B User Manual

This user manual describes the preparation before the deployment, the procedure of deploying the blockchain module and machine learning module and the user guide of the system.

1 Preparation of the Environment

Currently, the system only supports Windows or Linux. The following requirement for preparation mainly focuses on the Windows system:

1. Operating System: Windows 10 or 11.
2. Software Requirement: Docker Desktop, WSL 2, Ubuntu 20.04, Python.
3. Port Requirement: Port 8000 and Port 8888 should be allowed to use.

1 Deployment of Blockchain and ML Module

Firstly, user should decompress the file and open Docker Desktop, WSL 2 and Ubuntu. Open the file and run the following commands on the terminal:

```
$ cd deploy
$ ./start.sh
$ cd ..
$ cd application
$ ./build.sh
$ ./start.sh
$ cd ..
$ cd vue
$ ./build.sh
$ npm run dev
```

Then the website should be automatically open with the URL: http://localhost:8000/ and come into a login page. It means the deployment of the blockchain module is successful.

Then open the file called "MLWebServer" and run the main.py file. The machine learning module has finished deployment if the python file keeps running.

2 Interaction

For all actors, all accounts are allowed to log in to check the information inside the wallet. The investor can log into the "User 1" account to gain the portfolio strategy suggestion, create portfolio strategy, adjust portfolio strategy, and query the portfolio and several types of transactions.

Figure 1: Machine Learning Page

As shown in Figure 28, the user can submit the request of generating portfolio strategy suggestions after filling up constraints. Users will receive the result after several seconds.

Figure 2: Create Portfolio Page

As shown in Figure 29, users can create a portfolio strategy on Create Portfolio Page. After entering the desired share of each commodity, users can click "Create" to create a portfolio strategy.
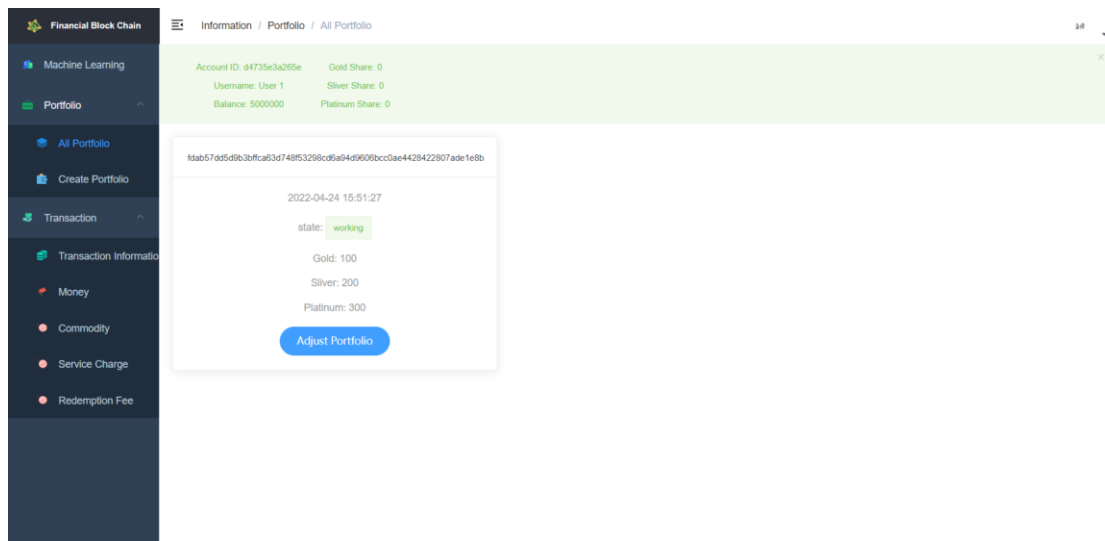
Figure 3: All Portfolio Page

As shown in Figure 30, users can query existing portfolio strategy on "All Portfolio Page". Users can also adjust their portfolio in the page when clicking "Adjust Portfolio". A modified portfolio strategy will generate after entering the desired share of the commodity.
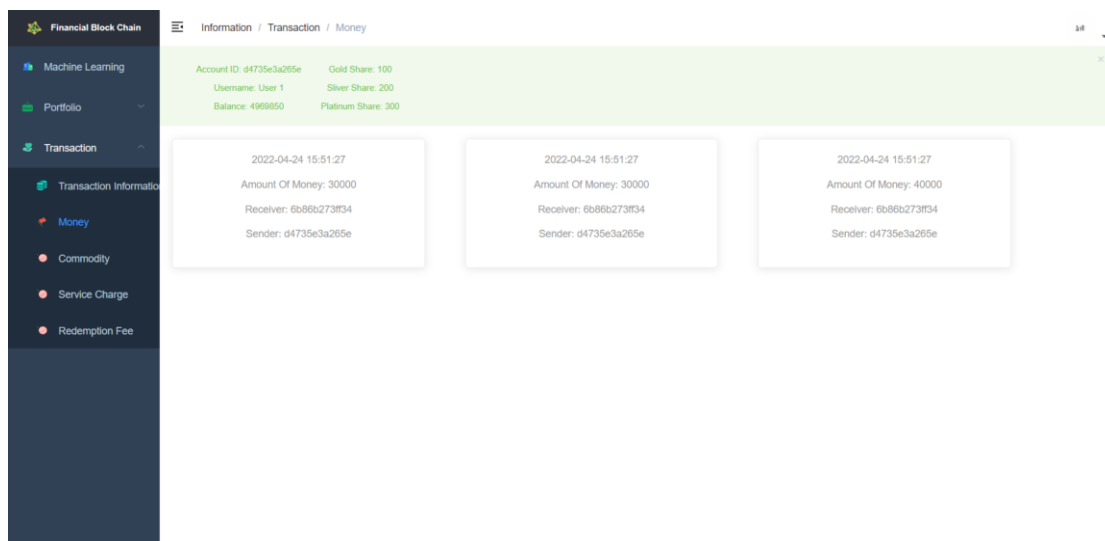

Figure 4: Money Transaction Page

As shown in Figure 31, users can open Money Transaction Page to query the money transaction of this account. Other types of transactions can be checked when opening relevant pages.
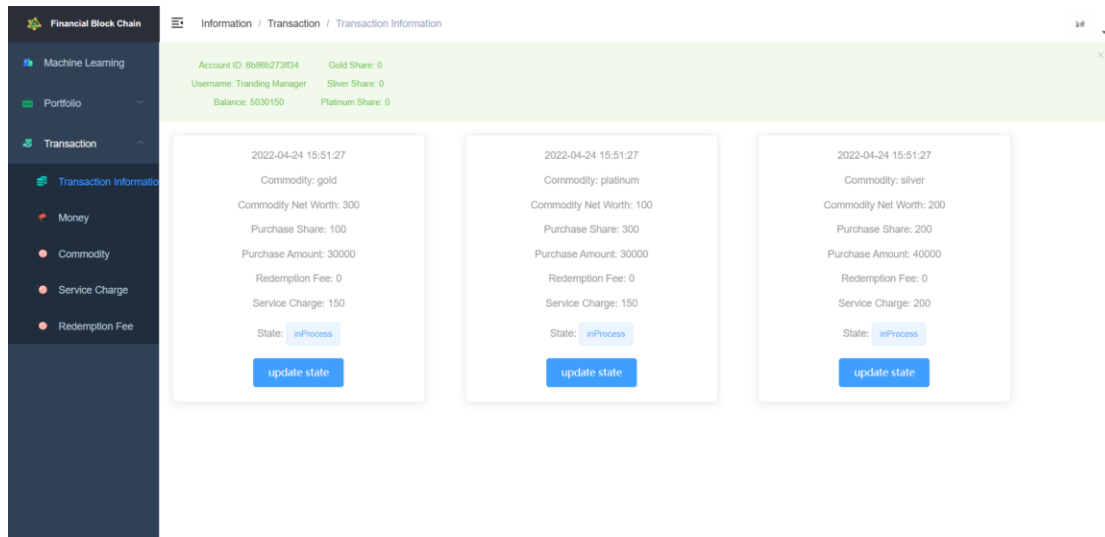
Figure 5: Transaction Information Page for Trading Manager

As shown in Figure 32, the trading manager can update the state of the transaction on Transaction Information Page when the role of the account is the trading manager. The trading manager can modify the state to "success", then several transactions will happen.