

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

Structures (BT)

- Arrays
- Fallback

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

CODE:-

```
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.18;

contract StudentData {
    struct Student {
        uint id;
        string name;
        uint age;
    }

    Student[] public students;

    event StudentAdded(uint id, string name, uint age);

    function addStudent(uint _id, string memory _name, uint _age) public {
        Student memory newStudent = Student({
            id: _id,
            name: _name,
            age: _age
        });

        students.push(newStudent);
        emit StudentAdded(_id, _name, _age);
    }

    function getStudent(uint index) public view returns (uint, string memory, uint) {
        require(index < students.length, "Student not found.");
        Student memory student = students[index];
        return (student.id, student.name, student.age);
    }

    fallback() external {}
}
```