

Adding, Changing, and Removing Data



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So far, all we've done is query data, but SQL has commands for adding and modifying data as well.

All the Commands – AKA CRUD

SELECT (i.e. read)

INSERT (i.e. create)

UPDATE

DELETE

INSERT

Command is actually INSERT INTO

Table name after command

Only one table allowed

List of columns in parens

VALUES keyword

List of values in parens

Values and columns must be equal

```
INSERT INTO
person
(person_id,
first_name,
last_name,
contacted_number,
date_last_contacted,
date_added)
VALUES
(1,
'Jon',
'Flanders',
0,
NULL,
'2016-05-14 11:43:31');
```

◀ INSERT INTO
◀ TABLE

◀ COLUMN NAMES

◀ VALUES KEYWORD

◀ VALUES

BULK INSERT

INSERT allows only one table and column list

Insert multiple rows with one statement

Either multiple values lists or

SELECT statement following table name

```
INSERT INTO
person
(person_id,
first_name,
last_name,
contacted_number,
date_last_contacted,
date_added)
VALUES
(1, 'Jon', 'Flanders',
0, NULL,
'2016-05-14 11:43:31'),
(2, 'Shannon', 'Ahern',
0, NULL,
'2016-05-14 11:43:31');
```

◀ INSERT INTO
◀ TABLE

◀ COLUMN NAMES

◀ VALUES KEYWORD

◀ MULTIPLE VALUES LIST
(COMMA SEPARATED)

```
INSERT INTO  
person p  
SELECT  
* FROM old_person op  
WHERE op.person_id > 300;
```

◀ INSERT INTO
◀ TABLE

◀ SELECT STATEMENT

UPDATE

Modifies column(s) in a single table

WHERE clause dictates which rows

SET keyword follows table name

```
UPDATE  
email_address e  
SET  
e.email_address =  
'aaron@mail.com'  
WHERE  
e.email_address_id = 5;
```

◀ UPDATE COMMAND

◀ TABLE NAME

◀ SET KEYWORD

◀ VALUES

◀ WHERE CLAUSE

DELETE

DELETES one or more rows in a table

Permanent!

DELETE FROM is actual full command

WHERE clause is critical!

```
DELETE FROM person p;
```

```
DELETE FROM person p  
WHERE  
p.id = 5;
```

◀ DELETE COMMAND

BAD PRACTICE!



◀ DELETE COMMAND

◀ WHERE CLAUSE

Good Practice



Summary

INSERT, UPDATE, and DELETE are the three SQL commands you want to learn if you are going to be modifying data in your database tables