

03.CRUD-Query



SQL UPDATE Statement

แก้ไขข้อมูลที่อยู่ในตาราง โดยกำหนดค่าแต่ละ Field ตามเงื่อนไขที่กำหนด

UPDATE table_name

SET column1 = value1, column2 = value2, ...

WHERE condition;

Customers Table

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
90	Wilman Kala	Matti Karttunen	Keskuskatu 45	Helsinki	21240	Finland
91	Wolski	Zbyszek	ul. Filtrowa 68	Walla	01-012	Poland

UPDATE Customers

SET ContactName = 'Alfred Schmidt', City= 'Frankfurt'

WHERE CustomerID = 91;

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
90	Wilman Kala	Matti Karttunen	Keskuskatu 45	Helsinki	21240	Finland
91	Wolski	Alfred Schmidt	ul. Filtrowa 68	Frankfurt	01-012	Poland

Customers Table

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Alfred Schmidt	Obere Str. 57	Frankfurt	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

UPDATE Customers
SET ContactName='Juan'
WHERE Country='Mexico';

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Alfred Schmidt	Obere Str. 57	Frankfurt	12209	Germany
2	Ana Trujillo Emparedados y helados	Juan	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Juan	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

SQL UPDATE Statement

- ข้อควรระวัง ในการใช้คำสั่ง UPDATE คือการแก้ไขโดยไม่มีคำสั่งเงื่อนไขหรือ WHERE จะทำให้เกิดการแก้ไขข้อมูลทั้งหมดทุกแถวเป็นค่าเดียวกัน

UPDATE Customers SET ContactName='Juan';

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Juan	Obere Str. 57	Frankfurt	12209	Germany
2	Ana Trujillo Emparedados y helados	Juan	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Juan	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Juan	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Juan	Berguvsvägen 8	Luleå	S-958 22	Sweden

SQL DELETE Statement

ลบข้อมูลออกจาก TABLE ตามเงื่อนไขที่กำหนด

DELETE FROM table_name

WHERE condition;

- ข้อควรระวัง ควรระวังการใช้คำสั่ง **DELETE** ที่ไม่มีเงื่อนไข เพราะเป็นการลบข้อมูลทั้งหมดในตาราง

DELETE FROM table_name; 

Customers Table

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
90	Wilman Kala	Matti Karttunen	Keskuskatu 45	Helsinki	21240	Finland
91	Wolski	Zbyszek	ul. Filtrowa 68	Walla	01-012	Poland

DELETE FROM Customers
WHERE CustomerID = 91;

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
90	Wilman Kala	Matti Karttunen	Keskuskatu 45	Helsinki	21240	Finland

DELETE FROM Customers
WHERE CustomerName = 'Wilman Kala';

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
91	Wolski	Zbyszek	ul. Filtrowa 68	Walla	01-012	Poland

The SQL SELECT TOP Clause

SELECT TOP number|percent column_name(s)
FROM table_name
WHERE condition;

1. กำหนดจำนวนแถวข้อมูลที่ต้องการแสดง

เช่น **SELECT TOP 3** CustomerName, City **FROM** Customers;

2. ใช้เปอร์เซ็นต์ในการเลือกจำนวนข้อมูลที่จะแสดง

เช่น **SELECT TOP 25 PERCENT * FROM** Customers;

SQL Joins

เป็นคำสั่งที่เชื่อมข้อมูลระหว่างตารางตั้งแต่สองตารางขึ้นไป โดยพิจารณาจากความสัมพันธ์ระหว่าง Foreign Key กับ Primary Key

SELECT column, column, ... **FROM** Table1

[INNER/LEFT/RIGHT/FULL OUTER] JOIN Table2 ON

Table1.column = Table2.column

โดยที่ Table1.column จะเป็น Primary Key หรือ Foreign Key ที่เชื่อมไปยัง Table2

Table2.column เป็น Primary Key หรือ Foreign Key ที่เชื่อมไปยัง Table1

INNER JOIN

Customers Table

CustomerID	CustomerName	ContactName	City	Country
89	White Clover Markets	Karl Jablonski	Seattle	USA
90	Wilman Kala	Matti Karttunen	Helsinki	Finland
91	Wolski	Zbyszek	Walla	Poland

Orders Table

OrderID	OrderDate	CustID
1	2020-03-15	89
2	2020-03-16	89
3	2020-03-16	90
4	2020-03-17	

```
SELECT OrderID, OrderDate, CustomerName, City, Country
FROM Orders
INNER JOIN Customers ON Orders.CustID = Customers.CustomerID;
```

OrderID	OrderDate	CustomerName	City	Country
1	2020-03-15	White Clover Markets	Seattle	USA
2	2020-03-16	White Clover Markets	Seattle	USA
3	2020-03-16	Wilman Kala	Helsinki	Finland

LEFT JOIN

Customers Table

CustomerID	CustomerName	ContactName	City	Country
89	White Clover Markets	Karl Jablonski	Seattle	USA
90	Wilman Kala	Matti Karttunen	Helsinki	Finland
91	Wolski	Zbyszek	Walla	Poland

Orders Table

OrderID	OrderDate	CustID
1	2020-03-15	89
2	2020-03-16	89
3	2020-03-16	90
4	2020-03-17	

```
SELECT OrderID, OrderDate, CustomerName, City, Country
FROM Orders
LEFT JOIN Customers ON Orders.CustID = Customers.CustomerID;
```

OrderID	OrderDate	CustomerName	City	Country
1	2020-03-15	White Clover Markets	Seattle	USA
2	2020-03-16	White Clover Markets	Seattle	USA
3	2020-03-16	Wilman Kala	Helsinki	Finland
4	2020-03-17			

RIGHT JOIN

Customers Table

CustomerID	CustomerName	ContactName	City	Country
89	White Clover Markets	Karl Jablonski	Seattle	USA
90	Wilman Kala	Matti Karttunen	Helsinki	Finland
91	Wolski	Zbyszek	Walla	Poland

Orders Table

OrderID	OrderDate	CustID
1	2020-03-15	89
2	2020-03-16	89
3	2020-03-16	90
4	2020-03-17	

SELECT OrderID, OrderDate, CustomerName, City, Country
FROM Orders
RIGHT JOIN Customers **ON** Orders.CustID = Customers.CustomerID;

OrderID	OrderDate	CustomerName	City	Country
1	2020-03-15	White Clover Markets	Seattle	USA
2	2020-03-15	White Clover Markets	Seattle	USA
3	2020-03-16	Wilman Kala	Helsinki	Finland
		Wolski	Walla	Poland

FULL JOIN

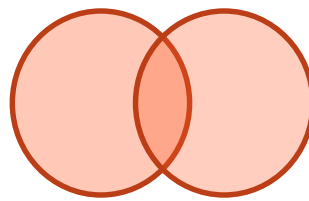


TABLE 1 TABLE 2

Customers Table

CustomerID	CustomerName	ContactName	City	Country
89	White Clover Markets	Karl Jablonski	Seattle	USA
90	Wilman Kala	Matti Karttunen	Helsinki	Finland
91	Wolski	Zbyszek	Walla	Poland

Orders Table

OrderID	OrderDate	CustID
1	2020-03-15	89
2	2020-03-16	89
3	2020-03-16	90
4	2020-03-17	

SELECT OrderID, OrderDate, CustomerName, City, Country
FROM Orders
FULL OUTER JOIN Customers **ON** Orders.CustID =
Customers.CustomerID;

OrderID	OrderDate	CustomerName	City	Country
1	2020-03-15	White Clover Markets	Seattle	USA
2	2020-03-16	Wilman Kala	Helsinki	Finland
		Wolski	Walla	Poland
4	2020-03-17			

CROSS JOIN

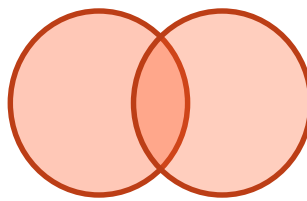


TABLE 1 TABLE 2

Customers Table

CustomerID	CustomerName	ContactName	City	Country
89	White Clover Markets	Karl Jablonski	Seattle	USA
90	Wilman Kala	Matti Karttunen	Helsinki	Finland
91	Wolski	Zbyszek	Walla	Poland

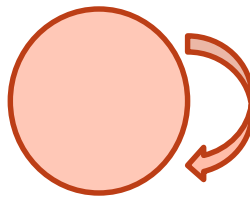
Shipper Table

ShipperID	ShipperName
1	DHL
2	Kerry

SELECT ShipperID, ShipperName, CustomerName, City, Country
FROM Shipper
CROSS OUTER JOIN Customers

ShipperID	ShipperName	CustomerName	City	Country
1	DHL	White Clover Markets	Seattle	USA
1	DHL	Wilman Kala	Helsinki	Finland
1	DHL	Wolski	Walla	Poland
2	Kerry	White Clover Markets	Seattle	USA
2	Kerry	Wilman Kala	Helsinki	Finland
2	Kerry	Wolski	Walla	Poland

SELF JOIN



Accounts Table

TABLE 1

AccountID	AccountName	Balance
1	White Clover Markets	15600
2	Wilman Kala	20000
3	Wolski	5000
4	William Colman	35000

SELECT a.AccountID, b.AccountName, b.Balance
FROM Accounts a, Accounts b
WHERE a.Balance < b.Balance;

AccountID	AccountName	Balance
1	Wilman Kala	20000
1	William Colman	35000
2	William Colman	35000
3	White Clover Markets	15000
3	Wilman Kala	20000
3	William Colman	35000

PRODUCTS

ProductID	ProductName	SupplierID	CategoryID	Price
1	AAA	1	1	18
2	BBB		1	19
3	CCC	3	2	10
4	DDD	2	2	22

CATEGORIES

CategoryID	CategoryName
1	Shoes
2	Socks
3	Pants

SUPPLIERS

SupplierID	SupplierName
1	Thailand
2	Japan
3	Korea
4	China

SQL Command	Result
SELECT CategoryID, CategoryName, ProductName FROM Products INNER JOIN Categories ON Products.CategoryID = Categories.CategoryID	
SELECT CategoryID, CategoryName, ProductName FROM Products INNER JOIN Categories ON Products.CategoryID = Categories.CategoryID WHERE CategoryID = 1;	
SELECT ProductID, ProductName, SupplierName FROM Products LEFT JOIN Suppliers ON Products.SupplierID = Suppliers.SupplierID	

PRODUCTS

ProductID	ProductName	SupplierID	CategoryID	Price
1	AAA	1	1	18
2	BBB		1	19
3	CCC	3	2	10
4	DDD	2	2	22

CATEGORIES

CategoryID	CategoryName
1	Shoes
2	Socks
3	Pants

SUPPLIERS

SupplierID	SupplierName
1	Thailand
2	Japan
3	Korea
4	China

SQL Command	Result
SELECT SupplierID, SupplierName, ProductName FROM Products RIGHT JOIN Suppliers ON Products.SupplierID = Suppliers.SupplierID	
SELECT CategoryID, CategoryName, ProductName FROM Products FULL OUTER JOIN Categories	
SELECT a.ProductID, b.ProductName, a.Price FROM Products a, Products b WHERE a.Price > b.Price	