# Hotel Management System

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## 1. Introduction

The Hotel Management System is a comprehensive solution designed to streamline the operations of a hotel, from reservation management to billing and reporting. This project aims to provide an efficient and user-friendly platform for both hotel staff and guests.

## 2. Problem Definition

Managing a hotel involves various complex tasks such as handling reservations, room allocation, guest services, billing, and reporting. This system addresses these challenges by automating many of the manual processes.

## 3. Available Applications

- 1. Cloudbeds. FrontRunners 2023. …
- 2. InnRoad. FrontRunners 2023. …
- 3. WebRezPro. WebRezPro is a cloud-based hospitality property
- 4. Little Hotelier. FrontRunners 2023. …
- 5. https://www.panpacific.com
- 6. http://hoteloceanpalace.com
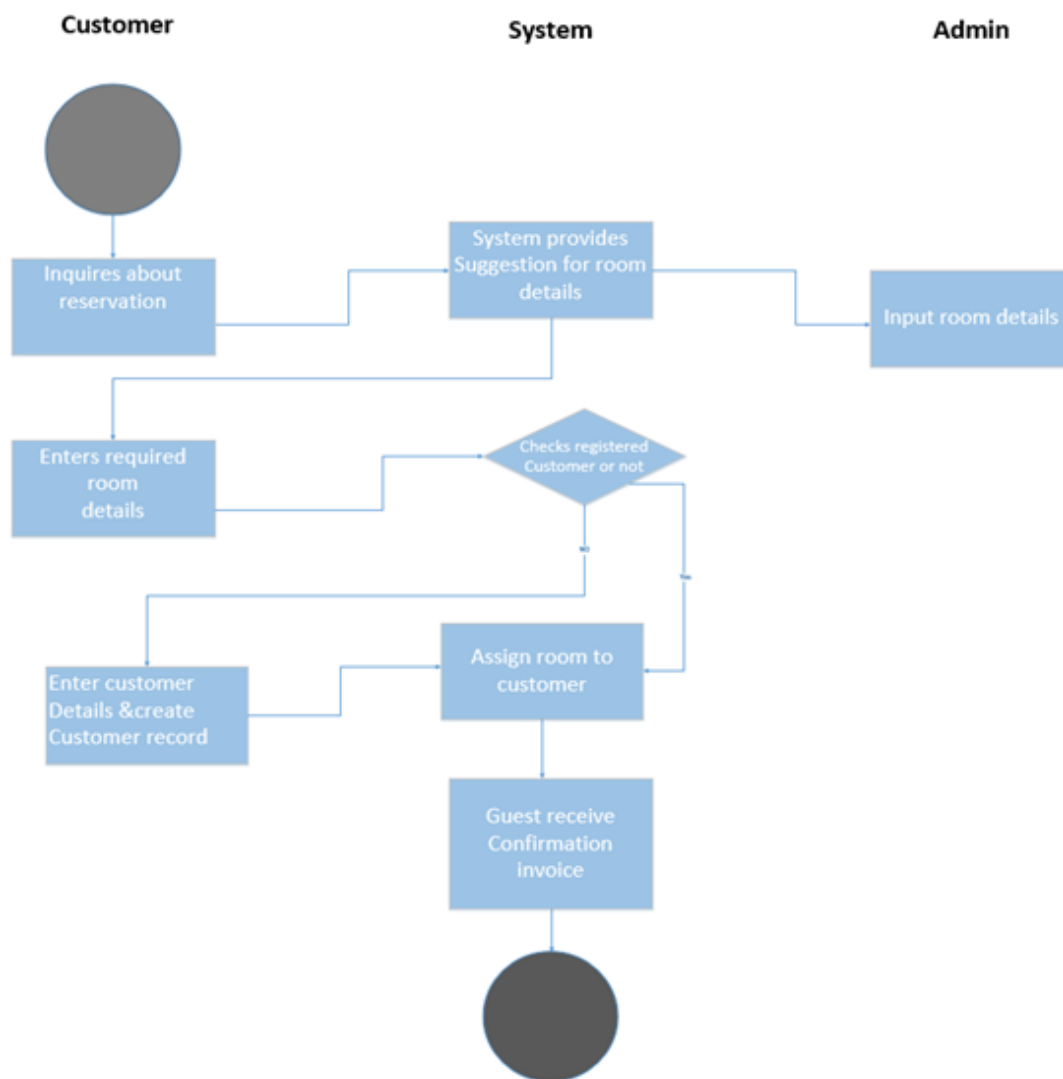- 7. https://dreamplushotelandresort.com

## 4. Stakeholders

- Hotel Owners
- Hotel Managers
- Receptionists
- Guests

# 5. Issues Encountered

During the development process, a few challenges were encountered. One major issue was optimizing database queries to ensure smooth performance, especially during peak reservation periods. This was addressed by implementing proper indexing and query optimization techniques.
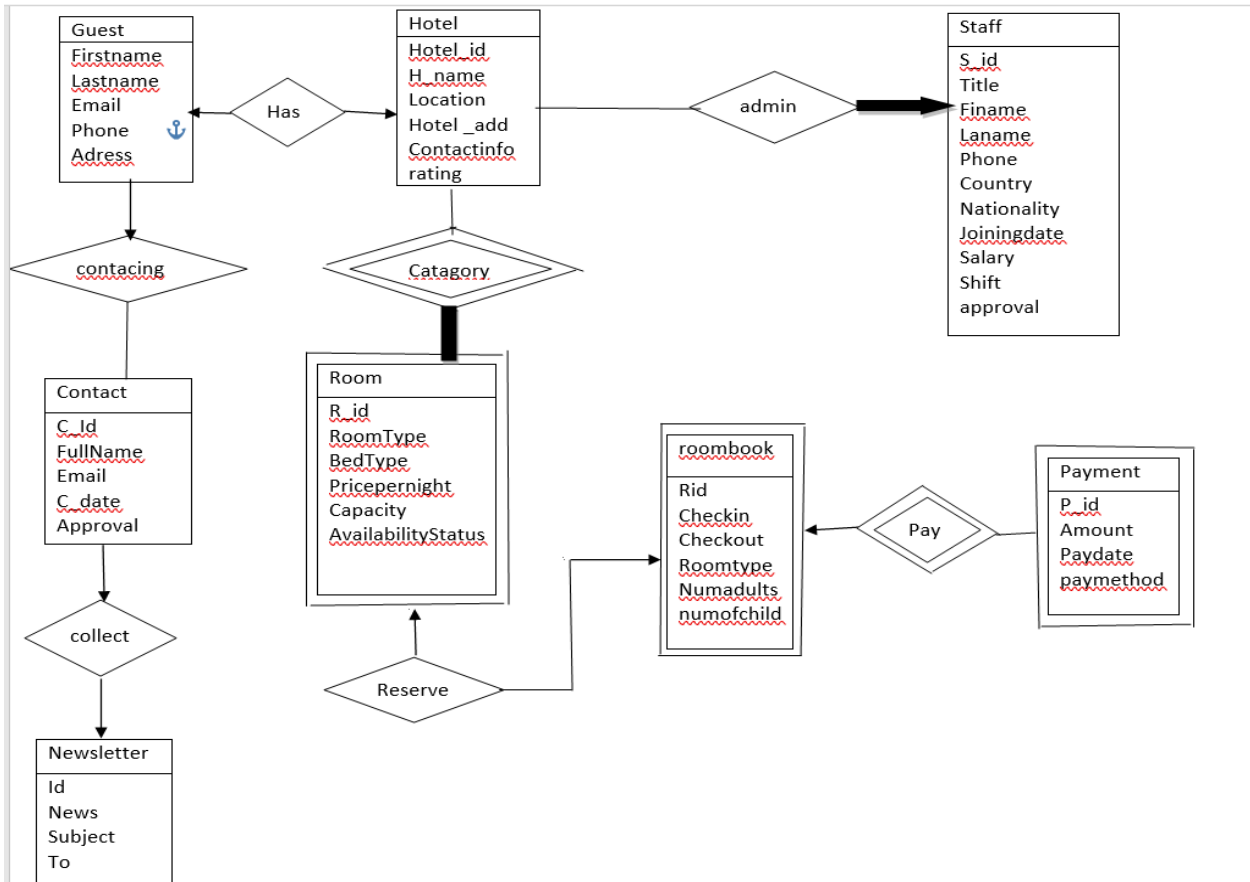
# 6. System Architecture

The project followed the **MVC (Model-View-Controller)** software development model. The architecture consists of:

- **Model**: Contains the data structures and logic to interact with the database.
- **View**: Represents the user interface, including HTML templates and CSS styles.
- **Controller**: Manages the flow of information between the Model and the View, processing user requests and updating the Model.
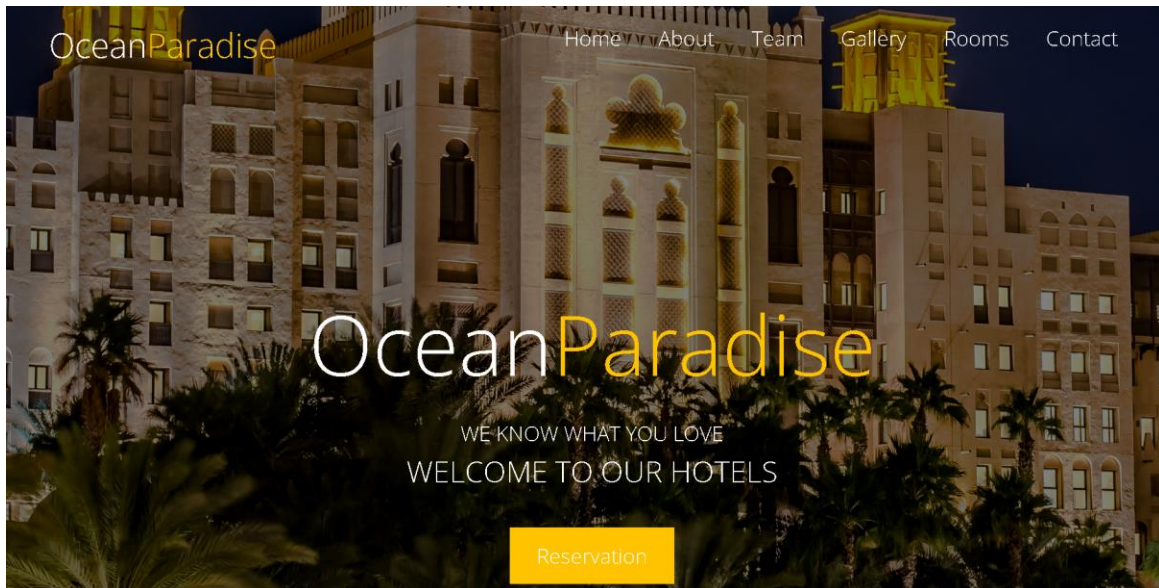
# 7. Database Design

## 8. Tools and Technologiess

Frontend: HTML, CSS, JavaScrip

Backend: PHP

Database: MySQL

Version Control: Git

## 9. Implementation



Reservation:

# Rooms And Rates

### Deluxe Room
★★☆☆☆
$320
Book Now

### Luxury Room
★★☆☆☆
$220
Book Now

### Guest Room
★★☆☆☆
$180
Book Now

### Single Room
★★☆☆☆
$150
Book Now

Your Name

Phone No.

Email

Your Message

SUBMIT

Admin login:

## OceanParadise

Username

••••••••

LOGIN

Rooms status:

**Status** Room Booking

| New Room Bookings **14** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| # | Name | Email | Country | Room | Bedding | Meal | Check In | Check Out | Status | More |
| 15 | abir hasan imran | weare22@gmail.com | bangladeshi | Superior Room | Double | Breakfast | 2023-11-02 | 2023-11-10 | Not Conform | Action |
| 14 | Mahira khan | agirnk22@gmail.com | 8903290 | Superior Room | Single | Half Board | 0000-00-00 | 0000-00-00 | Not Conform | Action |
| 13 | Mahira khan | agirnk22@gmail.com | 8903290 | Superior Room | Single | Half Board | 0000-00-00 | 0000-00-00 | Not Conform | Action |
| 12 | Mahira khan | agirnk22@gmail.com | 8903290 | Superior Room | Single | Half Board | 0000-00-00 | 0000-00-00 | Not Conform | Action |
| 11 | Mahira khan | agirnk22@gmail.com | 8903290 | Superior Room | Single | Half Board | 0000-00-00 | 0000-00-00 | Not Conform | Action |
| 10 | souri22 | saurimahin22@gmail.com | Afganistan | Superior | Single | Breakfast | 0000-00-00 | 0000-00-00 | Not | Action |

News Letter:

**News letters** panel

Send The News Letters to Followers

Send New News Letters

| 10 ∨ records per page | | | | | Search: |
|---|---|---|---|---|---|
| Name | Phone Number | Email | Date | Status | Approval | Remove |
| No data available in table | | | | | | |

Showing 0 to 0 of 0 entries                    Previous  Next

Payment Details:

**Payment Details**

| 10 ∨ records per page | | | | | | | | | | Search: |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | Room type | Bed Type | Check in | Check out | No of Room | Meal Type | Room Rent | Bed Rent | Meals | Gr.Total | Print |
| No data available in table | | | | | | | | | | | |

Showing 0 to 0 of 0 entries                    Previous  Next

Add user:



# 10. Conclusion and Limitations

The Hotel Management System project successfully addresses the challenges faced by hotel management. It provides an efficient platform for managing reservations, rooms, and guest services. However, there are some limitations:

- The system currently lacks multi-language support, limiting its use in non-English-speaking regions.
- While efforts have been made to optimize performance, very large hotels with high reservation traffic may require further optimization.
- The system does not currently support online payments. Additionally, the system is not yet integrated with a payment gateway.

In conclusion, the system significantly improves the efficiency and accuracy of hotel management operations.

## Appendix

Attainment of Complex Engineering Problem (CP)

| S.L. | CP No. | Attainment | Remarks |
|------|--------|------------|---------|
| 1. | P1: Depth of Knowledge Required | Yes | K3 (Engineering Fundamentals): |
| | | | K4 (Engineering Specialization): No |

| | | | K5 (Design): Yes ,need to create ER diagram before implementation. |
|---|---|---|---|
| | | | ER diagram Article no:7 |
| | | | K6 (Technology): Yes.Need to use Html,Css,Php, mysql for implementation. |
| | | | K8 (Research): |
| 2. | P2: Range of Conflicting Requirements | Yes | We are working on Hotel management system. |
| 3. | P3: Depth of Analysis Required | | Need to Analysis on present softwares and experiments.Investigations on different problems on this topic. |
| 4. | P4: Familiarity of Issues | Yes | Php ,Mysql syntax related issues. |
| 5. | P5: Extent of Applicable Codes | Yes | 6. System Architecture |
| 6. | P6: Extent of Stakeholder Involvement and Conflicting Requirements | Yes | Hotel Owners Hotel Managers Receptionists Guests |
| 7. | P7: Interdependence | Yes | 9. Implementation |

Mapping of Complex Engineering Activities (CA)

| S.L. | CA No. | Attainment | Remarks |
|---|---|---|---|
| 1. | A1: Range of resources | Yes | Frontend: HTML, CSS, JavaScript Backend: PHP Database: MySQL VersionControl:Git stakeholders: Hotel owners Hotel Managers Receptionists Guests |

| 2. | A2: Level of interaction | Yes | Sometimes faceing problems in connecting database,php and mysql related bugs was also there . |
|---|---|---|---|
| 3. | A3: Innovation | No | |
| 4. | A4: Consequences for Society and the Environment | YES | The Hotel Management System is a comprehensive solution designed to streamline the operations of a hotel, from reservation management to billing and reporting. This project aims to provide an efficient and user-friendly platform for both hotel staff and guests. |
| 5. | A5: Familiarity | No | |