

CCMP 603 - Introduction to Smart Contracts

ORGANIC FOOD PROJECT

Team members:

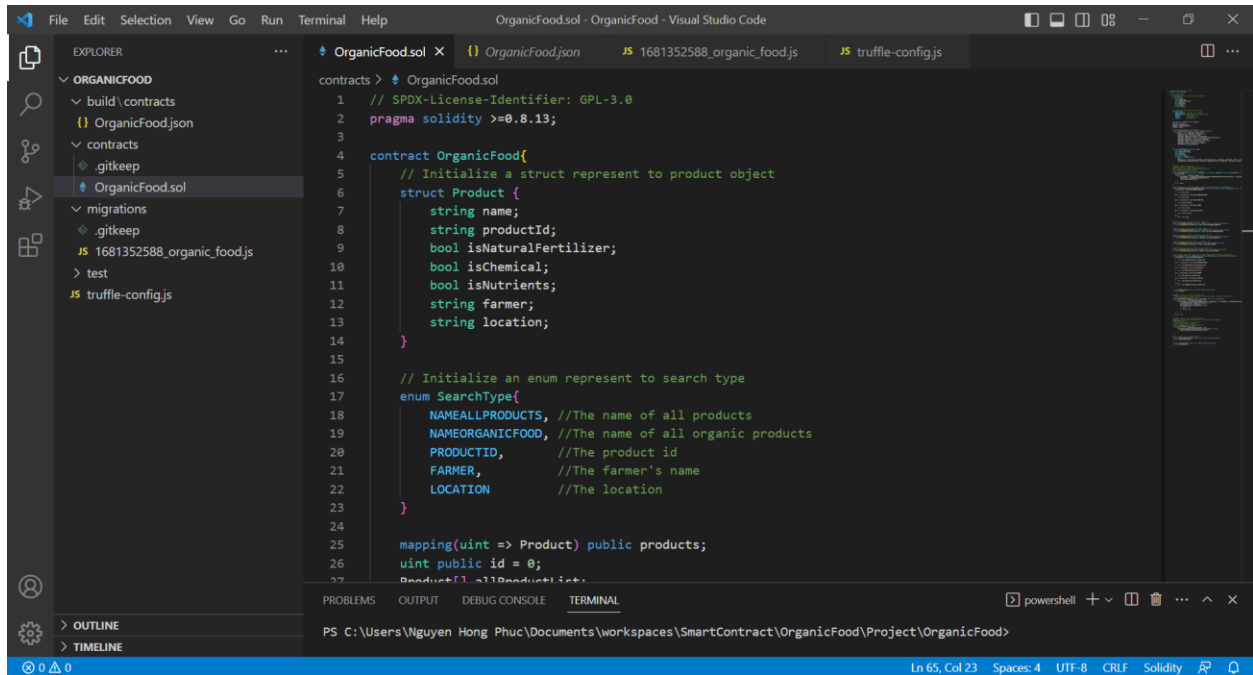
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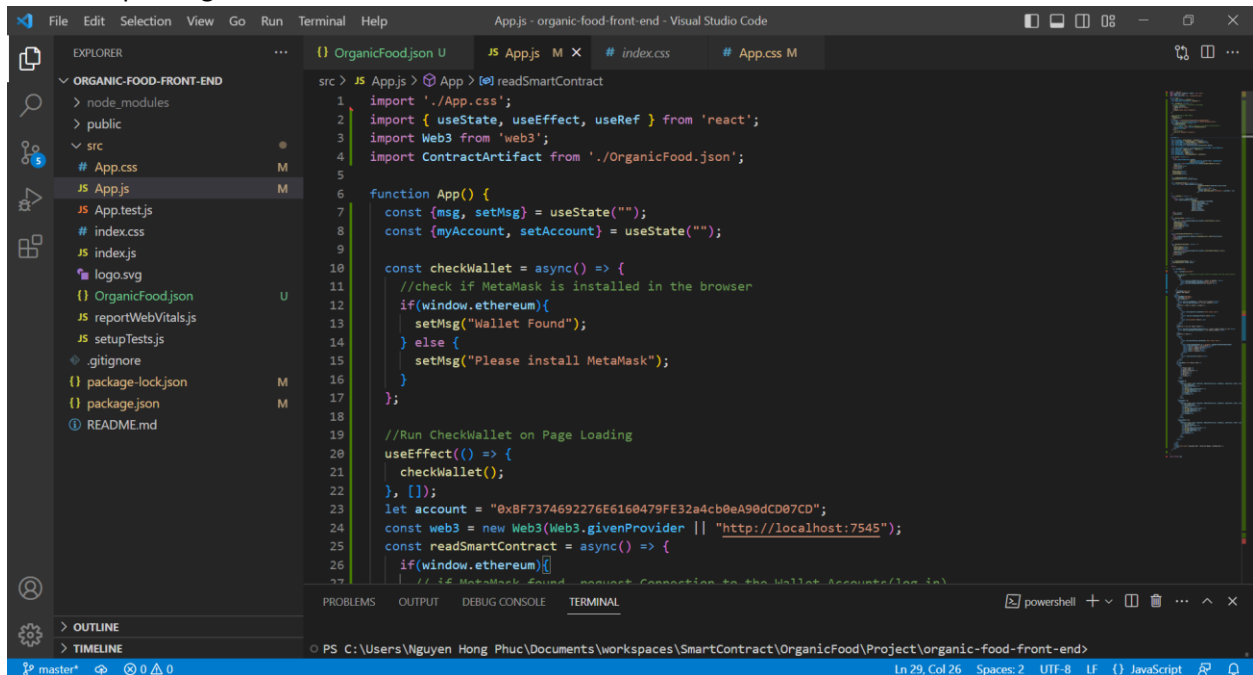
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A. Setting up environment

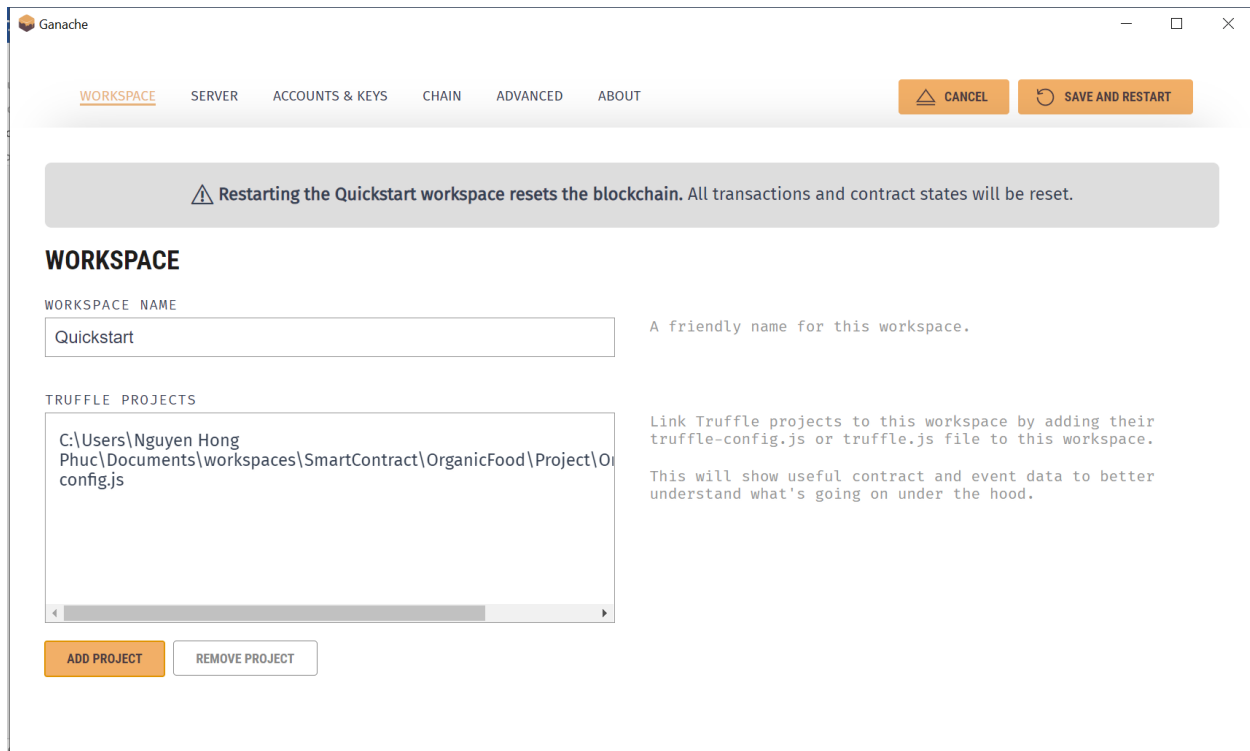
1. Open OrganicFood folder – backend in Visual Studio Code



2. Open organic-food-front-end folder – front end in a different Visual Studio Code



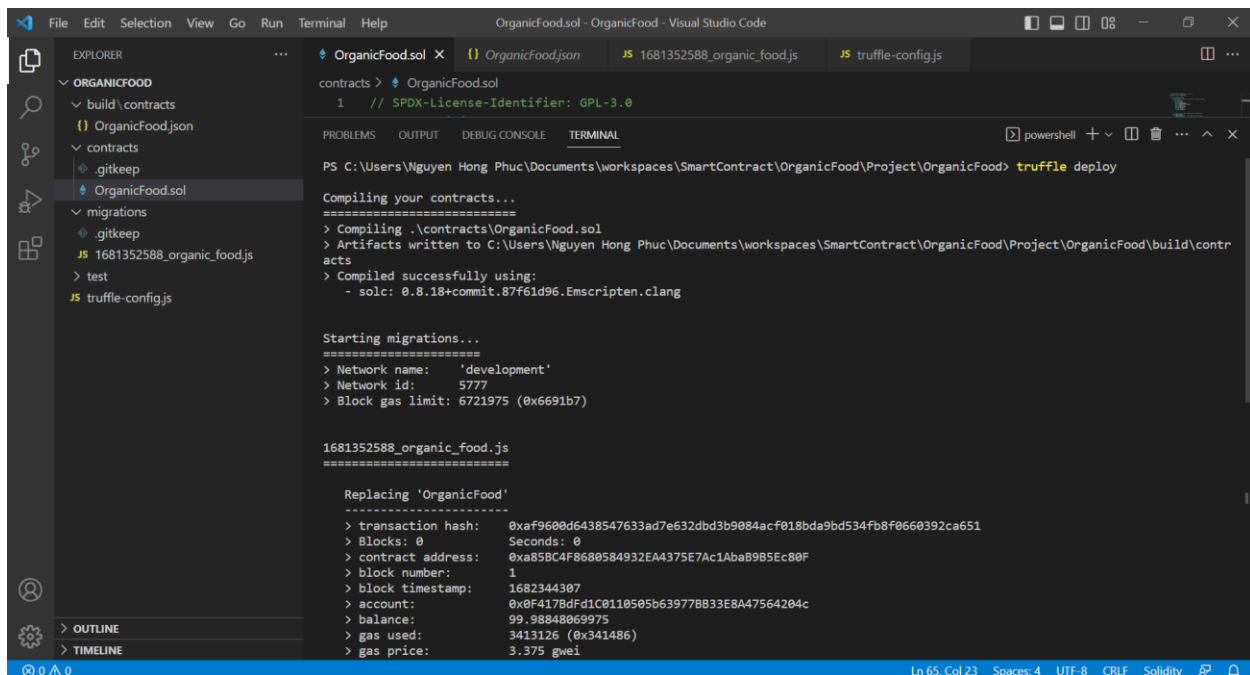
3. Open Ganache app, connect Ganache to



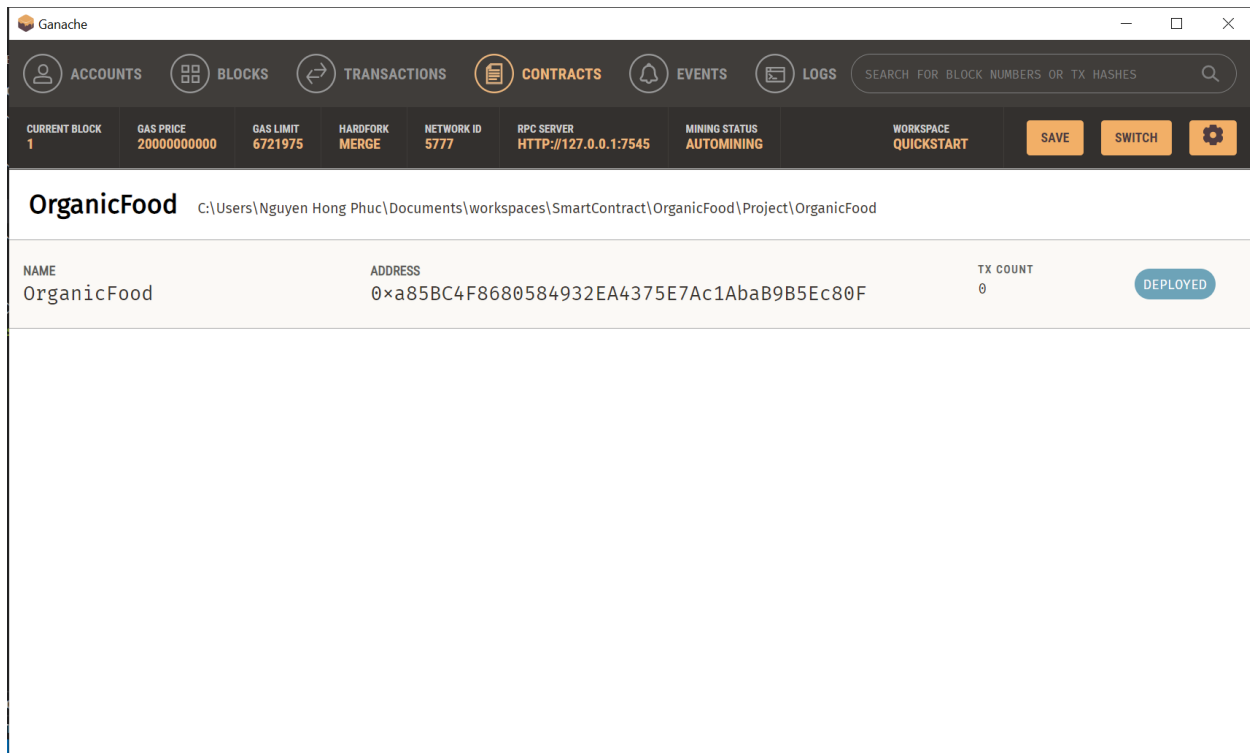
4. On backend side, open Terminal > New Terminal > enter command:

> truffle deploy

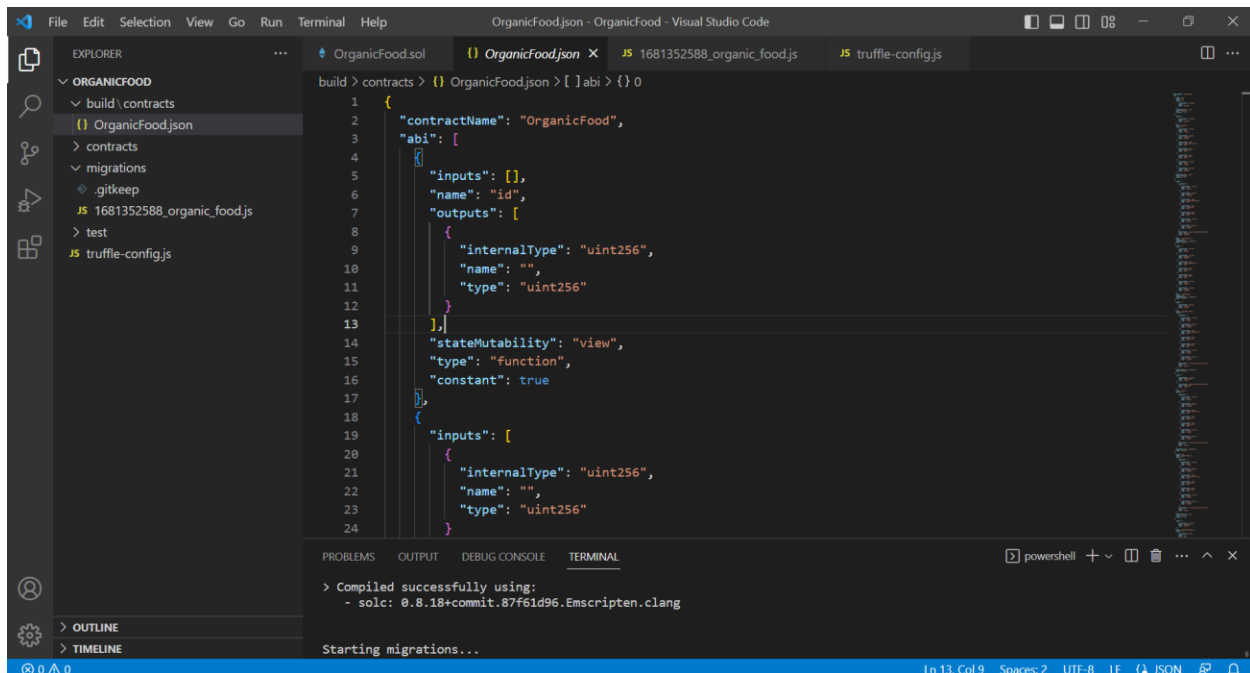
To deploy smart contract to Ganache



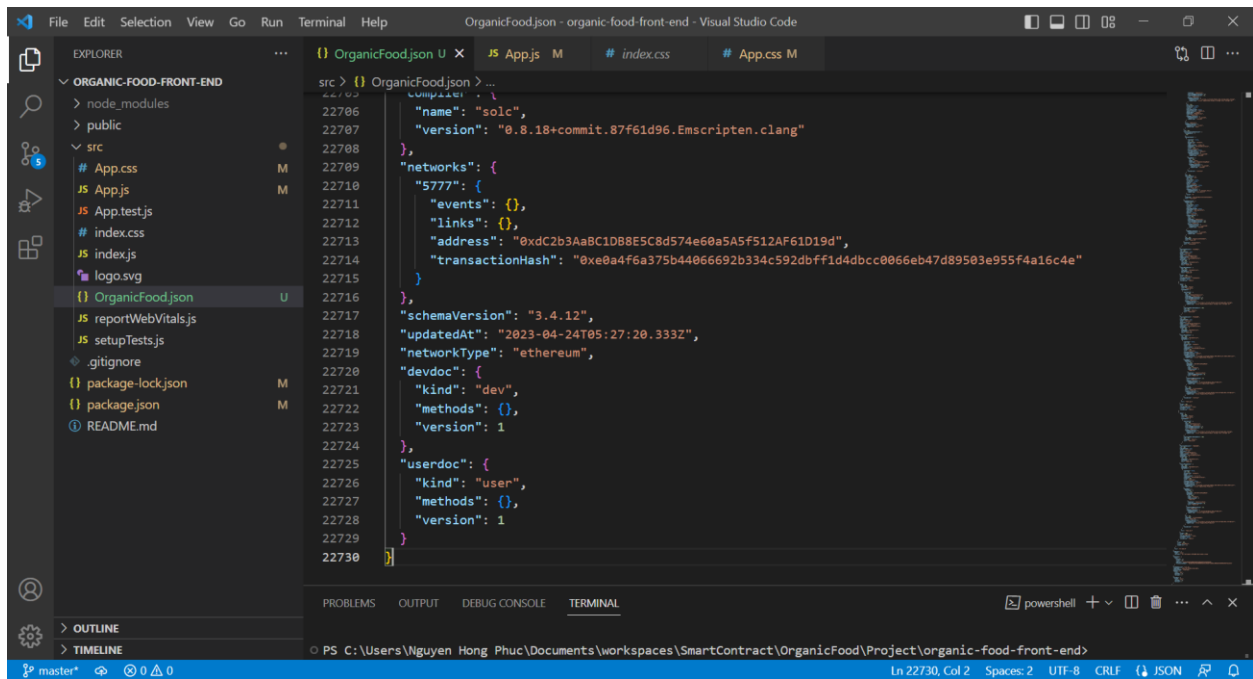
5. Deploy successfully to Ganache



6. On backend script window, open file build/contracts/OrganicFood.json, copy all scripts from this file



7. On frontend window, open file src/OrganicFood.json, paste all copied scripts to this file

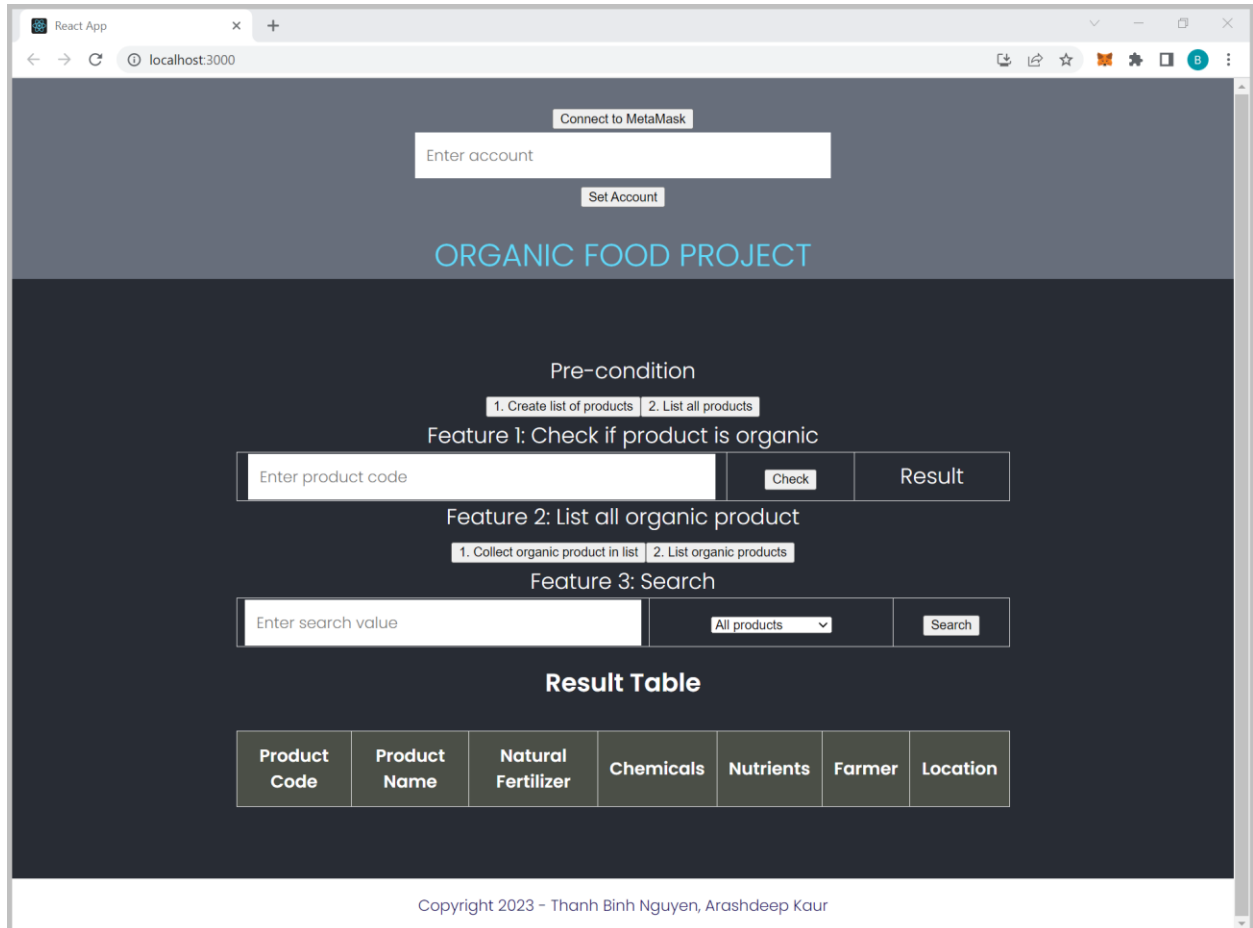


```
src > {} OrganicFood.json > ...
22706   "name": "solc",
22707   "version": "0.8.18+commit.87f61d96.Emscripten.clang"
22708 },
22709   "networks": {
22710     "5777": {
22711       "events": {},
22712       "links": {},
22713       "address": "0xdC2b3AaBC1D88E5C8d574e60a5A5f512AF61D19d",
22714       "transactionHash": "0xe0a4f6a375b44066692b334c592dbff1d4dbcc0066eb47d89503e955f4a16c4e"
22715     }
22716   },
22717   "schemaVersion": "3.4.12",
22718   "updatedAt": "2023-04-24T05:27:20.333Z",
22719   "networkType": "ethereum",
22720   "devdoc": {
22721     "kind": "dev",
22722     "methods": {},
22723     "version": 1
22724   },
22725   "userdoc": {
22726     "kind": "user",
22727     "methods": {},
22728     "version": 1
22729   }
22730 }
```

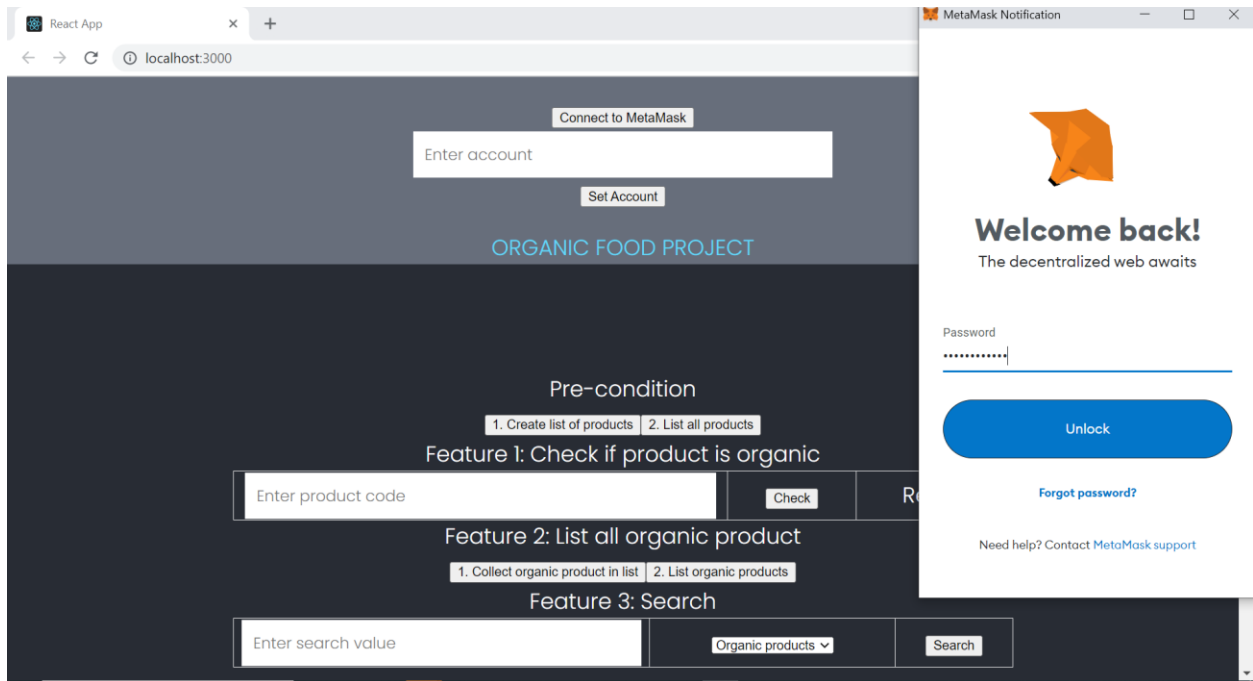
PS C:\Users\Nguyen Hong Phuc\Documents\workspaces\SmartContract\OrganicFood\Project\organic-food-front-end>

8. Open Terminal > New Terminal > enter command
> npm start

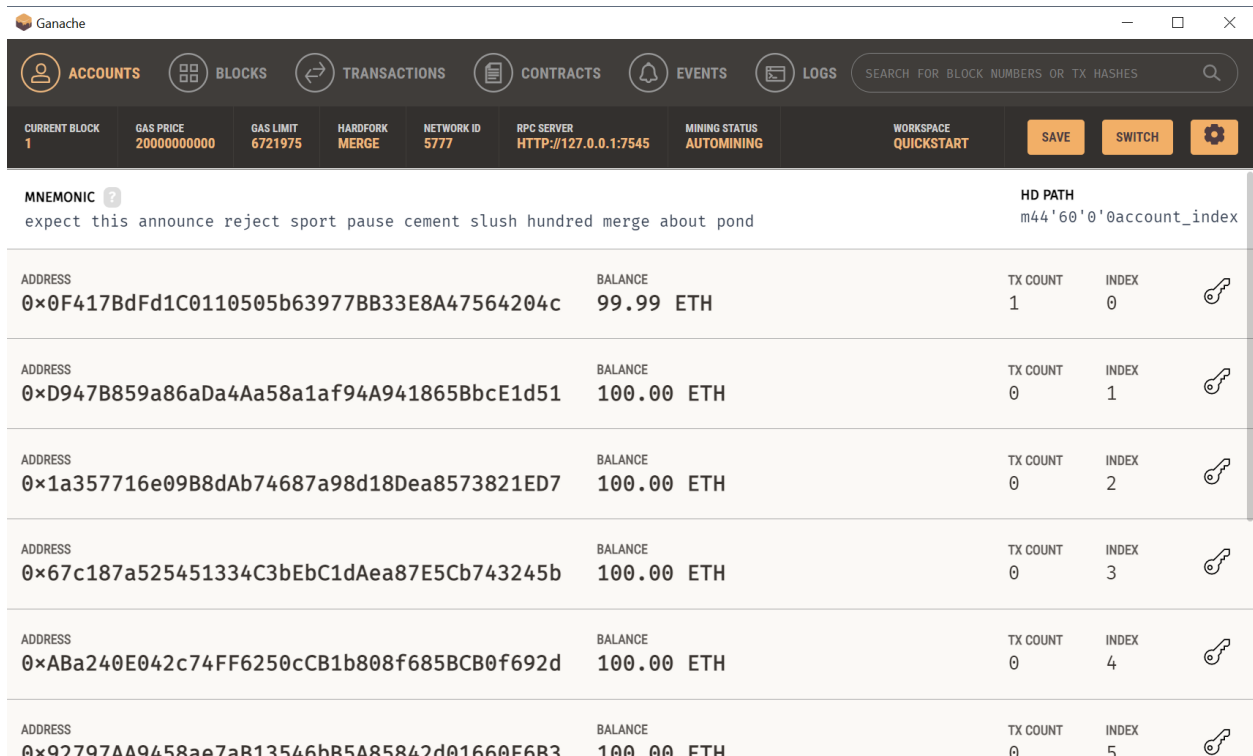
To open browser



9. Click on **Connect to MetaMask** button to connect to the wallet



10. After logged in to Metamask, open Ganache > select an address > click on the key icon



11. Copy PRIVATE KEY

ACCOUNT INFORMATION

ACCOUNT ADDRESS

0x0F417BdFd1C0110505b63977BB33E8A47564204c

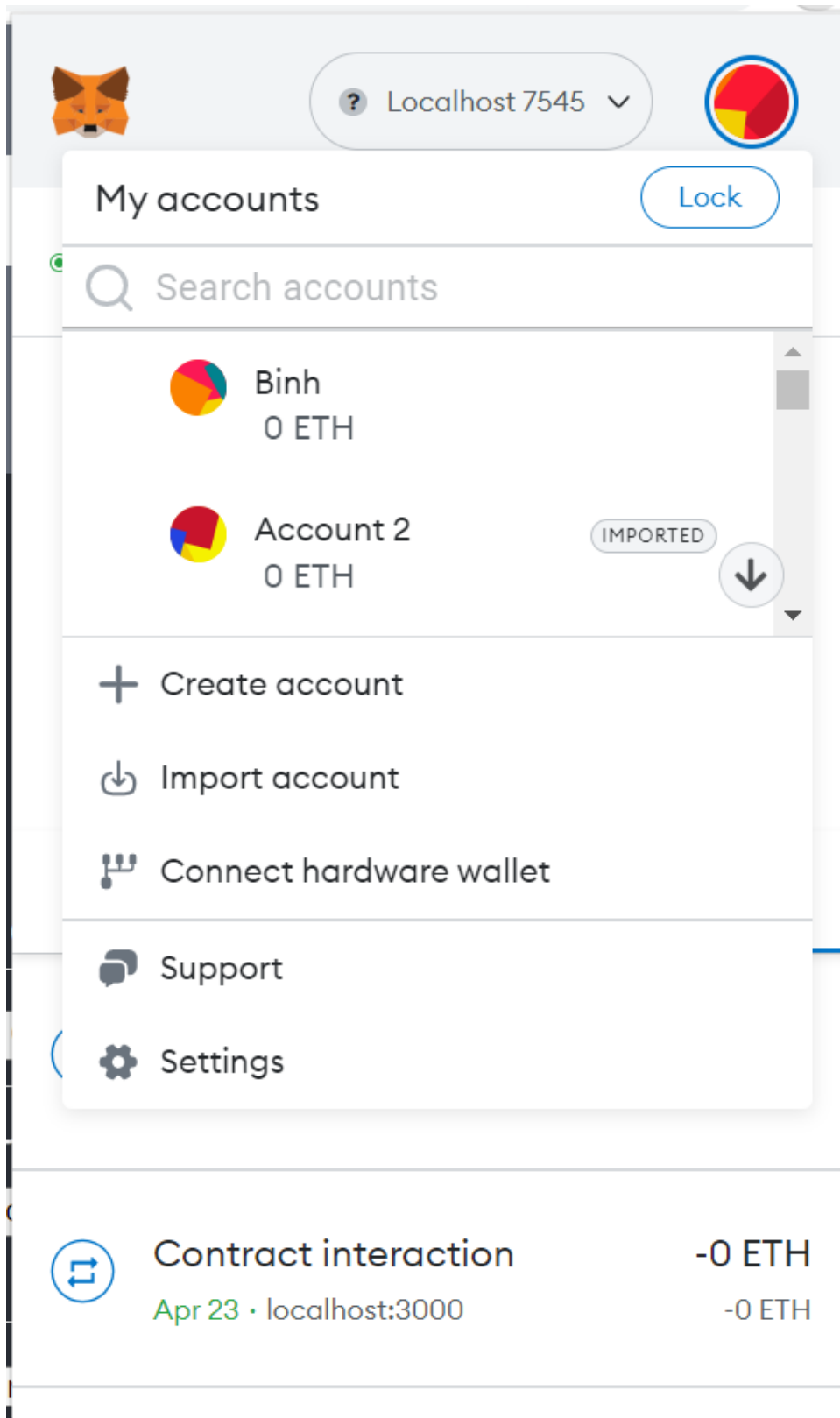
PRIVATE KEY

0x661ace8ce72b261625977462fa0230650ca66cca0ad2516b07fbb79d6dbd6c
fb

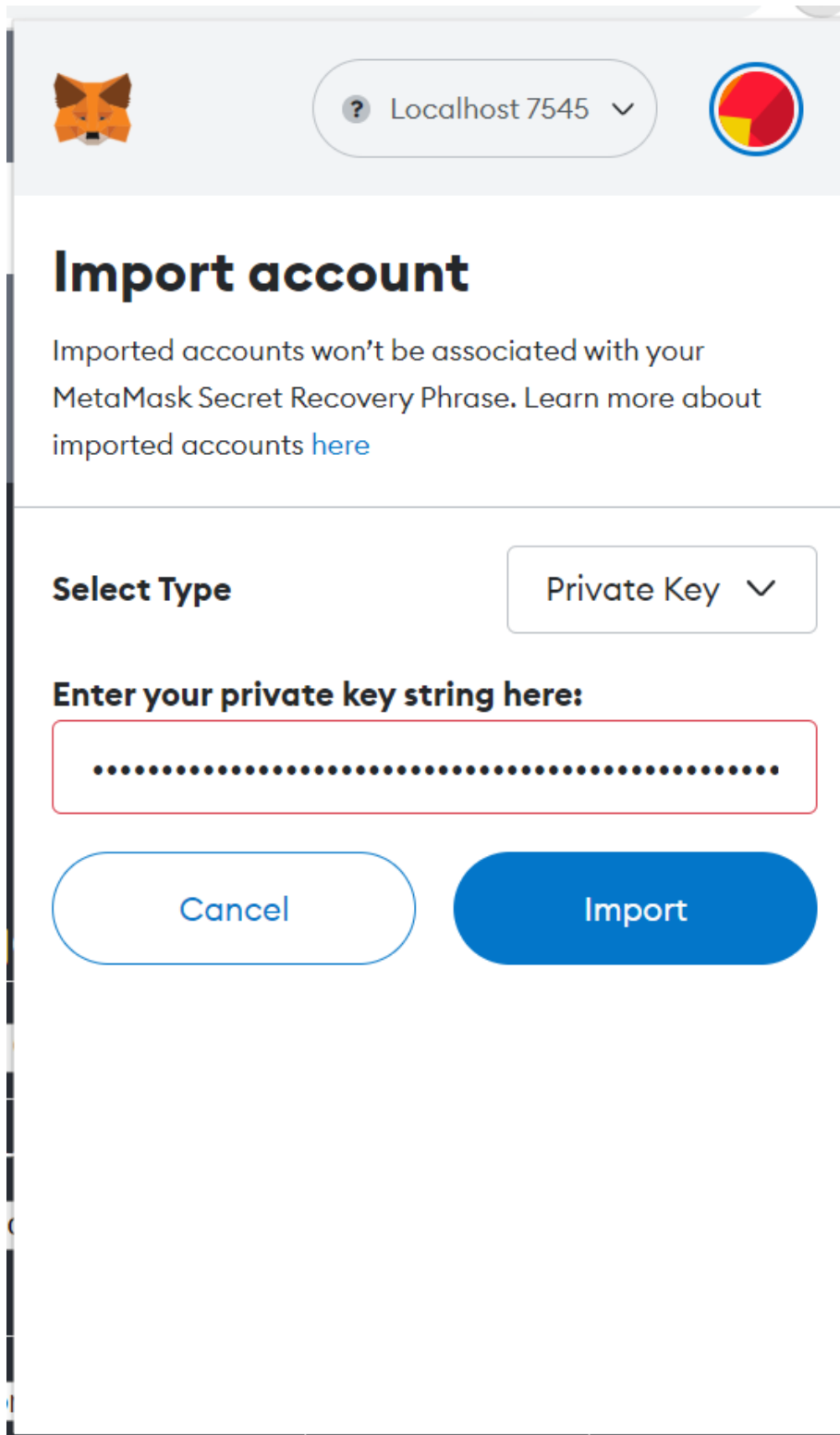
Do not use this private key on a public blockchain; use it for development purposes only!



DONE

12. On Metamask, select account icon > Select **Import account**



13. Paste the copied private key > Click **Import** button



 Localhost 7545 ▼ 

Import account


Imported accounts won't be associated with your MetaMask Secret Recovery Phrase. Learn more about imported accounts [here](#)

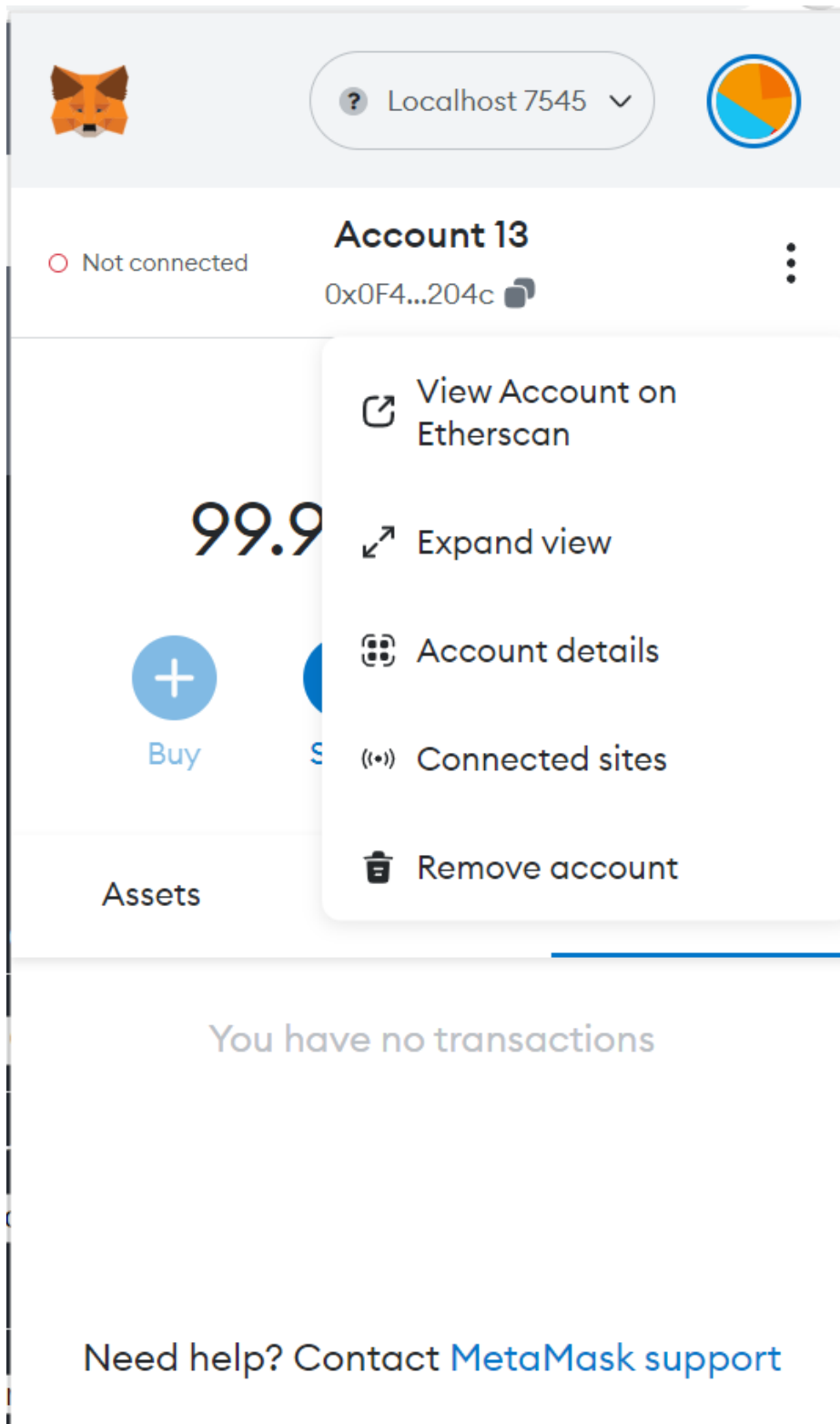
Select Type Private Key ▼

Enter your private key string here:

.....


Cancel Import

14. Click on  icon > Select **Connected sites**





15. Select the imported account > Click **Next** button > Click **Connect** button

1 of 2

 http://localhost:3000



Connect with MetaMask

Select the account(s) to use on this site



 Select all 

New account



☐

 Account 10 (0xaba.....)
0 ETH 



☐

 Account 11 (0x2c2...d...)
0 ETH 

☐

 Account 12 (0xbf7...0...)
0 ETH 

☒

 Account 13 (0x0f4...2...)
99.9884807 ETH 

Only connect with sites you trust. [Learn more](#)

Cancel

Next

> Back

2 of 2



http://localhost:3000

Connect to Account 13 (0x0f4...204c)

Allow this site to:



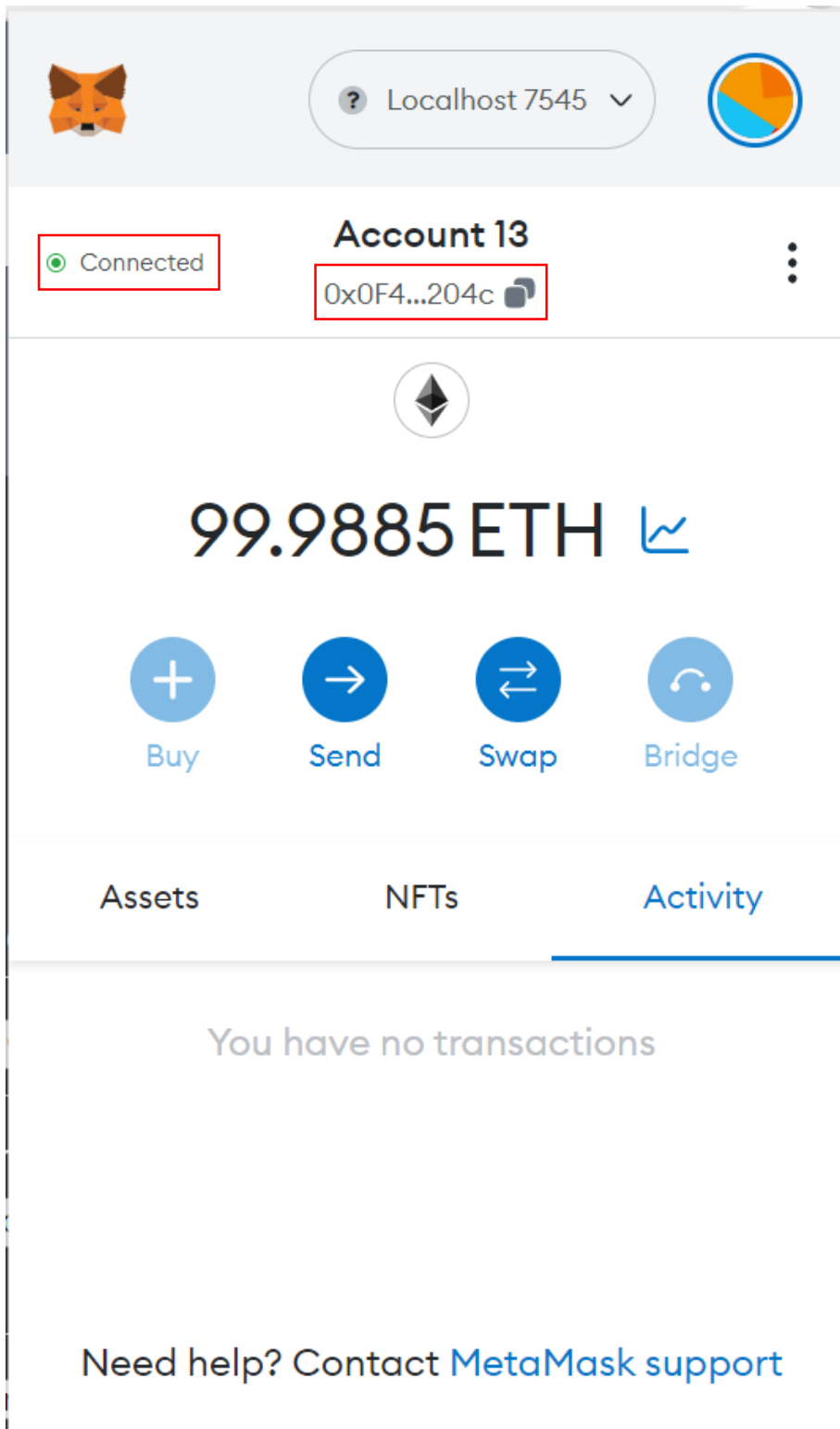
See address, account balance, activity
and suggest transactions to approve

Only connect with sites you trust. [Learn more](#)

Cancel

Connect

16. Observe the Connected icon on the left of account > Copy the public key of the account



17. Paste on account textbox > Click on **Set Account** button

React App

localhost:3000

Connect to MetaMask

0x0F417BdFdIC0110505b63977BB33E8A47564204c

Set Account

ORGANIC FOOD PROJECT

Pre-condition

1. Create list of products 2. List all products

Feature 1: Check if product is organic

Enter product code

Check

Result

Feature 2: List all organic product

1. Collect organic product in list 2. List organic products

Feature 3: Search

Enter search value

Organic products

Search

B. How to test

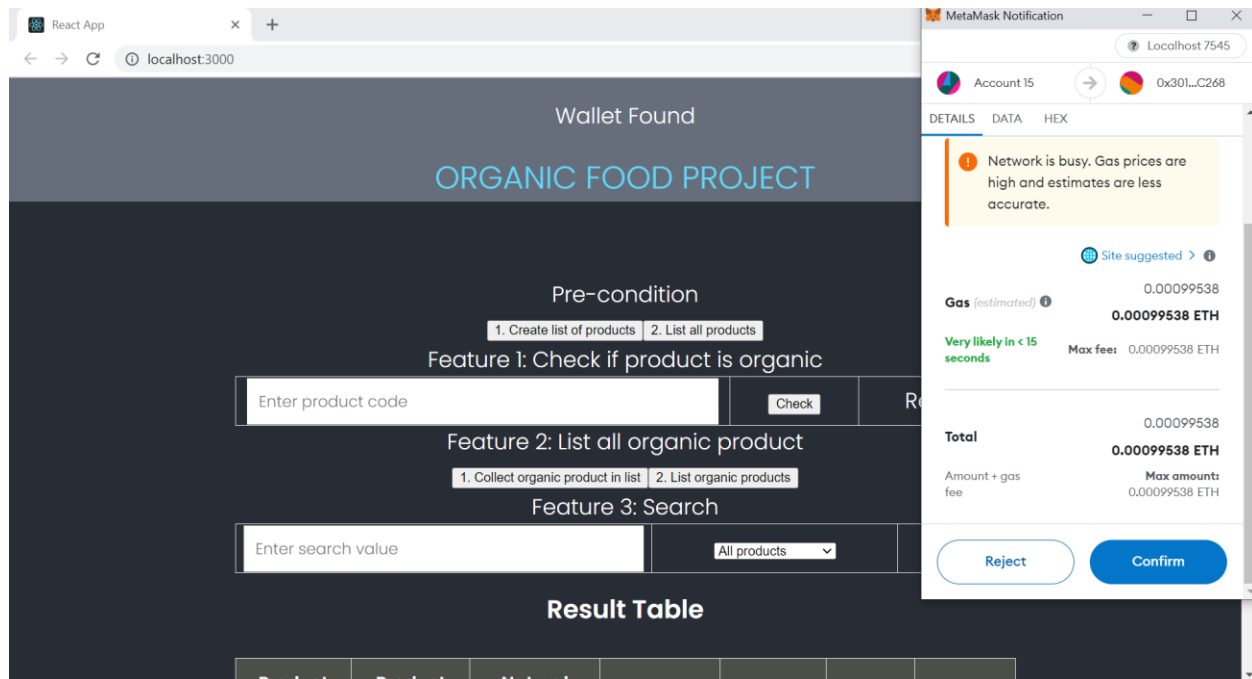
Pre - condition: Create data to test

We hard coded the input data on front end script

```
let data = [  
  {  
    productName: 'Lemon',  
    productCode: '001',  
    naturalFertilizer: true,  
    chemical: false,  
    nutrients: true,  
    farmer: 'Mike',  
    location: 'Moose Jaw'  
  },  
  {  
    productName: 'Carrot',  
    productCode: '002',  
    naturalFertilizer: true,  
    chemical: false,  
    nutrients: true,  
    farmer: 'Mike',  
    location: 'Moose Jaw'  
  },  
  {  
    productName: 'Cabbage',  
    productCode: '003',  
    naturalFertilizer: true,  
    chemical: false,  
    nutrients: true,  
    farmer: 'Mike',  
    location: 'Regina'  
  },  
  {
```

Click on **1. Create list of products** button

Confirm on metamask wallet, we have 10 rows of data, so we need to click on **Confirm** button 10 times



Click on **2. List all products** button

⇒ **Expected Result:** 10 rows of data display on the Result Table

Wallet Found

ORGANIC FOOD PROJECT

Pre-condition

1. Create list of products 2. List all products

Feature 1: Check if product is organic

Enter product code Result

Feature 2: List all organic product

1. Collect organic product in list 2. List organic products

Feature 3: Search

Enter search value All products

Result Table

Product Code	Product Name	Natural Fertilizer	Chemicals	Nutrients	Farmer	Location
001	Lemon	true	false	true	Mike	Moose Jaw
002	Carrot	true	false	true	Mike	Moose Jaw
003	Cabbage	true	false	true	Mike	Regina
004	Spinach	true	false	true	Mike	Moose Jaw
005	Potato	true	false	true	Mike	Regina
006	Tomato	true	false	true	Nick	Saskatoon
007	Sweet Potato	true	false	true	Mike	Moose Jaw
008	Cilantro	false	false	true	Mike	Moose Jaw
009	Green Onion	true	false	false	Nick	Saskatoon
010	Bok Choy	true	false	true	Mike	Saskatoon

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Feature 1: Check if product is organic

Enter Product Code on textbox. Format: number which existed on the list

Click on **Check** button

⇒ **Expected Result:**

- Result will be displayed on Result label. It displays true/false.

Feature 1: Check if product is organic		
002	Check	true

Feature 1: Check if product is organic		
008	Check	false

Feature 2: List all organic product

Click on **1. Collect organic product in list** button

Click on **2. List organic products** button

⇒ **Expected Result:**

- The list of organic products is displayed on Result Table

React App

localhost:3000

Wallet Found

ORGANIC FOOD PROJECT

Pre-condition

1. Create list of products 2. List all products

Feature 1: Check if product is organic

008 false

Feature 2: List all organic product

1. Collect organic product in list 2. List organic products

Feature 3: Search

Enter search value All products

Result Table

Product Code	Product Name	Natural Fertilizer	Chemicals	Nutrients	Farmer	Location
001	Lemon	true	false	true	Mike	Moose Jaw
002	Carrot	true	false	true	Mike	Moose Jaw
003	Cabbage	true	false	true	Mike	Regina
004	Spinach	true	false	true	Mike	Moose Jaw
005	Potato	true	false	true	Mike	Regina
006	Tomato	true	false	true	Nick	Saskatoon
007	Sweet Potato	true	false	true	Mike	Moose Jaw
010	Bok Choy	true	false	true	Mike	Saskatoon

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Feature 3: Search

1. Enter Search string. Expected type: text for name, number for Product ID
2. Select Search type on dropdown list
3. Click on **Search** button

⇒ **Expected Result:**

- Search result is displayed on Result Table

Wallet Found

ORGANIC FOOD PROJECT

Pre-condition

1. Create list of products 2. List all products

Feature 1: Check if product is organic

008 false

Feature 2: List all organic product

1. Collect organic product in list 2. List organic products

Feature 3: Search

Lemon All products

Result Table

Product Code	Product Name	Natural Fertilizer	Chemicals	Nutrients	Farmer	Location
001	Lemon	true	false	true	Mike	Moose Jaw

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❧ THE END ❧