



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

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 : Mobile-Ready – Cross-Platform DApp Awareness

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

ALGORITHM

- **Start** the process by identifying DApp features that must be supported on mobile devices.
- **Install** mobile-compatible wallets such as MetaMask Mobile or Trust Wallet for testing.
- **Develop** a responsive user interface using web technologies (HTML, CSS, React, or Flutter) that adapts to different screen sizes.
- **Integrate** Web3 libraries that support both mobile and desktop environments for blockchain connectivity.
- **Test and Deploy** the DApp on multiple platforms (Android, iOS, and web) to ensure seamless interaction and consistent performance.

* Softwares used

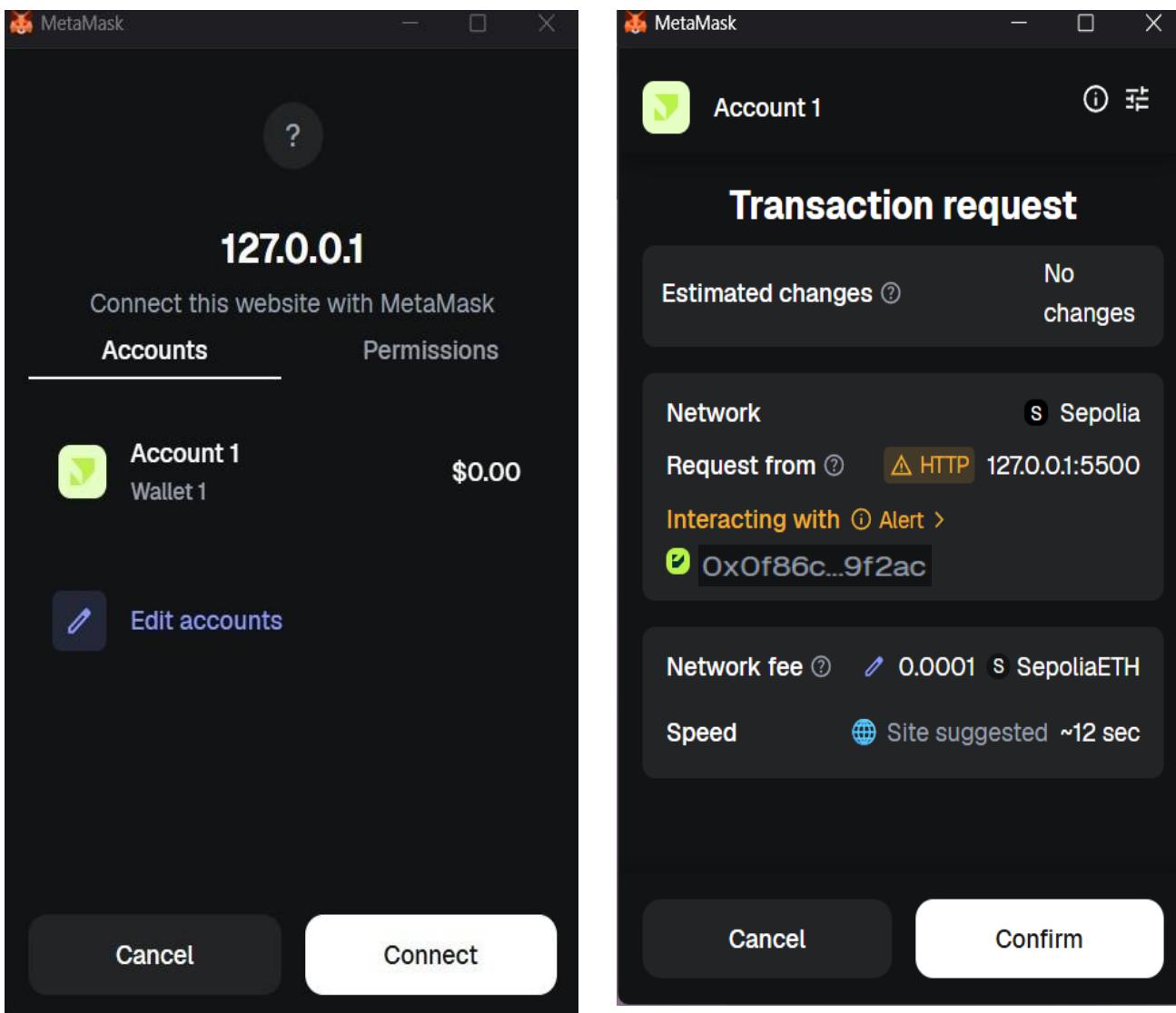
1. Remix IDE
2. MetaMask Wallet (Desktop & Mobile)
3. WalletConnect
4. A responsive web frontend built using React.js with Web3/Ethers.js.

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

* Testing Phase: Compilation of Code (error detection)

1. The DApp was tested on both desktop and mobile devices to ensure cross-platform compatibility.
2. On desktop, the DApp was accessed via brave browser with the MetaMask extension installed, and smart contract interactions were successfully performed.
3. On mobile, the same DApp URL was opened using the MetaMask mobile app browser, and WalletConnect was used to verify wallet integration for other mobile browsers.
4. Functional testing was conducted by performing basic read and write operations (e.g., invoking smart contract functions) on both platforms.
5. Responsive behavior of the user interface was checked using browser developer tools to confirm proper layout rendering on different screen sizes.
6. No errors or connection issues were found in smart contract execution across devices, validating the success of cross-platform functionality.



- The DApp was successfully made accessible across multiple platforms, including mobile and web browsers.
- The interface automatically adjusted to different screen sizes, ensuring smooth usability on smartphones and tablets.
- Wallet connections through MetaMask Mobile and Trust Wallet worked seamlessly for transactions.
- Cross-platform testing confirmed consistent functionality and performance across devices.
- The experiment proved that DApps can be effectively optimized for mobile platforms, enhancing accessibility and user experience.

*** Observations**

- The DApp interface successfully adapted to various screen sizes, including mobile and tablet displays.
- Wallet integration on mobile devices using MetaMask and Trust Wallet functioned correctly.
- Transactions and blockchain interactions were smooth and responsive across different platforms.

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:

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