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 Experiment: React Start – DApp Frontend Scaffolding

*Coding Phase: Pseudo Code / Flow Chart / Algorithm

1 Start React app

2 Import ethers

3 Detect MetaMask and request wallet access

4 Display connected account address

5 Connect to smart contract (optional)

6 Show transaction results or data

7 End

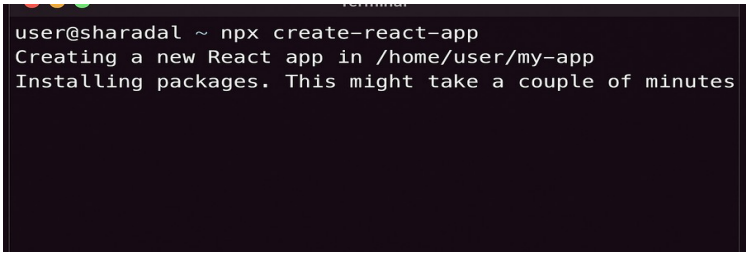
* Software used:

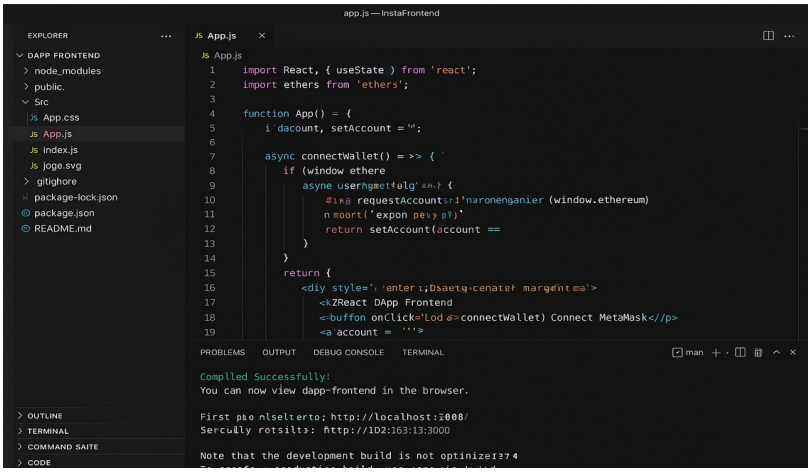
- Node.js
- React.js
- Ethers.js / Web3.js
- MetaMask
- Browser (Chrome/Brave)

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

* Testing Phase: Compilation of Code (error detection)

- Install Node.js and npm on your system.
- Create a React project using:
- `npx create-react-app dapp-frontend`
- `Navigate to the project folder:`
- `cd dapp-frontend`
- `Install required libraries:`
- `npm install ethers web3`
- `Create a file App.js and connect it to MetaMask using ethers.js.`
- `Fetch the current wallet address and display it on the page.`
- `Test connection using a deployed contract (optional).`
- `Run the app using:`
- `npm start`
- `Observe connection messages and UI behavior.`
-

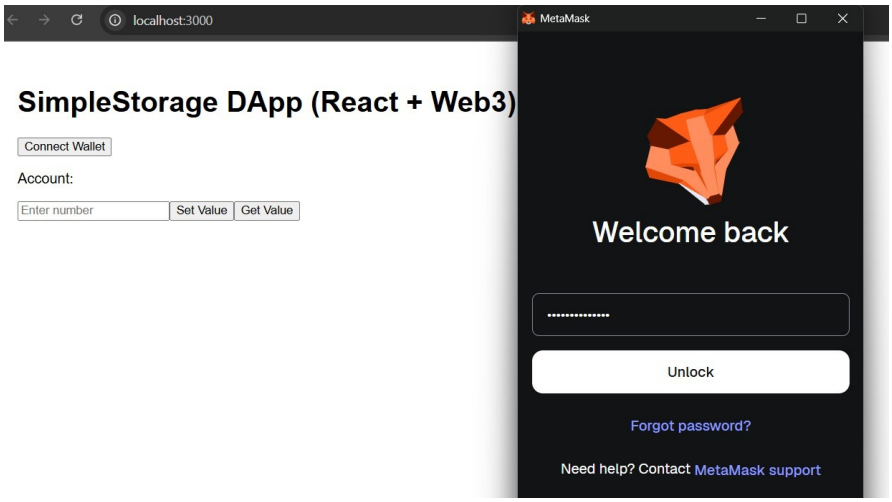




* Implementation Phase: Final Output (no error)

- The app loads successfully.
- “Connect MetaMask” button connects to the user’s wallet.
- The wallet address is displayed on the screen.

* Implementation Phase: Final Output (no error)



Observations:

It was observed that React.js provides an efficient structure for building DApp frontends. By integrating ethers.js or web3.js, the app can communicate with the Ethereum network. The MetaMask connection allows users to interact securely with blockchain smart contracts through a friendly web interface.

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. :

Signature of the Faculty:

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

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