

Maintaining the Data

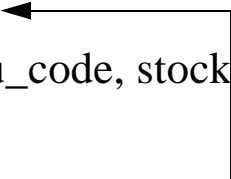
- INSERT
- UPDATE
- DELETE
- LOAD
- UNLOAD

The INSERT Statement

```
INSERT INTO stock  
VALUES (120, 'ANZ', 'roller blades', 195,  
        'crate', '4/crate');
```

Including a Column List

```
INSERT INTO stock (manu_code, stock_num)
VALUES ('ANZ', 130);
INSERT INTO stock (manu_code, stock_num)
VALUES ('NRG', 130)
```



Multiple statements
must be separated by a
semi-colon (;).

Using NULL and ZERO as Place Holders

INSERT INTO customer
VALUES (0, 'John', 'Doe', 'My Sports',
'123 Main Street', NULL, 'Menlo Park',
'CA', '94030', '415-555-1212')

SERIAL COLUMN

NULL VALUE

The diagram consists of two red lines with arrowheads. One line starts at the text 'SERIAL COLUMN' and points down to the '0' in the SQL statement. The other line starts at the text 'NULL VALUE' and points up to the 'NULL' in the SQL statement.

Obtaining Values From a SELECT

```
INSERT INTO closed_orders
  SELECT *
    FROM orders
   WHERE paid_date IS NOT NULL;
```

```
INSERT INTO stock2
  SELECT stock_num, manu_code,
         description, unit_price
    FROM stock
   WHERE unit = 'case'
```

The UPDATE Statement

```
UPDATE customer  
  SET  company = 'College Sports',  
        phone = '510-655-0011'  
WHERE customer_num = 118
```

UPDATE Examples

Update one column in ALL rows

UPDATE stock

SET unit_price = unit_price * 1.05

Update three columns in selected rows

UPDATE orders

SET (ship_date, ship_weight, ship_charge) =
('3/30/94', 20.40, 10)

WHERE order_num = 1002

UPDATE With a Subquery

UPDATE orders

SET ship_instruct = 'ASAP'

WHERE order_date > '6/1/94'

AND customer_num IN

(SELECT customer_num

FROM customer

WHERE city = 'Redwood City')

The DELETE Statement

```
DELETE FROM customer
```

```
    WHERE customer_num = 118
```

1 row(s) deleted.

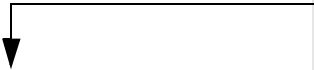
```
DELETE FROM customer
```

```
    WHERE customer_num = 101
```

692: Key value for constraint (informix.u100_1) is still being referenced.

Deleting an Unknown Number of Rows

First count how many rows will be deleted.



```
SELECT COUNT(*) FROM stock  
WHERE description MATCHES 'tennis*';
```

```
DELETE FROM stock  
WHERE description MATCHES 'tennis*'
```

DELETE Using a Subquery

DELETE

FROM items

WHERE order_num IN

(SELECT order_num FROM orders

WHERE order_date < '1/1/94');

DELETE

FROM orders

WHERE order_date < '1/1/94';

The LOAD Statement

LOAD FROM 'new_state' INSERT INTO state

This file contains the data to insert.

new_state

GB Great Britain
HK Hong Kong

The pipe (|) symbol is the default delimiter.

Specifying a Delimiter

LOAD FROM 'new_state' **DELIMITER '!'**
INSERT INTO state

The exclamation point (!) is specified as the delimiter.

new_state

GB!Great Britain!
HK!Hong Kong!

Specifying Columns

```
LOAD FROM 'new_cust'  
INSERT INTO customer  
  (customer_num, fname, lname)
```

Column-list
specified

Zero is used as a place
holder for serial values.

new_cust

0|Peter|Pan|

0||Hook|

No value specified; a null
value will be inserted.

The UNLOAD Statement

```
UNLOAD TO 'new_cust'  
  SELECT * FROM customer  
  WHERE customer_num > 120
```

new_cust

121|Jason|Wallack|City Sports|Lake Biltmore Mall|350 W. 23rd Street|Wilmington|DE|19898|302-366-7511|

122|Cathy|O'Brian|The Sporting Life|543 Nassau Street||Princeton|NJ|08540|609-342-0054|

...

128|Frank|Lessor|Phoenix University|Athletic Department|1817 N. Thomas Road|Phoenix|AZ|85008|602-533-1817|

Specifying a Delimiter

```
UNLOAD TO 'new_cust' DELIMITER ';'
SELECT * FROM customer
WHERE customer_num > 120
```

new_cust

```
121;Jason;Wallack;City Sports;Lake Biltmore Mall;350 W. 23rd
Street;Wilmington;DE;19898;302-366-7511;
122;Cathy;O'Brian;The Sporting Life;543 Nassau Street;Princeton;NJ;08540;609-342-0054;
...
128;Frank;Lessor;Phoenix University;Athletic Department;1817 N. Thomas
Road;Phoenix;AZ;85008;602-533-1817;
```