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 Experiement :

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Flow of Cross-Platform DApp Usage:

1.User Opens Dapp:
- -On Desktop Browser (e.g., Chrome, Brave)
- -On Mobile Browser / App (e.g., MetaMask App, WalletConnect QR link)

2.Wallet Connection:
- -Desktop: MetaMask browser extension connects and injects Web3/Ethers
- -Mobile: MetaMask mobile app or WalletConnect QR enables connection

3.Smart Contract Interaction:
- -Frontend calls smart contract via Web3.js/Ethers.js
- -Both mobile and desktop run the same contract functions

4.Perform Transaction:
- -User triggers a read/write function (e.g., mint, vote, transfer)
- -Wallet asks for gas confirmation (popup appears)

5.Completion & Feedback:
- -Transaction is submitted and mined

6.DApp shows transaction hash, success or failure status

* 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.

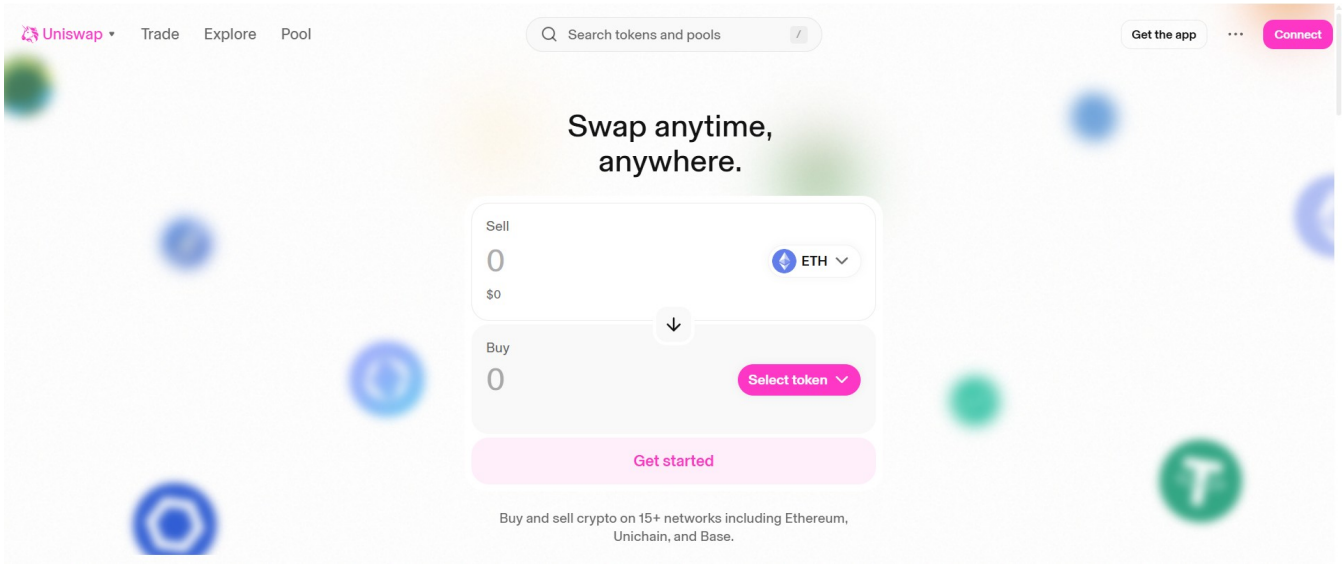
*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

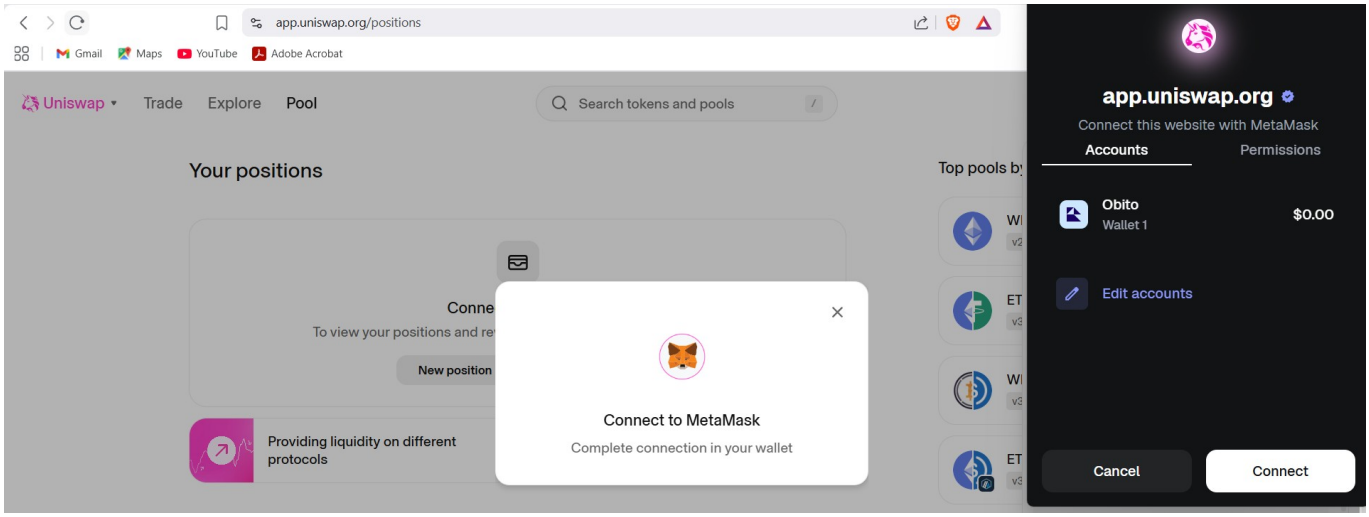
* Testing Phase: Compilation of Code (error detection)

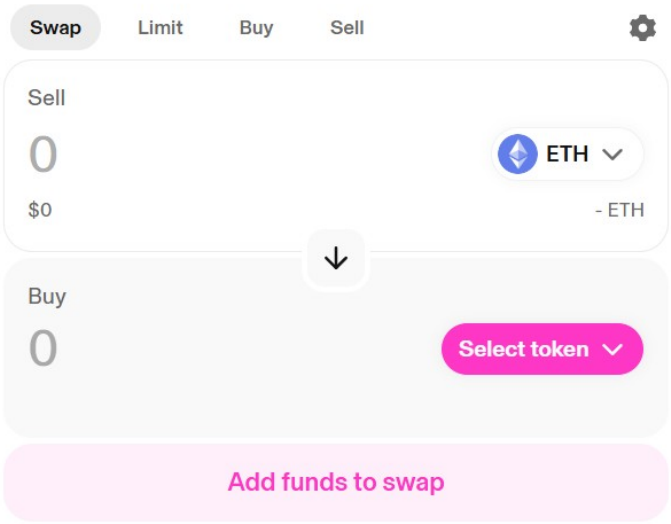
1.The DApp was tested on both desktop and mobile devices to ensure cross-platform compatibility.
2.On desktop, the DApp was accessed via a browser (Chrome) with the MetaMask extension installed, and smart contract interactions were successfully performed.
3.On mobile, the same DApp URL was opened using 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.

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

* Implementation Phase: Final Output (no error)







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

* Implementation Phase: Final Output (no error)

1.DApp frontend opens properly on both desktop and mobile devices
2.Wallet connected and smart contract methods executed successfully
3.No change in contract code required for cross-platform support
4.Final UI previewed on Chrome, Firefox (desktop), and MetaMask app (mobile)

* Observations

1.The same smart contract seamlessly works across mobile and desktop without code modifications.
2.WalletConnect is essential for mobile wallet integration, especially when browser extensions cannot be installed.
3.UI responsiveness is necessary for smooth user experience on mobile screens.
4.Cross-platform DApps improve accessibility and enable true decentralization by lowering device barriers.

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.