Used_goods_trading_platform_doc

Dapp (HOW TO RUN)

Web app (use nodejs)

How to run :

```
$> node server.js
```

Project subject

Used goods trading platform

Summary

Develop a platform for trading used goods safely. The seller registers the goods, and the buyer buys the desired item. When the buyer completes the delivery, the payment shall be made in principle.
It provides appropriate alternatives to various problems during the transaction. For example, the buyer does not complete the purchase, or the seller does not deliver the goods or the goods are delivered incorrectly.
Trading fees and commissions use only etherium.

Requirements

- Can register goods.
- After the buyer confirms receipt of the goods, payment is made.
- Prevention should be provided to prevent malicious users.
- The platform operator takes a certain fee.

Requirements segmentation

- Register product
    - Enter basic information necessary for product registration.
        - require product info
    - Product registration fee is deducted.
- Buy product
    - Product price and fees are deducted.
    - Enter the necessary information for the transaction.
        - require delivery info
- Shipment
    - Enter the tracking number after shipment.
- Receipt and payment
    - The buyer confirms the receipt of the product, the price is paid to the seller.
    - If the receipt confirmation process is not carried out for a certain period of time, the seller can handle it himself.
        - period check
- Secure
    - Checking the authority.
    - Measures against malicious sellers, buyers.
        - Mediation request function.
- Privacy
    - After the transaction is completed, buyer and seller can delete it themselves before deleting the item.
- Fees (owner)
    - Fee withdrawal

- Etc
  - Cancel purchase
  - Delete product
  - Delete SmartContract

Data architecture (on-chain ↔ off-chain)

- off-chain (json file)
  - product
    - id (pk) ← on-chain mapping
    - title
    - description
    - picture (URL)
- on-chain
  - product
    - id (pk) ← off-chain mapping
    - price
    - buyer account (address)
    - seller account (address)
    - seller phone number
    - state
    - last state changed date
  - delivery info
    - buyer home address
    - buyer phone number
    - tracking number
  - declaration info
    - register account (address)

Use-case

- Register product
  - Registeration fee : (Seller → SmartContract)
- View products
- Buy product
  - Reservation
    - Enter shipping information.
    - Payment (Buyer → SmartContract)
    - Reservation fee : (Buyer → SmartContract)
  - Shipment
    - Enter tracking number
  - Receipt and payment
    1. Receipt
       a. Pay to seller (SmartContract → Seller)
- Mediation request
  - Owner selects the person to be paid.
    - Payment (SmartContract → buyer or seller)
- Cancel purchase
  - Payment (SmartContract → buyer)
- Delete privacy data
- Fee withdrawal

Actor

- Seller
- Buyer
- Owner

Diagram

See attachment file : diagram.png