School: ................................................................................ Campus: ......................................................

Academic Year: ..................... Subject Name: ......................................................... Subject Code: ........................

Semester: .............. Program: ....................................... Branch: ........................ Specialization: .........................

Date: ....................................

**Centurion**
UNIVERSITY
*Shaping Lives...*
*Empowering Communities...*

# Applied and Action Learning
(Learning by Doing and Discovery)

**Name of the Experiement :** Hello Solidity – Writing First Smart Contract

## * Coding Phase: Pseudo Code / Flow Chart / Algorithm

ALGORITHM:
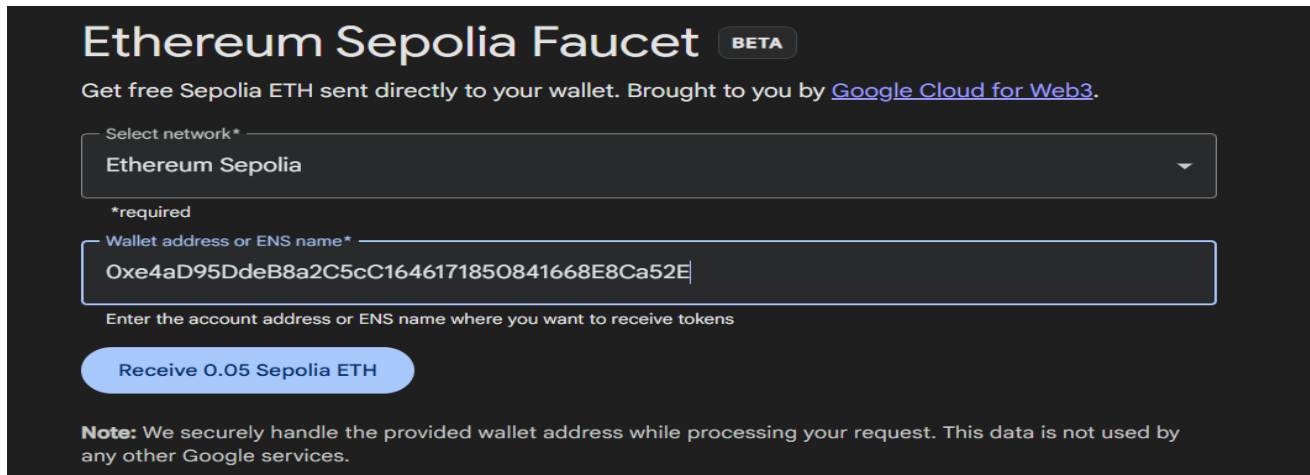
1. Start
2. Install the MetaMask extension in your browser and set up a wallet.
3. Connect to a test network (e.g., Sepolia) and collect test ETH from a faucet.
4. Open Remix IDE in your browser.
5. Create a new file named SimpleStorage.sol.
6. Write a simple contract in Solidity:
7. Write your code
8. Compile the contract using the Solidity Compiler in Remix.
9. In the Deploy tab, select Injected Provider - MetaMask and connect.
10. Click Deploy and confirm the transaction in MetaMask.
11. After deployment, click the greet() function to view the output.
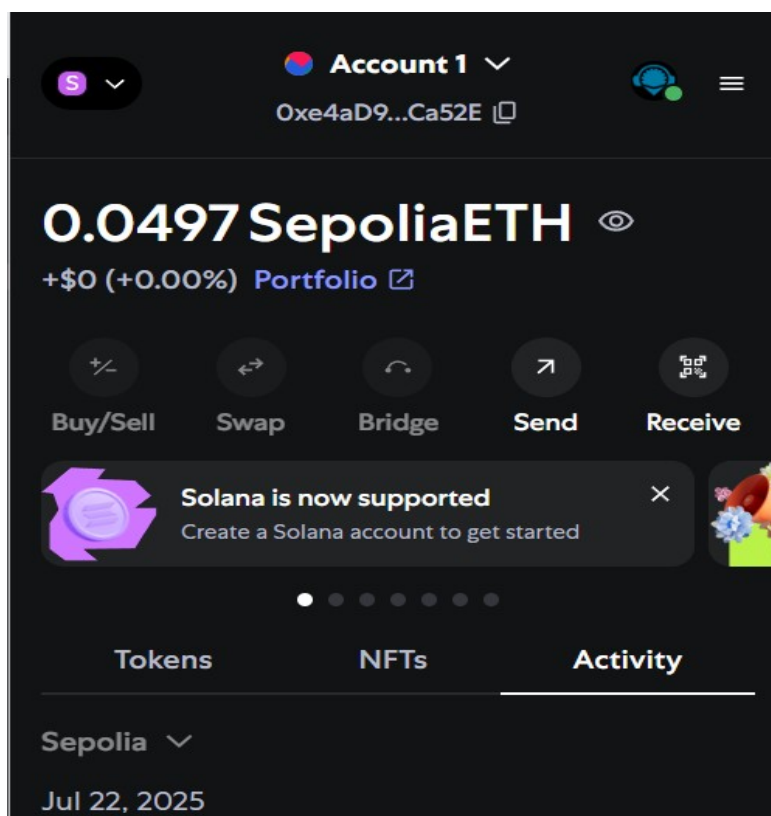12. End

# * Software Used:

1. Metamask Wallet
2. Remix IDE
3. Ethereum sepolia Faucet

# * Testing/Implementation Phase:

First we have to download Metamask and add the extension on the brave browser where u can use the remix ide . Then go to Ethereum cloud to receive faucet



Give your wallet address to receive 0.05 faucet



Open remix IDE on the same browser and create a solidity file named as SimpleStorage.sol and write the code which we have to deploy
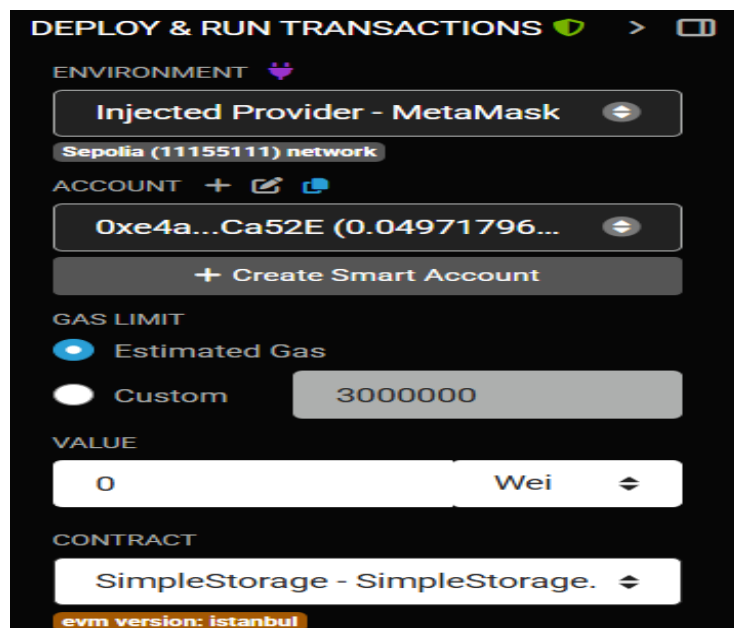
# * Testing/Implementation Phase:)
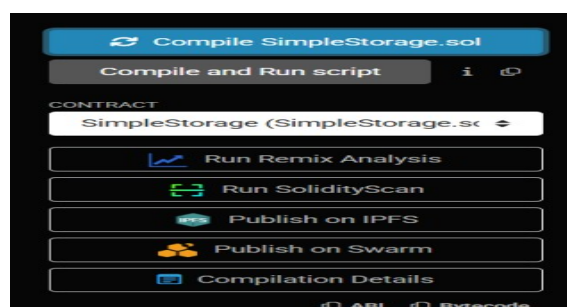
```
1   // SPDX-License-Identifier: MIT
2   pragma solidity 0.8.0;
3
4   contract SimpleStorage {
5       uint public storedData;
6
7
8       constructor(uint _data) {
9           storedData = _data;
10      }
11
12      function set(uint x) public {
13          storedData = x;
14      }
15
16      function get() public view returns (uint) {
17          return storedData;
18      }
19  }
20
```

In code we have to create two function named get() and set() Get function to get the data and set function to set the data  after write your smart contract go to the Enviornment and choose Injected Provider -Metamask  and you can see there are autogenerate of your Metamask Wallet address with the test balance

**DEPLOY & RUN TRANSACTIONS** 🛡  >  ▭

ENVIRONMENT 🔻

| Injected Provider - MetaMask | ⬍ |

Sepolia (11155111) network

ACCOUNT  +  ☑  🗗

| 0xe4a...Ca52E (0.04971796... | ⬍ |

+ Create Smart Account

GAS LIMIT

🔘 Estimated Gas

⚪ Custom     3000000

VALUE

| 0 | Wei  ⬍ |

CONTRACT

| SimpleStorage - SimpleStorage. ⬍ |

evm version: istanbul

Then cllick on compile after clicking our file has successsfully compiled

🔄 Compile SimpleStorage.sol

Compile and Run script     i   ⓒ

CONTRACT
| SimpleStorage (SimpleStorage.s⟨ ⬍ |

📈 Run Remix Analysis

🔁 Run SolidityScan

🔷 Publish on IPFS

🐝 Publish on Swarm

🖥 Compilation Details

ⓒ ABI    ⓒ Bytecode

# *  Implementation Phase: Final Output (no error)

Then click Deploy



Now Our smart contract has successfully deployed to our Wallet address



Observation:
1. The smart contract was successfully compiled and deployed on the Ethereum test network using Remix and MetaMask.
2. MetaMask handled the transaction and confirmed it on the blockchain.

## 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 Faculty:

Signature of the Student:

Name :

Regn. No. :

Page No............

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