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 Experiement : **Read the Chain _ Web3.js Basics**

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

- ☐ Connect Web3 wallet.

- ☐ Fetch smart contract with ABI and address.

- ☐ For write:

  - ☐ Call a function like set() with .send({ from: user })

- ☐ For read:

  - ☐ Call a function like get() with .call()

- ☐ Display result on the frontend.

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.


```solidity
// SPDX-License-Identifier: MIT
pragma solidity ^0.8.0;

contract HelloSolidity {
    uint public storedData;

    constructor(uint _data) {
        storedData = _data;
    }

    function set(uint x) public {
        storedData = x;
    }

    function get() public view returns (uint) {
        return storedData;
    }
}
```

Read the Chain

Connect Wallet

Connected: 0x7760106495a804b2DE289dc8010Bc5b2a61feB14

Store Number

456866   Set Number

Read Number

Get Number

Stored Number: 456866

Read the Chain

Connect Wallet

Connected: 0x7760106495a804b2DE289dc8010Bc5b2a61feB14

Store Number

555555   Set Number

Read Number

Get Number

Stored Number: 555555

* Observations:

☐ Writing (set) requires gas and confirmation from MetaMask.

☐ Reading (get) is free and fast.

☐ Updates reflect in UI once the transaction is confirmed.

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:

**As applicable according to the experiment.*
Two sheets per experiment (10-20) to be used.