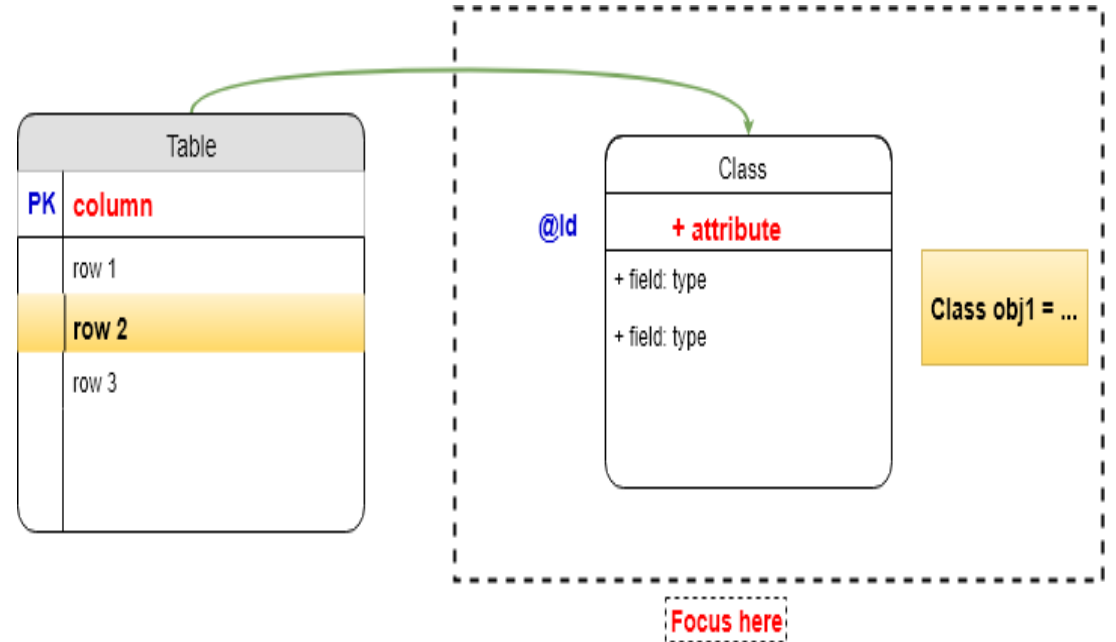# JPA – Java Persistence API

JPA – Java Persistence API

É uma especificação para a persistência de objectos java na base de dados.

Princípios básicos

1. Tabelas - Classes

2. Colunas – Atributos;

3. Configurações das colunas – anotações nos atributos;

4. Um registro – um objecto.

Table	
PK	column
	row 1
	row 2
	row 3

Class
+ attribute
+ field: type
+ field: type

@Id

Class obj1 = ...

Focus here

Exemplos: Mapeamento de uma classe

```java
@AllArgsConstructor
@NoArgsConstructor
@Getter @Setter
@Entity(name = "user")
public Class User {

    @Id
    private Long id;

    @Column(length = 75, nullable = false)
    private String name;

    @Column(length = 75, nullable = false, unique = true)
    private String email;

    @Column(length = 100, nullable = false)
    private String password;
}
```

Exemplos: SQL Puro x JPA

```java
// Saving a new user
User user = new User(1L, "Kevin Wingi", "kevin.wingi.cursos@gmail.com","strong-password-here");

public void save(User user) {
    //Getting some configs here like db connection

    String sql = "INSERT INTO user VALUES (?, ?, ?, ?)";

    PreparedStatement ps = con.prepareStatement(sql);
    ps.setLong(user.getId());
    ps.setString(user.getName());
    ps.setString(user.getEmail());
    ps.setString(user.getPassword());

    //save user
    ps.execute();
}
```

```java
// Saving a new user
User user = new User(1L, "Kevin Wingi", "kevin.wingi.cursos@gmail.com","strong-password-here");

public void save(User user) {
    //Getting some configs here like db connection

    dbSession.save(user);
}
```

Exemplos: Mudanças no sistema

```java
@AllArgsConstructor
@NoArgsConstructor
@Getter @Setter
@Entity(name = "user")
public Class User {

    @Id
    private Long id;

    @Column(length = 75, nullable = false)
    private String name;

    @Column(length = 75, nullable = false, unique = true)
    private String email;

    @Column(length = 100, nullable = false)
    private String password;

    @Column(length = 20)
    private String phone;
}
```

Exemplos: SQL Puro x JPA – Fácil Manutenção

```java
// Saving a new user
User user = new User(1L, "Kevin Wingi", "kevin.wingi.cursos@gmail.com","strong-password-here", "+258843601322");

public void save(User user) {
    //Getting some configs here like db connection

    String sql = "INSERT INTO user VALUES (?, ?, ?, ?, ?)";

    PreparedStatement ps = con.prepareStatement(sql);
    ps.setLong(user.getId());
    ps.setString(user.getName());
    ps.setString(user.getEmail());
    ps.setString(user.getPassword());
    ps.setString(user.getPhone());

    //save user
    ps.execute();
}
```

```java
// Saving a new user
User user = new User(1L, "Kevin Wingi", "kevin.wingi.cursos@gmail.com","strong-password-here", "+258843601322");

public void save(User user) {
    //Getting some configs here like db connection

    dbSession.save(user);
}
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