HOTEL MANAGEMENT SYSTEM

SECOND REVIEW REPORT

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Prepared For

DATABASE SYSTEMS (ITE1003) – PROJECT COMPONENT

Submitted To

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Contents

1. INTRODUCTION

Hotels are the major generators of tourist. Hotel Management involves a combination of various skills like management, marketing, human resource development, financial development, dexterity, etc.

Activities in the area of Hotel Management involves ensuring that all the operations like food and drinks, accommodation including the maintenance of finance and personal details of all the employee are well served.

The reservations, registrations, accounts, services, payment mode, extra activities are to be handled and maintained carefully and in an effective way to satisfy the guest as well as to check there is no leakage of profit to the hotel. The tool required for that is a strong database.
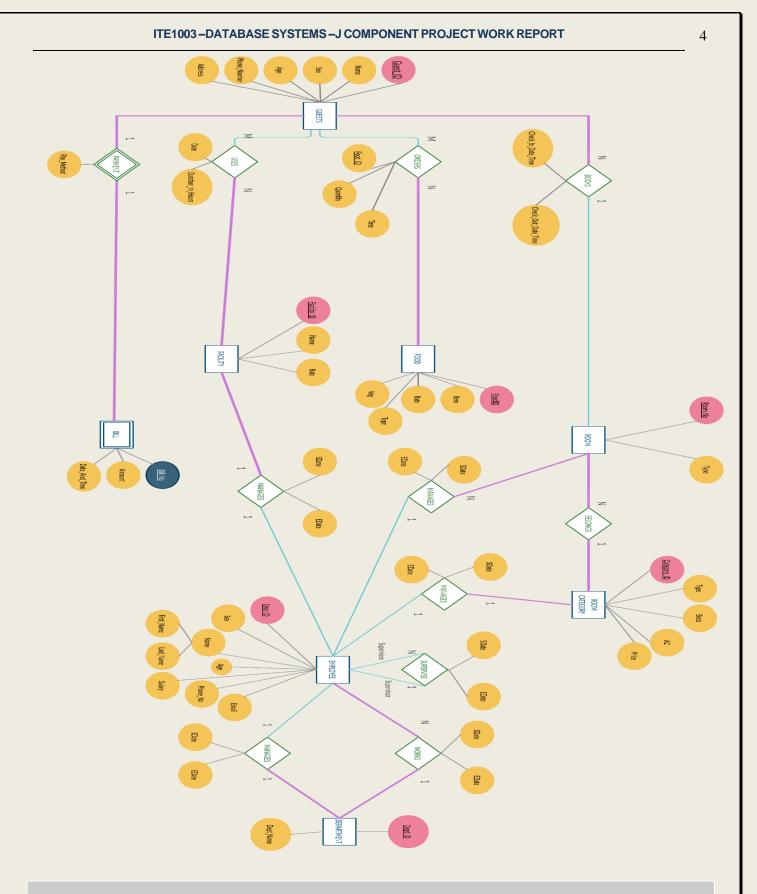
2. KEY CONTACTS AND STAKEHOLDERS

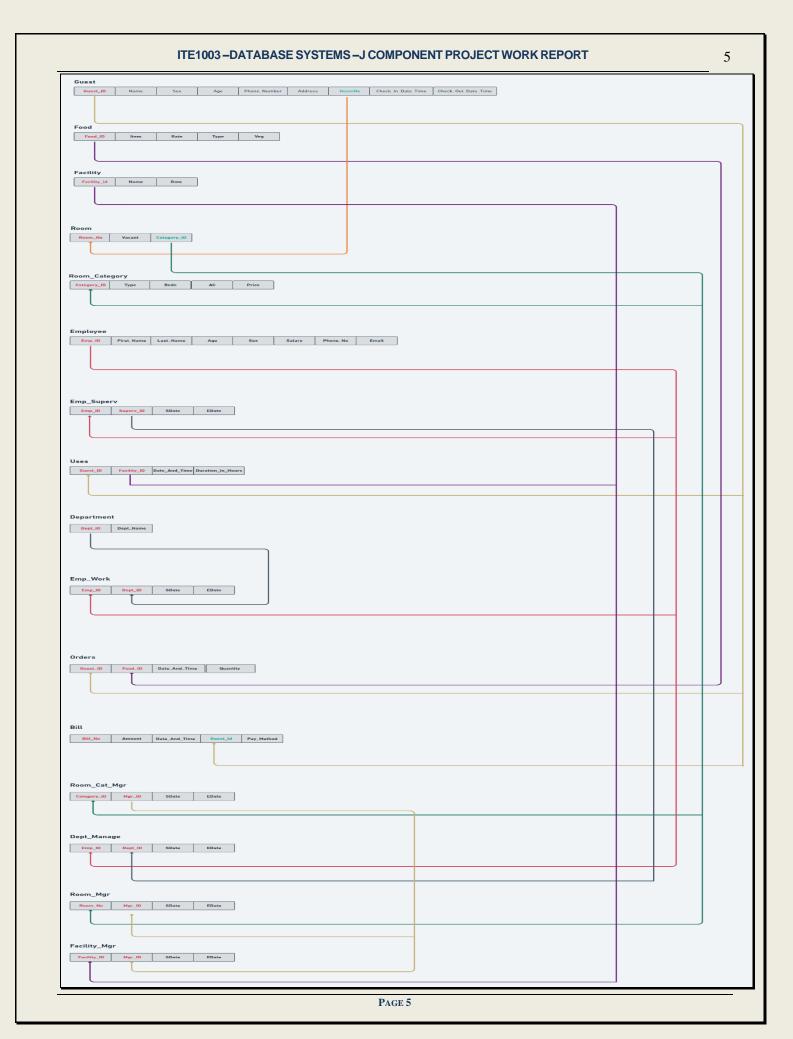| Name	Registration Number	Phone Number
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3. PROJECT SOFTWARE REQUIREMENTS

- Windows 10
- Oracle Live SQL

4. ER DIAGRAM

Here, Bold Line (PINK) represents Total Participation whereas Normal Line (BLUE) represents Partial Participation. Here, RED colour denotes Primary Key, BLUE colour signifies Partial Key and YELLOW colour represents Attributes.

5. SCHEMA DIAGRAM

Guest

Guest_ID	Name	Sex	Age	Phone_Number	Address	RoomNo	Check_In_Date_Time	Check_Out_Date_Time

Food

Food_ID	Item	Rate	Type	Veg

Facility

Facility_id	Name	Rate

Room

Room_No	Vacant	Category_ID

Room_Category

Category_ID	Type	Beds	AC	Price

Employee

Emp_ID	First_Name	Last_Name	Age	Sex	Salary	Phone_No	Email

Emp_Superv

Emp_ID	Superv_ID	SDate	EDate

Uses

Guest_ID	Facility_ID	Date_And_Time	Duration_In_Hours

Department

Dept_ID	Dept_Name

Emp_Work

Emp_ID	Dept_ID	SDate	EDate

Orders

Guest_ID	Food_ID	Date_And_Time	Quantity

Bill

Bill_No	Amount	Date_And_Time	Guest_Id	Pay_Method

Room_Cat_Mgr

Category_ID	Mgr_ID	SDate	EDate

Dept_Manage

Emp_ID	Dept_ID	SDate	EDate

Room_Mgr

Room_No	Mgr_ID	SDate	EDate

Facility_Mgr

Facility_ID	Mgr_ID	SDate	EDate

6. TABLES AND CONSTRAINTS

Guest:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Guest_ID	VARCHAR2	PRIMARY KEY
Name	VARCHAR2	NOT NULL
Sex	CHAR	NOT NULL
Age	NUMBER	CHECK (Age>0)
Phone_Number	NUMBER	NOT NULL
Address	VARCHAR2	
Room_No	NUMBER	FOREIGN KEY REFERENCES Room(Room_No)
Check_In_Date_Time	VARCHAR 2	TIMESTAMP
Check_Out_Date_Time	VARCHAR2	TIMESTAMP

Food:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Food_ID	VARCHAR2	PRIMARY KEY
Item	VARCHAR2	NOT NULL
Rate	NUMBER	NOT NULL
Type	VARCHAR2	
Veg	CHAR	NOT NULL

Facility:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Facility_ID	VARCHAR2	PRIMARY KEY
Name	VARCHAR2	NOT NULL
Rate	NUMBER	NOT NULL

Room:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Room_No	NUMBER	PRIMARY KEY
Vacant	CHAR	NOT NULL
Category_ID	VARCHAR2	NOT NULL, FOREIGN KEY REFERENCES Room_Category(Category_ID)

Room_Category:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Category_ID	VARCHAR2	PRIMARY KEY
Type	CHAR	
Beds	VARCHAR2	
AC	CHAR	NOT NULL
Price	NUMBER	NOT NULL

Employee:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Emp_ID	VARCHAR2	PRIMARY KEY
First_Name	VARCHAR2	NOT NULL
Last_Name	VARCHAR2	
Age	NUMBER	NOT NULL
Sex	CHAR	NOT NULL
Salary	NUMBER	NOT NULL
Phone_No	NUMBER	
Email	VARCHAR 2	UNIQUE

Emp_Superv:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Emp_ID	VARCHAR2	PRIMARY KEY
Superv_ID	VARCHAR2	PRIMARY KEY
SDate	DATE	NOT NULL
EDate	DATE	

Uses:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Guest_ID	VARCHAR2	PRIMARY KEY
Facility_ID	VARCHAR2	PRIMARY KEY
Date_And_Time	TIMESTAMP	NOT NULL
Duration_In_Hours	NUMBER	NOT NULL

Department:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Dept_ID	VARCHAR2	PRIMARY KEY
Dept_Name	VARCHAR2	NOT NULL

Emp_Work:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Emp_ID	VARCHAR2	PRIMARY KEY
Dept_ID	VARCHAR2	PRIMARY KEY
SDate	DATE	NOT NULL
EDate	DATE	

Orders:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Guest_ID	VARCHAR2	PRIMARY KEY
Food_ID	VARCHAR2	PRIMARY KEY
Date_And_Time	TIMESTAMP	
Quantity	NUMBER	NOT NULL

Bill (Fully Dependent on Guest):

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Bill_No	VARCHAR2	PRIMARY KEY
Amount	VARCHAR2	NOT NULL
Date_And_Time	NUMBER	TIMESTAMP
Guest_ID	NUMBER	NOT NULL, FOREIGN KEY REFERENCES Guest(Guest_ID)
Pay_Method	VARCHAR2	VARCHAR2

Room_Cat_Mgr:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Category_ID	VARCHAR2	PRIMARY KEY
Mgr_ID	VARCHAR2	PRIMARY KEY
SDate	DATE	NOT NULL
EDate	DATE	

Dept_Manage:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Emp_ID	VARCHAR2	PRIMARY KEY
Dept_ID	VARCHAR2	PRIMARY KEY

SDate	DATE	NOT NULL
EDate	DATE	

Room_Mgr:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Room_No	NUMBER	PRIMARY KEY
Mgr_ID	VARCHAR2	PRIMARY KEY
SDate	DATE	NOT NULL
EDate	DATE	

Facility_Mgr:

ATTRIBUTES	DATA TYPES	CONSTRAINTS
Facility_ID	VARCHAR2	PRIMARY KEY
Mgr_ID	VARCHAR2	PRIMARY KEY
SDate	DATE	NOT NULL
EDate	DATE	

7. RECORDS AND QUERIES

7.1 Creating Tables:

```
CREATE TABLE Bill (
        Bill_No NUMBER(5) PRIMARY KEY,
        Amount NUMBER(15,2) NOT NULL,
        Date_And_Time TIMESTAMP,
        Guest_ID VARCHAR2(10) NOT NULL,
        Pay_Method VARCHAR2(15)
);


CREATE TABLE Food(
        Food_ID VARCHAR2(7) PRIMARY KEY,
        Item VARCHAR2(20) NOT NULL,
        Rate NUMBER(4) NOT NULL,
        Type VARCHAR2(20),
        Veg CHAR(1) NOT NULL
);

CREATE TABLE Facility (
```

```
        Facility_ID VARCHAR2(7) PRIMARY KEY,
        Name VARCHAR2(20) NOT NULL,
        Rate NUMBER(4) NOT NULL
);

CREATE TABLE Employee(
        Emp_ID VARCHAR(6) PRIMARY KEY,
        First_Name VARCHAR(15) NOT NULL,
        Last_Name VARCHAR(15),
        Age NUMBER(3) NOT NULL,
        Sex CHAR(1) NOT NULL,
        Salary NUMBER(6) NOT NULL,
        Phone_No NUMBER(10),
        Email VARCHAR2(30) UNIQUE
);


CREATE TABLE Department(
        Dept_ID VARCHAR2(6) PRIMARY KEY,
        Dept_Name VARCHAR2(30)
);


CREATE TABLE Room_Category(
        Category_ID VARCHAR2(6) PRIMARY KEY,
        Type VARCHAR2(40),
        Beds NUMBER(2),
        AC CHAR(1) NOT NULL,
        Price NUMBER(6) NOT NULL
);

CREATE TABLE Guest(
        Guest_ID VARCHAR2(6) PRIMARY KEY,
        Name VARCHAR2(20) NOT NULL,
        Sex CHAR(1) NOT NULL,
        Age NUMBER(4) CHECK(Age>0),
        Phone_Number NUMBER(10) NOT NULL,
        Address VARCHAR2(30),
        Room_No NUMBER(4),
        Check_In_Date_Time TIMESTAMP,
        Check_Out_Date_Time TIMESTAMP
);

CREATE TABLE Room(
        Room_No NUMBER(5) PRIMARY KEY,
        Vacant CHAR(1) NOT NULL,
        Category_ID VARCHAR2(6) NOT NULL
);

CREATE TABLE Dept_Manage(
        Emp_ID VARCHAR2(6),
        Dept_ID VARCHAR2(6),
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Emp_ID,Dept_ID)
);
```

```
CREATE TABLE Facility_Mgr(
        Facility_ID VARCHAR2(7),
        Mgr_ID VARCHAR2(6),
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Facility_ID,Mgr_ID)
);

CREATE TABLE Room_Mgr(
        Room_No NUMBER(5),
        Mgr_ID VARCHAR2(6),
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Room_No,Mgr_ID)
);

CREATE TABLE Room_Cat_Mgr(
        Category_ID VARCHAR2(6),
        Mgr_ID VARCHAR2(6),
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Category_ID,Mgr_ID)
);


CREATE TABLE Emp_Superv(
        Emp_ID VARCHAR2(6),
        Superv_ID VARCHAR2(6),
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Emp_ID,Superv_ID)
);

CREATE TABLE Uses(
        Guest_ID VARCHAR2(6),
        Facility_ID VARCHAR2(7),
        Date_And_Time TIMESTAMP,
        Duration_In_Hours NUMBER(3,1) NOT NULL,
        PRIMARY KEY(Guest_ID,Facility_ID)
);

CREATE TABLE Orders(
        Guest_ID VARCHAR2(6),
        Food_ID VARCHAR2(7),
        Date_And_Time TIMESTAMP,
        Quantity NUMBER(2) NOT NULL,
        PRIMARY KEY(Guest_ID,Food_ID)
);

CREATE TABLE Emp_Work(
        Emp_ID VARCHAR2(6) NOT NULL,
        Dept_ID VARCHAR2(6) NOT NULL,
        SDate DATE NOT NULL,
        EDate DATE,
        PRIMARY KEY(Emp_ID,Dept_ID)
);
```

7.2 Adding Foreign Key References:

```
ALTER TABLE Room
ADD FOREIGN KEY (Category_ID) REFERENCES Room_Category(Category_ID) ON DELETE SET
NULL;

ALTER TABLE Guest
ADD FOREIGN KEY (Room_No) REFERENCES Room(Room_No) ON DELETE SET NULL;

ALTER TABLE Bill
ADD FOREIGN KEY (Guest_ID) REFERENCES Guest(Guest_ID) ON DELETE SET NULL;

ALTER TABLE Dept_Manage
ADD (FOREIGN KEY (Emp_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL, FOREIGN
KEY (Dept_ID) REFERENCES Department(Dept_ID) ON DELETE SET NULL);

ALTER TABLE Emp_Work
ADD (FOREIGN KEY (Emp_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL, FOREIGN
KEY (Dept_ID) REFERENCES Department(Dept_ID) ON DELETE SET NULL);

ALTER TABLE Emp_Superv
ADD (FOREIGN KEY (Emp_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL, FOREIGN
KEY (Superv_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL);

ALTER TABLE Room_Cat_Mgr
ADD (FOREIGN KEY (Category_ID) REFERENCES Room_Category(Category_ID) ON DELETE SET
NULL, FOREIGN KEY (Mgr_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL);

ALTER TABLE Room_Mgr
ADD (FOREIGN KEY (Room_No) REFERENCES Room(Room_No) ON DELETE SET NULL, FOREIGN
KEY (Mgr_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL);

ALTER TABLE Facility_Mgr
ADD (FOREIGN KEY (Facility_ID) REFERENCES Facility(Facility_ID) ON DELETE SET NULL,
FOREIGN KEY (Mgr_ID) REFERENCES Employee(Emp_ID) ON DELETE SET NULL);

ALTER TABLE Uses
ADD (FOREIGN KEY (Guest_ID) REFERENCES Guest(Guest_ID) ON DELETE SET NULL, FOREIGN
KEY (Facility_ID) REFERENCES Facility(Facility_ID) ON DELETE SET NULL);

ALTER TABLE Orders
ADD (FOREIGN KEY (Guest_ID) REFERENCES Guest(Guest_ID) ON DELETE SET
 NULL, FOREIGN KEY (Food_ID) REFERENCES Food(Food_ID) ON DELETE SET NULL);
```

7.3 Inserting Records in table:

Food:

INSERT INTO Food VALUES('FOD0001','Bread Butter',20,'Breakfast','Y');

INSERT INTO Food VALUES('FOD0002','Poha',30,'Breakfast','Y');

INSERT INTO Food VALUES('FOD0003','Idli',20,'Breakfast','Y');

INSERT INTO Food VALUES('FOD0004','Dosa',30,'Breakfast','Y');

INSERT INTO Food VALUES('FOD0005','Omlette',20,'Breakfast','N');

Facility:

INSERT INTO Facility VALUES('FAC0001','Swimming Pool',250);

INSERT INTO Facility VALUES('FAC0002','Shoe Shine Service',70);

INSERT INTO Facility VALUES('FAC0003','Badminton',150);

INSERT INTO Facility VALUES('FAC0004','Table Tennis',150);

INSERT INTO Facility VALUES('FAC0005','Squash',150);

Employee:

INSERT INTO Employee
VALUES('EMP101','Rahul','Bose',58,'M',45000,7958263897,'saar101@saar.co.in');

INSERT INTO Employee
VALUES('EMP102','Animesh','Sharma',70,'M',80000,7960645805,'saar102@saar.co.in');

INSERT INTO Employee
VALUES('EMP103','Shivash','Tiwari',19,'M',110000,6895697562,'saar103@saar.co.in');

INSERT INTO Employee
VALUES('EMP104','Subham','Awasthi',75,'M',25000,7136859758,'saar104@saar.co.in');

INSERT INTO Employee
VALUES('EMP105','Kashish','Mittal',39,'M',100000,7191800267,'saar105@saar.co.in');
INSERT INTO Employee

Department:

INSERT INTO Department VALUES('DEP001','Front Office');

INSERT INTO Department VALUES('DEP002','Housekeeping');

INSERT INTO Department VALUES('DEP003','Food and Beverage Service');

INSERT INTO Department VALUES('DEP004','Maintenance');

INSERT INTO Department VALUES('DEP005','Account and Credit');

Room_Category:

INSERT INTO Room_Category VALUES('RCT001','Deluxe',1,'Y',2000);

INSERT INTO Room_Category VALUES('RCT002','Executive Deluxe',2,'Y',3000);

INSERT INTO Room_Category VALUES('RCT003','Classic SAAR Deluxe',3,'Y',3500);

INSERT INTO Room_Category VALUES('RCT004','Ambassador Deluxe',4,'Y',4500);

INSERT INTO Room_Category VALUES('RCT005','SAAR Superior Deluxe',5,'Y',5000);

Room:

INSERT INTO Room VALUES (101,'Y','RCT001');

INSERT INTO Room VALUES (102,'Y','RCT001');

INSERT INTO Room VALUES (103,'Y','RCT001');

INSERT INTO Room VALUES (104,'Y','RCT001');

INSERT INTO Room VALUES (105,'Y','RCT001');

Guest:

INSERT INTO Guest VALUES ('GUD001','Ratan Agarwal','M', 35 , 9857563389 ,'BHOPAL, MADHYA PRADESH', 102 , TIMESTAMP'2019-07-12 14:00:00', TIMESTAMP'2019-07-25 07:00:00');

INSERT INTO Guest VALUES ('GUD002','Nikhar Ganhwar','M', 67 , 6578899341 ,'CHENNAI, TAMIL NADU', 104 , TIMESTAMP'2019-11-03 00:00:00', TIMESTAMP'2019-11-03 08:00:00');

INSERT INTO Guest VALUES ('GUD003','Naruto Uzumaki','M', 22 , 8709004567 ,'BHUBANESHWAR, ORRISA', 205 , TIMESTAMP'2019-12-13 15:00:00', null);

INSERT INTO Guest VALUES ('GUD004','Arnab Poddar','M', 45 , 9867003345 ,'KOHIMA, NAGALAND', 310 , TIMESTAMP'2019-11-02 23:00:00', TIMESTAMP'2019-11-27 11:00:00');

INSERT INTO Guest VALUES ('GUD005','Ai Hayasaka','F', 19 , 9845001200 ,'LUCKNOW, UTTAR PRADESH', 502 , TIMESTAMP'2019-01-03 11:10:00', TIMESTAMP'2019-02-01 07:00:00');

Dept_Mgr:

INSERT INTO Dept_Manage VALUES ('EMP122','DEP001', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Dept_Manage VALUES ('EMP123','DEP002', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Dept_Manage VALUES ('EMP124','DEP003', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('06-06-2019','dd-mm-yyyy'));

INSERT INTO Dept_Manage VALUES ('EMP130','DEP004', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Dept_Manage VALUES ('EMP131','DEP005', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Facility_Mgr:

INSERT INTO Facility_Mgr VALUES ('FAC0001','EMP104', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('19-07-2019','dd-mm-yyyy'));

INSERT INTO Facility_Mgr VALUES ('FAC0002','EMP130', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Facility_Mgr VALUES ('FAC0003','EMP140', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Facility_Mgr VALUES ('FAC0004','EMP114', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('18-10-2019','dd-mm-yyyy'));

INSERT INTO Facility_Mgr VALUES ('FAC0005','EMP117', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Room_Mgr:

INSERT INTO Room_Mgr VALUES (101 ,'EMP138', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('06-03-2019','dd-mm-yyyy'));

INSERT INTO Room_Mgr VALUES (102 ,'EMP138', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Room_Mgr VALUES (103 ,'EMP138', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Room_Mgr VALUES (104 ,'EMP140', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('25-05-2019','dd-mm-yyyy'));

INSERT INTO Room_Mgr VALUES (105 ,'EMP140', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Room_Cat_Mgr:

INSERT INTO Room_Cat_Mgr VALUES ('RCT001','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('12-05-2019','dd-mm-yyyy'));

INSERT INTO Room_Cat_Mgr VALUES ('RCT002','EMP123', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Room_Cat_Mgr VALUES ('RCT003','EMP124', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('15-08-2019','dd-mm-yyyy'));

INSERT INTO Room_Cat_Mgr VALUES ('RCT004','EMP130', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Room_Cat_Mgr VALUES ('RCT005','EMP131', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Emp_Superv:

INSERT INTO Emp_Superv VALUES ('EMP101','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Superv VALUES ('EMP102','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Superv VALUES ('EMP103','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Superv VALUES ('EMP104','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Superv VALUES ('EMP105','EMP122', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Uses:

INSERT INTO Uses VALUES ('GUD001','FAC0001', TIMESTAMP'2019-07-12 15:00:00', 5.0);

INSERT INTO Uses VALUES ('GUD002','FAC0002', TIMESTAMP'2019-11-03 05:00:00', 2.0);

INSERT INTO Uses VALUES ('GUD003','FAC0003', TIMESTAMP'2019-07-13 16:00:00', 3.0);

INSERT INTO Uses VALUES ('GUD004','FAC0004', TIMESTAMP'2019-11-03 08:00:00', 4.0);

INSERT INTO Uses VALUES ('GUD005','FAC0005', TIMESTAMP'2019-01-03 12:00:00', 1.0);

Orders:

INSERT INTO Orders VALUES ('GUD005','FOD0001',TIMESTAMP'2019-01-05 11:10:00', 2);

INSERT INTO Orders VALUES ('GUD020','FOD0010',TIMESTAMP'2019-05-02 09:30:00', 1);

INSERT INTO Orders VALUES ('GUD001','FOD0008',TIMESTAMP'2019-07-13 14:00:00', 3);

INSERT INTO Orders VALUES ('GUD026','FOD0019',TIMESTAMP'2019-12-31 14:45:00', 4);

INSERT INTO Orders VALUES ('GUD002','FOD0015',TIMESTAMP'2019-11-05 05:00:00', 2);

Emp_Work:

INSERT INTO Emp_Work VALUES ('EMP101','DEP010', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Work VALUES ('EMP102','DEP002', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Work VALUES ('EMP103','DEP002', TO_DATE('01-01-2019','dd-mm-yyyy'), TO_DATE('06-06-2019','dd-mm-yyyy'));

INSERT INTO Emp_Work VALUES ('EMP104','DEP010', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

INSERT INTO Emp_Work VALUES ('EMP105','DEP010', TO_DATE('01-01-2019','dd-mm-yyyy'), null);

Bill:

INSERT INTO Bill VALUES (1 , 26185.0 , TIMESTAMP '2019-07-25 07:00:00','GUD001','Credit Card');

INSERT INTO Bill VALUES (2 , 2200.0 , TIMESTAMP '2019-11-03 08:00:00','GUD002','Cash');

INSERT INTO Bill VALUES (3 , 63500.0 , TIMESTAMP '2019-08-01 20:00:00','GUD003','Debit Card');

INSERT INTO Bill VALUES (4 , 138100.0 , TIMESTAMP '2019-11-27 11:00:00','GUD004','Credit Card');

INSERT INTO Bill VALUES (5 , 232190.0 , TIMESTAMP '2019-02-01 07:00:00','GUD005','Debit Card');

Queries:

1. Display all the vacant rooms
```
SELECT *
 FROM Room
WHERE Vacant = 'Y';
```

2. Display the details of all Guests staying in the hotel now
```
Select *
FROM Guest
WHERE Check_Out_Date_Time IS NULL;
```

3. Display the details of all Guests residing between 1st August 2019 and 1st December 2019.
```
SELECT *
FROM Guest
WHERE Check_In_Date_Time > DATE'2019-08-01' AND Check_In_Date_Time <
DATE'2019-12-01';
```

4. Display the name and contact number of guests who have used the table tennis facility.
```
SELECT *
FROM Guest
 WHERE Guest_ID IN
(SELECT Guest_ID
FROM Uses
WHERE Facility_ID IN
(SELECT Facility_ID
FROM Facility
WHERE Name = 'Table Tennis'));
```

5. Display the facilities used by guest id GUD003.
```
SELECT Name
FROM Facility
```

```
WHERE Facility_ID IN
(SELECT Facility_ID
FROM Uses
WHERE Guest_ID = 'GUD003');
```

6. Display the food ordered by guest id GUD001.

```
SELECT Item
FROM Food
WHERE Food_ID in
(SELECT Food_ID
FROM Orders
WHERE Guest_ID = 'GUD001');
```

7. Display details of all the senior citizens who have stayed in hotel.

```
SELECT name
FROM guest
WHERE age>60 ;
```

8. Display the details of the guest who having the maximum bill amount.

```
SELECT Name
FROM Guest
WHERE Guest_ID =
(SELECT Guest_ID
FROM Bill
WHERE amount =
(SELECT MAX(amount)
FROM Bill));
```

9. Display the details of female employees having salary greater than 50000.

```
SELECT * FROM Employee
WHERE Sex = 'F' AND SALARY> 50000
```

10. Display the details of all employees who are supervised by employee having id EMP123.

```
SELECT * FROM Emp_Superv
WHERE Superv_ID = 'EMP123'
```

11. Display average salary of employees working.

```
SELECT AVG(Salary)
 FROM Employee
```

12. Display the total combined salary of all employees.

```
SELECT SUM(Salary)
 FROM Employee
```

13. Display details of all guests from RAJASTHAN.

```
SELECT *
FROM Guest
WHERE address LIKE '%RAJASTHAN';
```

14. Display all items available for breakfast.

```
SELECT Item, Rate
FROM Food
WHERE Type = 'Breakfast';
```

15. Display details of room category having highest price.

```
SELECT *
FROM Room_Category
WHERE Price = (
        SELECT MAX(Price) FROM Room_Category
)
```

16. Display the details of all departments employee EMP110 has worked for.

```
SELECT *
FROM Department
WHERE Dept_ID IN (
        SELECT Dept_ID
        FROM Emp_Work
        WHERE Emp_ID = 'EMP110'
);
```