# Banco de Dados II

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# Na aula de hoje

- Revisão sobre SQL

# Para que existe o SQL?

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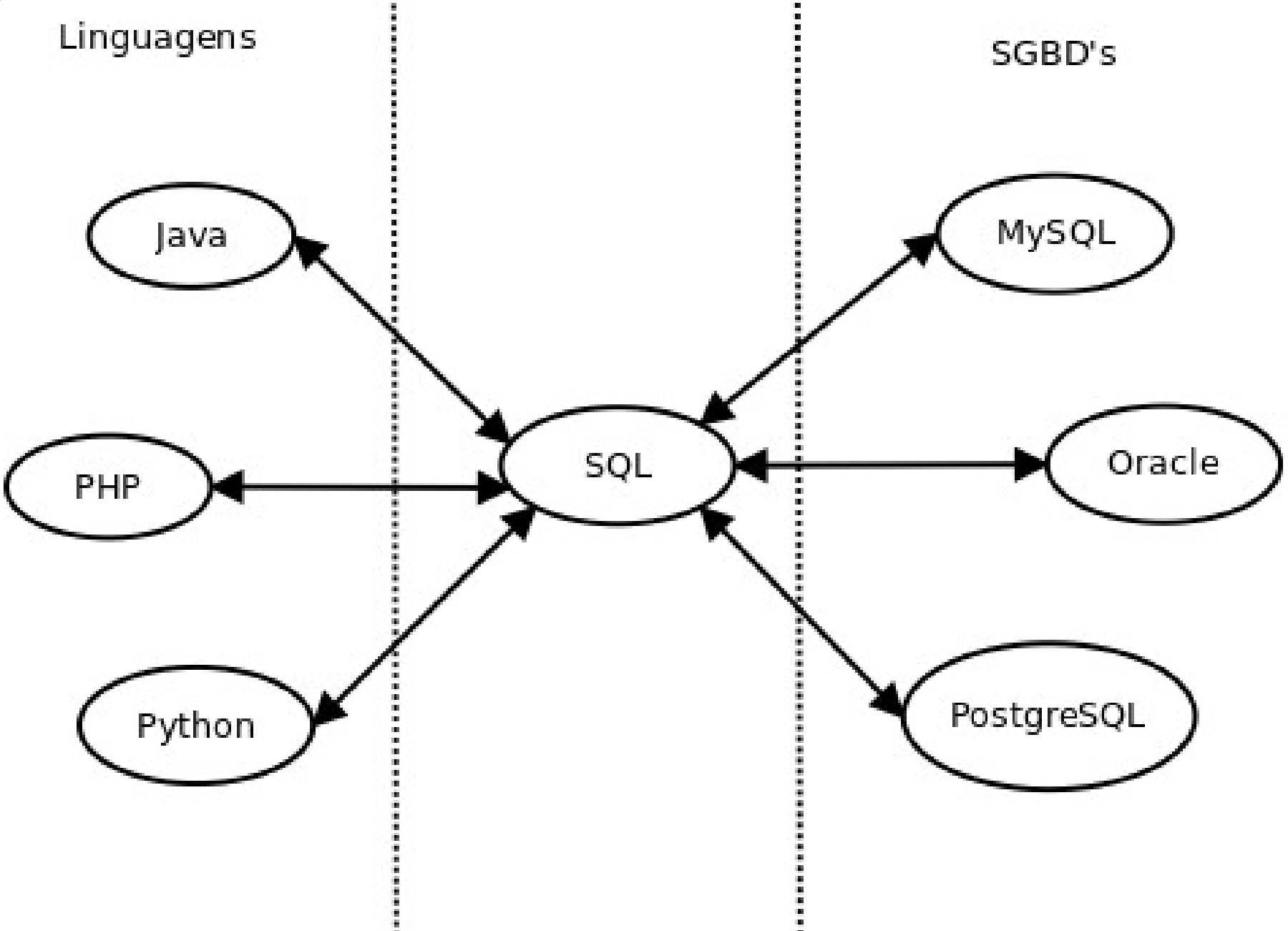
R: Padronizar a comunicação com o banco de dados facilitando o desenvolvimento de software. Na prática também facilita a troca de tecnologias.

# Importância do SQL



# Subconjuntos de SQL

- DDL (Data Definition Language): CREATE, DROP e ALTER
- DML (Data Manipulation Language): INSERT, UPDATE, DELETE
- DCL (Data Control Language): GRANT, REVOKE
- DTL (Data Transaction Language): BEGIN WOK, COMMIT, ROLLBACK
- DQL (Data Query Language): SELECT

# CREATE

- CREATE DATABASE nome;
- CREATE TABLE table_name(

  column1 datatype,

  column2 datatype,

  column3 datatype,

  .....

  columnN datatype,

  PRIMARY KEY( one or more columns )

);

# INSERT

- INSERT INTO TABLE_NAME (column1, column2, column3,...columnN) VALUES (value1, value2, value3,...valueN);

# SELECT

- SELECT column1, column2, columnN FROM table_name;
- SELECT column1, column2, columnN

  FROM table_name

  WHERE [search_condition]

# UPDATE

- UPDATE table_name SET column1 = value1, column2 = value2...., columnN = valueN WHERE [condition];

  (sem o WHERE atualiza todos os registros)

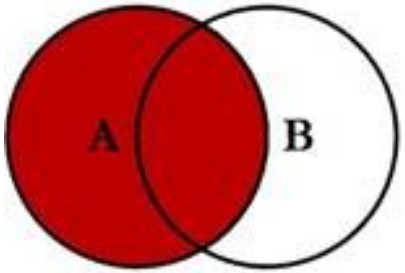
# DELETE

- DELETE FROM table_name WHERE [condition];

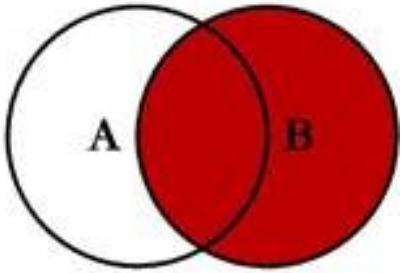
  (sem o WHERE deleta todos os registros!!!)

Joins = Junção

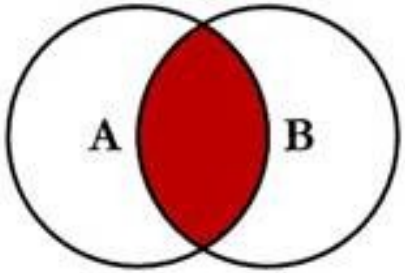
# SQL JOINS



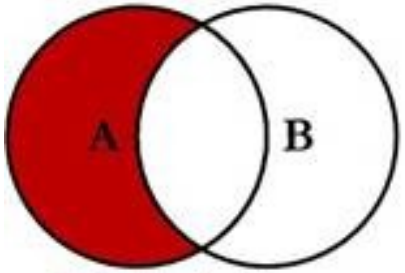

```
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
```



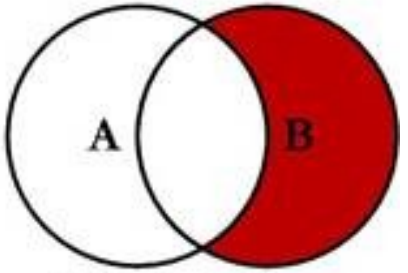

```
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
```



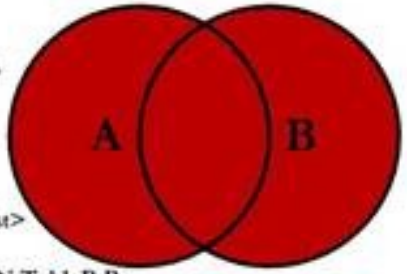

```
SELECT <select_list>
FROM TableA A
INNER JOIN TableB B
ON A.Key = B.Key
```



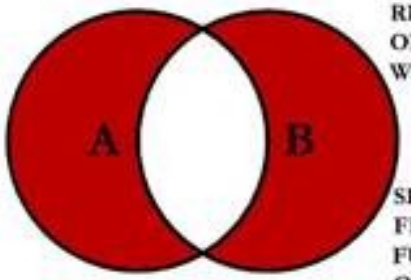

```
SELECT <select_list>
FROM TableA A
LEFT JOIN TableB B
ON A.Key = B.Key
WHERE B.Key IS NULL
```




```
SELECT <select_list>
FROM TableA A
RIGHT JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
```




```
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
```




```
SELECT <select_list>
FROM TableA A
FULL OUTER JOIN TableB B
ON A.Key = B.Key
WHERE A.Key IS NULL
OR B.Key IS NULL
```

# Operação Cross Join

Também chamada de junção cruzada ou ainda de produto cartesiano

Dado:

Tabela A

| ColunaA |
|---|
| 1 |
| 2 |

Tabela B

| ColunaB |
|---|
| A |
| B |
| C |

A X B =

| ColunaA | ColunaB |
|---|---|
| 1 | A |
| 1 | B |
| 1 | C |
| 2 | A |
| 2 | B |
| 2 | C |

# Outros tipos de join

- https://www.devmedia.com.br/sql-join-entenda-como-funciona-o-retorno-dos-dados/31006

# Referências


- https://pt.wikipedia.org/wiki/SQL
- https://www.tutorialspoint.com/postgresql/postgresql_delete_query.htm