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Table of Abbreviations

Abbreviations	Stands for
ERD	Entity relationship diagram
E-mail	electronic mail
ID	Identification
Num	Number
SSN	Social Security Number

1. Analysis

1.1 Introduction

The Sofitel Legend Old Cataract Aswan Hotel, commonly known as the Old Cataract Hotel, is a historic British colonial-era hotel located on the banks of the River Nile in Aswan, Egypt. It was built in 1899 by Thomas Cook and opened under the name Cataract Hotel. In 1961 the hotel was expanded with the addition of a new tower wing, operating as the budget wing of the hotel. From 2008 to 2011 the hotel was closed and underwent a complete restoration, reopening in October 2011 as the Sofitel Legend Old Cataract Aswan Hotel[1].

1.2 History

The Cataract Hotel was built in 1899 by Thomas Cook to house European travelers to Assouan (as Aswan was then known). Its guests have included Tsar Nicholas II, Winston Churchill, Howard Carter, Margaret Thatcher, Jimmy Carter, François Mitterrand, Princess Diana, Queen Noor and Agatha Christie, who set portions of her novel Death on the Nile at the hotel. [citation needed] The 1978 film of the novel was shot at the hotel. The Dining Room was added in 1902. The architect was Henri Favarger[1].



Figure 1.Old Cataract Hotel [1].

1.3 Entities

- Hotel
- Room
- Guest
- Reservation
- Staff
- Front_Office (Reception)
- Departments
- Management
- Payment
- Hotel_Event
- Feedback
- Dependences

1.4 Attributes

Hotel:

- HoHotelID (Primary Key)
- HoName
- HoAddress
- HoRating
- HoPhone_number
- HoE-mail

Room:

- RRoomID (Primary Key)
- RRoom_Type
- RNumber_of_rooms
- RAvailability

Guest:

- GSSN (Primary Key)
- GName
- GAddress
- GPhone
- GEmail
- GMember_ship

Reservation:

- ReReservationID (Primary Key)
- ReCheck_In Date
- ReCheck_Out Date
- ReRoom_category
- ReDuration (derived)

Staff:

- SStaffID (Primary Key)
- SFirstName
- SLastName
- SPosition
- SE-mail
- SNumber
- Saddress

Front_Office (Reception):

- FReceptionistID (Primary Key)
- FName
- FContactNumber
- FShift (hour)
- FSalary

Departments:

- Denumber (primary key)
- Defloor
- DeName
- DeOfficeHours
- DeEmployeeCount
- DeSpecialization

Management:

- MManagerID (Primary Key)
- MName
- MContactNumber
- MDepartment
- Mrole
- MSalary

Feedback:

- FeFeedbackID (Primary Key)
- FeRating
- FeComplaints and opinions

Payment:

- PPaymentID (Primary Key)
- PAmount
- PPayment Date
- PPayment Method
- PTransaction num

Dependences:

- DDeName
- DDeSSN
- DDerelationdegree

Hotel_Event:

- HEventID (primary key)
- HName
- HDescription
- HDate
- HStart time
- HEnd time

2. Design

2.1. ERD

2.1.1 Manual ERD

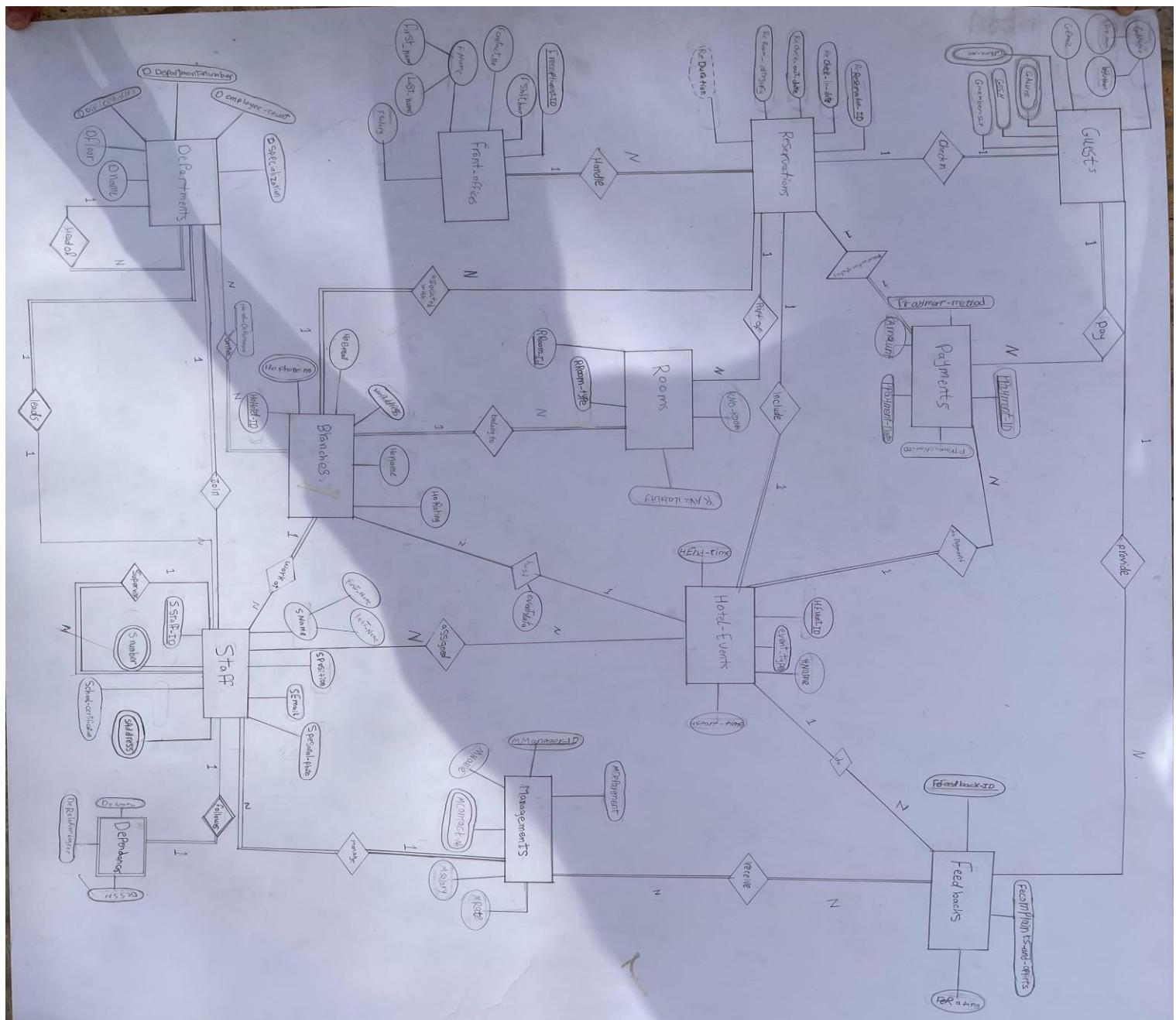


Figure 2. Manual ERD

2.1.2 Electronic ERD

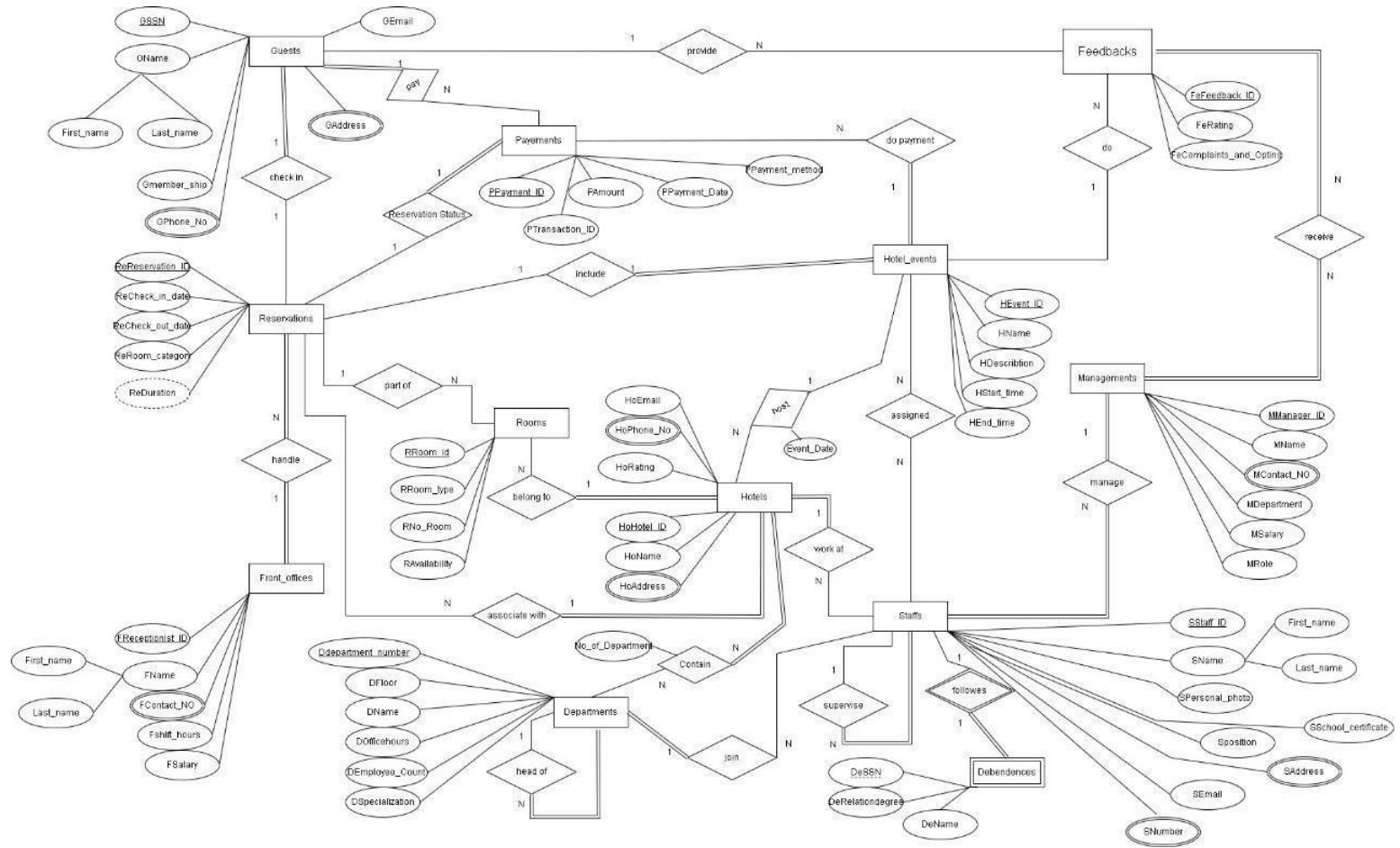


Figure 3. Electronic ERD

2.2 Relational schema (Mapping)

2.2.1 Manual Schema

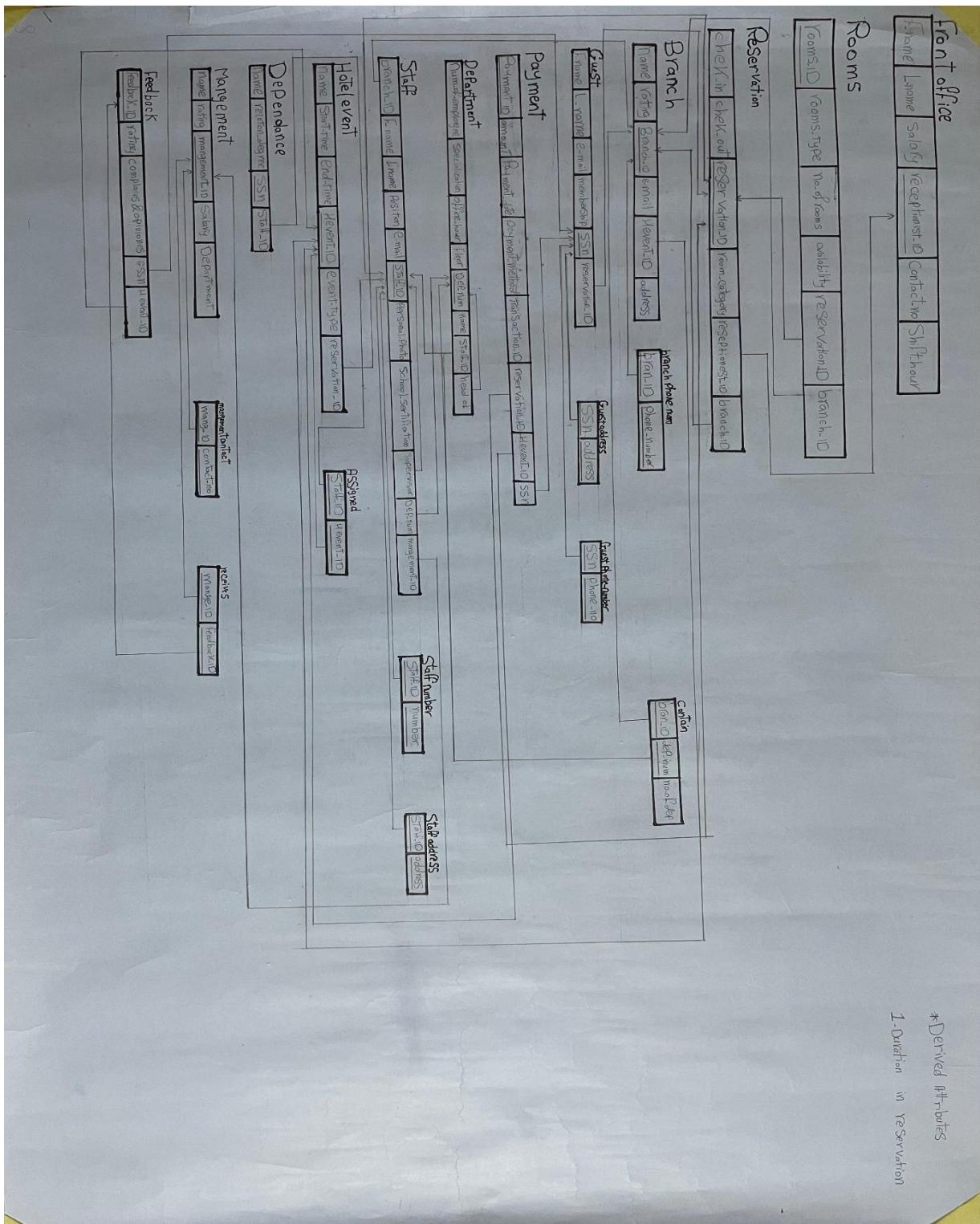


Figure 4. Manual Schema

2.2.2 Electronic Schema

Derived Attribute
duration in reservations

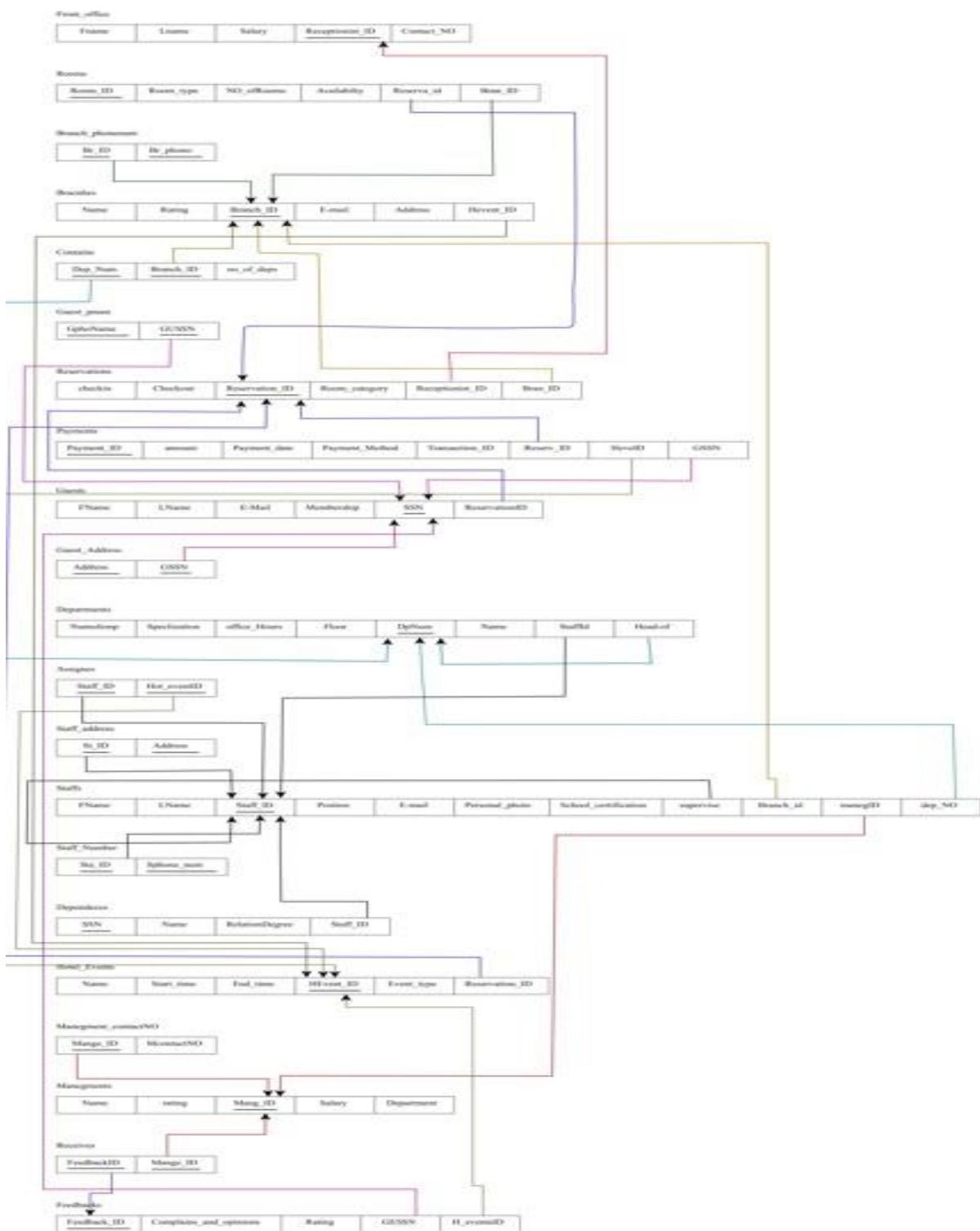
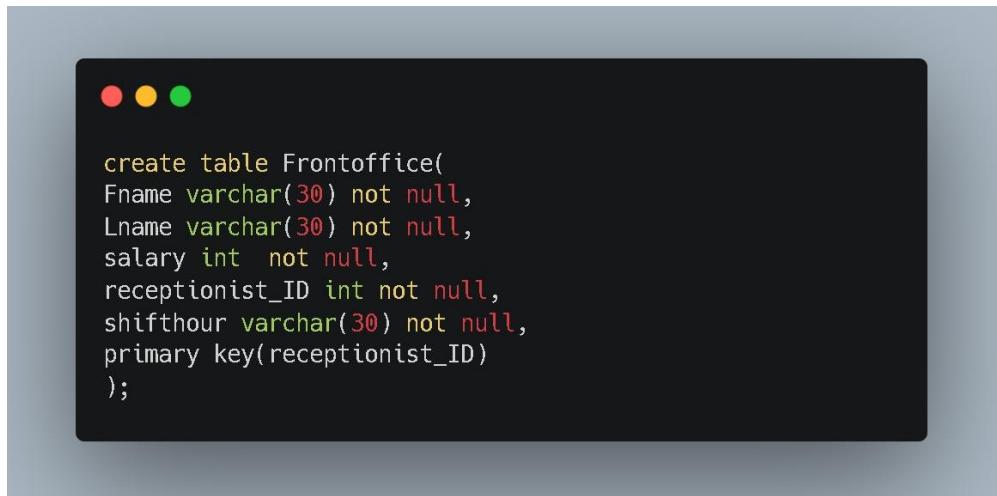


Figure 5. Electronic Schema

3. Implementation

3.1 Database Code

3.1.1 Creating Tables



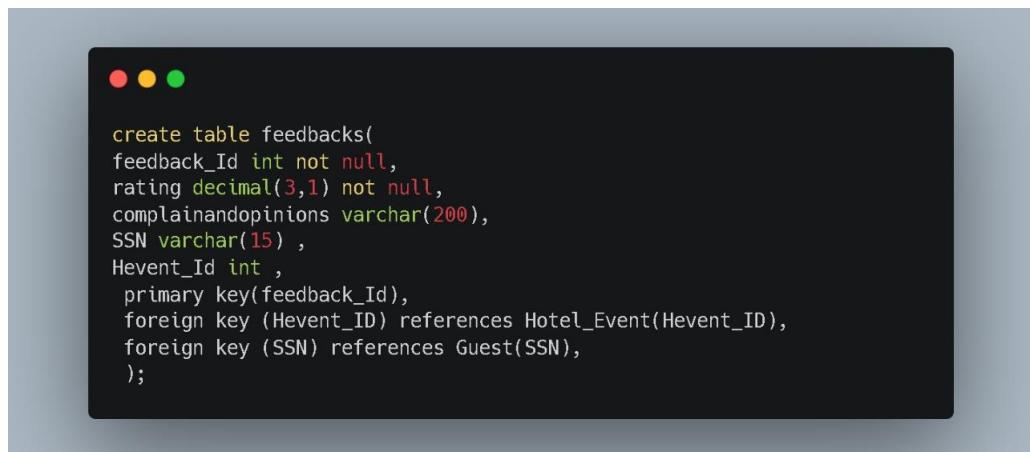
```
create table Frontoffice(
Fname varchar(30) not null,
Lname varchar(30) not null,
salary int not null,
receptionist_ID int not null,
shifthour varchar(30) not null,
primary key(receptionist_ID)
);
```

Figure 6. Creating Frontoffice Table



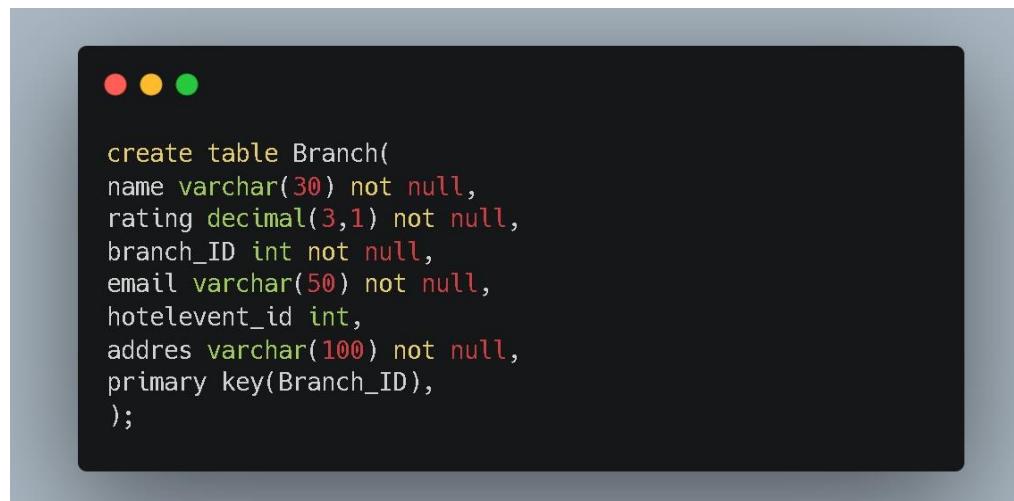
```
create table Reservation (
checkin date not null,
checkout date not null,
Reservation_ID int not null,
room_category varchar(60),
receptionist_ID int ,
branch_ID int ,
primary key(Reservation_ID),
foreign key (receptionist_ID) references Frontoffice(receptionist_ID
),
foreign key (branch_ID) references Branch (branch_ID)
);
```

Figure 7. Creating Reservation Table



```
create table feedbacks
feedback_Id int not null,
rating decimal(3,1) not null,
complainandopinions varchar(200),
SSN varchar(15) ,
Hevent_Id int ,
primary key(feedback_Id),
foreign key (Hevent_ID) references Hotel_Event(Hevent_ID),
foreign key (SSN) references Guest(SSN),
);
```

Figure 8. Creating Feedbacks Table



```
create table Branch(
name varchar(30) not null,
rating decimal(3,1) not null,
branch_ID int not null,
email varchar(50) not null,
hotelevent_id int,
addres varchar(100) not null,
primary key(Branch_ID),
);
```

Figure 9. Creating Branch Table

```
create table Staff (
branch_ID int ,
Fname varchar(30) not null,
Lname varchar(30)not null,
postion varchar(60)not null,
email varchar(60) not null,
staff_id int not null,
degree_certification varchar (100) not null,
supervisor int ,
dep_num int ,
MangID int ,
primary key(staff_id),
foreign key (dep_num)references department(dep_num),
foreign key(supervisor)references Staff(staff_id),
foreign key (MangID) references Manegment(Mangment_ID),
foreign key (branch_ID) references Branch (branch_ID)
);
```

Figure 10. Creating Staff Table

```
create table Guest_phone(
SSN varchar(15) not null,
phonenum varchar(30) not null,
primary key (SSN,phonenum),
foreign key (SSN) references Guest(SSN)
);
```

Figure 11. Creating Guest_phone Table

```
create table dependence(
    name varchar(40) not null,
    relationdegree varchar(30) not null,
    SSN varchar(15) not null,
    Staff_ID int not null,
    primary key(SSN, Staff_ID),
    foreign key(Staff_ID)references Staff(staff_id),
);
```

Figure 12. Creating dependence Table

```
create table Assinens(
    staff_ID int not null,
    hevent_ID int not null,
    primary key(staff_ID,hevent_ID),
    foreign key(staff_ID)references Staff(staff_id),
    foreign key (Hevent_ID) references Hotel_Event(Hevent_ID)
);
```

Figure 13. Creating Assinens Table

```
create table Rooms (
room_ID int not null,
roomtype varchar(50) not null,
numberofrooms int not null,
availability varchar(60) not null,
reservation_ID int,
branch_ID int ,
primary key (room_ID),
foreign key (branch_ID) references Branch (branch_ID),
foreign key (Reservation_ID)references Reservation(Reservation_ID)

);
```

Figure 14. Creating Rooms Table

```
create table StaffAddres(
staff_id int not null,
Address varchar(70) not null,
primary key(staff_id,Address),
foreign key(staff_id)references Staff(staff_id),
);
```

Figure 15. Creating StaffAddres Table

```
create table Staffnum(
staff_id int not null,
numberpho int not null,
primary key(staff_id,numberpho),
foreign key(staff_id)references Staff(staff_id),
);
```

Figure 16. Creating Staffnum Table

```
create table department(
numofEmp int not null,
specilization varchar(50) not null,
floorr varchar(30)not null,
dep_num int not null,
name varchar(50) not null,
staff_ID int ,
head_of int ,
primary key(dep_num),
foreign key (head_of)references department(dep_num)
);
```

Figure 17. Creating department Table

```
create table Manegment(
name varchar(50) not null,
rating decimal(3,1) not null,
Mangment_ID int not null,
salary int not null,
department varchar(50),
primary key(Mangment_ID)
);
```

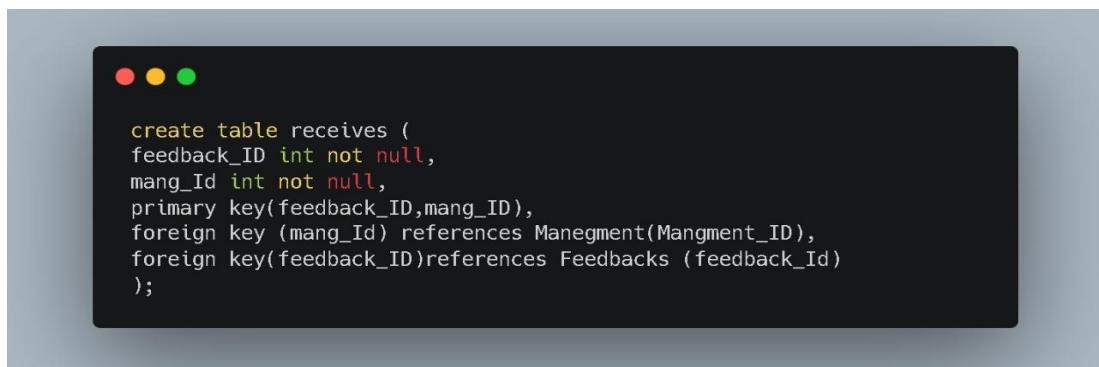
Figure 18. Creating Management Table



```
create table Hotel_Event(
    name varchar(100) ,
    starttime decimal not null,
    endtime decimal not null,
    Eventdate Date not null,
    Hevent_ID int not null,
    eventtype varchar(60) not null,
    Reservation_ID int ,
    primary key (Hevent_ID),
    foreign key (Reservation_ID)references Reservation(Reservation_ID)

);
```

Figure 19. Creating Hotel_Event Table



```
create table receives (
    feedback_ID int not null,
    mang_Id int not null,
    primary key(feedback_ID,mang_Id),
    foreign key (mang_Id) references Manegment(Mangment_ID),
    foreign key(feedback_ID)references Feedbacks (feedback_Id)
);
```

Figure 20. Creating receives Table



```
create table GuestAddress(
    SSN varchar(15) not null,
    address varchar(60) not null,
    primary key(SSN,address),
    foreign key (SSN) references Guest(SSN)
);
```

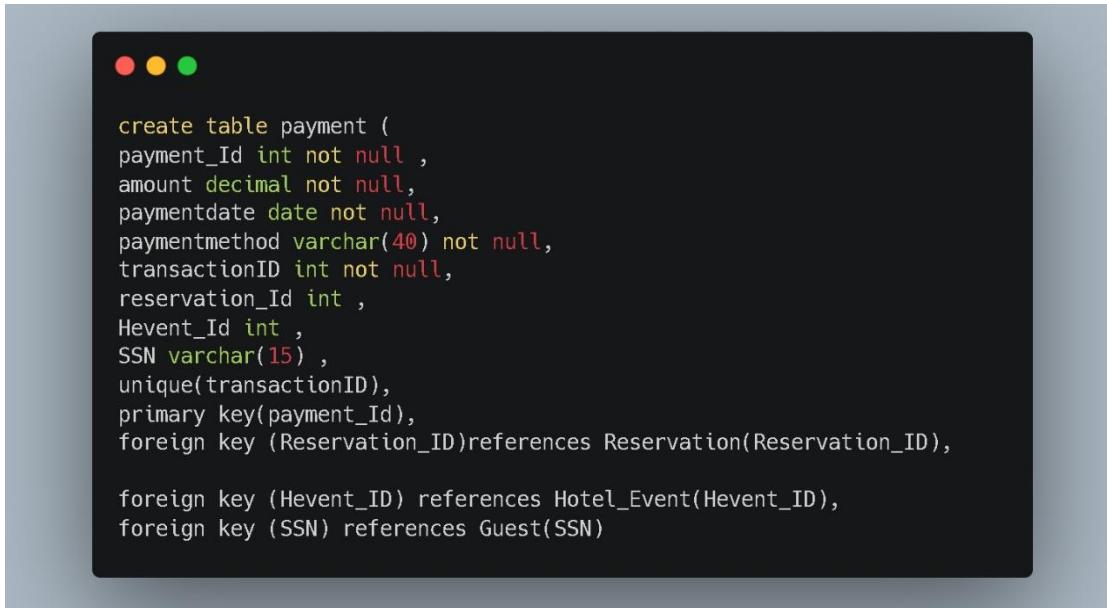
Figure 21. Creating GuestAddress Table



```
create table Guest(
Fname varchar(30) not null,
Lname varchar(30) not null,
email varchar(60) ,
gender char(1),
membership varchar(40),
SSN varchar(15) not null,
reservation_ID int,
primary key(SSN),
foreign key (Reservation_ID)references Reservation(Reservation_ID)

);
```

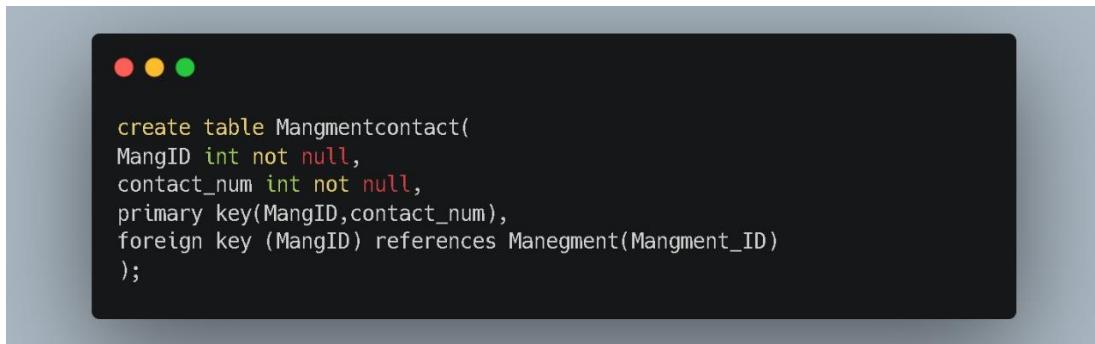
Figure 22. Creating Guest Table



```
create table payment (
payment_Id int not null ,
amount decimal not null,
paymentdate date not null,
paymentmethod varchar(40) not null,
transactionID int not null,
reservation_Id int ,
Hevent_Id int ,
SSN varchar(15) ,
unique(transactionID),
primary key(payment_Id),
foreign key (Reservation_ID)references Reservation(Reservation_ID),

foreign key (Hevent_ID) references Hotel_Event(Hevent_ID),
foreign key (SSN) references Guest(SSN)
```

Figure 23. Creating payment Table



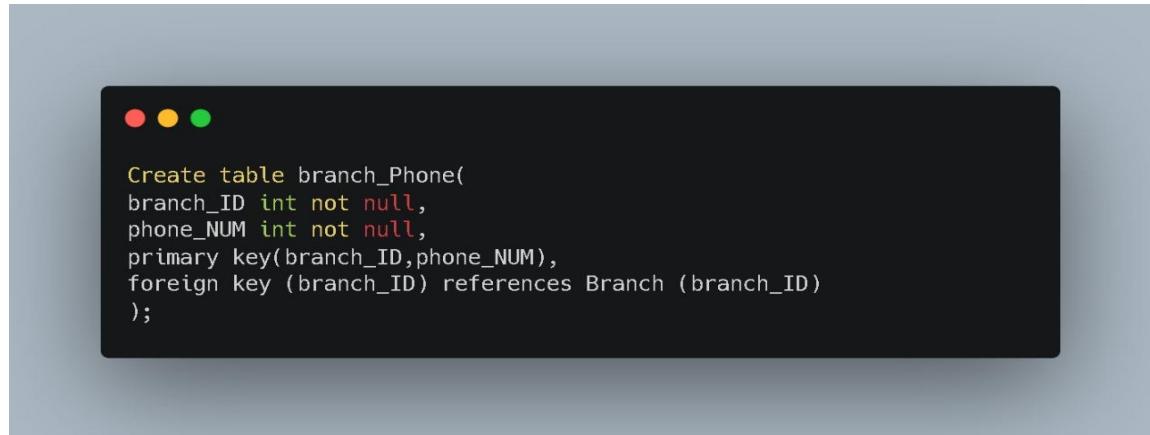
```
create table Mangmentcontact(
MangID int not null,
contact_num int not null,
primary key(MangID,contact_num),
foreign key (MangID) references Manegment(Mangment_ID)
);
```

Figure 24. Creating Managmentcontact Table



```
create table Contain (
branch_ID int not null,
dep_num int not null,
numofdep int not null,
primary key(branch_ID,dep_num),
foreign key (dep_num)references department(dep_num),
foreign key (branch_ID) references Branch (branch_ID)
);
```

Figure 25. Creating contact Table



```
Create table branch_Phone(
branch_ID int not null,
phone_NUM int not null,
primary key(branch_ID,phone_NUM),
foreign key (branch_ID) references Branch (branch_ID)
);
```

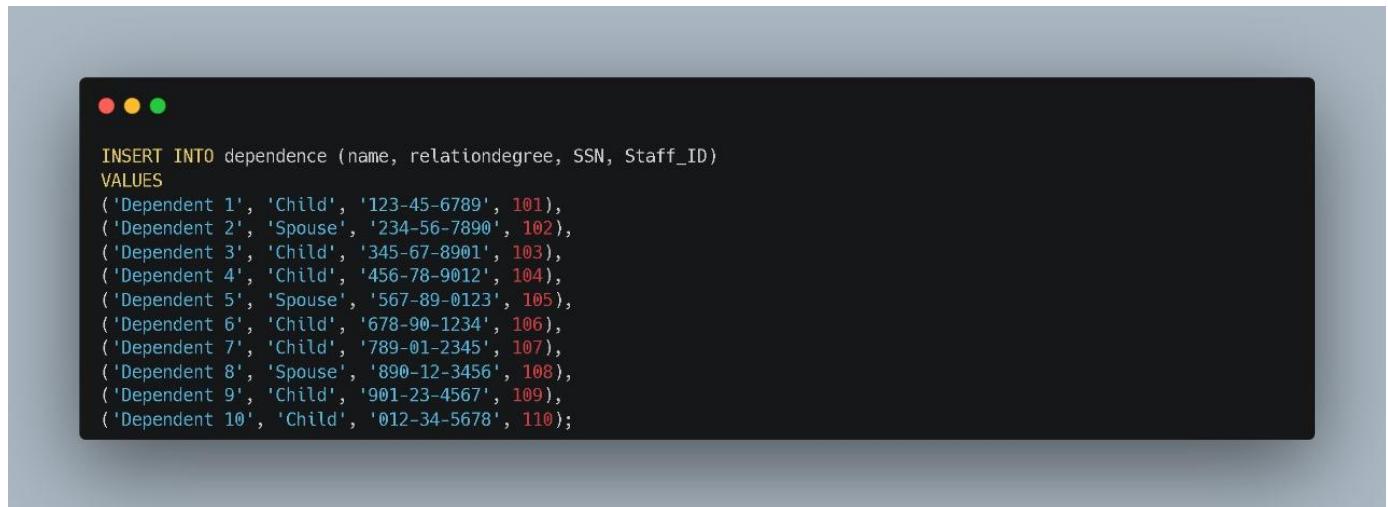
Figure 26. Creating branch_phone Table

3.1.2 Altering Tables

```
ALTER TABLE branch
ADD CONSTRAINT fkbranch
FOREIGN KEY (hotelevent_id) REFERENCES Hotel_Event(Hevent_ID);
ALTER TABLE Department
ADD CONSTRAINT fkDdep
FOREIGN KEY (staff_ID) REFERENCES Staff(staff_id);
```

**Figure 27. Altering branch Table
And Altering Department Table**

3.1.3 Inserting Tables



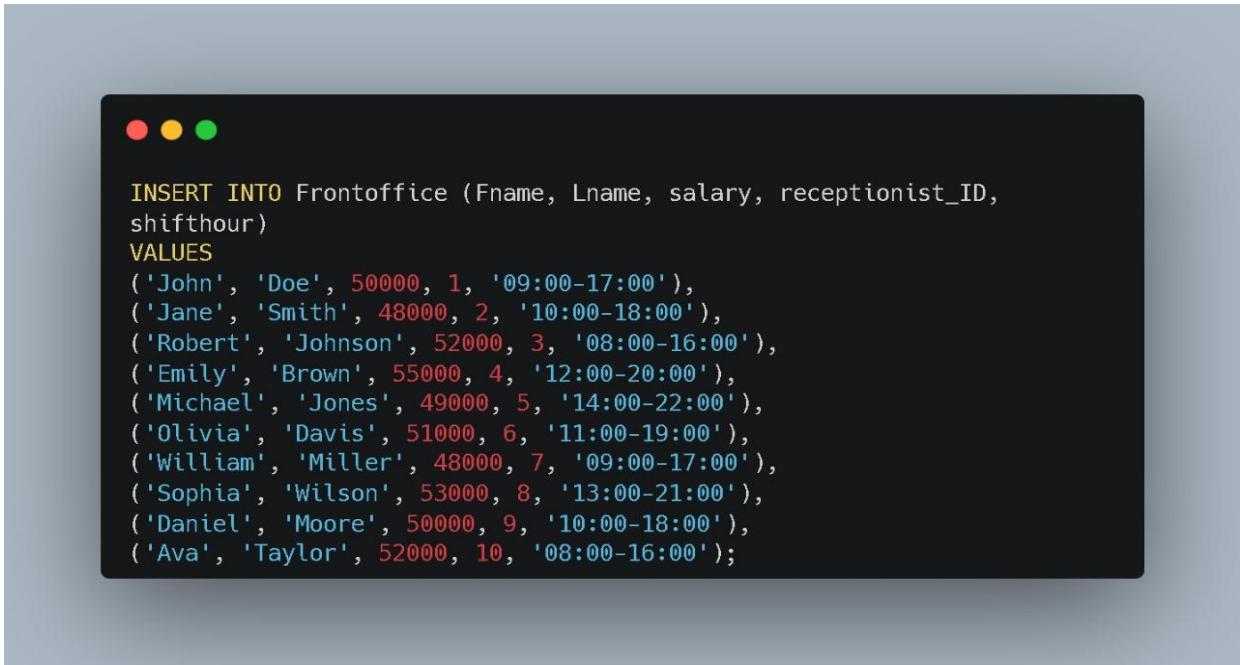
```
INSERT INTO dependence (name, relationdegree, SSN, Staff_ID)
VALUES
('Dependent 1', 'Child', '123-45-6789', 101),
('Dependent 2', 'Spouse', '234-56-7890', 102),
('Dependent 3', 'Child', '345-67-8901', 103),
('Dependent 4', 'Child', '456-78-9012', 104),
('Dependent 5', 'Spouse', '567-89-0123', 105),
('Dependent 6', 'Child', '678-90-1234', 106),
('Dependent 7', 'Child', '789-01-2345', 107),
('Dependent 8', 'Spouse', '890-12-3456', 108),
('Dependent 9', 'Child', '901-23-4567', 109),
('Dependent 10', 'Child', '012-34-5678', 110);
```

Figure 28. Inserting dependence Table



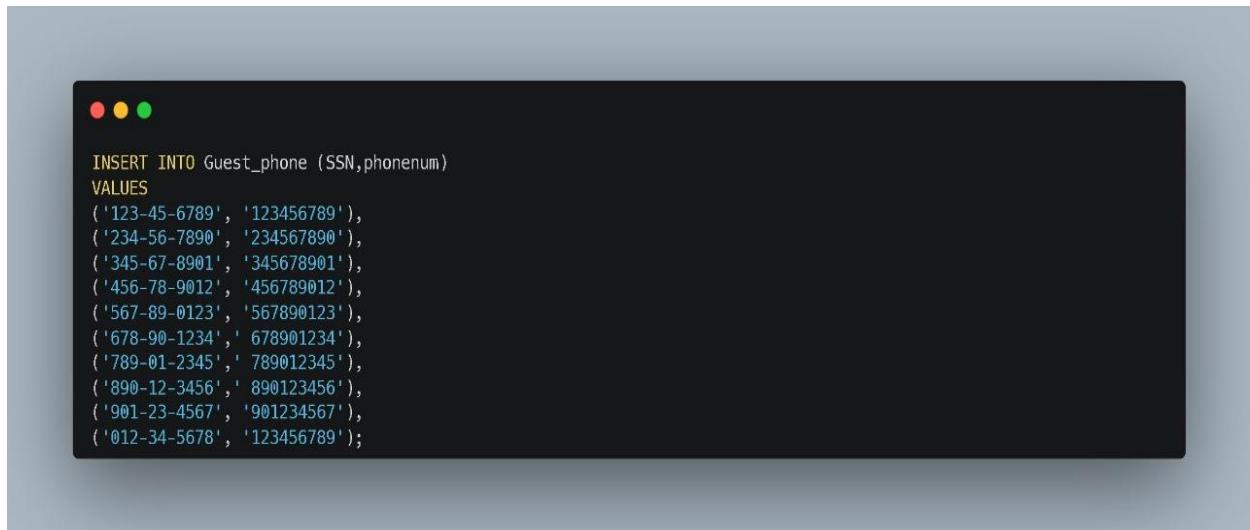
```
INSERT INTO Hotel_Event (name, starttime, endtime, Eventdate, Hevent_ID, eventtype, Reservation_ID)
VALUES
('Event A', 14.5, 18.5, '2023-01-02', 1, 'Conference', 1),
('Event B', 10.0, 12.5, '2023-02-13', 2, 'Meeting', 2),
('Event C', 16.0, 20.0, '2023-03-22', 3, 'Banquet', 3),
('Event D', 13.0, 17.0, '2023-04-08', 4, 'Workshop', 4),
('Event E', 9.5, 14.0, '2023-05-17', 5, 'Seminar', 5),
('Event F', 18.0, 22.5, '2023-06-28', 6, 'Exhibition', 6),
('Event G', 11.5, 15.5, '2023-07-12', 7, 'Party', 7),
('Event H', 14.5, 19.0, '2023-08-20', 8, 'Conference', 8),
('Event I', 10.0, 13.5, '2023-09-07', 9, 'Meeting', 9),
('Event J', 8.5, 12.0, '2023-10-15', 10, 'Banquet', 10);
```

Figure 29. Inserting Hotel_Event Table



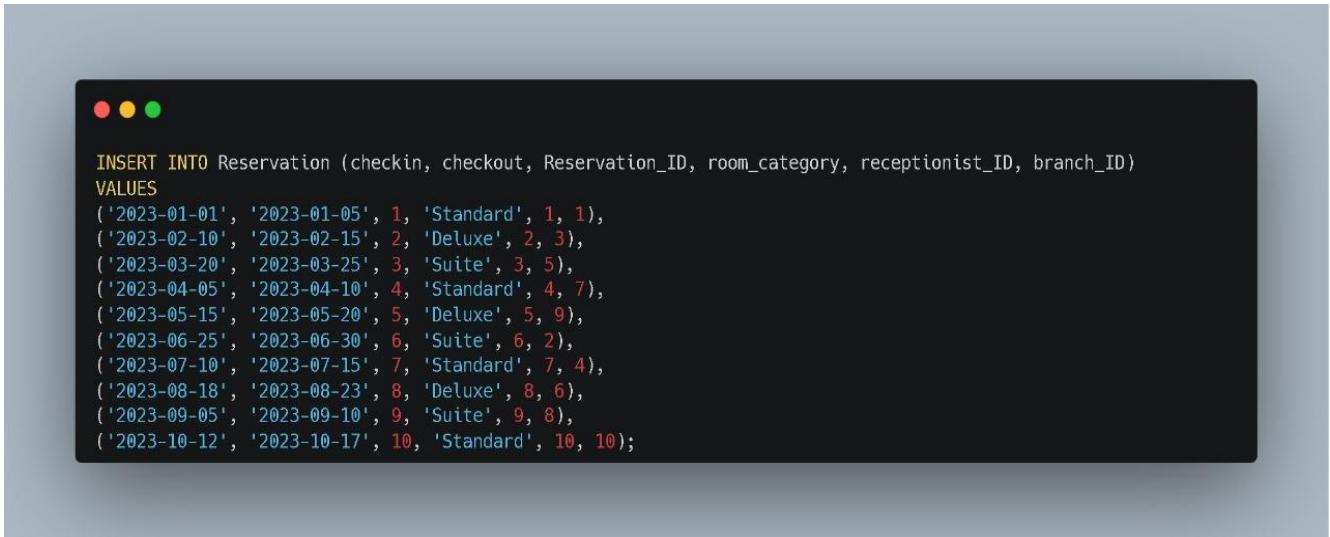
```
INSERT INTO Frontoffice (Fname, Lname, salary, receptionist_ID, shifthour)
VALUES
('John', 'Doe', 50000, 1, '09:00-17:00'),
('Jane', 'Smith', 48000, 2, '10:00-18:00'),
('Robert', 'Johnson', 52000, 3, '08:00-16:00'),
('Emily', 'Brown', 55000, 4, '12:00-20:00'),
('Michael', 'Jones', 49000, 5, '14:00-22:00'),
('Olivia', 'Davis', 51000, 6, '11:00-19:00'),
('William', 'Miller', 48000, 7, '09:00-17:00'),
('Sophia', 'Wilson', 53000, 8, '13:00-21:00'),
('Daniel', 'Moore', 50000, 9, '10:00-18:00'),
('Ava', 'Taylor', 52000, 10, '08:00-16:00');
```

Figure 30. Inserting Frontoffice Table



```
INSERT INTO Guest_phone (SSN,phonenumber)
VALUES
('123-45-6789', '123456789'),
('234-56-7890', '234567890'),
('345-67-8901', '345678901'),
('456-78-9012', '456789012'),
('567-89-0123', '567890123'),
('678-90-1234', '678901234'),
('789-01-2345', '789012345'),
('890-12-3456', '890123456'),
('901-23-4567', '901234567'),
('012-34-5678', '123456789');
```

Figure 31. Inserting Guest_phone Table



```
INSERT INTO Reservation (checkin, checkout, Reservation_ID, room_category, receptionist_ID, branch_ID)
VALUES
('2023-01-01', '2023-01-05', 1, 'Standard', 1, 1),
('2023-02-10', '2023-02-15', 2, 'Deluxe', 2, 3),
('2023-03-20', '2023-03-25', 3, 'Suite', 3, 5),
('2023-04-05', '2023-04-10', 4, 'Standard', 4, 7),
('2023-05-15', '2023-05-20', 5, 'Deluxe', 5, 9),
('2023-06-25', '2023-06-30', 6, 'Suite', 6, 2),
('2023-07-10', '2023-07-15', 7, 'Standard', 7, 4),
('2023-08-18', '2023-08-23', 8, 'Deluxe', 8, 6),
('2023-09-05', '2023-09-10', 9, 'Suite', 9, 8),
('2023-10-12', '2023-10-17', 10, 'Standard', 10, 10);
```

Figure 32. Inserting Reservation Table



```
INSERT INTO Branch (name, rating, branch_ID, email, address)
VALUES
('Branch A', 4.5, 1, 'brancha@example.com', '123 Main Street, Cityville'),
('Branch B', 3.8, 2, 'branchb@example.com', '456 Oak Avenue, Townsville'),
('Branch C', 4.2, 3, 'branchc@example.com', '789 Pine Road, Villagetown'),
('Branch D', 4.0, 4, 'branchd@example.com', '234 Cedar Lane, Hamletville'),
('Branch E', 3.9, 5, 'branche@example.com', '567 Birch Boulevard, Suburbia'),
('Branch F', 4.7, 6, 'branchf@example.com', '890 Elm Court, Countryside'),
('Branch G', 3.5, 7, 'branchg@example.com', '345 Maple Drive, Riverside'),
('Branch H', 4.1, 8, 'branchh@example.com', '678 Willow Street, Lakeside'),
('Branch I', 3.6, 9, 'branchi@example.com', '901 Redwood Avenue, Hilltop'),
('Branch J', 4.4, 10, 'branchj@example.com', '123 Oakwood Lane, Mountainside');
```

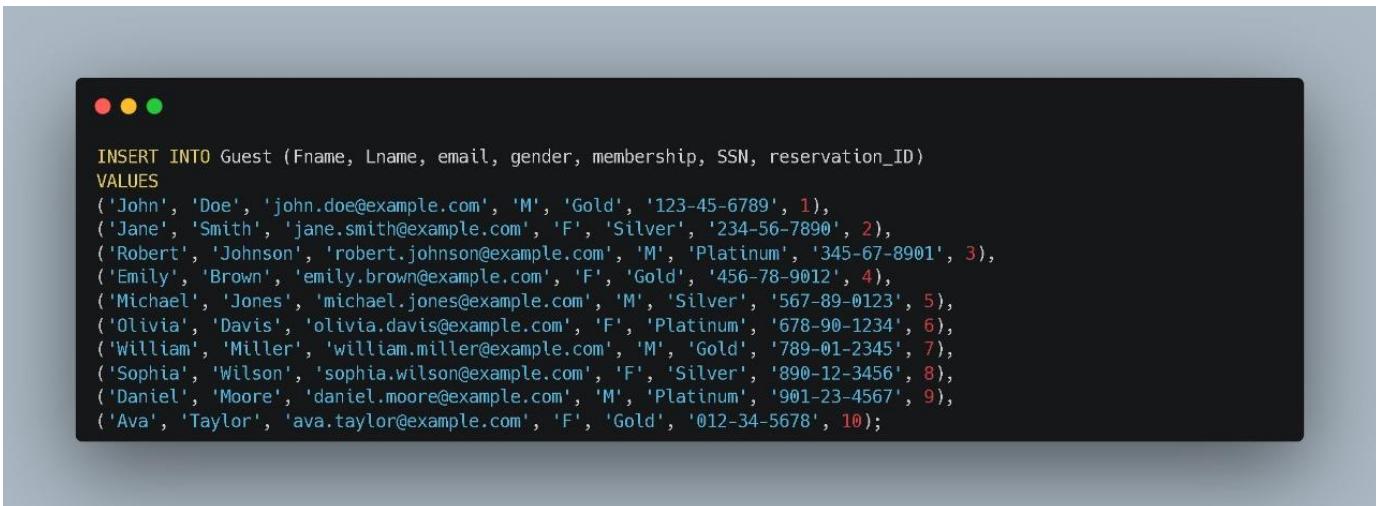
Figure 33. Inserting Branch Table



```
● ● ●

INSERT INTO branch_Phone (branch_ID, phone_NUM)
VALUES
(1, 123456789),
(2, 234567890),
(3, 345678901),
(4, 456789012),
(5, 567890123),
(6, 678901234),
(7, 789012345),
(8, 890123456),
(9, 901234567),
(10, 123456789);
```

Figure 34. Inserting branch_phone Table



```
● ● ●

INSERT INTO Guest (Fname, Lname, email, gender, membership, SSN, reservation_ID)
VALUES
('John', 'Doe', 'john.doe@example.com', 'M', 'Gold', '123-45-6789', 1),
('Jane', 'Smith', 'jane.smith@example.com', 'F', 'Silver', '234-56-7890', 2),
('Robert', 'Johnson', 'robert.johnson@example.com', 'M', 'Platinum', '345-67-8901', 3),
('Emily', 'Brown', 'emily.brown@example.com', 'F', 'Gold', '456-78-9012', 4),
('Michael', 'Jones', 'michael.jones@example.com', 'M', 'Silver', '567-89-0123', 5),
('Olivia', 'Davis', 'olivia.davis@example.com', 'F', 'Platinum', '678-90-1234', 6),
('William', 'Miller', 'william.miller@example.com', 'M', 'Gold', '789-01-2345', 7),
('Sophia', 'Wilson', 'sophia.wilson@example.com', 'F', 'Silver', '890-12-3456', 8),
('Daniel', 'Moore', 'daniel.moore@example.com', 'M', 'Platinum', '901-23-4567', 9),
('Ava', 'Taylor', 'ava.taylor@example.com', 'F', 'Gold', '012-34-5678', 10);
```

Figure 35. Inserting Guest Table

```
INSERT INTO department (numofEmp, specialization, floorr, dep_num, name, staff_ID, head_of)
VALUES
(20, 'Finance', 'Floor 1', 1, 'Finance', 101, 1),
(30, 'Human Resources', 'Floor 2', 2, 'HR', 102, 2),
(25, 'Marketing', 'Floor 3', 3, 'Marketing', 103, 3),
(40, 'Operations', 'Floor 4', 4, 'Operations ', 104, 4),
(35, 'Sales', 'Floor 5', 5, 'Sales', 105, 5),
(22, 'IT', 'Floor 6', 6, 'IT', 106, 6),
(18, 'Customer Service', 'Floor 7', 7, 'Customer Service', 107, 7),
(26, 'Logistics', 'Floor 8', 8, 'Logistics', 108, 8),
(28, 'Research and Development', 'Floor 9', 9, 'R&D', 109, 9),
(32, 'Quality Assurance', 'Floor 10', 10, 'QA ', 110, 10);
```

Figure 36. Inserting department Table

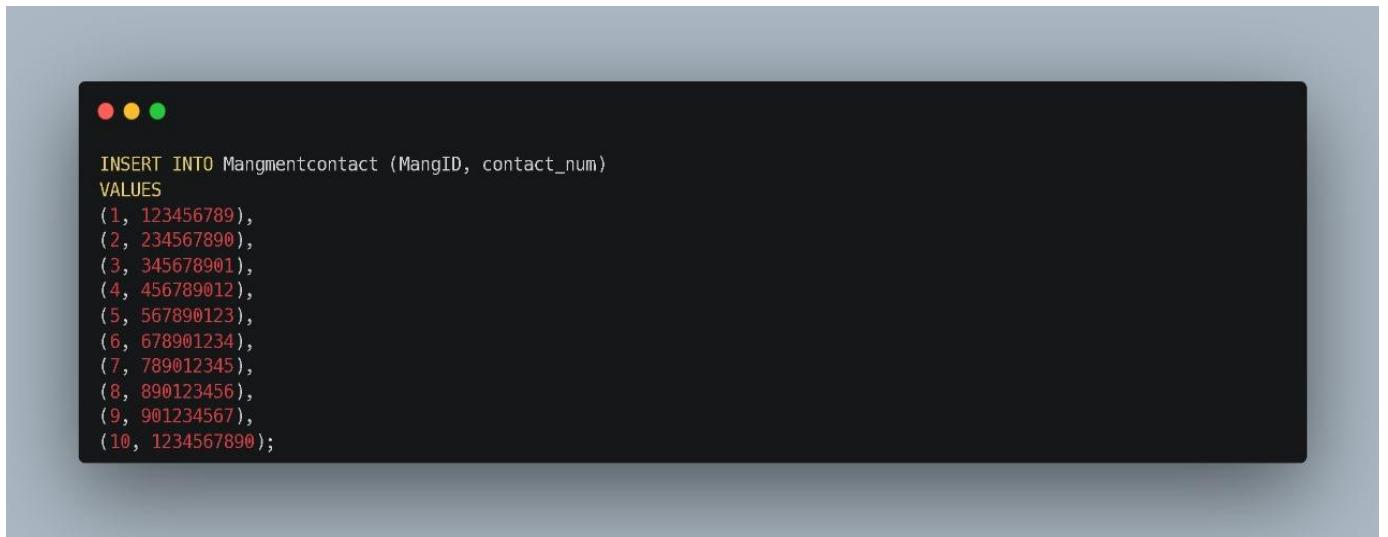
```
INSERT INTO payment (payment_Id, amount, paymentdate, paymentmethod, transactionID, reservation_Id, Hevent_Id, SSN)
VALUES
(1, 500.00, '2023-01-05', 'Credit Card', 1001, 1, 1, '123-45-6789'),
(2, 800.00, '2023-02-15', 'Cash', 1002, 2, 2, '234-56-7890'),
(3, 1200.00, '2023-03-25', 'Debit Card', 1003, 3, 3, '345-67-8901'),
(4, 600.00, '2023-04-10', 'Credit Card', 1004, 4, 4, '456-78-9012'),
(5, 900.00, '2023-05-20', 'Cash', 1005, 5, 5, '567-89-0123'),
(6, 1500.00, '2023-06-30', 'Debit Card', 1006, 6, 6, '678-90-1234'),
(7, 700.00, '2023-07-15', 'Credit Card', 1007, 7, 7, '789-01-2345'),
(8, 1000.00, '2023-08-23', 'Cash', 1008, 8, 8, '890-12-3456'),
(9, 1300.00, '2023-09-10', 'Debit Card', 1009, 9, 9, '901-23-4567'),
(10, 950.00, '2023-10-17', 'Credit Card', 1010, 10, 10, '012-34-5678');
```

Figure 37. Inserting payment Table



```
INSERT INTO Rooms (room_ID, roomtype, numberofrooms, availability, reservation_ID, branch_ID)
VALUES
(1, 'Standard', 10, 'Yes', 1, 1),
(2, 'Deluxe', 8, 'Yes', 2, 3),
(3, 'Suite', 5, 'Yes', 3, 5),
(4, 'Standard', 12, 'Yes', 4, 7),
(5, 'Deluxe', 7, 'Yes', 5, 9),
(6, 'Suite', 6, 'Yes', 6, 2),
(7, 'Standard', 9, 'Yes', 7, 4),
(8, 'Deluxe', 10, 'Yes', 8, 6),
(9, 'Suite', 4, 'Yes', 9, 8),
(10, 'Standard', 11, 'Yes', 10, 10);
```

Figure 38. Inserting Rooms Table



```
INSERT INTO Mangmentcontact (MangID, contact_num)
VALUES
(1, 123456789),
(2, 234567890),
(3, 345678901),
(4, 456789012),
(5, 567890123),
(6, 678901234),
(7, 789012345),
(8, 890123456),
(9, 901234567),
(10, 1234567890);
```

Figure 39. Inserting Managementcontact Table



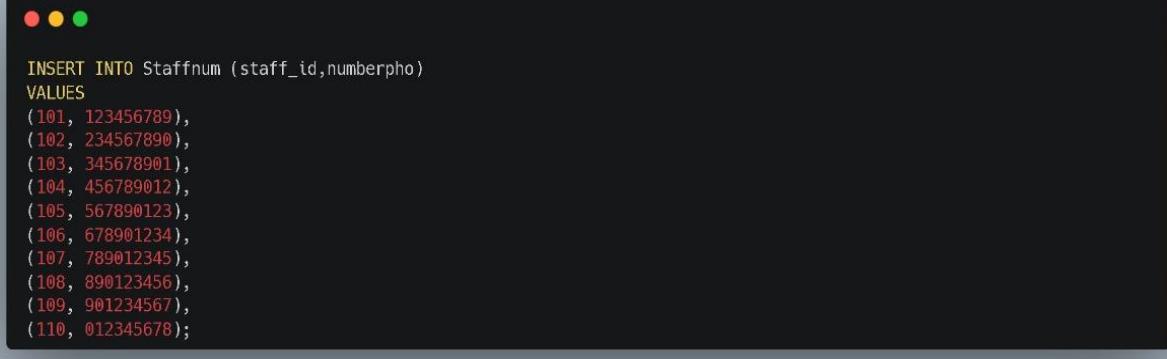
```
INSERT INTO Assinens (staff_ID,hevent_ID)
VALUES
(101, 1),
(102, 2),
(103, 3),
(104, 4),
(105, 5),
(106, 6),
(107, 7),
(108, 8),
(109, 9),
(110, 10);
```

Figure 40. Inserting Assinens Table



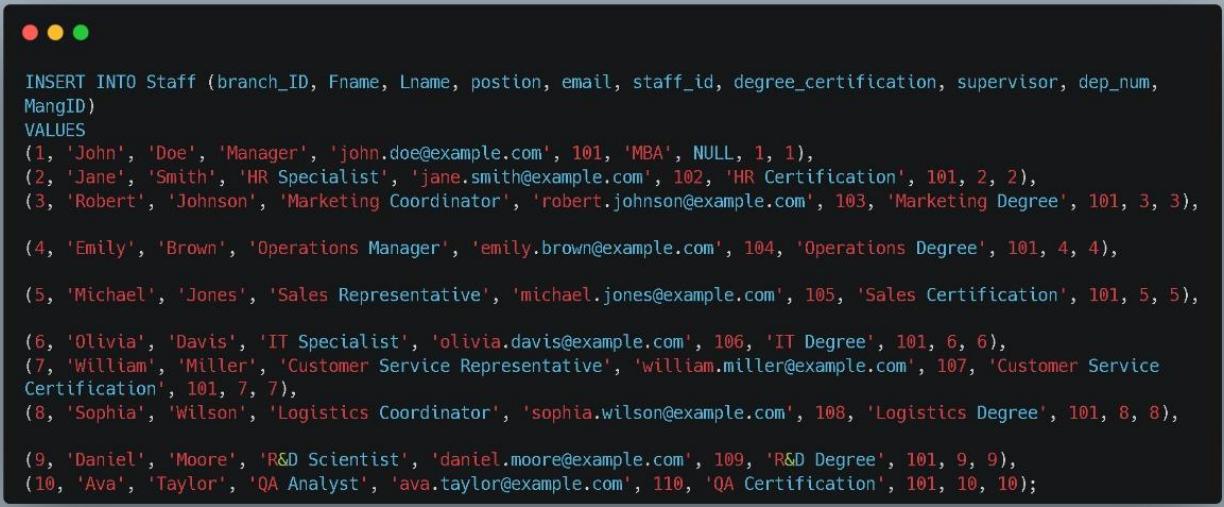
```
INSERT INTO StaffAddres (staff_id, Address)
VALUES
(101, '123 Main Street, Cityville'),
(102, '456 Oak Avenue, Townsville'),
(103, '789 Pine Road, Villagetown'),
(104, '234 Cedar Lane, Hamletville'),
(105, '567 Birch Boulevard, Suburbia'),
(106, '890 Elm Court, Countryside'),
(107, '345 Maple Drive, Riverside'),
(108, '678 Willow Street, Lakeside'),
(109, '901 Redwood Avenue, Hilltop'),
(110, '123 Oakwood Lane, Mountainside');
```

Figure 41. Inserting StaffAddres Table



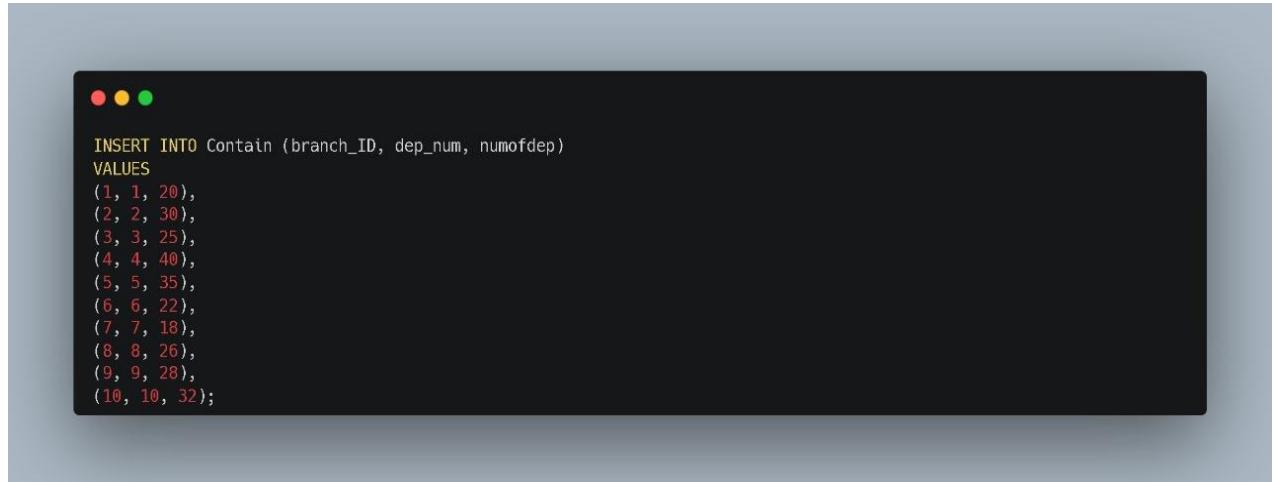
```
INSERT INTO Staffnum (staff_id,numberpho)
VALUES
(101, 123456789),
(102, 234567890),
(103, 345678901),
(104, 456789012),
(105, 567890123),
(106, 678901234),
(107, 789012345),
(108, 890123456),
(109, 901234567),
(110, 012345678);
```

Figure 42. Inserting staffnum Table



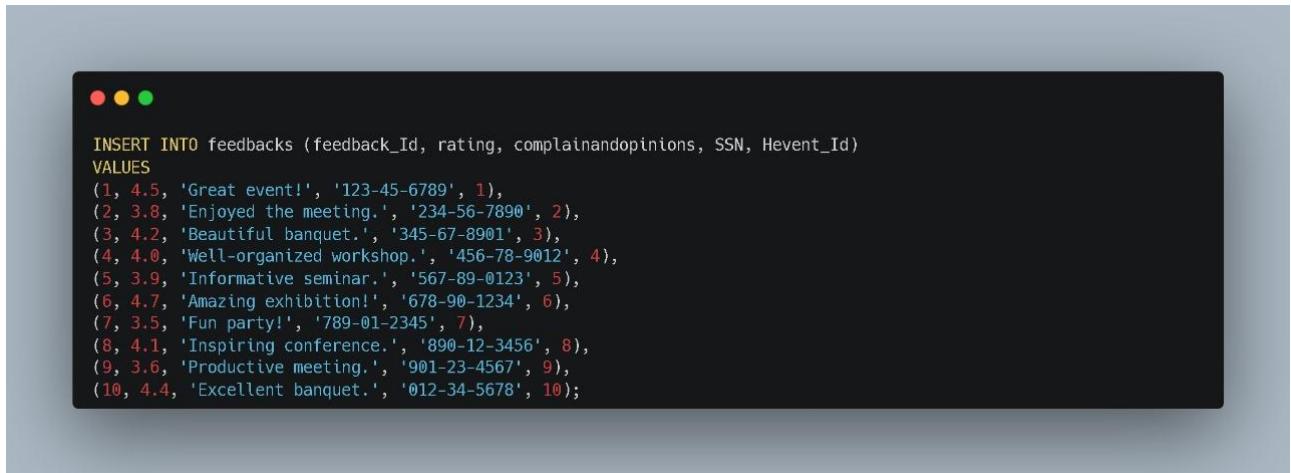
```
INSERT INTO Staff (branch_ID, Fname, Lname, position, email, staff_id, degree_certification, supervisor, dep_num,
MangID)
VALUES
(1, 'John', 'Doe', 'Manager', 'john.doe@example.com', 101, 'MBA', NULL, 1, 1),
(2, 'Jane', 'Smith', 'HR Specialist', 'jane.smith@example.com', 102, 'HR Certification', 101, 2, 2),
(3, 'Robert', 'Johnson', 'Marketing Coordinator', 'robert.johnson@example.com', 103, 'Marketing Degree', 101, 3, 3),
(4, 'Emily', 'Brown', 'Operations Manager', 'emily.brown@example.com', 104, 'Operations Degree', 101, 4, 4),
(5, 'Michael', 'Jones', 'Sales Representative', 'michael.jones@example.com', 105, 'Sales Certification', 101, 5, 5),
(6, 'Olivia', 'Davis', 'IT Specialist', 'olivia.davis@example.com', 106, 'IT Degree', 101, 6, 6),
(7, 'William', 'Miller', 'Customer Service Representative', 'william.miller@example.com', 107, 'Customer Service
Certification', 101, 7, 7),
(8, 'Sophia', 'Wilson', 'Logistics Coordinator', 'sophia.wilson@example.com', 108, 'Logistics Degree', 101, 8, 8),
(9, 'Daniel', 'Moore', 'R&D Scientist', 'daniel.moore@example.com', 109, 'R&D Degree', 101, 9, 9),
(10, 'Ava', 'Taylor', 'QA Analyst', 'ava.taylor@example.com', 110, 'QA Certification', 101, 10, 10);
```

Figure 43. Inserting Staff Table



```
INSERT INTO Contain (branch_ID, dep_num, numofdep)
VALUES
(1, 1, 20),
(2, 2, 30),
(3, 3, 25),
(4, 4, 40),
(5, 5, 35),
(6, 6, 22),
(7, 7, 18),
(8, 8, 26),
(9, 9, 28),
(10, 10, 32);
```

Figure 44. Inserting contain Table



```
INSERT INTO feedbacks (feedback_Id, rating, complainandopinions, SSN, Hevent_Id)
VALUES
(1, 4.5, 'Great event!', '123-45-6789', 1),
(2, 3.8, 'Enjoyed the meeting.', '234-56-7890', 2),
(3, 4.2, 'Beautiful banquet.', '345-67-8901', 3),
(4, 4.0, 'Well-organized workshop.', '456-78-9012', 4),
(5, 3.9, 'Informative seminar.', '567-89-0123', 5),
(6, 4.7, 'Amazing exhibition!', '678-90-1234', 6),
(7, 3.5, 'Fun party!', '789-01-2345', 7),
(8, 4.1, 'Inspiring conference.', '890-12-3456', 8),
(9, 3.6, 'Productive meeting.', '901-23-4567', 9),
(10, 4.4, 'Excellent banquet.', '012-34-5678', 10);
```

Figure 45. Inserting Feedbacks Table

```
● ● ●

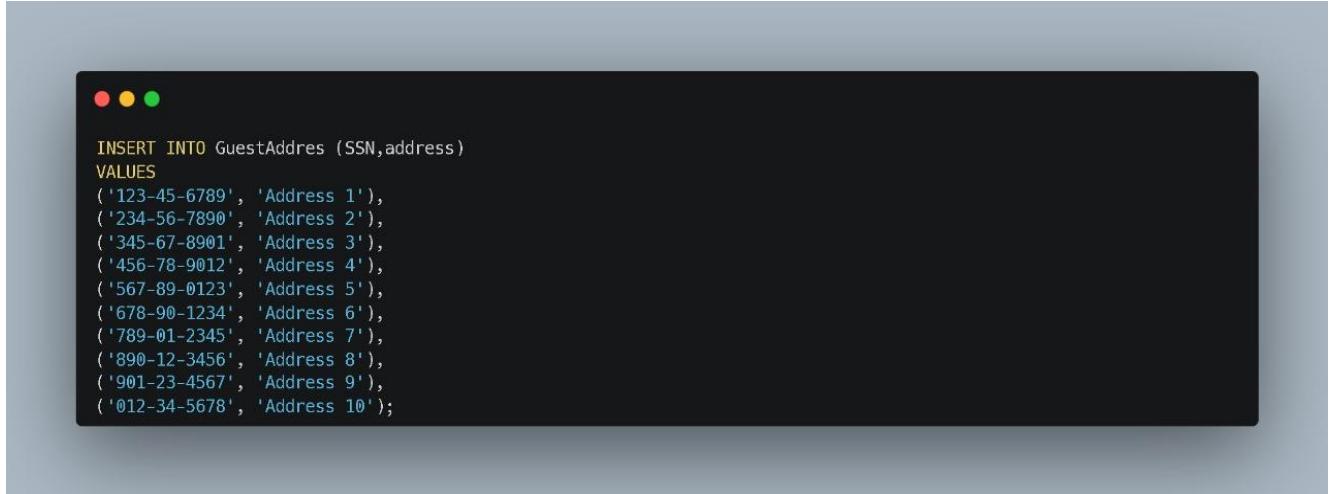
INSERT INTO receives (feedback_ID, mang_Id)
VALUES
(1, 1),
(2, 2),
(3, 3),
(4, 4),
(5, 5),
(6, 6),
(7, 7),
(8, 8),
(9, 9),
(10, 10);
```

Figure 46. Inserting receives Table

```
● ● ●

INSERT INTO Manegment (name, rating, Mangment_ID, salary, department)
VALUES
('Alice ', 4.5, 1, 80000, 'Finance'),
('Bob ', 3.8, 2, 75000, 'Human Resources'),
('Charlie ', 4.2, 3, 82000, 'Marketing'),
('David ', 4.0, 4, 78000, 'Operations'),
('Eva ', 3.9, 5, 79000, 'Sales'),
('Frank ', 4.7, 6, 85000, 'IT'),
('Grace ', 3.5, 7, 72000, 'Customer Service'),
('Hank ', 4.1, 8, 81000, 'Logistics'),
('Ivy ', 3.6, 9, 77000, 'Research and Development'),
('Jack ', 4.4, 10, 83000, 'Quality Assurance');
```

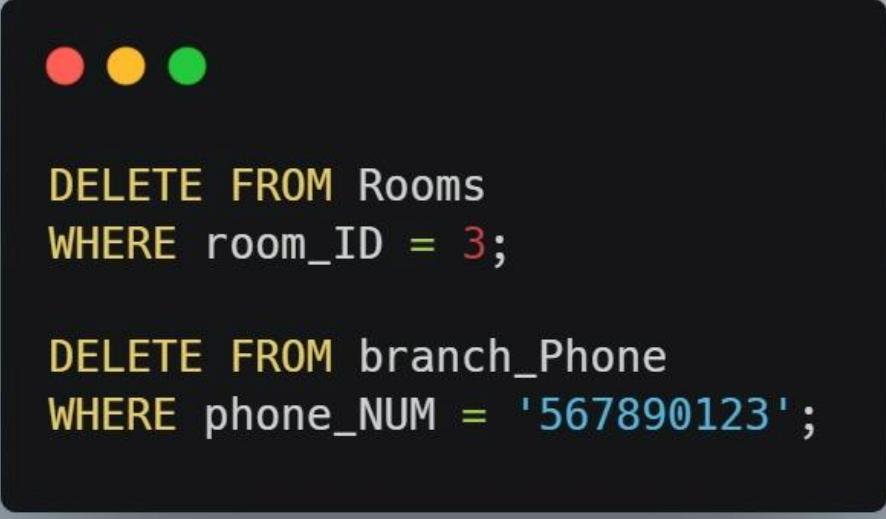
Figure 47. Inserting management Table



```
INSERT INTO GuestAddress (SSN,address)
VALUES
('123-45-6789', 'Address 1'),
('234-56-7890', 'Address 2'),
('345-67-8901', 'Address 3'),
('456-78-9012', 'Address 4'),
('567-89-0123', 'Address 5'),
('678-90-1234', 'Address 6'),
('789-01-2345', 'Address 7'),
('890-12-3456', 'Address 8'),
('901-23-4567', 'Address 9'),
('012-34-5678', 'Address 10');
```

Figure 48. Inserting GuestAddressTable

3.1.4 Updating data (delete Value)



```
DELETE FROM Rooms  
WHERE room_ID = 3;  
  
DELETE FROM branch_Phone  
WHERE phone_NUM = '567890123';
```

Figure 49. updating data

3.1.5 Updating data (change Values)

```
UPDATE Frontoffice
SET salary = 60000
WHERE receptionist_ID = 4;

UPDATE Branch
SET email = 'newemail@example.com'
WHERE name = 'Branch A'

UPDATE Reservation
SET room_category = 'Executive Suite'
WHERE Reservation_ID = 3;

UPDATE Hotel_Event
SET eventtype = 'Gala'
WHERE Hevent_ID = 3;

UPDATE branch_Phone
SET phone_NUM = '987654321'
WHERE branch_ID = 1;
```

Figure 50. updating data

3.1.6 Description Tables

The screenshot shows the SQL Server Management Studio (SSMS) interface with the 'Results' tab selected. The query results are displayed in a table format.

Name	Owner	Type	Created_datetime
Assinens	dbo	user table	2023-12-24 22:28:11.850

Below the table, detailed information about the columns, primary key, foreign keys, and indexes is shown:

- Columns:**

Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
staff_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
hevent_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
- Identity:** No identity column defined.
- RowGuidCol:** No rowguidcol column defined.
- Data_located_on_filegroup:** PRIMARY
- Indexes:**

index_name	index_description	index_keys
PK_Assinens_DA3A5CD6F4B17F96	clustered, unique, primary key located on PRIMARY	staff_ID, hevent_ID
- Constraints:**

constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys
FOREIGN KEY	FK_Assinens_hevent_6B24EA82	No Action	No Action	Enabled	Is_For_Replication	hevent_ID
FOREIGN KEY	FK_Assinens_staff_6A30C649	No Action	No Action	Enabled	Is_For_Replication	staff_ID
PRIMARY KE...	PK_Assinens_DA3A5CD6F4B17...	(n/a)	(n/a)	(n/a)	(n/a)	staff_ID, hevent_ID

Figure 51. Description Assinens Table

The screenshot shows the SQL Server Management Studio (SSMS) interface with the 'Results' tab selected. The query results are displayed in a table format.

Name	Owner	Type	Created_datetime
Branch	dbo	user table	2023-12-24 22:28:11.820

Below the table, detailed information about the columns, primary key, foreign keys, and indexes is shown:

- Columns:**

Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
name	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
rating	decimal	no	5	3	1	no	(n/a)	(n/a)	NULL
branch_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
email	varchar	no	50			no	no	no	SQL_Latin1_General_CI_AS
hevent_id	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
adres	varchar	no	100			no	no	no	SQL_Latin1_General_CI_AS
- Identity:** No identity column defined.
- RowGuidCol:** No rowguidcol column defined.
- Data_located_on_filegroup:** PRIMARY
- Indexes:**

index_name	index_description	index_keys
PK_Branch_E5512B165D67BFED	clustered, unique, primary key located on PRIMARY	branch_ID
- Constraints:**

constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys
FOREIGN KEY	fkbranch	No Action	No Action	Enabled	Is_For_Replication	hevent_id
PRIMARY KE...	PK_Branch_...	(n/a)	(n/a)	(n/a)	(n/a)	branch_ID

Figure 52. Description Branch Table

Name	Owner	Type	Created_datetime													
Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation							
1 branch_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL							
2 phone_NUM	int	no	4	10	0	no	(n/a)	(n/a)	NULL							
Identity																
1	No identity column defined.		NULL	NULL	NULL											
RowGuidCol																
1	No rowguidcol column defined.															
Data_located_on_filegroup																
1	PRIMARY															
index_name																
1	PK_branch_P_7489E0059D57CBFA		index_description			index_keys										
clustered, unique, primary key located on PRIMARY																
branch_ID, phone_NUM																
constraint_type																
1	FOREIGN KEY	FK_branch_Ph_banc_4222D4EF		delete_action	update_action	status_enabled	status_for_replication	constraint_keys								
2				No Action	No Action	Enabled	Is_For_Replication	branch_ID								
3	PRIMARY KE...	PK_branch_P_7489E0059D57C...	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	REFERENCES finhotel.dbo.Branch (branch_ID)	branch_ID, phone_NUM							

Figure 53. Description Branch_phone Table

Name	Owner	Type	Created_datetime													
Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation							
1 branch_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL							
2 dep_num	int	no	4	10	0	no	(n/a)	(n/a)	NULL							
3 numofdep	int	no	4	10	0	no	(n/a)	(n/a)	NULL							
Identity																
1	No identity column defined.		NULL	NULL	NULL											
RowGuidCol																
1	No rowguidcol column defined.															
Data_located_on_filegroup																
1	PRIMARY															
index_name																
1	PK_Contain_A185A35F01187BF4		index_description			index_keys										
clustered, unique, primary key located on PRIMARY																
branch_ID, dep_num																
constraint_type																
1	FOREIGN KEY	FK_Contain_branch_797309D9		delete_action	update_action	status_enabled	status_for_replication	constraint_keys								
2				No Action	No Action	Enabled	Is_For_Replication	branch_ID								
3	FOREIGN KEY	FK_Contain_dep_num_787EE...		No Action	No Action	Enabled	Is_For_Replication	REFERENCES finhotel.dbo.Branch (branch_ID)	dep_num							
4				(n/a)	(n/a)	(n/a)	(n/a)	REFERENCES finhotel.dbo.department (dep...								
5	PRIMARY KE...	PK_Contain_A185A35F01187BF4	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	branch_ID, dep_num								

Figure 54. Description contain Table

1	department	dbo	user table	2023-12-24 22:28:11.840						
Column_name Type Computed Length Prec Scale Nullable TrimTrailingBlanks FixedLenNullInSource Collation										
1	numofEmp	int	no	4	10	0	no	(n/a)	(n/a)	NULL
2	specilization	varchar	no	50			no	no	no	SQL_Latin1_General_CI_AS
3	floorr	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
4	dep_num	int	no	4	10	0	no	(n/a)	(n/a)	NULL
5	name	varchar	no	50			no	no	no	SQL_Latin1_General_CI_AS
6	staff_ID	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
7	head_of	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
Identity Seed Increment Not For Replication										
1	No identity column defined.	NULL	NULL	NULL						
RowGuidCol										
1	No rowguidcol column defined.									
Data_located_on_filegroup										
1	PRIMARY									
index_name index_description index_keys										
1	PK_department_4D483495DD6C1BF8	clustered, unique, primary key located on PRIMARY	dep_num							
constraint_type constraint_name delete_action update_action status_enabled status_for_replication constraint_keys										
1	FOREIGN KEY	FK_department_head_5BE2A6F2	No Action	No Action	Enabled	Is_For_Replication	head_of			
2							REFERENCES finhotel.dbo.department (dep_num)			
3	FOREIGN KEY	fkDep	No Action	No Action	Enabled	Is_For_Replication	staff_ID			
4							REFERENCES finhotel.dbo.Staff (staff_id)			

Figure 55. Description department Table

1	dependence	dbo	user table	2023-12-24 22:28:11.850						
Column_name Type Computed Length Prec Scale Nullable TrimTrailingBlanks FixedLenNullInSource Collation										
1	name	varchar	no	40			no	no	no	SQL_Latin1_General_CI_AS
2	relationdegree	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
3	SSN	varchar	no	15			no	no	no	SQL_Latin1_General_CI_AS
4	Staff_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
Identity Seed Increment Not For Replication										
1	No identity column defined.	NULL	NULL	NULL						
RowGuidCol										
1	No rowguidcol column defined.									
Data_located_on_filegroup										
1	PRIMARY									
index_name index_description index_keys										
1	PK_dependen_E9339101BE3B3F43	clustered, unique, primary key located on PRIMARY	SSN, Staff_ID							
constraint_type constraint_name delete_action update_action status_enabled status_for_replication constraint_keys										
1	FOREIGN KEY	FK_dependenc_Staff_6E01572D	No Action	No Action	Enabled	Is_For_Replication	Staff_ID			
2							REFERENCES finhotel.dbo.Staff (staff_id)			
3	PRIMARY KE...	PK_dependen_E9339101BE3B...	(n/a)	(n/a)	(n/a)	(n/a)	SSN, Staff_ID			

Figure 56. Description dependence Table

Results Messages

	Name	Owner	Type	Created_datetime						
1	feedbacks	dbo	user table	2023-12-24 22:28:11.850						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	feedback_id	int	no	4	10	0	no	(n/a)	(n/a)	NULL
2	rating	decimal	no	5	3	1	no	(n/a)	(n/a)	NULL
3	complainandopinions	varchar	no	200			yes	no	yes	SQL_Latin1_General_CI_AS
4	SSN	varchar	no	15			yes	no	yes	SQL_Latin1_General_CI_AS
5	Hevent_Id	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
1	Identity	Seed	Increment	Not For Replication						
1	No identity column defined.	NULL	NULL	NULL						
1	RowGuidCol									
1	No rowguidcol column defined.									
1	Data_located_on_filegroup									
1	PRIMARY									
1	index_name		index_description				index_keys			
1	PK_feedback_7A6A2FB46E4FD9BC		clustered, unique, primary key located on PRIMARY				feedback_id			
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys		
1	FOREIGN KEY	FK_feedbacks_Heven_70DDC3D8		No Action	No Action	Enabled	Is_For_Replication	Hevent_Id		
2								REFERENCES finhotel.dbo.Hotel_Event (Hevent_ID)		
3	FOREIGN KEY	FK_feedbacks_SSN_71D1E811		No Action	No Action	Enabled	Is_For_Replication	SSN		
4								REFERENCES finhotel.dbo.Guest (SSN)		
5	PRIMARY KE...	PK_feedback_7A6A2FB46E4FD9BC	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)	feedback_id		
1	Table is referenced by foreign key									
1	finhotel.dbo.receives: FK_receives_feedback_75A2...									

Figure 57. Description feedbacks Table

Results Messages

	Name	Owner	Type	Created_datetime						
1	Frontoffice	dbo	user table	2023-12-24 22:28:11.810						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Fname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
2	Lname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
3	salary	int	no	4	10	0	no	(n/a)	(n/a)	NULL
4	receptionist_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
5	shiftour	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
1	Identity	Seed	Increment	Not For Replication						
1	No identity column defined.	NULL	NULL	NULL						
1	RowGuidCol									
1	No rowguidcol column defined.									
1	Data_located_on_filegroup									
1	PRIMARY									
1	index_name		index_description				index_keys			
1	PK_Frontoff_4DCD8422237BB048		clustered, unique, primary key located on PRIMARY				receptionist_ID			
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys		
1	PRIMARY KEY (clustered)	PK_Frontoff_4DCD8422237BB048		(n/a)	(n/a)	(n/a)	(n/a)	receptionist_ID		
1	Table is referenced by foreign key									
1	finhotel.dbo.Reservation: FK_Reservat_recep_...									

Figure 58. Description Frontoffice Table

Results										
	Name	Owner	Type	Created_datetime						
1	Guest	dbo	user table	2023-12-24 22:28:11.830						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Fname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
2	Lname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
3	email	varchar	no	60			yes	no	yes	SQL_Latin1_General_CI_AS
4	gender	char	no	1			yes	no	yes	SQL_Latin1_General_CI_AS
5	membership	varchar	no	40			yes	no	yes	SQL_Latin1_General_CI_AS
6	SSN	varchar	no	15			no	no	no	SQL_Latin1_General_CI_AS
7	reservation_ID	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
	Identity	Seed	Increment	Not For Replication						
1	No identity column defined.	NULL	NULL	NULL						
	RowGuidCol									
1	No rowguidcol column defined.									
	Data_located_on_filegroup									
1	PRIMARY									
1	index_name		index_description				index_keys			
1	PK_Guest__CA1E8E3DBB26EA1D		clustered, unique, primary key located on PRIMARY				SSN			
constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys			
1	FOREIGN KEY	FK_Guest_reservati_48CFD27E	No Action	No Action	Enabled	Is_For_Replication	reservation_ID			
2							REFERENCES finhotel.dbo.Reservation (Reservation...			
3	PRIMARY KE...	PK_Guest__CA1E8E3DBB26EA...	(n/a)	(n/a)	(n/a)	(n/a)	SSN			

Figure 59. Description Guest Table

Results										
	Name	Owner	Type	Created_datetime						
1	Guest_phone	dbo	user table	2023-12-24 22:28:11.833						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	SSN	varchar	no	15			no	no	no	SQL_Latin1_General_CI_AS
2	phonenum	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
	Identity	Seed	Increment	Not For Replication						
1	No identity column defined.	NULL	NULL	NULL						
	RowGuidCol									
1	No rowguidcol column defined.									
	Data_located_on_filegroup									
1	PRIMARY									
1	index_name		index_description				index_keys			
1	PK_Guest_ph__E603165F8BE28993		clustered, unique, primary key located on PRIMARY				SSN, phonenum			
constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys			
1	FOREIGN KEY	FK_Guest_phone__SSN__4E88ABD4	No Action	No Action	Enabled	Is_For_Replication	SSN			
2							REFERENCES finhotel.dbo.Guest (SSN)			
3	PRIMARY KE...	PK_Guest_ph__E603165F8BE28993	(n/a)	(n/a)	(n/a)	(n/a)	SSN, phonenum			

Figure 60. Description Guest_phone Table

150 %

Results Messages

	Name	Owner	Type	Created_datetime
1	GuestAddress	dbo	user table	2023-12-24 22:28:11.830
1	Column_name	Type	Computed	Length
1	SSN	varchar	no	15
2	address	varchar	no	60
1	Identity	Seed	Increment	Not For Replication
1	No identity column defined.	NULL	NULL	NULL
1	RowGuidCol			
1	No rowguidcol column defined.			
1	Data_located_on_filegroup			
1	PRIMARY			
1	index_name	index_description	index_keys	
1	PK_GuestAdd_8D4F46D8E5B4A6F2	clustered, unique, primary key located on PRIMARY	SSN, address	
1	constraint_type	constraint_name	delete_action	update_action
1	FOREIGN KEY	FK_GuestAddress__SSN__4BAC3F29	No Action	No Action
2			Enabled	Is_For_Replication
3	PRIMARY KE...	PK_GuestAdd_8D4F46D8E5B4A6...	(n/a)	(n/a)
			(n/a)	(n/a)
			SSN, address	

Figure 61. Description Guest_addresses Table

Results Messages

	Name	Owner	Type	Created_datetime
1	Hotel_Event	dbo	user table	2023-12-24 22:28:11.823
1	Column_name	Type	Computed	Length
1	name	varchar	no	100
2	starttime	decimal	no	9
3	endtime	decimal	no	9
4	Eventdate	date	no	3
5	Hevent_ID	int	no	4
6	eventtype	varchar	no	60
7	Reservation_ID	int	no	4
			10	0
			yes	(n/a)
			(n/a)	(n/a)
				NULL
1	Identity	Seed	Increment	Not For Replication
1	No identity column defined.	NULL	NULL	NULL
1	RowGuidCol			
1	No rowguidcol column defined.			
1	Data_located_on_filegroup			
1	PRIMARY			
1	index_name	index_description	index_keys	
1	PK_Hotel_Ev_8AFB69C0A63AD844	clustered, unique, primary key located on PRIMARY	Hevent_ID	
1	constraint_type	constraint_name	delete_action	update_action
1	FOREIGN KEY	FK_Hotel_Eve_Reser_3F466844	No Action	No Action
2			Enabled	Is_For_Replication
3	PRIMARY KE...	PK_Hotel_Ev_8AFB69C0A63AD...	(n/a)	(n/a)
			(n/a)	(n/a)
			Reservation_ID	
1	Table is referenced by foreign key			
1	finhotel.dbo.Assinens_FK_Assinens_hevent_6B24			

Figure 62. Description Hotel_Event Table

Results									
Name	Owner	Type	Created_datetime						
1 Management	dbo	user table	2023-12-24 22:28:11.837						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource
1	name	varchar	no	50		1	no	no	SQL_Latin1_General_CI_AS
2	rating	decimal	no	5	3	1	no	(n/a)	(n/a)
3	Mangment_ID	int	no	4	10	0	no	(n/a)	(n/a)
4	salary	int	no	4	10	0	no	(n/a)	(n/a)
5	department	varchar	no	50		yes	no	yes	SQL_Latin1_General_CI_AS
1	Identity	Seed	Increment	Not For Replication					
1	No identity column defined.	NULL	NULL	NULL					
1	RowGuidCol								
1	No rowguidcol column defined.								
1	Data_located_on_filegroup								
1	PRIMARY								
1	index_name	index_description		index_keys					
1	PK_Management_A9E4CDF474440F4A	clustered, unique, primary key located on PRIMARY		Mangment_ID					
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys	
1	PRIMARY KEY (clustered)	PK_Management_A9E4CDF474440F4A		(n/a)	(n/a)	(n/a)	(n/a)	Mangment_ID	
1	Table is referenced by foreign key.								
1	finhotel.dbo.ManagementContact FK_Management_Mang...								
2	finhotel.dbo.receives FK_receives_mang_ID_74AE54...								
3	finhotel.dbo.Staff FK_Staff_MangID_60A75C0F								

Query executed successfully.

DESKTOP-DOC7L4 (16.0 RTM) | DESKTOP-DOC7L4\Youssef | finhotel | 0 rows

Figure 63. Description Manegment Table

Results									
Name	Owner	Type	Created_datetime						
1 Managementcontact	dbo	user table	2023-12-24 22:28:11.840						
1	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource
1	MangID	int	no	4	10	0	no	(n/a)	(n/a)
2	contact_num	int	no	4	10	0	no	(n/a)	(n/a)
1	Identity	Seed	Increment	Not For Replication					
1	No identity column defined.	NULL	NULL	NULL					
1	RowGuidCol								
1	No rowguidcol column defined.								
1	Data_located_on_filegroup								
1	PRIMARY								
1	index_name	index_description		index_keys					
1	PK_Management_5EC3DA1C8EB3A151	clustered, unique, primary key located on PRIMARY		MangID, contact_num					
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys	
1	FOREIGN KEY	FK_Management_MangID_59063447	No Action	No Action	Enabled	Is_For_Replication	MangID		
2							REFERENCES finhotel.dbo.Manegment (Mangment_ID)		
3	PRIMARY KE...	PK_Management_5EC3DA1C8EB3A...	(n/a)	(n/a)	(n/a)	(n/a)		MangID, contact_num	

Query executed successfully.

DESKTOP-DOC7L4 (16.0 RTM) | DESKTOP-DOC7L4\Youssef | finhotel | 00:00:00 | 10 rows

Figure 64. Description Manegmentcontact Table

Results Messages															
1	payment	dbo	user table	Created_datetime	2023-12-24 22:28:11.833	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	payment_Id	int	no	4	10	0	no	(n/a)				(n/a)	no	NULL	
2	amount	decimal	no	9	18	0	no	(n/a)				(n/a)	no	NULL	
3	paymentdate	date	no	3	10	0	no	(n/a)				(n/a)	no	NULL	
4	paymentmethod	varchar	no	40			no	no				no	no	SQL_Latin1_General_CI_AS	
5	transactionID	int	no	4	10	0	no	(n/a)				(n/a)	no	NULL	
6	reservation_Id	int	no	4	10	0	yes	(n/a)				(n/a)	yes	NULL	
7	Hevent_Id	int	no	4	10	0	yes	(n/a)				(n/a)	yes	NULL	
8	SSN	varchar	no	15			yes	no				yes	yes	SQL_Latin1_General_CI_AS	
Identity Seed Increment Not For Replication															
1	No identity column defined.			NULL	NULL	NULL									
RowGuidCol															
1	No rowguidcol column defined.														
Data_located_on_filegroup															
1	PRIMARY														
index_name index_description index_keys															
1	PK_payment__ED10C462F9307CA1	clustered, unique, primary key located on PRIMARY					payment_Id								
2	UQ_payment_9857C536545ED66	nonclustered, unique, unique key located on PRIMA...					transactionID								
constraint_type constraint_name delete_action update_action status_enabled status_for_replication constraint_keys															
1	FOREIGN KEY	FK_payment_Hevent_534D60F1	No Action	No Action	Enabled	Is_For_Replication	Hevent_Id								
2															
3	FOREIGN KEY	FK_payment_reserva_52593CB8	No Action	No Action	Enabled	Is_For_Replication	reservation_Id								
4															
5	FOREIGN KEY	FK_payment_SSN_5441852A	No Action	No Action	Enabled	Is_For_Replication	SSN								

Query executed successfully.

Figure 65. Description payment Table

Results Messages																
1	receives	dbo	user table	Created_datetime	2023-12-24 22:28:11.853	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation	
1	feedback_ID	int	no	4	10	0	no	(n/a)				(n/a)	no	NULL		
2	mang_Id	int	no	4	10	0	no	(n/a)				(n/a)	no	NULL		
Identity Seed Increment Not For Replication																
1	No identity column defined.			NULL	NULL	NULL										
RowGuidCol																
1	No rowguidcol column defined.															
Data_located_on_filegroup																
1	PRIMARY															
index_name index_description index_keys																
1	PK_receives_438396C969620CAE	clustered, unique, primary key located on PRIMARY				feedback_ID, mang_Id										
constraint_type constraint_name delete_action update_action status_enabled status_for_replication constraint_keys																
1	FOREIGN KEY	FK_receives_feedback_75A278F5	No Action	No Action	Enabled	Is_For_Replication	feedback_ID									
2																
3	FOREIGN KEY	FK_receives_mang_l_74AE54...	No Action	No Action	Enabled	Is_For_Replication	mang_Id									
4																
5	PRIMARY KE...	PK_receives_438396C969620...	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)									

Query executed successfully.

Figure 66. Description receives Table

Results Messages														
1	Name	Owner	Type	Created_datetime										
1	Reservation	dbo	user table	2023-12-24 22:28:11.820	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	checkin	date	no	3	10	0	no	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
2	checkout	date	no	3	10	0	no	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
3	Reservation_ID	int	no	4	10	0	no	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
4	room_category	varchar	no	60			yes	no			yes	NULL	NULL	SQL_Latin1_General_CI_AS
5	receptionist_ID	int	no	4	10	0	yes	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
6	branch_ID	int	no	4	10	0	yes	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
1	Identity	Seed	Increment	Not For Replication										
1	No identity column defined.	NULL	NULL	NULL										
1	RowGuidCol													
1	No rowguidcol column defined.													
1	Data_located_on_filegroup													
1	PRIMARY													
1	index_name	index_description		index_keys										
1	PK_Reservation_17302A8D5A93D612	clustered, unique, primary key located on PRIMARY	Reservation_ID											
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys						
1	FOREIGN KEY	FK_Reservation_branch_3C69FB99	No Action	No Action	Enabled	Enabled	Is_For_Replication	branch_ID	REFERENCES finhotel.dbo.Branch (branch_ID)					
2								RECEPTIONIST_ID						
3	FOREIGN KEY	FK_Reservation_recep_3B75D760	No Action	No Action	Enabled	Enabled	Is_For_Replication	receptionist_ID	REFERENCES finhotel.dbo.Frontoffice (recept..)					
4								Reservation_ID						
5	PRIMARY KEY	PK_Reservation_17302A8D5A93D...	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)							
1	Table is referenced by foreign key													
1	finhotel.dbo.Guest FK_Guest_reservation_48CFD27E													
2	finhotel.dbo.Hotel_Event FK_Hotel_Eve_Reser_3...													
3	finhotel.dbo.payment FK_payment_reserva_5259...													

Figure 67. Description reservation Table

Results Messages														
1	Name	Owner	Type	Created_datetime										
1	Rooms	dbo	user table	2023-12-24 22:28:11.827	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	room_ID	int	no	4	10	0	no	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
2	roomtype	varchar	no	50			no	no			no	NULL	NULL	SQL_Latin1_General_CI_AS
3	numberoffroms	int	no	4	10	0	no	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
4	availability	varchar	no	60			no	no			no	NULL	NULL	SQL_Latin1_General_CI_AS
5	reservation_ID	int	no	4	10	0	yes	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
6	branch_ID	int	no	4	10	0	yes	(n/a)			(n/a)	NULL	NULL	SQL_Latin1_General_CI_AS
1	Identity	Seed	Increment	Not For Replication										
1	No identity column defined.	NULL	NULL	NULL										
1	RowGuidCol													
1	No rowguidcol column defined.													
1	Data_located_on_filegroup													
1	PRIMARY													
1	index_name	index_description		index_keys										
1	PK_Rooms_19645EB299BA1DAD	clustered, unique, primary key located on PRIMARY	room_ID											
1	constraint_type	constraint_name		delete_action	update_action	status_enabled	status_for_replication	constraint_keys						
1	FOREIGN KEY	FK_Rooms_branch_ID_44FF419A	No Action	No Action	Enabled	Enabled	Is_For_Replication	branch_ID	REFERENCES finhotel.dbo.Branch (branch_ID)					
2								RECEPTIONIST_ID						
3	FOREIGN KEY	FK_Rooms_reservation_45F365D3	No Action	No Action	Enabled	Enabled	Is_For_Replication	reservation_ID	REFERENCES finhotel.dbo.Reservation (Res...					
4								room_ID						
5	PRIMARY KEY	PK_Rooms_19645EB299BA1DAD	(n/a)	(n/a)	(n/a)	(n/a)	(n/a)							

Query executed successfully.

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Figure 68. Description Rooms Table

Results									
	Name	Owner	Type	Created_datetime					
1	Staff	dbo	user table	2023-12-24 22:28:11.840					
Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1 branch_ID	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
2 Fname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
3 Lname	varchar	no	30			no	no	no	SQL_Latin1_General_CI_AS
4 position	varchar	no	60			no	no	no	SQL_Latin1_General_CI_AS
5 email	varchar	no	60			no	no	no	SQL_Latin1_General_CI_AS
6 staff_id	int	no	4	10	0	no	(n/a)	(n/a)	NULL
7 degree_certification	varchar	no	100			no	no	no	SQL_Latin1_General_CI_AS
8 supervisor	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
Identity	Seed	Increment	Not For Replication						
1 No identity column defined.	NULL	NULL	NULL						
RowGuidCol									
1 No rowguidcol column defined.									
Data_located_on_filegroup									
1 PRIMARY									
index_name	index_description	index_keys							
1 PK_Staff_1963DD9C0DF287AC	clustered, unique, primary key located on PRIMARY	staff_id							
constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys			
1 FOREIGN KEY	FK_Staff_branch_ID_619B8048	No Action	No Action	Enabled	Is_For_Replication	branch_ID			
2						REFERENCES finhotel.dbo.Branch (branch_ID)			
✓ Query executed successfully.									DESKTOP-DOC7L14 (16.0 RTM) DESKTOP-DOC7L14\Yousse...

Figure 69. Description Staff Table

Results									
	Name	Owner	Type	Created_datetime					
1	StaffAddress	dbo	user table	2023-12-24 22:28:11.847					
Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1 staff_id	int	no	4	10	0	no	(n/a)	(n/a)	NULL
2 Address	varchar	no	70			no	no	no	SQL_Latin1_General_CI_AS
Identity	Seed	Increment	Not For Replication						
1 No identity column defined.	NULL	NULL	NULL						
RowGuidCol									
1 No rowguidcol column defined.									
Data_located_on_filegroup									
1 PRIMARY									
index_name	index_description	index_keys							
1 PK_StaffAdd_3EB31E6F96285986	clustered, unique, primary key located on PRIMARY	staff_id, Address							
constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys			
1 FOREIGN KEY	FK_StaffAddr_staff_6754599E	No Action	No Action	Enabled	Is_For_Replication	staff_id			
2						REFERENCES finhotel.dbo.Staff (staff_id)			
3	PRIMARY KEY	PK_StaffAdd_3EB31E6F9620...	(n/a)	(n/a)	(n/a)	(n/a)			staff_id, Address
✓ Query executed successfully.									DESKTOP-DOC7L14 (16.0 RTM) DESKTOP-DOC7L14\Yousse...

Figure 70. Description StaffAddress Table

Results								
Name	Owner	Type	Created_datetime					
1 Staffnum	dbo	user table	2023-12-24 22:28:11.843					
1	staff_id	int	no	4	10	0	no (n/a)	FixedLenNullInSource (n/a) NULL
2	numberpho	int	no	4	10	0	no (n/a)	Collation NULL
1	Identity		Seed	Increment	Not For Replication			
1	No identity column defined.		NULL	NULL	NULL			
1	RowGuidCol							
1	No rowguidcol column defined.							
1	Data_located_on_filegroup							
1	PRIMARY							
1	index_name		index_description		index_keys			
1	PK_Staffnum_FF0BD1D19EEBA1ED		clustered, unique, primary key located on PRIMARY		staff_id, numberpho			
1	constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys	
1	FOREIGN KEY	FK__Staffnum__staff_6477ECF3	No Action	No Action	Enabled	Is_For_Replication	staff_id	
2							REFERENCES finhotel.dbo Staff (staff_id)	
3	PRIMARY KE...	PK__Staffnum_FF0BD1D19EEB...	(n/a)	(n/a)	(n/a)	(n/a)	staff_id, numberpho	

Query executed successfully.

DESKTOP-DOC7L4 (16.0 RTM) | DESKTOP-DOC7L4\Youssef

Figure 71. Description Staffnum Table

3.2 GUI

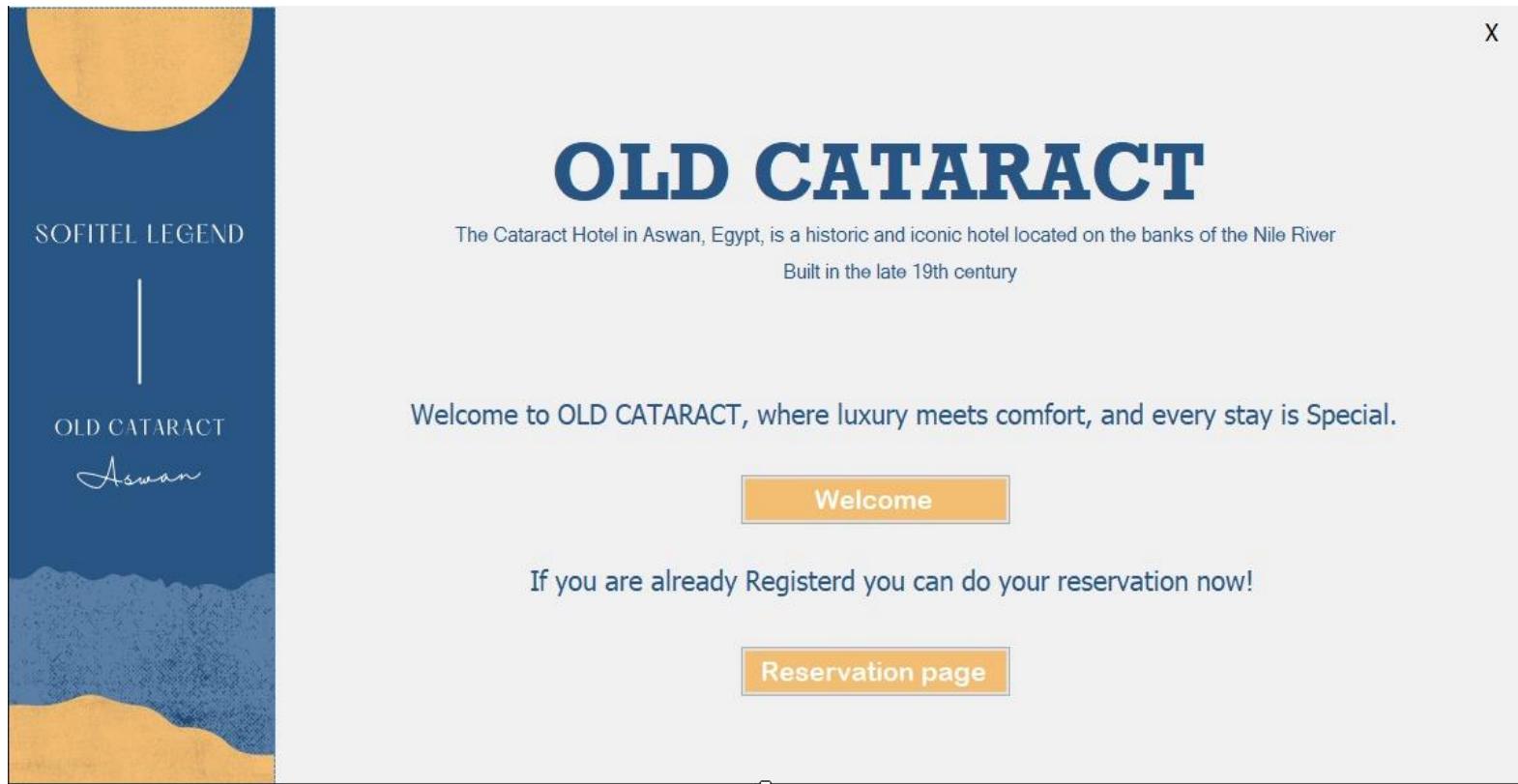


Figure 72. Home Page



Registration

First Name: Address:

Last Name: Phone number:

Email: membership:

Gender: Reservation ID :

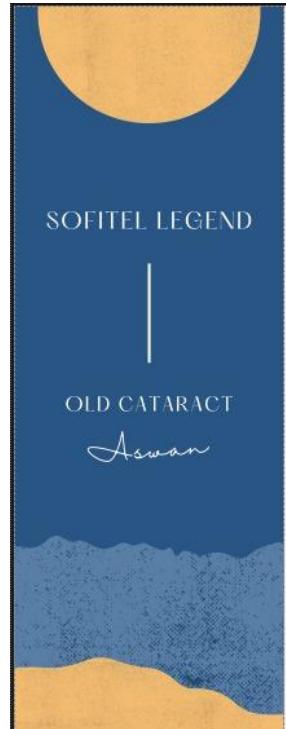
SSN:

Registration Data

Buttons:

Register **Edit**
Veiw **Delete**

Figure 73. Table Page



Reservation

X

Check-in date:

Check-out date:

Room category:

Submit

Reservation ID:

Edit **Veiw** **Delete**

Veiw Row

View Row

View

Back

Figure 74. search Page

References

- 1) https://en.wikipedia.org/wiki/Old_Cataract_Hotel

Old_Cataract_Hotel – Wikipedia, November 19, 2023