

Introduction to Database Systems: CS312

Updating Tables

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Alter a Table's Name

Modifying
Tables

Copying
tables

Removing
Data

Deleting
Tuples

Deleting
Entries

DB Browser

- 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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DB Browser

- Create a new table using *Insert*.

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

Change a Table's Name

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DB Browser

- Add a new table

```
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 Using AS Keyword

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DB Browser

- 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];
```

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

```
INSERT INTO sTable values("S100","Fletcher",4);
```

Removing Tables or Table Data

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DB Browser

- 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

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

- Used to delete data in a table

```
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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DB Browser

- 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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DB Browser

- Create a new table using *Update*.

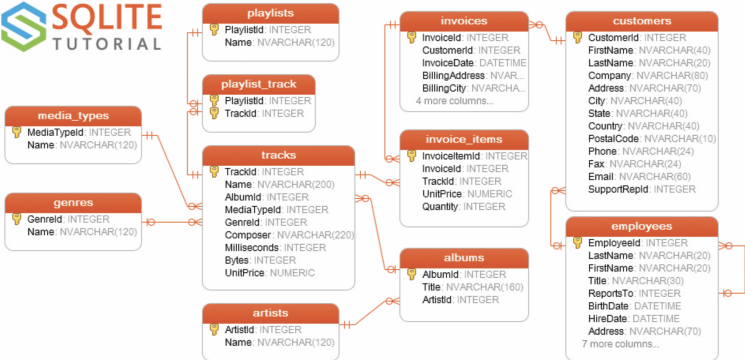
```
UPDATE table_name  
    SET column1 = value1,  
        column2 = value2....,  
        columnN = valueN  
WHERE [condition];
```

- 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 Schema



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

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DB Browser

SQLite Database Browser - /Users/jc/tmp/example.db

New Database Open Database Write Changes Revert Changes

Database Structure Browse Data Edit Pragmas Execute SQL

Table: 

New Record Delete Record

	list	month	members
	Filter	Filter	Filter
1	gluster-board	2013-09-05	99999
2	gluster-users	2013-09-05	99999

< 1 - 2 of 12 >

Go to:

SQL Log

Show SQL submitted by Clear

```
PRAGMA foreign_keys = "1";
PRAGMA encoding
SELECT type, name, sql, tbl_name FROM sqlite_master;
SELECT COUNT(*) FROM (SELECT rowid,* FROM 'total_members' ORDER BY 'rowid' ASC);
SELECT rowid,* FROM 'total_members' ORDER BY 'rowid' ASC LIMIT 0, 50000;
```

UTF-8

Let's Try It Out!

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



THINK