MusicStore on Linux Platform

Installation and Configuration Guide for Testing the Application

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1. Introduction

This guide provides detailed instructions for cloning, setting up, and testing the MusicStore application on a Linux platform. It includes steps for configuring PostgreSQL, creating and installing self-signed certificates, and setting up the application to run securely over HTTPS. Notes for Windows users are included where necessary.

2. Prerequisites

Ensure you have the following tools installed on your system:

Git: Version control system.

sudo apt-get install git # For Debian/Ubuntu

sudo dnf install git # For Fedora

Python: Programming language (version 3.6 or higher).

sudo apt-get install python3 # For Debian/Ubuntu

sudo dnf install python3 # For Fedora

PostgreSQL: Database system.

sudo apt-get install postgresql postgresql-contrib # For Debian/Ubuntu

sudo dnf install postgresql-server postgresql-contrib # For Fedora

OpenSSL: Toolkit for SSL/TLS.

sudo apt-get install openssl # For Debian/Ubuntu

sudo dnf install openssl # For Fedora

3. Cloning the Repository

Open a terminal and run the following commands:

git clone https://github.com/tihyyti/MusicStore.git

cd MusicStore

4. Setting Up the Virtual Environment

Create and activate a virtual environment:

python3 -m venv venv

source venv/bin/activate # For Linux/macOS

venv\Scripts\activate   # For Windows

5. Installing Dependencies

Install the required Python packages:

pip install -r requirements.txt

6. Setting Up PostgreSQL

Ensure PostgreSQL is running and create a new database and user:

sudo -i -u postgres

psql

CREATE DATABASE musicstore;

CREATE USER musicuser WITH PASSWORD 'yourpassword';

GRANT ALL PRIVILEGES ON DATABASE musicstore TO musicuser;

\q

exit

7. Configuring Environment Variables

Create a .env file in the project root directory with the following content:

FLASK_APP=run.py

FLASK_ENV=development

DATABASE_URL=postgresql://musicuser:yourpassword@localhost:5432/musicstore

8. Initializing the Database

Run the following commands to set up the database schema:

flask db init

flask db migrate

flask db upgrade

9. Creating and Installing Self-Signed Certificates

Generate a self-signed certificate using OpenSSL:

mkdir -p app/certs

openssl req -x509 -newkey rsa:4096 -nodes -out app/certs/cert.pem -keyout app/certs/key.pem -days 365

10. Running the Application

Start the Flask application:

python3 run.py

11. Installing Certificates in Web Browsers

Firefox

Ensure libnss3-tools is installed:

sudo apt-get install libnss3-tools # For Debian/Ubuntu

sudo dnf install nss-tools # For Fedora

Add the certificate to Firefox:

certutil -A -n "MusicStore" -t "TC,,C" -i app/certs/cert.pem -d sql:
$HOME/.mozilla/firefox/*.default-release

Microsoft Edge

Open Edge and navigate to Settings > Privacy, search, and services > Security > Manage certificates.

Import the certificate:

Click on Import.

Select app/certs/cert.pem.

Choose Trusted Root Certification Authorities as the store location.

Complete the import process.

Safari (Mac)

Open Keychain Access.

Drag and drop app/certs/cert.pem into the System keychain.

Set the certificate to Always Trust.

12. Appendix

A. Common Errors and Troubleshooting

Virtual Environment Activation Issues: Ensure you are using the correct command for your operating system.

Database Connection Errors: Verify PostgreSQL is running and the database URL in the .env file is correct.

Certificate Warnings in Browsers: Ensure the certificate is correctly installed and trusted in the browser.