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 Walkthrough – Hands-on Wallet Setup

Objective/Aim:

To understand and perform hands-on setup of a browser-based cryptocurrency wallet (like MetaMask), observe its components, and explore its usage for mining or interaction with blockchain applications.

Apparatus/Software Used:

- Laptop/PC
- Word for documentation
- Internet for research
- Meta Mask

Theory/Concept:

A **crypto wallet** allows users to interact with blockchain networks by securely storing and managing public and private keys. Browser wallets like **MetaMask** act as bridges between users and decentralized applications (dApps).

Key Concepts:

- **Public Key**: Wallet address used to receive funds.
- **Private Key / Seed Phrase**: Secret used to access and recover wallet.
- **Browser Wallets**: Extensions that manage keys and sign transactions (e.g., MetaMask, Trust Wallet Web Extension).
- **Gas Fees**: Small transaction fees on networks like Ethereum.
- **Mining (Browser-based)**: Not efficient on modern blockchains due to high computational needs, but some blockchains allow browser-based proof-of-work/token rewards (e.g., Monero via CPU mining).

Procedure:

Step 1: Install MetaMask Wallet

1. Open Chrome/Brave/Firefox.
2. Search: **MetaMask Extension** or go to https://metamask.io.
3. Click "Download" → Add extension to browser.

Step 2: Create Wallet

1. Click on MetaMask icon → "Get Started" → "Create a Wallet".
2. Set a **strong password**.
3. Carefully **write down the 12-word seed phrase**.
4. Confirm the seed phrase → Wallet is created.

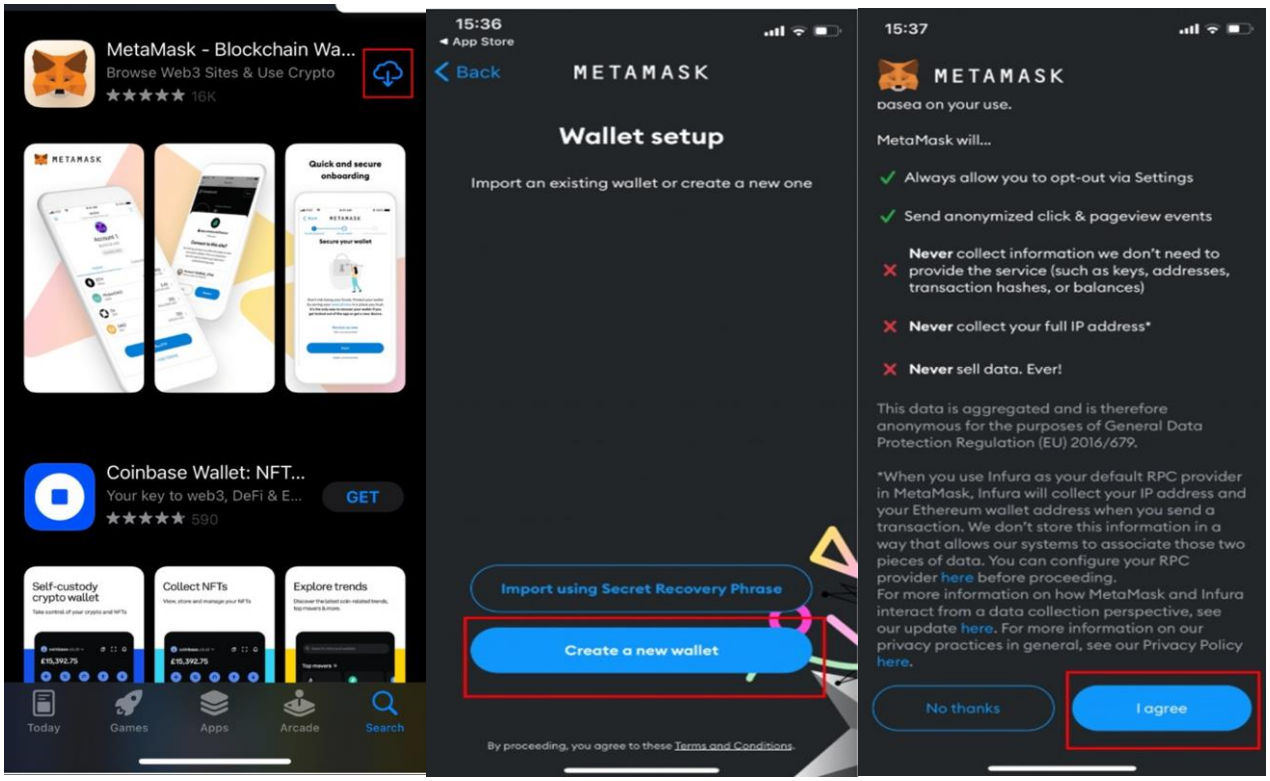
Step 3: Observe Wallet Interface

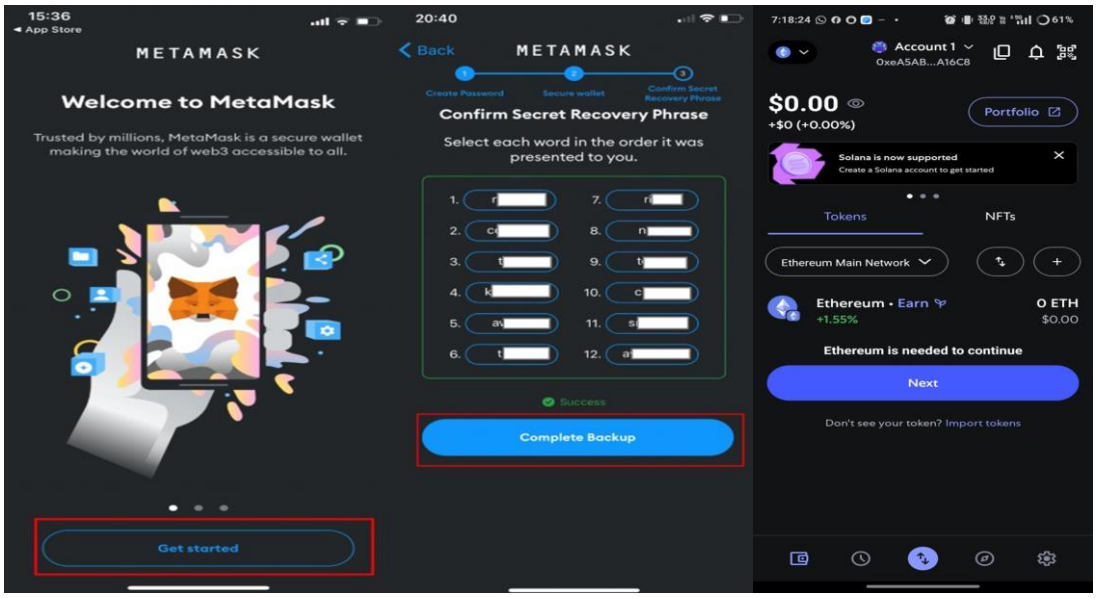
- **Account Address** (starts with 0x...)
- **Network Selector** (Ethereum Mainnet, Testnets, etc.)
- **Balance** (ETH or tokens)
- **Send / Receive / Swap functions**

Step 4: Add Test Network & Tokens (Optional)

1. Go to Settings → Networks → Add a Testnet (e.g., Goerli).
2. Use a **Testnet Faucet** to get test ETH for practice.

Step 5: Simulate Mining (Educational Purpose)





Observation Table:

Sl. No.	Step	Observation / Output
1	Installed MetaMask	Extension added to browser
2	Created Wallet	Wallet created; seed phrase generated
3	Wallet Interface	Address: `0x...`, Network: Ethereum Mainnet
4	Received Test ETH (Goerli)	Wallet shows balance of 0.1 Goerli ETH
5	Tried sending tokens	Transaction sent; pending then confirmed
6	Visited browser mining site	CPU usage spiked, hash rate observed
7	Mining status	Hash rate: ~20 H/s, Earnings: 0.000001 XMR

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.