

COLE.VN
Connecting knowledge

Tổng quan CSDL Truy vấn dữ liệu

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NỘI DUNG CHÍNH

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- DDL statement
- Constraint
- DML statement
- Bài tập thực hành

DDL statement

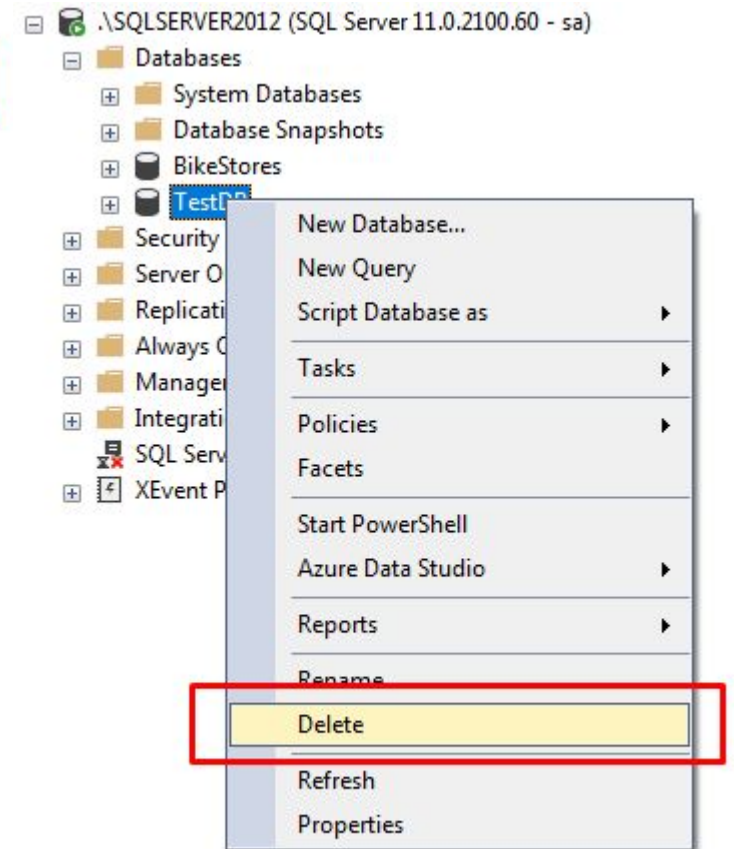
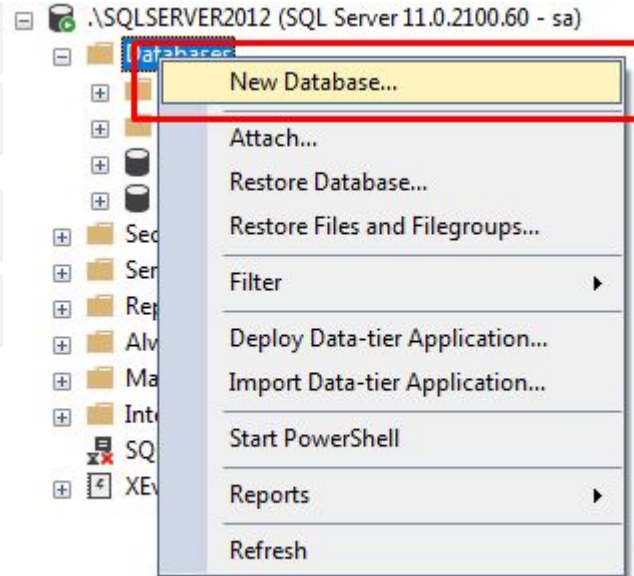
- Database:

```
CREATE DATABASE databasename;
```

```
CREATE DATABASE testDB;
```

```
DROP DATABASE databasename;
```

```
DROP DATABASE testDB;
```

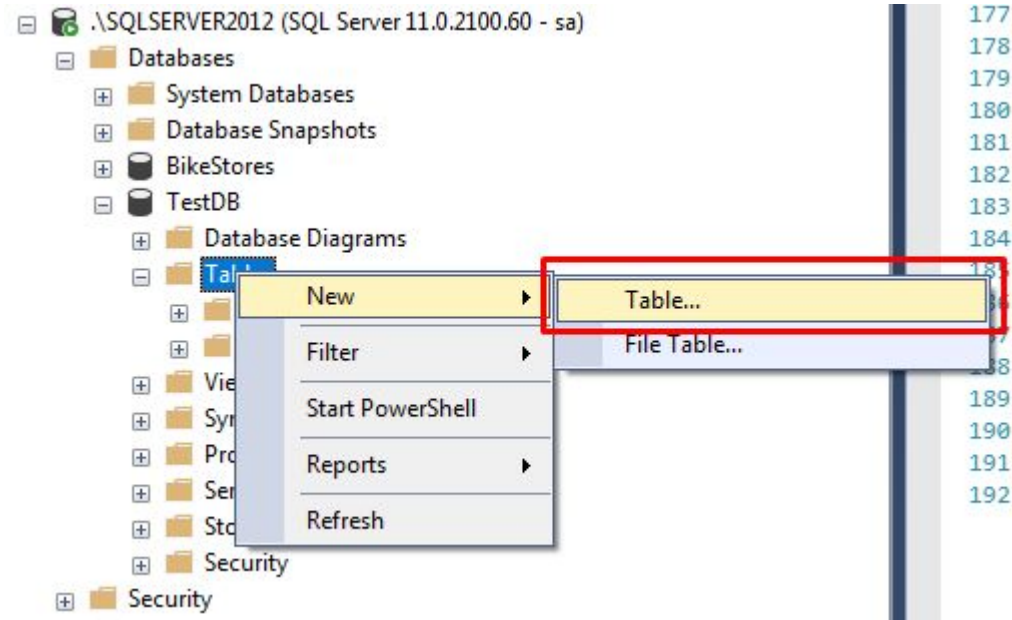


DDL statement

- Table:

```
CREATE TABLE table_name (  
    column1 datatype,  
    column2 datatype,  
    column3 datatype,  
    ....  
);
```

```
CREATE TABLE Persons (  
    PersonID int,  
    LastName varchar(255),  
    FirstName varchar(255),  
    Address varchar(255),  
    City varchar(255)  
);
```



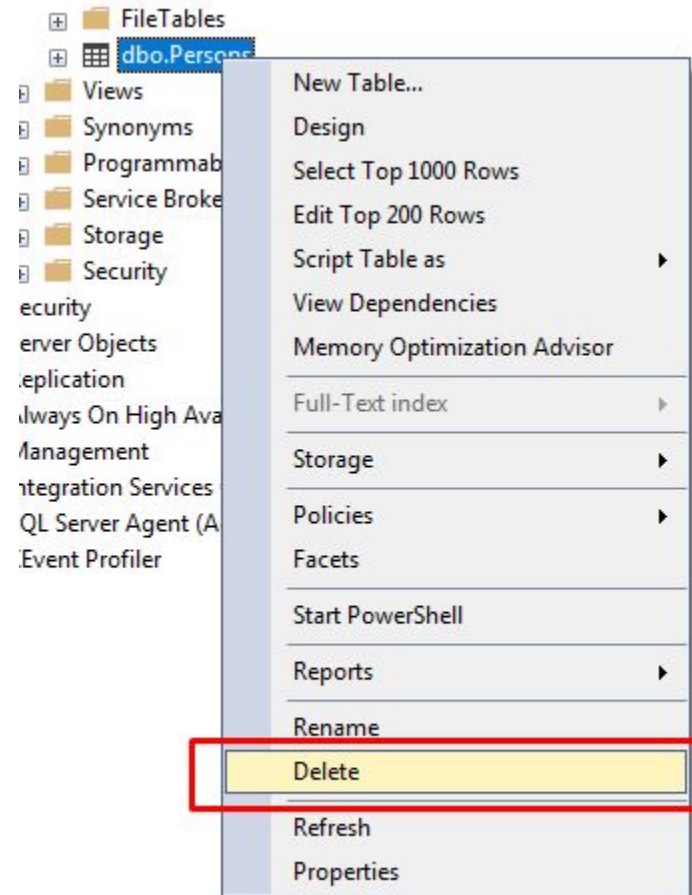
DDL statement

- Table:

```
DROP TABLE table_name;
```

```
TRUNCATE TABLE table_name;
```

```
DROP TABLE Persons;
```



DDL statement

- Table:

```
ALTER TABLE table_name  
ADD column_name datatype;
```

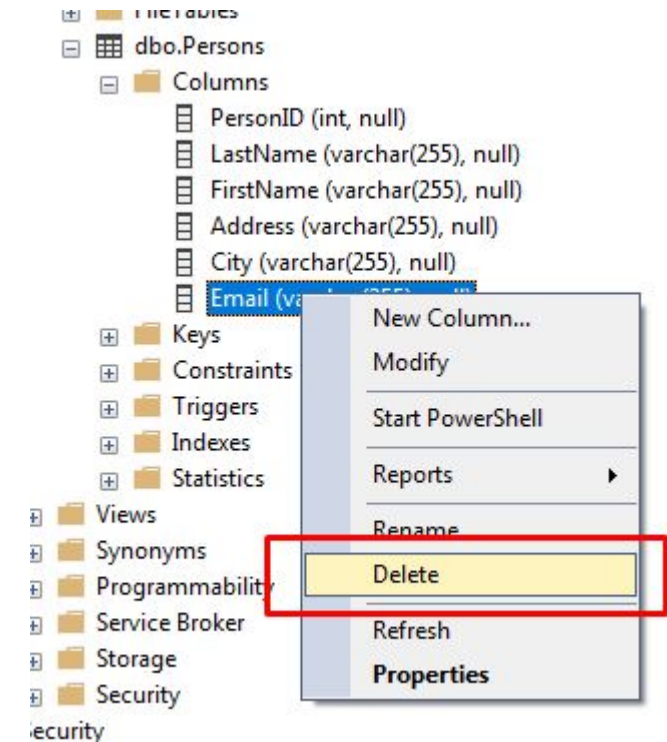
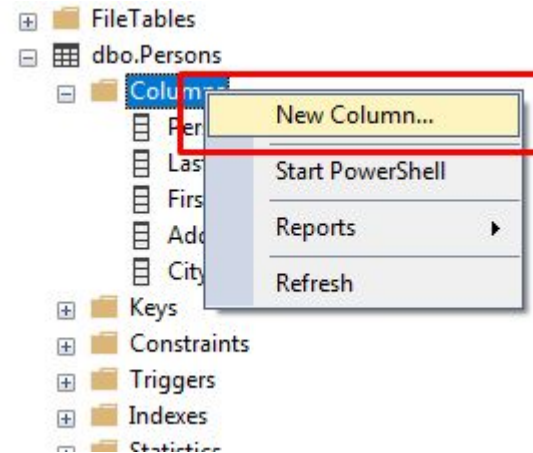
```
ALTER TABLE Persons  
ADD Email varchar(255);
```

```
ALTER TABLE table_name  
DROP COLUMN column_name;
```

```
ALTER TABLE Persons  
DROP COLUMN Email;
```

```
ALTER TABLE table_name  
ALTER COLUMN column_name datatype;
```

```
ALTER TABLE Persons  
ALTER COLUMN Email varchar(500);
```



Constraint

- Ràng buộc dữ liệu (Constraint) được chỉnh định khi tạo bảng (create table) hoặc sửa bảng (alter table)

```
create table table_name (  
    column1 datatype constraint,  
    column2 datatype constraint,  
    column3 datatype constraint,  
    ....  
);
```

- Mục đích: Đảm bảo tính toàn vẹn của dữ liệu
- Các loại constraint cơ bản:

- NOT NULL
- UNIQUE
- PRIMARY_KEY
- FOREIGN_KEY
- CHECK
- DEFAULT
- AUTO_INCREMENT
- ...

```
CREATE TABLE Persons (  
    ID int IDENTITY(1,1) PRIMARY KEY,  
    Code varchar(255) NOT NULL UNIQUE,  
    LastName varchar(255) NOT NULL,  
    FirstName varchar(255) NOT NULL,  
    Age int CHECK (Age>=18),  
    City varchar(255) DEFAULT 'HN'  
);
```

```
CREATE TABLE Orders (  
    OrderID int NOT NULL PRIMARY KEY,  
    OrderNumber int NOT NULL,  
    PersonID int FOREIGN KEY REFERENCES Persons(ID)  
);
```


DML statement

- Insert

```
INSERT INTO table_name (column1, column2, column3, ...)
VALUES (value1, value2, value3, ...);
```

```
INSERT INTO table_name
VALUES (value1, value2, value3, ...);
```

```
INSERT INTO table2
SELECT * FROM table1
WHERE condition;
```

```
INSERT INTO table2 (column1, column2, column3, ...)
SELECT column1, column2, column3, ...
FROM table1
WHERE condition;
```

DML statement

- Update

```
UPDATE table_name  
SET column1 = value1, column2 = value2, ...  
WHERE condition;
```

- Delete

```
DELETE FROM table_name WHERE condition;
```

```
DELETE tb1  
FROM  
    Table1 tb1  
    INNER JOIN Table2 tb2 ON tb2.key = tb1.key  
WHERE ...
```

Bài tập thực hành

Hoc_Sinh

Column Name	Data Type	Allow Nulls	Primary Key
Hoc_Sinh_Id	int	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ngay_Tao	datetime	<input type="checkbox"/>	<input type="checkbox"/>
Ngnoi_Tao	nvarchar(50)	<input type="checkbox"/>	<input type="checkbox"/>
Ngay_Sua	datetime	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ngnoi_Sua	nvarchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ma	nvarchar(50)	<input type="checkbox"/>	<input type="checkbox"/>
Ten	nvarchar(500)	<input type="checkbox"/>	<input type="checkbox"/>
Ngay_Sinh	date	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Gioi_Tinh	nvarchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
So_Dien_Thoai	nvarchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dia_Chi	nvarchar(500)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
So_Thich	nvarchar(500)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ky_Nang	nvarchar(500)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ghi_Chú	nvarchar(500)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lop_Hoc_Id	int	<input type="checkbox"/>	<input type="checkbox"/>

Lop_Hoc

Column Name	Data Type	Allow Nulls	Primary Key
Lop_Hoc_Id	int	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ngay_Tao	datetime	<input type="checkbox"/>	<input type="checkbox"/>
Ngnoi_Tao	nvarchar(50)	<input type="checkbox"/>	<input type="checkbox"/>
Ngay_Sua	datetime	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ngnoi_Sua	nvarchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ma	nvarchar(50)	<input type="checkbox"/>	<input type="checkbox"/>
Ten	nvarchar(500)	<input type="checkbox"/>	<input type="checkbox"/>

- ☐ Tạo 4 row dữ liệu cho bảng Lop_Hoc
- ☐ Tạo 30 row dữ liệu cho bảng Hoc_Sinh (chia ra cho 4 lớp)

THANK YOU !

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