

Hotel DBMS

Assignment 9

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Group 7

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Overview

This project is a Java Swing GUI application backed by a SQLite database (hotel.db). The system allows users to:

- Create all database tables
- Populate the database with sample hotel data
- View and search guest information
- Display reservation information
- Update guest email addresses
- Delete guest records
- Execute multiple database operations through a simple GUI

The system is fully self-contained. No Oracle, VPN, or server setup is required. All data is stored locally.

Requirements & Setup

Downloading the Project from GitHub

You can download the required files from GitHub:

<https://github.com/kemblemu/CPS510>

Place all the following files in the same folder:

- Main.java
- DB.java
- SQL.java
- Queries.java
- sqlite-jdbc-3.51.0.0.jar

When the program runs, it automatically generates:

- hotel.db (SQLite database file)
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How to Compile

Open a terminal inside the project folder and run:

`javac -cp ".;sqlite-jdbc-3.51.0.0.jar" *.java` (for Windows)

`javac -cp ".:sqlite-jdbc-3.51.0.0.jar" *.java` (for Mac/Linux)

How to Run

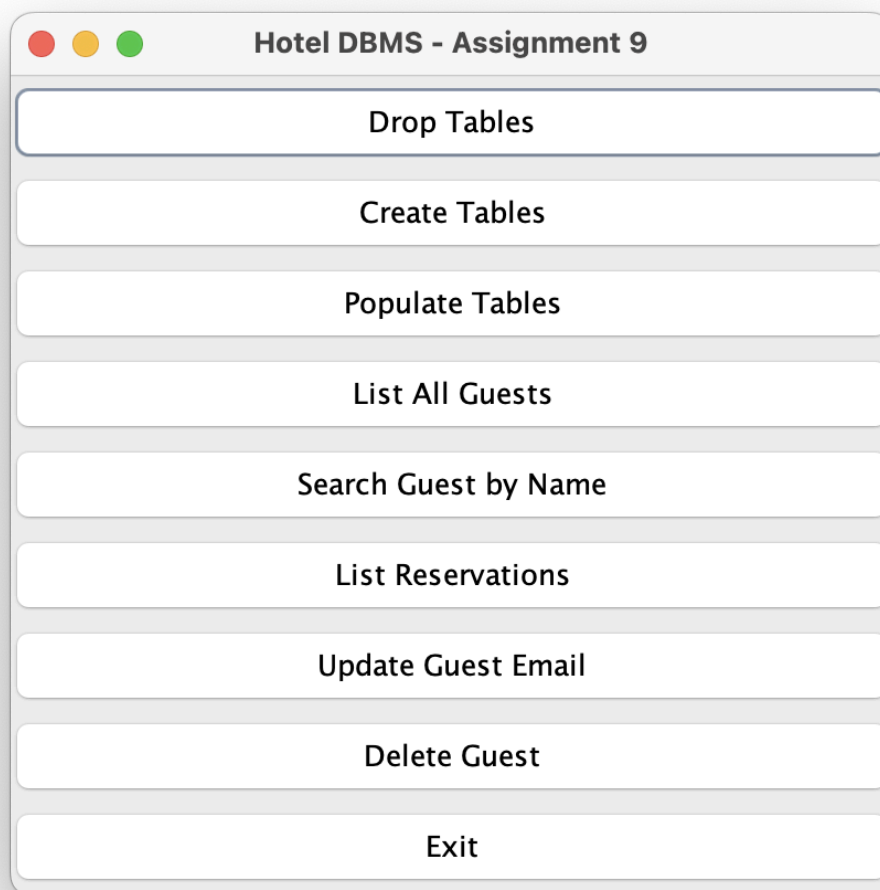
To launch the graphical interface, run:

`java -cp ".;sqlite-jdbc-3.51.0.0.jar" Main` (for Windows)

`java -cp ".:sqlite-jdbc-3.51.0.0.jar" Main` (for Mac/Linux)

Launching the Application

Once you run the program, the main menu window appears:



Each button corresponds to one of the system's features.

Feature Guide

Drop Tables

Deletes all tables from hotel.db.

Use this before creating a fresh database or reloading data.

A message will confirm the operation.

Create Tables

Creates all tables defined in the BCNF schema:

- ProvinceCountry
- PostalAddress
- Guests
- Staff
- RoomType
- Rooms
- Reservations
- Invoices
- ServiceTypes
- ServiceRequests
- RoomAssignment

A pop-up message confirms that the tables were created.

Populate Tables

Inserts the hotel data into the new tables.

A message will confirm that the data was inserted.

List All Guests

Prints all guest records to the console.

Includes guest ID, name, email, and phone number.

Search Guest by Name

Prompts the user to enter a name (or part of a name).

Search is case-insensitive.

Results are shown in the console.

List Reservations

Displays reservations joined with guest names and room numbers.

Update Guest Email

Prompts for:

1. Guest ID
2. New email address

Updates the corresponding record.

Confirmation appears via pop-up.

Delete Guest

Prompts for a guest ID and deletes the record if it exists.

Exit Application

Closes the program immediately.