

Back-End Setup Guide

Welcome to the Furniture Delivery App back-end development setup guide. This document provides step-by-step instructions for setting up the development environment and running the server.

Prerequisites

Before proceeding, ensure you have the following prerequisites installed:

1. **PGAdmin4**: GUI to interface with Postgres Database (<https://www.pgadmin.org/download/>),
2. **Docker**: Application containerization system (<https://www.docker.com/products/docker-desktop/>),
3. **Docker-Compose**: Toolchain that helps interface with Docker and simplifies running containers and their setup (<https://github.com/docker/compose>),
4. **Python 3.11**: The language in which the back-end is implemented (<https://www.python.org/>),
5. **Pyenv**: Python environment utility, separate development workspace into Python Environments (<https://github.com/pyenv/pyenv>).
6. **Homebrew**: Only required for Mac users (<https://brew.sh/>),
7. **Postman (Optional)**: Use to test API endpoints (<https://www.postman.com/>).



Pyenv is not natively supported by Windows, there is a separate Github repository that works around this. <https://github.com/pyenv-win/pyenv-win>

Step-by-Step Setup

1. Environment Setup

If you are developing on a mac, open your terminal and run the following command:

```
<project root>/scripts/core.sh -c
```

The `core.sh` script contains many useful scripts that help automate things such as first-time setup, running the server, installing dependencies, amongst some other features.

After running the above command, you will now be able to run the script by doing:

```
ukay -h
```

The `ukay` command is added as an alias to your `~/.zshrc` file.



Unfortunately, this script does not run on Windows or Linux machines. For those, you will have to perform a manual setup for Python and Pyenv.

Once all software is installed, cd to the project root and run the following:

```
pyenv install 3.11.0;  
pyenv global 3.11.0;  
pyenv virtualenv ukay-delivery-backend;  
pyenv activate ukay-delivery-backend;  
pip install -r requirements.txt;
```

This code block will create a Python environment with Python 3.11, activates the environment, and installs all the required modules for the server.

2. Running the App

- **Start the Database:**
 - Navigate to the `<project root>/docker` directory
 - Execute the following command:

```
docker-compose up -d
```

This command will pull a Postgres Docker image, and run the container. The default credentials are found in the compose.yaml file.



Once the container is running, enter into the database using PGAdmin and run **all** of the queries that are in the <project root>/scripts/init.sql file.

- **Start the Server:**
 - If you are on a Mac, run the following:

```
ukay -r
```

For all other platforms, run:

```
cd <project root>/app  
python .
```

The server will run using the following address:

<http://localhost:21000/>

You may view the API Documentation by visiting the following link in your web browser:

<http://localhost:21000/docs>

Additionally, there is a JSON representation of the documentation in <project root>/api/openapi.json

Additional Notes

- **Dependencies:** If any dependencies must be updated, ensure you generated a new requirements.txt file by doing: `pip freeze > requirements.txt`
- **Environment Variables:** If the project uses any environment variables (like API keys or secret tokens), ensure they are correctly set up in the development environment.

This guide should provide you with a comprehensive setup for starting backend-end development on the Furniture Delivery App. For more specific instructions or

troubleshooting, refer to the official FastAPI, Python, and Docker documentation or contact the project maintainers.