

A decorative graphic on the left side of the slide, consisting of a network of white lines and small circles on a dark teal background, resembling a circuit board or a neural network.

WEEK 5

SQL – INSERTING, UPDATING AND DELETING ROWS OF DATA

STUDENT OBJECTIVES

- Upon completion of this video, you should be able to:
 - Insert rows of data into a table
 - Update a row(s) of data in a table or some attributes within rows in a table
 - Delete a row of data from a table
 - Show the attribute names and types for an existing table

INSERTING Data Into Tables:

In this way, the order is given

INSERT INTO TableName (Attr1Name, Attr2Name, Attr3Name)
VALUES (value1, value2, value3);

OR

if you're putting something invalid (i.e. foreign key does not match), you'll receive an error.

INSERT INTO TableName **VALUES** (value1, value2, value3);

NOTE: if you use this method you must put a value for EVERY field and in the correct order that the fields are in the table

Example:

upper case

INSERT INTO owner (firstname, lastname, ownerid) **VALUES**
("Laura", "Reid", 1);

int, no need

INSERT INTO pet VALUES (100, "w", "w", 22)

○ UPDATING Existing Data:

UPDATE TableName SET AttrName = 'Value' WHERE Condition;

Example:

*UPDATE owner SET firstname="Elaine" WHERE firstname
="Laura";*

to verify, the update, we could use:

*SELECT * FROM owner -*

WHERE lastname = "Laura"
also works.

EXAMPLES USING QUOTES:

```
mysql> SELECT 'hello', '"hello"', '""hello""', 'hel'lo', '\hello';
```

```
+-----+-----+-----+-----+-----+
| hello | "hello" | ""hello"" | hel'lo | 'hello |
+-----+-----+-----+-----+-----+
```

```
mysql> SELECT "hello", "'hello'", '"hello"', "hel"lo", "\"hello";
```

```
+-----+-----+-----+-----+-----+
| hello | 'hello' | '"hello"' | hel"lo | "hello |
+-----+-----+-----+-----+-----+
```

```
mysql> SELECT 'This\nIs\nFour\nLines';
```

```
+-----+
| This
Is
Four
Lines |
+-----+
```

```
mysql> SELECT 'disappearing\ backlash';
```

```
+-----+
| disappearing backlash |
+-----+
```

DELETING Tuples From Tables:

be careful with this one.

↓

DELETE FROM TableName WHERE Condition

if there's no condition,
everything is deleted.

Example:

DELETE FROM owner WHERE lastname = 'Reid';

But if the item is linked to other field as foreign key,
system would prevent this action and throws an exception

Getting information back (if you can't remember table names or column names)

SHOW DATABASES;
SHOW TABLES;
SHOW COLUMNS IN tablename;

e.g. SHOW COLUMNS IN employee;

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| laurascompany |
| lreid2tadb |
| mysql |
| performance_schema |
| testinclass |
| vetdb |
+-----+
7 rows in set (0.01 sec)

mysql> show tables;
+-----+
| Tables_in_lurascompany |
+-----+
| DEPARTMENT |
| EMPLOYEE |
| PROJECT |
| WORKS_ON |
+-----+
4 rows in set (0.00 sec)

mysql> show columns in EMPLOYEE;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| SSN | varchar(9) | NO | PRI | NULL | |
| lastname | varchar(20) | YES | | NULL | |
| firstname | varchar(20) | YES | | NULL | |
| sex | varchar(1) | YES | | NULL | |
| deptno | char(3) | YES | | NULL | |
| city | varchar(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```


$$BB.g = CC.g$$

b 7 g d z

5 9 8 low 55

5 4 6 gene 55

5 4 6 pig 66

$$(1+4+1)/3 = 2.$$

$$AA.d = CC.d.$$

$$4+2+1$$

a b c d f z

1 3 4 low 8 55

2 5 5 gene 6 55

4 2 5 low 8 55

y			z			x		
A			B			C		
a	b	c	d	e		e	f	g
1	3	10	5	44		44	2	1
5	4	5	1	3		3	1	7
3	14	5	5	1		3	2	8
5	2	8						

a b c 7 8 d

3 14 5 1 7 5

3 14 5 2 8