DBMS Assignment-3

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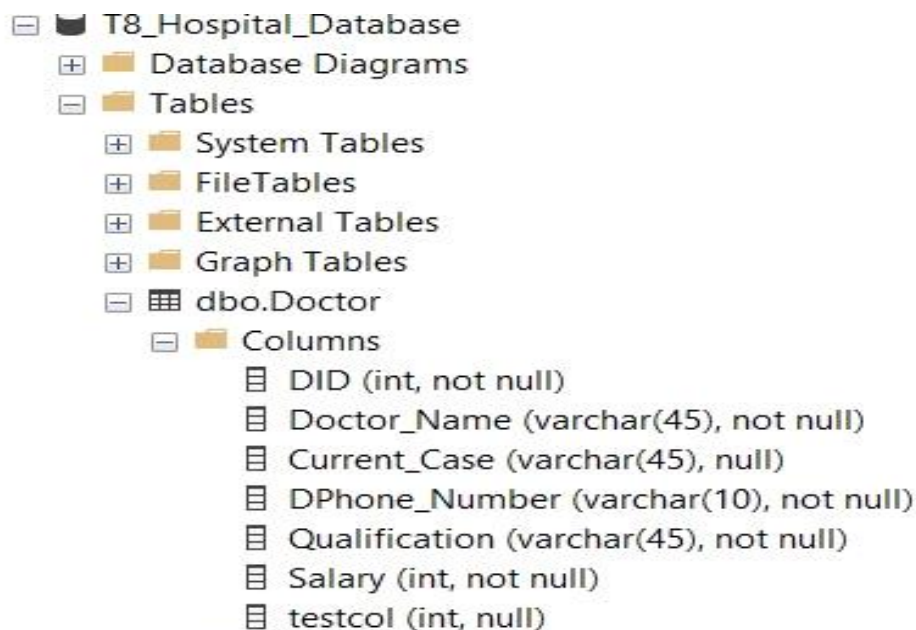
Team-8

1. Add, Modify and Delete Column using Alter Command
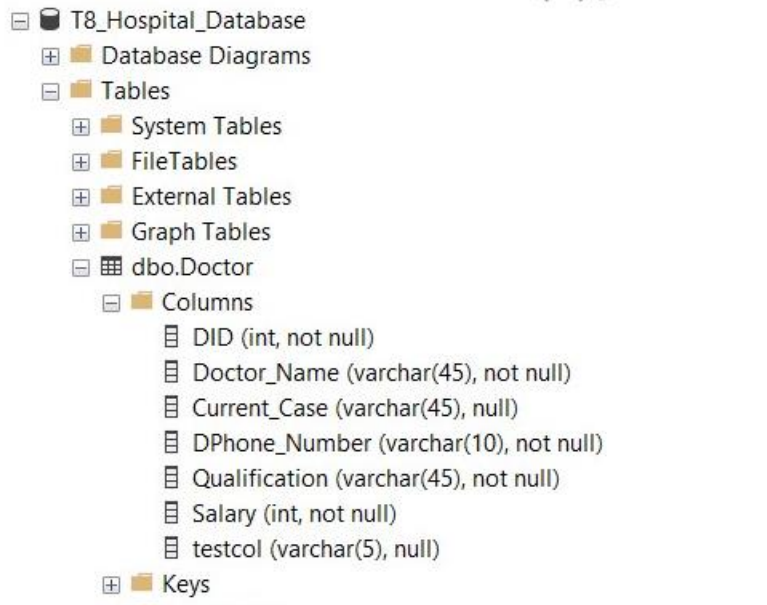
```sql
CREATE DATABASE T8_Hospital_Database;

CREATE TABLE Doctor
(DID INT NOT NULL
CONSTRAINT AK_DID UNIQUE(DID),
Doctor_Name VARCHAR(45) NOT NULL,
Current_Case VARCHAR(45),
DPhone_Number VARCHAR(10) NOT NULL
CONSTRAINT AK_DPhone_Number UNIQUE(DPhone_Number),
Qualification VARCHAR(45) NOT NULL,
Salary INT NOT NULL,);


ALTER TABLE Doctor
ADD testcol INT;
```

```sql
ALTER TABLE Doctor
ALTER COLUMN  testcol VARCHAR(5);
```

```
⊟ ● T8_Hospital_Database
   ⊞ ■ Database Diagrams
   ⊟ ■ Tables
      ⊞ ■ System Tables
      ⊞ ■ FileTables
      ⊞ ■ External Tables
      ⊞ ■ Graph Tables
      ⊟ ⊞ dbo.Doctor
         ⊟ ■ Columns
            ⊟ DID (int, not null)
            ⊟ Doctor_Name (varchar(45), not null)
            ⊟ Current_Case (varchar(45), null)
            ⊟ DPhone_Number (varchar(10), not null)
            ⊟ Qualification (varchar(45), not null)
            ⊟ Salary (int, not null)
            ⊟ testcol (varchar(5), null)
         ⊞ ■ Keys
```

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,'Abhishek Kumar','Covid','1111111111','Flu Expert',58000);
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
VALUES(2,'Gabru','Covid','1111111112','Flu Expert',58000);
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
VALUES(3,'Mehndi','Bird flu','1111111113','Flu Expert',38000);

INSERT INTO Doctor
VALUES(4,'Bassi','Bird flu','1111111114','Bird Watcher',38000),
(5,'Brar','Fever','1111111115','Cook',48000),
(6,'Shaan','Cold','1111111116','Singer',48000),
(7,'Dawood','','1111111117','Drug Lord',88000),
(8,'Mahes','Stomach Ache','1111111118','Flu Expert',18000),
(9,'Bhangar','','1111111119','Hacker',28000),
```

```sql
(10,'Bhau','','1111111120','Brother',28000),
(11,'Shankar','Gas','1111111121','Tribal',38000),
(12,'Lakshman','Nuclear Radiation','1111111130','Medical',18000),
(13,'Sweta','Burns','1111111122','Call Center',48000),
(14,'Pewds','Amnesia','1111111123','Gamer',98000),
(15,'Kevin','Amnosea','1111111124','Chaotic',68000),
(16,'Ken','','1111111125','Stramer',28000);


INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 17,'Buff','','1111111126','Flu Expert',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 18,'Kalki','','1111111127','Neurologist',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 19,'Reva','Stress','1111111128','Psychologist',38000;
INSERT INTO Doctor(DID, Doctor_Name, Current_Case, Dphone_Number,
Qualification, Salary)
SELECT 20,'Mercedes','','1111111129','Enterprenaur',38000
```

DID	Doctor_Na...	Current_Case	DPhone_N...	Qualification	Salary
1	Abhishek Ku...	Covid	1111111111	Flu Expert	58000
2	Gabru	Covid	1111111112	Flu Expert	58000
3	Mehndi	Bird flu	1111111113	Flu Expert	38000
4	Bassi	Bird flu	1111111114	Bird Watcher	38000
5	Brar	Fever	1111111115	Cook	48000
6	Shaan	Cold	1111111116	Singer	48000
7	Dawood		1111111117	Drug Lord	88000
8	Mahes	Stomach Ac...	1111111118	Flu Expert	18000
9	Bhangar		1111111119	Hacker	28000
10	Bhau		1111111120	Brother	28000
11	Shankar	Gas	1111111121	Tribal	38000
12	Lakshman	Nuclear Rad...	1111111130	Medical	18000
13	Sweta	Burns	1111111122	Call Center	48000
14	Pewds	Amnesia	1111111123	Gamer	98000
15	Kevin	Amnosea	1111111124	Chaotic	68000
16	Ken		1111111125	Stramer	28000
17	Buff		1111111126	Flu Expert	38000
18	Kalki		1111111127	Neurologist	38000
19	Reva	Stress	1111111128	Psychologist	38000
20	Mercedes		1111111129	Enterprenaur	38000
*	NULL	NULL	NULL	NULL	NULL

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

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

Msg 207, Level 16, State 1, Line 2
```

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

```
Use T8_Hospital_Database
SELECT DID,Current_Case INTO FEE from Doctor;

Use T8_Hospital_Database
INSERT INTO FEE(DID)
VALUES(30);
```

```
Msg 547, Level 16, State 0, Line 2

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 T8_Hospital_Database
ALTER TABLE FEE
ADD FOREIGN KEY (DID) REFERENCES Doctor(DID)

Use T8_Hospital_Database
ALTER TABLE Doctor
DROP COLUMN DID
```

```
Msg 5074, Level 16, State 1, Line 2
The object 'AK_DID' is dependent on column 'DID'.
Msg 5074, Level 16, State 1, Line 2
The object 'FK__FEE__DID__276EDEB3' is dependent on column
'DID'.
Msg 4922, Level 16, State 9, Line 2
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;
```

1	Abhishek Ku...	Covid	123456789	Flu Expert	58000
2	Gabru	Covid	1111111112	Flu Expert	58000

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

```
Use T8_Hospital_Database

SELECT Current_case FROM Doctor WHERE DID=3;
```

```
Use T8_Hospital_Database
SELECT * FROM Doctor;
```

	DID	Doctor_Name	Current_Case	DPhone_Number	Qualification	Salary
1	1	Abhishek Kumar	Covid	123456789	Flu Expert	58000
2	2	Gabru	Covid	1111111112	Flu Expert	58000
3	3	Mehndi	Bird flu	1111111113	Flu Expert	38000
4	4	Bassi	Bird flu	1111111114	Bird Watcher	38000
5	5	Brar	Fever	1111111115	Cook	48000
6	6	Shaan	Cold	1111111116	Singer	48000
7	7	Dawood		1111111117	Drug Lord	88000
8	8	Mahes	Stomach Ache	1111111118	Flu Expert	18000
9	9	Bhangar		1111111119	Hacker	28000
10	10	Bhau		1111111120	Brother	28000
11	11	Shankar	Gas	1111111121	Tribal	38000
12	12	Lakshman	Nuclear Radiation	1111111130	Medical	18000
13	13	Sweta	Burns	1111111122	Call Center	48000
14	14	Pewds	Amnesia	1111111123	Gamer	98000
15	15	Kevin	Amnosea	1111111124	Chaotic	68000
16	16	Ken		1111111125	Stramer	28000
17	17	Buff		1111111126	Flu Expert	38000

```
Use T8_Hospital_Database
SELECT DID,Current_Case FROM FEE;
```

	DID	Current_Case
1	1	Mental Issue
2	2	Covid
3	3	Bird flu
4	4	Bird flu
5	5	X-ray
6	6	Cold
7	7	
8	8	Stomach Ache
9	9	
10	10	
11	11	Gas
12	12	Nuclear Radiation
13	13	Burns
14	14	Amnesia
15	15	Amnosea
16	16	
17	17	

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 T8_Hospital_Database
UPDATE FEE SET Current_Case='Mental Issue'
WHERE DID=1;
```

(1 row affected)

```sql
Use T8_Hospital_Database
UPDATE FEE SET Current_Case='X-ray'
WHERE DID=5;
```

(1 row affected)

```sql
Use T8_Hospital_Database
UPDATE FEE SET Current_Case='X-ray'
WHERE DID=37;
```

(0 rows affected)