Applied and Action Learning
(Learning by Doing and Discovery)

Name of the Experiement : Token Launch – Deploying a Token Locally

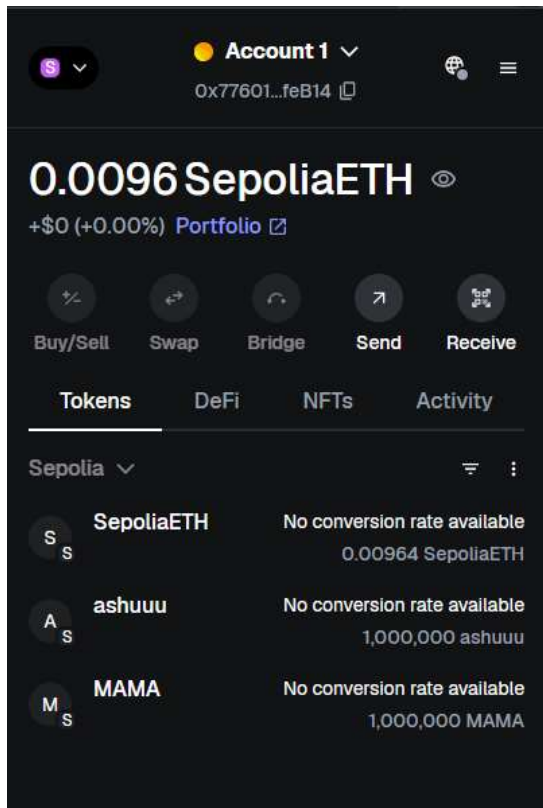# * Coding Phase: Pseudo Code / Flow Chart / Algorithm

1. **Set up Environment**
   o Open Remix IDE and ensure Solidity is selected.
2. **Write Contract**
   o Use OpenZeppelin's standard ERC-20 contract and name it accordingly (e.g., MyToken, DAIClone).
3. **Compile the Contract**
   o Compile the .sol file using the compiler tab (select Solidity 0.8.x or compatible version).
4. **Connect MetaMask**
   o Ensure MetaMask is set to Sepolia testnet (or your desired testnet).
5. **Deploy Contract**
   o In Remix, choose "Injected Web3" under the Deploy tab and click "Deploy."
   o Approve the transaction in MetaMask.
6. **Get Contract Address**
   o Copy the deployed contract address from Remix's "Deployed Contracts" panel.
7. **Add Token in MetaMask**
   o In MetaMask, click "Import Tokens," paste the contract address, and add the token manually.
8. **Mint / Transfer Tokens**
   o Use Remix to interact with contract functions like mint, transfer, or balanceOf.
9. **Use in DeFi (Swap)**
   o Go to a DeFi platform (e.g., Uniswap on Sepolia), connect wallet, and swap ETH to the custom DAI token.
10. **Verify Transactions**

- Check the activity section in MetaMask or on Sepolia Etherscan for verification.
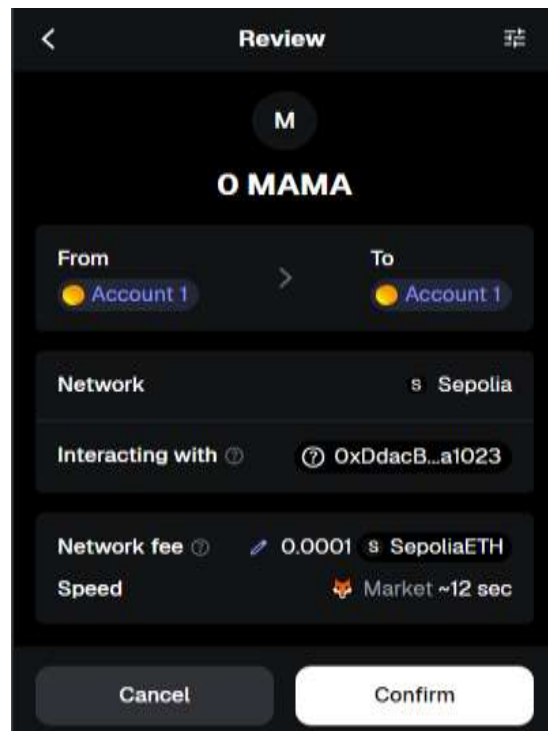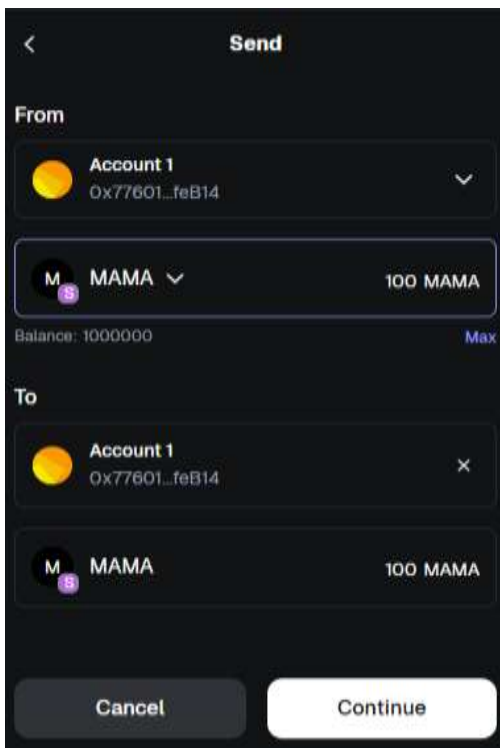
Software used

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

* Implementation Phase: Final Output (no error)

1. Firstly go to home page of MetaMask, then go to where you stored DAI tokens;
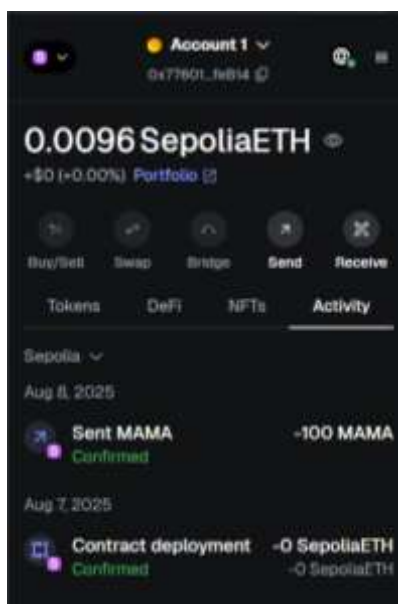

2. Then go to name of your token, tap on send option and add another one's wallet address;

* Implementation Phase: Final Output (no error)

3. Then transaction will complete within 12 sec;

* Observations:

- The deployed token only appears in MetaMask if manually added using the correct contract address.
- DeFi platforms can detect the token if it's listed or has standard ERC-20 functions.
- Swapping ETH to a custom token works only if there's enough liquidity in the pool.
- MetaMask records each transaction, including gas fee and token balance updates.
- Contract interaction via Remix is faster on testnets, and changes reflect instantly on MetaMask.

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 :

Signature of the Faculty:

Regn. No. :

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