

DBMS PROJECT



HOTEL PRICE COMPARISON

B.Tech 2nd Year

Submitted By:

Saurabh Yadav (U101115FCS143)

Sarthak Kholi (U101115FCS141)

Shiksha Swaraj (U101115FCS212)

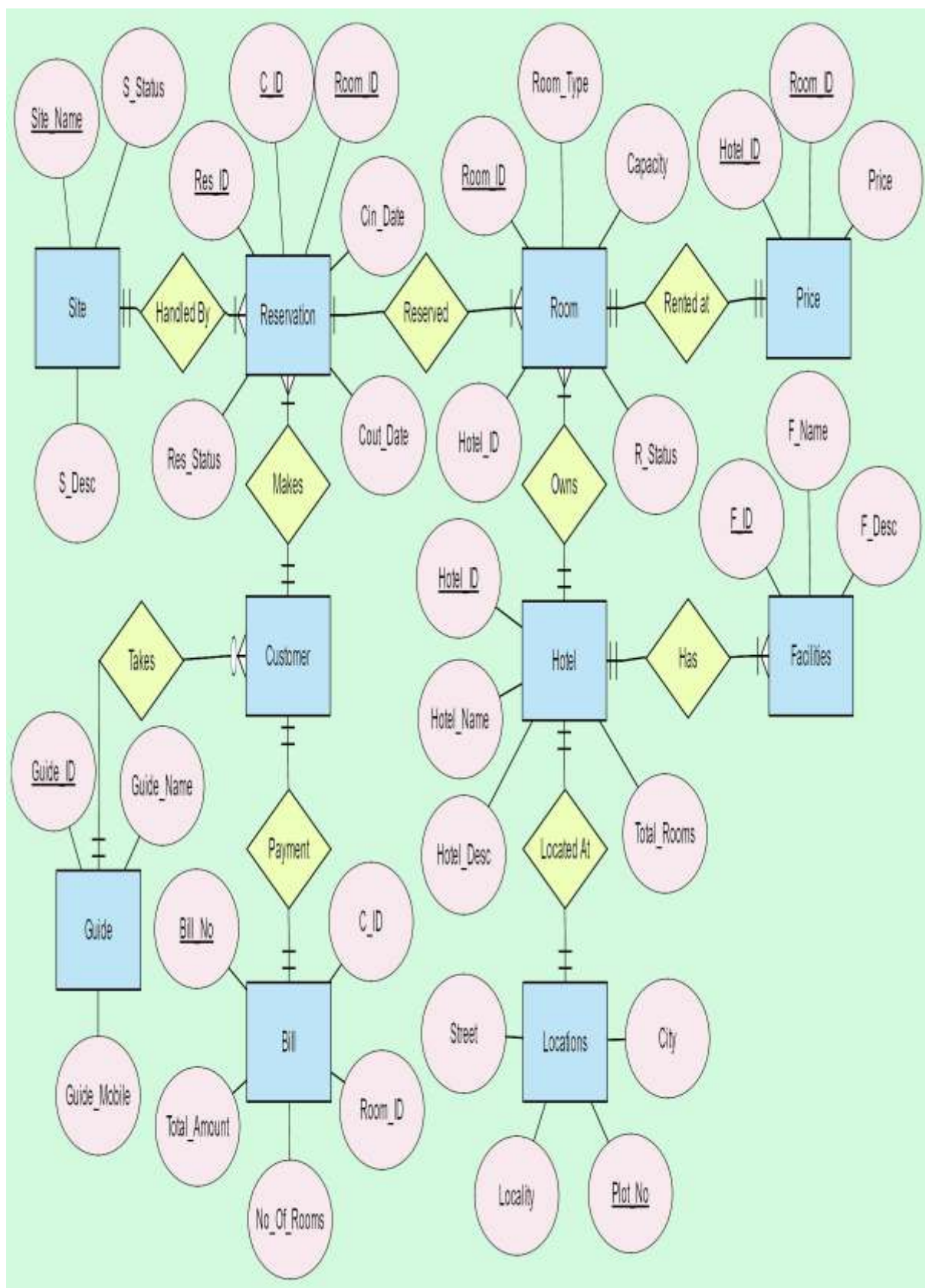
Shravya Pagadala (U101115FCS152)

Detailed Discription

Customer satisfaction is all about providing good and fast service and at the same time keeping it simple. Hotel management system is no different. Keeping information about all hotels and the keeping it relevant to the need of the customer required a very efficient management of database.

All the information has to be categorised perfectly and make sense to the user. For this, there need to a web of customer ,administrator and the hotels. Each hotel has a unique id ,name and address. The hotel has several rooms with each room having a unique id,the hotel id ,name and the type of the room.The hotel can own a hall with a unique id ,the hotel rent,type,the hotel id of the hotel. It belongs to and the type of the hotel.The administrator is the supervisor of the reservation being made, he has a unique id, name and a phone number. A customer who needs to make a reservation has a unique id name mobile numberand address. Once reservation is made it has a unique ID the start date and in date of the reservation there is the price of the hall in the room of the hotel updated on daily basis. The today price as a hotel ID, price and the date of the price being tact. That in a

straighter confirmed the reservation by checking on the rooms of the hotel but it doesn't get confirm until the payment is done. Once the payment is then the invoices generated by the invoice ID, status and the description. After the completion of the payment the bill is generated with the bill ID, name and the amount. Generation of the bill confirm the reservation.



Detailed Procedure to covert the ER Model of Database to Relational Tables

1) Table Site

```
CREATE TABLE Site
(
  Site_Name VARCHAR(20) NOT NULL,
  S_Status VARCHAR(20) NOT NULL,
  S_Desc VARCHAR(20) NOT NULL,
  PRIMARY KEY (Site_Name)
);
```

2) Table Hotel

```
CREATE TABLE Hotel
(
  Hotel_ID INT NOT NULL,
  Hotel_Name VARCHAR(20) NOT NULL,
  Hotel_Desc VARCHAR(20) NOT NULL,
  Total_Rooms INT NOT NULL,
  PRIMARY KEY (Hotel_ID)
);
```

3) Table Locations

```
CREATE TABLE Locations(
  Street VARCHAR(20) NOT NULL,
  Locality VARCHAR(20) NOT NULL,
  City VARCHAR(20) NOT NULL,
  Plot_No INT NOT NULL,
  Hotel_ID INT NOT NULL,
  PRIMARY KEY (Plot_No),
  FOREIGN KEY (Hotel_ID) REFERENCES
  Hotel(Hotel_ID) );
```

4) Table Facilities

```
CREATE TABLE Facilities
(
    F_ID INT NOT NULL,
    F_Name VARCHAR(20) NOT NULL,
    F_Desc VARCHAR(20) NOT NULL,
    Hotel_ID INT NOT NULL,
    PRIMARY KEY (F_ID),
    FOREIGN KEY (Hotel_ID) REFERENCES
        Hotel(Hotel_ID) );
```

5) Table Guide

```
CREATE TABLE Guide
(
    Guide_ID INT NOT NULL,
    Guide_Name VARCHAR(20) NOT NULL,
    Guide_Mobile INT NOT NULL,
    PRIMARY KEY (Guide_ID)
);
```

6) Table Customer

```
CREATE TABLE Customer
(
    C_Name VARCHAR(20) NOT NULL,
    C_ID INT NOT NULL,
    C_Address VARCHAR(50) NOT NULL,
    C_Mobile INT NOT NULL,
    PRIMARY KEY (C_ID) );
```

7) Table Reservation

```
CREATE TABLE Reservation
(
    Res_ID INT NOT NULL,
    Cin_Date DATE NOT NULL,
    Cout_Date DATE NOT NULL,
    Res_Status VARCHAR(50) NOT NULL,
    C_ID INT NOT NULL,
    Room_ID INT NOT NULL,
    PRIMARY KEY (Res_ID),
    FOREIGN KEY (C_ID) REFERENCES Customer(C_ID),
    FOREIGN KEY (Room_ID) REFERENCES
Room(Room_ID)
);
```

8) Table Room

```
CREATE TABLE Room
(
    Room_ID INT NOT NULL,
    Room_Type VARCHAR(20) NOT NULL,
    Capacity INT NOT NULL,
    R_Status VARCHAR(20) NOT NULL,
    Hotel_ID INT NOT NULL,
    PRIMARY KEY (Room_ID),
    FOREIGN KEY (Hotel_ID) REFERENCES
Hotel(Hotel_ID) );
```

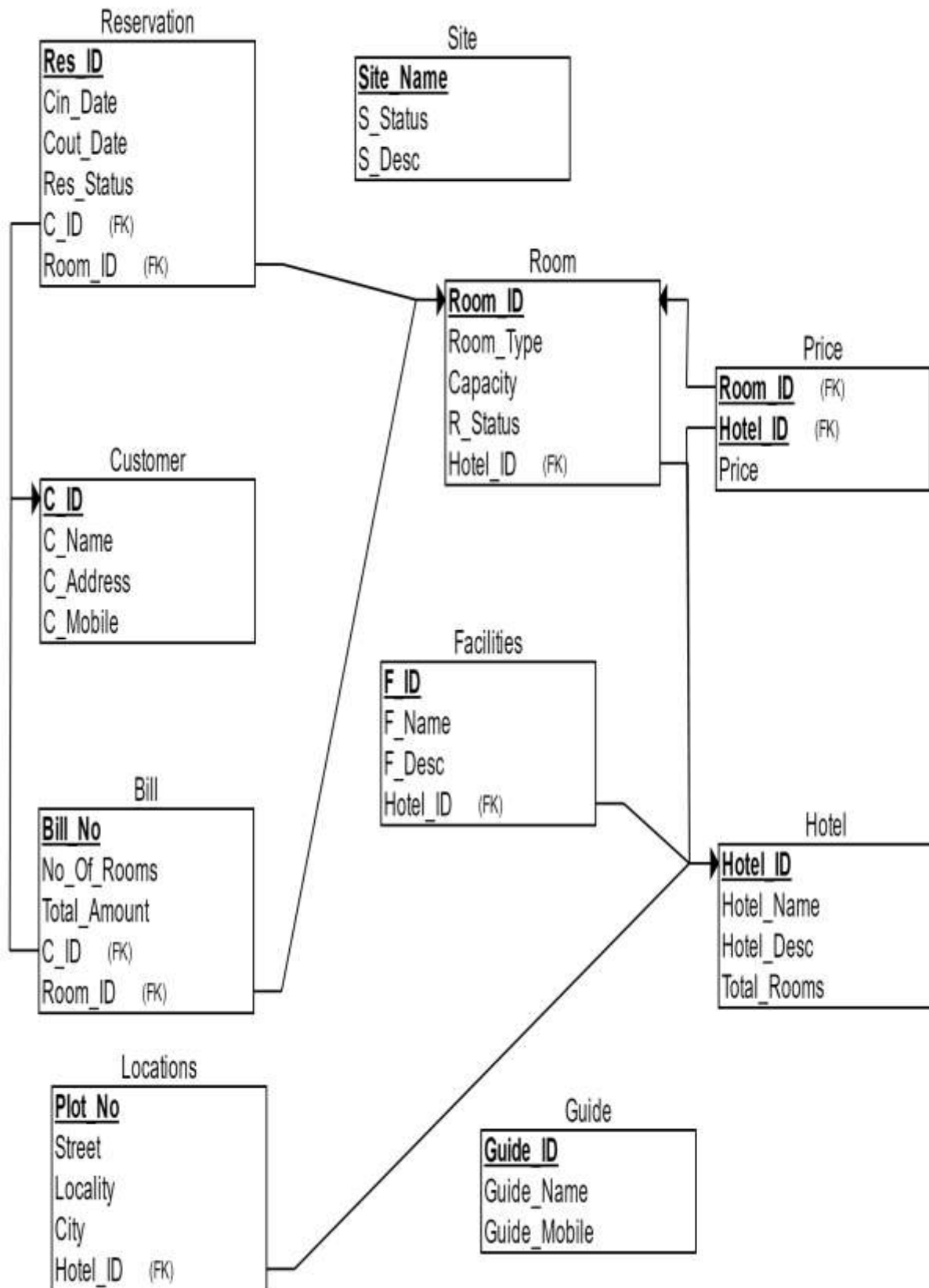
9) Table Price

```
CREATE TABLE Price
(
    Price INT NOT NULL,
    Room_ID INT NOT NULL,
    Hotel_ID INT NOT NULL,
    PRIMARY KEY (Room_ID, Hotel_ID),
    FOREIGN KEY (Room_ID) REFERENCES
Room(Room_ID),
    FOREIGN KEY (Hotel_ID) REFERENCES Hotel(Hotel_ID)
);
```

10) Table Bill

```
CREATE TABLE Bill
(
    Bill_No INT NOT NULL,
    No_Of_Rooms INT NOT NULL,
    Total_Amount INT NOT NULL,
    C_ID INT NOT NULL,
    Room_ID INT NOT NULL,
    PRIMARY KEY (Bill_No),
    FOREIGN KEY (C_ID) REFERENCES Customer(C_ID),
    FOREIGN KEY (Room_ID) REFERENCES
Room(Room_ID)
);
```


Table Schemas



Functional Dependencies

➤ Table Hotel

$\{\text{Hotel_ID}\} \rightarrow \{\text{Hotel_Name}\}$

$\{\text{Hotel_ID}\} \rightarrow \{\text{Hotel_Desc}\}$

$\{\text{Hotel_ID}\} \rightarrow \{\text{Total_Rooms}\}$

$\{\text{Hotel_ID}, \text{Hotel_Name}\} \rightarrow \{\text{Hotel_Desc}\}$

$\{\text{Hotel_ID}, \text{Hotel_Name}\} \rightarrow \{\text{Total_Rooms}\}$

➤ Table Facilities

$\{\text{F_ID}\} \rightarrow \{\text{F_Name}\}$

$\{\text{F_ID}\} \rightarrow \{\text{F_Desc}\}$

$\{\text{F_Name}\} \rightarrow \{\text{F_Desc}\}$

$\{\text{F_Name}, \text{F_Desc}\} \rightarrow \{\text{F_ID}\}$

➤ Table Guide

$\{\text{Guide_ID}\} \rightarrow \{\text{Guide_Name}\}$

$\{\text{Guide_ID}\} \rightarrow \{\text{Guide_Mobile}\}$

$\{\text{Guide_Mobile}\} \rightarrow \{\text{Guide_Name}\}$

$\{\text{Guide_Mobile}, \text{Guide_Name}\} \rightarrow \{\text{Guide_ID}\}$

➤ Table Site

$\{\text{Site_Name}\} \rightarrow \{\text{S_Status}\}$

$\{\text{Site_Name}\} \rightarrow \{\text{S_Desc}\}$

➤ Table Customer

$\{\text{C_ID}\} \rightarrow \{\text{C_Name}\}$

$\{\text{C_ID}\} \rightarrow \{\text{C_Address}\}$

$\{\text{C_ID}\} \rightarrow \{\text{C_Mobile}\}$

$\{\text{C_Name}, \text{C_Address}\} \rightarrow \{\text{C_Mobile}\}$

$\{\text{C_Name}, \text{C_Address}\} \rightarrow \{\text{C_ID}\}$

➤ Table Reservation

$\{\text{Res_ID}\} \rightarrow \{\text{Cin_Date}\}$

$\{\text{Res_ID}\} \rightarrow \{\text{Cout_Date}\}$

$\{\text{Res_ID}\} \rightarrow \{\text{Res_Status}\}$

$\{\text{Res_ID}\} \rightarrow \{\text{Room_ID}\}$

➤ Table Room

$\{\text{Room_ID}\} \rightarrow \{\text{Room_Type}\}$

$\{\text{Room_ID}\} \rightarrow \{\text{Capacity}\}$

$\{\text{Room_ID}\} \rightarrow \{\text{R_Status}\}$

➤ Table Price

$\{\text{Room_ID}, \text{Hotel_ID}\} \rightarrow \{\text{Price}\}$

➤ Table Bill

$\{\text{Bill_No}\} \rightarrow \{\text{C_ID}\}$

$\{\text{Bill_No}\} \rightarrow \{\text{No_Of_Rooms}\}$

$\{\text{Bill_No}\} \rightarrow \{\text{Total_Amount}\}$

$\{\text{C_ID}, \text{Total_Amount}\} \rightarrow \{\text{Bill_No}\}$

Implementation of the database on mysql platform

```
insert  hpcf1 x
Limit to 1000 rows

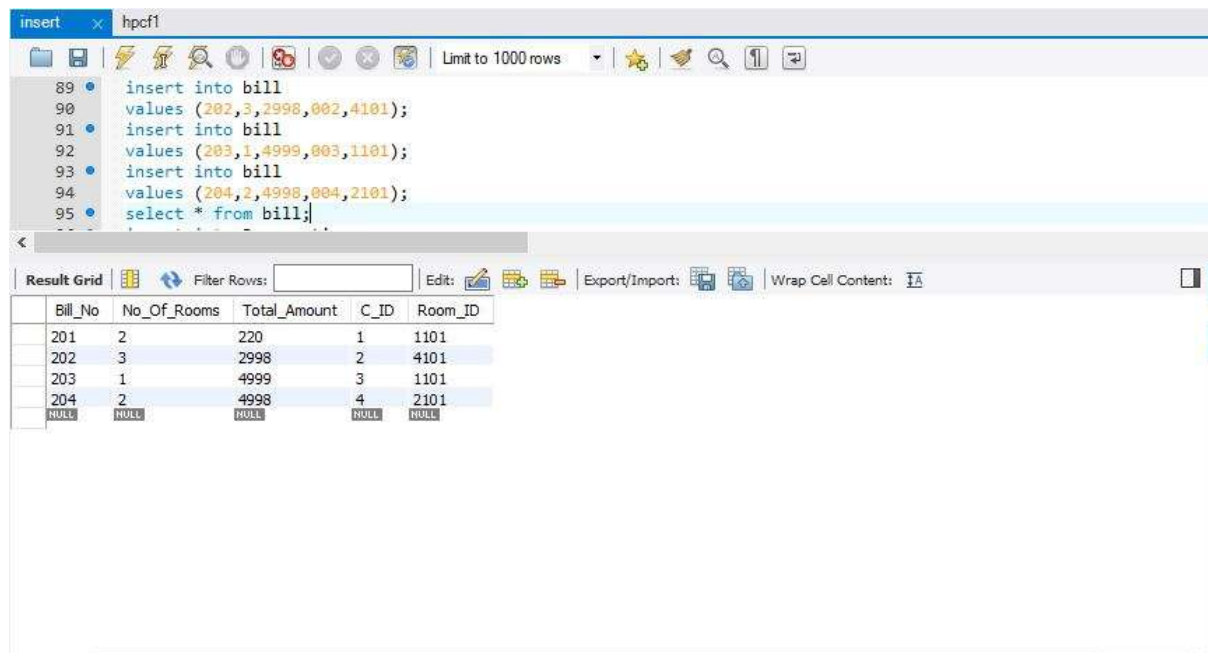
1 • create database hpcf1;
2 • use hpcf1;
3 • CREATE TABLE Customer
4   (
5     C_Name VARCHAR(20) NOT NULL,
6     C_ID VARCHAR(20) NOT NULL,
7     C_Address VARCHAR(50) NOT NULL,
8     C_Mobile VARCHAR(20) NOT NULL,
9     PRIMARY KEY (C_ID)
10  );
11
12 • CREATE TABLE Site
13   (
14     Site_Name VARCHAR(20) NOT NULL,
15     S_Status VARCHAR(20) NOT NULL,
16     S_Desc VARCHAR(20) NOT NULL,
17     PRIMARY KEY (Site_Name)
18  );
19
20 • CREATE TABLE Hotel
21   (
22     Hotel_ID VARCHAR(20) NOT NULL,
23     Hotel_Name VARCHAR(20) NOT NULL,
24     Hotel_Desc VARCHAR(20) NOT NULL,
25     Total_Rooms VARCHAR(20) NOT NULL,
26     PRIMARY KEY (Hotel_ID)
27  );
28
29 • CREATE TABLE Locations
30   (
31     Street VARCHAR(20) NOT NULL,
32     Locality VARCHAR(20) NOT NULL,
33     City VARCHAR(20) NOT NULL,
34     Plot_No VARCHAR(20) NOT NULL,
35     Hotel_ID VARCHAR(20) NOT NULL,
36     PRIMARY KEY (Plot_No),
37     FOREIGN KEY (Hotel_ID) REFERENCES Hotel(Hotel_ID)
38  );
39
40 • CREATE TABLE Facilities
41   (
42     F_ID VARCHAR(20) NOT NULL,
43     F_Name VARCHAR(20) NOT NULL,
44     F_Desc VARCHAR(20) NOT NULL,
45     Hotel_ID VARCHAR(20) NOT NULL,
46     PRIMARY KEY (F_ID),
47     FOREIGN KEY (Hotel_ID) REFERENCES Hotel(Hotel_ID)
48  );
49
```

```

49
50 • CREATE TABLE Guide
51 (
52     Guide_ID INT NOT NULL,
53     Guide_Name VARCHAR(20) NOT NULL,
54     Guide_Mobile VARCHAR(20) NOT NULL,
55     PRIMARY KEY (Guide_ID)
56 );
57
58 • CREATE TABLE Room
59 (
60     Room_ID VARCHAR(20) NOT NULL,
61     Room_Type VARCHAR(20) NOT NULL,
62     Capacity VARCHAR(20) NOT NULL,
63     R_Status VARCHAR(20) NOT NULL,
64     Hotel_ID VARCHAR(20) NOT NULL,
65     PRIMARY KEY (Room_ID),
66     FOREIGN KEY (Hotel_ID) REFERENCES Hotel(Hotel_ID)
67 );
68
69 • CREATE TABLE Price
70 (
71     Price VARCHAR(20) NOT NULL,
72     Room_ID VARCHAR(20) NOT NULL,
73     Hotel_ID VARCHAR(20) NOT NULL,
74     PRIMARY KEY (Room_ID, Hotel_ID),
75     FOREIGN KEY (Room_ID) REFERENCES Room(Room_ID),
76     FOREIGN KEY (Hotel_ID) REFERENCES Hotel(Hotel_ID)
77 );
78
79 • CREATE TABLE Bill
80 (
81     Bill_No VARCHAR(20) NOT NULL,
82     No_Of_Rooms VARCHAR(20) NOT NULL,
83     Total_Amount VARCHAR(20) NOT NULL,
84     C_ID VARCHAR(20) NOT NULL,
85     Room_ID VARCHAR(20) NOT NULL,
86     PRIMARY KEY (Bill_No),
87     FOREIGN KEY (C_ID) REFERENCES Customer(C_ID),
88     FOREIGN KEY (Room_ID) REFERENCES Room(Room_ID)
89 );
90
91 • CREATE TABLE Reservation
92 (
93     Res_ID VARCHAR(20) NOT NULL,
94     Cin_Date DATE NOT NULL,
95     Cout_Date DATE NOT NULL,
96     Res_Status VARCHAR(50) NOT NULL,
97
98 • CREATE TABLE Reservation
99 (
100     Res_ID VARCHAR(20) NOT NULL,
101     Cin_Date DATE NOT NULL,
102     Cout_Date DATE NOT NULL,
103     Res_Status VARCHAR(50) NOT NULL,
104     C_ID VARCHAR(20) NOT NULL,
105     Room_ID VARCHAR(20) NOT NULL,
106     PRIMARY KEY (Res_ID),
107     FOREIGN KEY (C_ID) REFERENCES Customer(C_ID),
108     FOREIGN KEY (Room_ID) REFERENCES Room(Room_ID)
109 );

```

Sample Data Bill



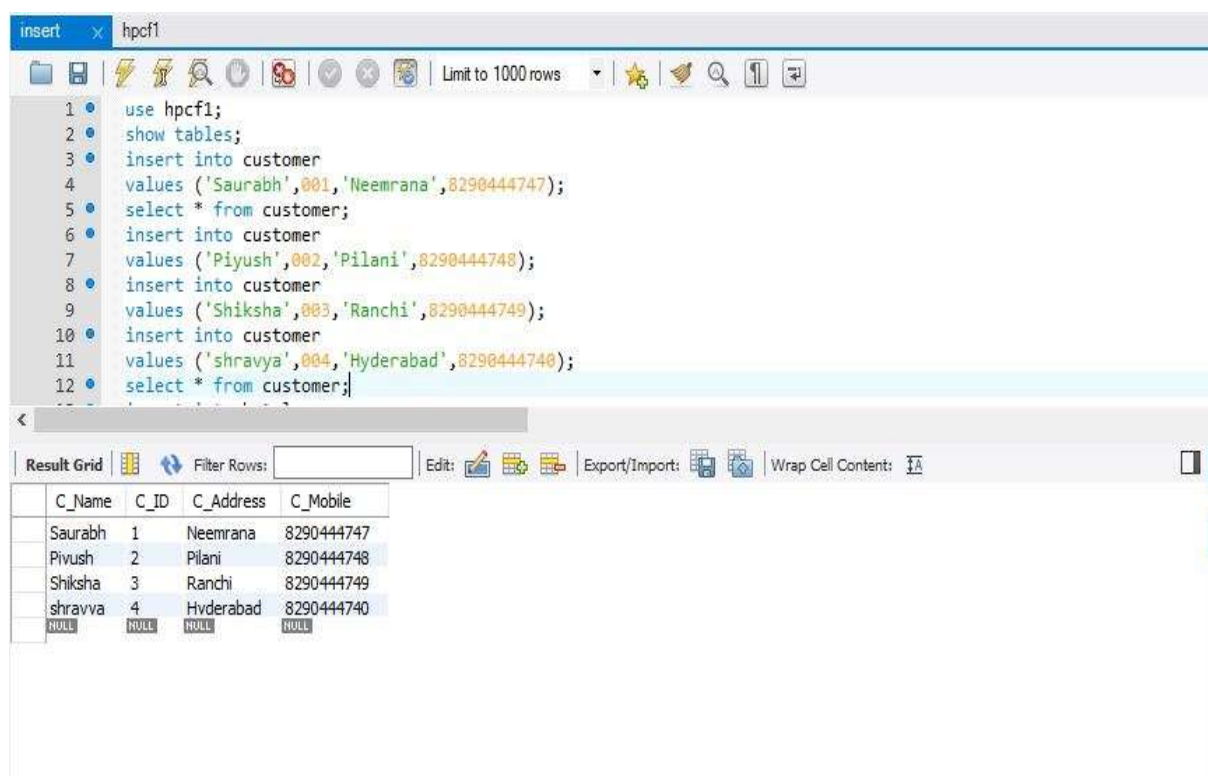
The screenshot shows a database client interface with a tab labeled 'insert' and 'hpcf1'. The SQL editor contains the following statements:

```
89 • insert into bill
90 • values (202,3,2998,002,4101);
91 • insert into bill
92 • values (203,1,4999,003,1101);
93 • insert into bill
94 • values (204,2,4998,004,2101);
95 • select * from bill;
```

The 'Result Grid' shows the output of the SQL statements:

Bill_No	No_Of_Rooms	Total_Amount	C_ID	Room_ID
201	2	220	1	1101
202	3	2998	2	4101
203	1	4999	3	1101
204	2	4998	4	2101
NULL	NULL	NULL	NULL	NULL

Sample Data customer



The screenshot shows a database client interface with a tab labeled 'insert' and 'hpcf1'. The SQL editor contains the following statements:

```
1 • use hpcf1;
2 • show tables;
3 • insert into customer
4 • values ('Saurabh',001,'Neemrana',8290444747);
5 • select * from customer;
6 • insert into customer
7 • values ('Piyush',002,'Pilani',8290444748);
8 • insert into customer
9 • values ('Shiksha',003,'Ranchi',8290444749);
10 • insert into customer
11 • values ('shravya',004,'Hyderabad',8290444740);
12 • select * from customer;
```

The 'Result Grid' shows the output of the SQL statements:

C_Name	C_ID	C_Address	C_Mobile
Saurabh	1	Neemrana	8290444747
Piyush	2	Pilani	8290444748
Shiksha	3	Ranchi	8290444749
shravya	4	Hyderabad	8290444740
NULL	NULL	NULL	NULL

Sample Data Facilities

The screenshot shows a database interface with a SQL editor and a result grid. The SQL editor contains the following queries:

```
41 • select * from site;
42 • insert into facilities
43 values (601,'breakfast','free breakfast',401);
44 • insert into facilities
45 values (602,'wifi','free wifi',402);
46 • insert into facilities
47 values (603,'drinks','free welcome drinks',403);
48 • insert into facilities
49 values (604,'room service','free room service',404);
50 • insert into facilities
51 values (605,'brunch','expensive brunch',401);
52 • select * from facilities;
```

The result grid displays the following data:

F_ID	F_Name	F_Desc	Hotel_ID
601	breakfast	free breakfast	401
602	wifi	free wifi	402
603	drinks	free welcome drinks	403
604	room service	free room service	404
605	brunch	expensive brunch	401
NULL	NULL	NULL	NULL

Sample Data Guide

The screenshot shows a database interface with a SQL editor and a result grid. The SQL editor contains the following queries:

```
53 • insert into guide
54 values (11,'Vijay',9852535629);
55 • insert into guide
56 values (12,'Rajneesh',9852535628);
57 • insert into guide
58 values (13,'Rohit',9852535627);
59 • select * from guide;
60 • insert into room
```

The result grid displays the following data:

F_ID	F_Name	F_Desc	Hotel_ID
601	breakfast	free breakfast	401
602	wifi	free wifi	402
603	drinks	free welcome drinks	403
604	room service	free room service	404
605	brunch	expensive brunch	401
NULL	NULL	NULL	NULL

Sample Data Price

insert x hpcf1

Limit to 1000 rows

```
71 • update room set Capacity = 25 where Room_ID = 2101;
72 • select * from room;
73 • update room set Capacity = 30 where Room_ID = 4101;
74 • select * from room;
75 • insert into price
76 values (1999,1101,401);
77 • insert into price
78 values (3999,1102,401);
79 • insert into price
80 values (999,2101,402);
81 • insert into price
82 values (1999,3101,403);
83 • insert into price
84 values (4999,4101,404);
85 • select * from price;
86 • select*from customer;
```

Result Grid

Price	Room_ID	Hotel_ID
1999	1101	401
3999	1102	401
999	2101	402
1999	3101	403
4999	4101	404
NULL	NULL	NULL

Sample Data Rooms

insert x hpcf1

Limit to 1000 rows

```
59 • select * from guide;
60 • insert into room
61 values (1101,'room',2,'free',401);
62 • insert into room
63 values (1102,'hall',2,'free',401);
64 • insert into room
65 values (2101,'room',2,'free',402);
66 • insert into room
67 values (3101,'room',30,'free',403);
68 • insert into room
69 values (4101,'hall',2,'free',404);
70 • select * from room;
```

Result Grid

Room_ID	Room_Type	Capacity	R_Status	Hotel_ID
1101	room	2	free	401
1102	hall	2	free	401
2101	room	25	free	402
3101	room	2	free	403
4101	hall	30	free	404
NULL	NULL	NULL	NULL	NULL

Sample Data Reservation

The screenshot shows a database management tool interface with a tab labeled 'insert' and 'hpcf1'. The SQL editor contains the following queries:

```
95 • select * from bill;
96 • insert into Reservation
97 • values (1110,20/02/2017,22/02/2017,'booked',002,1101);
98 • insert into Reservation
99 • values (1112,21/03/2017,23/03/2017,'Free',003,4101);
100 • insert into Reservation
101 • values (1113,02/05/2017,05/05/2017,'booked',004,1101);
102 • insert into Reservation
103 • values (1114,20/01/2017,22/01/2017,'free',001,2101);
104 • insert into Reservation
105 • values (1115,08/03/2017,22/10/2017,'booked',002,3101);
106 • select * from reservation;
```

The 'Result Grid' shows the following data:

Res_ID	Cin_Date	Cout_Date	Res_Status	C_ID	Room_ID
1110	2017-02-20	2017-02-22	booked	2	1101
1112	2017-03-21	2017-03-23	Free	3	4101
1113	2017-05-02	2017-05-05	booked	4	1101
1114	2017-01-20	2017-01-22	free	1	2101
1115	2017-03-08	2017-03-10	booked	2	3101
NULL	NULL	NULL	NULL	NULL	NULL

Sample Data Site

The screenshot shows a database management tool interface with a tab labeled 'insert' and 'hpcf1'. The SQL editor contains the following queries:

```
32 • select * from locations;
33 • insert into site
34 • values ('Oyo','online','Book hotels');
35 • insert into site
36 • values ('Goibibo','online','Low price Hotels');
37 • insert into site
38 • values ('Makemytrip','online','Book cheap hotels');
39 • insert into site
40 • values ('zoo','offline','Book at low price');
41 • select * from site;
42 • insert into facilities
```

The 'Result Grid' shows the following data:

Site_Name	S_Status	S_Desc
Goibibo	online	Low price Hotels
Makemytrip	online	Book cheap hotels
Oyo	online	Book hotels
zoo	offline	Book at low price
NULL	NULL	NULL

Sample Price Comparison

```
127
128
129
130 • SELECT price.Price, room.room_id, room.room_Type,room.hotel_ID
131 FROM room
132 INNER JOIN price ON room.room_ID=price.room_ID;
```

Result Grid

Price	room_id	room_Type	hotel_ID
1999	1101	room	401
3999	1102	hall	401
999	2101	room	402
1999	3101	room	403
4999	4101	hall	404

Sample Compare and Reserve

```
129
130 • SELECT price.Price, room.room_id, room.room_Type,room.hotel_ID
131 FROM room
132 INNER JOIN price ON room.room_ID=price.room_ID;
133 • select * from reservation where res_ID = 1113;
```

Result Grid

Res_ID	Cin_Date	Cout_Date	Res_Status	C_ID	Room_ID
1113	2017-05-02	2017-05-05	booked	4	1101
NULL	NULL	NULL	NULL	NULL	NULL

Sample Update Reservation

```
insert x hpcf1
107 • update reservation set Cin_Date = '2017-02-20' where Res_ID=1110;
108 • select * from reservation;
109 • update reservation set Cout_Date = '2017-02-22' where Res_ID=1110;
110 • update reservation set Cin_Date = '2017-03-21' where Res_ID=1112;
111 • update reservation set Cout_Date = '2017-03-23' where Res_ID=1112;
112 • update reservation set Cin_Date = '2017-05-02' where Res_ID=1113;
113 • update reservation set Cout_Date = '2017-05-05' where Res_ID=1113;
114 • update reservation set Cin_Date = '2017-01-20' where Res_ID=1114;
115 • update reservation set Cout_Date = '2017-01-22' where Res_ID=1114;
116 • update reservation set Cin_Date = '2017-03-08' where Res_ID=1115;
117 • update reservation set Cout_Date = '2017-03-10' where Res_ID=1115;
118 • select * from reservation;
```

Result Grid

Res_ID	Cin_Date	Cout_Date	Res_Status	C_ID	Room_ID
1110	2017-02-20	2017-02-22	booked	2	1101
1112	2017-03-21	2017-03-23	Free	3	4101
1113	2017-05-02	2017-05-05	booked	4	1101
1114	2017-01-20	2017-01-22	free	1	2101
1115	2017-03-08	2017-03-10	booked	2	3101
NULL	NULL	NULL	NULL	NULL	NULL