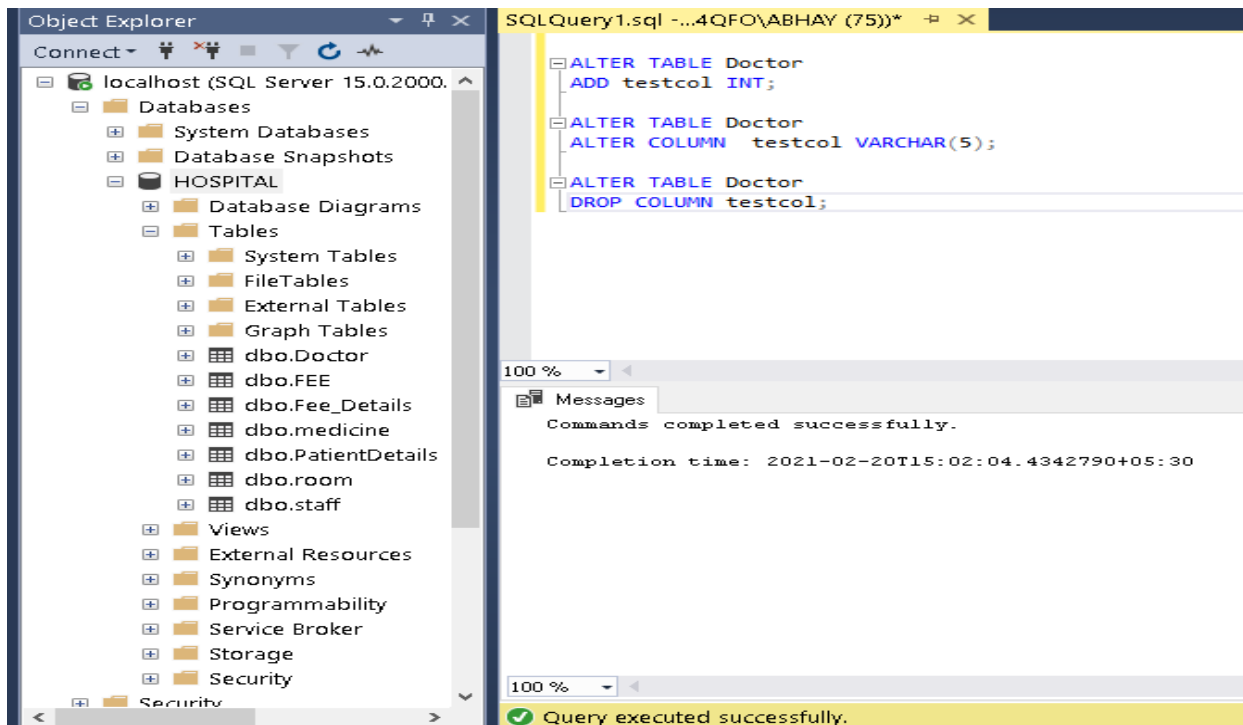Abhay.N.Rao

19BCS002

DBMS LAB Assignment 3

1. Add, Modify and Delete Column using Alter Command.



2. Insert 20 Employees Data into all the tables. Use all the 3 methods that have been showcased.

```sql
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
VALUES(1,'Ajay', 'Brain Surgery', '1111111110', 'MBBS',58000);
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
VALUES(2,'Vijay', 'Brain Surgery', '1111111111', 'MBBS',58000);
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
VALUES(3,'Jay', 'Heart Surgery', '1111111112', 'MBBS',38000);

INSERT INTO Doctor
VALUES
(4,'Ramesh', 'Heart Surgery', '1111111113', 'MBBS',38000),
(5,'Suresh', 'Kidney Surgery', '1111111114', 'MBBS',48000),
(6,'Shaan','Flu','1111111115','Singer',48000),
(7,'Mahesh', 'Skin Surgery', '1111111116', 'MBBS',88000),
(8,'Rajesh', 'Kidney Surgery', '1111111117', 'MBBS',18000),
```

```sql
(9,'Sanjay', 'Bone Surgery', '1111111118', 'MBBS',28000),
(10,'Kalpesh', 'Liver Surgery', '1111111119', 'MBBS',28000),
(11,'Shankar','Kidney Surgery','1111111120','MBBS',38000),
(12,'Mithesh', 'Liver Surgery', '1111111121', 'MBBS',18000),
(13,'Sweta','Burns','1111111122','MBBS',48000),
(14,'Pawar','Amnesia','1111111123','MBBS',98000),
(15,'Keshav','Artherities','1111111124','MBBS',68000),
(16,'Kishore','Skin Surgery','1111111125','MBBS',28000);

INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 17,'Bipul','','1111111126','MBBS',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 18,'Ketaki','','1111111127','MBBS',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 19,'Ravi','Stroke','1111111128','MBBS',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 20, 'Mayank','','1111111129','MBBS',38000;
```



3. Show Violation of Primary Key, Unique Not Null and default key constraints through insertion.

Violation of UNIQUE KEY constraint 'D_DPhone_Number'. Cannot insert duplicate key in object 'dbo.Doctor'. The duplicate key value is (1111111111).

Invalid column name 'Sanjay'.

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

```
Use Hospital
SELECT DID,Current_Case INTO FEE from Doctor;

Use Hospital
INSERT INTO FEE(DID)
VALUES(30);
```

Error Message:

```
The INSERT statement conflicted with the FOREIGN KEY constraint
"FK__FEE__DID__276EDEB3". The conflict occurred in database
"T8_Hospital_Database", table "dbo.Doctor", column 'DID'.
The statement has been terminated.
```

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

```
Use Hospital
ALTER TABLE FEE
ADD FOREIGN KEY (DID) REFERENCES Doctor(DID)

Use Hospital
ALTER TABLE Doctor
DROP COLUMN DID
```
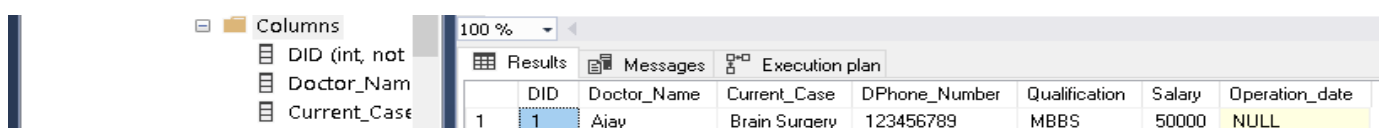
Error Message:

```
The object 'D_DID' is dependent on column 'DID'.
The object 'FK__FEE__DID__276EDEB3' is dependent on column 'DID'.
ALTER TABLE DROP COLUMN DID failed because one or more objects
access this column.
```

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

```
Use T8_Hospital_Database
UPDATE Doctor SET Dphone_Number='123456789'
WHERE DID=1;
```

| | DID | Doctor_Name | Current_Case | DPhone_Number | Qualification | Salary | Operation_date |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Ajay | Brain Surgery | 123456789 | MBBS | 50000 | NULL |

7. Add a column which has default value.

```
Use Hospital
ALTER TABLE Doctor
ADD Operation_date date default getdate()
```

8. 5 Simple Select queries to retrieve data from your database.

a)



b)

c)

```sql
SELECT DID,Current_Case FROM Doctor;
```

| | DID | Current_Case |
|---|---|---|
| 1 | 1 | Brain Surgery |
| 2 | 2 | Covid |
| 3 | 3 | Heart Surgery |
| 4 | 4 | Bird flu |
| 5 | 5 | Heart Surgery |
| 6 | 6 | Liver Surgery |
| 7 | 7 | Bone Surgery |
| 8 | 8 | Stomach A... |
| 9 | 9 | Kidney Sur... |
| 10 | 10 | Liver Surgery |
| 11 | 11 | Liver Surgery |
| 12 | 12 | Kidney Sur... |
| 13 | 13 | Skin Surgery |
| 14 | 14 | Bone Surgery |
| 15 | 15 | Brain Surgery |
| 16 | 16 | Heart Surgery |
| 17 | 17 | Bird flu |
| 18 | 18 | Covid |
| 19 | 19 | Brain Surgery |
| 20 | 20 | Bone Surgery |

Query executed successfully.

d)

```sql
SELECT top 100 * FROM Doctor
```

| | DID | Doctor_Name | Current_Case | DPhone_Number | Qualification | Salary | Operation_date |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Ajay | Brain Surgery | 123456789 | MBBS | 50000 | NULL |
| 2 | 2 | Sanjay | Covid | 1111111112 | MBBS | 58000 | NULL |
| 3 | 3 | Ramesh | Heart Surgery | 1111111113 | MBBS | 40000 | NULL |
| 4 | 4 | Bipul | Bird flu | 1111111114 | MBBS | 38000 | NULL |
| 5 | 5 | Sujay | Heart Surgery | 1111111115 | MBBS | 48000 | NULL |
| 6 | 6 | Shaan | Liver Surgery | 1111111116 | MBBS | 48000 | NULL |
| 7 | 7 | Paarth | Bone Surgery | 1111111117 | MBBS | 88000 | NULL |
| 8 | 8 | Mahesh | Stomach A... | 1111111118 | MBBS | 18000 | NULL |
| 9 | 9 | Suresh | Kidney Sur... | 1111111119 | MBBS | 30000 | NULL |
| 10 | 10 | Mithesh | Liver Surgery | 1111111120 | MBBS | 20000 | NULL |
| 11 | 11 | Kalpesh | Liver Surgery | 1111111121 | MBBS | 20000 | NULL |
| 12 | 12 | Rajesh | Kidney Sur... | 1111111122 | MBBS | 30000 | NULL |
| 13 | 13 | Sweta | Skin Surgery | 1111111123 | MBBS | 48000 | NULL |
| 14 | 14 | Pawar | Bone Surgery | 1111111124 | MBBS | 38000 | NULL |
| 15 | 15 | Ketak | Brain Surgery | 1111111125 | MBBS | 58000 | NULL |
| 16 | 16 | Yash | Heart Surgery | 1111111126 | MBBS | 48000 | NULL |
| 17 | 17 | Bumrah | Bird flu | 1111111127 | MBBS | 38000 | NULL |
| 18 | 18 | Manoj | Covid | 1111111128 | MBBS | 38000 | NULL |
| 19 | 19 | Ravi | Brain Surgery | 1111111129 | MBBS | 38000 | NULL |
| 20 | 20 | Malik | Bone Surgery | 1111111130 | MBBS | 38000 | NULL |

Query executed successfully.

e)

```sql
SELECT max(DID) FROM Doctor
```

| | (No column name) |
|---|---|
| 1 | 20 |

9. Show how foreign key 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.

```
Use Hospital
UPDATE FEE SET Current_Case='Cancer Treatment'
WHERE DID=4;


(1 row affected)

Use Hospital
UPDATE FEE SET Current_Case='Alzheimer'
WHERE DID=15;


(1 row affected)


Use Hospital
UPDATE FEE SET Current_Case='Tumour Surgery'
WHERE DID=37;

(0 rows affected)
```