

Introduction to Data Management

CSE 344

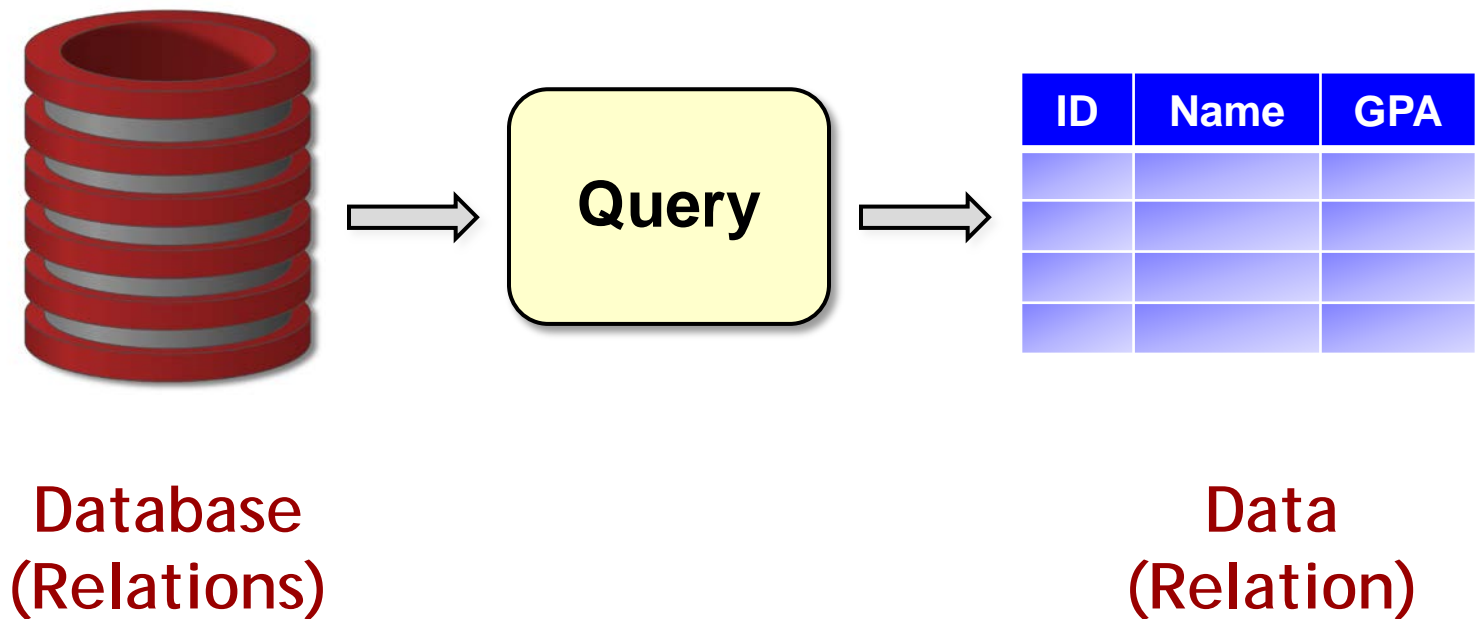
Section 2

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Announcements

- Webquiz 2, HW 2 posted
- Homework 1 is due on Thursday (01/16)

Review: SQL Query



Key Concepts in Basic Queries

- Single Relation
 - Select, From, Where
 - Order By
- Multiple Relations
 - Joins
 - Union, Intersection, Difference
 - Subqueries: Any, In, Exists, All
- Aggregation, Grouping

Note on NULL

- Are these the same?

```
SELECT * FROM PURCHASE WHERE 1=1;
```

```
SELECT * FROM PURCHASE  
WHERE Price =Price;
```


```
SELECT * FROM PURCHASE  
WHERE (Price > 60 OR Price <= 60);
```

Joins

- INNER JOIN, or JOIN for short
 - A INNER JOIN B ON <Condition>
- NATURAL JOIN
 - Eliminate one copy of common attributes
- JOIN + USING
 - A JOIN B USING (X)
 - Equivalent to NATURAL JOIN forcing only attributes X to be the same

Outerjoin

- R OUTER JOIN S is the core of an outerjoin expression. It is modified by:
 1. Optional NATURAL in front of OUTER.
 2. Optional ON <condition> after JOIN.
 3. Optional LEFT, RIGHT, or FULL before OUTER.
 - ◆ LEFT = pad dangling tuples of R only.
 - ◆ RIGHT = pad dangling tuples of S only.
 - ◆ FULL = pad both; this choice is the default.



Only one
of these

Exercises on joins and aggregation