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**Lab 01**

## **Creating Hotel Table**

```
SQL> CREATE TABLE Hotel(  
2 Hotel_No NUMBER(3) NOT NULL,  
3 Name VARCHAR(20) NOT NULL,  
4 City VARCHAR(15) NOT NULL,  
5 CONSTRAINT Hotel_PK_HotelNo PRIMARY KEY(Hotel_No)  
6 );
```

Table created.

## **Creating Room Table**

```
SQL> CREATE TABLE Room(  
2 Hotel_No NUMBER(3),  
3 Room_No NUMBER,  
4 Type CHAR(1),  
5 Price NUMBER(7,2) NOT NULL,  
6 CONSTRAINT Room_FK_Hotel_HotelNo FOREIGN KEY (Hotel_No) REFERENCES Hotel(Hotel_No),  
7 CONSTRAINT Room_PK_NO PRIMARY KEY(Hotel_No,Room_No),  
8 CONSTRAINT Room_CK_Type CHECK (TYPE IN ('A','N'))  
9 );
```

Table created.

## **Creating Guest Table**

```
SQL> CREATE TABLE Guest(  
2 Guest_No VARCHAR(5),  
3 Name VARCHAR(15) NOT NULL,
```

```

4 dob DATE,
5 t_date date DEFAULT sysdate,
6 age AS (TRUNC (MONTHS_BETWEEN(t_date,dob)/12)) VIRTUAL,
7 Gender CHAR(1) NOT NULL,
8 Phone_No NUMERIC(10),
9 Adhar_No VARCHAR(10),
10 CONSTRAINT Guest_PK_GuestNo PRIMARY KEY(Guest_No),
11 CONSTRAINT Guest_CK_age CHECK (AGE>18),
12 CONSTRAINT Guest_CK_gender CHECK (GENDER IN ('M','F')),
13 CONSTRAINT Guest_UQ_PhoneNo UNIQUE(PHONE_No),
14 CONSTRAINT Guest_CK_PhoneNo CHECK (length(PHONE_No)=10)
15 );

```

Table created.

## Creating Booking Table

```

SQL> CREATE TABLE Booking(
2 Hotel_No NUMBER(3),
3 Guest_No VARCHAR(5),
4 Room_No NUMBER,
5 Date_From DATE,
6 Date_To DATE,
7 temp_date date DEFAULT sysdate,
8 CONSTRAINT Booking_FK_Hotel_HotelNo FOREIGN KEY (Hotel_No) REFERENCES
Hotel(Hotel_No),
9 CONSTRAINT Booking_FK_Guest_GuestNo FOREIGN KEY (Guest_No) REFERENCES
Guest(Guest_No),
10 CONSTRAINT Booking_FK_Room_RoomNo FOREIGN KEY (Hotel_No,Room_No) REFERENCES
Room(Hotel_No,Room_No),
11 CONSTRAINT Booking_CK_Date CHECK (Date_From<=Date_To AND DATE_FROM>=temp_date)
12 );

```

Table created.

## Table Description

SQL> desc Hotel

Name	Null?	Type
-----		
HOTEL_NO	NOT NULL	NUMBER(3)
NAME	NOT NULL	VARCHAR2(20)
CITY	NOT NULL	VARCHAR2(15)

SQL> desc Room

Name	Null?	Type
-----		
HOTEL_NO	NOT NULL	NUMBER(3)
ROOM_NO	NOT NULL	NUMBER
TYPE		CHAR(1)
PRICE	NOT NULL	NUMBER(7,2)

SQL> desc Guest

Name	Null?	Type
-----		
GUEST_NO	NOT NULL	VARCHAR2(5)
NAME	NOT NULL	VARCHAR2(15)
DOB		DATE
T_DATE		DATE
AGE		NUMBER
GENDER	NOT NULL	CHAR(1)
PHONE_NO		NUMBER(10)
ADHAR_NO		VARCHAR2(10)

SQL> desc Booking

Name	Null?	Type
------	-------	------

---

HOTEL_NO	NUMBER(3)
GUEST_NO	VARCHAR2(5)
ROOM_NO	NUMBER
DATE_FROM	DATE
DATE_TO	DATE
TEMP_DATE	DATE

## Insertion in Hotel Table

```
SQL> INSERT INTO Hotel (HOTEL_NO, NAME, CITY) VALUES (111, 'Empire Hotel', 'Delhi');
```

1 row created.

```
SQL> INSERT INTO Hotel (HOTEL_NO, NAME, CITY) VALUES (235, 'Park Palace', 'Delhi');
```

1 row created.

```
SQL> INSERT INTO Hotel (HOTEL_NO, NAME, CITY) VALUES (423, 'Brownstone Hotel', 'Mumbai');
```

1 row created.

```
SQL> INSERT INTO Hotel (HOTEL_NO, NAME, CITY) VALUES (498, 'James Plaza', 'Mumbai');
```

1 row created.

## Insertion in Room table

```
SQL> INSERT INTO Room (HOTEL_NO, ROOM_NO, TYPE, PRICE) VALUES (111, 313, 'A', 1450);
```

1 row created.

```
SQL> INSERT INTO Room (HOTEL_NO,ROOM_NO,TYPE,PRICE) VALUES (111,412,'N',1450);
```

1 row created.

```
SQL> INSERT INTO Room (HOTEL_NO,ROOM_NO,TYPE,PRICE) VALUES (235,1267,'N',1750);
```

1 row created.

```
SQL> INSERT INTO Room (HOTEL_NO,ROOM_NO,TYPE,PRICE) VALUES (235,1289,'N',1950);
```

1 row created.

## Insertion in Guest Table

```
SQL> INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES  
(256,'Siddhi Gupta', '22-October-2004','F',9878121312,'7489374377');
```

1 row created.

## Insertion in Booking Table

```
SQL> INSERT INTO Booking (HOTEL_NO,GUEST_NO,DATE_FROM,DATE_TO,ROOM_NO) VALUES  
(111,256,'15-August-2024','20-August-2024',313);
```

1 row created.

## Null Value Insertion

```
SQL> INSERT INTO Hotel (HOTEL_NO,NAME,CITY) VALUES (111,",'Delhi');
```

```
INSERT INTO Hotel (HOTEL_NO,NAME,CITY) VALUES (111,",'Delhi')
```

\*

ERROR at line 1:

ORA-01400: cannot insert NULL into ("RIYA"."HOTEL"."NAME")

## Unique Value Insertion

```
SQL> INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES  
(256,'Riya', '22-October-2004','F',9878121312,'7489374377');
```

```
INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES (256,'Riya',  
'22-October-2004','F',9878121312,'7489374377')
```

\*

ERROR at line 1:

ORA-00001: unique constraint (RIYA.GUEST\_PK\_GUESTNO) violated

## Referential Integrity Constraint

```
SQL> INSERT INTO Room (HOTEL_NO,ROOM_NO,TYPE,PRICE) VALUES (313,111,"",1450);
```

```
INSERT INTO Room (HOTEL_NO,ROOM_NO,TYPE,PRICE) VALUES (313,111,"",1450)
```

\*

ERROR at line 1:

ORA-02291: integrity constraint (RIYA.ROOM\_FK\_HOTEL\_HOTELNO) violated - parent

key not found

## Age Violation

```
SQL> INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES  
(367,'Smruti Agrawal', '22-October-2022','F',9878121312,'7489374377');
```

```
INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES (367,'Smruti  
Agrawal', '22-October-2022','F',9878121312,'7489374377')
```

\*

ERROR at line 1:

ORA-02290: check constraint (RIYA.GUEST\_CK\_AGE) violated

## Check Constraint Violation for Gender

```
SQL> INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES  
(367,'Smruti Agrawal', '22-October-2022','m',987812132,'7489374377');
```

```
INSERT INTO Guest (GUEST_NO,NAME,DOB,GENDER,PHONE_NO,ADHAR_NO) VALUES (367,'Smruti  
Agrawal', '22-October-2022','m',987812132,'7489374377')
```

\*

ERROR at line 1:

ORA-02290: check constraint (RIYA.GUEST\_CK\_PHONENO) violated

## View User Conatraits

```
SQL> SELECT TABLE_NAME,CONSTRAINT_NAME,CONSTRAINT_TYPE FROM USER_CONSTRAINTS  
WHERE TABLE_NAME IN ('HOTEL');
```

TABLE_NAME	CONSTRAINT_NAME	C
-----		
HOTEL	SYS_C0011106	C
HOTEL	SYS_C0011107	C
HOTEL	SYS_C0011108	C
HOTEL	HOTEL_PK_HOTELNO	P

```
SQL> SELECT TABLE_NAME,CONSTRAINT_NAME,CONSTRAINT_TYPE FROM USER_CONSTRAINTS  
WHERE TABLE_NAME IN ('ROOM');
```

TABLE_NAME	CONSTRAINT_NAME	C
-----		
ROOM	SYS_C0011110	C
ROOM	ROOM_CK_TYPE	C
ROOM	ROOM_PK_NO	P
ROOM	ROOM_FK_HOTEL_HOTELNO	R

```
SQL> SELECT TABLE_NAME,CONSTRAINT_NAME,CONSTRAINT_TYPE FROM USER_CONSTRAINTS  
WHERE TABLE_NAME IN ('BOOKING');
```

TABLE_NAME	CONSTRAINT_NAME	C
-----		
BOOKING	BOOKING_CK_DATE	C
BOOKING	BOOKING_FK_HOTEL_HOTELNO	R
BOOKING	BOOKING_FK_GUEST_GUESTNO	R
BOOKING	BOOKING_FK_ROOM_ROOMNO	R

```
SQL> SELECT TABLE_NAME,CONSTRAINT_NAME,CONSTRAINT_TYPE FROM USER_CONSTRAINTS  
WHERE TABLE_NAME IN ('GUEST');
```

TABLE_NAME	CONSTRAINT_NAME	C
GUEST	GUEST_CK_GENDER	C
GUEST	GUEST_CK_PHONENO	C
GUEST	GUEST_PK_GUESTNO	P
GUEST	GUEST_UQ_PHONENO	U
GUEST	SYS_C0011114	C
GUEST	SYS_C0011115	C
GUEST	GUEST_CK_AGE	C

7 rows selected.