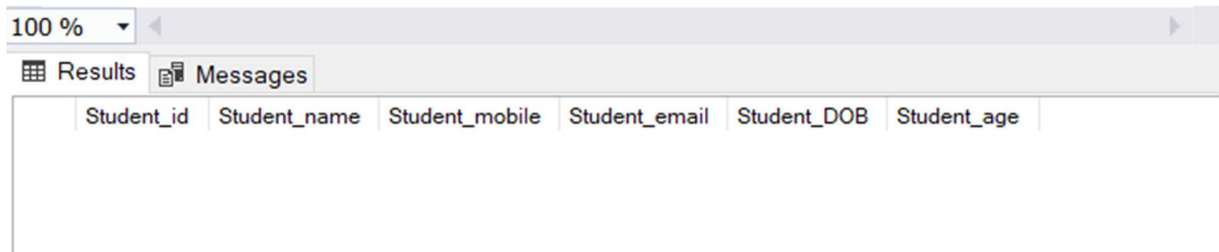


S Venkata Ramana

19bcs096 T12

DBMS-LAB Assig3

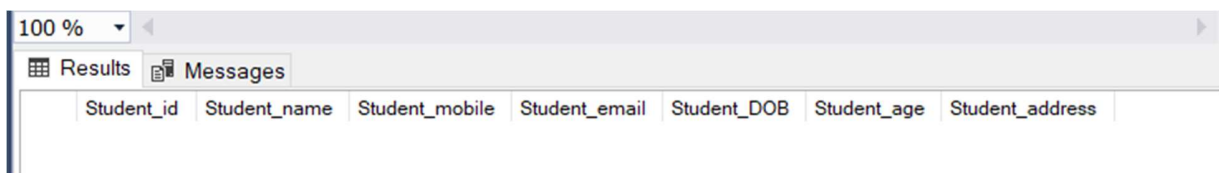
1. Add, Modify and Delete Column using Alter Command.



Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
------------	--------------	----------------	---------------	-------------	-------------

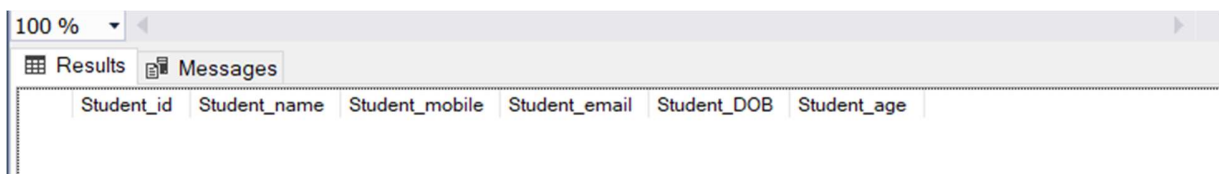
```
ALTER TABLE dbo.T12_Students  
ADD Student_address VARCHAR(50);
```

```
ALTER TABLE dbo.T12_Students  
ALTER COLUMN Student_address VARCHAR(100);
```



Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age	Student_address
------------	--------------	----------------	---------------	-------------	-------------	-----------------

```
ALTER TABLE dbo.T12_Students  
DROP COLUMN Student_address;
```



Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
------------	--------------	----------------	---------------	-------------	-------------

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

Showcased

```
INSERT INTO  
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)  
VALUES(21, 'A', '0000001', 'xyz@gmail.com', '01-01-2021');
```

```
INSERT INTO dbo.T12_Students  
VALUES(22, 'B', '0000001', 'xyz@gmail.com', '01-01-2021');
```

```

INSERT INTO
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
(SELECT Student_id,Student_name,Student_mobile,Student_email,Student_DOB FROM
Ex_school.dbo.Ex_Students where Student_id =30);

```

```

INSERT INTO dbo.T12_Students
VALUES(23,'apple','00234561','xyz@gmail.com','01-01-2021');
INSERT INTO dbo.T12_Students
VALUES(24,'boy','007521','xyz@gmail.com','01-01-2005');
INSERT INTO dbo.T12_Students
VALUES(25,'cat','83768421','xyz@gmail.com','01-01-2001');
INSERT INTO dbo.T12_Students
VALUES(26,'dog','3565461','xyz@gmail.com','01-01-2001');
INSERT INTO dbo.T12_Students
VALUES(27,'elephant','07225651','xyz@gmail.com','01-01-2001');
INSERT INTO dbo.T12_Students
VALUES(28,'fish','005621','xyz@gmail.com','01-01-2001');
INSERT INTO dbo.T12_Students
VALUES(29,'goat','000261','xyz@gmail.com','01-01-2001');
INSERT INTO dbo.T12_Students
VALUES(31,'horse','06735401','xyz@gmail.com','01-01-1999');
INSERT INTO dbo.T12_Students
VALUES(32,'iland','0067341','xyz@gmail.com','01-01-1991');
INSERT INTO dbo.T12_Students
VALUES(33,'jack','00674301','xyz@gmail.com','01-01-1991');
INSERT INTO dbo.T12_Students
VALUES(34,'ram','0054301','xyz@gmail.com','01-01-1991');
INSERT INTO dbo.T12_Students
VALUES(35,'rom','0756301','xyz@gmail.com','01-01-1991');
INSERT INTO dbo.T12_Students
VALUES(36,'cpu','008301','xyz@gmail.com','01-01-1991');
INSERT INTO dbo.T12_Students
VALUES(37,'rat','00445563401','xyz@gmail.com','01-01-2005');
INSERT INTO dbo.T12_Students
VALUES(38,'monkey','057641','xyz@gmail.com','01-01-1985');
INSERT INTO dbo.T12_Students
VALUES(39,'sun','04673241','xyz@gmail.com','01-01-1961');
INSERT INTO dbo.T12_Students
VALUES(40,'moon','00673251','xyz@gmail.com','01-01-2001');

```

Student_id = 90;

100 %

Results Messages

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	21	A	0000001	xyz@gmail.com	2021-01-01	0
2	22	B	0000001	xyz@gmail.com	2021-01-01	0
3	23	apple	00234561	xyz@gmail.com	2021-01-01	0
4	24	boy	007521	xyz@gmail.com	2005-01-01	16
5	25	cat	83768421	xyz@gmail.com	2001-01-01	20
6	26	dog	3565461	xyz@gmail.com	2001-01-01	20
7	27	elephant	07225651	xyz@gmail.com	2001-01-01	20
8	28	fish	005621	xyz@gmail.com	2001-01-01	20
9	29	goat	000261	xyz@gmail.com	2001-01-01	20
10	30	kk	56789	xyz@gmail.com	2000-01-01	21
11	31	horse	06735401	xyz@gmail.com	1999-01-01	22
12	32	iland	0067341	xyz@gmail.com	1991-01-01	30
13	33	jack	00674301	xyz@gmail.com	1991-01-01	30
14	34	ram	0054301	xyz@gmail.com	1991-01-01	30
15	35	rom	0756301	xyz@gmail.com	1991-01-01	30
16	36	cpu	008301	xyz@gmail.com	1991-01-01	30
17	37	rat	00445563401	xyz@gmail.com	2005-01-01	16
18	38	monkey	057641	xyz@gmail.com	1985-01-01	36
19	39	sun	04673241	xyz@gmail.com	1961-01-01	60
20	40	moon	00673251	xyz@gmail.com	2001-01-01	20

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

INSERT INTO

```
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
VALUES(21,'A','0000001','xyz@gmail.com','01-01-2021');
```

100 %

Messages

Msg 2627, Level 14, State 1, Line 68
Violation of PRIMARY KEY constraint 'PK_T12_Students'. Cannot insert duplicate key in object 'dbo.T12_Students'. The duplicate key value is (21).
The statement has been terminated.

Completion time: 2021-02-19T16:40:03.8920227+05:30

INSERT INTO

```
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
VALUES(16,'A','0000001','xyz@gmail.com','01-01-2021');
```

```
100 %
Messages
Msg 2627, Level 14, State 1, Line 80
Violation of UNIQUE KEY constraint 'Student_mobile_unique'. Cannot insert duplicate key in object 'dbo.T12_Students'. The duplicate key value is (0000001).
The statement has been terminated.

Completion time: 2021-02-19T16:54:04.0670955+05:30
|
```

INSERT INTO

```
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
VALUES(16,'A','0000001','xyz@gmail.com',null);
```

```
100 %
Messages
Msg 515, Level 16, State 2, Line 80
Cannot insert the value NULL into column 'Student_DOB', table 'School.dbo.T12_Students'; column does not allow nulls. INSERT fails.
The statement has been terminated.

Completion time: 2021-02-19T16:55:43.5465200+05:30
```

ALTER TABLE dbo.T12_Students

```
ADD CONSTRAINT Student_email_default DEFAULT 'xyz@gmail.com' FOR Student_email ;
```

INSERT INTO

```
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
VALUES(16,'DEFAULT','00000543','xyz@gmail.com','01-01-1900');
```

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	16	DEFAULT	00000543	xyz@gmail.com	1900-01-01	121
2	21	A	0000001	xyz@gmail.com	2021-01-01	0

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.T12_Departments

```
values(01,'cse','computer science','0',233);
```

```
Messages
Msg 547, Level 16, State 0, Line 86
The INSERT statement conflicted with the FOREIGN KEY constraint "FK_T12_Departments_T12_School". The conflict occurred in database "School", table "dbo.T12_School", column 'School_id'.
The statement has been terminated.

Completion time: 2021-02-19T17:11:59.1694204+05:30
```

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

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

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	21	A	0000001	xyz@gmail.com	2021-01-01	0
2	22	B	0000001	xyz@gmail.com	2021-01-01	0
3	23	apple	00234561	xyz@gmail.com	2021-01-01	0

```
UPDATE dbo.T12_Students
SET Student_mobile = '794709298'
WHERE Student_id =22;
```

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	21	A	0000001	xyz@gmail.com	2021-01-01	0
2	22	B	794709298	xyz@gmail.com	2021-01-01	0
3	23	apple	00234561	xyz@gmail.com	2021-01-01	0

7. Add a column which has default value.

```
ALTER TABLE dbo.T12_Students
ADD Student_FAV VARCHAR(50) DEFAULT 'FOOTBALL';
```

```
INSERT INTO
dbo.T12_Students(Student_id,Student_name,Student_mobile,Student_email,Student_DOB)
VALUES(01,'DEFAULT','0111111','xyz@gmail.com','01-01-1900');
```

Results Messages							
	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age	Student_FAV
1	1	DEFAULT	0111111	xyz@gmail.com	1900-01-01	121	FOOTBALL

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

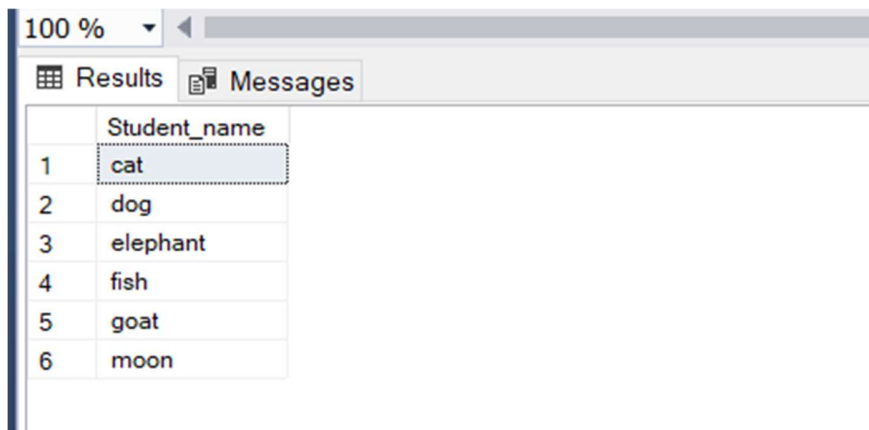
```
SELECT Student_name from T12_Students  
where Student_FAV = 'FOOTBALL';
```



The screenshot shows a database query results window. At the top, there is a zoom level of '100 %' and a horizontal scrollbar. Below this, there are two tabs: 'Results' (active) and 'Messages'. The 'Results' tab displays a table with one column, 'Student_name', and one row containing the value 'messi'.

	Student_name
1	messi

```
SELECT Student_name from T12_Students  
where Student_age = 20;
```



The screenshot shows a database query results window. At the top, there is a zoom level of '100 %' and a horizontal scrollbar. Below this, there are two tabs: 'Results' (active) and 'Messages'. The 'Results' tab displays a table with one column, 'Student_name', and six rows containing the values 'cat', 'dog', 'elephant', 'fish', 'goat', and 'moon'.

	Student_name
1	cat
2	dog
3	elephant
4	fish
5	goat
6	moon

Select top 10 * from T12_Students;

100 %

Results Messages

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	1	messi	0111111	xyz@gmail.com	1900-01-01	121
2	16	DEFAULT	00000543	xyz@gmail.com	1900-01-01	121
3	21	A	0000001	xyz@gmail.com	2021-01-01	0
4	22	B	794709298	xyz@gmail.com	2021-01-01	0
5	23	apple	00234561	xyz@gmail.com	2021-01-01	0
6	24	boy	007521	xyz@gmail.com	2005-01-01	16
7	25	cat	83768421	xyz@gmail.com	2001-01-01	20
8	26	dog	3565461	xyz@gmail.com	2001-01-01	20
9	27	elephant	07225651	xyz@gmail.com	2001-01-01	20
10	28	fish	005621	xyz@gmail.com	2001-01-01	20

Select * from T12_Students;

Results Messages

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age
1	1	messi	0111111	xyz@gmail.com	1900-01-01	121
2	16	DEFAULT	00000543	xyz@gmail.com	1900-01-01	121
3	21	A	0000001	xyz@gmail.com	2021-01-01	0
4	22	B	794709298	xyz@gmail.com	2021-01-01	0
5	23	apple	00234561	xyz@gmail.com	2021-01-01	0
6	24	boy	007521	xyz@gmail.com	2005-01-01	16
7	25	cat	83768421	xyz@gmail.com	2001-01-01	20
8	26	dog	3565461	xyz@gmail.com	2001-01-01	20
9	27	elephant	07225651	xyz@gmail.com	2001-01-01	20
10	28	fish	005621	xyz@gmail.com	2001-01-01	20
11	29	goat	000261	xyz@gmail.com	2001-01-01	20
12	30	kk	56789	xyz@gmail.com	2000-01-01	21
13	31	horse	06735401	xyz@gmail.com	1999-01-01	22
14	32	iland	0067341	xyz@gmail.com	1991-01-01	30
15	33	jack	00674301	xyz@gmail.com	1991-01-01	30
16	34	ram	0054301	xyz@gmail.com	1991-01-01	30
17	35	rom	0756301	xyz@gmail.com	1991-01-01	30
18	36	cpu	008301	xyz@gmail.com	1991-01-01	30
19	37	rat	00445563401	xyz@gmail.com	2005-01-01	16
20	38	monkey	057641	xyz@gmail.com	1985-01-01	36
21	39	sun	04673241	xyz@gmail.com	1961-01-01	60
22	40	moon	00673251	xyz@gmail.com	2001-01-01	20

```
Select * from T12_Students
where Student_id in (Select Student_id from T12_Departments
where Student_id = 595);
```

100 %

Results

Messages

	Student_id	Student_name	Student_mobile	Student_email	Student_DOB	Student_age	Student_FAV
1	32	iland	0067341	xyz@gmail.com	1991-01-01	30	NULL

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.