Pizza Order Management SQL Project

Description

This project is designed to create, manage, and query a relational database system for a pizza restaurant. The system includes tables for managing customers, employees, orders, pizzas, toppings, sizes, and more. It includes SQL scripts for creating the necessary database structure, inserting data from CSV files, and handling relationships between the tables.

Project Structure

The project consists of several parts:

- **SQL Table Creation**: Scripts for creating tables in the database.
- **Data Insertion**: Python scripts that generate `INSERT INTO` SQL statements for bulk importing data from CSV files.
- **Database Relationships**: Proper foreign key constraints and relationships between the tables.

Database Tables

- **Customer**: Stores customer details like name, phone, address, etc.
- **Employee**: Stores employee information.
- **Order**: Stores order details like order date, time, employee handling the order, and the customer who placed the order.
- **Pizza**: Stores pizza details and their sizes.
- **Toppings**: Stores available toppings and their prices.
- **Pizza_Toppings**: Junction table linking pizzas to their toppings.
- **Pizza_Order**: Stores information about pizzas included in each order.
- **Size**: Stores pizza size descriptions and their corresponding prices.

Files

- **`schema.sql`**: Contains SQL statements to create the tables with appropriate relationships.
- **`insert_order.py`**: A Python script to generate `INSERT INTO` statements for the `order` table from CSV data.
- **`insert_customer.py`**: A Python script to generate `INSERT INTO` statements for the `customer` table from CSV data.
- **`insert_toppings.py`**: A Python script to generate `INSERT INTO` statements for the `toppings` table from CSV data.
- **`data/`**: Directory containing sample CSV files for loading initial data into the database.

Requirements

- MySQL
- MySQL Workbench (for database management and running SQL scripts)
- Python
- CSV files containing sample data for customers, orders, pizzas, etc.

Python Libraries

- **csv** (for handling CSV files)
- **os** (for file handling)

Getting Started

1. Setting Up the Database

1. Install MySQL on your local machine.
2. Open MySQL Workbench and create a new schema for the project.
3. Run the `schema.sql` script to create the necessary tables.

2. Inserting Data from CSV Files

There is Python scripts to convert CSV data into `INSERT INTO` SQL statements and then execute those in MySQL Workbench.

Use the Python scripts to generate SQL insert statements:

"python convert.py"

1. Copy the generated SQL statements into MySQL Workbench and run them.

3. Running the Project

1. Execute all necessary SQL files (.sql files) in MySQL Workbench.
2. Use MySQL queries to interact with the data in your pizza management system.

Project Features

- **Relational Database**: Manages pizza orders, toppings, sizes, and customer details.
- **Python Integration**: Automatically converts CSV files into SQL INSERT statements.
- **SQL Querying**: Run complex queries to retrieve order information, customer details, and pizza configurations.