#10 SQL

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A SQL query walks into a bar. It approaches two tables and asks them: "mind if I join you?"
Bias towards odds
Discussion 6 Attendance
Discussion 9 Attendance
Storage
SQL

Structured Query Language

A **declarative** language — describe what you want

- Obviously, someone (maybe you!) has to implement the "how to do it" part beforehand
- A common way (but not the only way!) of working with databases
Sqlite is case-insensitive, so instead of:

```
SELECT * FROM records WHERE salary > 0;
```

You could do:

```
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```
SQL

MiSc

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...

Please don't 😞
SQL

How to create tables

```sql
SELECT [cols] FROM [tables]
WHERE [condition] ORDER BY [criteria];
```
SQL

Joins

The information you need is split across multiple tables

Combine them using joins
Query Problem Solving
Now you're thinking with joins

1. Where is my data coming from?

```
SELECT [cols] FROM [tables] WHERE [conditions];
```

2. Which joins make sense?

3. Anything else to filter on?

4. What columns to keep?
1 CREATE TABLE colour AS
2 SELECT "apple" AS fruit, "red" AS colour UNION
3 SELECT "banana", "yellow";
4 CREATE TABLE radiation AS
5 SELECT "apple" AS fruit, 0 AS rads UNION
6 SELECT "banana", 3250;
SELECT * FROM colour AS c, radiation AS r
WHERE c.fruit = r.fruit;

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Colour</th>
<th>Fruit</th>
<th>Rads</th>
</tr>
</thead>
<tbody>
<tr>
<td>apple</td>
<td>red</td>
<td>apple</td>
<td>0</td>
</tr>
<tr>
<td>apple</td>
<td>red</td>
<td>banana</td>
<td>3250</td>
</tr>
<tr>
<td>banana</td>
<td>yellow</td>
<td>apple</td>
<td>0</td>
</tr>
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