# Updating Tables

CMPSC 305 – Database Systems

# Updated Database

We will be using this database to showcase these commands.

```
cat builder_campusD.txt | sqlite3 myCampusDB.sqlite3
```

# Alter a Table's Name

❖ 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

❖ 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

- Add a new table to try this on …

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


.tables
```

- Change table's name

```
ALTER TABLE myStuff RENAME TO myNewStuff;


.tables
```

# Create and Populate New Table From Another: AS

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

# Removing Tables or Table Data

- 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 IF EXISTS 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)

- 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

➤ Create a new table using Update.
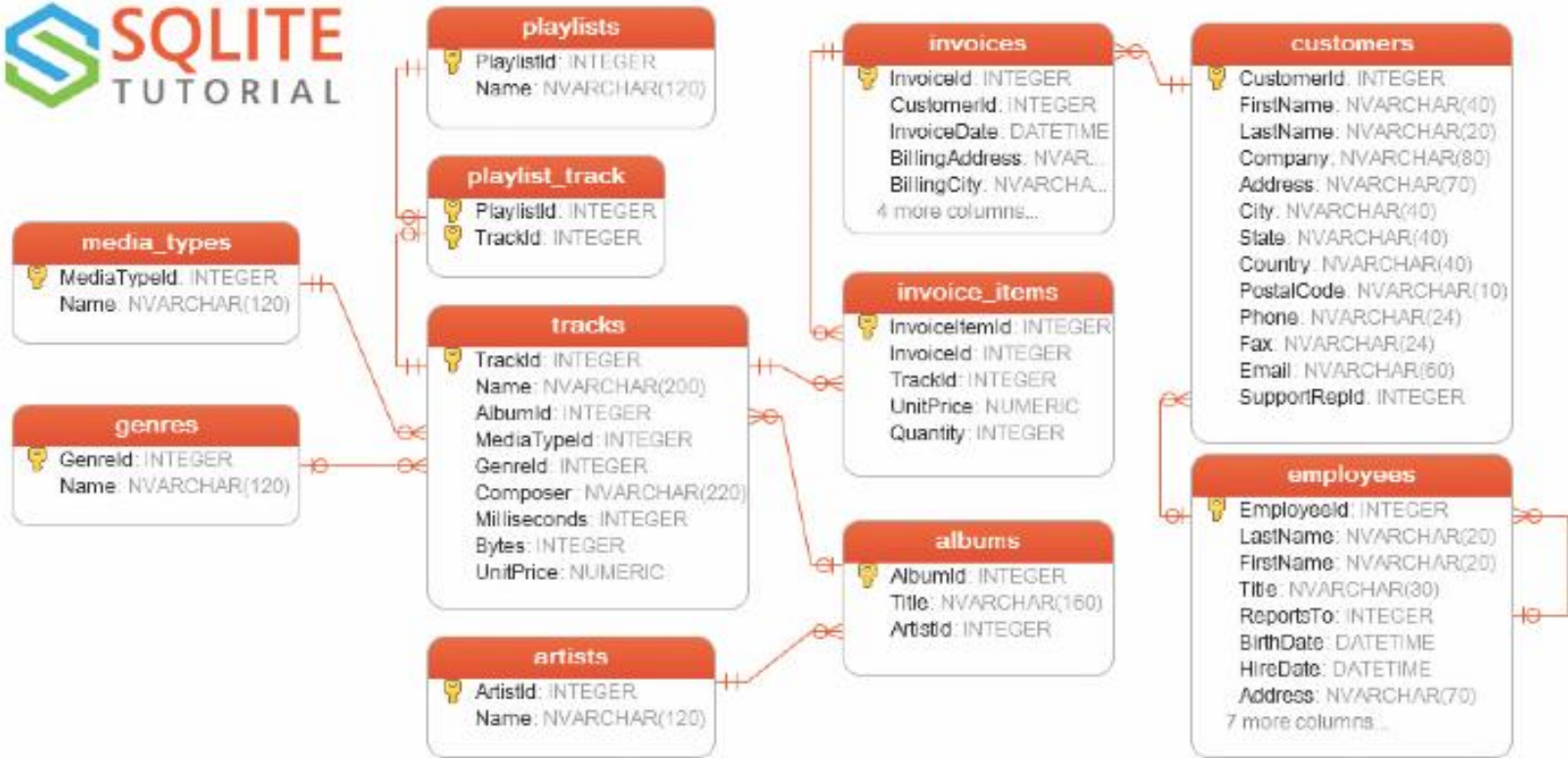
```
UPDATE table_name
        SET column1 = value1,
        column2 = value2....,
        columnN = valueN
        WHERE [condition];
```

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

```
UPDATE student SET ID = "XS5" where name == "Beuller";
```
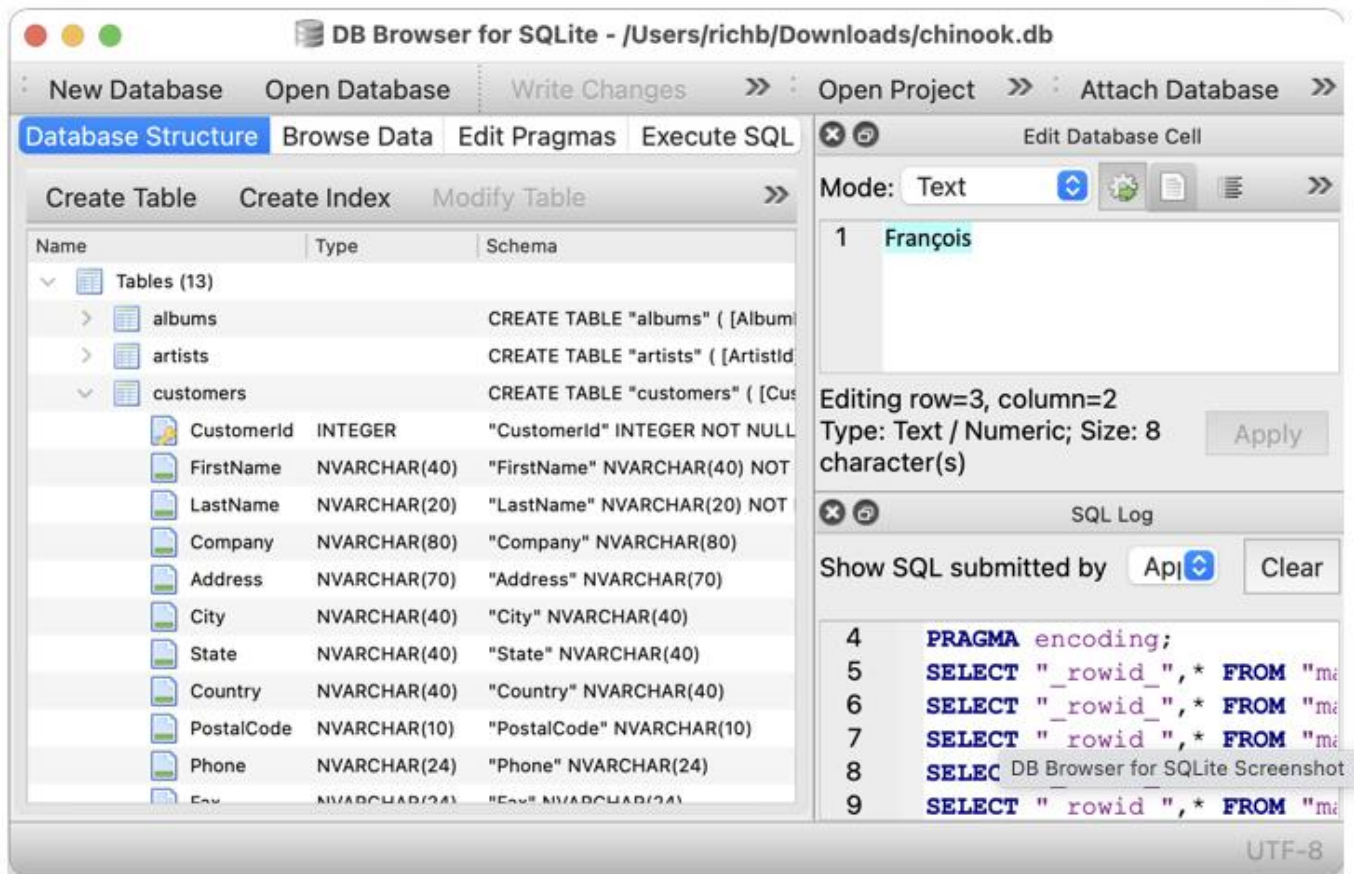
```
UPDATE student SET ID = "S5", totCred = 55
WHERE name == "Beuller";
```

# New database: Chinook's Schema



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

# DB Browser



DB Browser for SQLite Screenshot

# DB Browser

## 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/

# Consider this



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