

Assignment 5

1. Write a program for Addition, Subtraction and Multiplication and division of two numbers.

Code:

Add.sol

```
// SPDX-License-Identifier: MIT

pragma solidity ^0.7.4;

contract addition {

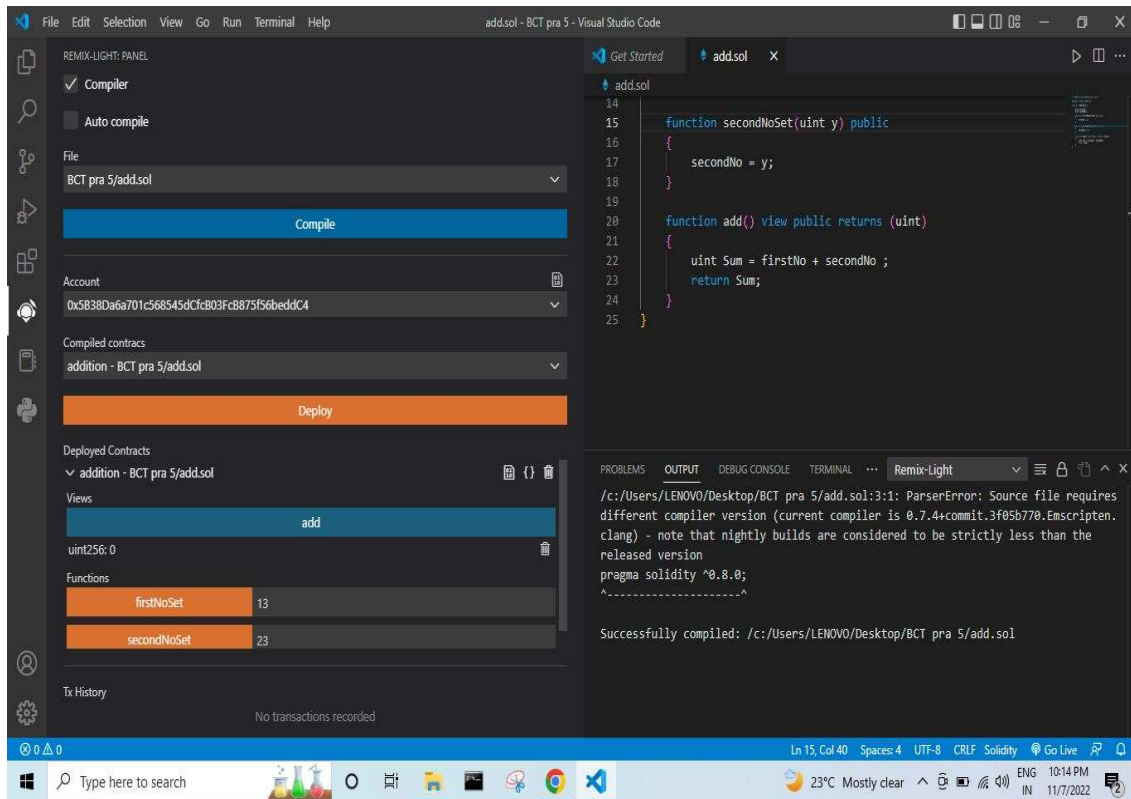
    uint firstNo ;
    uint secondNo ;

    function firstNoSet(uint x) public
    {
        firstNo = x;
    }

    function secondNoSet(uint y) public
    {
        secondNo = y;
    }

    function add() view public returns (uint)
    {
        uint Sum = firstNo + secondNo ;
        return Sum;
    }
}
```

Output:



2. Write a program using array

- accept and display array elements
- find addition of all array elements

Code :

```
pragma solidity ^0.7.4;

contract DynamicArray{

    int[] private arr;

    function addData(int num) public
    {
        arr.push(num);
    }

    // to get the elements of array

    function getData() public view returns(int[] memory)
```

```

    {
        return arr;
    }

    // to get sum of array

    function getSum() public view returns(int)
    {
        uint i;
        int sum = 0;

        for(i = 0; i < arr.length; i++)
            sum = sum + arr[i];
        return sum;
    }
}

```

Output

The screenshot displays the Remix IDE interface for the file `sumArray.sol`. The left sidebar contains the 'REMIK-LIGHT: PANEL' with sections for 'Compiler', 'File', 'Account', 'Compiled contracts', 'Deployed Contracts', and 'Tx History'. The 'Compiler' section shows a 'Compile' button. The 'Account' section displays the address `0x5838Da6a701c568545dCfc803Fc8875f56beddC4`. The 'Compiled contracts' section shows 'DynamicArray - email/sumArray.sol'. The 'Deployed Contracts' section shows two functions: 'getData' and 'getSum'. The 'Output' panel at the bottom right shows the message 'Successfully compiled: /c:/Users/LENOVO/Desktop/Ethereum/email/sumArray.sol'.

3. write program to display employee details (Id, Name, salary, joining date)

Code:

```
// SPDX-License-Identifier: MIT
```

```
Pragma solidity >=0.5.0 <0.9.0;
```

```
struct Employee {  
    unit id;  
    String name;  
    Int salary;  
    int joiningDate;  
}  
  
contract Place{  
Employee public e1;  
constructor(uint _id,string memory _name , int _salary , int _joiningDate){  
    e1.id=_id;  
    e1.name=_name;  
    e1.salary=_salary;  
    e1.joiningDate=_joiningDate;  
}  
  
function set(uint _id,string memory _name , int _salary , int _joiningDate) public{  
    Employee memory new_employee = Employee({  
        id:_id,  
        name:_name,  
        salary:_salary,  
        joiningDate:_joiningDate  
    });  
    e1=new_employee;  
}  
}
```

Output:

The screenshot displays the Visual Studio Code interface with the 'employee.sol' file open. The left sidebar shows the 'REMIX-LIGHT: PANEL' with the following sections:

- Compiler:** Includes a 'Compile' button and an 'Auto compile' checkbox.
- File:** Shows the file path 'emai/employee.sol'.
- Account:** Displays the account address '0xAb8483F64d9C6d1EcF9b849Ae677dD3315835cb2'.
- Compiled contracts:** Shows 'Place - emai/employee.sol'.
- Deploy:** A button with the text '209,Rohit,20000,2023'.
- Deployed Contracts:** Shows 'Place - emai/employee.sol' with a view of 'e1'.
- Views:** A table showing the deployed contract's state variables:

Variable	Value
uint256: 209	209
string: Rohit	Rohit
int256: 20000	20000
int256: 2023	2023
- Tx History:** Shows 'No transactions recorded'.

The main editor shows the Solidity code for 'employee.sol':

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.5.0 <0.9.0;
4
5 struct Employee{
6     uint id;
7     string name;
8     int salary;
9     int joiningDate;
10 }
11
12 contract Place{
13
14     Employee public e1;
15
16     constructor(uint _id,string memory _name , int _salary
17         e1.id=_id;
18         e1.name=_name;
19         e1.salary=_salary;
20         e1.joiningDate=_joiningDate;
21     }
22
23
24     function set(uint _id,string memory _name , int _salary
25         Employee memory new_employee = Employee({
26             id:_id,
27             name:_name,
28             salary:_salary,
29             joiningDate:_joiningDate
30         });
31         e1=new_employee;
32     }
33 }
```

The status bar at the bottom indicates 'Ln 6, Col 12', 'Spaces: 4', 'UTF-8', 'CRLF', 'Solidity', and 'Go Live'. The system tray shows the date '11/10/2022' and time '7:59 PM'.