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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 : 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:

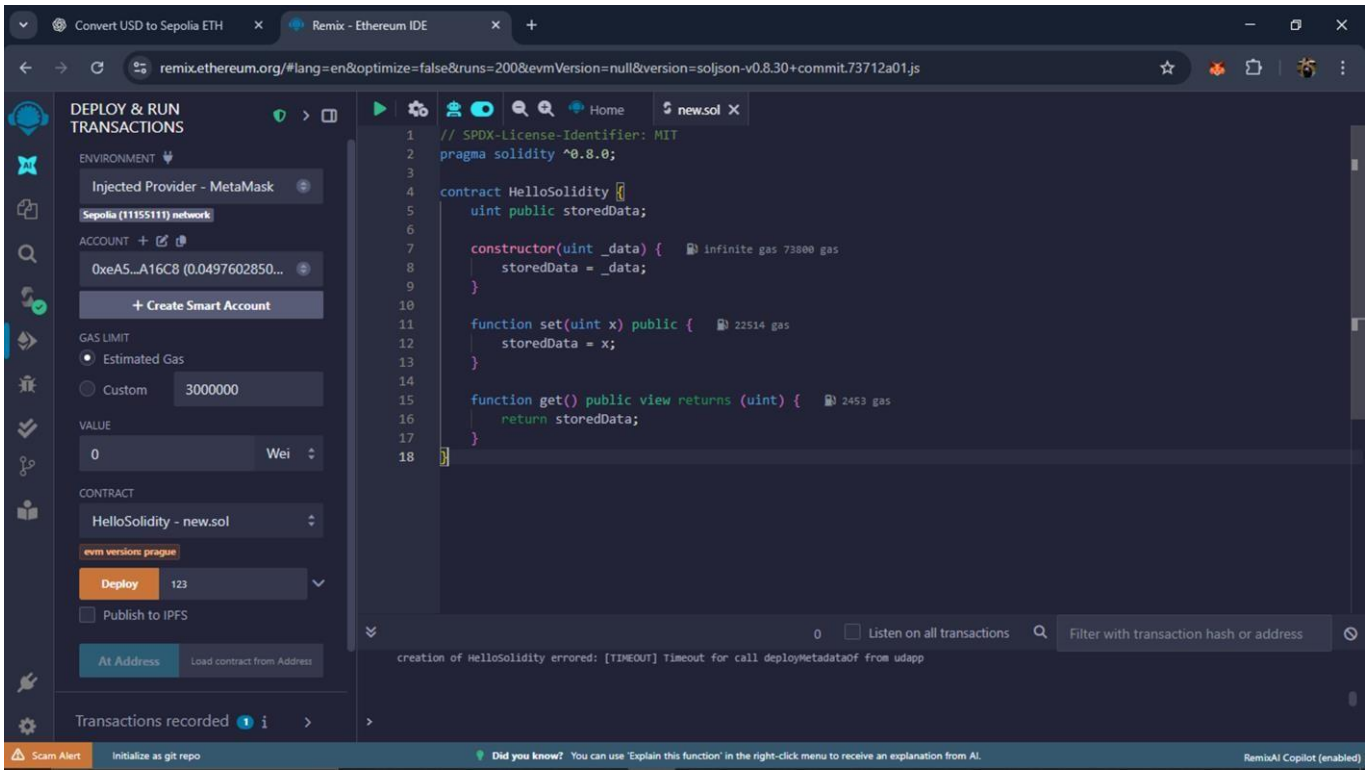
- Laptop/PC
- Word for documentation
- Internet for research
- Chrome Browser
- Remix – Ethereum IDE

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	Details
Remix Environment	Remix IDE (browser-based IDE for Solidity)
Contract Name	`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		
	10		

Signature of the Faculty:

Signature of the Student:

Name :
Regn.No.