CASE STUDY

HOTEL MANAGEMENT SYSTEM
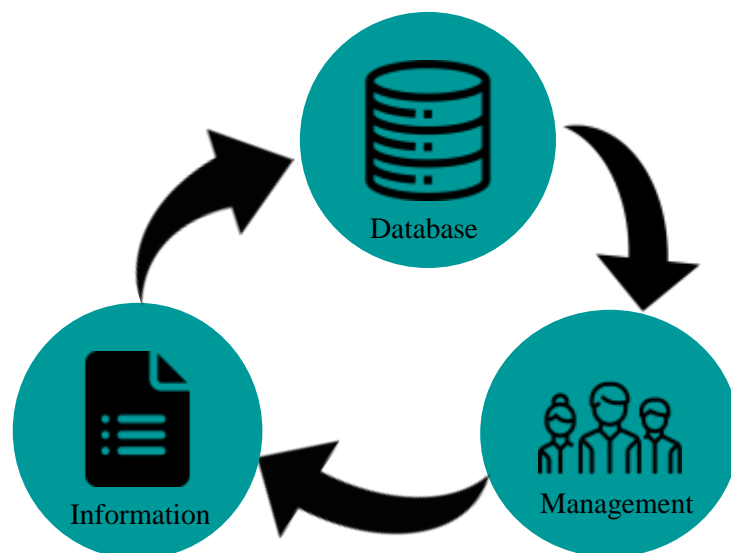
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INTRODUCTION:

The main objective of this project is to create a database management system for a hotel. The hotel has multiple chains, which further have multiple hotels. In order to manage all the operations and data of hotel we would need an organized management that will cater to our needs. The data collected for making hotel database management system is taken from one of the hotel's of Mumbai i.e. Suvi Palace in Vasai. The areas which we will manage include-

- The hotel chains, their details

- The number of rooms in the hotel, description of rooms and discounts provided

- Information about employees and departments they work in

- Information about guests

- Managing bookings and other services provided to the guests

## HOTEL AND RESTAURANT MANAGEMENT:

Hotel Management System is to manage all aspects of hotel business operations, including the delivery of superior guest experiences. Traditionally, a hotel management system is a software that enables a group of hotels to manage front-office capabilities, such as booking reservations, guest check-in/checkout, room assignment, managing room rates, and billing.

DATABASE DESIGNING:

Starting with drawing the ER diagram

We started with designing the structure of the database. We noted down all the tables required. We designed each table with columns and attributes respectively and tried to derive the relationships between tables. We tried to keep the tables in a form where we can reduce the data redundancy and to make it accessible in an easy and simple way. The ER diagram created is as below:
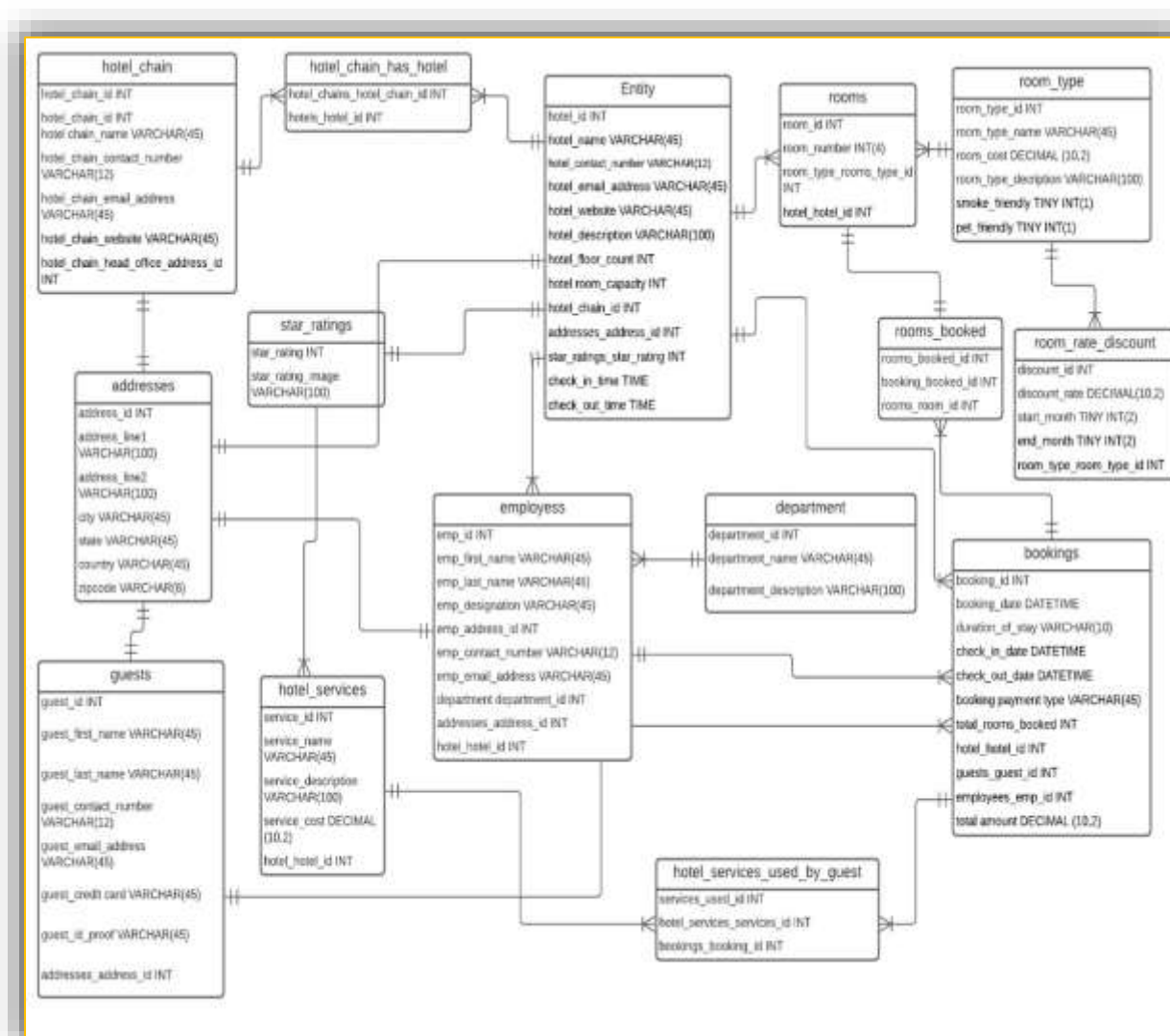
CREATING AND DEFINING TABLES:

We will be creating the required tables for making the hotel management database. Following are the tables created.

```
SQL> CREATE TABLE hotel_database.hotel (
  2    hotel_id INT   ,
  3    hotel_name VARCHAR(45) ,
  4    hotel_contact_number VARCHAR(12) ,
  5    hotel_email_address VARCHAR(45) ,
  6    hotel_website VARCHAR(45) ,
  7    hotel_description VARCHAR(100) ,
  8    hotel_floor_count INT ,
  9    hotel_room_capacity INT ,
 10    hotel_chain_id INT ,
 11    addresses_address_id INT   ,
 12    star_ratings_star_rating INT   ,
 13    check_in_time TIMESTAMP ,
 14    check_out_time TIMESTAMP,
 15    PRIMARY KEY (hotel_id, addresses_address_id, star_ratings_star_rating),
 16    CONSTRAINT fk_hotels_addresses1
 17      FOREIGN KEY (addresses_address_id)
 18      REFERENCES hotel_database.addresses(address_id));

Table created.

SQL> create index fk_hotels_addresses1_idx ON hotel_database.hotel(addresses_address_id ASC);

Index created.
```

hotel table consists of information of the hotel such as name, contact number, email-address, website, description of hotel, floor count, room capacity, check in time, check out time, star ratings. Here the primary key is hotel_id, addresses_address_id, star_ratings_star_rating.

```
SQL> ALTER TABLE hotel_database.hotel
  2  ADD CONSTRAINT fk_hotel_star_ratings1
  3      FOREIGN KEY(star_ratings_star_rating)
  4      REFERENCES hotel_database.star_ratings(star_rating);

Table altered.

SQL> create index fk_hotel_star_ratings1_idx ON hotel_database.hotel(star_ratings_star_rating ASC);

Index created.
```

```
SQL> CREATE TABLE hotel_database.hotel_chain_has_hotel (
  2     hotel_chains_hotel_chain_id INT  ,
  3     hotels_hotel_id INT  ,
  4  PRIMARY KEY(hotel_chains_hotel_chain_id,hotels_hotel_id));

Table created.
```

hotel_chain_has_hotel table consists of the data about the hotel chains of the hotel. There are two primary keys in this table, hotel_chains_hotel_chain_id and hotels_hotel_id.

```
SQL> CREATE TABLE hotel_database.hotel_chain (
  2    hotel_chain_id INT ,
  3    hotel_chain_name VARCHAR(45) ,
  4    hotel_chain_contact_number VARCHAR(12) ,
  5    hotel_chain_email_address VARCHAR(45) ,
  6    hotel_chain_website VARCHAR(45) ,
  7    head_office_address_id INT   ,
  8    PRIMARY KEY (hotel_chain_id, head_office_address_id),
  9    CONSTRAINT fk_hotel_chains_addresses1
 10      FOREIGN KEY (head_office_address_id)
 11      REFERENCES hotel_database.addresses(address_id));

Table created.

SQL> create index fk_hotel_chains_addresses1_idx ON hotel_database.hotel_chain(head_office_address_id ASC);

Index created.
```

hotel_chain table consists of details of the hotel chain. The primary key of the table is hotel_chain_id and head_office_address_id. The foreign key in this table is address_id taking reference from addresses table.

```
SQL> CREATE TABLE hotel_database.hotel_services (
  2    service_id INT  ,
  3    service_name VARCHAR(45) ,
  4    service_description VARCHAR(100) ,
  5    service_cost DECIMAL(10,2) ,
  6    hotel_hotel_id INT  ,
  7  PRIMARY KEY(service_id,hotel_hotel_id));

Table created.

SQL> create index fk_hotel_services_hotel1_idx ON hotel_database.hotel_services(hotel_hotel_id);

Index created.
```

hotel_services table contains information about the services provided to the guests. Primary key is service_id.

```
SQL> create table COOK(
  2   Cook_Id int ,
  3   Fname varchar(15)   ,
  4   Lname varchar(15)   ,
  5   Contact varchar(20)   ,
  6    Address varchar(30)   ,
  7     Salary varchar(30)   ,
  8   Sex char(1)   ,
  9   Bdate date   ,
 10   Join_Date date   ,
 11   Specialization varchar(50)   ,
 12   PRIMARY KEY(Cook_Id));

Table created.
```

COOK table contains data about the chef's working in the hotel. The information about cook includes name, contact details, address, salary, gender, birthdate, join date and his/her specialization. The primary key for this table is Cook_Id.

```
SQL> create table DELIVERY_BOY(
  2  Delivery_Boy_Id int ,
  3  Fname varchar(15)  ,
  4  Lname varchar(15)  ,
  5  Contact varchar(20)  ,
  6   Address varchar(30)  ,
  7    Salary varchar(30)  ,
  8  Sex char(1)  ,
  9  Bdate date  ,
 10  Join_Date date  ,
 11  PRIMARY KEY(Delivery_Boy_Id));

Table created.
```

DELIVERY_BOY table consists of data related to the delivery boys working in the hotel. The information of the delivery boy's is same as of cook's. Here the primary key is Delivery_Boy_Id.

```
SQL> CREATE TABLE hotel_database.employees (
  2    emp_id INT   ,
  3    emp_first_name VARCHAR(45) ,
  4    emp_last_name VARCHAR(45) ,
  5    emp_designation VARCHAR(45) ,
  6    emp_contact_number VARCHAR(12) ,
  7    emp_email_address VARCHAR(45) ,
  8    department_department_id INT   ,
  9    addresses_address_id INT   ,
 10    hotel_hotel_id INT   ,
 11    PRIMARY KEY (emp_id, department_department_id, addresses_address_id, hotel_hotel_id),
 12    CONSTRAINT fk_employees_services1
 13      FOREIGN KEY (department_department_id)
 14      REFERENCES hotel_database.department(dept_id));

Table created.

SQL> ALTER TABLE hotel_database.employees
  2  ADD CONSTRAINT fk_employees_addresses1
  3      FOREIGN KEY(addresses_address_id)
  4      REFERENCES hotel_database.addresses(address_id);

Table altered.
```

employees table consists of data related to the employees. The primary key is employee_id. There are three foreign keys, service_id that denotes many-to-one relations with the department table.
address_id that denotes one-to-one relationship with the addresses table.
hotel_id that denotes many-to-one relationship with the hotel table.

```
SQL> create table MANAGER(
  2   Manager_Id int ,
  3   Fname varchar(15) ,
  4   Lname varchar(15) ,
  5   Contact varchar(20) ,
  6    Address varchar(30)  ,
  7     Salary varchar(30)  ,
  8   Sex char(1)  ,
  9   Bdate date  ,
 10   Join_Date date,
 11   PRIMARY KEY(Manager_ID));

Table created.
```

MANAGER table consists of details about the manager of the hotel and here the primary key is Manager_ID.

```
SQL> create table WAITER(
  2   Waiter_Id int ,
  3   Fname varchar(15)  ,
  4   Lname varchar(15)  ,
  5   Contact varchar(20)  ,
  6    Address varchar(30)  ,
  7     Salary varchar(30)  ,
  8   Sex char(1)  ,
  9   Bdate date  ,
 10   Join_Date date  ,
 11   PRIMARY KEY(Waiter_Id));

Table created.
```

WAITER table consists of waiter id, Name of waiter, contact of waiter, address, salary of waiter, gender, birthdate and join date of waiter. The primary key here is waiter_id.

```
SQL> CREATE TABLE hotel_database.department (
  2     dept_id INT   ,
  3     dept_name VARCHAR(45) ,
  4     dept_descr VARCHAR(100) ,
  5  PRIMARY KEY(dept_id));

Table created.
```

department table contains the data about the different departments of the hotel. The primary key is dept_id, which creates a one-to-many relationship with the employee's table.

```
SQL> create table MENU(
  2   Menu_Id INT,
  3   Name varchar(100)   ,
  4   Price varchar(20)   ,
  5   Type varchar(20)   ,
  6   Category varchar(30)   ,
  7   PRIMARY KEY(Menu_Id,Name));

Table created.
```

MENU table contains details about the food item mentioned in the menu of the hotel. The primary key is Menu_Id and Name.

```
SQL> create table MENU_BILL(
  2  Order_Id int   ,
  3  Name varchar(100)   ,
  4  Quantity varchar(20)   ,
  5  Price varchar(20)   ,
  6  FOREIGN KEY(Order_Id)
  7  REFERENCES BILL(Order_Id));

Table created.
```

MENU BILL table consists of orders, name of the customer, quantity served, price of the food items. The foreign key here is order_id.

```
SQL> create table BILL(
  2  Order_id int ,
  3  Customer_Fname varchar (20) ,
  4  Customer_Lname varchar (20) ,
  5  Customer_id int   ,
  6  Total_Amount double precision ,
  7   PRIMARY KEY(Order_id));

Table created.
```

BILL table defines the information about the name of the customers, the food they ordered and total amount paid by the customers. The primary key of the table is Order_id.

```
SQL> CREATE TABLE hotel_database.addresses (
  2      address_id INT,
  3      address_line1 VARCHAR(100),
  4      address_line2 VARCHAR(100),
  5      city VARCHAR(45),
  6      state VARCHAR(45),
  7      country VARCHAR(45),
  8      zipcode VARCHAR(8),
  9   primary key(address_id));

Table created.
```

addresses table defines the information about the address of guests, hotels, hotel chains, employees. The primary key of the table is address_id. It maintains one-to-one relationship with tables, hotel_chain, hotel, employees and guests.

```
SQL> CREATE TABLE hotel_database.bookings (
  2      booking_id INT   ,
  3      booking_date TIMESTAMP ,
  4      duration_of_stay VARCHAR(10) ,
  5      check_in_date TIMESTAMP,
  6      check_out_date TIMESTAMP ,
  7      booking_payment_type VARCHAR(45) ,
  8      total_rooms_booked INT ,
  9      hotel_hotel_id INT   ,
 10      guests_guest_id INT   ,
 11      employees_emp_id INT   ,
 12      total_amount DECIMAL(10,2) ,
 13   PRIMARY KEY(booking_id,hotel_hotel_id,guests_guest_id,employees_emp_id));

Table created.
```

bookings table contains data about the booking made for rooms. The primary key for this table is booking_id.
The table has the following foreign keys:
hotel_hotel_id which has a many-to-one relationship with the hotel table.
guests_guest_id which has a many-to-one relationship with the guest's table.
employees_emp_id which has a many-to-one relationship with the employee's table.

```
SQL> CREATE TABLE hotel_database.rooms (
  2     room_id INT   ,
  3     room_number INT ,
  4     rooms_type_rooms_type_id INT   ,
  5     hotel_hotel_id INT   ,
  6     PRIMARY KEY (room_id, rooms_type_rooms_type_id, hotel_hotel_id),
  7     CONSTRAINT fk_rooms_rooms_type1
  8       FOREIGN KEY (rooms_type_rooms_type_id)
  9       REFERENCES hotel_database.room_type(room_type_id));

Table created.
```

rooms table contains details of the room i.e. room number, room type, etc. The primary key is room_id, rooms_type_rooms_id, hotel_hotel_id. Whereas the foreign key is rooms_type_rooms_id.

```
SQL> CREATE TABLE hotel_database.room_rate_discount (
  2     discount_id INT   ,
  3     discount_rate DECIMAL(10,2) ,
  4     start_month INT ,
  5     end_month INT ,
  6     room_type_room_type_id INT   ,
  7     PRIMARY KEY (discount_id, room_type_room_type_id),
  8     CONSTRAINT fk_room_rate_discount_type1
  9       FOREIGN KEY (room_type_room_type_id)
 10       REFERENCES hotel_database.room_type(room_type_id));

Table created.

SQL> create index fk_discount_room_type1_idx ON hotel_database.room_rate_discount(room_type_room_type_id);

Index created.
```

room_rate_discount table contains rate of discount provided to the customers, room type, etc. The primary key is discount_id, room_type_room_type_id whereas the foreign key is room_type_room_type_id.

```
SQL> CREATE TABLE hotel_database.room_type (
  2    room_type_id INT ,
  3    room_type_name VARCHAR(45) ,
  4    room_cost DECIMAL(10,2) ,
  5    room_type_description VARCHAR(100) ,
  6    smoke_friendly INT ,
  7    pet_friendly INT ,
  8  PRIMARY KEY(room_type_id));

Table created.
```

room_type table consists of room type i.e. is it smoke friendly or pet friendly, room cost, etc. Primary key is room type id.

```
SQL> CREATE TABLE hotel_database.rooms_booked (
  2    rooms_booked_id INT  ,
  3    bookings_booking_id INT  ,
  4    rooms_room_id INT  ,
  5  PRIMARY KEY (rooms_booked_id, bookings_booking_id, rooms_room_id));

Table created.

SQL> create index fk_rooms_booked_booking1_idx ON hotel_database.rooms_booked(bookings_booking_id ASC);

Index created.

SQL> create index fk_rooms_booked_rooms1_idx ON hotel_database.rooms_booked(rooms_room_id ASC);

Index created.
```

rooms_booked table has one primary key, rooms_booked_id. This table has 2 foreign keys, booking_id which has many-to-one relationship with the bookings table and room_id which has one-to-one relationship with the rooms table.

```
SQL> create table SALE_DETAIL(
  2  SDate date ,
  3  Daily int ,
  4  Weekly int   ,
  5  Monthly int   ,
  6  Rname VARCHAR(30));

Table created.
```

sale_detail table consists of date of sale, daily, weekly and monthly.

```
SQL> CREATE TABLE hotel_database.star_ratings (
  2     star_rating INT   ,
  3     star_rating_image VARCHAR(100) ,
  4  PRIMARY KEY(star_rating));

Table created.
```

star ratings table contains details how much star ratings the hotels receive.

```
SQL> CREATE TABLE hotel_database.guests (
  2     guest_id INT   ,
  3     guest_first_name VARCHAR(45) ,
  4     guest_last_name VARCHAR(45) ,
  5     guest_contact_number VARCHAR(12) ,
  6     guest_email_address VARCHAR(45) ,
  7     guest_credit_card VARCHAR(45) ,
  8     guest_id_proof VARCHAR(45) ,
  9     addresses_address_id INT   ,
 10    PRIMARY KEY (guest_id, addresses_address_id),
 11    CONSTRAINT fk_guests_addresses1
 12      FOREIGN KEY (addresses_address_id)
 13      REFERENCES hotel_database.addresses(address_id));

Table created.

SQL> create index fk_guests_addresses1_idx ON hotel_database.guests(addresses_address_id ASC);

Index created.
```

guests table has the data about the guests that check in to the hotel. The primary key of this table is guest_id. There is one foreign key in this table, address_id that has one to one relationship with the address table.

INSERTING DATA IN THE TABLES:

After creating the tables, we insert data into the tables to keep records of the guests, customers, cook's, employees, manager, waiter, delivery boy's, rooms, services provided to the guests and customers, etc. So, following is the data inserted into the tables.

```
SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(1,49, 'Dave Street', 'Mumbai','Maharashtra','India','97');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(2,79, 'Gandhi Road', 'Mumbai','Maharashtra','India','97');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(3,98, 'Martin Street', 'Chennai','Tamil Nadu','India','45');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(4,101, 'lincoln street', 'Ahmedabad','Gujarat','India','93');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(5,23, 'Greenfield', 'Kolkata','Bengal','India','37');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(6,55, 'Sarojini Nagar', 'Delhi','NULL','India','01');

1 row created.

SQL> insert into addresses(address_id,address_line1,address_line2,city,state,country,zipcode)
  2  values(7,01, 'Thakur Village', 'Mumbai','Mharashtra','India','101');

1 row created.
```

```
SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(101,'Aditya','Sukhi','1','500');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(104,'Aishan','Anavkar','2','800');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(102,'Junaid','Qureshi','3','1000');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(103,'Om','Gaiwkwad','4','250');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(110,'Mahak','Mourya','5','225');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(105,'Mirthula','Naidu','6','975');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(107,'Shubham','Tiwari','7','1125');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(108,'Kedar','Parab','8','480');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(109,'Sandesh','Kotwal','9','2500');

1 row created.

SQL> insert into BILL(Order_Id,Customer_Fname,Customer_Lname,Customer_Id,Total_Amount)
  2  values(113,'Aditee','Patil','10','375');

1 row created.
```

```
SQL> insert into bookings(booking_id,booking_date,duration_of_stay,check_in_date,check_out_date,booking_payment_type,total_rooms_booked,hotel_hotel_id,guests_guest_id,employees_emp_id,total_amount)
  2  values(1,'25-JAN-2018 11:59:32',2,'16-JUN-2018 12:00:00','18-JUN-2018 12:00:00','card','4','1','3','2','8000');

1 row created.

SQL> insert into bookings(booking_id,booking_date,duration_of_stay,check_in_date,check_out_date,booking_payment_type,total_rooms_booked,hotel_hotel_id,guests_guest_id,employees_emp_id,total_amount)
  2  values(2,'15-NOV-2018 11:59:32',4,'30-DEC-2018 12:00:00','02-JAN-2019 12:00:00','card','4','3','5','2','10000');

1 row created.

SQL> insert into bookings(booking_id,booking_date,duration_of_stay,check_in_date,check_out_date,booking_payment_type,total_rooms_booked,hotel_hotel_id,guests_guest_id,employees_emp_id,total_amount)
  2  values(3,'09-FEB-2019 11:59:32',3,'20-FEB-2019 12:00:00','23-FEB-2019 12:00:00','cash','3','3','1','5','6000');

1 row created.

SQL> insert into bookings(booking_id,booking_date,duration_of_stay,check_in_date,check_out_date,booking_payment_type,total_rooms_booked,hotel_hotel_id,guests_guest_id,employees_emp_id,total_amount)
  2  values(4,'13-MAR-2019 10:45:05',4,'10-APR-2019 12:00:00','14-FEB-2019 12:00:00','card','3','4','1','2','10000');

1 row created.
```

```
SQL> insert into cook(Cook_Id,Fname,Lname,Contact,Salary,Sex,Join_Date)
  2  values(1,'raghav','Sharma','976543218','8000','M','01-APR-2011');

1 row created.

SQL> insert into cook(Cook_Id,Fname,Lname,Contact,Salary,Sex,Join_Date)
  2  values(2,'Rishabh','Kumar','982314567','7000','M','11-APR-2011');

1 row created.
```

```
SQL> insert into Delivery_Boy(Delivery_Boy_Id,Fname,Lname,Salary,Sex,Join_Date)
  2  values(1,'Tarang','Goyal','5500','M','15-Mar-2011');

1 row created.

SQL> insert into Delivery_Boy(Delivery_Boy_Id,Fname,Lname,Salary,Sex,Join_Date)
  2  values(2,'Rajat','Agrawal','5500','M','15-Mar-2011');

1 row created.

SQL> insert into Delivery_Boy(Delivery_Boy_Id,Fname,Lname,Salary,Sex,Join_Date)
  2  values(3,'Saksham','Maheshwari','5500','M','20-Mar-2011');

1 row created.

SQL> insert into Delivery_Boy(Delivery_Boy_Id,Fname,Lname,Salary,Sex,Join_Date)
  2  values(4,'Vidit','Narayan','5500','M','20-Mar-2011');

1 row created.

SQL> insert into Delivery_Boy(Delivery_Boy_Id,Fname,Lname,Salary,Sex,Join_Date)
  2  values(5,'Rajat','Shah','5500','M','25-Apr-2011');

1 row created.
```

```
SQL> insert into department(dept_id,dept_name,dept_descr)
  2  values(1,'kitchen','cooking');

1 row created.

SQL> insert into department(dept_id,dept_name,dept_descr)
  2  values(2,'cleaning','sweeping and moping');

1 row created.

SQL> insert into department(dept_id,dept_name,dept_descr)
  2  values(3,'front staff','handle bookings and query resolution');

1 row created.

SQL> insert into department(dept_id,dept_name,dept_descr)
  2  values(4,'management','handles customer and resolve complaints');

1 row created.

SQL> insert into department(dept_id,dept_name,dept_descr)
  2  values(5,'commute','pick up and drop');

1 row created.
```

```
SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(1,'jen','louis','Manager',1,5,1);

1 row created.

SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(2,'David','Lawerence','Head Chef',1,5,1);

1 row created.

SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(3,'Rajesh','Vora','Waiter Head',2,4,3);

1 row created.

SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(4,'Samiksha','Patel','Cashier',5,4,7);

1 row created.

SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(5,'jenny','Singh','Head Accountant',5,2,6);

1 row created.

SQL> insert into employees(emp_id,emp_first_name,emp_last_name,emp_designation,department_department_id,addresses_address_id,hotel_hotel_id)
  2  values(6,'Sam','Pitt','Receptionist',3,4,2);

1 row created.
```

```
SQL> INSERT INTO guests(guest_id, guest_first_name, guest_last_name, guest_contact_number, guest_email_address, guest_id_proof, addresses_address_id)
  2  values(1,'Dhruvi','Swadia',9653314701,'dhruviswa@gmail.com','Aadhar',1);

1 row created.

SQL> INSERT INTO guests(guest_id, guest_first_name, guest_last_name, guest_contact_number, guest_email_address, guest_id_proof, addresses_address_id)
  2  values(2,'Riya','Ghosh',9623907001,'riya01@gmail.com','Pan',3);

1 row created.

SQL> INSERT INTO guests(guest_id, guest_first_name, guest_last_name, guest_contact_number, guest_email_address, guest_id_proof, addresses_address_id)
  2  values(3,'Aman','Sinha',9864532104,'aman25@gmail.com','Aadhar',2);

1 row created.

SQL> INSERT INTO guests(guest_id, guest_first_name, guest_last_name, guest_contact_number, guest_email_address, guest_id_proof, addresses_address_id)
  2  values(4,'Rakshita','Bhole',9011874305,'bholerakhita10@gmail.com','Passport',5);

1 row created.

SQL> INSERT INTO guests(guest_id, guest_first_name, guest_last_name, guest_contact_number, guest_email_address, guest_id_proof, addresses_address_id)
  2  values(5,'Raj','Shah',9769217295,'shahraj28@gmail.com','Passport',4);

1 row created.
```

```
SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(1,2);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(3,5);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(2,4);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(1,5);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(2,3);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(3,1);

1 row created.

SQL> insert into hotel_chain_has_hotel(hotel_chains_hotel_chain_id,hotels_hotel_id)
  2  values(4,1);
```

```
SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(1,'24-Hour Room Service','24-hour room service to take care of customers',1);

1 row created.

SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(2,'Currency Exchange','Foreign currency exchange facility available',1);

1 row created.

SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(3,'Laundry','Laundry/Dry Cleaning available same day',1);

1 row created.

SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(4,'Entertainment Room','Room to play indoor games like table tennis,pool,fooseball,monopoly,cards and books as well',2);

1 row created.

SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(5,'Swimming Pool','Pool access to all guests',1);

1 row created.

SQL> insert into hotel_services(service_id,service_name,service_description,hotel_hotel_id)
  2  values(6,'Gym','24 hour Gym',2);

1 row created.
```

```
SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(1,'Vegetable Pakora','300','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(2,'Onion Bhaji','400','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(3,'Mushroom Garlic Fry','550','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(4,'Samosa','150','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(5,'Lollipop','250','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(6,'Cutlet','300','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(7,'Chilli Panner','350','Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(8,'Chicken Tikka','350','Non-Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(9,'Tandoori Chicken','350','Non-Veg','Starters');

1 row created.

SQL> insert into menu(Menu_Id,Name,Price,Type,Category)
  2  values(10,'Lamb Tikka','400','Non-Veg','Starters');

1 row created.
```

```
SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(1,50,1,3,1);

1 row created.

SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(2,25,6,9,3);

1 row created.

SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(3,10,2,10,2);

1 row created.

SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(4,30,8,10,2);

1 row created.

SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(5,0,4,6,1);

1 row created.

SQL> insert into room_rate_discount(discount_id,discount_rate,start_month,end_month,room_type_room_type_id)
  2  values(6,75,11,12,1);

1 row created.
```

```
SQL> insert into room_type(room_type_id,room_type_name,room_cost,room_type_description,smoke_frindly,pet_friendly)
  2  values(1,'Standard Room',101,'Queen Size Bed 323 sq-foot room with city view',0,1
  3
SQL> insert into room_type(room_type_id,room_type_name,room_cost,room_type_description,smoke_friendly,pet_friendly)
  2  values(1,'Standard Room',101,'Queen Size Bed 323 sq-foot room with city view',0,1);

1 row created.

SQL> insert into room_type(room_type_id,room_type_name,room_cost,room_type_description,smoke_friendly,pet_friendly)
  2  values(2,'Standard Twin BedRoom',134,'Twin Beds 323 sq-foot room with city view',1,1);

1 row created.

SQL> insert into room_type(room_type_id,room_type_name,room_cost,room_type_description,smoke_friendly,pet_friendly)
  2  values(3,'Executive Room',332,'King Size Bed 443 sq-foot room with city view',1,1);

1 row created.

SQL> insert into room_type(room_type_id,room_type_name,room_cost,room_type_description,smoke_friendly,pet_friendly)
  2  values(4,'Super Deluxe Room',555,'2 King Size Bed with complimentary breakfast 443 sq-foot room with city view',1,1);

1 row created.
```

QUERIES:

```
SQL> -- How many customers have made a booking for a duration of 4 days?;
SQL> SELECT count(*) FROM hotel_database.bookings WHERE duration_of_stay=4;

  COUNT(*)
----------
         2
```

```
SQL> --Insert new records in waiter, cook;
SQL> INSERT INTO hotel_database.waiter
  2   values(2,'Rajat','Shah','976854231',NULL,5000,'M',NULL,'09-MAR-2011');

1 row created.

SQL> INSERT INTO hotel_database.cook
  2   values(4,'Ashutosh','Pandey','945387621',NULL,8000,'M',NULL,'10-APR-2012','Seafood');

1 row created.
```

```
SQL> --What is the average price of a booking?;
SQL> select avg(total_amount) from hotel_database.bookings;

AVG(TOTAL_AMOUNT)
-----------------
             7800
```

```
SQL> --Waq to implement the use of joins;
SQL> select d.dept_id,e.emp_id,e.emp_first_name,d.dept_name from hotel_database.department d inner join hotel_
database.employees e on e.emp_id=d.dept_id order by e.emp_id;

   DEPT_ID     EMP_ID EMP_FIRST_NAME
---------- ---------- --------------------------------------------
DEPT_NAME
--------------------------------------------
         1          1 jen
kitchen

         2          2 David
cleaning

         3          3 Rajesh
front staff


   DEPT_ID     EMP_ID EMP_FIRST_NAME
---------- ---------- --------------------------------------------
DEPT_NAME
--------------------------------------------
         4          4 Samiksha
management

         5          5 jenny
commute
```

```
SQL> --WAQ to list the guests who have id proof as aadhar;
SQL> select guest_id, guest_first_name, guest_last_name from hotel_database.guests where guest_id_proof = 'Aadhar';

  GUEST_ID GUEST_FIRST_NAME
---------- --------------------------------------------
GUEST_LAST_NAME
--------------------------------------------
         1 Dhruvi
Swadia

         3 Aman
Sinha
```
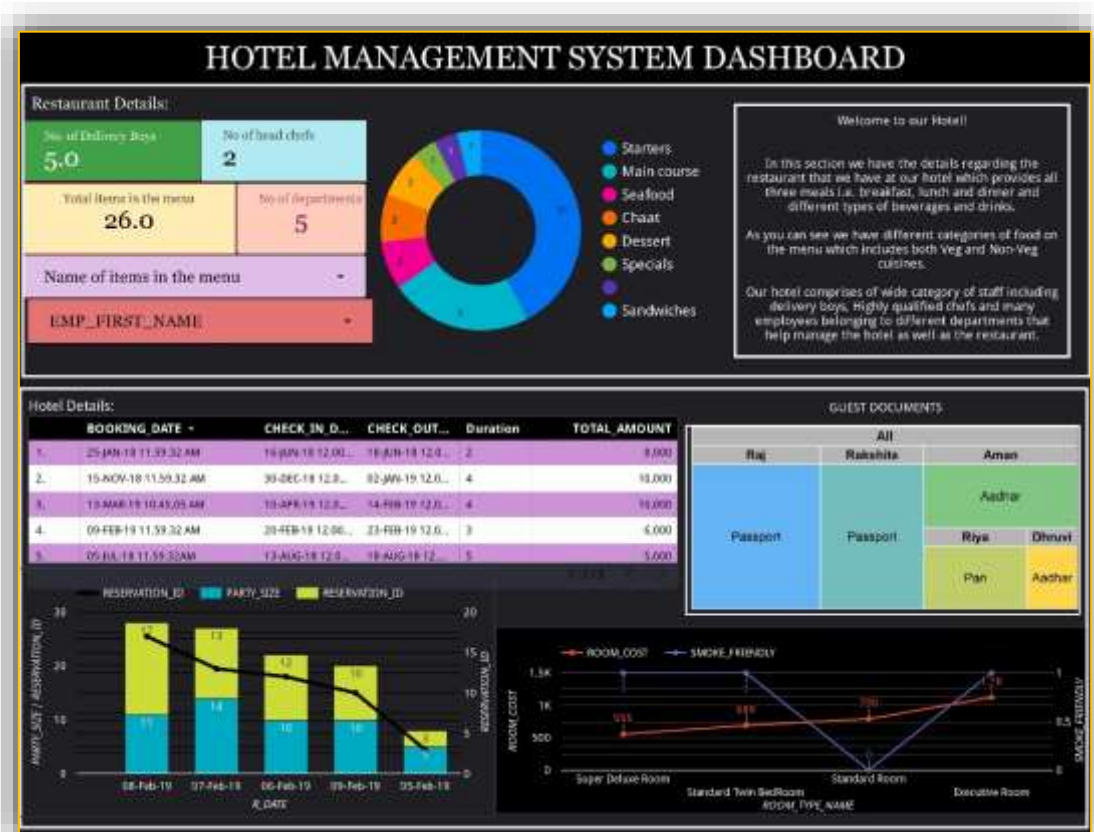
CONVERTING SQL DATA TO EXCEL:

```
SQL> SET MARKUP HTML ON
SQL&gt; SPOOL C:\Users\DELL\Desktop\bookings.xls
<br>
SQL&gt; SELECT * FROM hotel_database.bookings;
<br>
<p>
<table border='1' width='90%' align='center' summary='Script output'>
<tr>
<th scope="col">
BOOKING_ID
</th>
<th scope="col">
BOOKING_DATE
</th>
<th scope="col">
DURATION_O
</th>
```

HOTEL MANAGEMENT SYSTEM DASHBOARD:

CONCLUSION:

This project is our attempt to create a database management system for hotel management. We were able to create a database management system for managing the operations of the hotel such as keeping the information regarding various hotel chains, the respective staff which work throughout these hotel chains, the information about guests, description of rooms, etc. Overall, the database management system is quite beneficial in managing such large and varied amount of operations and its data.