

Core Java Training

Project Title: Hospitality Management System

Introduction: A Hospitality Management System aims to streamline operations in the hospitality industry by providing tools for managing hotels, rooms, guests, and reservations. This system will incorporate a MySQL database for data storage and a Swing GUI for user interaction.

Database Design: The database will consist of the following tables:

- **Hotels:** Stores information about hotels, such as name, location, and amenities.
- **Rooms:** Contains details about individual rooms in hotels, including room number, type, price, and status.
- **Guests:** Stores information about guests, including name, email, and phone number.
- **Reservations:** Keeps track of reservations made by guests, including check-in and check-out dates.

Backend Java Code: The backend Java code will include Data Access Objects (DAOs) for each entity (Hotel, Room, Guest, Reservation) to perform CRUD operations on the database. Additionally, business logic will be implemented to handle operations such as checking room availability and calculating reservation costs.

Swing GUI: The Swing GUI will provide an intuitive interface for users to interact with the system. It will include functionalities such as adding/editing hotels, rooms, and guests, making reservations, and viewing reservation details.

Features:

- 1. Hotel Management:**
 - Add/Edit/Delete hotels.
 - View hotel details.
- 2. Room Management:**
 - Add/Edit/Delete rooms.
 - View room details.
- 3. Guest Management:**
 - Add/Edit/Delete guests.
 - View guest details.

4. Reservation Management:

- Make new reservations.
- View reservation details.
- Check room availability for specific dates.

Step-by-Step Approach to Building the Hospitality Management System:

1. Database Design:

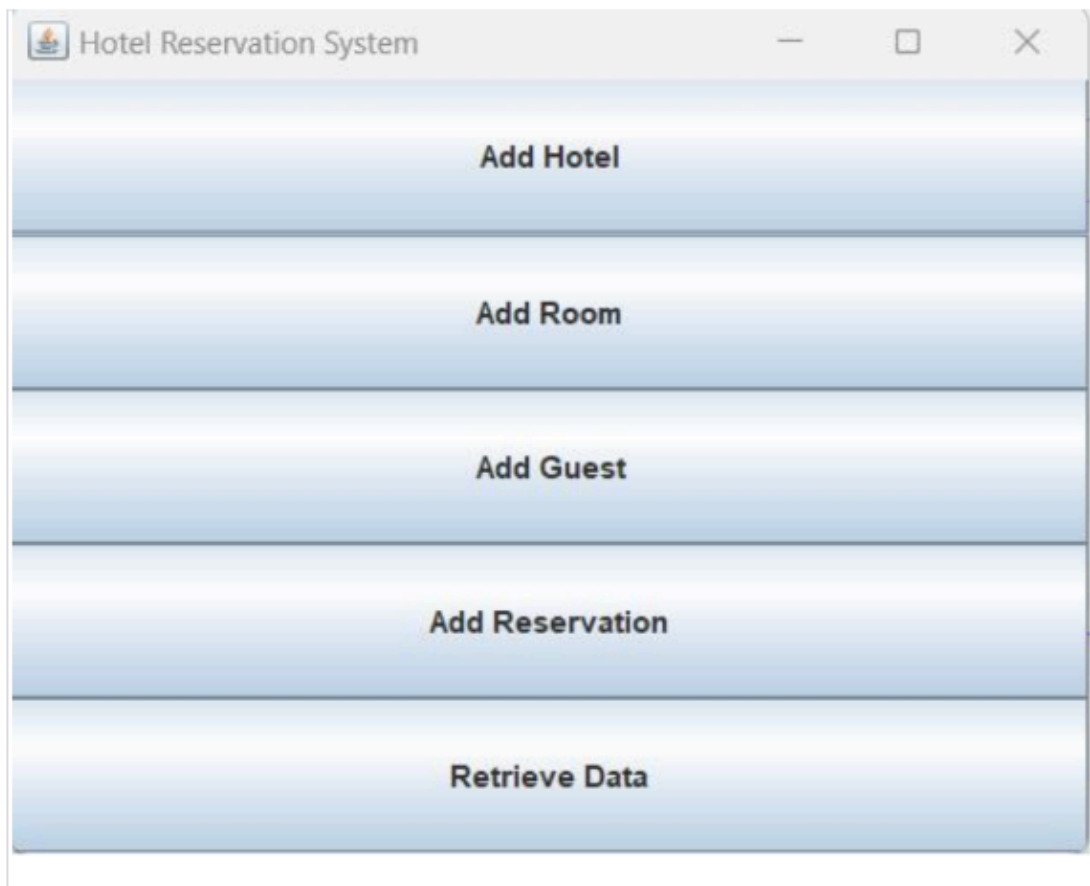
- Start by designing the MySQL database schema to accommodate the required tables: Hotel, Room, Guest, and Reservation
 - Four tables will be created in MySQL workbench.
 - Define the structure of each table, including the fields and their data types.
 - Establish relationships between the tables, such as foreign key constraints to maintain data integrity.

2. Eclipse Code:

- Set up a Java project for the backend code.
- First create entity classes : Hotel.java, Room.java, Guest.java, Reservation.java to define the fields and then constructor and getters setters.
 - Then create a DatabaseConnector class which will have the code for connecting to MySQL Database.
 - Create Data Access Objects (DAOs) for each entity (Hotel, Room, Guest, Reservation) to interact with the database.
 - Implement CRUD operations (Create, Read, Update, Delete) within each DAO to manage data.

3. Swing GUI Development:

- Create a new Java class which will be the main class for the Swing GUI.
- Design the user interface layout using Swing components, including frames, panels, buttons, text fields, and tables.
 - Implement event handling to capture user interactions, such as button clicks and data input.
 - Integrate backend functionality into the GUI, such as calling DAO methods to retrieve or modify data in the database.
 - Test the GUI thoroughly to ensure all functionalities work as expected and provide a smooth user experience.



This is how a final project should look like.

Following this step-by-step approach will help ensure a systematic and efficient development process for the Hospitality Management System, resulting in a robust and user-friendly application tailored to the needs of the hospitality industry.

Final Deliverable: .jar file of Hospitality Domain Project

Submission Guidelines:

- Prepare a project folder encompassing your .jar file and compress it into a zip archive.
- Upload the zipped project folder on their respective dashboard..