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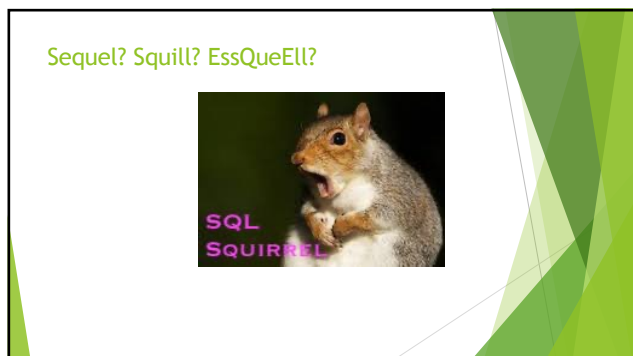
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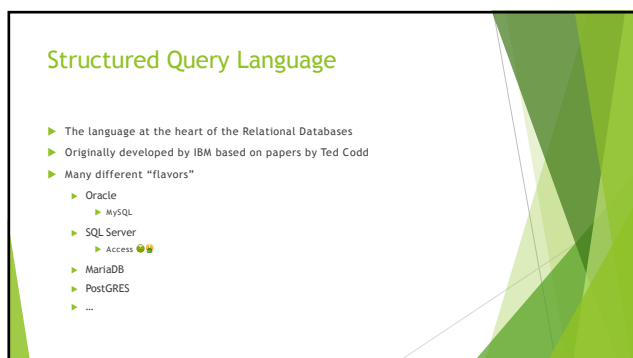
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### DxL

- ▶ Unlike Swift and Java, the language is split into different language subsets based on the functionality required
- ▶ The different subsets are based on the different roles of the database user
  - ▶ Database Designer
    - ▶ DDL
      - ▶ Data Definition Language
  - ▶ Database User
    - ▶ DML
      - ▶ Data Manipulation Language
    - ▶ DQL
      - ▶ Data Query Language
  - ▶ Database Manager
    - ▶ DCL
      - ▶ Data Control Language

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### SQL Styleguide Basics

- ▶ Keywords in CAPS
- ▶ Clauses and fields in clauses separated by line
  - ▶ Fields indented after KEYWORD
- ▶ Table/View names in plural/collective
- ▶ Field names singular lowercase separated by \_ (snake\_case)
  - ▶ The language is not case sensitive but the systems they run on are
- ▶ 3NF is the MINIMUM normalization level
- ▶ All statements end with a semicolon
- ▶ Parentheses match vertically if more than one line with interior lines indented

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### Example SQL Code

```
--1
SELECT Name,
FROM Employee
ORDER BY
  Name,
  LastName;
--2
SELECT DISTINCT
FROM
ORDER BY
;
```

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## Entity Relation Diagram

- ▶ Like UML but explicitly for the design of Databases
- ▶ Each table gets a box
- ▶ Left column is used to indicate KEY status
  - ▶ Primary
  - ▶ Foreign
- ▶ One field per row
- ▶ Color is NICE
- ▶ Crows feet notation for relations
  - ▶ One to One
  - ▶ One to Many
  - ▶ Many to Many (Rare)

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## ER Diagram



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