Talk to neighbor:
- introduce yourself
- why are you/they here?

CSE 344

Intro to Data Mgt

25 wi

James Wilcox

Why are we here?

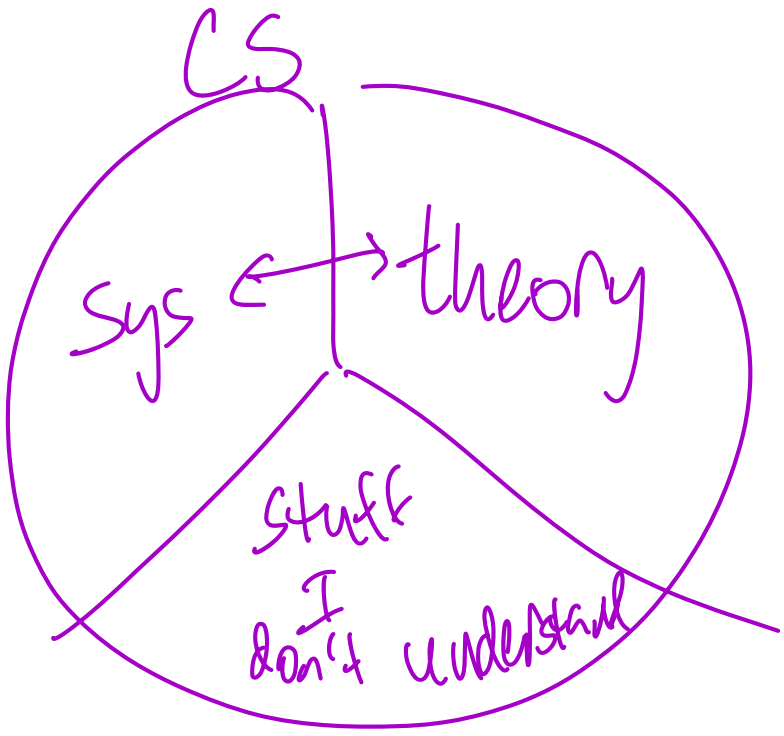
- in your way to 4444
- building applications
  - database-backed applications
    - storage

What is database / database management system (DBMS)

- something that stores data
  - Is a server?
  - sorted, ordered, organize
  - persistent memory
    permanent

- James's opinion: a collection of data

Systems and theory



A DB is a collection of data

Relational Model: a database is a bunch of sets of tuples (sets of tuples = relation)

CSE 311

$$\{1,2,3\} \times \{\text{"a"}, \text{"b"}\}$$
$$= \{(1,a), (1,b), (2,a), (2,b), (3,a), (3,b)\}$$

A relation is a set of tuples.

A relation on $A_1, \ldots, A_n$

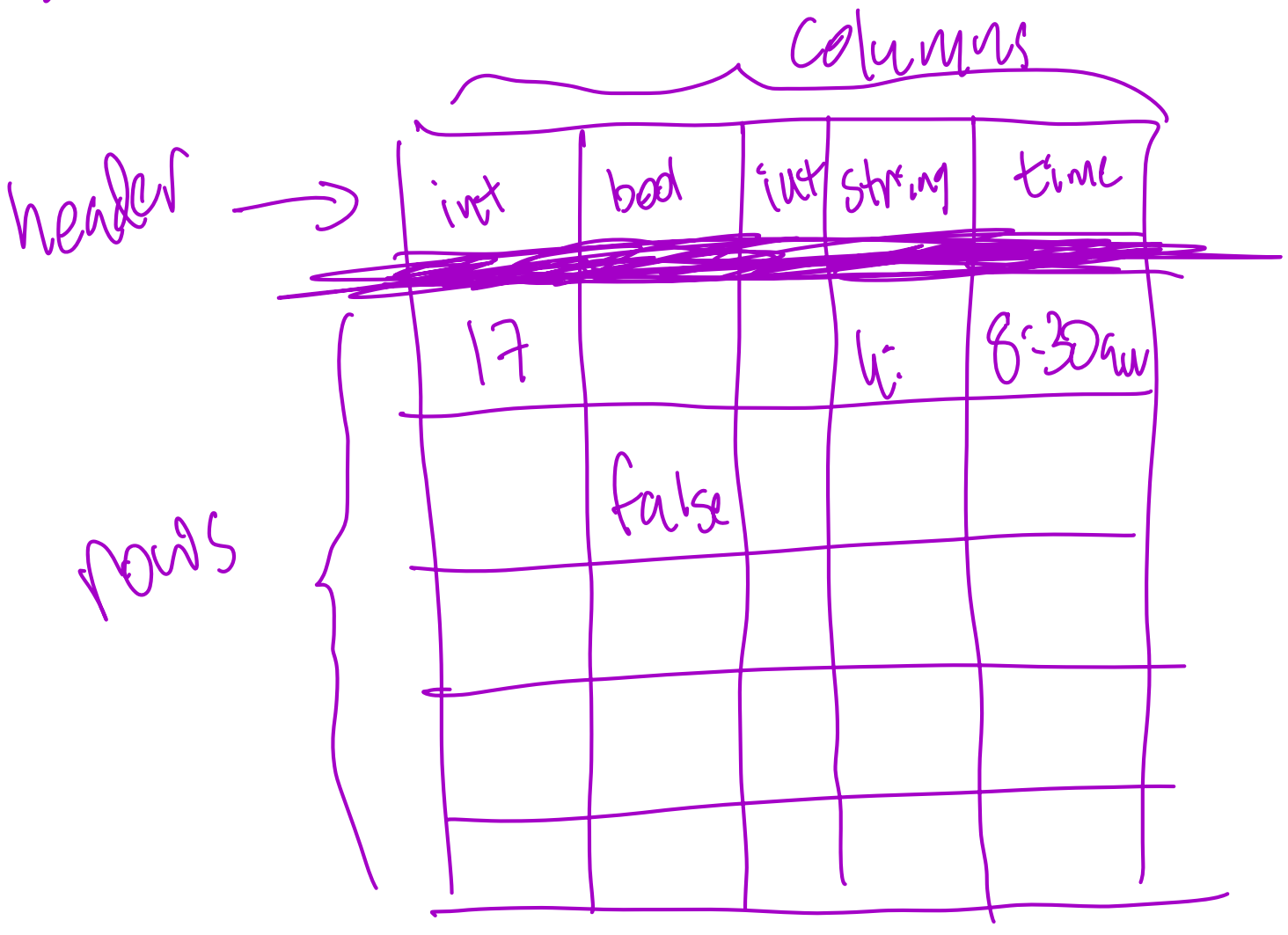
is a subset of $A_1 \times \cdots \times A_n$

Example: $A_1 = \{1, 2, 3\}$ $A_2 = \{a, b\}$

$R = \{(1, a), (2, b)\} \subseteq A_1 \times A_2$

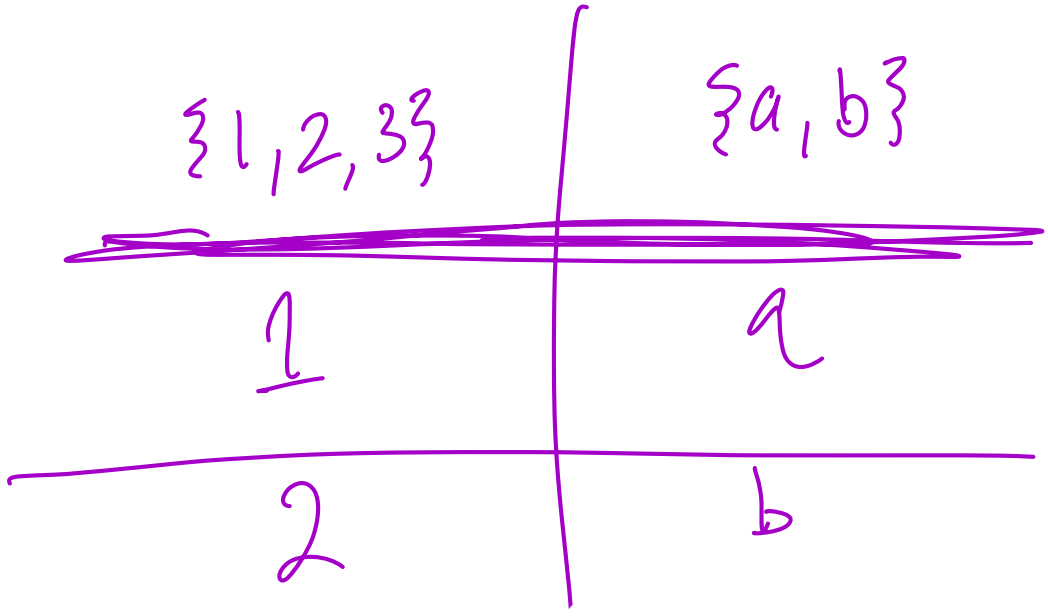
$S = \emptyset \subseteq A_1 \times A_2$

A table is a 2d grid

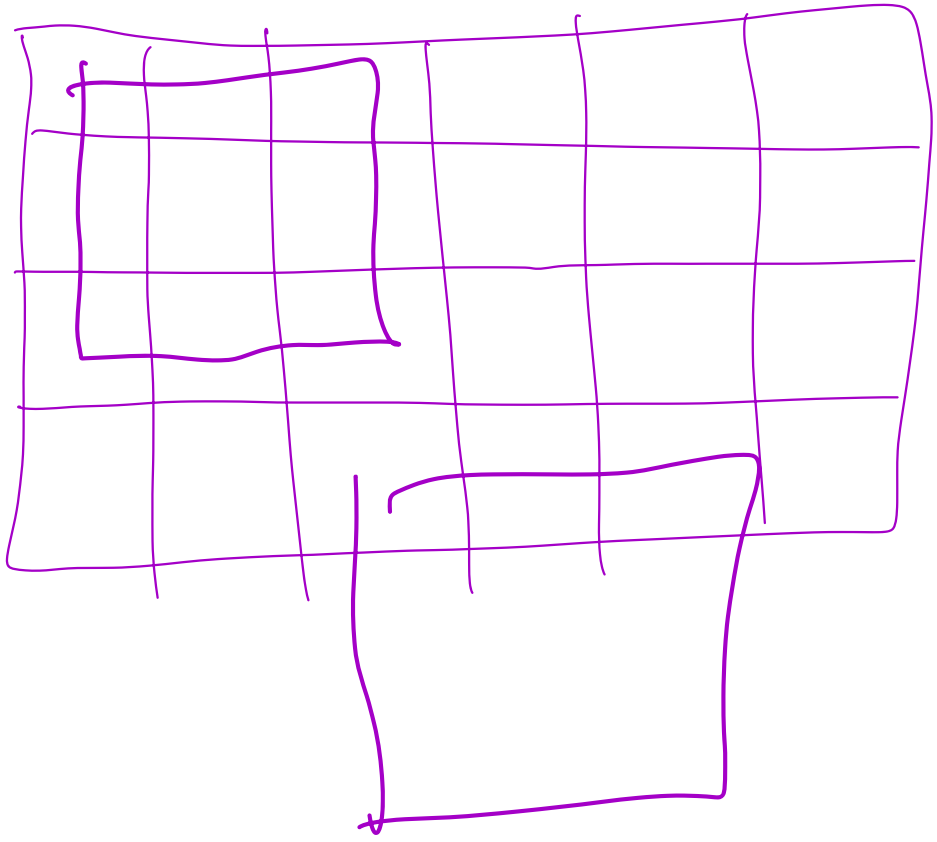


Asymmetry between rows and columns

columns, attributes, fields

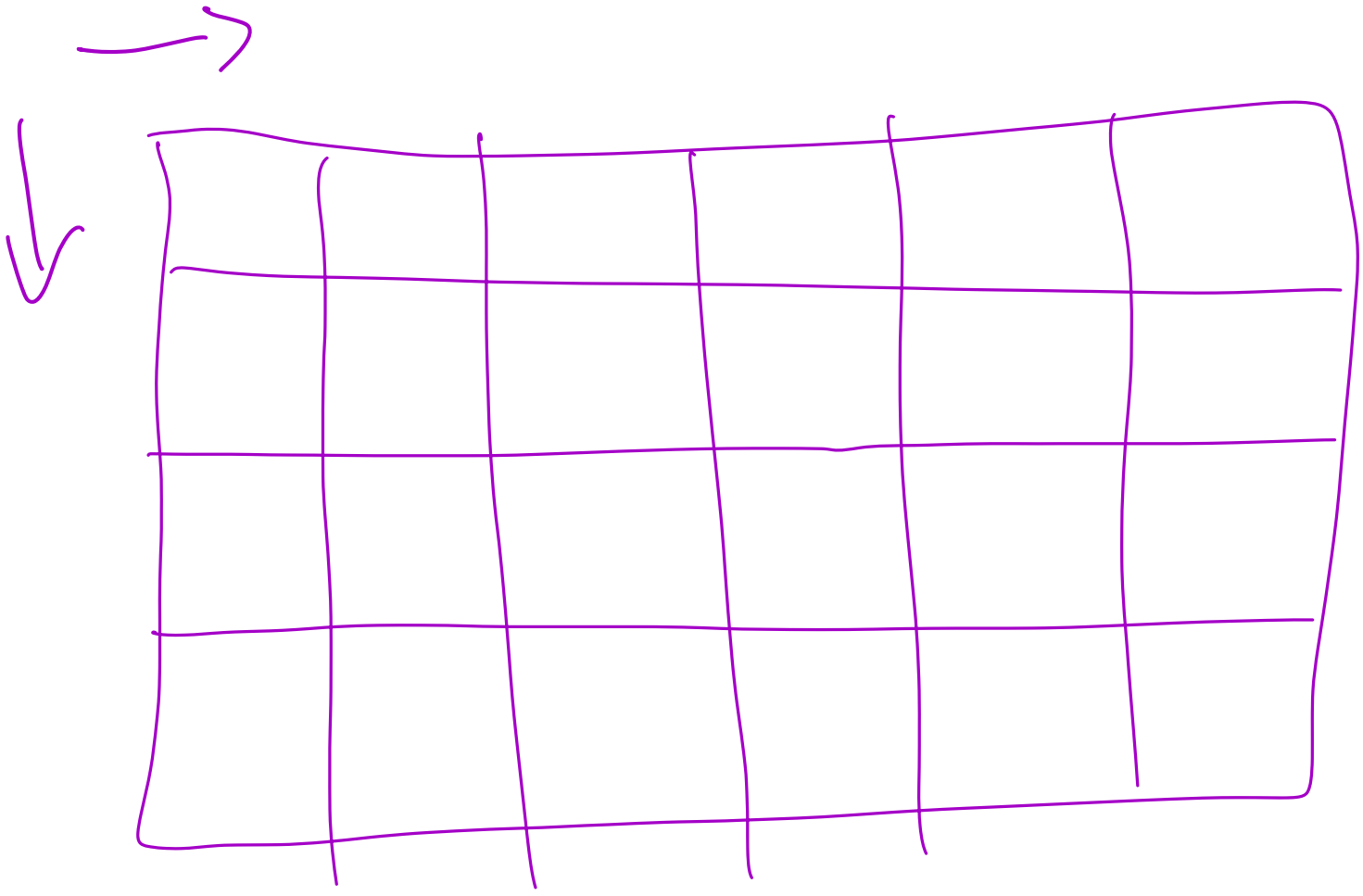


rows, tuple, record, object



how to use SS as a rel.

- each column has a type



Straw Proposals

- bad idea that I have had