

HOTEL MANAGEMENT SYSTEM (HMS)



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2 Introduction

This is a management system for managing the general activities of a hotel like booking of rooms, billing etc. The purpose of this document is to collect, analyze and define high-level needs and features of the Hotel Management System. It focuses on the capabilities needed by the stakeholders, and the target users, and why these needs exist. The details of how the Hotel Management System fulfills these needs are detailed in the use-case and supplementary specifications.

2.1 Project Objective

The objectives of Hotel Management System are to develop a project which maintains booking of rooms and handles accounts of a hotel. It is a database-based application to be implemented in oracle. This management system is aimed at facilitating the prompt, accurate and easy management of a hotel. It will be very helpful to the manager on the one hand and to the customer as they would be able to get good and fast service.

2.2 Project Scope

In this management system, Hotel management can add new customers and manage that customer information. Hotel manager can add hotel bill in that customer bill. This management system works at all hotels that cater to a large number of customers and want to computerize the complete management process.

2.3 Key Stakeholders

This project was made by my team as a course project for educational purposes.

Following are the key stakeholders in my project:

- My team members.
- Hotel staff.
- Hotel Management.

2.4 Software Requirements

- **Oracle 11 G**
- **Microsoft Word**
- **ERDPlus** ([ERDPlus](#))

2.5 Features Given to users

- Provide useful information about hotel.
- Provide ease of access.
- Offer security of user data, payment.
- Online room booking.
- E-payment.
- Reservation Email.
- Online payment Integration.

3 Database Design

3.1 Table Description

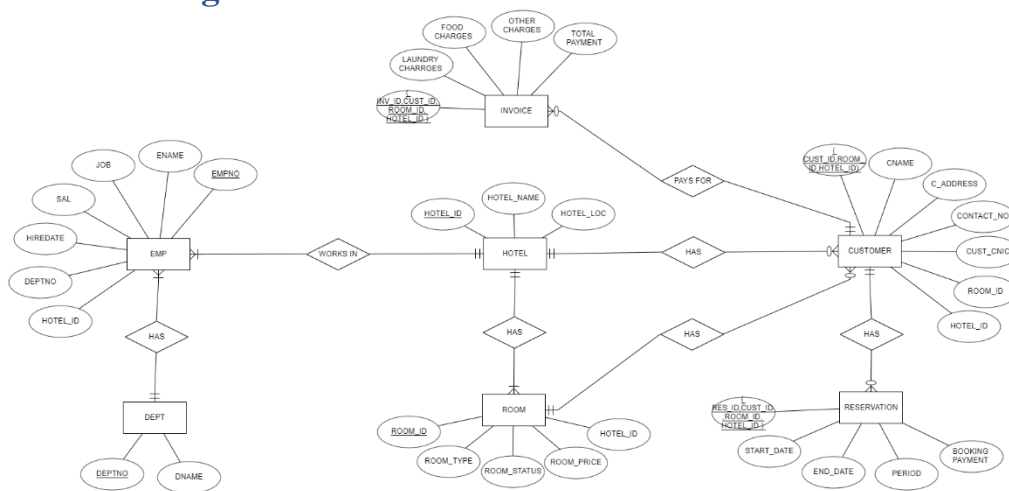
1. **DEPT:** This table consists of details about the various departments in the hotel. The information stored in this table includes department number and department name available in that department.
Constraint: Department name will be unique for each department; department number will be the **Primary Key** in DEPT Table. Department number and department name can't be **NULL**.
2. **HOTEL:** This table consists of details about the various hotels. The information stored in this table includes hotel ID, hotel name and hotel location for that hotel.
Constraint: hotel ID will be the **Primary Key** in HOTEL Table. Hotel ID, hotel name and hotel location can't be **NULL**.
3. **EMP:** This table stores information about all the employees working for the hospital and the departments they are associated with. Each employee is given an identity number. The information stored in this table includes employee number, employee name, job, salary, hire date, department number and hotel ID.
Constraint: Employee number will be the **Primary Key** in EMP Table. Department number will be **Foreign Key** references to Department number of DEPT Table. Hotel ID will be **Foreign Key** references to hotel ID of HOTEL Table. Employee number, employee name, job, salary, hire date, department number and hotel ID can't be **NULL**.
4. **ROOM:** This table consists of details about rooms in various hotels. The information stored in this table includes room ID, room type, room status, room price and hotel ID for each room.
Constraint: Room ID will be the **Primary Key** in ROOM Table. Hotel ID will be **Foreign Key** references to hotel ID of HOTEL Table. Room ID, room type, room status, room price and hotel ID can't be **NULL**.
5. **CUSTOMER:** This table consists of details about customers in various hotels. The information stored in this table includes customer ID, customer name, customer address, contact number, customer CNIC, room ID and hotel ID for each customer.
Constraint: Customer ID, ROOM ID, HOTEL ID will be the **Composite primary Key** in CUSTOMER Table. Room ID will be **Foreign Key** references to room ID of ROOM Table. Hotel ID will be **Foreign Key** references to hotel ID of HOTEL Table. Customer ID, customer name, customer address, contact number, customer CNIC, room ID and hotel ID can't be **NULL**.
6. **RESERVATION:** This table consists of details about customer's reservation. The information stored in this table includes reservation ID, start date, end date, period, booking payment, customer ID, room ID and hotel ID for each customer.
Constraint: RESERVATION ID, Customer ID, ROOM ID, HOTEL ID will be the **Composite primary Key** in RESERVATION Table. Customer ID, room ID and hotel ID will be **Composite foreign Key** references to customer ID, room ID and hotel ID of CUSTOMER Table. Reservation ID, start date, end date, period, booking payment, customer ID, room ID and hotel ID can't be **NULL**.
7. **INVOICE:** This table consists of details about customer's invoice. The information stored in this table includes invoice ID, laundry charges, food charges, other charges, total payment, customer ID, room ID and hotel ID for each customer.
Constraint: Invoice ID, Customer ID, ROOM ID, HOTEL ID will be the **Composite primary Key** in INVOICE Table. Customer ID, room ID and hotel ID will be **Composite foreign Key** references to customer ID, room ID and hotel ID of CUSTOMER Table. Invoice ID, laundry charges, food charges, other charges, total payment, customer ID, room ID and hotel ID can't be **NULL**.

3.2 Relational Database Schema

Relational database schema of above seven tables.

1. DEPT(DEPTNO, DNAME)
2. HOTEL(HOTEL_ID, HOTEL_NAME, HOTEL_LOC)
3. EMP(EMPNO, ENAME, JOB, SAL, HIREDATE, DEPTNO, HOTEL ID)
4. ROOM(ROOM_ID, ROOM_TYPE, ROOM_STATUS, ROOM_PRICE, HOTEL_ID)
5. CUSTOMER(CUST_ID, CNAME, C_ADDRESS, CONTACT_NO, CUST_CNIC, ROOM_ID, HOTEL_ID)
6. RESERVATION(RES_ID,CUST_ID, ROOM_ID, HOTEL_ID, START_DATE, END_DATE, PERIOD, BOOKING_PAYMENT)
7. INVOICE(INV_ID,CUST_ID, ROOM_ID, HOTEL_ID, LAUNDRY_CHARGES, FOOD_CHARGES, OTHER_CHARGES, TOTAL_PAYMENT)

3.3 ER Diagram



TABLES

SELECT * FROM EMP;

EMPNO	ENAME	JOB	SAL	HIREDATE	DEPTNO	HOTEL_ID
1710	Asad	Manager	50000	01/11/2011	1	1
1730	Raheem	Manager	55000	02/19/2010	1	2
1750	Akram	Manager	59000	06/23/2010	1	3
1715	Faisal	Head Chef	51000	10/13/2011	2	1
1725	Umer	Head Chef	53000	11/13/2010	2	2
1735	Zia	Head Chef	52300	04/19/2010	2	3
1745	Kareem	Supervisor	56300	12/19/2013	3	1
1755	Luqman	Supervisor	55300	05/19/2012	3	2
1765	Luqman	Supervisor	56000	09/01/2012	3	3
1720	Fareed	Manager	58000	09/21/2009	4	1
1740	Faheem	Manager	57000	07/03/2009	4	2
1760	Noman	Manager	59000	07/03/2012	4	3
1711	Ali	Waiter	26000	03/03/2013	1	1
1712	Saleem	Waiter	26000	02/05/2013	1	1
1731	Rehman	Waiter	27900	10/11/2014	1	2
1732	Shareef	Waiter	27900	10/13/2014	1	2
1751	Qamar	Waiter	26200	10/17/2013	1	3
1752	Moaz	Waiter	26200	10/09/2013	1	3
1716	Qasim	Chef	46200	11/09/2012	2	1
1717	Naem	Chef	46200	11/13/2012	2	1
1726	Rafay	Chef	44800	08/13/2014	2	2
1727	Danish	Chef	44800	08/10/2014	2	2
1736	Farah	Chef	47100	05/19/2014	2	3
1737	Naila	Chef	47100	05/11/2014	2	3
1746	Wasif	Bell Boy	29100	05/21/2012	3	1
1747	Taha	Bell Boy	29100	05/01/2012	3	1
1756	Ilyas	Bell Boy	28400	10/01/2012	3	2
1757	Shazia	Bell Girl	28400	10/09/2012	3	2
1766	Shazia	Bell Girl	28700	02/09/2012	3	3
1767	Sadia	Bell Girl	28700	02/09/2012	3	3
1721	Saba	Receptionist	31700	01/09/2012	4	1
1722	Faiza	Receptionist	31700	01/01/2012	4	1
1741	Yasir	Receptionist	33000	06/01/2012	4	2
1742	Rabia	Receptionist	33000	06/13/2012	4	2
1761	Nida	Receptionist	30000	01/11/2014	4	3
1762	Tania	Receptionist	30000	01/11/2014	4	3

SELECT * FROM DEPT;

DEPTNO	DNAME
1	Food And Beverages
2	Food Production
3	House Keeping
4	Front Office

SELECT * FROM HOTEL;

HOTEL_ID	HOTEL_NAME	HOTEL_LOC
1	Pearl Continental	Lahore
2	Pearl Continental	Islamabad
3	Pearl Continental	Karachi

SELECT * FROM CUSTOMER;

CUST_ID	CNAME	C_ADDRESS	CONTACT_NO	CUST_CNIC	ROOM_ID	HOTEL_ID
5101	Saleem	18/2 st. 3 Ali Town,Sargoda	03005173921	31202-7822988-9	103	1
5102	Qasim	101/3 st. 17 Noor Town,Siakot	03091273921	31202-7212988-9	106	1
5103	Faisal	11/9 st. 7 Faiz Town,Narowal	03091212321	31202-7212912-9	108	1
5201	Umer	21/8 st. 2 Hamd Town,Noorpur	03099012321	31202-7212892-9	203	2
5202	Ayesha	211/1 st. 1 HBFC,Islampur	03029452321	31212-7212182-9	205	2
5203	Alia	91/11 st. 11 SLI,Attock	03059452981	31212-72212182-9	206	2
5208	Wasif	91 st. 3 PT1,Swabi	03059452981	31212-72212182-9	208	2
5205	Wasif	91 st. 3 PT1,Swabi	03059452981	31212-72212182-9	207	2
5206	Kashif	53 st. 1 Muradpur,Karak	03159453981	31212-72222182-1	209	2
5207	Akbar	3 st. 2 Fasilpur,Hasilpur	03209753971	31212-21322172-1	210	2
5301	ALi	121/2 st. 9 Alipur,Khushab	03332752971	31232-21399172-1	301	3
5302	Ishaq	71/8 st. 19 Clifton,Karachi	03332752111	31232-21619172-1	307	3
5303	Ishaq	71/8 st. 19 Clifton,Karachi	03332752111	31232-21619172-1	308	3
5304	Imran	901 st. 12 QBI,Karachi	03332752861	31202-51616172-9	309	3

SELECT * FROM ROOM;

ROOM_ID	ROOM_TYPE	ROOM_STATUS	ROOM_PRICE	HOTEL_ID
101	Single	Available	1500	1
102	Single	Available	1500	1
103	Single	Unavailable	1500	1
104	Double	Available	2500	1
105	Double	Available	2500	1
106	Double	Unavailable	2500	1
107	Queen	Available	3500	1
108	Queen	Unavailable	3500	1
109	King	Available	4500	1
110	Studio	Available	5500	1
201	Single	Available	1500	2
202	Single	Available	1500	2
203	Single	Unavailable	1500	2
204	Double	Available	2500	2
205	Double	Unavailable	2500	2
206	Double	Unavailable	2500	2
207	Queen	Unavailable	3500	2
208	Queen	Unavailable	3500	2
209	King	Unavailable	4500	2
210	Studio	Unavailable	5500	2
301	Single	Unavailable	1500	3
302	Single	Available	1500	3
303	Single	Available	1500	3
304	Double	Available	2500	3
305	Double	Available	2500	3
306	Double	Available	2500	3
307	Queen	Unavailable	3500	3
308	Queen	Unavailable	3500	3
309	King	Unavailable	4500	3
310	Studio	Available	5500	3

SELECT * FROM INVOICE;

INV_ID	CUST_ID	HOTEL_ID	ROOM_ID	LAUNDRY_CHARGES	FOOD_CHARGES	OTHER_CHARGES	TOTAL_PAYMENT
9101	5101	1	103	1000	1500	500	3000
9102	5102	1	106	1000	1500	1000	3500
9103	5103	1	108	1000	2500	1000	4500
9201	5201	2	203	1000	1500	0	2500
9202	5202	2	205	1000	2500	0	3500
9203	5203	2	206	2000	2500	0	4500
9204	5205	2	207	2000	2500	0	4500
9205	5206	2	209	2000	2500	0	4500
9206	5207	2	210	2000	2500	0	4500
9207	5208	2	208	2000	2500	0	4500
9301	5301	3	301	2000	2500	0	4500
9302	5302	3	307	2000	2500	0	4500
9303	5303	3	308	2000	2500	0	4500
9304	5304	3	309	2000	2500	0	4500

SELECT * FROM RESERVATION;

RES_ID	CUST_ID	ROOM_ID	HOTEL_ID	START_DATE	END_DATE	BOOKING_PAYMENT	PERIOD
7101	5101	103	1	02/15/2016	02/17/2016	3000	2
7102	5102	106	1	02/15/2016	02/17/2016	5000	2
7103	5103	108	1	02/15/2016	02/17/2016	7000	2
7201	5201	203	2	02/15/2016	02/17/2016	3000	2
7202	5202	205	2	02/15/2016	02/17/2016	5000	2
7203	5203	206	2	02/11/2016	02/12/2016	2500	1
7204	5205	207	2	02/11/2016	02/12/2016	3500	1
7205	5206	209	2	02/11/2016	02/12/2016	4500	1
7206	5207	210	2	02/11/2016	02/12/2016	5500	1
7207	5208	208	2	02/11/2016	02/12/2016	3500	1
7301	5301	301	3	02/11/2016	02/12/2016	1500	1
7302	5302	307	3	02/11/2016	02/12/2016	3500	1
7303	5303	308	3	02/11/2016	02/12/2016	3500	1
7304	5304	309	3	02/11/2016	02/12/2016	4500	1