

SQL: SELECT

Der SQL-SELECT-Befehl

```
SELECT <projection: spalten, expression>
FROM <tabellen>
WHERE <filter, selection>
GROUP BY <gruppierung: spalte> HAVING <bedingung>
ORDER BY <sortierreihenfolge: spalten, auf- absteigend>
```

1. Projection: Welche Spalten, bzw. welche Ausdrücke?

```
SELECT spalte1, spalte2, ...
FROM tabelle;
```

```
SELECT * FROM tabelle;
```

```
SELECT DISTINCT spalte
FROM tabelle;
```

```
SELECT COUNT(DISTINCT spalte)
FROM tabelle;
```

```
-- Funktionen: COUNT(), SUM(), AVG(), MIN(), MAX()
```

2. Selection, Filter: Welche Zeilen?

```
SELECT *
FROM tabelle
WHERE spalte = wert
```

```
-- Vergleichsoperatoren: = > < >= <= <>
```

```
-- BETWEEN wert1 AND wert2
```

```
-- LIKE 'a_b%' -- _ genau 1 beliebiges Zeichen, % beliebig viele beliebige Zeichen
```

```
-- IN (wert1, wert2, ...)
```

```
-- logische Operatoren: AND OR NOT
```

3. Gruppieren

```
SELECT COUNT(*), spalte
FROM tabelle
GROUP BY spalte
```

```
SELECT COUNT(*), spalte
FROM tabelle
GROUP BY spalte HAVING COUNT(*) > 5
```

4. Sortieren

```
SELECT *
FROM tabelle
ORDER BY spalte
```

```
-- Sortierreihenfolge: DESC ASC
```

5. Mehrere Tabellen

```
SELECT tabelle1.spalte1, tabelle2.spalte2, ...  
FROM tabelle1  
JOIN tabelle2 ON tabelle1.id = tabelle2.tabelle1_id
```

```
SELECT tabelle1.spalte1, tabelle2.spalte2, ...  
FROM tabelle1  
JOIN tabelle2 ON tabelle1.id = tabelle2.tabelle1_id  
JOIN tabelle3 ON tabelle2.id = tabelle3.tabelle2_id
```