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Roll Number: - 19BCP091

Subject: - Blockchain Technology lab

Aim :- Learn syntactical details of solidity through simple smart contracts

Code 1 :-

```
// SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.7.0 <0.9.0;

contract Hello {
    string public hello = "Hello World!";
}
```

Output 1 :-

The screenshot displays the Remix Ethereum IDE interface. The central editor shows the Solidity code for a contract named 'Hello'. The left sidebar contains the 'DEPLOY & RUN TRANSACTIONS' panel, which includes a 'Deploy' button, a 'Publish to IPFS' checkbox, and a 'Deployed Contracts' section. The 'Deployed Contracts' section shows a contract named 'HELLO AT 0XD91...39138 (ME)' with a balance of 0 ETH. Below this, there is a 'Low level interactions' section with a 'Transact' button. The bottom of the interface shows a 'CALL' log with the following details: [call] from: 0x5B38Da6a701c568545dCfC8B3F8B75f56beddC4 to: Hello.hello() data: 0x19f...f1d21. The 'Debug' button is visible next to the log entry.

Code 2 :-

```
// SPDX-License-Identifier: GPL-3.0

pragma solidity >=0.7.0 <0.9.0;

contract datatype {
    bool public boolean = true;
    int32 public int_32;
    int32 public int_var = type(int32).min;
    uint64 public int_64;
    uint256 public uint_var = type(uint256).max;
    string public str = "String";
    int256 public a = 1000;
    int256 public b = 100;

    function add_a_b() public view returns (int256) {
        int256 int_x = a + b;
        return int_x;
    }

    function sub_a_b() public view returns (int256) {
        int256 int_x = a - b;
        return int_x;
    }
}
```

Output 2 :-

Activities Brave Web Browser Nov 20 9:46 PM

Remix - Ethereum IDE x + remix.ethereum.org/#optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.7+commit.e28d00a7.js

DEPLOY & RUN TRANSACTIONS

a

Q: int256: 1000

add_a_b

Q: int256: 1100

b

Q: int256: 100

boolean

Q: bool: false

int_32

Q: int32: 0

int_64

Q: uint64: 0

int_var

Q: int32: -2147483648

str

Q: string: String

Test_1.sol Test_2.sol X bank.sol

```
1 // SPDX-License-Identifier: GPL-3.0
2
3 pragma solidity >=0.7.0 <0.9.0;
4
5 contract datatype {
6     bool public boolean = true;
7     int32 public int_32;
8     int32 public int_var = type(int32).min;
9     uint64 public int_64;
10    uint256 public uint_var = type(uint256).max;
11    string public str = "String";
12    int256 public a = 1000;
13    int256 public b = 100;
14
15    function add_a_b() public view returns (int256) {
16        int256 int_x = a + b;
17        return int_x;
18    }
19
20    function sub_a_b() public view returns (int256) {
21        int256 int_x = a - b;
22        return int_x;
23    }
24
25 }
```

0 ☐ listen on all transactions Search with transaction hash ...

CALL [call] from: 0x5B38Da6a701c568545dCfC803F56beddC4 to: datatype.uint_var() data: 0x9dd...3576f Debug