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Subject : - Blockchain Technology

Assignment 4 :-

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

● Structures

● Arrays

● Fallback

Deploy this smart contract on Ethereum and Observe the transaction fee and Gas values.

Program:

```solidity
pragma solidity ^0.8.0;
contract Student_Class
{
struct Student
{
string prn;
uint roll_no;
string name;
}

Student[] private arr;

event log(string msg);

// Fallback function : used when the function call does not match any of the
functions
receive() external payable
{
emit log("In fallback.");
}

function add_student(uint roll, string memory name, string memory prn)
public { //memory = persist data till function execution completes
arr.push(Student(prn, roll, name));
emit log("New student added");
}

function total_students() public view returns (uint) {
```
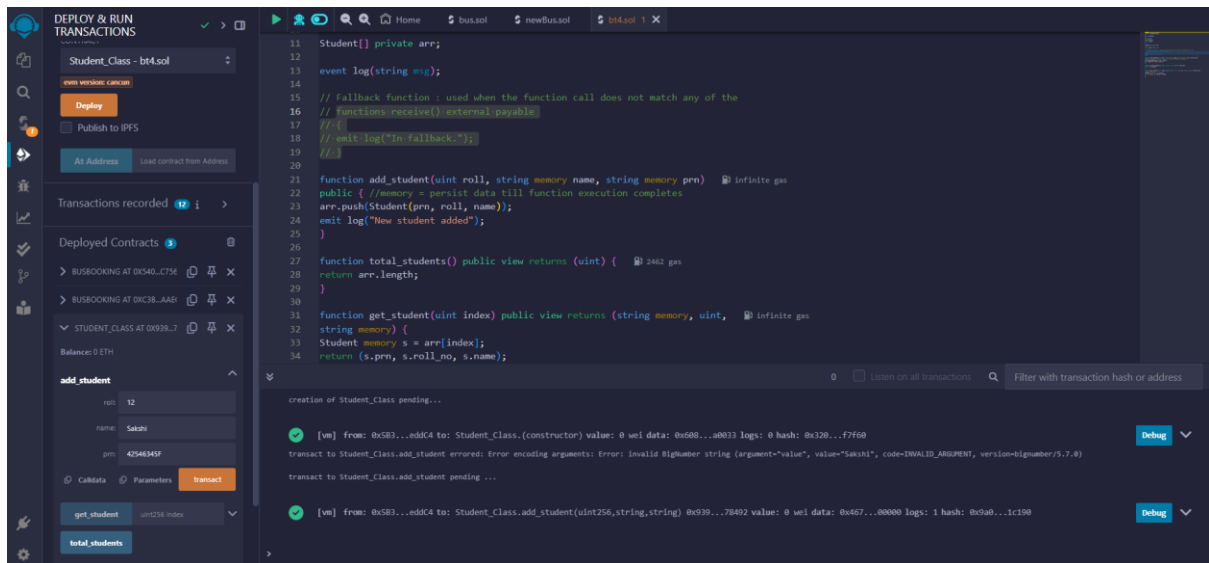
```
return arr.length;
}

function get_student(uint index) public view returns (string memory, uint,
string memory) {
Student memory s = arr[index];
return (s.prn, s.roll_no, s.name);
}
}
```
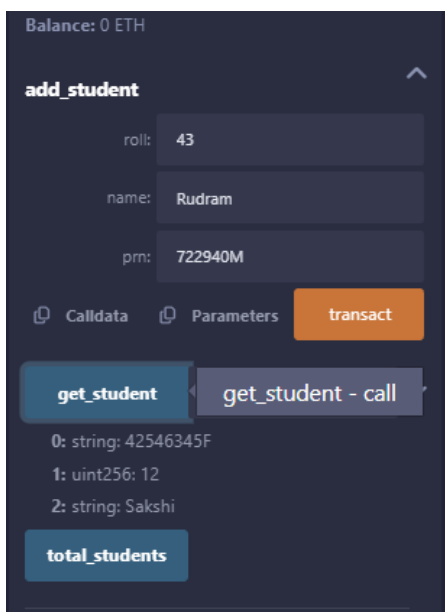
Output:

1. Enter the student details and execute the add_student function.

2. Enter the array index, to get student details using get_student.

3. Use total_students to view the no.of students added in the array.