX
v1.0.0
Compiled
StudentRegister.sol
return studentExists[_id];
}
/**
* @notice Fallback function for invalid calls or direct ETH sends
*/
fallback() external payable {
emit FallbackCalled(msg.sender, msg.value, "Fallback function was triggered");
}
/**
* @notice Receive ETH directly
*/
receive() external payable {}
}
Explain contract
AI copilot
Filter with transaction hash or ad...
The following libraries are accessible:
web3.js
ethers.js
Type the library name to see available commands.
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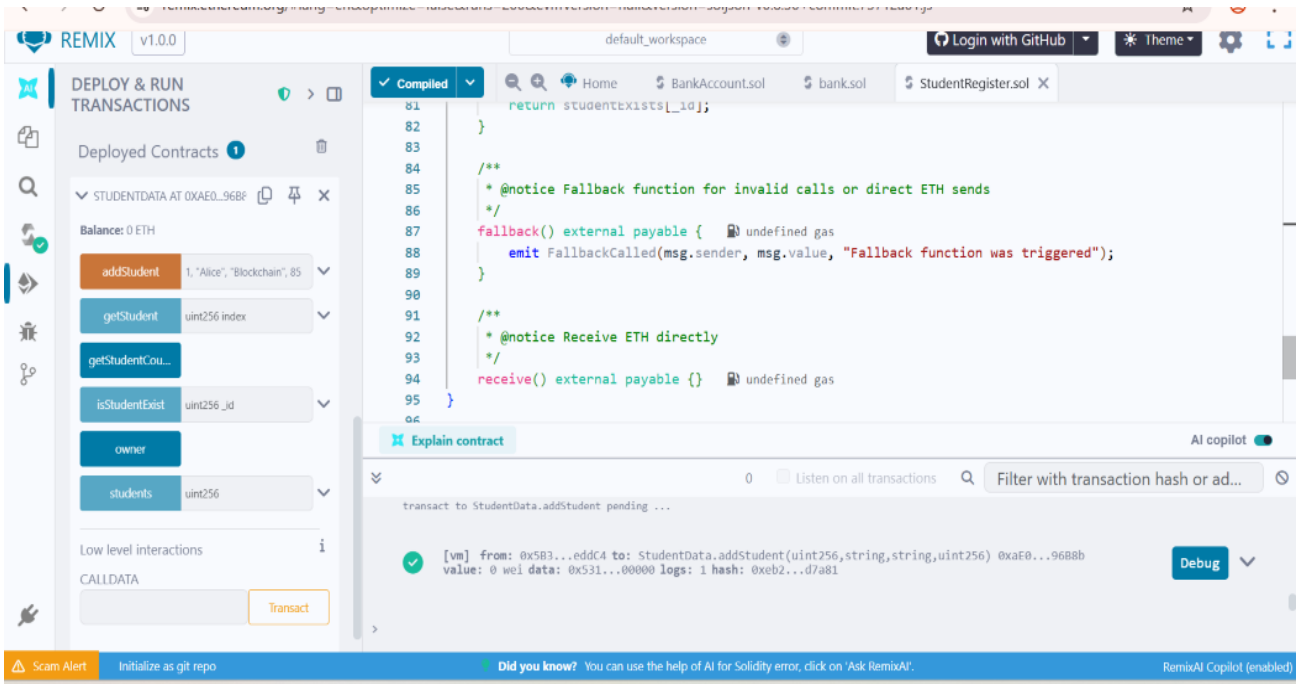
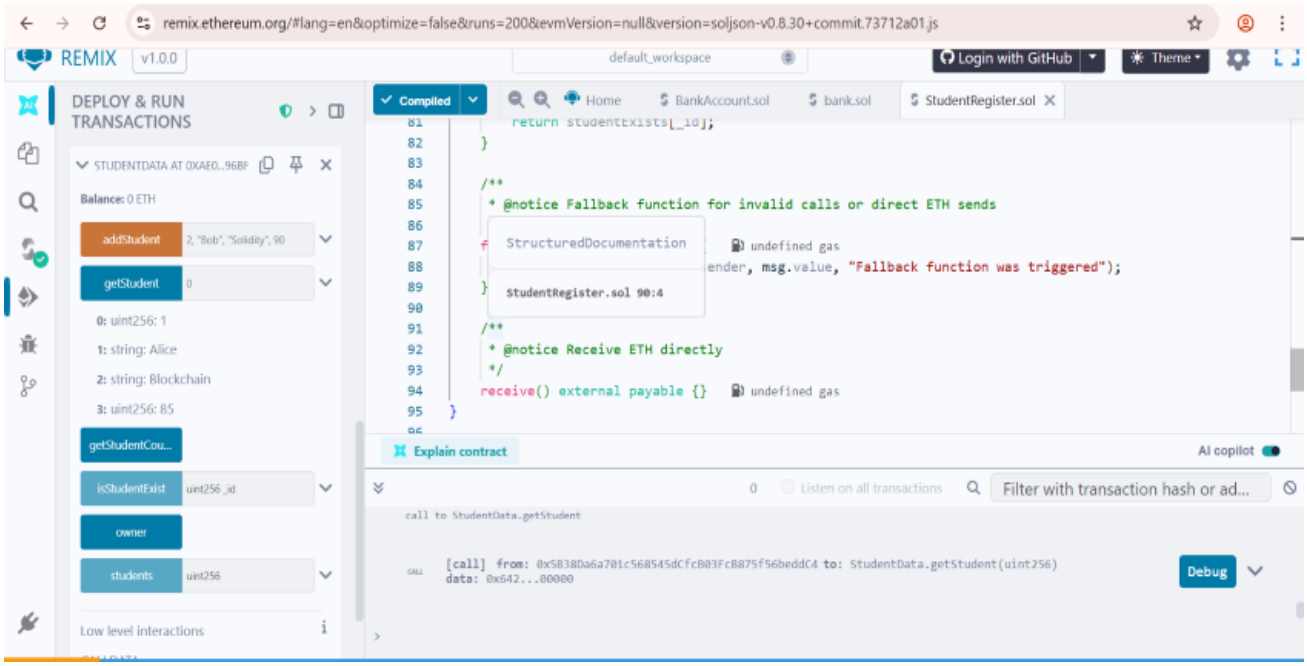
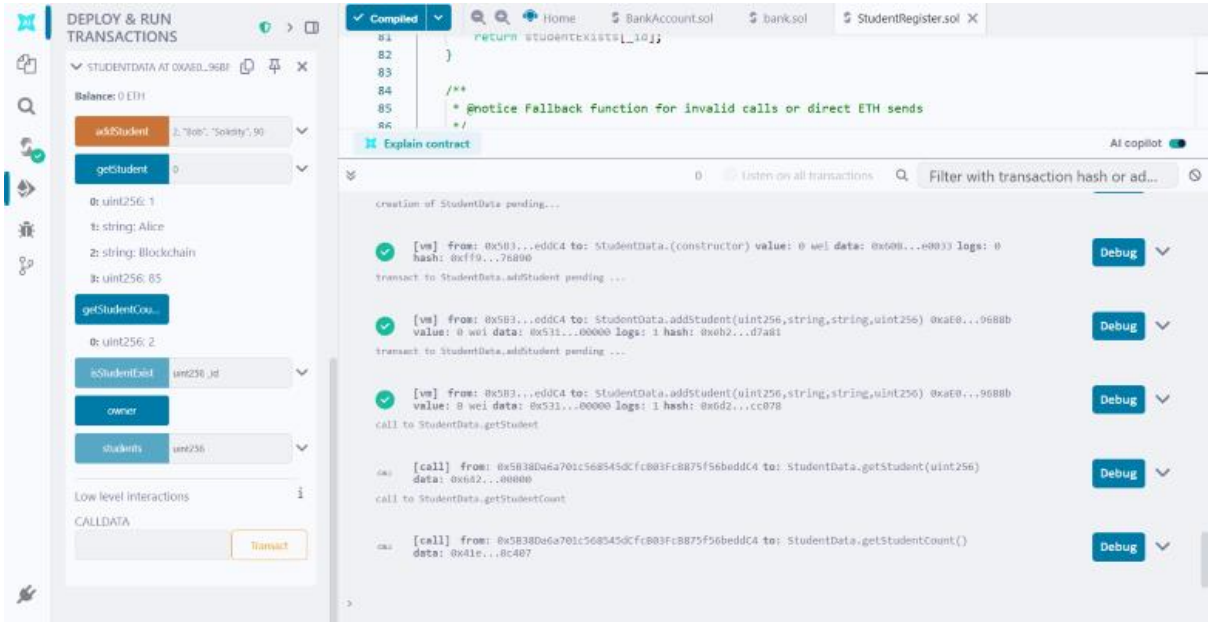
**Deploy:**



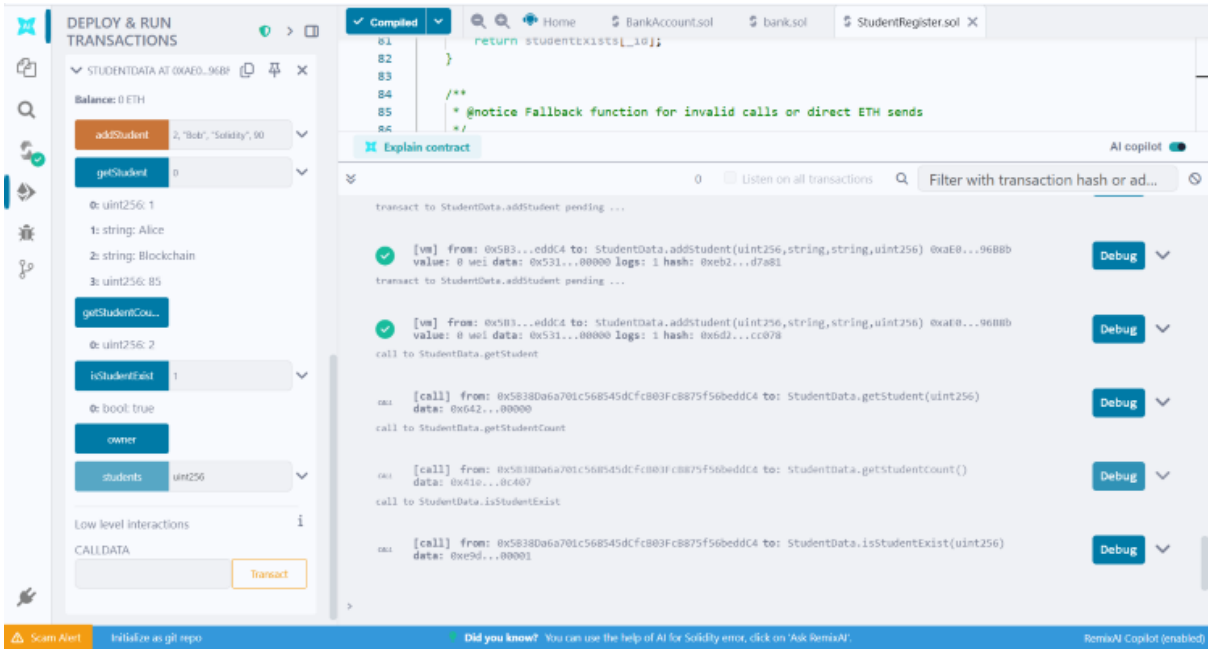

**Add Student:**



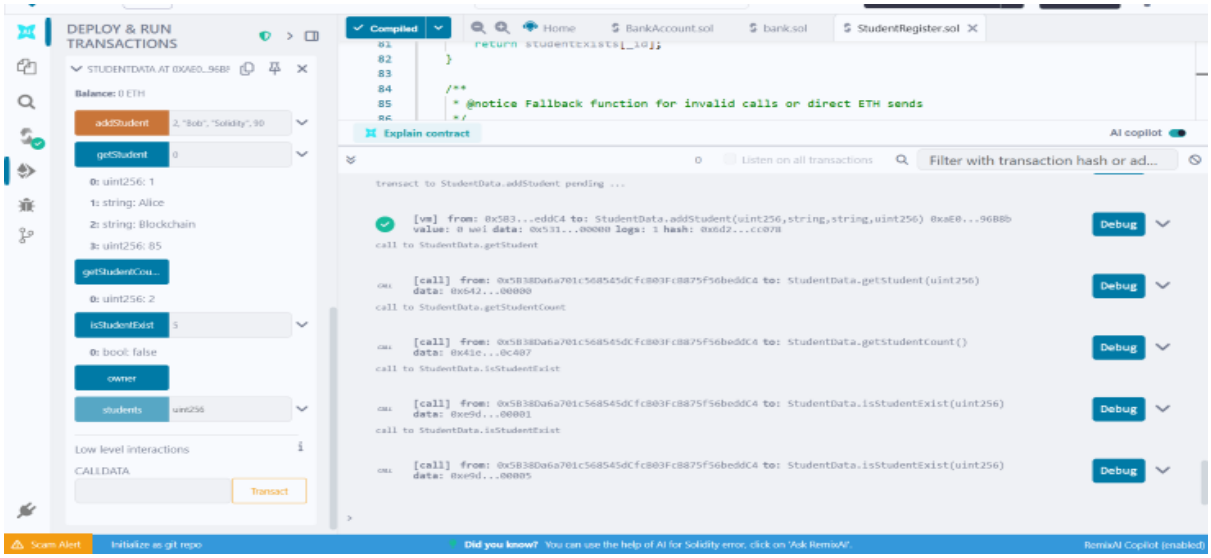
**Get Student Data:**



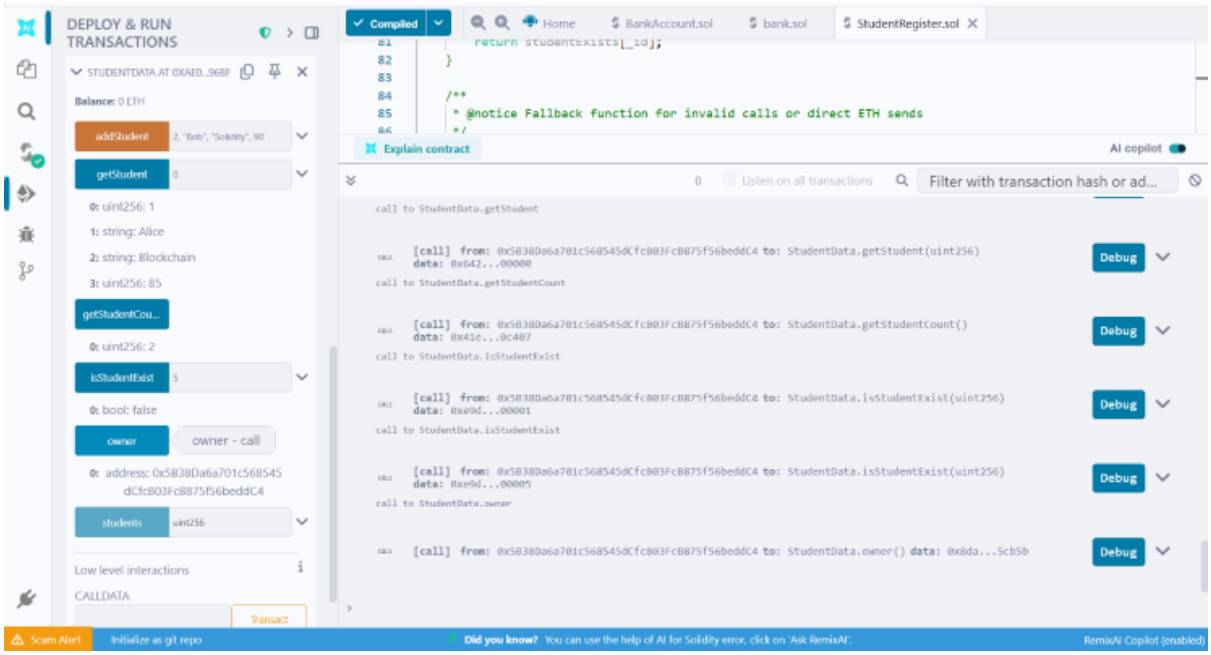

**Get Total No.of Students:**

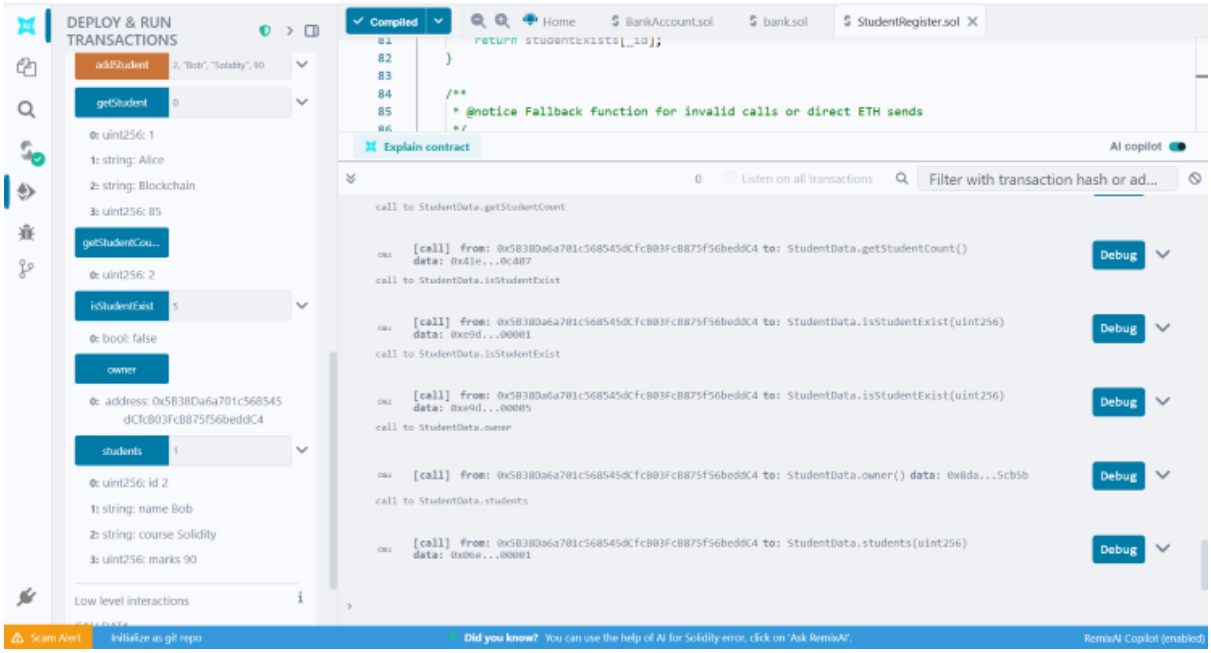


**Check Student Exist:**




**Check Owner :**




DEPLOY & RUN TRANSACTIONS
addStudent
getStudent
0: uint256: 1
1: string: Alice
2: string: Blockchain
3: uint256: 85
getStudentCou...
0: uint256: 2
isStudentExist
0: bool: false
owner
0: address: 0x5B38Da6a701c568545 dCfcB03FcB875f56beddC4
students
0: uint256: id 2
1: string: name Bob
2: string: course Solidity
3: uint256: marks 90
Low level interactions
Compiled
Home
BankAccount.sol
bank.sol
StudentRegister.sol
return studentExists[_id];
}
/**
* @notice Fallback function for invalid calls or direct ETH sends
*/
Explain contract
AI copilot
Listen on all transactions
Filter with transaction hash or ad...
call to StudentData.getStudentCount
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.getStudentCount() data: 0x41e...0c487
Debug
call to StudentData.isStudentExist
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.isStudentExist(uint256) data: 0xe9d...00001
Debug
call to StudentData.isStudentExist
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.isStudentExist(uint256) data: 0xe9d...00005
Debug
call to StudentData.owner
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.owner() data: 0x8da...5cb5b
Debug
call to StudentData.students
[call] from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4 to: StudentData.students(uint256) data: 0x00e...00001
Debug
Scam Alert
Initialize as git repo
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