

CSE 414 Introduction to Data Management

Section 2: More SQL

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 $1 - C$

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

Importing Files

First, make the table.

Then, import the data.

```
.mode csv
```

```
.import ./population.csv Population
```

```
.import ./gdp.csv GDP
```

```
.import ./airport.csv Airport
```