



**Pimpri Chinchwad Education Trust's Pimpri
Chinchwad College of Engineering**



Laboratory Practice III

Department: Computer Engineering

Academic Year: 2022 -2023

Semester: I

Year: B.E

Div: B

Name: Umesh Chaudhari

Roll No: BECOB279

Title: 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.

Code Output:

```
1 //Keyur Kolambe
2 //BECOB219
3 //SPDX-License-Identifier: GPL-3.0
4 pragma solidity >=0.7.0 <0.9.0;
5
6 contract StudentData {
7
8     struct Student {
9         int rollNo;
10        string fName;
11        string lName;
12        int marks;
13    }
14
15    address owner;
16    int public stdCount = 0;
17    mapping(int => Student) public stdRecords;
18
19    modifier onlyOwner {
20        require(owner == msg.sender);
21        _;
22    }
23
24    constructor() {
25        owner=msg.sender;
26    }
27
28 }
```

[vm] from: 0x5B3...eddC4 to: StudentData.(constructor) value: 0 wei data: 0x608...70033 logs: 0
hash: 0x216...5dc73

DEPLOY & RUN TRANSACTIONS

At Address Load contract from Address

Transactions recorded 1 1

Deployed Contracts

BANK AT 0XD91...39138 (MEMORY)

STUDENTDATA AT 0XD8B...33FA8 (ME)

STUDENTDATA AT 0XF8E...9FBE8 (ME)

Balance: 0 ETH

addNewRe... int256_rollNo, string_fName, stri

bonusMarks int256_bonus

stdCount

stdRecords int256

Low level interactions

CALLDATA

Transact

bank.sol Student.sol

```
25 owner=msg.sender;
26 }
27
28
29 function addNewRecords(int _rollNo, string memory _fName, string memory _lName,int _marks) p
30     stdCount=stdCount+1;
31     stdRecords[stdCount]= Student(_rollNo, _fName ,_lName,_marks);
32 }
33
34 function bonusMarks(int _bonus) public onlyOwner {
35     stdRecords[stdCount].marks = stdRecords[stdCount].marks + _bonus;
36 }
37
38 fallback() external payable{
39     //Executed when none of the functions match the
40     //function identifier or no data was provided with the function call.
41 }
42
43
44
45 }
```

0 listen on all transactions Search with transaction hash or address

✓ [vm] from: 0x5B3...eddC4 to: StudentData.(constructor) value: 0 wei data: 0x608...70033 logs: 0

hash: 0x216...5dc73

Debug