**Program Setup and Launch guide**

**Background**

This final year project is a group project. The current repository is finalized based on project **22CS016** only and may/does not reflect the final contribution for **22CS015**.

GitHub repository reference: <https://github.com/hung0125/CS4514_FYP_Blockchain_ipfs>

**Prerequisites**

* Setup OS should be Windows. The following guidelines were only tested on Windows.

**Step 1 – repository settings (do once)**

1. Install NPM (can be downloaded [here](https://nodejs.org/en)).
   * Upon installation, make sure the command ‘npm’ is responsive.
   * A screenshot of a computer program

     Description automatically generated with medium confidence
2. CD to **app** folder, issue command “npm i”.
3. Repeat step 2 for **smart\_contract** folder.

**Step 2 – wallet settings (do once)**

* Install MetaMask for Chrome (can be downloaded [here](https://chrome.google.com/webstore/detail/metamask/nkbihfbeogaeaoehlefnkodbefgpgknn)).
* Upon installation, set up Blockchain wallet.
  + A page like this should be automatically opened.
    - A screenshot of a wallet

      Description automatically generated with low confidence
  + Agree the terms then click “Import an existing wallet”. You could also create your own wallet.
  + On the next page, click “I Agree”
  + Input the following secret recovery phrase:
    - *limit error book doll distance lecture traffic mad brick wire essence mean*
    - (Directly copy the whole sentence then paste to the first input box)
  + Click the confirm button.
  + The page should be shown as follows:
    - A screenshot of a password

      Description automatically generated with medium confidence
  + Set the new password to **Cityufyp2022**
    - **Not recommended to change any new passwords.**
  + Click the import button.
  + After some confirmation dialogs, initialized page should be displayed as follows:
    - A screenshot of a computer

      Description automatically generated with medium confidence
  + Open “settings”.
    - A screenshot of a phone

      Description automatically generated with medium confidence
  + In the **Advanced** tab, turn on the following feature:
    - A picture containing text, font, algebra, screenshot

      Description automatically generated
  + In the **Networks** tab, click “Add a network” 🡪 “Add a network manually”.
    - A screenshot of a computer

      Description automatically generated with medium confidence
    - A screenshot of a network

      Description automatically generated with medium confidence
  + Input the network information as follows:
    - Network name: localhost
    - New RPC URL: <http://localhost:8545>
    - Chain ID: 31337
    - ETH
  + Save the information.
  + If there is a dialog box:
    - A screenshot of a computer screen

      Description automatically generated with low confidence
    - Click “Switch to localhost”
  + Else, switch to localhost host using the network tab on the top right corner.
    - A screenshot of a computer

      Description automatically generated with medium confidence
* Import local accounts from **localnode.bat**.
  + A screenshot of a computer

    Description automatically generated with medium confidence
  + Right click the account profile 🡪 “Import account”
  + Open the “localnode.bat”, following information should be displayed:
    - A screenshot of a computer

      Description automatically generated
  + Import any private key to the MetaMask window:
    - A screenshot of a login

      Description automatically generated with medium confidence
  + New account should be set as follows:
    - A screenshot of a computer

      Description automatically generated with low confidence

**Step 3 (do once)**

* Install IPFS desktop (can be downloaded [here](https://github.com/ipfs/ipfs-desktop/releases), named “[IPFS-Desktop-Setup-{version}.exe](https://github.com/ipfs/ipfs-desktop/releases/download/v0.28.0/IPFS-Desktop-Setup-0.28.0.exe)”).
* After launching the program, go the “Settings” tab then configure the following Json file as follows:
  + A picture containing diagram

    Description automatically generated

**Step 4 (do every time launch)**

* *App folder*: click **run.bat**.
* *Smart\_contract folder*: click **localnode.bat** first. When the account list is shown, click **deploy.bat**.
* Start IPFS desktop.

**Step 5 (do every time launch)**

* Go to [localhost:5173](http://localhost:5173)
* For each imported MetaMask account: profile icon 🡪 Settings 🡪 Advanced 🡪 Clear activity tab data
  + A screenshot of a phone

    Description automatically generated with medium confidence
* Connect to an MetaMask wallet account, renew the crypto keypair.
  + Graphical user interface, application

    Description automatically generated
* At this time, the system should be working.