CSEP 514 Data Management for Data Science

Section 2: More SQL

Importing Files

First, make the table.

Then, import the data.

```
.mode csv
.import ./population.csv Population
.import ./gdp.csv GDP
.import ./airport.csv Airport
```

SQL 3-valued logic

- SQL has 3-valued logic

  FALSE = 0 (ex. price<25 is FALSE when price = 99)

  UNKNOWN = 0.5 (ex. price <25 is UNKNOWN when price=NULL)

  TRUE = 1 (ex. price<25 is TRUE when price = 19)

SQL 3-valued logic

C1 AND C2 means min(C1,C2)

C1 OR C2 means max(C1,C2)

not C means means 1-C

The rule for SELECT ... FROM ... WHERE C is the following:

if C = TRUE then include the row in the output

if C = FALSE or C = unknown then do not include it

A brief example

```
CREATE TABLE
product(pname text,price float,category text,manufacturer text);

INSERT INTO
product(pname,price,category,manufacturer)
   VALUES ('NullProduct', 19.00, null, null);
```

What's the result?

```
SELECT *
FROM product
WHERE (price < 25) AND (category = 'gadget') OR (manufacturer =
'Apple');
```

Review: Order BY

ORDER BY column_name DESC

GROUP BY

- 1. Compute the FROM and WHERE clauses.
- 2. Group by the attributes in the GROUPBY
- 3. Compute the SELECT clause:
- grouped attributes and aggregates.

Don’t forget!

LIMIT

COUNT(*)

DISTINCT

AS

SUM

MAX/MIN