



School: Campus:
Academic Year: Subject Name: Subject Code:
Semester: Program: Branch: Specialization:
Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment : Read the Chain – Web3.js Basics

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- **Connect Wallet** – Establish a connection to the MetaMask wallet.
- **Load Smart Contract** – Fetch the deployed smart contract using its **ABI** and **address**.
- **Write Data to Blockchain** – Call a write function (e.g., `set()`) using `.send({ from: user })`; approve the transaction in MetaMask.
- **Read Data from Blockchain** – Call a read function (e.g., `get()`) using `.call()`; no gas fee required.
- **Update Frontend UI** – Display the fetched results on the frontend after the transaction confirmation.

Software used

1. MetaMask Wallet
2. Remix IDE.
3. MS Word.
4. Brave for researching.

* Implementation Phase: Final Output (no error)

1. Connect to MetaMask Wallet.
2. Setup Contract.
3. Write value to Blockchain.
4. Read Value.
5. Update UI with result.

The screenshot shows the Remix IDE interface. On the left is the 'FILE EXPLORER' with a list of files including .deps, .states, artifacts, contracts, scripts, tests, .prettierrc.json, new.sol, README.txt, SimpleStorage.sol, and TO-DO-LIST.sol. The main editor displays the Solidity code for 'new.sol'.

```

1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.0;
3
4 contract HelloSolvency {
5     uint public storedData;
6
7     constructor(uint _data) {
8         storedData = _data;
9     }
10
11     function set(uint x) public {
12         storedData = x;
13     }
14
15     function get() public view returns (uint) {
16         return storedData;
17     }
18 }

```



Read the Chain

Connect Wallet

Read Message

Read the Chain

Connected: 0x7760106495a804b2DE289dc8010Bc5b2a011eB14

Read Message

Smart Contract Message:

Hello, Web3!

*** Observations:**

Writing data to the blockchain required gas and MetaMask confirmation, while reading data was free and instantaneous. The UI updated automatically once the transaction was confirmed, reflecting the latest blockchain state.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Signature of the Student:*Name :**Regn. No. :****Signature of the Faculty:***