	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 : Wallet in testnet

Objective/Aim:

To learn how cryptocurrency wallets operate on blockchain test networks, and to practice creating, configuring, and using a wallet (MetaMask) to send and receive test ETH safely without risking real funds.
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Apparatus/Software Used:

- Laptop or desktop computer
- Web Browser (Chrome / Brave)
- MetaMask Wallet Extension
- Ethereum Test Network (Sepolia / Goerli)
- Testnet block explorer (Sepolia/Goerli Etherscan)

Theory/Concept:

What is a cryptocurrency wallet?
A wallet is a software tool that holds your private keys and enables you to manage crypto assets — view balances, sign transactions, and interact with dApps. It does not store coins on your device; instead it stores keys that authorize transfers on the blockchain.
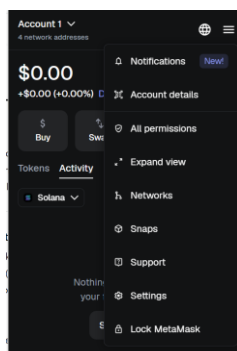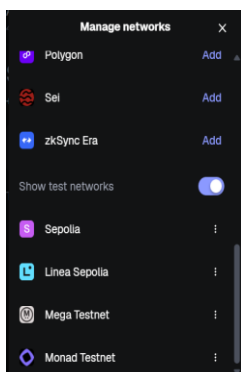
What is a testnet?
A testnet is an alternative blockchain that mirrors the main network but uses tokens with no monetary value. Testnets let developers and learners deploy smart contracts, test transactions, and troubleshoot without spending real cryptocurrency. Test ETH is obtained from faucets and can be used to simulate real-world operations safely. Transactions on testnets use **test ETH**, which has no real-world value and can be obtained from **faucets**.

Why use a wallet on testnet?
Using MetaMask (or similar) on a testnet allows you to practice wallet setup, network switching, transaction signing, and contract interaction. This reduces mistakes and security risks before moving to the mainnet.

Procedure:

- Install he MetaMask extension (or mobile app) and create a new wallet. Securely note the seed phrase and set a strong password.
- Open MetaMask and select a test network (Sepolia or Goerli) from the network menu.
- Copy your wallet address (the public account address) to the clipboard..
- Visit a reliable testnet faucet, paste your wallet address, and request test ETH.
- Wait for the faucet transaction to confirm and verify your balance in MetaMask.
- Send a small amount of test ETH from your wallet to another test wallet (or a friend's test address). Confirm the transaction in MetaMask.
- Open the testnet block explorer (Sepolia/Goerli Etherscan) and look up your transaction hash to view details: status, gas used, timestamp, sender, and receiver.
- (Optional) Connect your MetaMask wallet to a simple dApp on the testnet and interact (e.g., read contract state, submit a test transaction).
- Record observations about transaction latency, gas estimation, and any errors encountered.

Observation Table:

Parameter	Result / Notes
Wallet Setup	MetaMask installed and account created; seed phrase safely recorded
Network Switch	Successfully switched to Sepolia (or Goerli) test network
Faucet Funding	Test ETH received from faucet; balance updated in MetaMask
Sending TX	Small transfer executed; MetaMask showed pending → confirmed
Explorer Verification	Transaction visible on testnet Etherscan with correct details
Transaction Speed	Typical confirmation within seconds–minutes depending on network load
Gas & Fees	Gas estimation shown by MetaMask; fees in test ETH only
Security	No real funds at risk — only test tokens used

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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.