Introduction to Database Systems: CS312 Updating Tables

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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];
```

Change a Table's Name

- 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

- 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

- 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)

- 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];
```

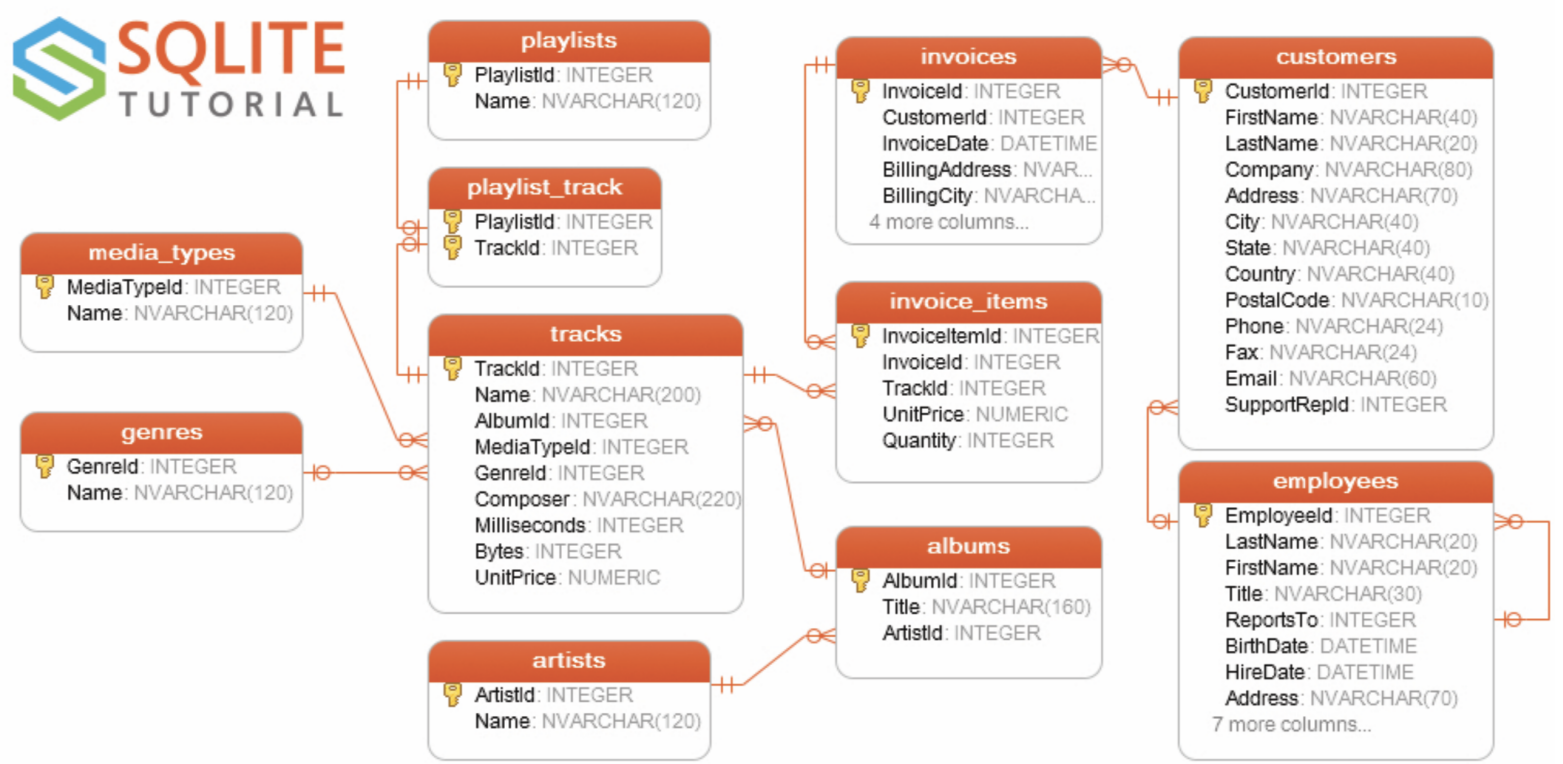
- Add an update to the Student table: Replace the ID and credits belonging to "Beuller"

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

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

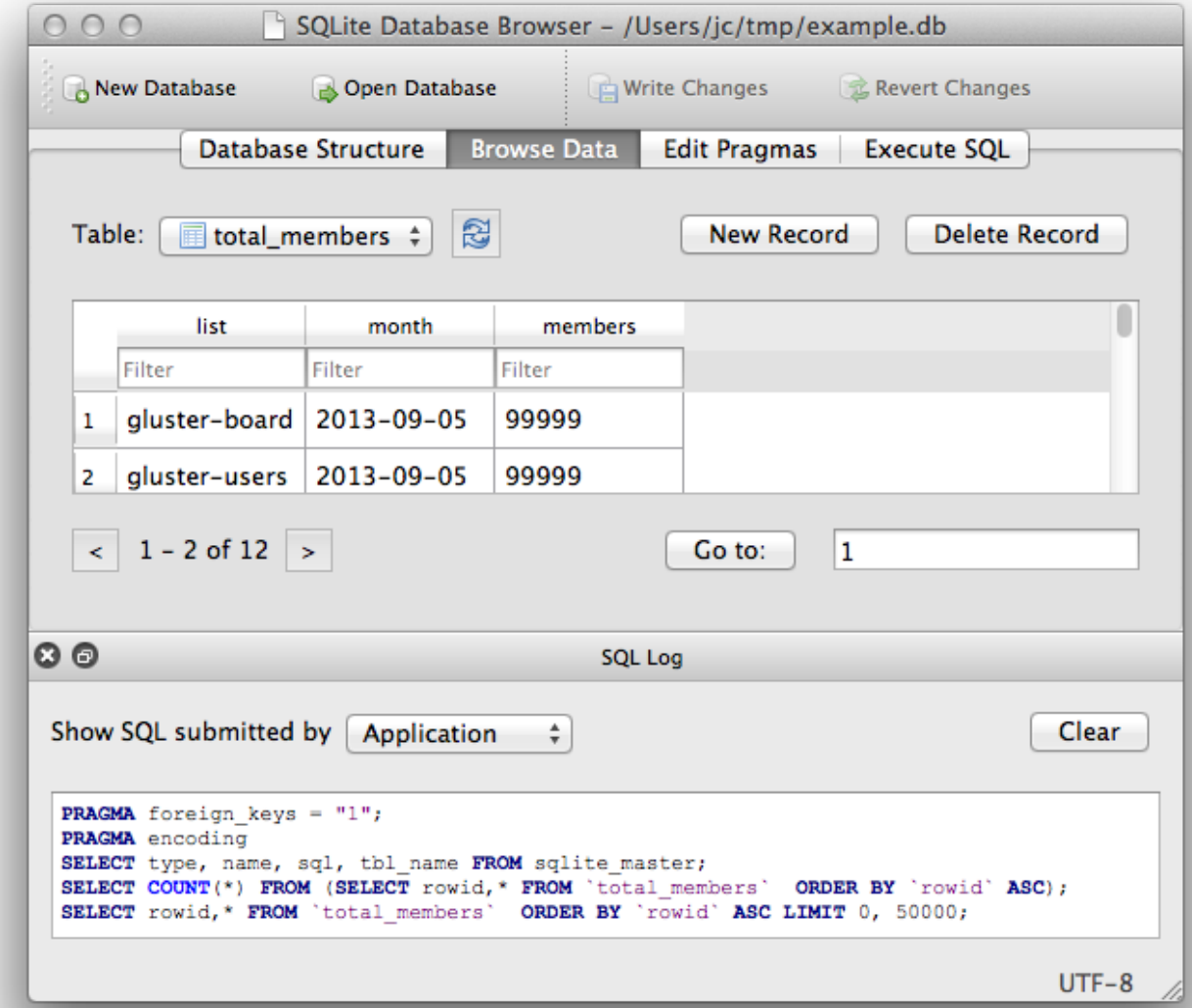
New database: Chinook's

Schema



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

DB Browser



DB Browser

Let's Try It Out!

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