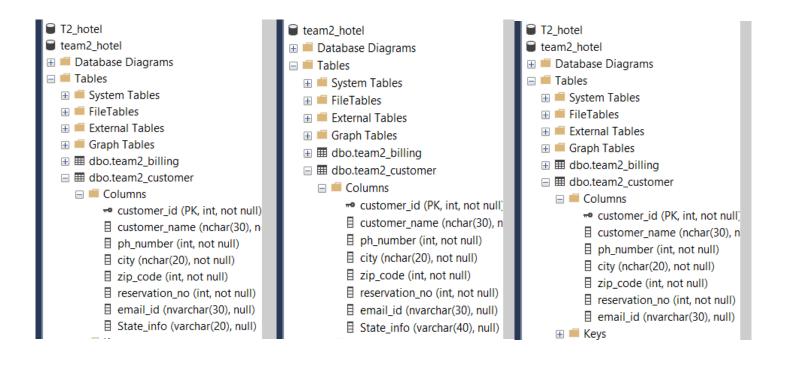# DBMS_LAB_ASSIGNMENT_3

Name: Param D. Mane

Reg No: 19BCS121

Team No: 2

Database: Hotel

Q1) Add, modify and delete column using alter command.

Query:

```sql
USE team2_hotel;

ALTER TABLE team2_customer
ADD State_info varchar(20);

ALTER TABLE team2_customer
ALTER COLUMN State_info varchar(40);

ALTER TABLE team2_customer
DROP COLUMN State_info;
```

Output:

Panel 1:
- T2_hotel
- team2_hotel
  - ⊞ Database Diagrams
  - ⊟ Tables
    - ⊞ System Tables
    - ⊞ FileTables
    - ⊞ External Tables
    - ⊞ Graph Tables
    - ⊞ dbo.team2_billing
    - ⊟ dbo.team2_customer
      - ⊟ Columns
        - customer_id (PK, int, not null)
        - customer_name (nchar(30), n
        - ph_number (int, not null)
        - city (nchar(20), not null)
        - zip_code (int, not null)
        - reservation_no (int, not null)
        - email_id (nvarchar(30), null)
        - State_info (varchar(20), null)

Panel 2:
- team2_hotel
  - ⊞ Database Diagrams
  - ⊟ Tables
    - ⊞ System Tables
    - ⊞ FileTables
    - ⊞ External Tables
    - ⊞ Graph Tables
    - ⊞ dbo.team2_billing
    - ⊟ dbo.team2_customer
      - ⊟ Columns
        - customer_id (PK, int, not null)
        - customer_name (nchar(30), n
        - ph_number (int, not null)
        - city (nchar(20), not null)
        - zip_code (int, not null)
        - reservation_no (int, not null)
        - email_id (nvarchar(30), null)
        - State_info (varchar(40), null)

Panel 3:
- T2_hotel
- team2_hotel
  - ⊞ Database Diagrams
  - ⊟ Tables
    - ⊞ System Tables
    - ⊞ FileTables
    - ⊞ External Tables
    - ⊞ Graph Tables
    - ⊞ dbo.team2_billing
    - ⊟ dbo.team2_customer
      - ⊟ Columns
        - customer_id (PK, int, not null)
        - customer_name (nchar(30), n
        - ph_number (int, not null)
        - city (nchar(20), not null)
        - zip_code (int, not null)
        - reservation_no (int, not null)
        - email_id (nvarchar(30), null)
      - ⊞ Keys

Q2) Insert 20 customer data into all the tables.

Query:

Table Name: team2_customer--

```sql
USE team2_hotel;

set identity_insert team2_customer on;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
VALUES
(1001,'Ram',9866622245,'MUMBAI',123,10,'Ram@gmail.com'),(1002,'Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com')
,
(1003,'Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),(1004,'Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com'),(1005,'Sam',8878922240,'MUMBAI',126,14,'Sam@gmail.com'),
(1006,'Tom',7666622245,'PUNE',234,13,'Tom@yahoo.com'),(1007,'Ram',9070662224,'PUNE',235,15,'Ram@yahoo.com'),(1008,'Arjun',7315622245,'Banglore',345,15,NULL),
(1009,'Param',8975622245,'Banglore',346,16,'Param@gmail.com'),(1010,'Rohit',7778822245,'PUNE',237,16,'Rohit_S@gmail.com'),(1011,'Ash',9866600045,'MUMBAI',129,17,NULL),
(1012,'Adlin',9144622245,'HUBLI',452,18,'Adl_12@gmail.com'),(1013,'Steve',9112020245,'HUBLI',452,19,NULL),(1014,'Randheer',7066650245,'DHARWAD',623,20,'randheer@yahoo.com'),
(1015,'Neha',7035622245,'MUMBAI',130,12,'neha@gmail.com'),(1016,'Virat',9866612345,'BANGLORE',349,21,NULL),(1017,'Roy',8336022245,'DHARWAD',603,20,NULL),
(1018,'Krishna',NULL,'MUMBAI',127,22,'Krish@gmail.com'),(1019,'Aakash',9866622000,'PUNE',245,23,'AK@gmail.com'),(1020,'James',9210620645,'DHARWAD',645,24,'James@outlook.com');
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;

set identity_insert team2_customer off;
INSERT INTO dbo.team2_customer
VALUES ('Ram',9866622245,'MUMBAI',123,10,'Ram@gmail.com'),('Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com'),
```

```sql
('Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),('Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com'),('Sam',
8878922240,'MUMBAI',126,14,'Sam@gmail.com'),
('Tom',7666622245,'PUNE',234,13,'Tom@yahoo.com'),('Ram',9070662224,'PUNE',235,15,'Ram@yahoo.com'),('Arjun',73156222
45,'Banglore',345,15,NULL),
('Param',8975622245,'Banglore',346,16,'Param@gmail.com'),('Rohit',7778822245,'PUNE',237,16,'Rohit_S@gmail.com'),('A
sh',9866600045,'MUMBAI',129,17,NULL),
('Adlin',9144622245,'HUBLI',452,18,'Adl_12@gmail.com'),('Steve',9112020245,'HUBLI',452,19,NULL),('Randheer',7066650
245,'DHARWAD',623,20,'randheer@yahoo.com'),
('Neha',7035622245,'MUMBAI',130,12,'neha@gmail.com'),('Virat',9866612345,'BANGLORE',349,21,NULL),('Roy',8336022245,
'DHARWAD',603,20,NULL),
('Krishna',NULL,'MUMBAI',127,22,'Krish@gmail.com'),('Aakash',9866622000,'PUNE',245,23,'AK@gmail.com'),('James',9210
620645,'DHARWAD',645,24,'James@outlook.com');
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;

set identity_insert team2_customer on;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
(Select customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id from T2_DB_HOTEL.dbo.T2_customer
where city='MUMBAI');
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;
```

Table Name: team2_billing--

```sql
set identity_insert team2_billing on;
INSERT INTO team2_billing(customer_id,billing_number,room_charge,payment_date,credit_card)
VALUES
(1001,40010,10000,'20210219','RS15438'),(1002,40011,15000,'20210219','RS15401'),(1003,40012,12000,'20210218','RA145
87'),(1002,40013,10500,'20210217','PQ15430'),
(1004,40014,15000,'20210215','MS10430'),(1005,40015,15000,'20210217','RT98740'),(1004,40016,10000,'20210216','LK180
43'),
(1006,40017,12000,'20210210','YU01243'),(1007,40018,5000,'20210214','QW16043'),(1008,40019,15000,'20210209','ZX1715
3'),
```

```sql
(1009,40020,20000,'20210219','TH16443'),(1010,40021,10000,'20210211','DC10203'),(1011,40022,12000,'20210208','CV157
00'),
(1012,40023,30000,'20210216','NH10003'),(1010,40024,4000,'20210129','MN19873'),(1013,40025,15000,'20210215','BN4560
0'),
(1014,40026,10000,'20210113','JK12430'),(1015,40027,12000,'20210204','SE04143'),(1016,40028,30000,'20210211','ML190
21'),
(1017,40029,20000,'20210214','MP16343');

SELECT TOP 20 *FROM team2_billing;
DELETE FROM team2_billing;
```

Table Name: team2_rooms --

```sql
set identity_insert team2_rooms on;
INSERT INTO team2_rooms (room_number,room_type,room_location,number_of_beds,customer_id)
VALUES
(200,'AC','floor3',2,1001),(201,'AC','floor3',2,1002),(203,'NonAC','floor2',2,1003),(204,'AC','floor3',3,1004),(205
,'AC','floor1',1,1005),
(206,'AC','floor3',3,1006),(207,'AC','floor2',3,1007),(208,'NonAC','floor1',2,1008),(209,'AC','floor3',4,1009),(210
,'NonAC','floor3',4,1010),
(211,'AC','floor1',2,1011),(212,'AC','floor2',1,1012),(213,'AC','floor1',4,1013),(214,'AC','floor4',2,1014),(215,'A
C','floor4',3,1015),(216,'NonAC','floor4',3,1016),
(217,'AC','floor5',4,1017),(218,'NonAC','floor3',1,1018),(219,'AC','floor5',4,1019),(220,'AC','floor3',2,1020);
SELECT TOP 20 *FROM team2_rooms;
DELETE FROM team2_rooms;
```
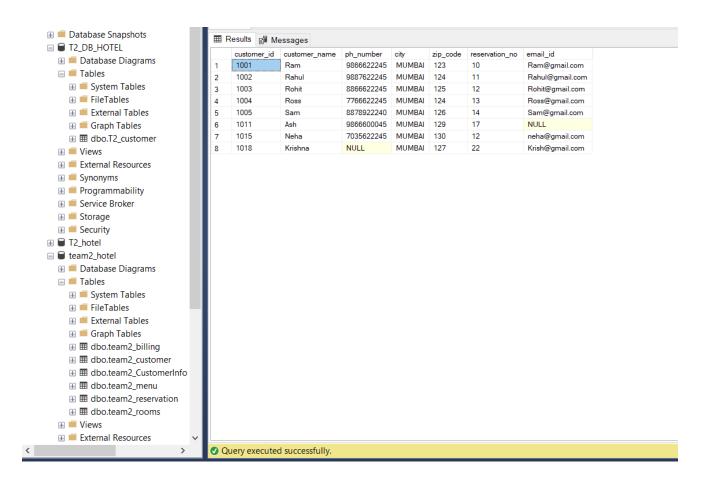
Output:

Entity: team2_customer --

Method No: 1

	customer_id	customer_name	ph_number	city	zip_code	reservation_no	email_id
1	1001	Ram	9866622245	MUMBAI	123	10	Ram@gmail.com
2	1002	Rahul	9887622245	MUMBAI	124	11	Rahul@gmail.com
3	1003	Rohit	8866622245	MUMBAI	125	12	Rohit@gmail.com
4	1004	Ross	7766622245	MUMBAI	124	13	Ross@gmail.com
5	1005	Sam	8878922240	MUMBAI	126	14	Sam@gmail.com
6	1006	Tom	7666622245	PUNE	234	13	Tom@yahoo.com
7	1007	Ram	9070662224	PUNE	235	15	Ram@yahoo.com
8	1008	Arjun	7315622245	Banglore	345	15	NULL
9	1009	Param	8975622245	Banglore	346	16	Param@gmail.com
10	1010	Rohit	7778822245	PUNE	237	16	Rohit_S@gmail.com
11	1011	Ash	9866600045	MUMBAI	129	17	NULL
12	1012	Adlin	9144622245	HUBLI	452	18	Adl_12@gmail.com
13	1013	Steve	9112020245	HUBLI	452	19	NULL
14	1014	Randheer	7066650245	DHAR...	623	20	randheer@yahoo.c...
15	1015	Neha	7035622245	MUMBAI	130	12	neha@gmail.com
16	1016	Virat	9866612345	BANGL...	349	21	NULL
17	1017	Roy	8336022245	DHAR...	603	20	NULL
18	1018	Krishna	NULL	MUMBAI	127	22	Krish@gmail.com
19	1019	Aakash	9866622000	PUNE	245	23	AK@gmail.com
20	1020	James	9210620645	DHAR...	645	24	James@outlook.co...

✅ Query executed successfully.

Method No: 2

	customer_id	customer_name	ph_number	city	zip_code	reservation_no	email_id
1	1081	Ram	9866622245	MUMBAI	123	10	Ram@gmail.com
2	1082	Rahul	9887622245	MUMBAI	124	11	Rahul@gmail.com
3	1083	Rohit	8866622245	MUMBAI	125	12	Rohit@gmail.com
4	1084	Ross	7766622245	MUMBAI	124	13	Ross@gmail.com
5	1085	Sam	8878922240	MUMBAI	126	14	Sam@gmail.com
6	1086	Tom	7666622245	PUNE	234	13	Tom@yahoo.com
7	1087	Ram	9070662224	PUNE	235	15	Ram@yahoo.com
8	1088	Arjun	7315622245	Banglore	345	15	NULL
9	1089	Param	8975622245	Banglore	346	16	Param@gmail.com
10	1090	Rohit	7778822245	PUNE	237	16	Rohit_S@gmail.com
11	1091	Ash	9866600045	MUMBAI	129	17	NULL
12	1092	Adlin	9144622245	HUBLI	452	18	Adl_12@gmail.com
13	1093	Steve	9112020245	HUBLI	452	19	NULL
14	1094	Randheer	7066650245	DHARWAD	623	20	randheer@yahoo.com
15	1095	Neha	7035622245	MUMBAI	130	12	neha@gmail.com
16	1096	Virat	9866612345	BANGLORE	349	21	NULL
17	1097	Roy	8336022245	DHARWAD	603	20	NULL
18	1098	Krishna	NULL	MUMBAI	127	22	Krish@gmail.com
19	1099	Aakash	9866622000	PUNE	245	23	AK@gmail.com
20	1100	James	9210620645	DHARWAD	645	24	James@outlook.com

Query executed successfully.

Method No: 3

	customer_id	customer_name	ph_number	city	zip_code	reservation_no	email_id
1	1001	Ram	9866622245	MUMBAI	123	10	Ram@gmail.com
2	1002	Rahul	9887622245	MUMBAI	124	11	Rahul@gmail.com
3	1003	Rohit	8866622245	MUMBAI	125	12	Rohit@gmail.com
4	1004	Ross	7766622245	MUMBAI	124	13	Ross@gmail.com
5	1005	Sam	8878922240	MUMBAI	126	14	Sam@gmail.com
6	1011	Ash	9866600045	MUMBAI	129	17	NULL
7	1015	Neha	7035622245	MUMBAI	130	12	neha@gmail.com
8	1018	Krishna	NULL	MUMBAI	127	22	Krish@gmail.com

Query executed successfully.

Entity: team2_billing --

	customer_id	billing_number	room_charge	payment_date	credit_card
1	1001	40010	10000	2021-02-19	RS15438
2	1002	40011	15000	2021-02-19	RS15401
3	1003	40012	12000	2021-02-18	RA14587
4	1002	40013	10500	2021-02-17	PQ15430
5	1004	40014	15000	2021-02-15	MS10430
6	1005	40015	15000	2021-02-17	RT98740
7	1004	40016	10000	2021-02-16	LK18043
8	1006	40017	12000	2021-02-10	YU01243
9	1007	40018	5000	2021-02-14	QW16043
10	1008	40019	15000	2021-02-09	ZX17153
11	1009	40020	20000	2021-02-19	TH16443
12	1010	40021	10000	2021-02-11	DC10203
13	1011	40022	12000	2021-02-08	CV15700
14	1012	40023	30000	2021-02-16	NH10003
15	1010	40024	4000	2021-01-29	MN19873
16	1013	40025	15000	2021-02-15	BN45600
17	1014	40026	10000	2021-01-13	JK12430
18	1015	40027	12000	2021-02-04	SE04143
19	1016	40028	30000	2021-02-11	ML19021
20	1017	40029	20000	2021-02-14	MP16343

✔ Query executed successfully.

Entity: team2_rooms –

	room_number	room_type	room_location	number_of_beds	customer_id
1	200	AC	floor3	2	1001
2	201	AC	floor3	2	1002
3	203	NonAC	floor2	2	1003
4	204	AC	floor3	3	1004
5	205	AC	floor1	1	1005
6	206	AC	floor3	3	1006
7	207	AC	floor2	3	1007
8	208	NonAC	floor1	2	1008
9	209	AC	floor3	4	1009
10	210	NonAC	floor3	4	1010
11	211	AC	floor1	2	1011
12	212	AC	floor2	1	1012
13	213	AC	floor1	4	1013
14	214	AC	floor4	2	1014
15	215	AC	floor4	3	1015
16	216	NonAC	floor4	3	1016
17	217	AC	floor5	4	1017
18	218	NonAC	floor3	1	1018
19	219	AC	floor5	4	1019
20	220	AC	floor3	2	1020

Query executed successfully.

Q3) Show violation of PK, Unique and Not null key constraints through insertion.

Query with Output:

- Violation of PK constraint:

```
USE team2_hotel;

set identity_insert team2_customer on;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
VALUES (1002,'Ram',9866622245,'MUMBAI',123,10,'Ram@gmail.com'),(1002,'Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com'),
(1003,'Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),(1004,'Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com'),(1005,'Sam',8878922:
(1006,'Tom',7666622245,'PUNE',234,13,'Tom@yahoo.com'),(1007,'Ram',9070662224,'PUNE',235,15,'Ram@yahoo.com'),(1008,'Arjun',7315622245,'Ban;
(1009,'Param',8975622245,'Banglore',346,16,'Param@gmail.com'),(1010,'Rohit',7778822245,'PUNE',237,16,'Rohit_S@gmail.com'),(1011,'Ash',986(
(1012,'Adlin',9144622245,'HUBLI',452,18,'Adl_12@gmail.com'),(1013,'Steve',9112020245,'HUBLI',452,19,NULL),(1014,'Randheer',7066650245,'DH/
(1015,'Neha',7035622245,'MUMBAI',130,12,'neha@gmail.com'),(1016,'Virat',9866612345,'BANGLORE',349,21,NULL),(1017,'Roy',8336022245,'DHARWA!
(1018,'Krishna',NULL,'MUMBAI',127,22,'Krish@gmail.com'),(1019,'Aakash',9866622000,'PUNE',245,23,'AK@gmail.com'),(1020,'James',9210620645,
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;
```

100 %

Results | Messages

```
Msg 2627, Level 14, State 1, Line 4
Violation of PRIMARY KEY constraint 'PK__team2_cu__CD65CB855852444E'. Cannot insert duplicate key in object 'dbo.team2_customer'. The duplicate key value is (1002).
The statement has been terminated.

(0 rows affected)

Completion time: 2021-02-19T11:02:13.7294629+05:30
```

- Violation of Unique Key constraint:

```sql
USE team2_hotel;

set identity_insert team2_customer on;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
VALUES (1001,'Ram',9866622245,'MUMBAI',123,10,'Ram@gmail.com'),(1002,'Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com'),
(1003,'Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),(1004,'Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com'),(1005,'Sam',8878922240,'MUMB
(1006,'Tom',7666622245,'PUNE',234,13,'Tom@yahoo.com'),(1007,'Ram',9070662224,'PUNE',235,15,'Ram@yahoo.com'),(1008,'Arjun',7315622245,'Banglore',34
(1009,'Param',8975622245,'Banglore',346,16,'Param@gmail.com'),(1010,'Rohit',7778822245,'PUNE',237,16,'Rohit_S@gmail.com'),(1011,'Ash',9866600045,'
(1012,'Adlin',9144622245,'HUBLI',452,18,'Adl_12@gmail.com'),(1013,'Steve',9112020245,'HUBLI',452,19,NULL),(1014,'Randheer',7066650245,'DHARWAD',62
(1015,'Neha',7035622245,'MUMBAI',130,12,'neha@gmail.com'),(1016,'Virat',9866612345,'BANGLORE',349,21,NULL),(1017,'Roy',8336022245,'DHARWAD',603,20
(1018,'Krishna',NULL,'MUMBAI',127,22,'Krish@gmail.com'),(1019,'Aakash',9866622000,'PUNE',245,23,'AK@gmail.com'),(1020,'James',9210620645,'DHARWAD'
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;

ALTER TABLE team2_customer
ADD UNIQUE(reservation_no);
```

100 %

Results | Messages

```
Msg 2627, Level 14, State 1, Line 4
Violation of UNIQUE KEY constraint 'UQ__team2_cu__3138648B5E0F689B'. Cannot insert duplicate key in object 'dbo.team2_customer'. The duplicate key value is (13).
The statement has been terminated.

(0 rows affected)

(0 rows affected)

Completion time: 2021-02-19T11:20:16.1905588+05:30
```

- Violation of NOT NULL constraint:

```sql
USE team2_hotel;

set identity_insert team2_customer on;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
VALUES (1001,'Ram',9866622245,'MUMBAI',NULL,10,'Ram@gmail.com'),(1002,'Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com'),
(1003,'Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),(1004,'Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com'),(1005,'Sam',887892224
(1006,'Tom',7666622245,'PUNE',234,15,'Tom@yahoo.com'),(1007,'Ram',9070662224,'PUNE',235,16,'Ram@yahoo.com'),(1008,'Arjun',7315622245,'Bangl
(1009,'Param',8975622245,'Banglore',346,18,'Param@gmail.com'),(1010,'Rohit',7778822245,'PUNE',237,19,'Rohit_S@gmail.com'),(1011,'Ash',98666
(1012,'Adlin',9144622245,'HUBLI',452,21,'Adl_12@gmail.com'),(1013,'Steve',9112020245,'HUBLI',452,22,NULL),(1014,'Randheer',7066650245,'DHAR
(1015,'Neha',7035622245,'MUMBAI',130,24,'neha@gmail.com'),(1016,'Virat',9866612345,'BANGLORE',349,25,NULL),(1017,'Roy',8336022245,'DHARWAD'
(1018,'Krishna',NULL,'MUMBAI',127,27,'Krish@gmail.com'),(1019,'Aakash',9866622000,'PUNE',245,28,'AK@gmail.com'),(1020,'James',9210620645,'D
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;
```

Results | Messages

```
Msg 515, Level 16, State 2, Line 4
Cannot insert the value NULL into column 'zip_code', table 'team2_hotel.dbo.team2_customer'; column does not allow nulls. INSERT fails.
The statement has been terminated.

(0 rows affected)

Completion time: 2021-02-19T12:16:25.3066261+05:30
```

Q4) Insert tuples into the table and see how FK constraint works if you try to insert into dependent table first.

Query:

```sql
USE team2_hotel;

set identity_insert team2_customer off;
INSERT INTO team2_customer (customer_id,customer_name,ph_number,city,zip_code,reservation_no,email_id)
VALUES
(1001,'Ram',9866622245,'MUMBAI',123,10,'Ram@gmail.com'),(1002,'Rahul',9887622245,'MUMBAI',124,11,'Rahul@gmail.com')
,
(1003,'Rohit',8866622245,'MUMBAI',125,12,'Rohit@gmail.com'),(1004,'Ross',7766622245,'MUMBAI',124,13,'Ross@gmail.com
'),(1005,'Sam',8878922240,'MUMBAI',126,14,'Sam@gmail.com'),
(1006,'Tom',7666622245,'PUNE',234,15,'Tom@yahoo.com'),(1007,'Ram',9070662224,'PUNE',235,16,'Ram@yahoo.com'),(1008,'
Arjun',7315622245,'Banglore',345,17,NULL),
(1009,'Param',8975622245,'Banglore',346,18,'Param@gmail.com'),(1010,'Rohit',7778822245,'PUNE',237,19,'Rohit_S@gmail
.com'),(1011,'Ash',9866600045,'MUMBAI',129,20,NULL),
(1012,'Adlin',9144622245,'HUBLI',452,21,'Adl_12@gmail.com'),(1013,'Steve',9112020245,'HUBLI',452,22,NULL),(1014,'Ra
ndheer',7066650245,'DHARWAD',623,23,'randheer@yahoo.com'),
(1015,'Neha',7035622245,'MUMBAI',130,24,'neha@gmail.com'),(1016,'Virat',9866612345,'BANGLORE',349,25,NULL),(1017,'R
oy',8336022245,'DHARWAD',603,26,NULL),
(1018,'Krishna',NULL,'MUMBAI',127,27,'Krish@gmail.com'),(1019,'Aakash',9866622000,'PUNE',245,28,'AK@gmail.com'),(10
20,'James',9210620645,'DHARWAD',645,29,'James@outlook.com');
SELECT TOP 20 *FROM team2_customer;
DELETE FROM team2_customer;

set identity_insert team2_rooms on;
INSERT INTO team2_rooms (room_number,room_type,room_location,number_of_beds,customer_id)
VALUES
(200,'AC','floor3',2,1001),(201,'AC','floor3',2,1002),(203,'NonAC','floor2',2,1003),(204,'AC','floor3',3,1004),(205
,'AC','floor1',1,1005),
```

```sql
(206,'AC','floor3',3,1006),(207,'AC','floor2',3,1007),(208,'NonAC','floor1',2,1008),(209,'AC','floor3',4,1009),(210
,'NonAC','floor3',4,1010),
(211,'AC','floor1',2,1011),(212,'AC','floor2',1,1012),(213,'AC','floor1',4,1013),(214,'AC','floor4',2,1014),(215,'A
C','floor4',3,1015),(216,'NonAC','floor4',3,1016),
(217,'AC','floor5',4,1017),(218,'NonAC','floor3',1,1018),(219,'AC','floor5',4,1019),(220,'AC','floor3',2,1020);
SELECT TOP 20 *FROM team2_rooms;
DELETE FROM team2_rooms;
```

Trying to Insert into dependent table first –

```sql
set identity_insert team2_rooms on;
INSERT INTO team2_rooms (room_number,room_type,room_location,number_of_beds,customer_id)
VALUES(221,'AC','floor4',3,1021);



/*Added FK*/
ALTER TABLE team2_rooms
ADD FOREIGN KEY (customer_id) REFERENCES team2_customer(customer_id);
```

Output:

Object Explorer:

- team2_hotel
  - Database Diagrams
  - Tables
    - System Tables
    - FileTables
    - External Tables
    - Graph Tables
    - dbo.team2_billing
    - dbo.team2_customer
    - dbo.team2_CustomerInfo
    - dbo.team2_menu
    - dbo.team2_reservation
    - dbo.team2_rooms
      - Columns
        - room_number (PK, int, not nu...
        - room_type (varchar(10), not n...
        - room_location (varchar(20), n...
        - number_of_beds (int, not null...
        - customer_id (FK, int, not null)
      - Keys
      - Constraints
      - Triggers
      - Indexes
      - Statistics

Query:

```sql
SELECT TOP 20 *FROM team2_rooms;
DELETE FROM team2_rooms;

set identity_insert team2_rooms on;
INSERT INTO team2_rooms (room_number,room_type,room_location,number_of_beds,customer_id)
VALUES(221,'AC','floor4',3,1021);


/*Added FK*/
ALTER TABLE team2_rooms
ADD FOREIGN KEY (customer_id) REFERENCES team2_customer(customer_id);
```

100 %

Messages

```
Msg 547, Level 16, State 0, Line 25
The INSERT statement conflicted with the FOREIGN KEY constraint "FK__team2_roo__custo__1E6F845E". The conflict occurred in database "team2_hotel", table "dbo.team2_customer", column 'customer_id'.
The statement has been terminated.

Completion time: 2021-02-19T14:23:46.1600733+05:30
```

Q5) Show violation of FK constraint when you try to delete from a base table. Explain why deletion gives an error.

Query:

```sql
USE team2_hotel

SELECT max(customer_id) from team2_customer; /*PK and max id is 1020*/

SELECT max(customer_id) from team2_rooms; /*FK and max id is 1020*/

/*Delete Statement*/
DELETE FROM team2_customer
WHERE customer_id=1020

/* First thing the delete statement is successful when it uses a single table that does not have a relationship to
any other table. But here both the tables are related with each other.
Therefore, we can see deletion gives an error because the delete statement conflicted with the reference
constraint*/
```

Output:


```
(1 row affected)


(1 row affected)
Msg 547, Level 16, State 0, Line 8
The DELETE statement conflicted with the REFERENCE constraint "FK__team2_roo__custo__1E6F845E". The conflict occurred in database "team2_hotel", table "dbo.team2_rooms", column 'customer_id'.
The statement has been terminated.


Completion time: 2021-02-19T14:42:51.7782384+05:30
```

100 %

⚠ Query completed with errors.　　　localhost (15.0 RTM)　DESKTOP-1G1MAVB\Param ...　team2_hotel　00:00:0

Q6) Try to update a non-existing entity data and check for error.

Query:

```sql
USE team2_hotel;

UPDATE team2_customer
SET customer_name = 'Rocky'
WHERE city='DHARWAD'
SELECT *FROM team2_customer where city='DHARWAD';

/* Not any error I got when I have updated customer_name corresponding to city 'DHARWAD'. Query executed
successfully.*/
```

Output:

	customer_id	customer_name	ph_number	city	zip_code	reservation_no	email_id
1	1014	Rocky	7066650245	DHARWAD	623	23	randheer@yahoo.com
2	1017	Rocky	8336022245	DHARWAD	603	26	NULL
3	1020	Rocky	9210620645	DHARWAD	645	29	James@outlook.com

✓ Query executed successfully.

Q7) Add a column which has default value.

Query:

```sql
USE team2_hotel;

ALTER TABLE team2_customer
ADD Telegram_ID varchar(30)
DEFAULT'Not Available' WITH VALUES

SELECT *FROM team2_customer;
```

Output:

	customer_id	customer_name	ph_number	city	zip_code	reservation_no	email_id	Telegram_ID
1	1001	Ram	9866622245	MUMBAI	123	10	Ram@gmail.com	Not Available
2	1002	Rahul	9887622245	MUMBAI	124	11	Rahul@gmail.com	Not Available
3	1003	Rohit	8866622245	MUMBAI	125	12	Rohit@gmail.com	Not Available
4	1004	Ross	7766622245	MUMBAI	124	13	Ross@gmail.com	Not Available
5	1005	Sam	8878922240	MUMBAI	126	14	Sam@gmail.com	Not Available
6	1006	Tom	7666622245	PUNE	234	15	Tom@yahoo.com	Not Available
7	1007	Ram	9070662224	PUNE	235	16	Ram@yahoo.com	Not Available
8	1008	Arjun	7315622245	Banglore	345	17	NULL	Not Available
9	1009	Param	8975622245	Banglore	346	18	Param@gmail.com	Not Available
10	1010	Rohit	7778822245	PUNE	237	19	Rohit_S@gmail.com	Not Available
11	1011	Ash	9866600045	MUMBAI	129	20	NULL	Not Available
12	1012	Adlin	9144622245	HUBLI	452	21	Adl_12@gmail.com	Not Available
13	1013	Steve	9112020245	HUBLI	452	22	NULL	Not Available
14	1014	Rocky	7066650245	DHARWAD	623	23	randheer@yahoo.com	Not Available
15	1015	Neha	7035622245	MUMBAI	130	24	neha@gmail.com	Not Available
16	1016	Virat	9866612345	BANGLORE	349	25	NULL	Not Available
17	1017	Rocky	8336022245	DHARWAD	603	26	NULL	Not Available
18	1018	Krishna	NULL	MUMBAI	127	27	Krish@gmail.com	Not Available
19	1019	Aakash	9866622000	PUNE	245	28	AK@gmail.com	Not Available
20	1020	Rocky	9210620645	DHARWAD	645	29	James@outlook.com	Not Available

Query executed successfully.

Q8) 5 Simple select queries to retrieve data from your database.
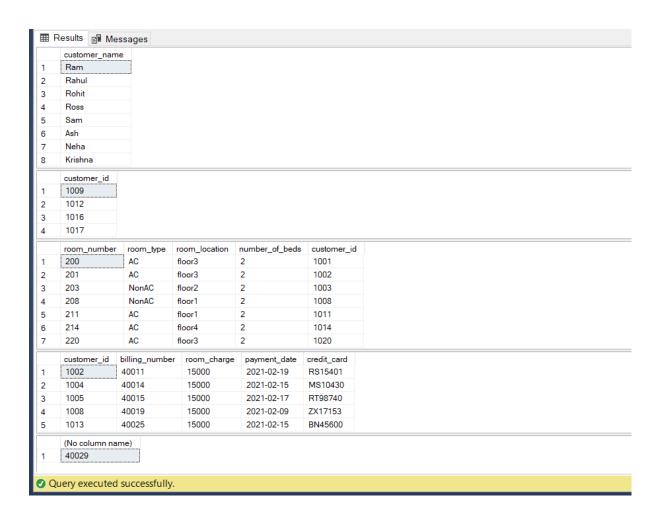
Query:

```sql
USE team2_hotel;

SELECT customer_name from team2_customer
where city='MUMBAI';

SELECT customer_id from team2_billing
where room_charge>15000;

SELECT *from team2_rooms
where number_of_beds=2;

SELECT *from team2_billing where room_charge=15000;

SELECT max(billing_number) from team2_billing;
```

Output:

Results | **Messages**

	customer_name
1	Ram
2	Rahul
3	Rohit
4	Ross
5	Sam
6	Ash
7	Neha
8	Krishna

	customer_id
1	1009
2	1012
3	1016
4	1017

	room_number	room_type	room_location	number_of_beds	customer_id
1	200	AC	floor3	2	1001
2	201	AC	floor3	2	1002
3	203	NonAC	floor2	2	1003
4	208	NonAC	floor1	2	1008
5	211	AC	floor1	2	1011
6	214	AC	floor4	2	1014
7	220	AC	floor3	2	1020

	customer_id	billing_number	room_charge	payment_date	credit_card
1	1002	40011	15000	2021-02-19	RS15401
2	1004	40014	15000	2021-02-15	MS10430
3	1005	40015	15000	2021-02-17	RT98740
4	1008	40019	15000	2021-02-09	ZX17153
5	1013	40025	15000	2021-02-15	BN45600

	(No column name)
1	40029

✅ Query executed successfully.

Q9) Show how FK constraint effects updating a dependent table when value is not existing and in base table where the value is referred and you want to update it.

Query:

```
USE team2_hotel;

UPDATE team2_rooms SET room_type='NonAC' where number_of_beds=1;

SELECT room_type from team2_rooms where number_of_beds=1;

/* 3 rows were affected */
```

Output: