Before We Get Started

The goal of this runbook is to safeguard the user from a deep hatred of technology and early hair loss. We will attempt to set up and configure our system to run the project before we encounter issues. Hopefully, this preemptive approach will provide the necessary guidance to simplify the process.

Introduction

This project is built solely for use in a Linux environment, and will only be explained in that capacity. It is not impossible to implement something similar in a different operating system, but we will not detail steps to do such. As a Linux based project, there are certain libraries and dependencies that must be installed for the program to work. We will cover all those details (and commands) very soon.

This project was developed with python in the PyCharm IDE using Flask and SQLAlchemy. It implements posting and user account microservices, such as creating a post or user and deleting a post or user. Additional functionalities of our implemented microservices will be discussed later.

Early development testing was done using Postman, but we have since moved to automated testing through curl commands in bash scripts. We are using Foreman to start all the processes associated with our project to better accommodate testing within our WSGI container, Gunicorn.

Getting Started

Step 1

First and foremost, we should be concerned with the system's default Python version. The command python --version will return the current version of python the system is using. If the current version is 3.x.x then we can move to *Step 2*. Otherwise, we must update to a stable version of Python 3 or tell the system to point to the correct path.

It is possible that we have multiple versions of python installed. As a test, we can run the command python3 --version. If the terminal echoes "Python 3.x.x", we have python3 installed, but the system's default path is pointing somewhere else. If the terminal does not echo, we must install Python 3 and can do so with the command sudo apt-get install python3.

Next, we must tell our system to point to the correct path. Using the command sudo nano ~/.bash_aliases we open a text file where we assign an alias to tell the system where we

want the default python version to be. Type alias python=/usr/bin/python3, then press CTRL+S and CTRL+X. We have just saved an alias for python and may continue to *Step 2*.

**Note: You may want to revert the that change at some point which will require you to reopen the .bash_aliases file and delete the alias.*

Step 2

The second thing we should make sure our system has is pip. If you installed the latest Python 3.x.x in *Step 1*, pip should have been included. Run the command pip3 --version to check if it is installed. If the terminal says that pip3 is not installed, run the command sudo apt-get install pip3. We are ready to install all the libraries and dependencies to run the project.

Libraries and Dependencies

This project uses a few different libraries to run. For simplicity, they've been alphabetically arranged in a table. Ensure that the following libraries and their dependencies are installed on your Linux system:

Library/Dependency	Command
Flask	sudo pip3 install flask
Flask-SQLAlchemy	sudo pip3 install flask_sqlalchemy
Flask-Marshmallow	sudo pip3 install flask_marshmallow
Foreman	gem install foreman
Gunicorn3	sudo apt install --yes gunicorn3
Marshmallow-SQLAlchemy	sudo pip3 install marshmallow-sqlalchemy
Pytz	sudo pip3 install pytz

Setup and Run

Create a folder then run the command:

github clone https://github.com/daytonschuh/CPSC449Project1

Files

Files included in project folder:

- Caddy
- Procfile
- Wsgi.py
- App.py

- Posts.db
- README.md

Testing

Terminal 1: foreman start -c

To see all testing for posts:

Terminal 2: bash testpost.sh

To see all testing for users:

Terminal 2: bash testuser.sh