

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

contract Database{

    struct student{
        int ID;
        string _fname;
        string _lname;
    }

    int public Count = 0;

    mapping(int => student) public stdRecords;

    function addNew(int _id, string calldata _fname, string calldata _lname) public{
        Count+=1;
        stdRecords[Count] = student(_id, _fname, _lname);
    }

    event received(address user, uint amount);

    receive() external payable{
        emit received(msg.sender, msg.value);
    }

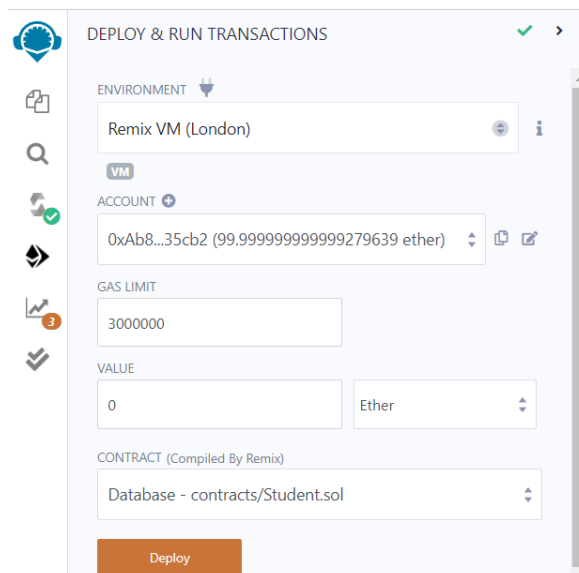
}
```

Database Contract Owner:


0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2


Database Contract Address:

0xa131AD247055FD2e2aA8b156A11bdEc81b9eAD95






DEPLOY & RUN TRANSACTIONS

ENVIRONMENT 

Remix VM (London) 

VM



ACCOUNT 

0xAb8...35cb2 (99.999999999999279639 ether)  


GAS LIMIT

3000000

VALUE

0  Ether 

CONTRACT (Compiled By Remix)

Database - contracts/Student.sol 

Deploy

# Add New Student

Transactions recorded 13 ⓘ >

Deployed Contracts

▼ DATABASE AT 0XA13...EAD95 (MEMORY)

Balance: 0 ETH

addNew

627, Captain, Price

▼

Count

stdRecords

int256

▼

status	true Transaction mined and execution succeed
transaction hash	0x75bb9f7e4430c018efb158e3fb97fcc66955a7bf58a49568190962beef13ea7e
from	0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2
to	Database.addNew(int256,string,string) 0xa131AD247055FD2e2aA8b156A11bdEc81b9eAD95
gas	130719 gas
transaction cost	113668 gas
execution cost	113668 gas
input	0x95e...00000
decoded input	<pre>{   "int256 _id": "627",   "string _fname": " Captain",   "string _lname": " Price" }</pre>
decoded output	<pre>{}</pre>

## Gas cost for Adding new Student to contract

gas	130719 gas
transaction cost	113668 gas
execution cost	113668 gas

## Return Count of Students in Contract

Transactions recorded **15** ⓘ >

Deployed Contracts ⓘ

▼ DATABASE AT 0XA13...EAD95 (MEMORY) ⓘ x

Balance: 0 ETH

addNew 6005,Soap,Mactavish ▼

Count

0: int256: 2

stdRecords int256 ▼

call to Database.Count

CALL [call] from: 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2 to: Database.Count() data: 0x93a...8333e

from 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2 ⓘ

to Database.Count() 0xa131AD247055FD2e2aA8b156A11bdEc81b9eAD95 ⓘ

execution cost 23471 gas (Cost only applies when called by a contract) ⓘ

input 0x93a...8333e ⓘ

decoded input {} ⓘ


decoded output {  
 "0": "int256: 2"  
} ⓘ


logs [] ⓘ ⓘ



## Gas cost to get Count of Students in record

execution cost 23471 gas (Cost only applies when called by a contract) ⓘ

## Search Student in Contract Records

Transactions recorded **15** 

Deployed Contracts 

▼ DATABASE AT 0XA13...EAD95 (MEMORY)  


Balance: 0 ETH

addNew

627,Captain,Price


▼


Count

0: int256: 2  
**stdRecords** 

:

"1"

 Calldata

 Parameters

call

0: int256: ID 627  
1: string: \_fname Captain  
2: string: \_lname Price

call to Database.stdRecords

```
CALL [call] from: 0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2 to: Database.stdRecords(int256) data: 0xcd9...00001

from      0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2 


to        Database.stdRecords(int256) 0xa131AD247055FD2e2aA8b156A11bdEc81b9eAD95 

execution cost 30414 gas (Cost only applies when called by a contract) 

input      0xcd9...00001 

decoded input {
  "int256 ": "1"
} 

decoded output {
  "0": "int256: ID 627",
  "1": "string: _fname Captain",
  "2": "string: _lname Price"
} 

logs       []  
```

## Gas cost to Search Student in record

execution cost	30414 gas (Cost only applies when called by a contract) 
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