

DBMS LAB ASSIGNMENT – 3

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ROLL NO: 19BCS053

Q-1:

Add, Modify and Delete Column using Alter Command

CODE:

Add:

```
USE Travel;  
ALTER TABLE CustomerDetails  
ADD email varchar(50);
```

Modify:

```
USE Travel;  
ALTER TABLE CustomerDetails  
ALTER COLUMN email text;
```

Delete:

```
USE Travel;  
ALTER TABLE CustomerDetails  
DROP COLUMN email;
```

OUTPUTS:

SQLQuery1.sql - DESKTOP-MGLPLGI.Travel (DESKTOP-MGLPLGI\HARI (67))* - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

Travel

Execute

Object Explorer

Connect

DESKTOP-MGLPLGI (SQL Server 15.0.2000.0)

Databases

System Databases

Database Snapshots

T3_Travel

Travel

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.BookingDetails

dbo.Bus

dbo.Car

dbo.CustomerDetails

Columns

customer_id (PK, ch

first_name (varchar

last_name (varchar

age (int, not null)

gender (char(1), not

phone (varchar(12),

address (text, not nu

email (varchar(50), r

Keys

SQLQuery1.sql - D...MGLPLGI\HARI (67))*

```
USE Travel;
ALTER TABLE CustomerDetails
ADD email varchar(50);
```

100 %

Messages

Commands completed successfully.

Completion time: 2021-02-18T18:59:24.1347755+05:30

100 %

Query executed successfully.

SQLQuery2.sql - DESKTOP-MGLPLGI.Travel (DESKTOP-MGLPLGI\HARI (55))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Travel

Execute

Object Explorer

Connect

DESKTOP-MGLPLGI (SQL Server 15.0.2000.0)

Databases

System Databases

Database Snapshots

T3_Travel

Travel

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.BookingDetails

dbo.Bus

dbo.Car

dbo.CustomerDetails

Columns

customer_id (PK, ch

first_name (varchar

last_name (varchar

age (int, not null)

gender (char(1), not

phone (varchar(12),

address (text, not nu

email (text, null)

Keys

SQLQuery2.sql - D...MGLPLGI\HARI (55))*

```
USE Travel;
ALTER TABLE CustomerDetails
ALTER COLUMN email text;
```

100 %

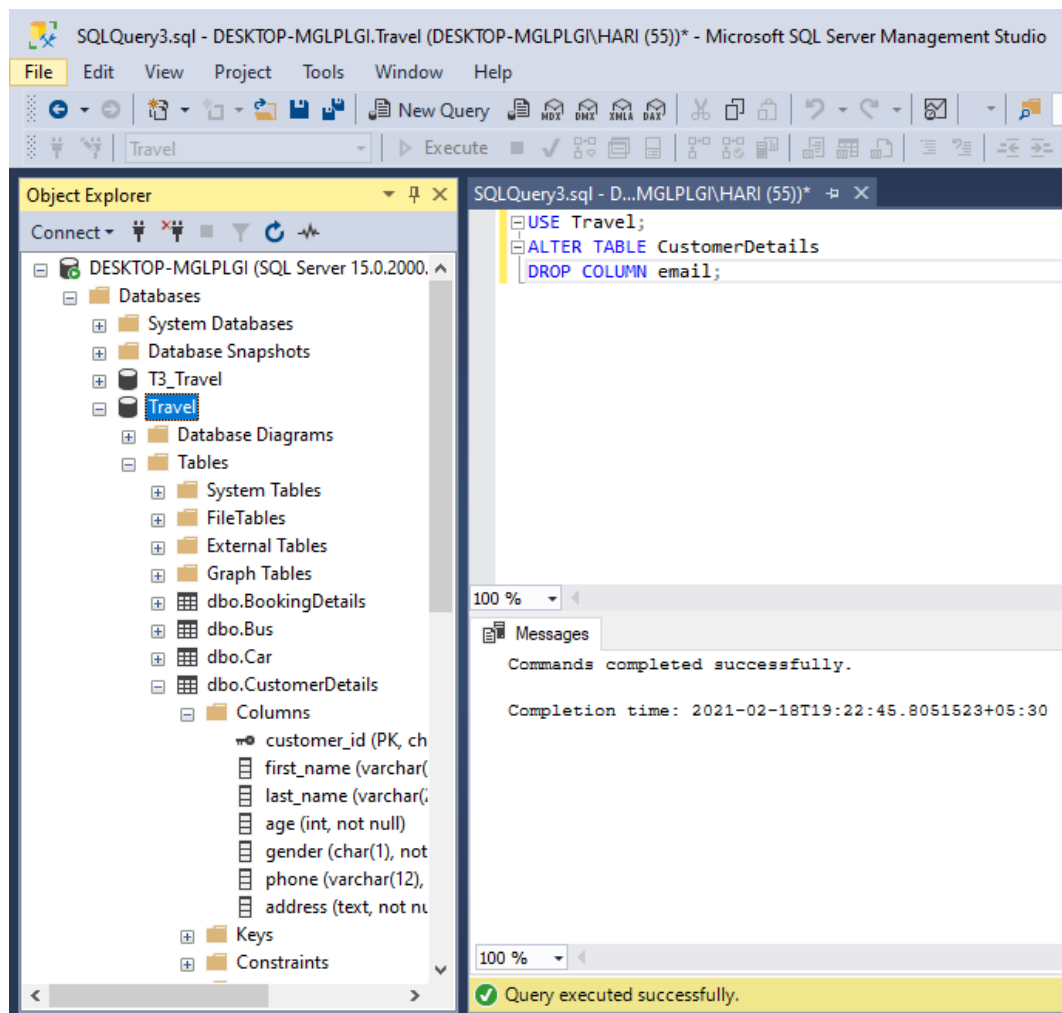
Messages

Commands completed successfully.

Completion time: 2021-02-18T19:18:48.1887651+05:30

100 %

Query executed successfully.



Q-2:

Insert 20 Employee Details into all the tables. Use all the 3 methods that I have showcased

CODE:

```
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('01001', 'P. RAJESH', 'Driver', '911234567890', 12500);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('01002', 'A. RAMESH', 'Driver', '911234567891', 12500);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('02003', 'B. SURESH', 'Driver', '911234567892', 12500);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('02004', 'N. NARESH', 'Driver', '911234567893', 12500);
```

```

INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('01005', 'R. PARESH', 'Cleaner', '911234567894', 8000);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('02006', 'T. MALLESH', 'Cleaner', '911234567895', 8000);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('01007', 'O. JAYESH', 'Luggage Manager', '911234567897', 5000);
INSERT INTO T3_EmployeeDetails (employee_id, name, designation, phone_number, salary)
VALUES
('02008', 'P. PARAMESH', 'Luggage Manager', '911234567898', 5000);
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000001', 'Kiran', 'Kumar', 31, 'M', '919999999999');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000002', 'Charan', 'Rao', 28, 'M', '919999999998');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000003', 'Farhan', 'Abdul', 37, 'M', '919999999997');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000004', 'Kissan', 'Chary', 21, 'M', '919999999996');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000005', 'Laban', 'Seth', 18, 'M', '919999999995');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000006', 'Cheman', 'Kumar', 35, 'M', '919999999994');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000007', 'Eeshwar', 'Prasad', 53, 'M', '919999999993');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000008', 'Raghavendra', 'Swamy', 42, 'M', '919999999992');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000009', 'Shivaji', 'Chatrapati', 61, 'M', '919999999991');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000010', 'Chakram', 'Kumar', 14, 'M', '919999999990');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000011', 'Jai', 'Krishna', 28, 'M', '9199999999912');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000012', 'Prabha', 'lingaraju', 41, 'M', '9199999999913');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000013', 'Somesh', 'Thakur', 33, 'M', '9199999999914');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000014', 'Deepak', 'Chowdary', 19, 'M', '9199999999915');

```

```

INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000015', 'Karthik', 'Sajjan', 20, 'M', '919999999189');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000016', 'Suvarna', 'Ram', 54, 'F', '919999999979');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000017', 'Sunder', 'Ram', 54, 'M', '919999999923');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000018', 'Manaswini', 'Ksheeraja', 16, 'F', '919999999122');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000019', 'Shreya', 'Kuppa', 8, 'F', '919999999187');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000020', 'Srinidhi', 'Kuppa', 5, 'F', '919999999964');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000001', '0100001', 25000, '2021-02-19T09:37:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000002', '0100002', 25000, '2021-02-19T09:42:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000003', '0100003', 25000, '2021-02-19T09:16:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000004', '0100004', 25000, '2021-02-19T09:07:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000005', '0100005', 25000, '2021-02-19T09:34:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000006', '0100006', 25000, '2021-02-19T09:12:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000007', '0100007', 25000, '2021-02-19T09:18:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000008', '0100008', 25000, '2021-02-19T09:58:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000009', '0100009', 25000, '2021-02-19T09:54:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000010', '0100010', 25000, '2021-02-19T11:12:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000011', '0200011', 50000, '2021-02-19T11:13:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000012', '0200012', 50000, '2021-02-19T10:18:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000013', '0200013', 50000, '2021-02-19T10:20:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000014', '0200014', 50000, '2021-02-19T10:25:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000015', '0200015', 50000, '2021-02-19T10:38:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000016', '0200016', 50000, '2021-02-19T10:42:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000017', '0200017', 50000, '2021-02-19T10:16:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000018', '0200018', 50000, '2021-02-19T10:11:00');

```

```

INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000019', '0200019', 50000, '2021-02-19T10:09:00');
INSERT INTO T3_BookingDetails (customer_id, booking_id, payment_amount, payment_dateTime)
VALUES ('0000000020', '0200020', 50000, '2021-02-19T10:14:00');
INSERT INTO T3_PackageDetails (package_name, package_description, cost, starting_point,
booking_id)
SELECT 'Kulu Manali', 'Chill Out!', 25000.00, 'Hyderabad', booking_id FROM
T3_BookingDetails
WHERE booking_id LIKE '01_____';
INSERT INTO T3_PackageDetails (package_name, package_description, cost, starting_point,
booking_id)
SELECT 'Manasarovar', 'Have a nice glimpse of Nature!', 50000.00, 'Hyderabad', booking_id
FROM
T3_BookingDetails WHERE booking_id LIKE '02_____';

```

OUTPUT:

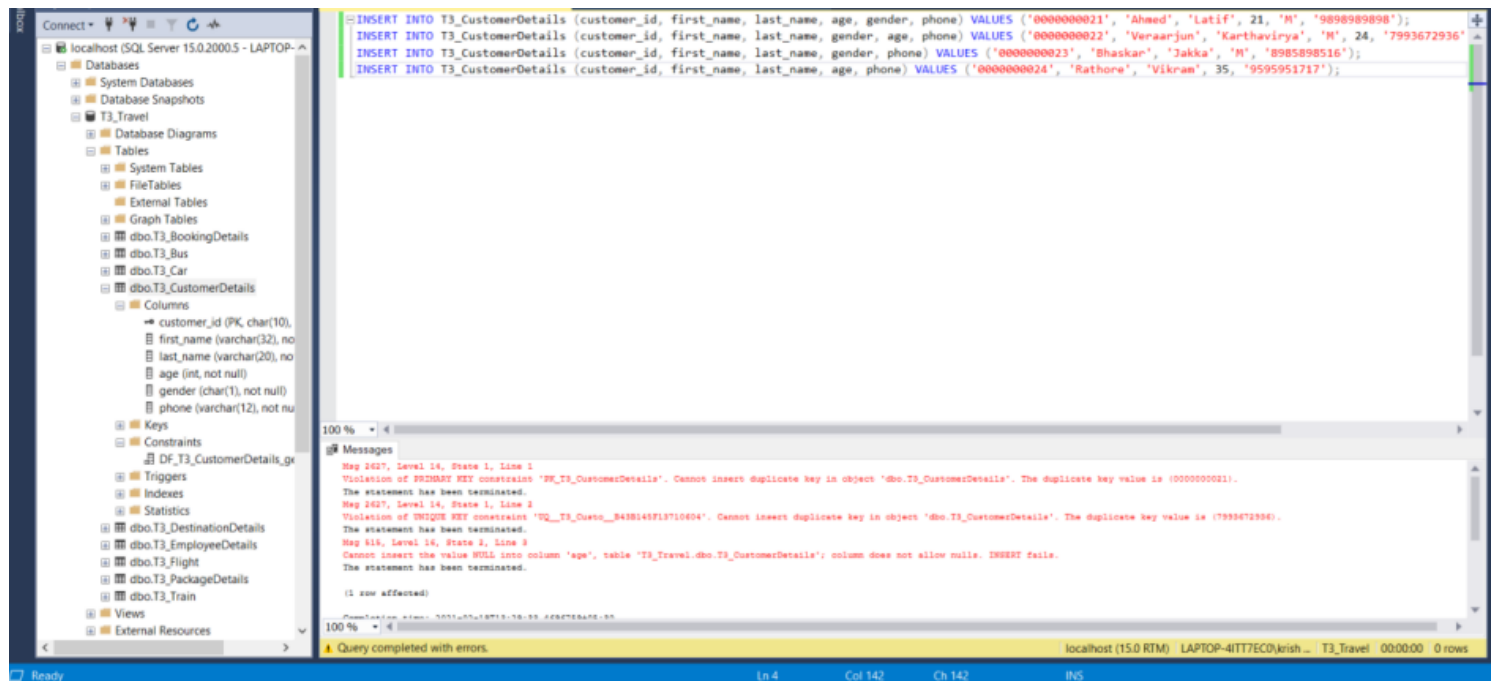
The screenshot displays the SQL Server Enterprise Manager interface. On the left, the 'Object Explorer' shows the database structure for 'T3_Travel', including tables like T3_BookingDetails, T3_CustomerDetails, T3_EmployeeDetails, and T3_PackageDetails. The right pane shows the SQL script being executed, which consists of four INSERT statements into these tables. The bottom pane shows the 'Messages' window, indicating that the query was executed successfully and that each of the four INSERT statements affected 1 row.

Q-3:

Show Violation of Primary Key, Unique Not Null and Default Key constraints through insertion.

CODE:

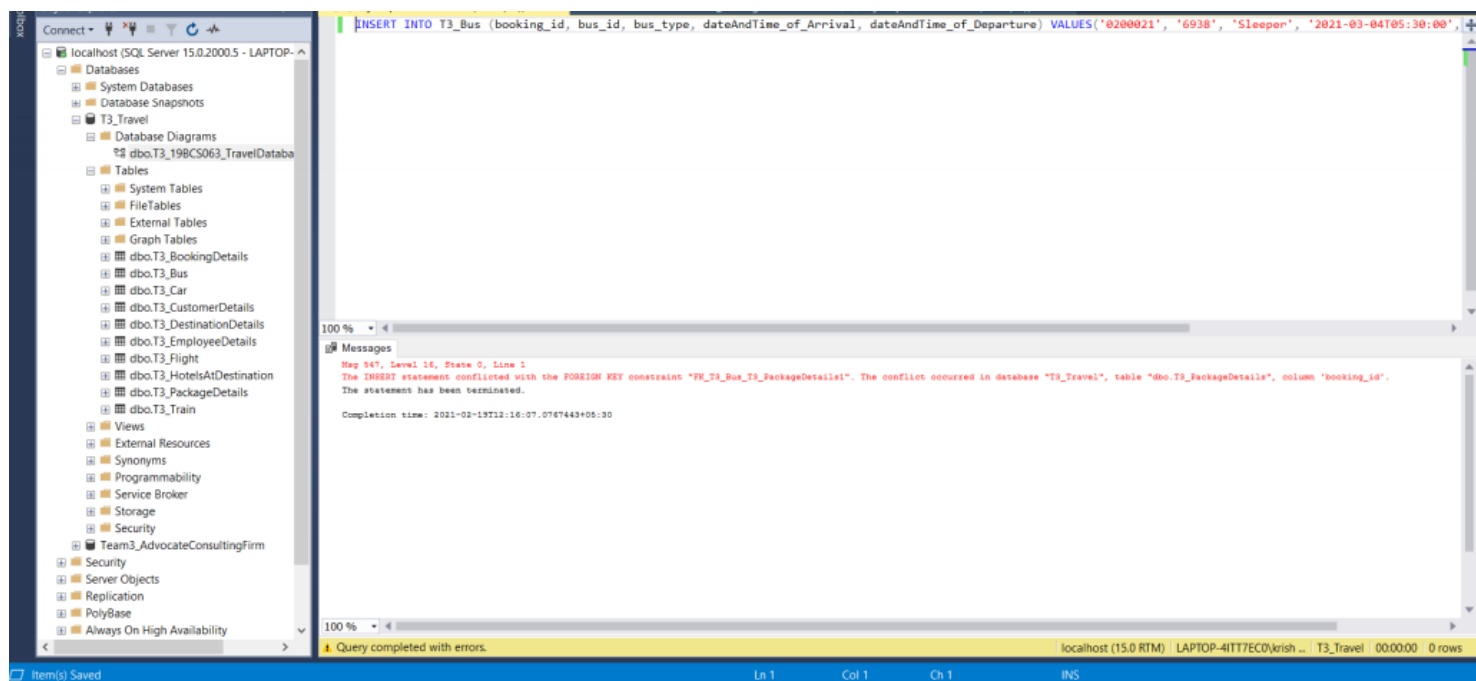
```
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, gender, phone)
VALUES
('0000000021', 'Ahmed', 'Latif', 21, 'M', '9898989898');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, gender, age, phone)
VALUES
('0000000022', 'Veraarjun', 'Karthavirya', 'M', 24, '7993672936');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, gender, phone) VALUES
('0000000023', 'Bhaskar', 'Jakka', 'M', '8985898516');
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, phone) VALUES
('0000000024', 'Rathore', 'Vikram', 35, '9595951717');
```

OUTPUT:**Q-4:**

Insert tuples into the table and see how foreign key constraint works if you try to insert into dependent table first.

CODE :

```
INSERT INTO T3_Bus (booking_id, bus_id, bus_type,
dateAndTime_of_Arrival,
dateAndTime_of_Departure) VALUES('0200021', '6938', 'Sleeper', '2021-03-
04T05:30:00', '2021-03-
08T15:15:00');
```

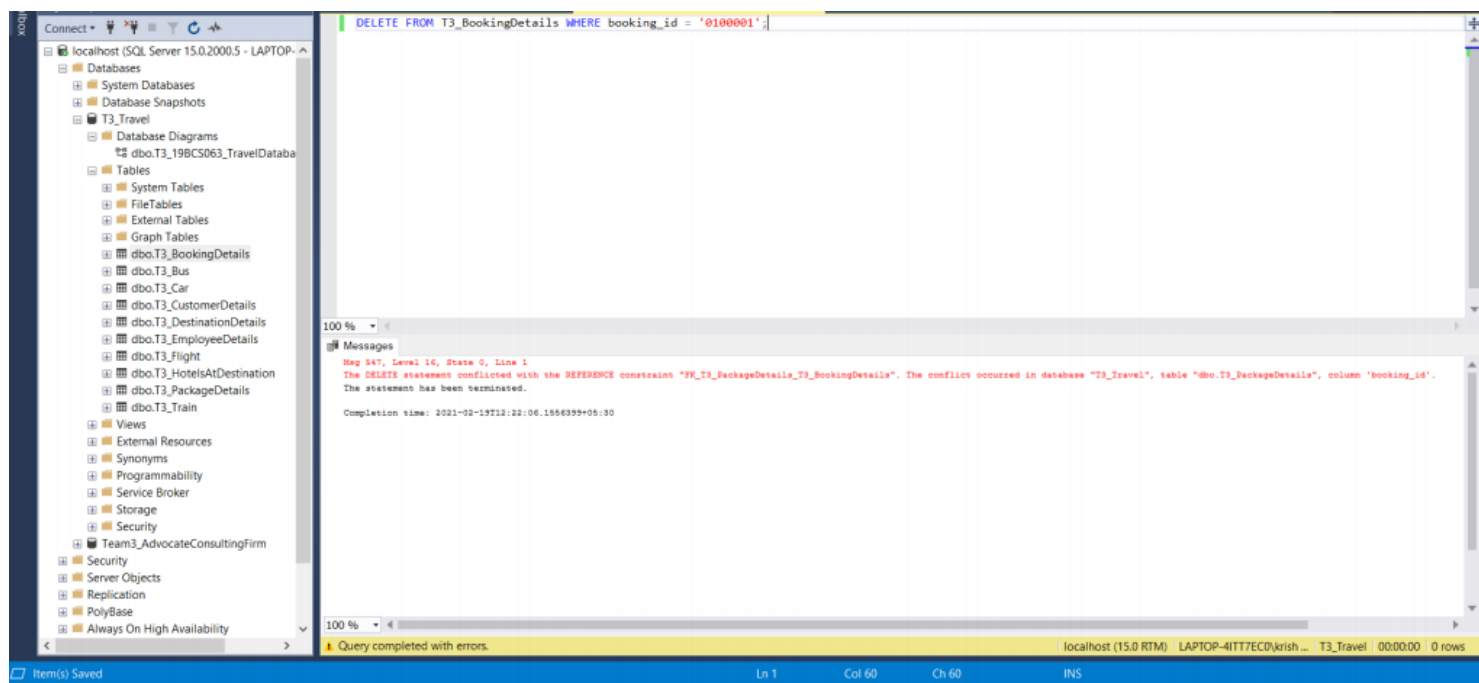
OUTPUT :**Q-5:**

Show Violation of Foreign Key Constraints when you try to delete from a base table. If you get an error explain why deletion give an error

CODE :

```
DELETE FROM T3_BookingDetails WHERE booking_id = '0100001';
```


OUTPUT:



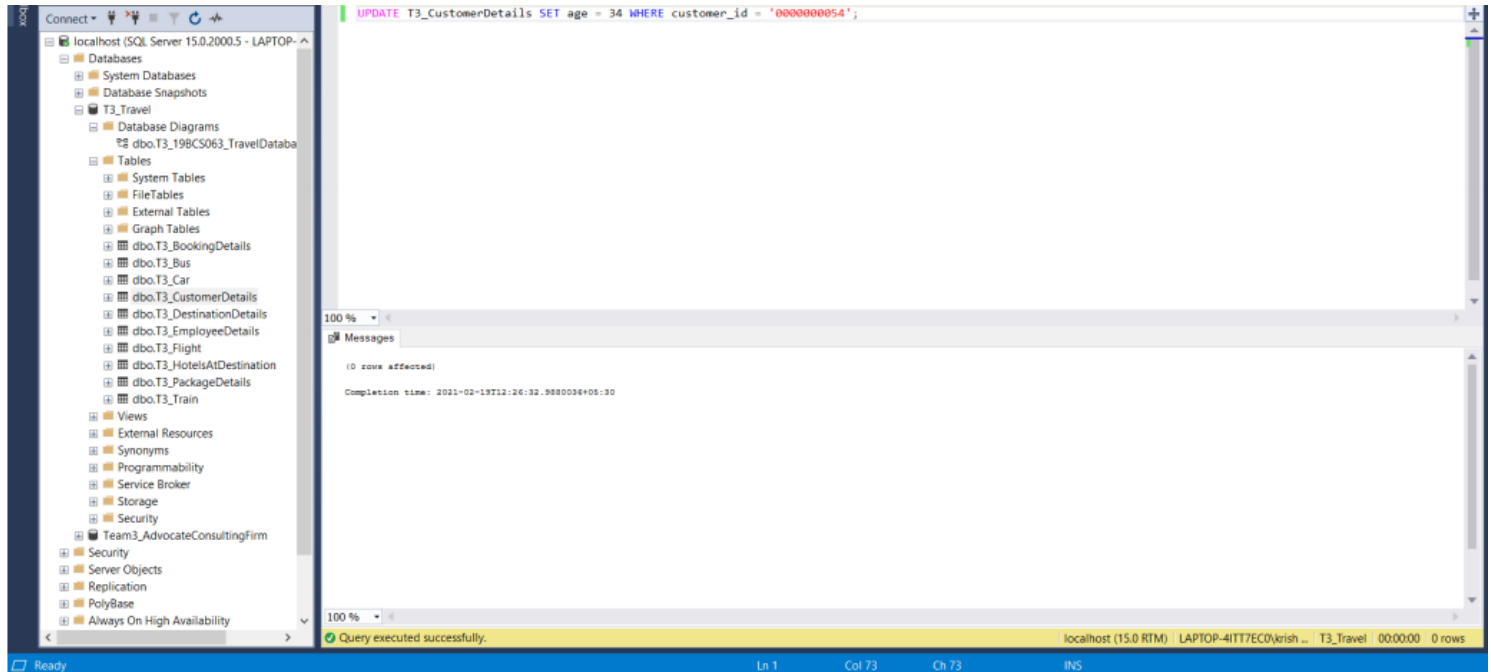
The Query did not execute because whenever we aim to delete a record from the base table, we need to ensure that all the related dependent table records are deleted prior. Otherwise, there will be redundant data all over the database.

Q-6:

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

CODE:

```
UPDATE T3_CustomerDetails SET age = 34 WHERE customer_id = '0000000054';
```

OUTPUT:

Here, we tried to update a non-existing entity of an entity set. This doesn't give an error but does no effect on the existing entities.

Q-7:

Add a column which has default value.

CODE:

```
INSERT INTO T3_CustomerDetails (customer_id, first_name, last_name, age, phone)
VALUES
('0000000022', 'Killadi', 'Santeswar', 19, '7995282469');
```

OUTPUT:

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Server Explorer' pane displays the database structure for 'localhost (SQL Server 15.0.2000.5 - LAPTOP-...)'. The 'Tables' folder is expanded, showing 'dbo.T3_CustomerDetails'. The 'Columns' folder for this table is also expanded, listing columns: customer_id (PK, char(10)), first_name (varchar(32), no), last_name (varchar(20), no), age (int, not null), gender (char(1), not null), and phone (varchar(12), not null). The 'Keys' folder shows a primary key constraint on customer_id. The 'Triggers' folder is empty. The 'Indexes' folder shows a non-clustered index on first_name. The 'Statistics' folder is empty. The 'dbo.T3_DestinationDetails' table is also visible in the list.

The main window displays the query execution results for the following script:

```

/***** Script for SelectTopRows command from SSMS *****/
SELECT TOP (1000) [customer_id]
, [first_name]
, [last_name]
, [age]
, [gender]
, [phone]
FROM [T3_Travel].[dbo].[T3_CustomerDetails]

```

The 'Results' pane shows the following data:

| customer_id | first_name | last_name | age | gender | phone |
|-------------|-------------|-------------|-----|--------|--------------|
| 0000000001 | Kiran | Kumar | 31 | M | 919999999999 |
| 0000000002 | Charan | Rao | 28 | M | 919999999998 |
| 0000000003 | Farhan | Abdul | 37 | M | 919999999997 |
| 0000000004 | Kasan | Chary | 21 | M | 919999999996 |
| 0000000005 | Laban | Seth | 18 | M | 919999999995 |
| 0000000006 | Chaman | Kumar | 35 | M | 919999999994 |
| 0000000007 | Eeshwar | Prasad | 53 | M | 919999999993 |
| 0000000008 | Raghavendra | Swamy | 42 | M | 919999999992 |
| 0000000009 | Shwaji | Chhatrapati | 61 | M | 919999999991 |
| 0000000010 | Chakram | Kumar | 14 | M | 919999999990 |
| 0000000011 | Jai | Krishna | 28 | M | 919999999989 |
| 0000000012 | Prabha | Ingara | 41 | M | 919999999988 |
| 0000000013 | Somesh | Thakur | 33 | M | 919999999987 |
| 0000000014 | Deepak | Choudhary | 19 | M | 919999999986 |
| 0000000015 | Karthik | Sajan | 20 | M | 919999999985 |
| 0000000016 | Suvena | Ram | 54 | F | 919999999984 |
| 0000000017 | Sunder | Ram | 54 | M | 919999999983 |
| 0000000018 | Manaswini | Kaheeraja | 16 | F | 919999999982 |
| 0000000019 | Shreya | Kuppa | 8 | F | 919999999981 |
| 0000000020 | Srinidhi | Kuppa | 5 | F | 919999999980 |
| 0000000021 | Krishna | Paancha | 19 | M | 7993672936 |

The status bar at the bottom indicates 'Query executed successfully.' and 'localhost (15.0 RTM) LAPTOP-4ITT7EC0\k... T3_Travel 00:00:00 21 rows'.

Q-8:

5 Simple select queries to retrieve data from your database.

CODE:

```
SELECT * FROM T3_CustomerDetails;
```

```
SELECT * FROM T3_BookingDetails WHERE booking_id LIKE '02_____';
```

```
SELECT bus_type FROM T3_Bus WHERE booking_id LIKE '01_____';
```

```
SELECT name, phone_number FROM T3_EmployeeDetails WHERE employee_id = '01001';
```

```
SELECT * FROM T3_DestinationDetails WHERE city = 'Kulu Manali';
```

OUTPUT:

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the database structure for 'T3_Travel'. The central pane shows the execution results of a query. The query is as follows:

```

SELECT * FROM T3_CustomerDetails;
SELECT * FROM T3_BookingDetails WHERE booking_id LIKE '02_____';
SELECT bus_type FROM T3_Bus WHERE booking_id LIKE '01_____';
SELECT name, phone_number FROM T3_EmployeeDetails WHERE employee_id = '01001';
SELECT * FROM T3_DestinationDetails WHERE city = 'Kulu Manali';

```

The results pane displays three tables:

| customer_id | first_name | last_name | age | gender | phone |
|-------------|------------|-----------|-----|--------|--------------|
| 0000000001 | Kiran | Kumar | 31 | M | 919999999999 |
| 0000000002 | Charan | Rao | 28 | M | 919999999998 |
| 0000000003 | Faham | Abdul | 37 | M | 919999999997 |
| 0000000004 | Kisan | Chary | 21 | M | 919999999996 |
| 0000000005 | Laban | Seth | 18 | M | 919999999995 |

| customer_id | booking_id | payment_amount | payment_dateTime | refunded | refund_amount | refund_dateTime |
|-------------|------------|----------------|-------------------------|----------|---------------|-----------------|
| 0000000011 | 0200011 | 50000.00 | 2021-02-19 11:13:00.000 | NULL | NULL | NULL |
| 0000000012 | 0200012 | 50000.00 | 2021-02-19 10:18:00.000 | NULL | NULL | NULL |
| 0000000013 | 0200013 | 50000.00 | 2021-02-19 10:20:00.000 | NULL | NULL | NULL |
| 0000000014 | 0200014 | 50000.00 | 2021-02-19 10:25:00.000 | NULL | NULL | NULL |
| 0000000015 | 0200015 | 50000.00 | 2021-02-19 10:38:00.000 | NULL | NULL | NULL |

| bus_type | |
|----------|---------|
| 1 | Sleeper |
| 2 | Sleeper |
| 3 | Sleeper |
| 4 | Sleeper |
| 5 | Sleeper |

| name | phone_number |
|-----------|--------------|
| P. RAJESH | 911234567890 |

| booking_id | city | hotel_name | hotel_description | address |
|------------|-------------|------------|-------------------|-------------|
| 0100001 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100002 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100003 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100004 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100005 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100006 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100007 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100008 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100009 | Kulu Manali | Raj Palace | Good | Kulu Manali |
| 0100010 | Kulu Manali | Raj Palace | Good | Kulu Manali |

The status bar at the bottom indicates: Query executed successfully. localhost (15.0 RTM) LAPTOP-4ITT7EC0\krish... T3_Travel 00:00:00 52 rows

Q-9:

Show how Foreign Key constraints 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.

CODE:

```
UPDATE T3_Bus SET bus_type = '2 Seater' WHERE bus_id = '6938';
```

OUTPUT:

The screenshot displays the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'T3_Travel' database. The 'Tables' folder is also expanded, listing various tables including 'dbo.T3_Bus', 'dbo.T3_Car', 'dbo.T3_CustomerDetails', 'dbo.T3_DestinationDetails', 'dbo.T3_EmployeeDetails', 'dbo.T3_Flight', 'dbo.T3_PackageDetails', and 'dbo.T3_Train'. The 'Columns' folder for 'dbo.T3_Bus' is expanded, showing columns like 'booking_id', 'bus_id', 'bus_type', 'dateAndTime_of_Arrival', and 'dateAndTime_of_Departure'.

The main query window shows the following SQL statement:

```
UPDATE T3_Bus SET bus_type = '2 Seater' WHERE bus_id = '6938';
```

The 'Messages' pane at the bottom shows the execution results:

```
(1 row affected)
Completion time: 2021-02-19T18:09:26.1089272+05:30
```

The status bar at the bottom indicates that the query was executed successfully, affecting 1 row. The execution time is 00:00:00. The status bar also shows the current location in the query: Ln 1, Col 63, Ch 63, INS.