

APS1050 Individual Project 1

Executive Summary

The project are about implementing new features and UI enhancements on top of an existing Pet's Shop DApp. For the first individual programming project, I would like to introduce two new features and UI enhancements I added to the original DApp.

New Feature: Pet's Election (Vote)

I transfer the election feature learning from [Election DApp](#) to the Pet's Shop DApp, where users are able to vote for their favorite pet in the page. Each user has only one vote, and their voting ability would be disabled once they have voted already.

New Feature: Pet's Election (Register)

In addition to that, I also add a new function that has not been implemented in the Election DApp, which users are also able to register new pets as candidates to the contest. Similarly, each user only allows to register one pet to the contest, the registration function would be closed if a user has registered already.

UI Enhancements

I also improve the UI elements. A new home page is made, which contains entry point to the election page. For election's page, users are able to see their account address and account balance at the top of account page.

Dependencies

- lite-server: ^2.3.0
- truffle: ^5.3.0
- chai: 4.2.0
- chai-as-promised: 7.1.1
- chai-bignumber: 3.0.0
- web3: 1.0.0-beta.55
- solidity: ^0.5.12
- Node.js: ^14.16.0
- Ganache: ^2.5.4
- OS: macOS ^11.2.3

Installation

Step 1. Install Dependencies

Install all packages specified in the `package.json`

```
npm install
```

Step 2. Install MetaMask

Install [MetaMask](#)

Step 3. Open Ganache

Open the Ganache, and click on `QUICKSTART` to obtain a new workspace for ethereum

Step 4. Truffle Migrate and Deploy

Migrate and deploy the contracts to our local network

```
truffle migrate --reset
```

Step 5. Run

Run our application on localhost

```
npm run dev
```

Testing

There are also unit testing for each contracts. We are able to run the unit tests by truffle testing command:

```
truffle test
```

Contract test files are located under `test` folder, and testing result is presented by `p1_contract_testing.png` .

Demo

A video recording of project 1 demo `p1_demo.mov` has been placed inside the submission folder.