



Foto: Thomas Josek

# Datenbanktechnologie

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# SQL

## (Structured Query Language)

- Standardisierte Sprache
  - ISO/IEC 9075 Information technology – Database languages – SQL
- Verwaltung relationaler Datenbanken
- Daten in relationalen Datenbanken
  - Abfrage
  - Einfügen
  - Ändern
  - Löschen
- Auf relationaler Algebra basiert

# SQL: Kategorien von Befehlen

- Data Query Language (DQL) (auch Teil von DML)
- Data Manipulation Language (DML)
- Data Definition Language (DDL)
- Data Control Language (DCL)
- Transaction Control Language (TCL)

# SQL: Format

```
SELECT column1, column2, ...  
FROM table_name  
WHERE condition;
```

```
INSERT INTO table_name (column1, column2, column3, ...)  
VALUES (value1, value2, value3, ...);
```

```
UPDATE table_name  
SET column1 = value1, column2 = value2, ...  
WHERE condition;
```

```
DELETE FROM table_name  
WHERE condition;
```

# Datenbankanfragen: Beispiele

- `SELECT * FROM tiere;`
- `SELECT * FROM tiere WHERE tierID = 2;`
- `SELECT * FROM tiere WHERE besitzerID = 3;`
- `SELECT name FROM tiere WHERE tier = "Maus";`
- `INSERT INTO tiere VALUES (6, "Hund", "Fido", 1);`
- `INSERT INTO tiere (tierID, name) VALUES (7, "Pluto");`
- `UPDATE tiere SET tier = "Hund" WHERE ID = 7;`
- `UPDATE tiere SET besitzerID = 1 WHERE tierID = 4;`
- `DELETE FROM tiere WHERE name = "Salmie";`