

CRYPTOCURRENCY EXCHANGE SYSTEM

PRESENTED BY TEAM WHATEVER: SHUHAO XIA, MAN LANG, LI HUA



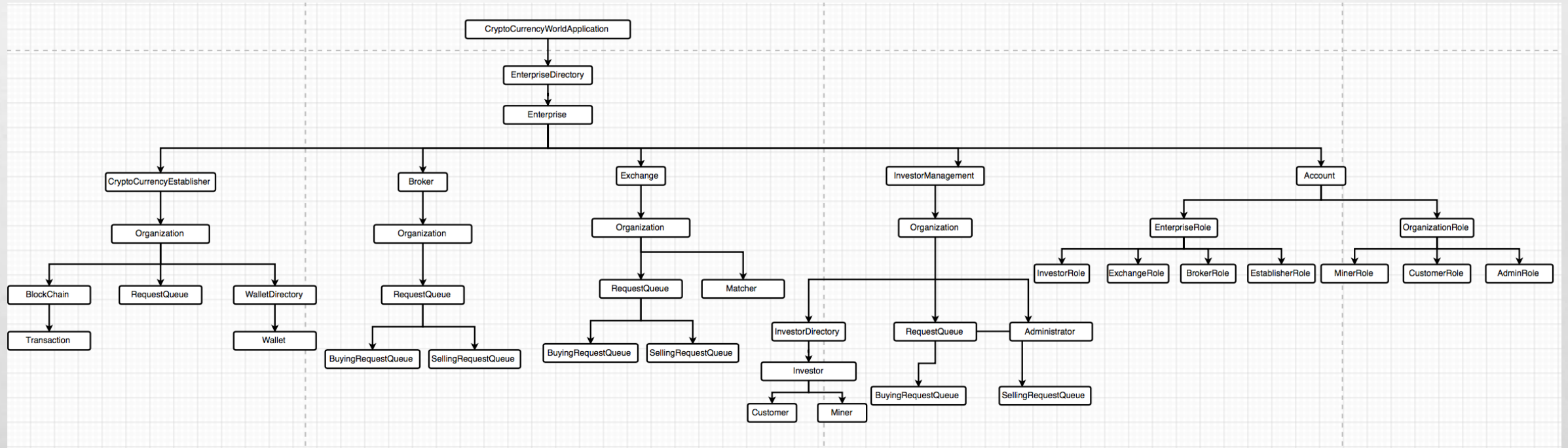
PROBLEM STATEMENT

- Cryptocurrency, as a digital currency, is stored and traded in a totally different way from traditional financial assets.
- Due to its special characteristics of decentralization and distributed ledger technology, a unique trading platform is required to meet the trading demands between cryptocurrency owners and investors.

APPROACH

- Our design simulates processes adopted in real cryptocurrency trading system, which includes submitting requests through brokers, matching process in exchange, and related processes such as creating new blocks, issuing new coins, etc.
- The whole application is designed in eco-system pattern, which enables end-users to expand this trading system into a all-in-one platform by adding in new types of cryptocurrency.

OBJECT MODEL



ROLES & USE CASES

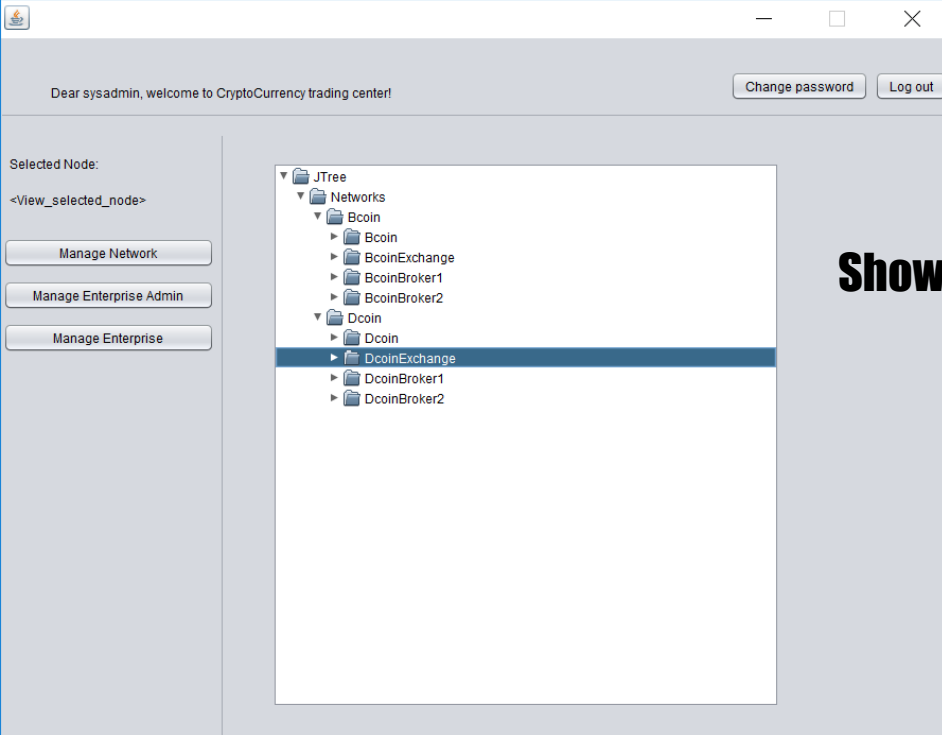
- **System administrator:** Manage networks, enterprises, and enterprise admins.
- **Cryptocurrency Establisher:** Create repository for each currency.
- **Broker administrator:** Responsible for managing brokers.
- **Exchange administrator:** Manage exchange employees.
- **Broker:** Responsible for managing buying/selling requests.
- **Matcher:** To match buying/selling requests submitted to the exchange.
- **Customer:** Investors who can only trade cryptocurrency on the platform.
- **Miner:** Investors who can mine (get bonus coins) for writing transactions in the blocks.

ADDITIONAL FEATURES

- Fully simulate the whole life cycle of real cryptocurrency trading processes.
- Sending reminder emails to newly registered users.
- Price trending chart of historical deal price data to help predict future price.
- Total ecosystem design.

SCREENSHOTS

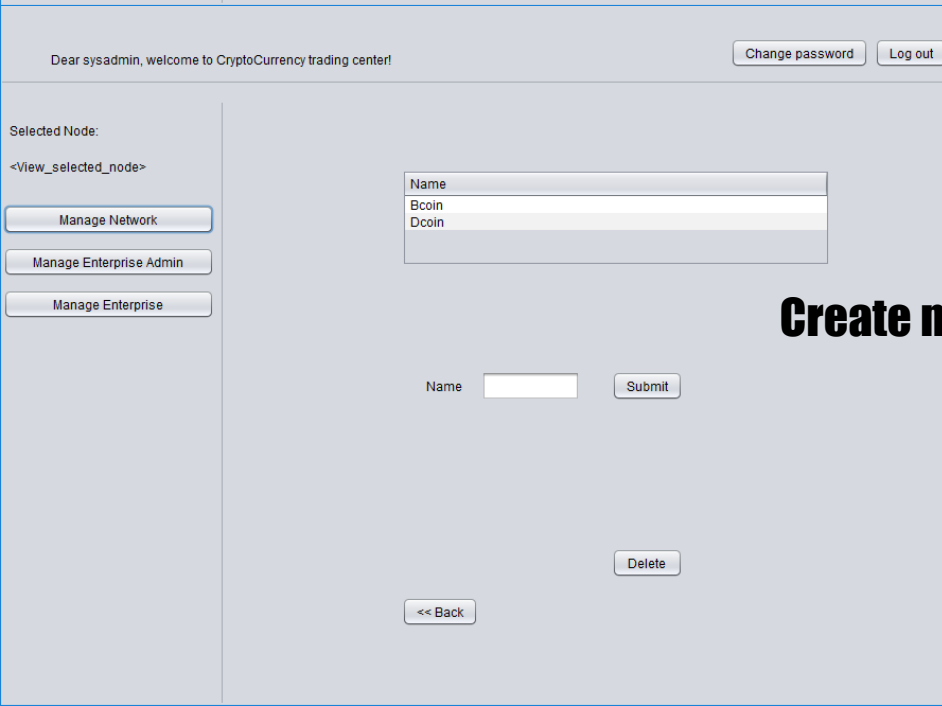
KEY SCREENS OF THE SYSTEM



System Admin Panel

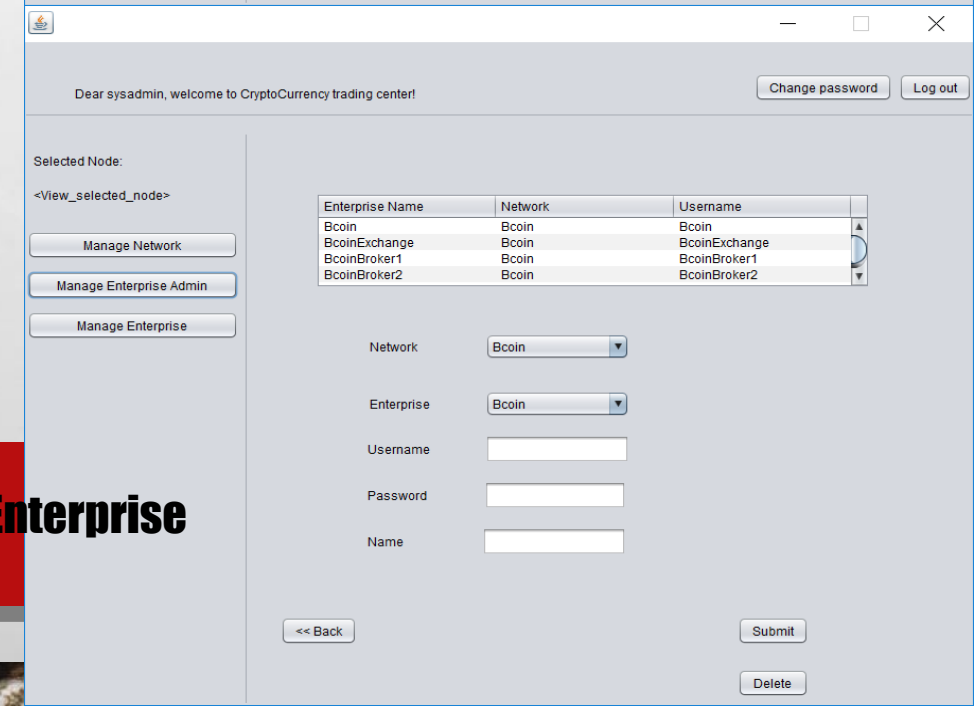
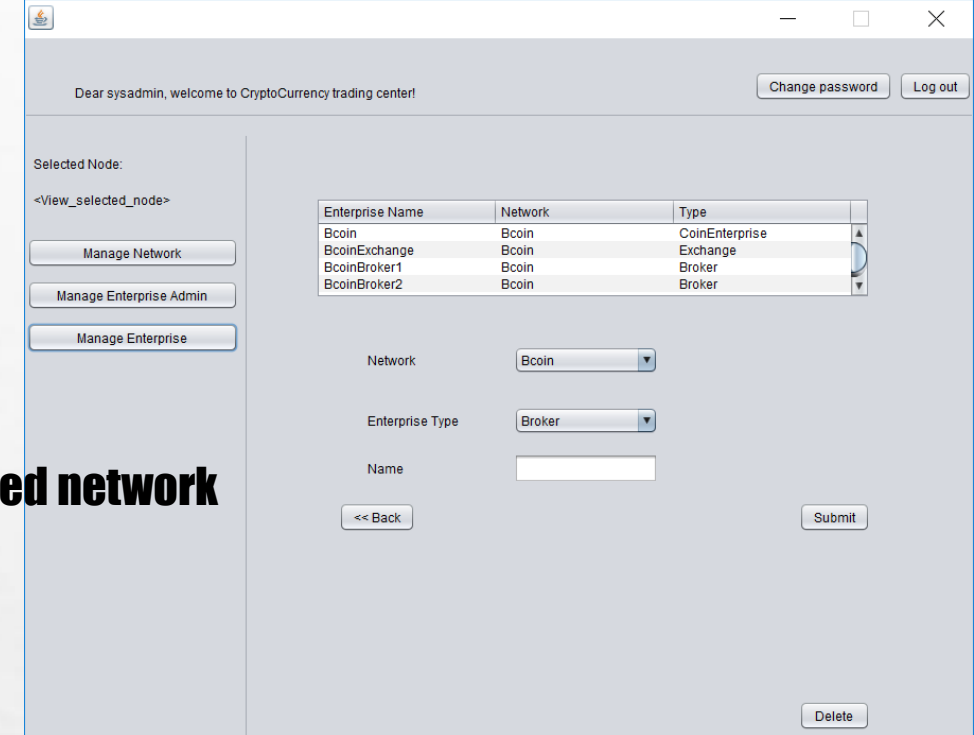
Show structure of this system

Create Enterprise in selected network



Create network and verify network name

Create Admin Account for Enterprise



Enterprise Admin

Dear Bcoin, welcome to CryptoCurrency trading center!

Change password

Log out

Bcoin

Name

Repository

Manage Organization

Manage User

Manage Organizations and their admin account under this enterprise

Organization Type

Block

Add Orga

Delete

Dear BcoinBroker1, welcome to CryptoCurrency trading center!

Change password

Log out

BcoinBroker1

User Name

br1

Role

ManageRequestAdmin

Manage Organization

Manage User

Organization

MngRequest

Role

ManageRequestA...

User Name

Password

Create

<< Back

Organization Admin

Dear br1, welcome to CryptoCurrency trading center!

Change password

Log out

MngRequest

Show Sell Request

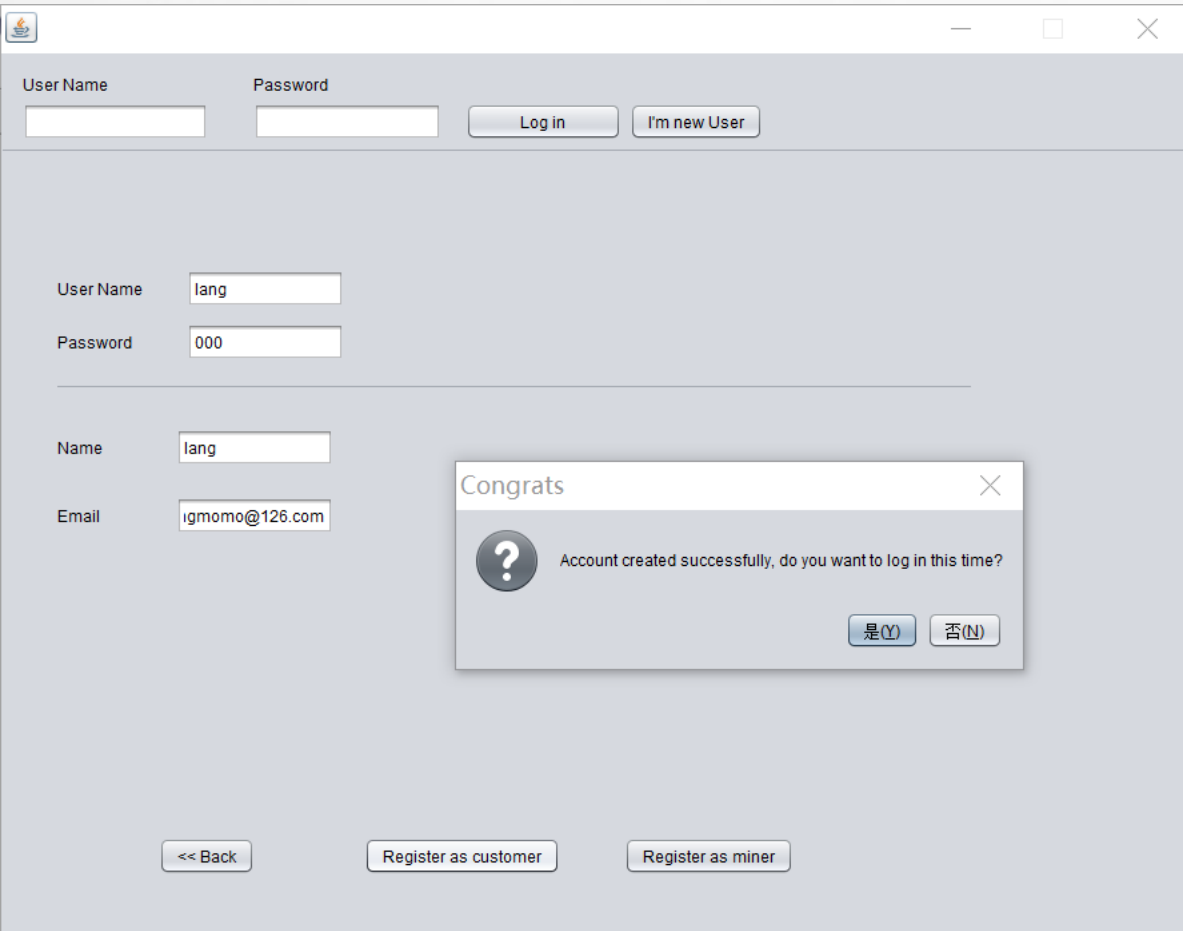
Show Buy Request

Customer	Price	Amount	CoinType	Type	Status
1	100	2.0	Bcoin	sell	
adminMiner	100	2.0	Bcoin	sell	
adminMiner	99	1.0	Bcoin	sell	
adminMiner	110	1.0	Bcoin	sell	
adminMiner	108	1.0	Bcoin	sell	
adminMiner	100	1.0	Bcoin	sell	
adminMiner	101	1.0	Bcoin	sell	
adminMiner	102	1.0	Bcoin	sell	
adminMiner	103	1.0	Bcoin	sell	
adminMiner	104	1.0	Bcoin	sell	
2	110	1.0	Bcoin	sell	
3	1	100.0	Bcoin	sell	
1	100	1.0	Bcoin	sell	

<< Back

View all requests(sell/buy) sent to this broker(match).

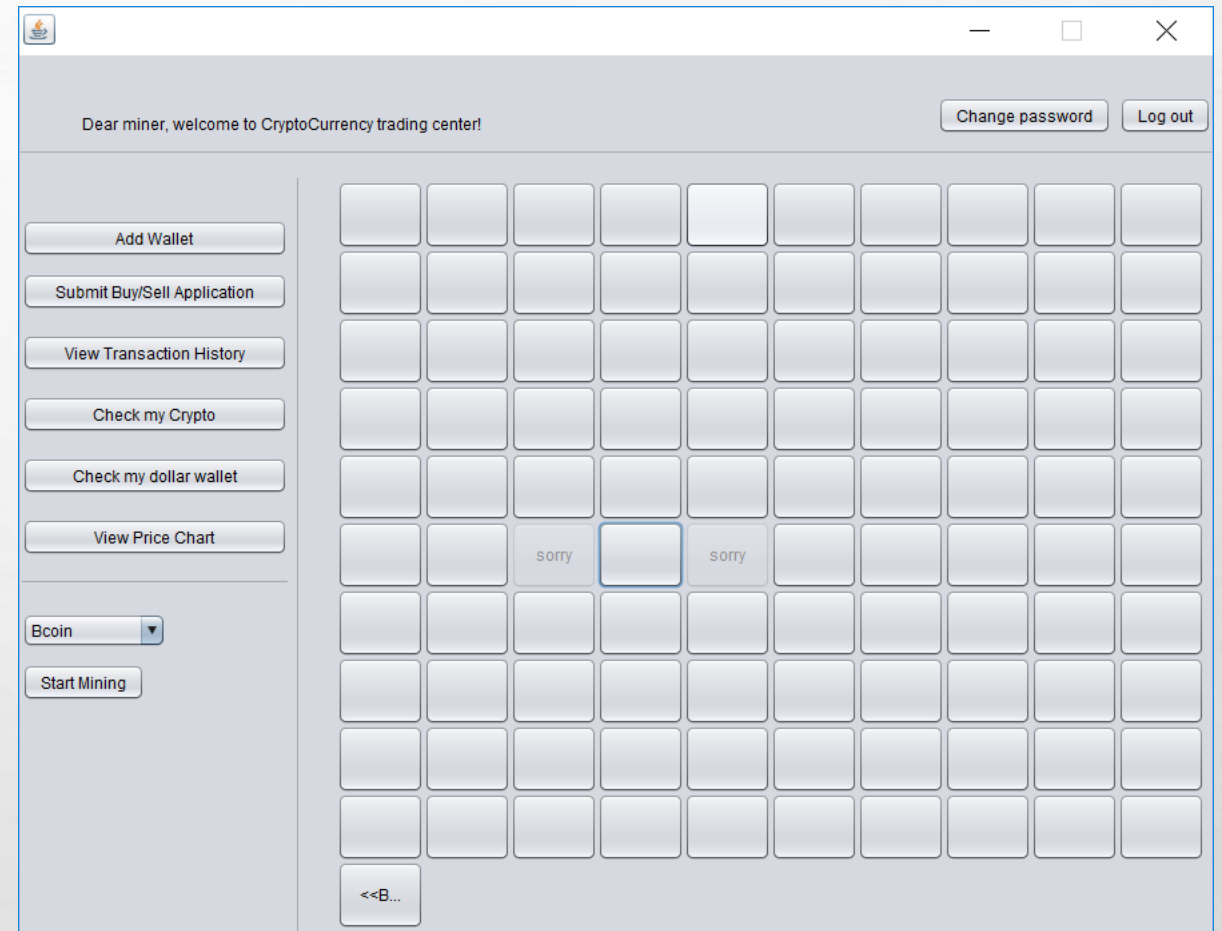
Register Customer



The screenshot shows a web application window titled "Register Customer". At the top, there are two input fields labeled "User Name" and "Password", followed by "Log in" and "I'm new User" buttons. Below these, there are two more input fields for "User Name" (containing "lang") and "Password" (containing "000"). Further down, there are input fields for "Name" (containing "lang") and "Email" (containing "igmomo@126.com"). At the bottom, there are three buttons: "<< Back", "Register as customer", and "Register as miner". A modal dialog box titled "Congrats" is open in the center, displaying a question mark icon and the text "Account created successfully, do you want to log in this time?". It has two buttons: "是(Y)" and "否(N)".

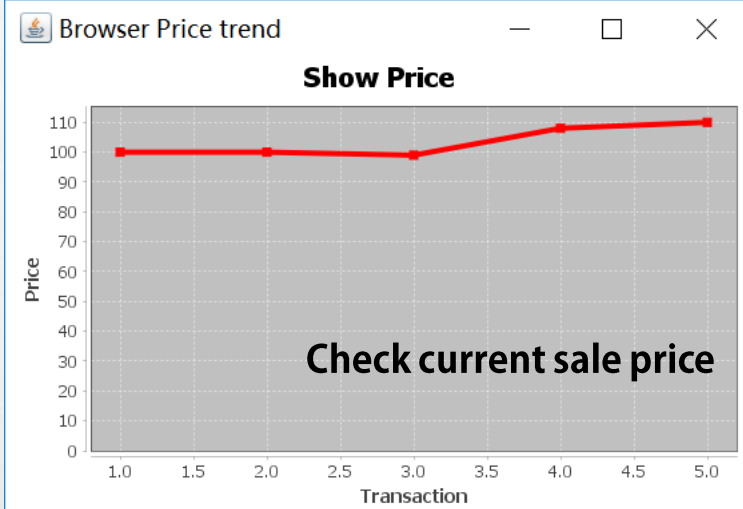
Register customer or miner(who is qualified for creating block)
Send login information to email address.

Miner Role



The screenshot shows a web application window titled "Miner Role". At the top, there is a greeting "Dear miner, welcome to CryptoCurrency trading center!" and two buttons: "Change password" and "Log out". Below the greeting, there is a list of buttons: "Add Wallet", "Submit Buy/Sell Application", "View Transaction History", "Check my Crypto", "Check my dollar wallet", and "View Price Chart". To the right of these buttons is a grid of 10 columns and 10 rows of buttons. The grid contains various buttons, including "sorry" and "Bcoin". At the bottom left, there is a dropdown menu labeled "Bcoin" and a button labeled "Start Mining". At the bottom right, there is a button labeled "<<B...".

Buy or sell coin like customer
Choose Coin type and create next block by digging out coin.



Customer Role

Wallet Panel

Recharge and check balance

Dear 2, welcome to CryptoCurrency trading center!

Change password Log out

Add Wallet

Submit Buy/Sell Application

View Transaction History

Check my Crypto

View Price Chart

Check my dollar wallet

wallet balance \$795.7

Add money

Dear lang, welcome to CryptoCurrency trading center!

Change password Log out

Add Wallet

Submit Buy/Sell Application

View Transaction History

Check my Crypto

View Price Chart

Check my dollar wallet

Coin Type Bcoin

Broker BcoinBroker1

Buy/Sell Buy

Preferred Price 100

Amount 1

<< Back Submit

Request Panel

Where customer can send buy/sell request to selected broker

Dear 2, welcome to CryptoCurrency trading center!

Change password Log out

Add Wallet

Submit Buy/Sell Application

View Transaction History

Check my Crypto

View Price Chart

Check my dollar wallet

Customer	Price	Amount	CoinType	Type	Status
2	100	2.0	Bcoin	buy	Buying price:100 Amount: 2.0
2	110	1.0	Bcoin	buy	Buying price:108 Amount: 1.0
2	120	1.0	Bcoin	buy	Buying price:110 Amount: 1.0

<< Back

Transaction History Panel

View personal requests history. Show each request status and final sale price

END

**THANK YOU
TEAM WHATEVER**