

Modifying Tables

Copying Tables

Removing Data

Deleting Tuples

Deleting Entries

DB Browser

Introduction to Database Systems: CS312 Updating Tables

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Updated Database

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 We will be using this database to showcase these commands.

cat campusDB_build.txt | sqlite3 myCampusDB.sqlite3



Alter a Table's Name

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- ALTER TABLE command modifies an existing table without performing a full dump and reload of the data.
- Rename an existing table

ALTER TABLE database_name.table_name RENAME TO new_table_name;

Alter a Table's Name

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• Create a new table using *Insert*.

```
INSERT INTO first_table_name
[(column1, column2, ... columnN)]
   SELECT column1, column2, ...columnN
   FROM second_table_name
   [WHERE condition];
```

Alter a Table's Name

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```
• Add a new table to try this on ...
```

```
CREATE TABLE newTable(
  Id varchar,
  name varchar,
  totCred numeric
);
```

.tables

• Change table's name

```
ALTER TABLE newTable RENAME TO oldTable;
```

.tables



Create and Populate New Table From Another: AS

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 Used to create a table from an existing table by copying the existing table's columns with data structures

```
CREATE TABLE new_table AS SELECT expressions
FROM existing_tables
[WHERE conditions];
```

CREATE TABLE TeachesIDs AS SELECT id FROM Teaches;

```
DROP TABLE sTable;
CREATE TABLE sTable AS
    SELECT id, name, totCred
    FROM student
    WHERE ID in ("S1","S2","S3","S4","S5");
```



Removing Tables or Table Data

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 Remove only table's data but leave the empty table in the DB

DELETE FROM tableName;

• Remove entire table and its data too

DROP TABLE tableName;



Delete Tuples From a Table

Used to delete data in a table

First, let's add a row (i.e., a tuple) to delete ...

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DELETE FROM table_name
 WHERE [condition];

Add a record to erase for this example

```
select * from instructor;
INSERT INTO instructor
VALUES ( "E10101", "Potter",
    "ES1", "English", 90000.00 );
/* Did the tuple arrive into the table?*/
    select * from instructor;
```



Delete Tuples From a Table

Second, we delete the recently added row (i.e., a tuple)

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• Delete all tuples in the Instructor for a particular condition

```
delete from instructor where name =="Potter";
```

• Be more specific: add to the conditional part:

```
delete from instructor where name == "Potter"
and deptName == "English";
```



Update an Entry

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• Create a new table using *Update*.

```
UPDATE table_name
   SET column1 = value1,
   column2 = value2...,
   columnN = valueN
   WHERE [condition];
```

 Add an update to the Student table: Replace the ID and credits belonging to "Beuller"

```
UPDATE student SET ID = "XS5" where name == "Beuller";
```

```
UPDATE student SET ID = "S5", totCred = 55
WHERE name == "Beuller";
```



New database: Chinook's

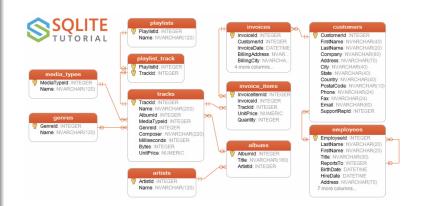
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 Ref: http://www.sqlitetutorial.net/ sqlite-sample-database/



DB Browser

Modifying Tables

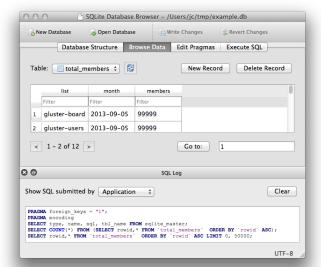
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DB Browser

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About

This program was developed originally by Mauricio Piacentini (@piacentini) from Tabuleiro Producoes, as the Arca Database Browser. The original version was used as a free companion tool to the Arca Database Xtra, a commercial product that embeds SQLite databases with some additional extensions to handle compressed and binary data.

The original code was trimmed and adjusted to be compatible with standard SQLite 2.x databases. The resulting program was renamed SQLite Database Browser, and released into the Public Domain by Mauricio. Icons were contributed by Raquel Ravanini, also from Tabuleiro. Jens Miltner (@jmiltner) contributed the code to support SQLite 3.x databases for the 1.2 release.

- Main: https://sqlitebrowser.org/
- Download: https://sqlitebrowser.org/dl/
- Linux: command: sudo apt-get install sqlitebrowser



DB Browser

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Let's Try It Out!

- Locate the sandbox database called sandbox/chinook.sqlite3
- Test-out the SQLite tool

