



# Hotel Management System

Presented by **Team Five Stars** ★★★★★

## Team Members :

|                               |            |
|-------------------------------|------------|
| Doaa Abdelsattar Farid Elwany | 2401248020 |
| Sama Sherif Mohamed           | 2401241267 |
| Somia Ahmed Ibrahim Othman    | 2401242005 |
| Rahma Hany Mohamed            | 2401247261 |
| Abdelrahman Osama Eldesoky    | 2401247716 |

# Project Overview

Our Hotel Management System simulates modern hotel operations, efficiently managing guests, rooms, staff, bookings, and payments through a structured database.



## Guest Management

Track personal info and contact details.



## Room Management

Monitor status, type, and staff assignments.



## Booking & Payments

Handle reservations, meal plans, and payment records.



## Staff & Shifts

Organize employee roles, contacts, and work schedules.

# Entities & Relationships

The system is built on key interconnected tables, ensuring data integrity and efficient querying.

## Guests

Personal info, SSD, email, age, and phone numbers.

## Room Types

Categories (Single, Double, Suite) and prices.

## Staff Shifts

Employee roles, contact, salary, and shift details.



## Rooms

Number, floor, status, type, and responsible staff.

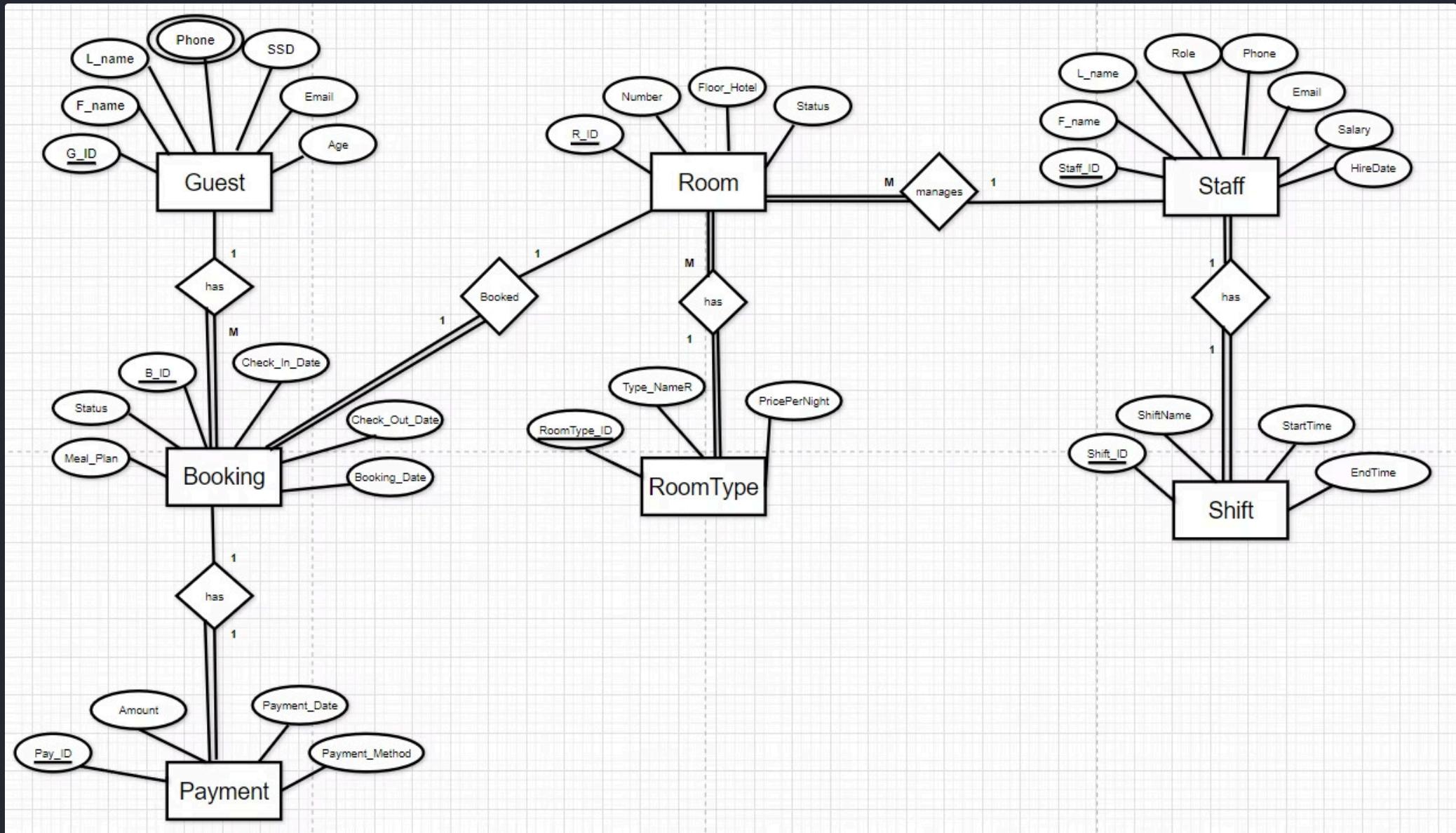
## Bookings

Check-in/out, meal plan, and status.

## Payments

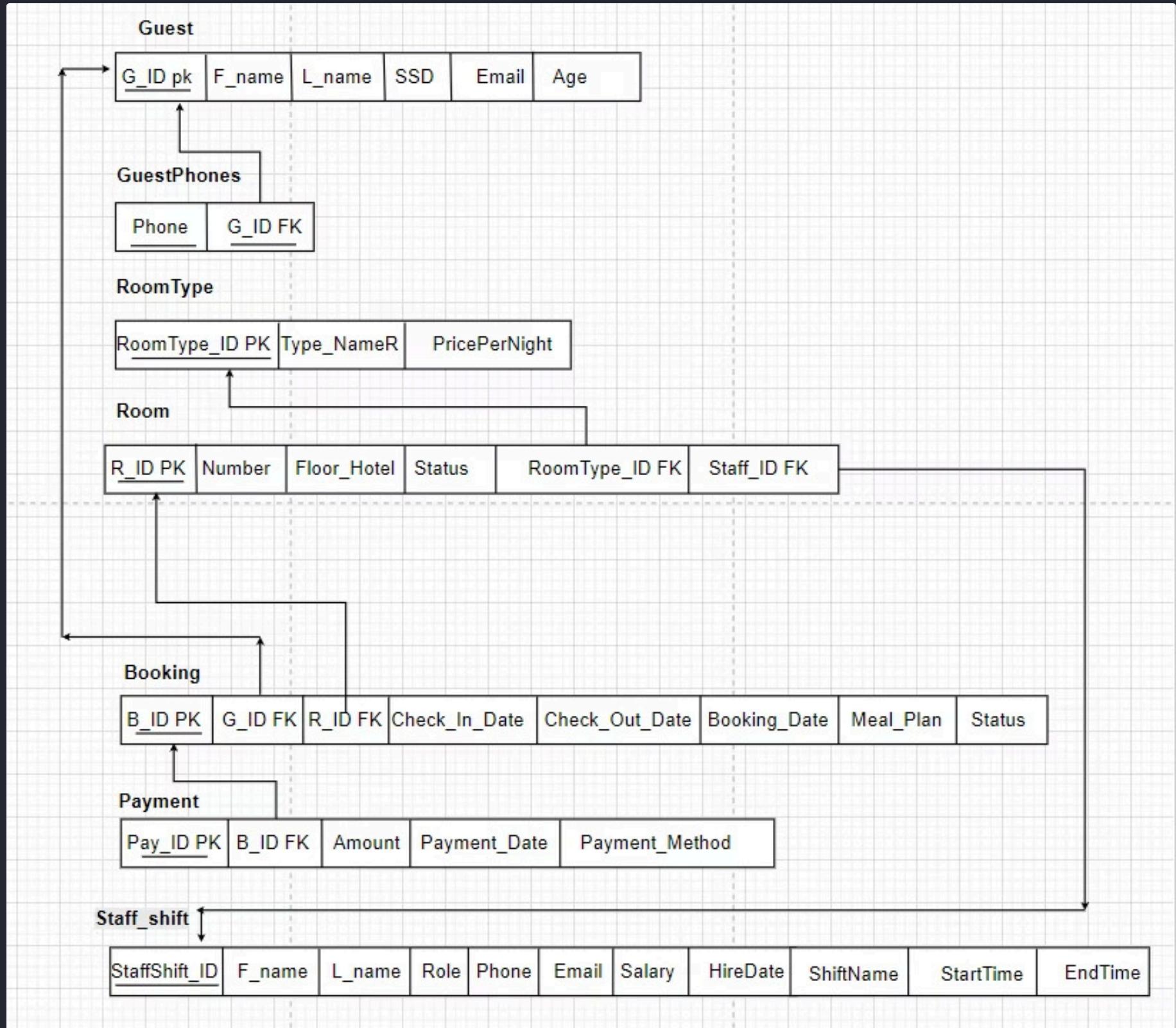
Amount, date, and payment method.

# ERD



# Relational Schema

Our ERD and Relational Schema illustrate the structure and relationships between all tables, ensuring data consistency and efficient operations.



# Data Dictionary

Detailed definitions for our core tables, including Guests, GuestPhones, RoomType, Room ,Booking , Payment and Staff\_Shift

## Guest

Stores personal info: G\_ID (PK), F\_name, L\_name, Email (Unique), SSD, Age ( $\geq 16$ ).

## GuestPhones

Maintains phone numbers: Phone (PK, composite with G\_ID), G\_ID (FK to Guest).

## RoomType

Defines room categories: RoomType\_ID (PK), Type\_NameR, PricePerNight ( $>0$ ).

## Room

Tracks room details: R\_ID (PK), Number ( $>0$ ), Floor\_Hotel ( $\geq 0$ ), Status, RoomType\_ID (FK), Staff\_ID (FK).

## Booking

Manages reservations: B\_ID (PK), G\_ID (FK), R\_ID (FK), Check\_In/Out\_Date, Booking\_Date, Meal\_Plan, Status.

## Payment

Records payment info: Pay\_ID (PK), B\_ID (FK), Amount ( $>0$ ), Payment\_Date, Payment\_Method.

## Staff\_Shift

Employee & shift details: StaffShift\_ID (PK), F\_name, L\_name, Role, Phone, Email, Salary ( $>0$ ), HireDate, ShiftName, Start/EndTime.

# Queries

Our system enables comprehensive reporting for better decision-making.



## Full Booking Details

Comprehensive overview of all reservations.



## Revenue per Room Type

Analyze income generated by different room categories.



## Average Stay Duration

Insights into guest stay patterns per room type.

## Upcoming Bookings

Monitor future reservations and plan resources.



## Top Guests by Payment

Identify high-value customers for loyalty programs.

## Staff Responsibilities

Track room assignments and staff workload.



## Guest Phone Directory

Easy access to guest contact information.

## Booking Meal Plan Summary

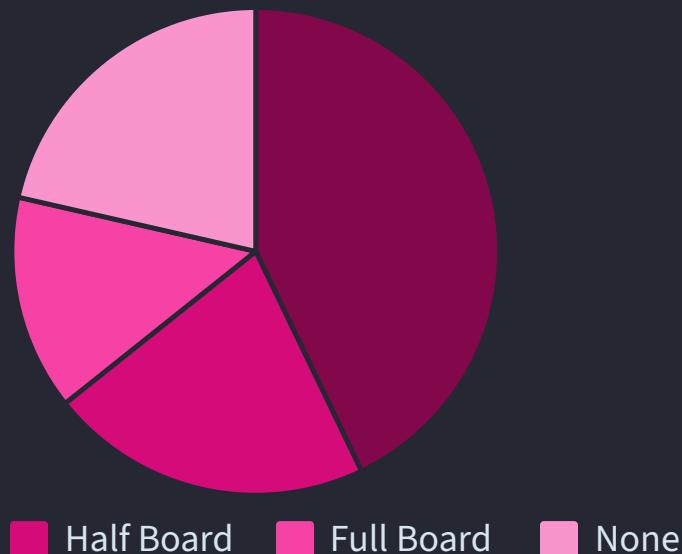
Overview of meal plan selections for bookings.

# Performance Metrics

Key queries provide insights into booking trends and revenue generation.

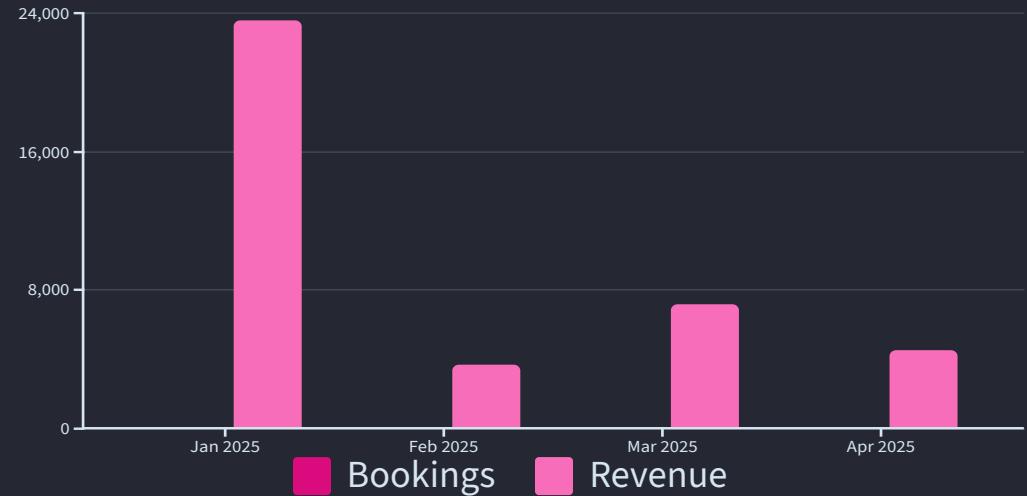
## Booking Count per Meal Plan

Analyzes the popularity of different meal plans.



## Monthly Bookings & Revenue

Tracks booking volume and total revenue over time.



# GUI

**Hotel Management**

**Room Management**

**Floor Overview**

**Room 101** Available  
Single \$450.00/night Ali Hussein (Cleaner)  
**Room 102** Occupied  
Double \$650.00/night Maha Kamal (Reception)  
**Room 103** Occupied  
Suite \$1200.00/night Omar Said (Manager)  
**Room 104** Cleaning  
Single \$950.00/night Dina Mostafa (Reception)  
**Floor 2**  
**Room 201** Occupied  
Single \$1400.00/night Tarek Ali (Cleaner)  
**Room 202** Available  
Double \$1300.00/night Salma Fouad (Reception)  
**Room 203** Occupied  
Suite \$1600.00/night Yara Sami (Manager)  
**Room 204** Occupied  
Single \$800.00/night Mostafa Nagy (Cleaner)

+ Add Room All

**Hotel Management**

**Dashboard**

Today: 2025-12-08

**Total Guests:** 15 **Available Rooms:** 5 **Total Bookings:** 19 **Total Revenue:** \$53550.00

**Room Status Summary:**  
Available: 5 rooms | Cleaning: 2 rooms | Occupied: 9 rooms

**Upcoming Check-ins:**

| Guest Name      | Room | Check-in Date | Room Type  |
|-----------------|------|---------------|------------|
| Ibrahim Mostafa | 301  | 2025-12-08    | Checked-in |
| Tamer Khaled    | 203  | 2025-12-07    | Checked-in |
| Youssef Nabil   | 103  | 2025-12-06    | Checked-in |
| Mona Hassan     | 303  | 2025-12-06    | Checked-in |
| Farah Nader     | 403  | 2025-03-10    | Upcoming   |

**Recent Bookings:**

| Guest Name      | Room | Booking Date | Status     |
|-----------------|------|--------------|------------|
| Ibrahim Mostafa | 301  | 2025-12-08   | Checked-in |
| Tamer Khaled    | 203  | 2025-12-07   | Checked-in |
| Youssef Nabil   | 103  | 2025-12-06   | Checked-in |
| Mona Hassan     | 303  | 2025-12-06   | Checked-in |
| Farah Nader     | 403  | 2025-03-10   | Upcoming   |

**Quick Actions:**

Add New Guest Create Booking Manage Rooms Generate Report

Hotel Management System © 2024 | Database: Hotels\_db

# Conclusion & Future Outlook

## Insights

 **Top Performing Room Type**  
Suite generated \$21650.00 in revenue

 **Best Performing Month**  
1/2025 had \$45650.00 in revenue

 **Most Valuable Guest**  
Ibrahim Mostafa spent \$8500.00 across 2 bookings

## Report Information

 **Data Source**  
Hotel Management Database

 **Last Updated**  
2025-12-08 00:08:34

 **Report Coverage**  
Complete historical data

Our Hotel Management System provides a robust, efficient, and scalable solution for modern hotel operations, enhancing guest experience and management efficiency.



**Enhanced Efficiency**  
Streamlined operations and reduced manual tasks.



**Improved Guest Experience**  
Faster check-ins, personalized services.



**Data-Driven Decisions**  
Comprehensive reports for strategic planning.