

DBMS LAB ASSIGNMENT 3

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REG NO – 19BCS116

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

```
ALTER TABLE dbo.T1_Doctor
ADD GENDER varchar(8);
```

100 %

Messages

Commands completed successfully.

Completion time: 2021-02-19T17:20:29.3672012+05:30

```
ALTER TABLE dbo.T1_Doctor
ALTER COLUMN GENDER varchar(4);
```

100 %

Messages

Commands completed successfully.

Completion time: 2021-02-19T17:22:02.4459220+05:30

```
ALTER TABLE dbo.T1_Doctor
DROP COLUMN GENDER;
```

100 %

Messages

Commands completed successfully.

Completion time: 2021-02-19T17:22:52.0668134+05:30

2.) Insert 20 Employees Data into all the tables. Use all the 3 methods

```

INSERT INTO dbo.T1_Doctor(doc_ID, doc_name, doc_specialization)
VALUES (1, 'Heni', 'Ortho');
INSERT INTO dbo.T1_Doctor
VALUES (2, 'Mike', 'Physician');
INSERT INTO dbo.T1_Doctor
VALUES (3, 'Rustom', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (4, 'Divyank', 'Ortho');
INSERT INTO dbo.T1_Doctor
VALUES (5, 'Kush', 'Phy');
INSERT INTO dbo.T1_Doctor
VALUES (6, 'Amit', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (7, 'Jignesh', 'Ortho');
INSERT INTO dbo.T1_Doctor
VALUES (8, 'Shankar', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (9, 'Sresth', 'Phy');
INSERT INTO dbo.T1_Doctor
VALUES (10, 'Rakesh', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (11, 'Samarth', 'Phy');
INSERT INTO dbo.T1_Doctor
VALUES (12, 'Rajesh', 'Surg');
INSERT INTO dbo.T1_Doctor
VALUES (13, 'Aditi', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (14, 'Amita', 'Surg');
INSERT INTO dbo.T1_Doctor
VALUES (15, 'Ashrith', 'Ortho');
INSERT INTO dbo.T1_Doctor
VALUES (16, 'Riya', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (17, 'Aparna', 'Surg');
INSERT INTO dbo.T1_Doctor
VALUES (18, 'Santanu', 'Child');
INSERT INTO dbo.T1_Doctor
VALUES (19, 'Akash', 'Ortho');
INSERT INTO dbo.T1_Doctor
VALUES (20, 'Sumit', 'Surg');

```

Results

Messages

	doc_ID	doc_name	doc_specialization
1	13	Aditi	Child
2	19	Akash	Ortho
3	6	Amit	Child
4	14	Amita	Surg
5	17	Aparna	Surg
6	15	Ashrith	Ortho
7	4	Divyank	Ortho
8	1	Heni	Ortho
9	7	Jignesh	Ortho
10	5	Kush	Phy
11	2	Mike	Physician
12	12	Rajesh	Surg
13	10	Rakesh	Child
14	16	Riya	Child
15	3	Rustom	Child
16	11	Samarth	Phy
17	18	Santanu	Child
18	8	Shankar	Child
19	9	Sresth	Phy
20	20	Sumit	Surg

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

```
INSERT INTO dbo.T1_Doctor
VALUES(1, 'Ritika', 'Phy');
```

100 %

Messages

Msg 2627, Level 14, State 1, Line 1
Violation of PRIMARY KEY constraint 'PK__T1_Docto__8AD12ABC84CDCD6E'. Cannot insert duplicate key in object 'dbo.T1_Doctor'. The duplicate key value is (1).
The statement has been terminated.

Completion time: 2021-02-19T17:38:13.6655304+05:30

```
INSERT INTO dbo.T1_Doctor
VALUES(NULL, 'Ritika', 'Phy');
```

100 %

Messages

Msg 515, Level 16, State 2, Line 1
Cannot insert the value NULL into column 'doc_ID', table 'Hospital.dbo.T1_Doctor'; column does not allow nulls. INSERT fails.
The statement has been terminated.

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

```
INSERT INTO dbo.T1_Patient
VALUES (3, 'Raj', 25, 'A', 123456, 4, 4);
```

100 %

Messages

Msg 547, Level 16, State 0, Line 1
The INSERT statement conflicted with the FOREIGN KEY constraint "FK_T1_Patien_Room__2F10007B". The conflict occurred in database "Hospital", table "dbo.T1_room", column 'Room_num'.
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

```
ALTER TABLE dbo.T1_Doctor
DROP COLUMN doc_ID
```

100 %

Messages

Msg 5074, Level 16, State 1, Line 1
The object 'FK_T1_Doctor_SAD12ABCB4CDD6E' is dependent on column 'doc_ID'.
Msg 4922, Level 16, State 9, Line 1
ALTER TABLE DROP COLUMN doc_ID failed because one or more objects access this column.

Reason - The deletion is giving an error as it violates referential integrity constraint. First, we need to delete the corresponding tuple from the dependent table and then the base table.

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

```
UPDATE T1_Doctor
SET doc_name = 'Atul'
where doc_id = 100;
```

100 %

Messages

(0 rows affected)

Completion time: 2021-02-19T17:53:36.9928143+05:30

7.) Add a column which has default value.

```
ALTER TABLE dbo.T1_Patient
ADD ENTRYDATE date default getdate();
```

100 %

Messages

Commands completed successfully.

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

i)

```
SELECT * FROM dbo.T1_Doctor;
```

100 %

Results Messages

	doc_ID	doc_name	doc_specialization
1	13	Aditi	Child
2	19	Akash	Ortho
3	6	Amit	Child
4	14	Amita	Surg
5	17	Aparna	Surg
6	15	Ashrith	Ortho
7	4	Divyank	Ortho
8	1	Heni	Ortho
9	7	Jignesh	Ortho
10	5	Kush	Phy
11	2	Mike	Physician
12	12	Rajesh	Surg
13	10	Rakesh	Child
14	16	Riya	Child
15	3	Rustom	Child
16	11	Samarth	Phy
17	18	Santanu	Child
18	8	Shankar	Child
19	9	Sresth	Phy
20	20	Sumit	Surg

ii)

```
SELECT doc_ID, doc_name FROM dbo.T1_Doctor;
```

100 %

Results Messages

	doc_ID	doc_name
1	13	Aditi
2	19	Akash
3	6	Amit
4	14	Amita
5	17	Aparna
6	15	Ashrith
7	4	Divyank
8	1	Heni
9	7	Jignesh
10	5	Kush
11	2	Mike
12	12	Rajesh
13	10	Rakesh
14	16	Riya
15	3	Rustom
16	11	Samarth
17	18	Santanu
18	8	Shankar
19	9	Sresth
20	20	Sumit

iii)

```
SELECT doc_ID, doc_name, doc_specialization FROM dbo.T1_Doctor where doc_specialization = 'Ortho';
```

100 %

Results Messages

	doc_ID	doc_name	doc_specialization
1	19	Akash	Ortho
2	15	Ashrith	Ortho
3	4	Divyank	Ortho
4	1	Heni	Ortho
5	7	Jignesh	Ortho

iv)

```
SELECT doc_ID, doc_name, doc_specialization FROM dbo.T1_Doctor where doc_id = 2;
```

100 %

Results			Messages
	doc_ID	doc_name	doc_specialization
1	2	Mike	Physician

v)

```
SELECT TOP (5) [doc_ID],[doc_name] FROM dbo.T1_Doctor
```

100 %

Results		Messages
	doc_ID	doc_name
1	13	Aditi
2	19	Akash
3	6	Amit
4	14	Amita
5	17	Aparna

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.


```
UPDATE T1_Patient  
SET Room_num = 4  
where Patient_ID = 1
```

100 %
Messages

Msg 547, Level 16, State 0, Line 1
The UPDATE statement conflicted with the FOREIGN KEY constraint "FK_T1_Patien_Room__2F10007B". The conflict occurred in database "Hospital", table "dbo.T1_room", column 'Room_num'.
The statement has been terminated.