



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 :** Hello Solidity – Writing First Smart Contract

### Objective/Aim:

- To write, compile, and deploy your first Solidity smart contract.
- To store and retrieve simple data on the Ethereum Sepolia Testnet using MetaMask and Remix IDE.

### Apparatus/Software Used:

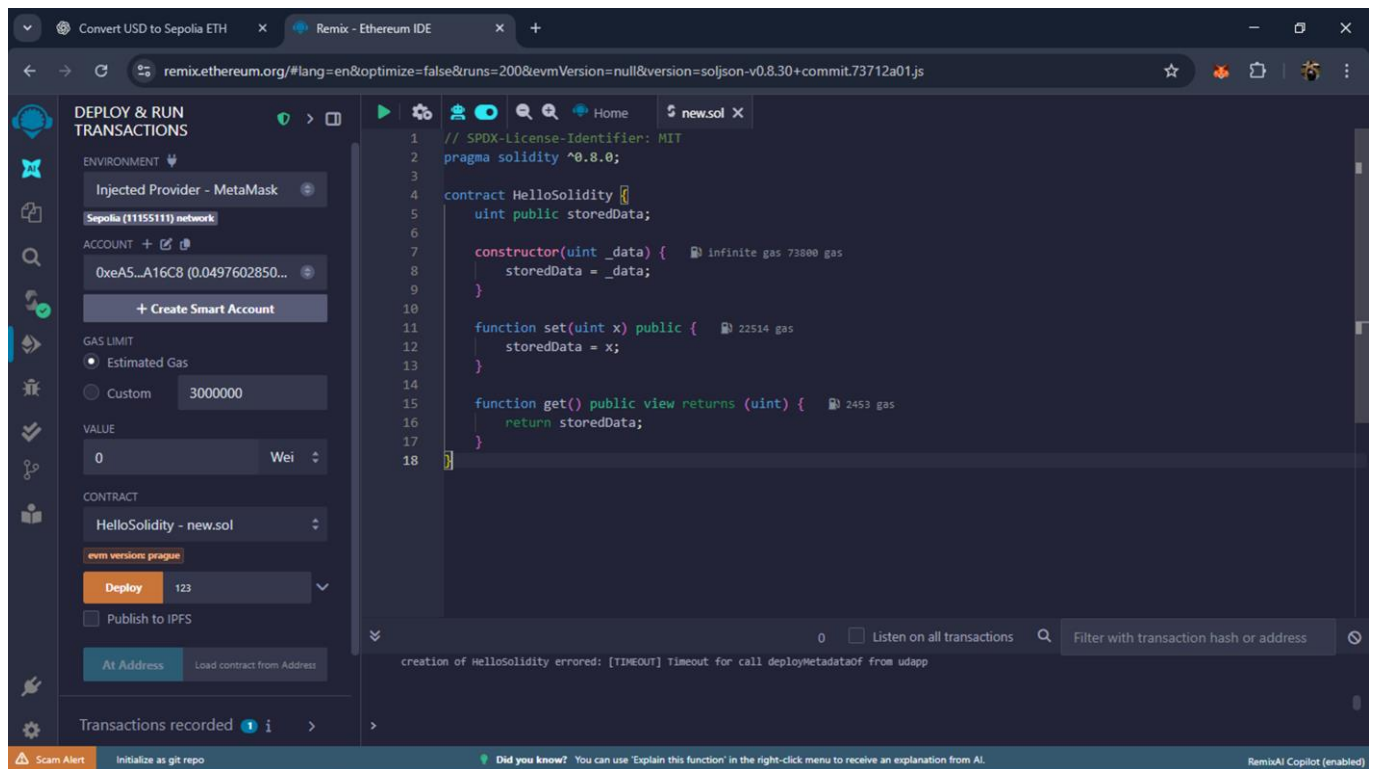
- Laptop/PC
- Word for documentation
- Internet for research
- Chrome Browser
- Remix – Ethereum IDE

### Theory/Concept:

- **Solidity:** A high-level programming language used to write smart contracts for Ethereum.
- **Smart Contract:** A self-executing contract with the rules written directly into code.
- **Remix IDE:** A browser-based development environment for writing, deploying, and testing Solidity contracts.
- **MetaMask:** A browser extension wallet used to interact with Ethereum-compatible networks like Sepolia.
- **Sepolia Testnet:** A public Ethereum test network that simulates the Ethereum mainnet for testing purposes.

## Procedure:

1. **Open Remix IDE** in your browser by visiting <https://remix.ethereum.org>.
2. **Create a new Solidity file** (e.g., new.sol) and write your first smart contract named HelloSolidity.
3. In the contract, define:
  - A public variable storedData of type uint.
  - A constructor that accepts a value \_data and stores it in storedData.
  - A set() function to update the value of storedData.
  - A get() function to read the current value of storedData.
4. **Connect Remix to MetaMask** by selecting the **Injected Provider - MetaMask** option under the "Environment" dropdown in the Remix sidebar.
5. Make sure **MetaMask is connected to the Sepolia Test Network** and your wallet is unlocked.
6. In Remix, select your contract (HelloSolidity) from the dropdown menu under "CONTRACT".
7. Enter an initial value in the input field next to the **Deploy** button , then click **Deploy** to deploy the contract.



## Observation Table

### Observation Point

Remix Environment

Contract Name

### Details

Remix IDE (browser-based IDE for Solidity)

HelloSolidity

## 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		
<b>Total</b>	<b>50</b>		

***Signature of the Student:***

*Name :*  
*Regn.No.*

***Signature of the Faculty:***