ALLEGHENY COLLEGE

Introduction to Database Systems: CS305 Updating Tables

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17 October 2023

- We will be using this database to showcase these commands.

```
cat campusDB_build.txt | sqlite3 myCampusDB.sqlite3
```

- 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];
```

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- 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
```

- 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");
```

- 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;
```

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- 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;
```

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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

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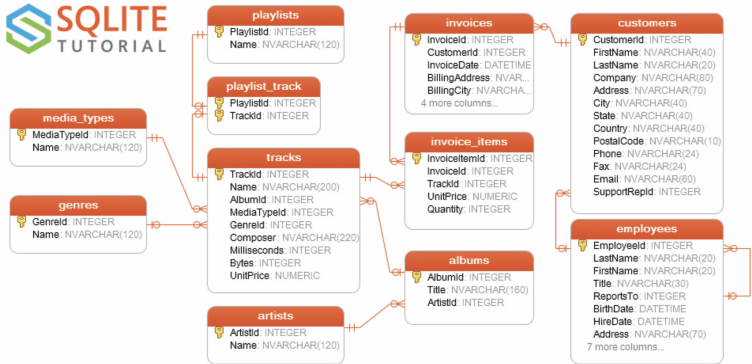- Create a new table using *Update*.

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

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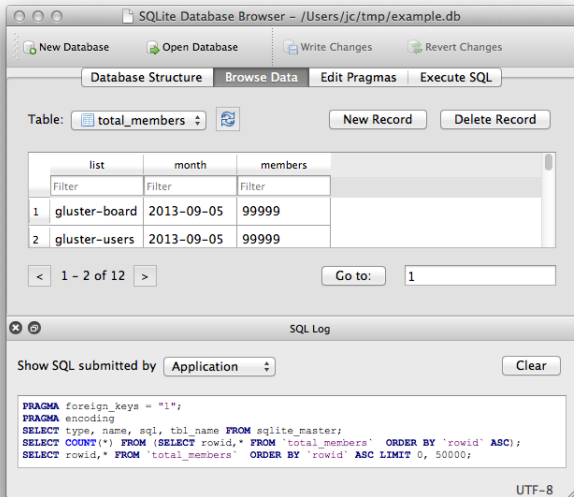 credits belonging to "Beuller"

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

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

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

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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`

Let's Try It Out!

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