



DOCUMENTATION OF HOTEL MANAGEMENT

Web technology

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Project Name: Hotel Management System

- i) Project Requirements

Purpose: The purpose of the hotel management system is to facilitate the efficient management of hotel-related operations, including client information, customer reservations, room details, and user management.

Expected Outcome:

1. **Client Management:**
 - Capture and store information about hotel clients, including client ID, names, phone number, and assigned room.
2. **Customer Management:**
 - Maintain details of hotel customers, including customer ID, names, email, phone, and password.
3. **Reservation Management:**
 - Handle customer reservations with details such as reservation ID, arrival and departure dates, number of adults and children, associated customer, and assigned room.
4. **Room Management:**
 - Manage information related to hotel rooms, including room number, floor number, type, status, price, and room description.
5. **User Management:**
 - Store user details for system authentication, including first name, last name, email, password, and associated roles.

Specific Constraints or Limitations:

1. **Data Integrity:**
 - Ensure data integrity and consistency through proper relationships between entities (e.g., foreign key constraints).
2. **User Authentication:**
 - Implement secure user authentication and authorization using roles associated with users.
3. **Reservation Logic:**
 - Include logic to handle reservations, considering factors like room availability, arrival, and departure dates.
4. **User Roles:**
 - Define and implement user roles (e.g., admin, staff) for appropriate access control.
5. **Unique Constraints:**
 - Enforce unique constraints, such as unique email addresses for users.

Additional Considerations:

1. Frontend Integration:

- Develop a user interface to interact with the database, allowing users to manage clients, reservations, rooms, and users.

2. Reporting:

- Implement reporting functionalities for generating reports on reservations, room occupancy, etc.

3. Security Measures:

- Implement security measures, such as encryption for sensitive information, to protect user and client data.

4. Testing:

- Conduct thorough testing to ensure the system's functionality, reliability, and security.

5. Documentation:

- Provide comprehensive documentation for code, database schema, and system functionalities.

ii) Project Plan:


The project plan: the scope is about reservation of rooms of our hotel.

These are the scripts used in the project:

```
<script src="js/jquery-3.2.1.min.js"></script>
<script src="js/popper.js"></script>
<script src="js/bootstrap.min.js"></script>
<script src="vendors/owl-carousel/owl.carousel.min.js"></script>
<script src="js/jquery.ajaxchimp.min.js"></script>
<script src="vendors/bootstrap-datepicker/bootstrap-
datetimepicker.min.js"></script>
<script src="vendors/nice-select/js/jquery.nice-select.js"></script>
<script src="js/mail-script.js"></script>
<script src="js/stellar.js"></script>
<script src="vendors/lightbox/simpleLightbox.min.js"></script>
<script src="js/custom.js"></script>
```

The timeline: 3weeks development

The Source code: many of the codes came from my mind and corrections came from chatGPT and friends.

 ROYAL HOTEL


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Customer Login

Home → Login

Login

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 ROYAL HOTEL

RESERVATIONLOGOUT

Enter Reservation

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 ROYAL HOTEL

ROOMRESERVATIONCUSTOMERLOGOUT

Save Client

Client List

Client National/Passport ID	Names	Phone Number	Assigned Room ID	ACTION	
12334445	Denyse	0781678910	120		
899993	Denyse	0781234567	R001		

[Save Room](#)

Room List

Room Number	Floor Number	Type	Status	Price	Room Description	ACTION
R001	1 update	Double Deluxe Room	Not Available	100.0	Denyse Room2	✎ ✖
ROO2	1	Double Deluxe Room	Available	123.0	Denyse 1st Room	✎ ✖

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[Enter Reservation](#)

Reservation List

Autogenerated Number	Reservation Number	Arrival Date	Departure Date	Email	Customer Names	Adult	Child	Room Id	ACTION
1	6286	2023-12-20	2023-12-29	bwadenyse@gmail.com	ddd	1	1	6	✎ ✖
2	1790	2023-12-27	2023-12-28	bb@gmail.com	denyse	1	1	3	✎ ✖
4	9166	2023-12-20	2024-01-05	bwadenyse@icloud.com	Denyse Uwineza	1	1	3	✎ ✖
5	5563	2023-12-21	2023-12-29	dee250rurangwa2@gmail.com	Denyse Uwineza	1	1	3	✎ ✖
6	7891	2023-12-14	2023-12-30	bb@gmail.com	Denyse Uwineza	1	1	3	✎ ✖
7	6638	2023-12-29	2024-01-05	dee250rurangwa2@gmail.com	Denyse	1	1	3	✎ ✖

Enter Reservation

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NAVIGATION

Home

Features

Services

Admin

Add New Reservation



New Reservation Form

Reservation Number

9449

Arrival Date

12 / 20 / 2023



Departure Date

12 / 30 / 2023



Email

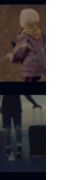
dee250urangwa2@gmail.com

Names

ddd

Number of Adult

INSTAGRAM



Staff Login

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Technical documentation:

Architecture Overview:

- **MVC (Model-View-Controller):** The application follows the MVC architecture, where controllers handle user requests, services contain business logic, and models represent the data entities.

Libraries and Frameworks:

1. **Spring Boot:**
 - Version: 2.3.2 (as per the parent version in the POM files).
 - Spring Boot is the core framework for building Java-based enterprise applications.
2. **Spring Data JPA:**
 - Used for data access and provides a higher-level, more data-centric abstraction for data access.
3. **Thymeleaf:**
 - A modern server-side Java template engine for web and standalone environments. It is used for rendering views in your Spring MVC application.
4. **Spring Boot DevTools:**
 - Provides fast application restarts, which helps in improving development productivity.
5. **MySQL Connector:**
 - Connector for MySQL database to interact with the MySQL database.
6. **Lombok:**
 - Reduces boilerplate code in Java classes by providing annotations like `@Data`, `@Builder`, etc.
7. **Spring Boot Starter Test:**
 - Includes dependencies for testing Spring Boot applications.
8. **Spring Boot Starter Mail:**
 - Starter for using JavaMail to send emails.

Key Components:

1. **Entities:**
 - `Reservation`, `Room`, `User`, and `Customer` are model entities annotated with JPA annotations, representing the data structure of your application.
2. **Repositories:**
 - It seems like you might have repositories for each entity to interact with the database.
3. **Services:**
 - `ReservationService`, `RoomService`, `UserService`, and `ClientService` are service interfaces providing methods for business logic.

4. **Controllers:**

- `ReservationController` and `PageController` are controllers handling HTTP requests, interacting with services, and rendering views.

Other Notable Points:

- **Session Management:**
 - `HttpSession` is used for session management, as evident in the `PageController`.
- **Error Handling:**
 - Error handling appears to be a part of the application, as seen in the `deleteEvent` method in `ReservationController`.

Suggestions for Improvement:

- Consider adding detailed exception handling and logging to enhance application robustness.
- Document the code with comments or `JavaDoc` for better maintainability.