DBMS PROJECT

HOTEL PRICE COMPARISON

B.Tech 2nd Year

Submitted By:
Saurabh Yadav (U101115FCS143)
Sarthak Kholi (U101115FCS141)
Shiksha Swaraj (U101115FCS212)
Shravya Pagadala (U101115FCS152)

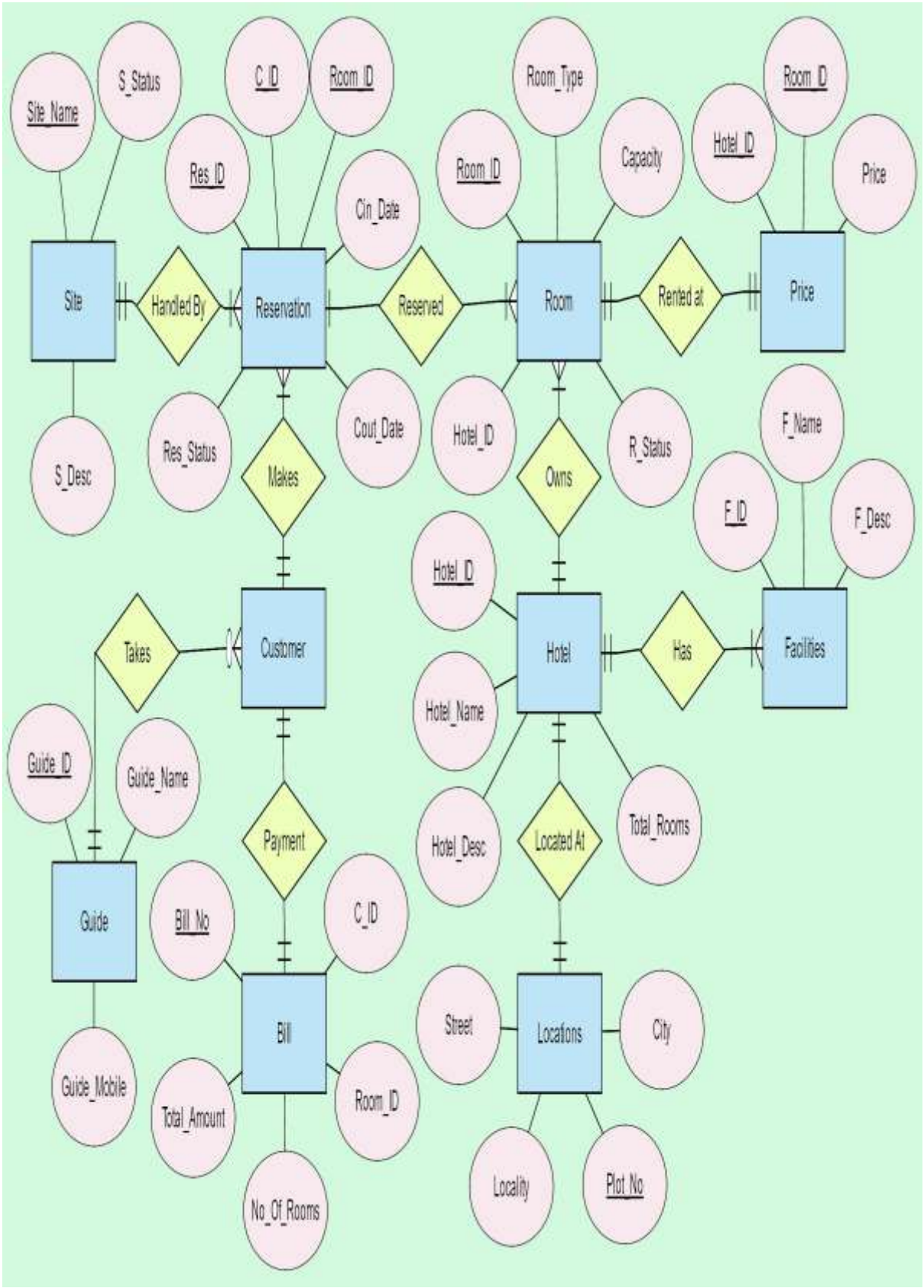
Detailed Discription

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 ER Diagram



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) );
```

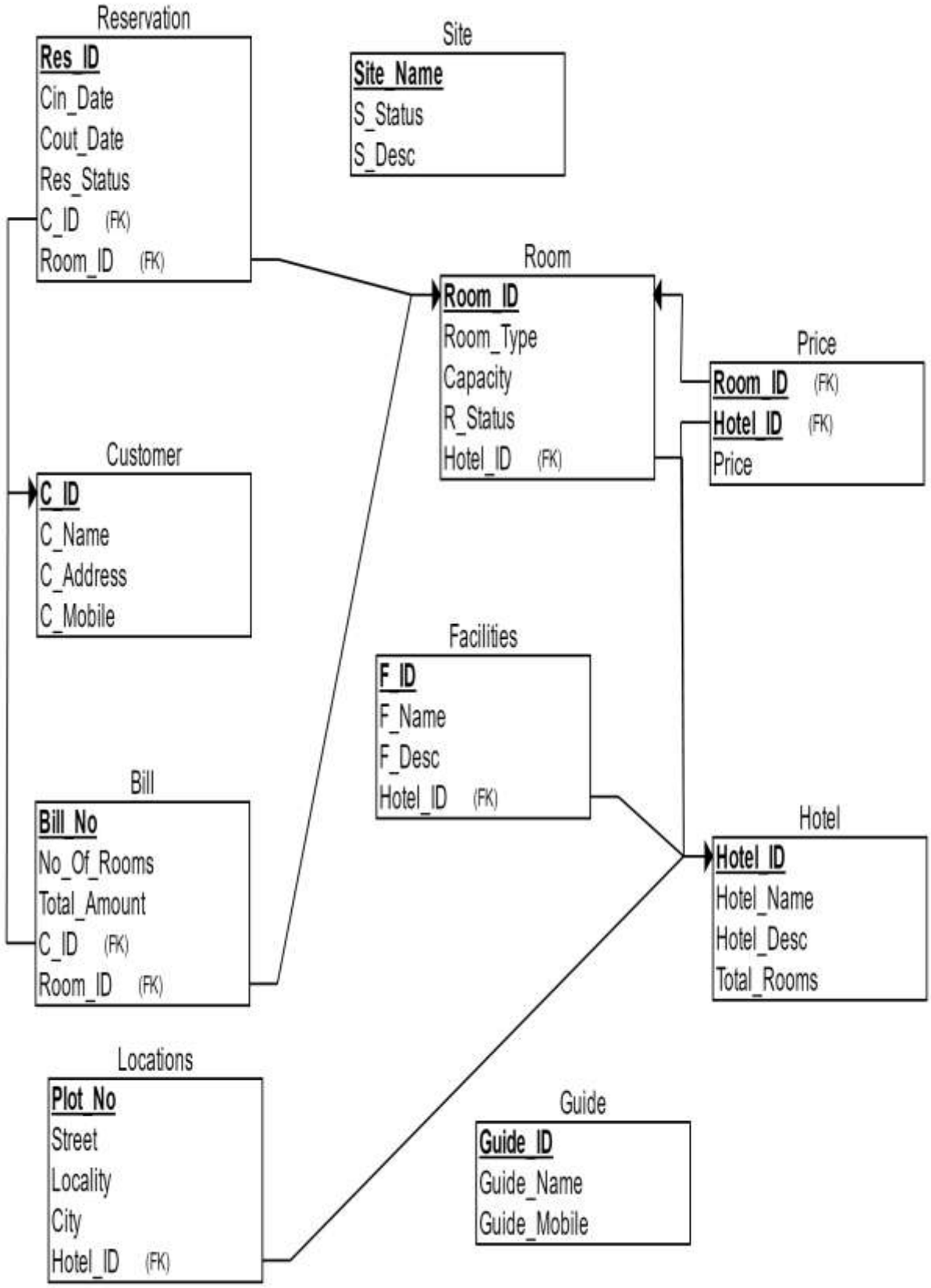
9) Table Price

```
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

{Hotel_ID}→ {Hotel_Name}
{Hotel_ID} →{Hotel_Desc}
{Hotel_ID}→ {Total_Rooms}
{Hotel_ID, Hotel_Name} →{Hotel_Desc}
{Hotel_ID, Hotel_Name}→ {Total_Rooms}

- Table Facilities

{F_ID}→ {F_Name}
{F_ID}→ {F_Desc}
{F_Name} →{F_Desc}
{F_Name, F_Desc}→ {F_ID}

- Table Guide

{Guide_ID}→ {Guide_Name}
{Guide_ID}→ {Guide_Mobile}
{Guide_Mobile}→ {Guide_Name}
{Guide_Mobile, Guide_Name}→ {Guide_ID}

- Table Site

{Site_Name}→ {S_Status}
{Site_Name} →{S_Desc}

- Table Customer

{C_ID}⟶ {C_Name}
{C_ID}⟶ {C_Address}
{C_ID} →{C_Mobile}
{C_Name,C_Address}⟶ {C_Mobile}
{C_Name,C_Address} ⟶{C_ID}

- Table Reservation

{Res_ID}→ {Cin_Date}
{Res_ID}→ {Cout_Date}
{Res_ID}→ {Res_Status}
{Res_ID}→ {Room_ID}

- Table Room

  {Room_ID} →{Room_Type}
  {Room_ID} →{Capacity}
  {Room_ID} →{R_Status}

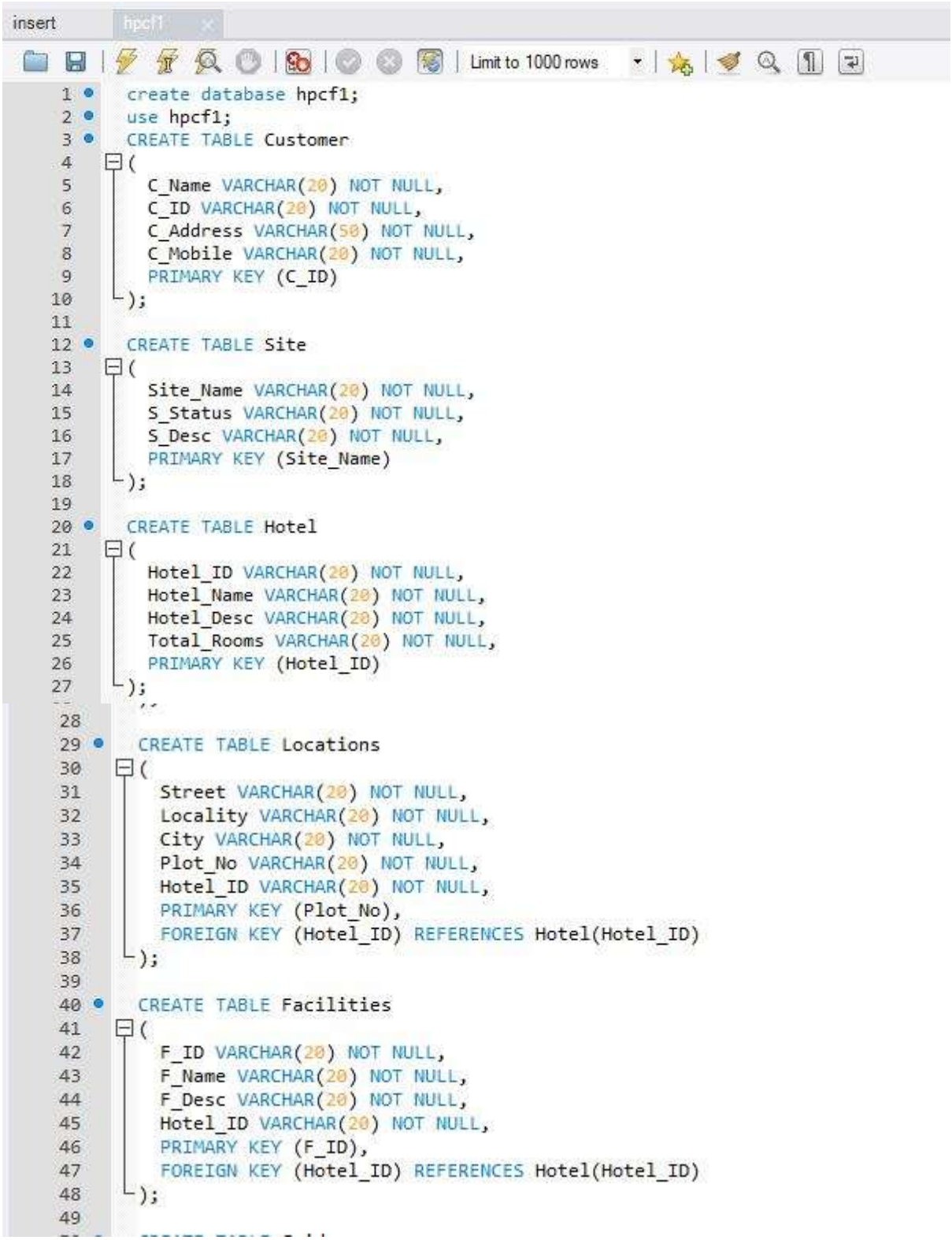
- Table Price

  {Room_ID, Hotel_ID} →{Price}

- Table Bill

  {Bill_No}→ {C_ID}
  {Bill_No} →{No_Of_Rooms}
  {Bill_No} →{Total_Amount}
  {C_ID,Total_Amount} →{Bill_No}

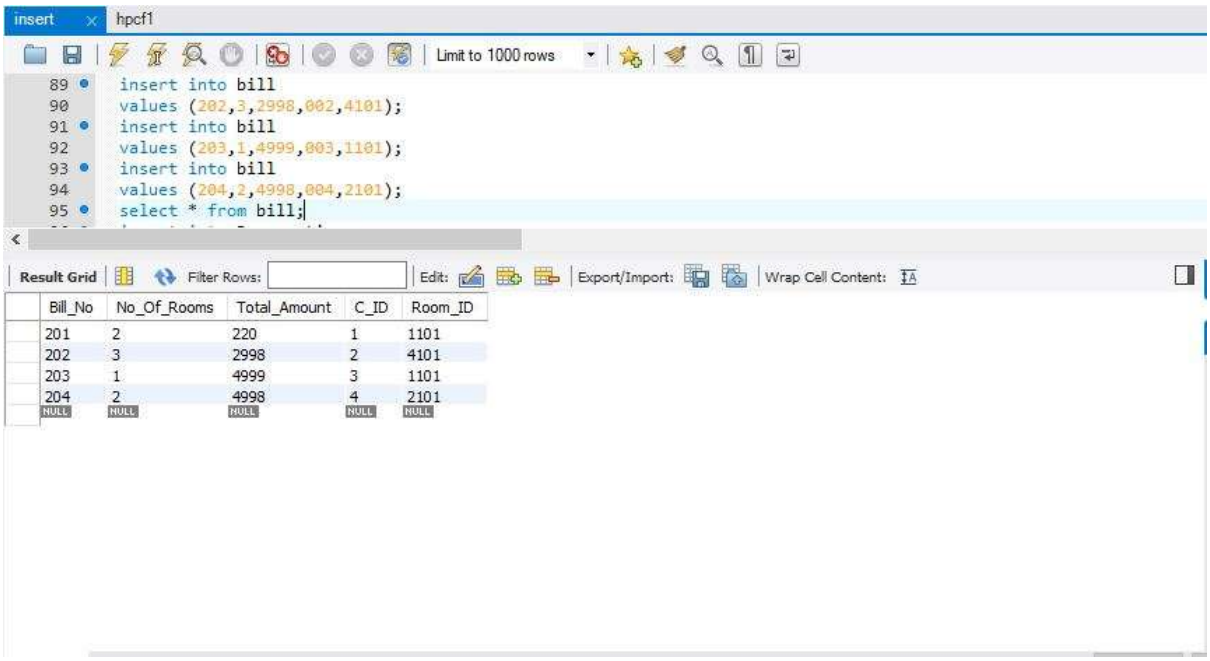
Implementation of the database on mysql platform



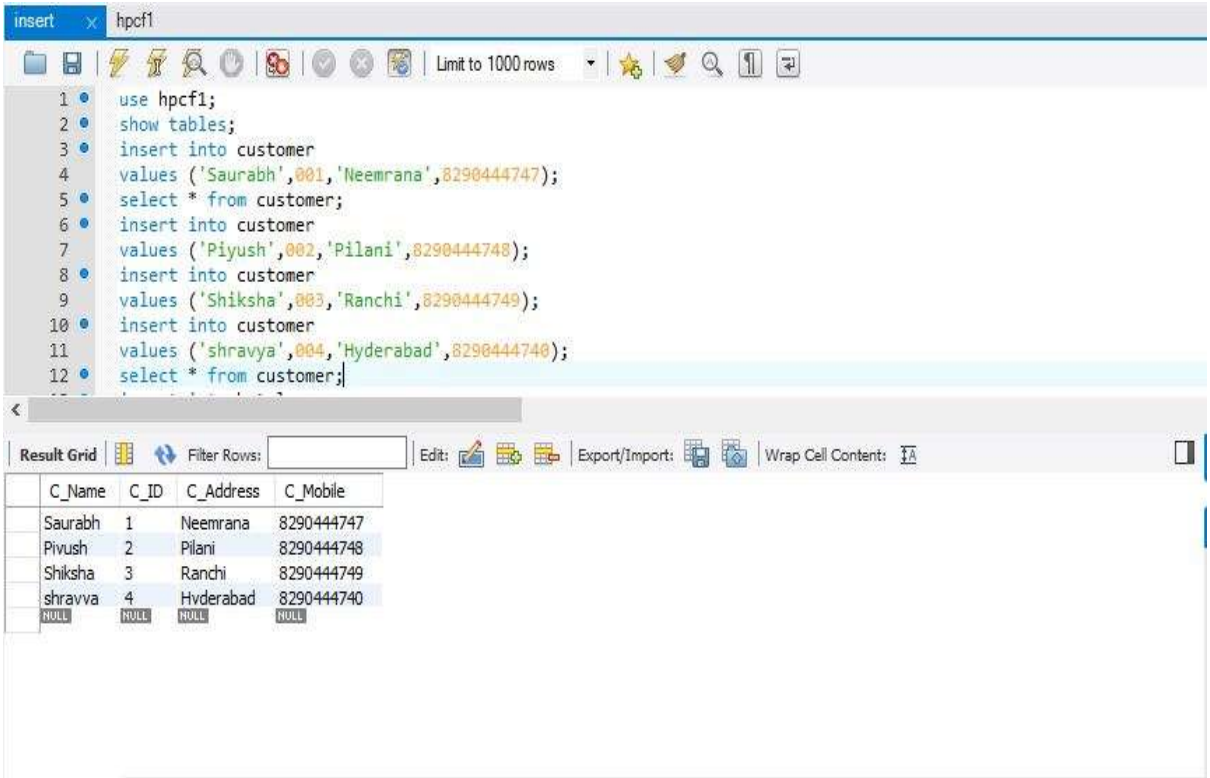
```
49
50  CREATE TABLE Guide
51  (
52    Guide_ID INT NOT NULL,
53    Guide_Name VARCHAR(20) NOT NULL,
54    Guide_Mobile VARCHAR(20) NOT NULL,
55    PRIMARY KEY (Guide_ID)
56  );
57
58  CREATE TABLE Room
59  (
60    Room_ID VARCHAR(20) NOT NULL,
61    Room_Type VARCHAR(20) NOT NULL,
62    Capacity 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,
```

```
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    C_ID VARCHAR(20) NOT NULL,
98    Room_ID VARCHAR(20) NOT NULL,
99    PRIMARY KEY (Res_ID),
100   FOREIGN KEY (C_ID) REFERENCES Customer(C_ID),
101   FOREIGN KEY (Room_ID) REFERENCES Room(Room_ID)
102 );
103
104
```

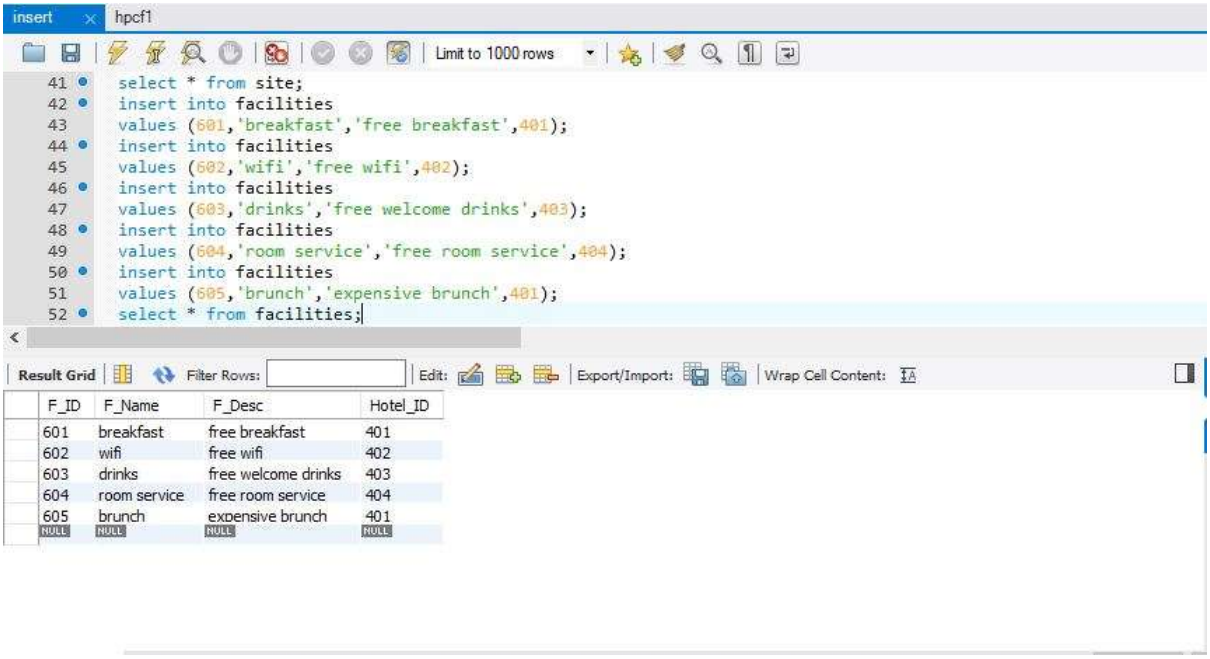
Sample Data Bill



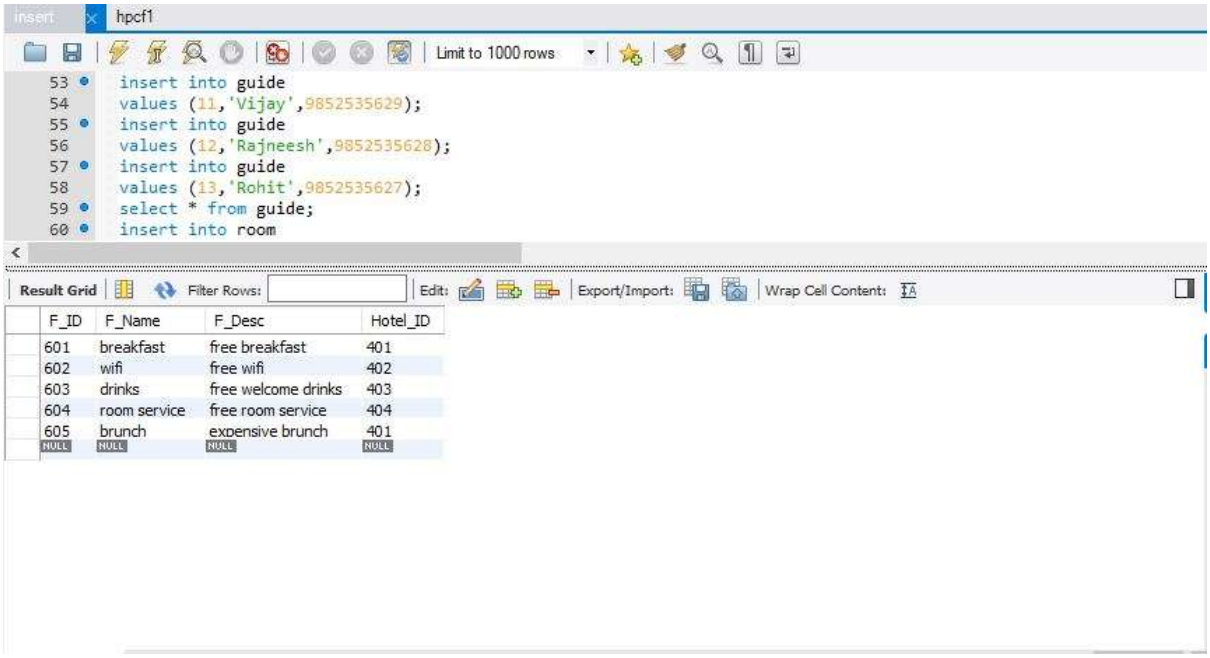
Sample Data customer



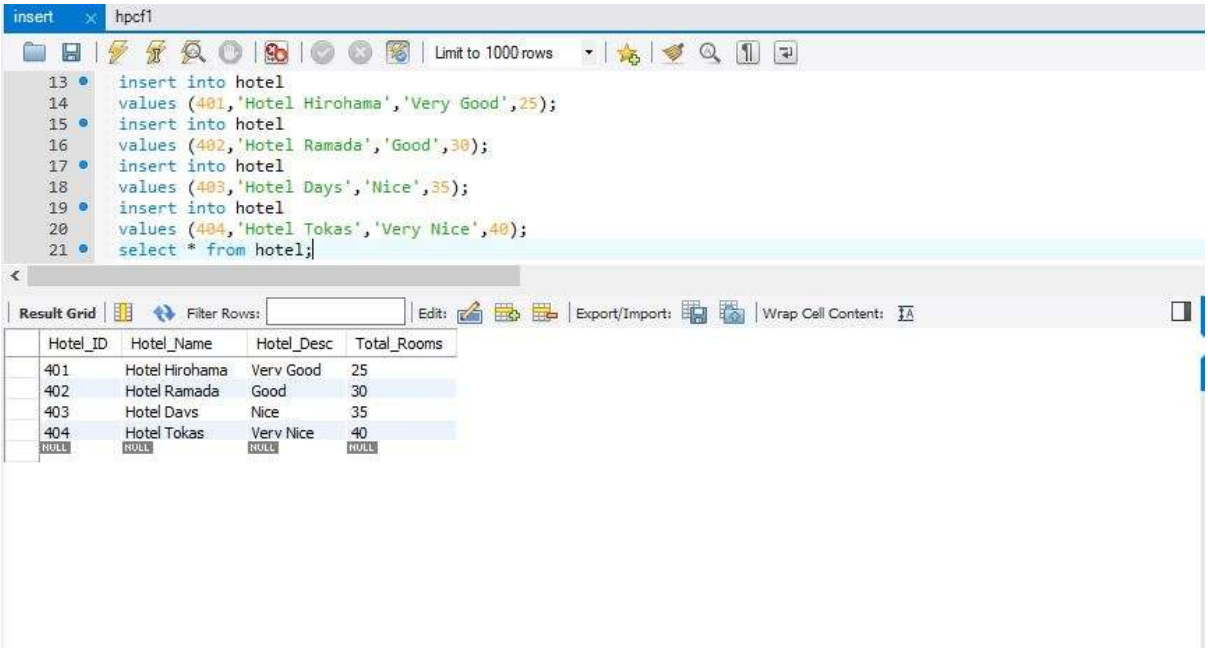
Sample Data Facilities



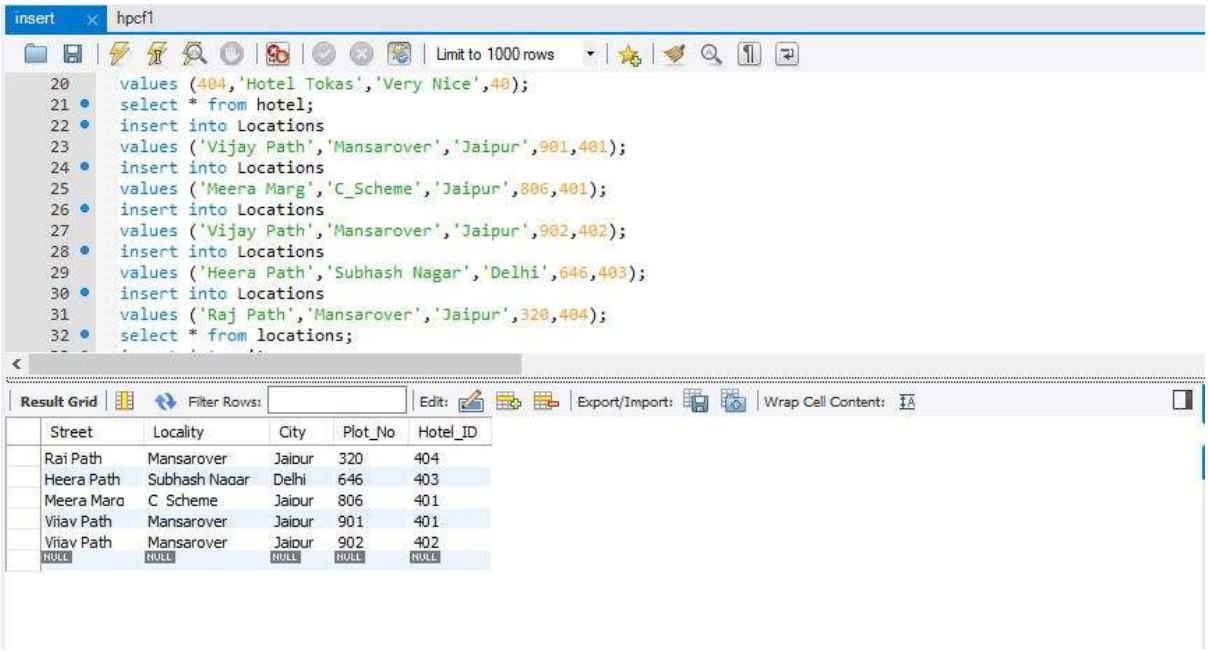
Sample Data Guide



Sample Data Hotel



Sample Data Location



Sample Data Price

insert | 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 | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

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 | hpcf1

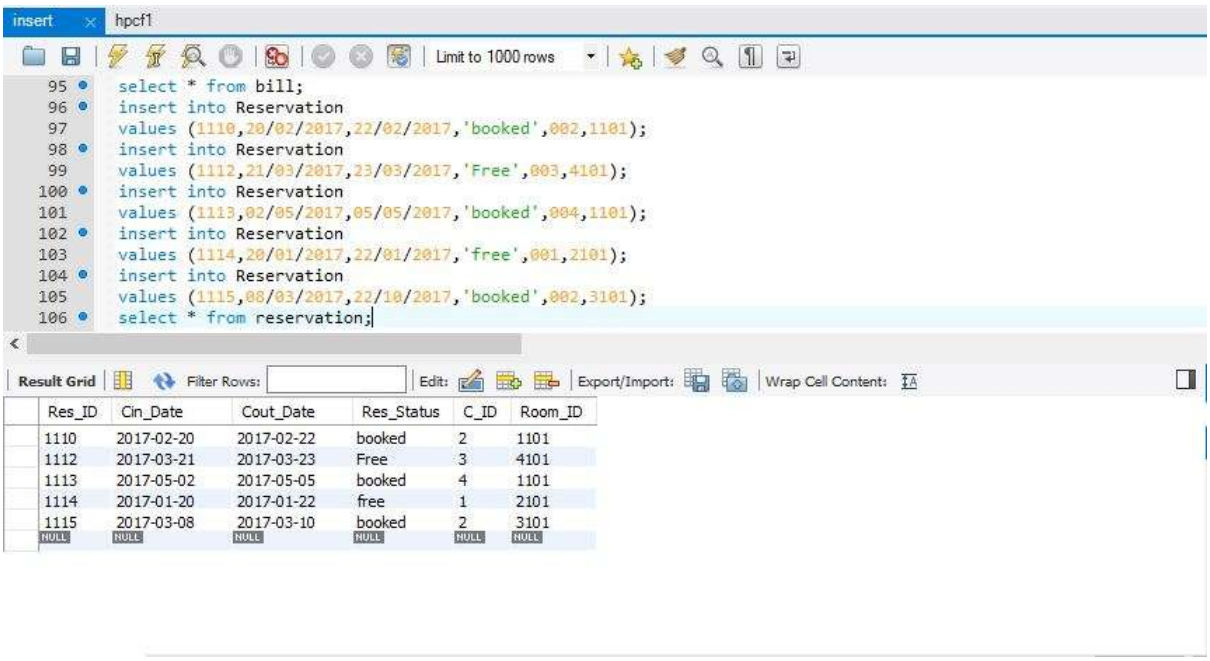
Limit to 1000 rows

```
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 | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

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

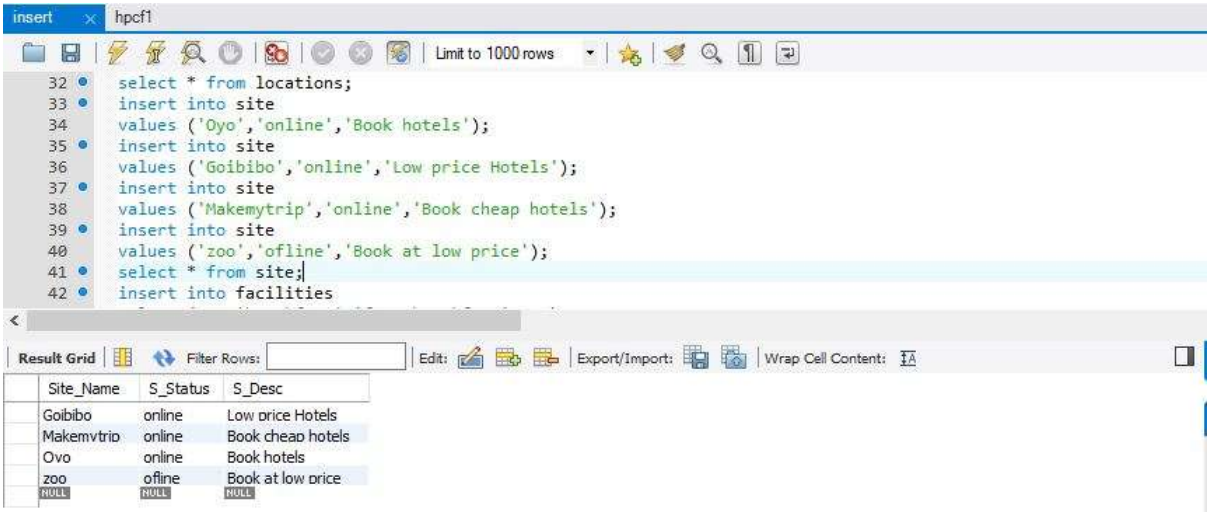
Sample Data Reservation



```
select * from bill;
insert into Reservation
values (1110,20/02/2017,22/02/2017,'booked',002,1101);
insert into Reservation
values (1112,21/03/2017,23/03/2017,'Free',003,4101);
insert into Reservation
values (1113,02/05/2017,05/05/2017,'booked',004,1101);
insert into Reservation
values (1114,20/01/2017,22/01/2017,'free',001,2101);
insert into Reservation
values (1115,08/03/2017,22/10/2017,'booked',002,3101);
select * from reservation;
```

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



```
select * from locations;
insert into site
values ('Oyo','online','Book hotels');
insert into site
values ('Goibibo','online','Low price Hotels');
insert into site
values ('Makemytrip','online','Book cheap hotels');
insert into site
values ('zoo','ofline','Book at low price');
select * from site;
insert into facilities
```

Site_Name	S_Status	S_Desc
Goibibo	online	Low price Hotels
Makemytrip	online	Book cheap hotels
Ovo	online	Book hotels
zoo	ofline	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 | Filter Rows: | Export: | Wrap Cell Content:

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;
```

esult Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

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 | hpcf1

Limit to 1000 rows

```
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 | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

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