```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;
contract StudentData {
    struct Student {
        string name;
        uint256 rollNumber;
        uint256 age;
    Student[] public students;
    event StudentAdded(string name, uint256 rollNumber, uint256 age);
    event FallbackCalled(address sender, uint256 value);
    function addStudent(string memory _name, uint256 _rollNumber, uint256 _age) public
{
        students.push(Student(_name, _rollNumber, _age));
        emit StudentAdded(_name, _rollNumber, _age);
    function getStudent(uint256 _index) public view returns (string memory, uint256,
        uint256) {
        require(_index < students.length, "Index out of bounds");</pre>
        Student memory student = students[_index];
        return (student.name, student.rollNumber, student.age);
    fallback() external payable {
        emit FallbackCalled(msg.sender, msg.value);
    }
    receive() external payable {
        emit FallbackCalled(msg.sender, msg.value);
    function getContractBalance() public view returns (uint256) {
        return address(this).balance;
    }
}
```

Contract Deployment

```
[vm]from: 0x5B3...eddC4to: StudentData.(constructor)value: 0 weidata:
0x608...a0033logs: 0hash: 0xbfa...ca518
status 0x1 Transaction mined and execution succeed
                   0xbfae948d2209635738b6794de04630c98780e144bce5822405b090068a9ca518
transaction hash
block hash 0x7ced1471a40c1d25b12a7127afd040a6f8b7765f785fbf3c910f5b726d4cdbd7
block number 5
                   0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
contract address
      0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
      StudentData.(constructor)
gas
      760583 gas
transaction cost
                   661376 gas
execution cost
                   564398 gas
input 0x608...a0033
output
0x608060405260043610610042575f3560e01c806306ead22e146100bd578063642f9163146100fb578063
682ad06e146101395780636f9fb98a1461016157610082565b36610082577f4fdfaf7cd2ae67f3639149bd
def2addc991d3f26e0121df03517ec62523649ca3334604051610078929190610485565b60
decoded input
                   {}
decoded output
logs []
raw logs
            Adding Student
[vm]from: 0x5B3...eddC4to: StudentData.addStudent(string,uint256,uint256)
0x7EF...8CB47value: 0 weidata: 0x682...00000logs: 1hash: 0xe78...cd79b
status 0x1 Transaction mined and execution succeed
transaction hash
                   0xe78cc12d945336aa5e33450d8b76effa97815edfc9d52f80fad8799a215cd79b
            0x8993e5dd4d247add692ebedf93dfade9c8fa6a085664b338585874078e4a56f4
block hash
block number 6
      0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
      StudentData.addStudent(string,uint256,uint256)
0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
      132294 gas
transaction cost
                   115038 gas
execution cost
                   93226 gas
input 0x682...00000
output 0x
decoded input
      "string _name": "Kunal",
      "uint256 _rollNumber": "33",
      "uint256 _age": "20"
decoded output
                   {}
logs
      {
             "from": "0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47",
             "topic":
"0xb72ee84ef937eaea5b974fd7578aeb8437a4d8cd7a7062d03255206e0155b354",
             "event": "StudentAdded",
             "args": {
                   "0": "Kunal",
                   "1": "33",
"2": "20",
                   "name": "Kunal",
                   "rollNumber": "33",
                   "age": "20"
             }
      }
]
```

```
raw logs
          Γ
 {
   "logIndex": "0x1",
   "blockNumber": "0x6"
   "blockHash": "0x8993e5dd4d247add692ebedf93dfade9c8fa6a085664b338585874078e4a56f4",
   "transactionHash":
"0xe78cc12d945336aa5e33450d8b76effa97815edfc9d52f80fad8799a215cd79b",
   "transactionIndex": "0x0".
   "address": "0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47",
   "data":
"topics": [
     "0xb72ee84ef937eaea5b974fd7578aeb8437a4d8cd7a7062d03255206e0155b354"
 }
]
[vm]from: 0x5B3...eddC4to: StudentData.addStudent(string,uint256,uint256)
0x7EF...8CB47value: 0 weidata: 0x682...00000logs: 1hash: 0x491...87b58
status 0x1 Transaction mined and execution succeed
               0x491068cb6c0db15ec3c80acce51b78bccf8367283753f6331a83408795a87b58
transaction hash
          0x8fb92f0b1fece07e6d9e2c90cbbae3cca71cc4a6d59b1cb802e15691c9277b86
block hash
block number 7
     0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
     StudentData.addStudent(string,uint256,uint256)
0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
     112629 gas
transaction cost
               97938 gas
execution cost
               76126 gas
input 0x682...00000
output 0x
decoded input
     "string _name": "Jason"
     "uint256 _rollNumber": "34",
     "uint256 _age": "21"
decoded output
               {}
logs
     £
          "from": "0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47",
          "topic":
"0xb72ee84ef937eaea5b974fd7578aeb8437a4d8cd7a7062d03255206e0155b354",
          "event": "StudentAdded",
          "args": {
               "0": "Jason",
               "1": "34",
                "2": "21"
                "name": "Jason",
                "rollNumber": "34",
                "age": "21"
          }
     }
]
```

```
raw logs
        Γ
 {
  "logIndex": "0x1",
  "blockNumber": "0x7"
  "blockHash": "0x8fb92f0b1fece07e6d9e2c90cbbae3cca71cc4a6d59b1cb802e15691c9277b86",
  "transactionHash":
"0x491068cb6c0db15ec3c80acce51b78bccf8367283753f6331a83408795a87b58",
  "transactionIndex": "0x0".
  "address": "0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47",
  "data":
"topics": [
    "0xb72ee84ef937eaea5b974fd7578aeb8437a4d8cd7a7062d03255206e0155b354"
 }
1
Contract Balance
call
[call]from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4to:
StudentData.getContractBalance()data: 0x6f9...fb98a
    0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
from
    StudentData.getContractBalance() 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
execution cost
            378 gas (Cost only applies when called by a contract)
input 0x6f9...fb98a
decoded input
            {}
decoded output
            {
    "0": "uint256: 0"
logs []
raw logs
        Get Student By Index
[call]from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4to:
StudentData.students(uint256)data: 0x06e...00001
    0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
from
    StudentData.students(uint256) 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
to
            10190 gas (Cost only applies when called by a contract)
execution cost
input 0x06e...00001
output
decoded input
    "uint256 ": "1"
decoded output
    "0": "string: name Jason",
    "1": "uint256: rollNumber 34",
    "2": "uint256: age 21"
logs
   []
raw logs
        []
```

```
[call]from: 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4to:
StudentData.students(uint256)data: 0x06e...00000 from 0x5B38Da6a701c568545dCfcB03FcB875f56beddC4
    StudentData.students(uint256) 0x7EF2e0048f5bAeDe046f6BF797943daF4ED8CB47
to
            10190 gas (Cost only applies when called by a contract)
execution cost
input 0x06e...00000
output
decoded input
    "uint256 ": "0"
decoded output
           {
    "0": "string: name Kunal",
    "1": "uint256: rollNumber 33",
    "2": "uint256: age 20"
logs []
raw logs
        []
```