

DATABASES

- persistent source of truth for an application
- REST APIs are stateless
 - they don't remember ANYTHING!
 - All data must live in the DB

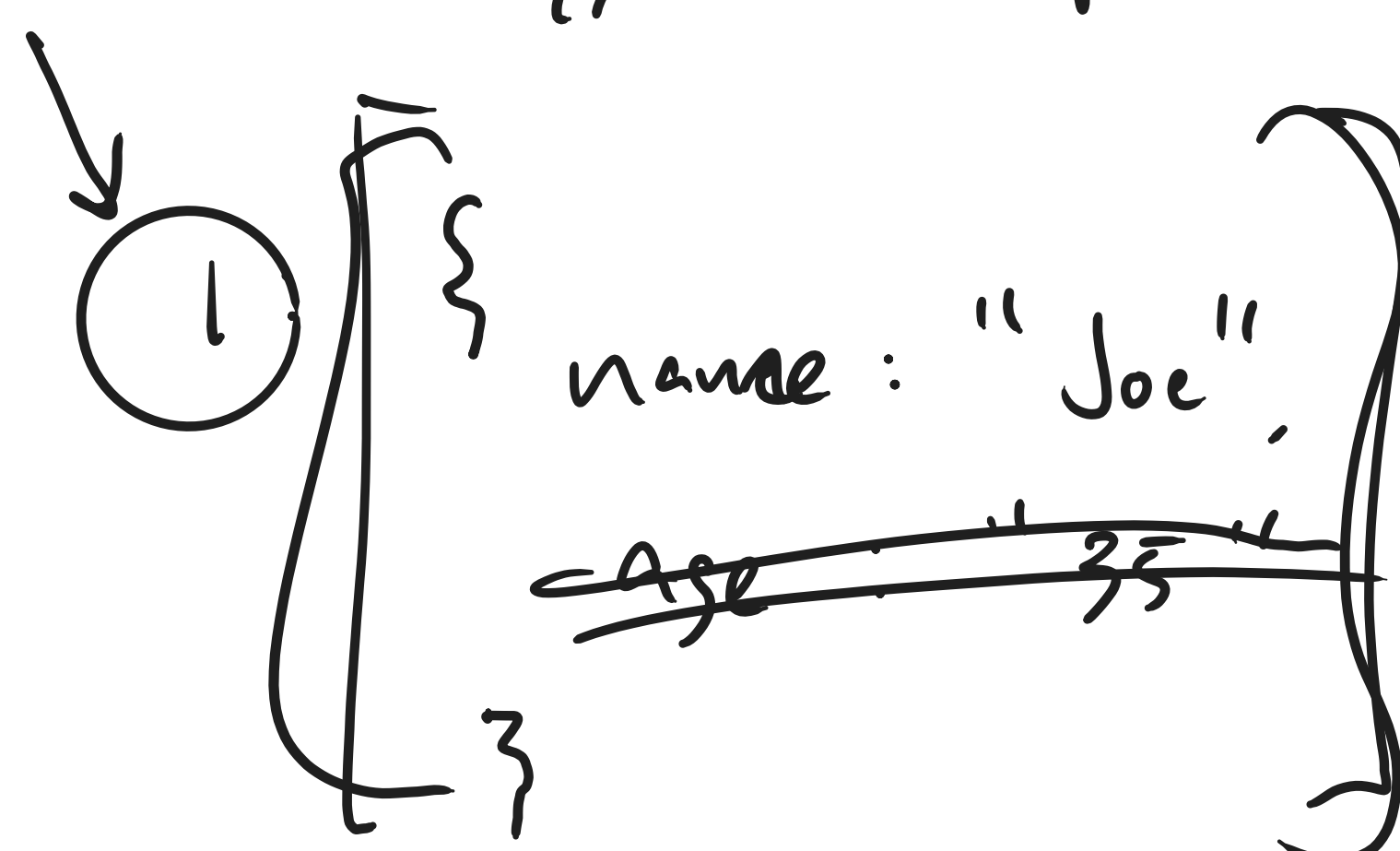
Relational (SQL)

Non-Relational (NoSQL)

SQL = Structured Query Language → not only SQL

- Tables
 - Rows / Columns
- Fixed Schema

Key/Value Pairs



pet [TABLE] ↓ attribute/property

id	name	breed	color
1	Miffy	Manx	Pink
2	Lazarus	Doberman	Black
3	Ed	Pug	Tan
4	Tina	null	Brown

Record →

teacher

id	name
1	Jon P.
2	Valerie
3	Dave
4	Dave

student

id	name	teacher-id	c-id
1	Jeff	1	2
2	Tiffany	1	1
3	Elizabeth	3	2

certs

id	name
1	OCF
2	CCP

Primary Key: unique identifier for a record (1 or more columns)

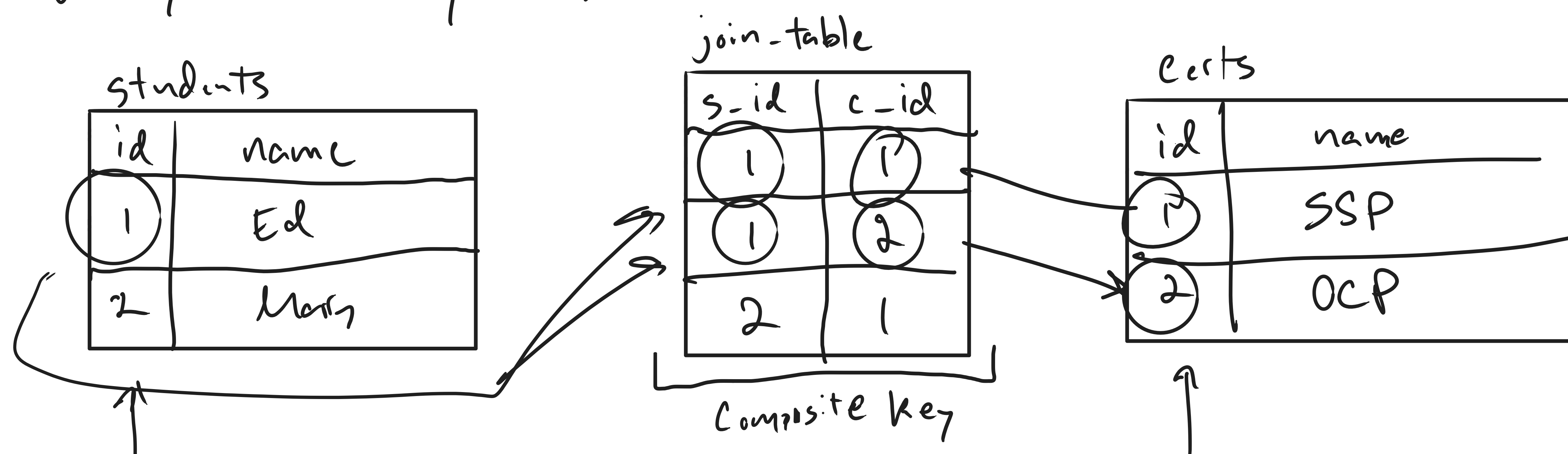
Foreign Key: a primary key for another table used as a column in a table to link them

RELATIONSHIPS

1-to-1 → Foreign Key can go on either side

1-to-Many / Many-to-1 → FK goes on the MANY side

Many-to-Many →



SELECT * FROM teacher JOIN students ON teacher.id = student.teacher-id;

SELECT * FROM student JOIN join-table ON student.id = join-table.student-id
JOIN cert ON join-table.cert-id = cert.id;

[1 Ed 1 2 2 SSP]