E6885 Final Project: DAPP on ComputeCoin Network (CCN)

This course project aims to provide hands-on experience on decentralized applications (DAPP) development on blockchain. Based on your own background, you are free to select any topic for the project, such as DeFi, NFT exchanges, SocialFi and GameFi. An introduction to CCN can be found here (https://computecoin-network.gitbook.io/computecoin-network/computecoin/about-computecoin-ccn)

Instructions on how to start and complete your project

Step 1

Learn Solidity - a language for smart contract programming. You can learn the language by reading the document https://docs.soliditylang.org/ , or attending online Solidity programming courses https://learnacourseonline.com/top-11-courses-to-learn-solidity-online/

For smart contract development, you also need very basic knowledge on Javascript or Typescript as they will be used for writing test scripts.

Step 2

Learn smart contract tools – Truffle and Hardhat. Both are very popular tools for smart contract development, debug and test.

Truffle website: https://trufflesuite.com/
Hardhat website: https://hardhat.org/

You just need to learn one of the tools for your purpose. The courses in Step 1 should have covered at least one of the tools.

Step 3

Download IDE for smart contract development. You can use any preferred editor. However, Visual Studio Code (https://code.visualstudio.com/) is highly recommended.

Step 4

Read the smart contract development document for CCN (https://docs.computecoin.network/) The design goal of CCN is to be fully compatible with Ethereum and Web3 standard, so that Solidity language and its tools Truffle/Hardhat can be used as is on CCN.

Right now, there are two things that need your attention before development. Please read the document here (https://computecoin-network.gitbook.io/computecoin-network/for-developers/smart-contract-developers/web3-compatibility) for details.

Step 5

Join the CCN developers' community on Discord (https://discord.gg/f4Z2jJjtNp) and get test tokens. You can also get technical support in #smart-contract channel in Discord.

The RPC address of CCN Huygens test environment is in http://18.182.45.18:8765/, which is required in configuring Truffle and Hardhat.

Project requirements

1. Final report due date: May 13th, 2022
2. Project team members: <= 5 members; For a larger team, a larger project is expected.
3. You need to submit a final report no more than 5 pages, excluding references and figures. Only one member in your team needs to submit the report. All authors' UNI needs to be included in the report.
4. You need to submit your code to github and include your github link in your final report.
5. Your final report should follow the structure below:
    5.1. Title, Authors
    5.2. Abstract
    5.3. Introduction to your DAPP
    5.4. Originality/novelty
    5.5. Showcase of your DAPP (e.g., one example from user's experience)
    5.6. Conclusion
    5.7. Reference (including the github link to your project)