MIT WORLD PEACE UNIVERSITY

Attack Research and Documentation Fourth Year B. Tech, Semester 8

MY ETHER WALLET AND GANACHE

Lab Assignment 4

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February 28, 2025

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1 Aim

The aim of this lab assignment is to understand the basics of Solidity programming and to develop simple smart contracts. This includes setting up the development environment, writing and deploying smart contracts, and interacting with them using MyEtherWallet and Ganache. The assignment will help in gaining practical experience in blockchain technology and smart contract development.

2 Screenshots



Figure 1: My Ether Wallet

3 Frequently Asked Questions

3.1 What is MyEtherWallet and how to set it up?

MyEtherWallet (MEW) is an open-source, client-side tool for generating and managing Ethereum wallets. It allows users to create wallets, interact with smart contracts, and send transactions without relying on centralized exchanges.

To set up MyEtherWallet:

- 1. Visit the official website: https://www.myetherwallet.com/.
- 2. Click on "Create a New Wallet" and select a preferred method (e.g., Keystore file, mnemonic phrase, or hardware wallet).
- 3. Follow the security guidelines to save your private key safely.
- 4. Access the wallet using the chosen method and start managing Ethereum assets.

3.2 How to connect MyEtherWallet to the Ganache Network?

To connect MyEtherWallet to Ganache:

- 1. Open MyEtherWallet and go to the "Networks" section.
- 2. Click on "Add Custom Network" and enter the following details:
 - Network Name: Ganache Test Network
 - New RPC URL: http://127.0.0.1:7545 (default Ganache RPC URL)
 - Chain ID: 1337 (or any custom ID from Ganache settings)
 - Currency Symbol: ETH
 - Block Explorer URL: (Leave blank for local Ganache)
- 3. Save the network settings and switch to the Ganache network.

3.3 How to import a Ganache account into MyEtherWallet?

To import a Ganache account into MyEtherWallet:

- 1. Open Ganache and copy the private key of an account.
- 2. Open MyEtherWallet and select "Access My Wallet."
- 3. Choose "Software" and then "Private Key" as the access method.
- 4. Paste the copied private key and unlock the wallet.
- 5. You should now see the imported Ganache account with a test balance.

3.4 How to send a transaction on the Ganache network using MyEtherWallet?

To send a transaction on the Ganache network using MyEtherWallet:

- 1. Ensure that MyEtherWallet is connected to the Ganache network.
- 2. Access the imported Ganache account.
- 3. Click on "Send Transaction" and enter the recipient's address (another Ganache account).
- 4. Specify the amount of ETH to send.
- 5. Adjust gas fees (optional, but typically unnecessary for Ganache).
- 6. Click "Send" and confirm the transaction.
- 7. Verify the transaction in Ganache's transaction log.

3.5 How to get more Ether in Ganache for testing?

Ganache provides pre-funded accounts with test Ether. If more is needed:

- 1. Restart Ganache to reset the accounts and refill balances.
- 2. If using Ganache CLI, start it with a higher initial balance:

```
ganache-cli --accounts 10 --defaultBalanceEther 10000
```

- 3. Use web3. js or truffle console to transfer Ether between test accounts.
- 4. Manually modify account balances in Ganache settings (if using GUI).

4 Conclusion

MyEtherWallet provides a user-friendly interface for managing Ethereum accounts, interacting with smart contracts, and sending transactions. By integrating it with Ganache, developers can simulate real-world Ethereum transactions in a local test environment. This setup helps in smart contract testing and blockchain application development without incurring real-world gas fees.

References

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