

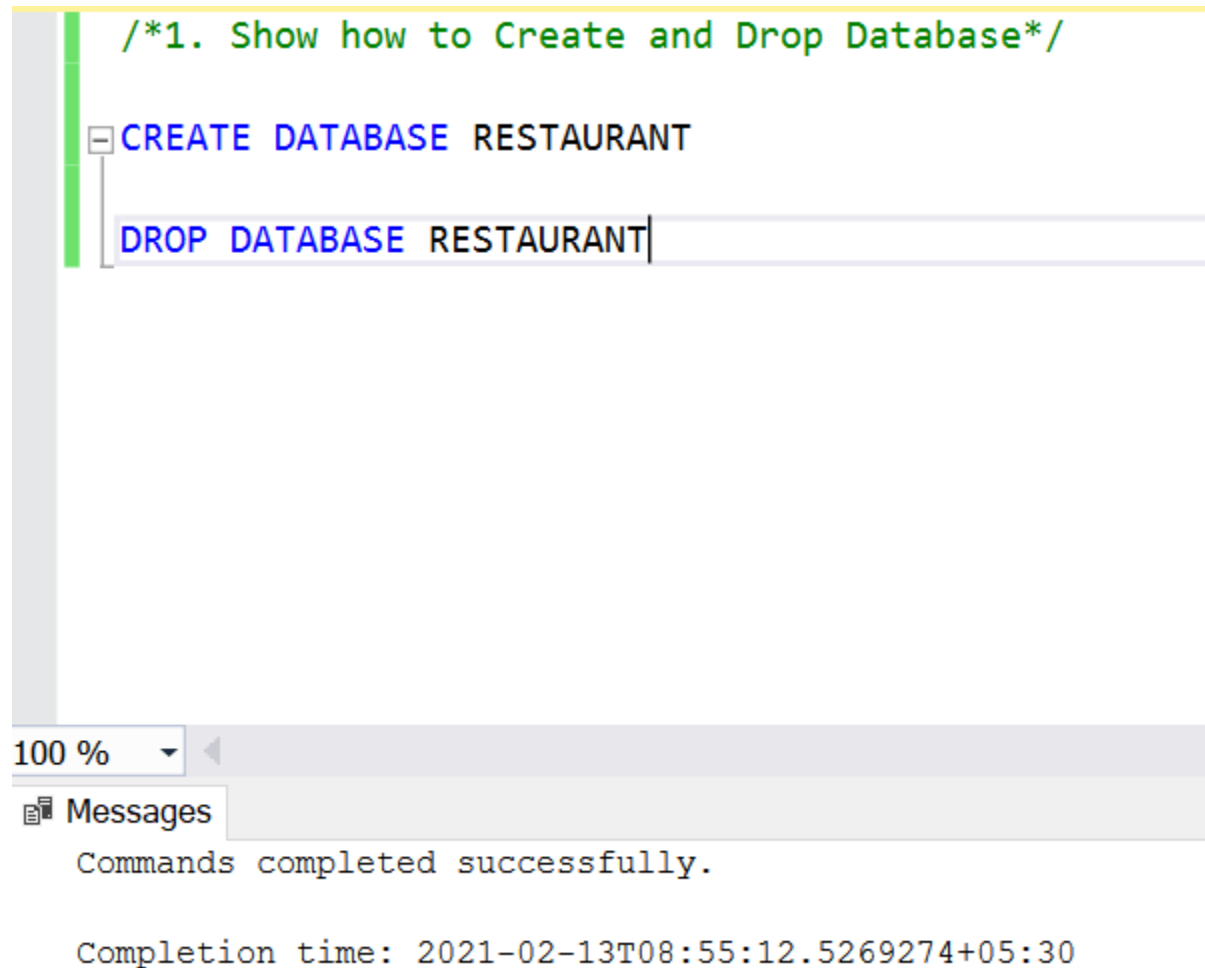
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1) Show how to create and drop database Query:

CREATE DATABASE RESTAURANT DROP DATABASE RESTAURANT

Output:



The screenshot shows a SQL IDE interface. At the top, a green comment line reads: `/*1. Show how to Create and Drop Database*/`. Below it, two SQL commands are entered in a text area: `CREATE DATABASE RESTAURANT` and `DROP DATABASE RESTAURANT`. The interface includes a zoom level dropdown set to 100%, a 'Messages' tab, and a status bar. The Messages pane displays the text 'Commands completed successfully.' and the completion time '2021-02-13T08:55:12.5269274+05:30'.

```
/*1. Show how to Create and Drop Database*/  
  
CREATE DATABASE RESTAURANT  
  
DROP DATABASE RESTAURANT
```

100 %

Messages

Commands completed successfully.

Completion time: 2021-02-13T08:55:12.5269274+05:30

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
```

| | 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 | 0x010500000000000515000000BD1C426C75C6B40EBFF570... | 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_4EFCEA4A9CCFFEE | 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 KF | PK T4 Facul 4FFCFA4A9CCF | (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;
```

100 %

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 |

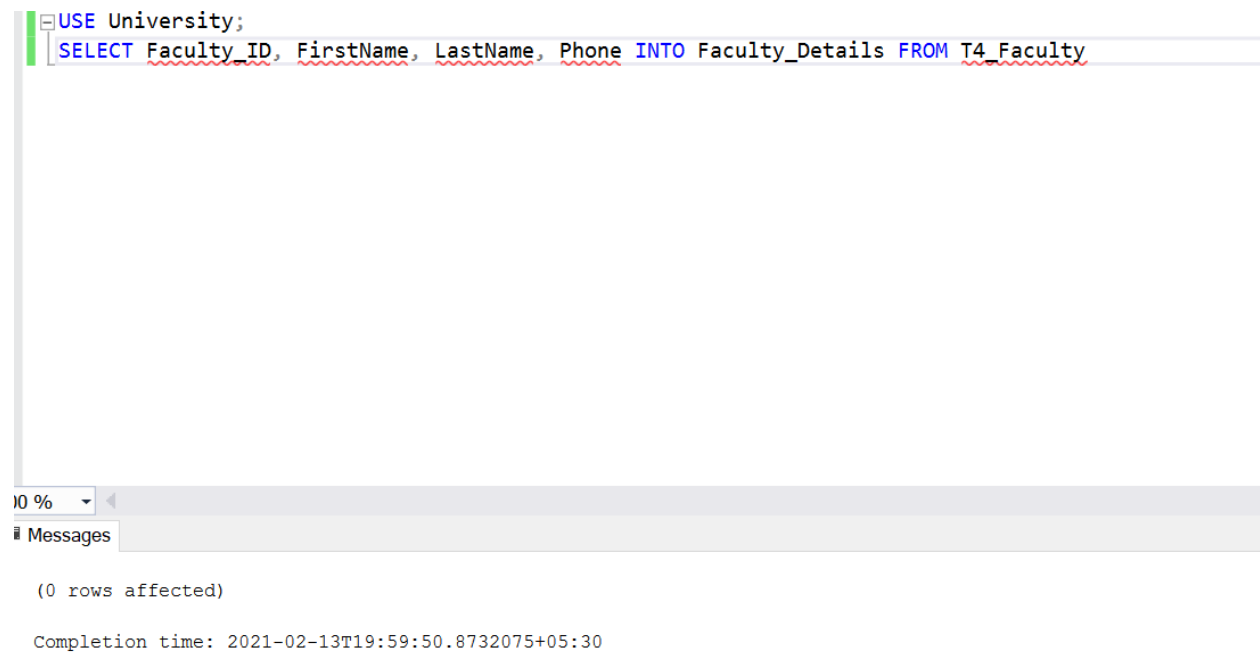
7. Create Table using Select Statement

Query:

USE University;

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

Output:



The screenshot shows a SQL query execution window. The query is: `USE University;` followed by `SELECT Faculty_ID, FirstName, LastName, Phone INTO Faculty_Details FROM T4_Faculty`. The output pane shows "(0 rows affected)" and the completion time: "2021-02-13T19:59:50.8732075+05:30".

```
USE University;  
SELECT Faculty_ID, FirstName, LastName, Phone INTO Faculty_Details FROM T4_Faculty
```

10 %

Messages

(0 rows affected)

Completion time: 2021-02-13T19:59:50.8732075+05:30

Viewing the created table:

```
USE University;
/*SELECT Faculty_ID, FirstName, LastName, Phone INTO Faculty_Details FROM T4_Faculty
*/
SELECT * FROM Faculty_Details;
```

100 %

Results Messages

| Faculty_ID | FirstName | LastName | Phone |
|------------|-----------|----------|-------|
|------------|-----------|----------|-------|

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:

```
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
)
```

.00 %

Messages

Commands completed successfully.

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

Viewing the created table:

```
SELECT * FROM Classmate
```

.00 %

Results Messages

| First_Name | Last_Name | Gender | Phone_Number | DOB | Age | Address_details |
|------------|-----------|--------|--------------|-----|-----|-----------------|
|------------|-----------|--------|--------------|-----|-----|-----------------|