

## ESI Writeup

### **What we used:**

Our site was made with a FastAPI backend. We used a Uvicorn ASGI server, a SQLite database, a SQLAlchemy ORM to manage that database, and Starlette to handle our HTTP requests and responses. The front end of the site was made using static HTML, CSS, and Javascript. The boilerplate code required to launch the app and set up the database was taken from the FastAPI tutorial, but all code for the site functionality is our own.

### **What succeeded:**

I feel our site looks fairly good and has relatively consistent design. I also feel that the backend is nicely organized. A lot of that isn't too apparent from the frontend, because the user doesn't really need to know about our database tables, but user accounts link to their orders and their address information, and orders also link to address information. We also made an effort to secure our site using OAuth Bearer tokens.

### **What failed:**

I feel like our site is not maintainable, and each additional feature is more difficult to add than it should be because of the tremendously different requirements at each milestone. If I were doing it again, I would have started from scratch for the last milestone, even though that means deleting what in theory is 10 weeks of work and redoing it in 2 weeks while also trying to learn AJAX, backend, and database interactions at the same time. Consistency in design is definitely important.

## **Setup Guide:**

To set up the site, cd into the backend folder and run setup.sh. Alternatively, you can run the commands in setup.sh individually, which are explained below:

### INSTALL PYTHON/PIP:

```
sudo apt install python3
```

```
sudo apt install python3-pip
```

### INSTALL AND ACTIVATE VIRTUALENV:

```
sudo pip install virtualenv
```

```
virtualenv -p /usr/local/python3 venv
```

```
source venv/bin/activate
```

### INSTALL ALL DEPENDENCIES:

```
pip install -r requirements.txt
```

The script is written assuming the site is set up on the WebDev VM, and the last line installs software that is required for compatibility with python versions less than 3.7:

```
pip install async-exit-stack async-generator
```

## **Running the site**

To run the server, you can cd into the backend folder and run the command:

```
uvicorn main:app --reload
```

By default, the site will be available at <http://localhost:8000/>