Fox of Hood: Programmer’s Guide

Introduction to the application

Fox of Hood (abbreviated FOH) is a stock portfolio and trading web application upon which users can buy, sell, adjust, and view stocks in their personal portfolio. This documentation is intended to provide information and instruction as to the proper development and maintenance of the product. As such, the tech stack used for the application includes Flask (python), SQL, HTML, CSS, JavaScript, and the Yahoo Finance API.

Overview

1. **Application architecture**

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Figure . Application architecture

1. **Key features**

The application features main functionalities including the following: hosting user accounts, buying stocks, selling stocks, stock adjustments (scheduled buying and selling of stocks), and the logging of user actions.

**3. Directory structure**

-backend

-app

-controllers

-logs

-\_init\_.py

-db.py

-schema.sql

-uploads

-.env

-requirements.txt

-server.py

-frontend

-app

-static

-templates

-\_init\_.py

-.env

-interface.py

-requirements.txt

Getting started

**Set-up and installation**

1. Clone the repository from Github.
   1. git clone <https://github.com/ettany/FOH_PSE>
2. Install dependencies.
   1. pip install -r requirements.txt
3. Run the backend.
   1. export FLASK\_APP=backend/app
   2. flask init-db
   3. flask --app backend/server.py run
4. Run the front end.
   1. python frontend/interface.py

Configuration

**Environment variables**

**.env Backend**

SECRET\_KEY=● ● ● ● ● ● ●

DATABASE\_URL=● ● ● ● ● ● ●

ALPHA\_VANTAGE\_API\_KEY=HYZ6LXZ02KV3N6VH

FLASK\_APP=development

UI\_URL=http://127.0.0.1:5001

RECAPTCHA\_SECRET\_KEY=● ● ● ● ● ● ●

These variables should be stored in an environment file in the front end of the application.

**.env Frontend**

BACKEND\_URL = 'http://localhost:5000'

These variables should be stored in an environment file in the back end of the application.

**API documentation**

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Frontend

1. **Templates**

Description of which controllers and functions each page uses:

**register.html**

user\_controller.py:

* register

**login.html**

user\_controller.py (face\_verification.py)

* login
* face\_recognition\_login

**admin.html**

user\_controller.py:

* create\_user
* delete\_user
* list

**index.html**

chartUtils.js:

* drawScatterPlotChart

transaction\_controller.py:

* portfolio

user\_controller.py:

* index

**trade.html**

chartUtils.js:

* drawBarChart
* drawLineChart

stock\_controller.py:

* stocklist
* StockSearch

transaction\_controller.py:

* buy
* sell
* schedule\_buy
* schedule\_sell

**log.html**

log\_controller.py:

* entries

**logout.html**

1. **Static files**

css – main styling (in addition to each page having a separate style section for internal css)

utils – chart functions and cookies (JavaScript)

1. **UI**

See user guide and demo video for more details:

User Guide: <https://github.com/ettany/FOH_PSE/blob/main/UserGuide_FOH.pdf>

Demo Video: <https://www.youtube.com/watch?v=7XaVBbRt8u4>