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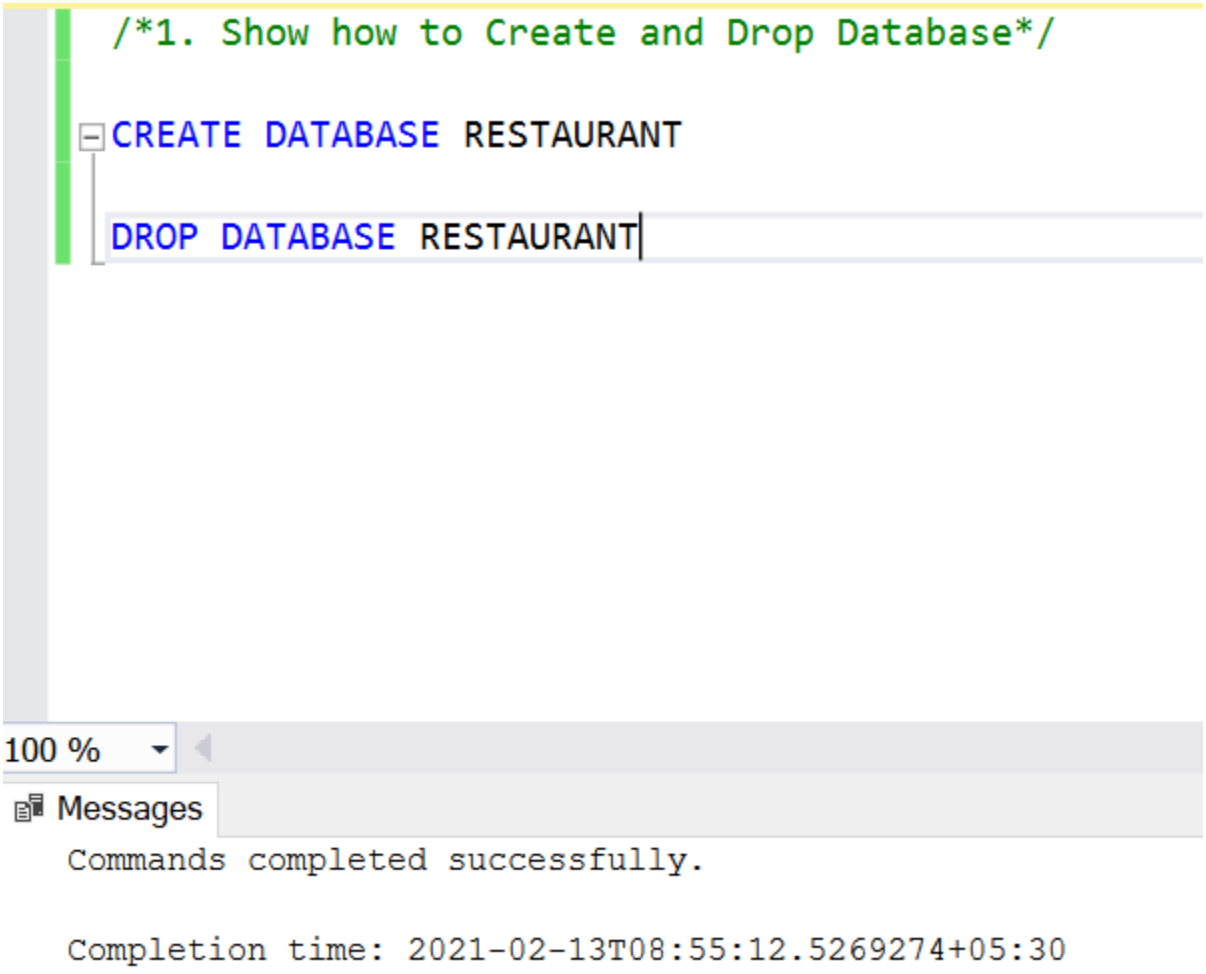
1) Show how to create and drop database

Query:

CREATE DATABASE RESTAURANT

DROP DATABASE RESTAURANT

Output:



2) Show all data bases that are in the system.

Query:

SELECT * FROM sys.databases where database_id>0

Output:

```
/*Show all databases that are in the system*/

SELECT * FROM sys.databases where database_id>0
```

100 %

Results | Messages

	name	database_id	source_database_id	owner_sid	create_date	compatibility_level	collation_name	user_acc
1	master	1	NULL	0x01	2003-04-08 09:13:36.390	150	Latin1_General_CI_AI	0
2	tempdb	2	NULL	0x01	2021-01-24 22:21:31.740	150	Latin1_General_CI_AI	0
3	model	3	NULL	0x01	2003-04-08 09:13:36.390	150	Latin1_General_CI_AI	0
4	msdb	4	NULL	0x01	2019-09-24 14:21:42.270	150	Latin1_General_CI_AI	0
5	University	5	NULL	0x0105000000000005150000000BD1C426C75C6B40EBFF570...	2021-02-13 08:32:35.730	150	Latin1_General_CI_AI	0

3) Create Table for your Database

Query:

```
CREATE DATABASE University;          /*creating a databases*/

USE University;


CREATE Table T4_Department

(

Department_Name VARCHAR(255) PRIMARY KEY NOT NULL,

Location_ VARCHAR(255) NOT NULL,

);


CREATE Table T4_Course_offered

(

Course_ID INT NOT NULL,

Department_Name VARCHAR(255) FOREIGN KEY REFERENCES
T4_Department(Department_Name) NOT NULL,
```

```
Faculty_ID INT NOT NULL,
Duration INT NOT NULL,
Name_ VARCHAR(255) NOT NULL,
PRIMARY KEY(Faculty_ID)
);

CREATE Table T4_Faculty
(
Faculty_ID INT PRIMARY KEY FOREIGN KEY REFERENCES  T4_Course_offered(Faculty_ID) NOT NULL,
Name VARCHAR(255) FOREIGN KEY REFERENCES T4_Department(Department_Name) NOT NULL,
HOD VARCHAR(255) NOT NULL,
FirstName VARCHAR(255) NOT NULL,
LastName VARCHAR(255) NOT NULL,
Phone INT NOT NULL
);

CREATE Table T4_Research_Projects
(
Project_ID INT PRIMARY KEY NOT NULL,
Area_of_Research VARCHAR(255) NOT NULL,
Project_Name VARCHAR(255) NOT NULL,
);
```

```
CREATE Table T4_Instructor_on_Research
(
Faculty_ID INT PRIMARY KEY NOT NULL,
Project_ID INT FOREIGN KEY REFERENCES T4_Research_Projects(Project_ID) NOT NULL,
Date_from DATE NOT NULL,
Date_to DATE NOT NULL,
);

CREATE Table T4_Student
(

Student_ID INT PRIMARY KEY NOT NULL,
FirstName VARCHAR(255) NOT NULL,
LastName VARCHAR(255) NOT NULL,
Phone INT NOT NULL,
Date_of_birth DATE NOT NULL,
Gender VARCHAR(3) NOT NULL,
);


CREATE Table T4_Course_Reg_Student
(
Course_ID INT PRIMARY KEY NOT NULL,
Student_ID INT FOREIGN KEY REFERENCES T4_Student(Student_ID) NOT NULL,

);
```

Output:

```
/*CREATE DATABASE University;*/ /*creating a databases*/

USE University;


CREATE Table T4_Department
(
    Department_Name VARCHAR(255) PRIMARY KEY NOT NULL,
    Location_ VARCHAR(255) NOT NULL,
);

CREATE Table T4_Course_offered
(
    Course_ID INT NOT NULL,
    Department_Name VARCHAR(255) FOREIGN KEY REFERENCES T4_Department(Department_Name) NOT NULL,
    Faculty_ID INT NOT NULL,
    Duration INT NOT NULL,
    Name_ VARCHAR(255) NOT NULL,
    PRIMARY KEY(Faculty_ID)
```

100 %

Messages

```
Commands completed successfully.

Completion time: 2021-02-13T19:23:07.0785915+05:30
```

4) Drop table

Query:

```
CREATE TABLE Classmate

(

First_Name VARCHAR(20) NOT NULL,

Last_Name VARCHAR(20) NOT NULL,

Gender CHAR(1) NOT NULL,

Phone_Number VARCHAR(12) NOT NULL,

DOB DATE NOT NULL,

Subjects TEXT

)

DROP TABLE Classmate
```

Output:

```
CREATE TABLE Classmate
(
    First_Name VARCHAR(20) NOT NULL,
    Last_Name VARCHAR(20) NOT NULL,
    Gender CHAR(1) NOT NULL,
    Phone_Number VARCHAR(12) NOT NULL,
    DOB DATE NOT NULL,
    Subjects TEXT
)
DROP TABLE Classmate
```

100 %

Messages

```
Commands completed successfully.

Completion time: 2021-02-13T11:44:22.0182238+05:30
```

5) Show how to check the schema of the tables

Query:

USE University;

EXEC sp_help T4_Faculty

Output:

```
USE University;
EXEC sp_help T4_Faculty
```

100 %

Results | Messages

	Name	Owner	Type	Created_datetime
1	T4_Faculty	dbo	user table	2021-02-13 19:23:07.063

	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Faculty_ID	int	no	4	10	0	no	(n/a)	(n/a)	NULL
2	Name	varchar	no	255			no	no	no	Latin1_General_CI_AI
3	HOD	varchar	no	255			no	no	no	Latin1_General_CI_AI
4	FirstName	varchar	no	255			no	no	no	Latin1_General_CI_AI
5	LastName	varchar	no	255			no	no	no	Latin1_General_CI_AI
6	Phone	int	no	4	10	0	no	(n/a)	(n/a)	NULL

	Identity	Seed	Increment	Not For Replication
1	No identity column defined.	NULL	NULL	NULL

	RowGuidCol
1	No rowguidcol column defined.

	Data_located_on_filegroup
1	PRIMARY

	index_name	index_description	index_keys
1	PK__T4_Facul__4EFCEA4A9CCFFFEE	clustered, unique, primary key located on PRIMARY	Faculty_ID

	constraint_type	constraint_name	delete_action	update_action	status_enabled	status_for_replication	constraint_keys
1	FOREIGN KEY	FK__T4_Facult__Facul__5FB337D6	No Action	No Action	Enabled	Is_For_Replication	Faculty_ID
2							REFERENCES University.dbo.T4_Course_offered (Fac
3	FOREIGN KEY	FK__T4_Faculty__Name__60A75...	No Action	No Action	Enabled	Is_For_Replication	Name
4							REFERENCES University.dbo.T4_Department (Depart
5	PRIMARY KE	PK__T4_Facul__4EFCEA4A9CCF	(n/a)	(n/a)	(n/a)	(n/a)	Faculty_ID

6) Show all the tables from the database

Query:

SELECT * FROM SYSOBJECTS WHERE xtype='U';

(or)

SELECT

*

FROM

information_schema.tables;

Output:

```
SELECT * FROM SYSOBJECTS WHERE xtype='U';
```

100 %

Results | Messages

	name	id	xtype	uid	info	status	base_schema_ver	replinfo	parent_obj	crdate	ftcatid	schema_ver	stats_schema_ver
1	T4_Department	1493580359	U	1	0	0	0	0	0	2021-02-13 19:23:07.060	0	0	0
2	T4_Course_offered	1525580473	U	1	0	0	0	0	0	2021-02-13 19:23:07.060	0	0	0
3	T4_Faculty	1573580644	U	1	0	0	0	0	0	2021-02-13 19:23:07.063	0	0	0
4	T4_Research_Projects	1637580872	U	1	0	0	0	0	0	2021-02-13 19:23:07.063	0	0	0
5	T4_Instructor_on_Research	1669580986	U	1	0	0	0	0	0	2021-02-13 19:23:07.067	0	0	0
6	T4_Student	1717581157	U	1	0	0	0	0	0	2021-02-13 19:23:07.070	0	0	0
7	T4_Course_Reg_Student	1749581271	U	1	0	0	0	0	0	2021-02-13 19:23:07.070	0	0	0

```
SELECT
    *
FROM
    information_schema.tables;
```

.00 %

Results | Messages

	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	TABLE_TYPE
1	University	dbo	T4_Department	BASE TABLE
2	University	dbo	T4_Course_offered	BASE TABLE
3	University	dbo	T4_Faculty	BASE TABLE
4	University	dbo	T4_Research_Projects	BASE TABLE
5	University	dbo	T4_Instructor_on_Research	BASE TABLE
6	University	dbo	T4_Student	BASE TABLE
7	University	dbo	T4_Course_Reg_Student	BASE TABLE
8	University	dbo	Faculty_Details	BASE TABLE

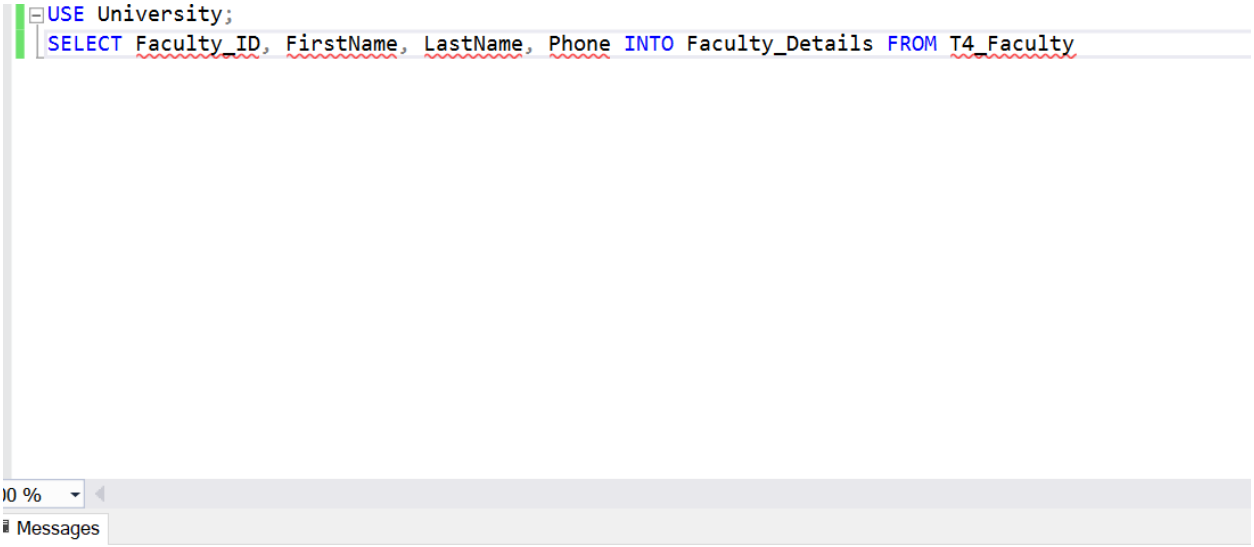
7. Create Table using Select Statement

Query:

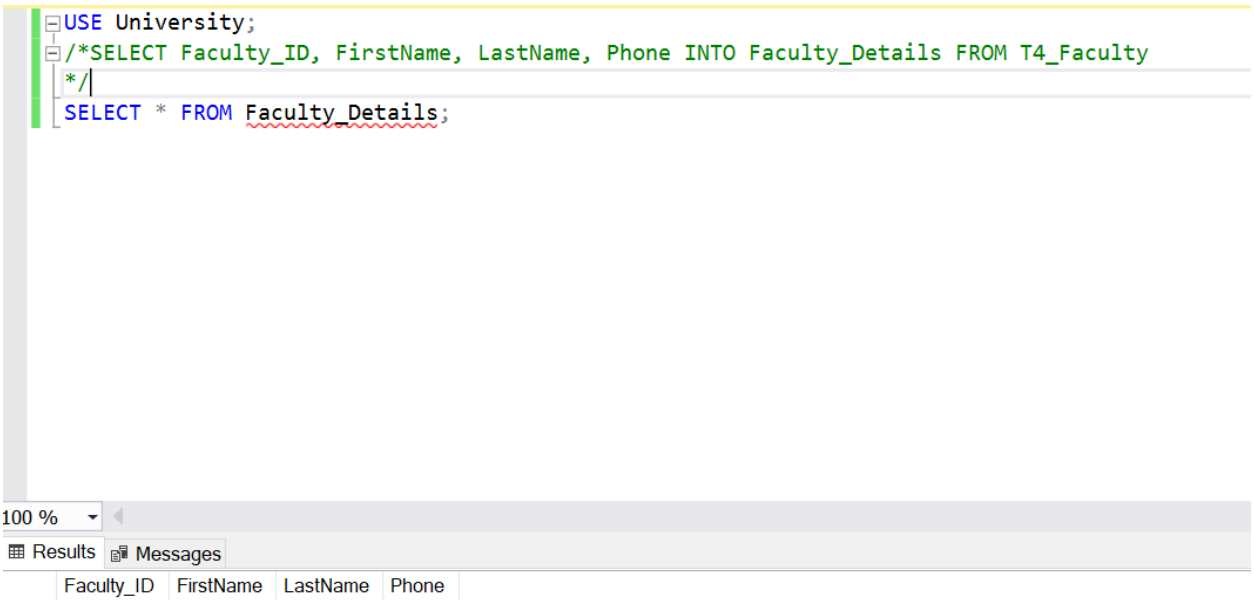
USE University;

SELECT Faculty_ID, FirstName, LastName, Phone INTO Faculty_Details FROM T4_Faculty

Output:



Viewing the created table:



8. Create a table which has derived attribute.

Query:

CREATE TABLE Classmate

(

First_Name VARCHAR(20) NOT NULL,

Last_Name VARCHAR(20) NOT NULL,

Gender CHAR(3) NOT NULL,

Phone_Number VARCHAR(12) NOT NULL,

DOB DATE NOT NULL,

Age AS DATEDIFF(YEAR,DOB,GETDATE()) ,

Address_details TEXT

)

Output:

```sql
CREATE TABLE Classmate
(
    First_Name VARCHAR(20) NOT NULL,
    Last_Name VARCHAR(20) NOT NULL,
    Gender CHAR(3) NOT NULL,
    Phone_Number VARCHAR(12) NOT NULL,
    DOB DATE NOT NULL,
    Age AS DATEDIFF(YEAR,DOB,GETDATE() ) ,
    Address_details TEXT
)
```

```
Messages
Commands completed successfully.

Completion time: 2021-02-13T20:07:30.3892572+05:30
```

Viewing the created table:

```sql
SELECT * FROM Classmate
```

Results | Messages

First_Name	Last_Name	Gender	Phone_Number	DOB	Age	Address_details