

LAB # 4:

SQL SELECT, DELETE, UPDATE, INSERT INTO COMMANDS

Objective (aim) of the experiment

To practice and implement SQL Commands (SELECT, DELETE, UPDATE, INSERT INTO).

Scoring Rubrics for Lab 4:				
S#	Task	Weightage	Obtained	Signature and Date
1	Using the 'Insert' statement correctly	30 %		
2	Using the 'Select' statement correctly	30 %		
3	Using the 'Delete' statement correctly	20 %		
4	Using the 'Update' statement correctly	20%		
Total marks obtained in this lab		100%	%	

Equipment used

Sl. No.	Facilities Required	Quantity
1	System	1
2	Operating System	Windows 7
3	DBMS	Sql Server Management Studio 2012

TASKS

The SQL SELECT Statement

The SELECT statement is used to select data from a database. The result is stored in a result table, called the result-set.

```
SELECT column_name,column_name
```

```
FROM table_name;
```

and

```
SELECT * FROM table_name;
```

Demo Database

We will use the well-known Northwind sample database.

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	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

Below is a selection from the "Customers" table:

SELECT Column Example

The following SQL statement selects the "CustomerName" and "City" columns from the "Customers" table:

Example

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SELECT CustomerName, City FROM

Customers; SELECT * Example

The following SQL statement selects all the columns from the "Customers" table: Example

SELECT * FROM Customers;

The SQL INSERT INTO Statement

The INSERT INTO statement is used to insert new records in a table. SQL INSERT INTO Syntax

It is possible to write the INSERT INTO statement in two forms.

The first form does not specify the column names where the data will be inserted, only their values:

```
INSERT INTO table_name
```

```
VALUES (value1,value2,value3,...);
```

The second form specifies both the column names and the values to be inserted:

```
INSERT INTO table_name (column1,column2,column3,...)
```

```
VALUES (value1,value2,value3,...);
```

Demo Database

In this tutorial we will use the well-known Northwind sample database. Below is a selection from the "Customers" table:

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
87	Wartian Herkku	Pirkko Koskitalo	Torikatu 38	Oulu	90110	Finland

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88	Wellington Importadora	Paula Parente	Rua do Mercado, 12	Resende	08737-363	Brazil
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

INSERT INTO Example

Assume we wish to insert a new row in the "Customers"

table. We can use the following SQL statement:

Example

```
INSERT INTO Customers (CustomerName, ContactName, Address, City, PostalCode, Country) VALUES ('Cardinal','Tom B. Erichsen','Skagen 21','Stavanger','4006','Norway');
```

The selection from the "Customers" table will now look like this:

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
87	Wartian Herkku	Pirkko Koskitalo	Torikatu 38	Oulu	90110	Finland
88	Wellington Importadora	Paula Parente	Rua do Mercado, 12	Resende	08737-363	Brazil
89	White Clover Markets	Karl Jablonski	305 - 14th Ave. S. Suite 3B	Seattle	98128	USA
90	Wilman Kala	Matti	Keskuskatu 45	Helsinki	21240	Finland

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		Karttunen				
91	Wolski	Zbyszek	ul. Filtrowa 68	Walla	01-012	Poland
92	Cardinal	Tom B. Erichsen	Skagen 21	Stavanger	4006	Norway

Insert Data Only in Specified Columns

It is also possible to only insert data in specific columns.

The following SQL statement will insert a new row, but only insert data in the "CustomerName", "City", and "Country" columns (and the CustomerID field will of course also be updated automatically):

Example

```
INSERT INTO Customers (CustomerName, City,  
Country) VALUES ('Cardinal', 'Stavanger',  
'Norway');
```

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
87	Wartian Herkku	Pirkko Koskitalo	Torikatu 38	Oulu	90110	Finland
88	Wellington Importadora	Paula Parente	Rua do Mercado, 12	Resende	08737-363	Brazil
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

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91	Wolski	Zbyszek	ul. Filtrowa 68	Walla	01-012	Poland
92	Cardinal	null	null	Stavanger	null	Norway

The SQL DELETE Statement

The DELETE statement is used to delete rows in a

table. SQL DELETE Syntax

DELETE FROM *table_name*

WHERE *some_column=some_value*;

Demo Database

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedado s y helados	Ana Trujillo	Avda. de la Constituci ón 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	Berguvsväg e n 8	Luleå	S-958 22	Sweden

In this tutorial we will use the well-known Northwind sample database.

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Below is a selection from the "Customers" table:

SQL DELETE Example

Assume we wish to delete the customer "Alfreds Futterkiste" from the "Customers" table. We use the following SQL statement:

Example

```
DELETE FROM Customers
```

```
WHERE CustomerName='Alfreds
```

```
Futterkiste' AND ContactName='Maria
```

```
Anders';
```

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitució n 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
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Delete All Data

It is possible to delete all rows in a table without deleting the table. This means that the table structure, attributes, and indexes will be intact:

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```
DELETE FROM table_name;
```

Or

```
DELETE * FROM table_name;
```

Note: Be very careful when deleting records. You cannot undo this statement!

The SQL UPDATE Statement

The UPDATE statement is used to update existing records in a

table. SQL UPDATE Syntax

```
UPDATE table_name
```

```
SET
```

```
column1=value1,column2=value2,...
```

```
WHERE
```

Notice the WHERE clause in the SQL UPDATE statement! The WHERE clause specifies which record or records that should be updated. If you omit the WHERE clause, all records will be updated!

```
some_column=some_value;
```

Demo Database

In this tutorial we will use the well-known Northwind sample database.

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitució n 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico

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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

Below is a selection from the "Customers" table:

SQL UPDATE Example

Assume we wish to update the customer "Alfreds Futterkiste" with a new contact person and city.

We use the following SQL statement:

Example

UPDATE Customers

SET ContactName='Alfred Schmidt',

City='Hamburg' WHERE

CustomerName='Alfreds Futterkiste';

Custo merID	CustomerName	ContactNa me	Address	City	PostalCod e	Country
1	Alfreds Futterkiste	Alfred Schmidt	Obere Str. 57	Hamburg	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

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Update Warning!

Be careful when updating records. If we had omitted the WHERE clause, in the example above, like this:

```
UPDATE Customers
```

```
SET ContactName='Alfred Schmidt', City='Hamburg';
```

The "Customers" table would have looked like this:

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

EXPECTED DELIVERABLE

A spool file showing all executions of the above queries.