

Spring Framework: Spring 6 Fundamentals



Bryan Hansen

Director of Software Development

@bh5k

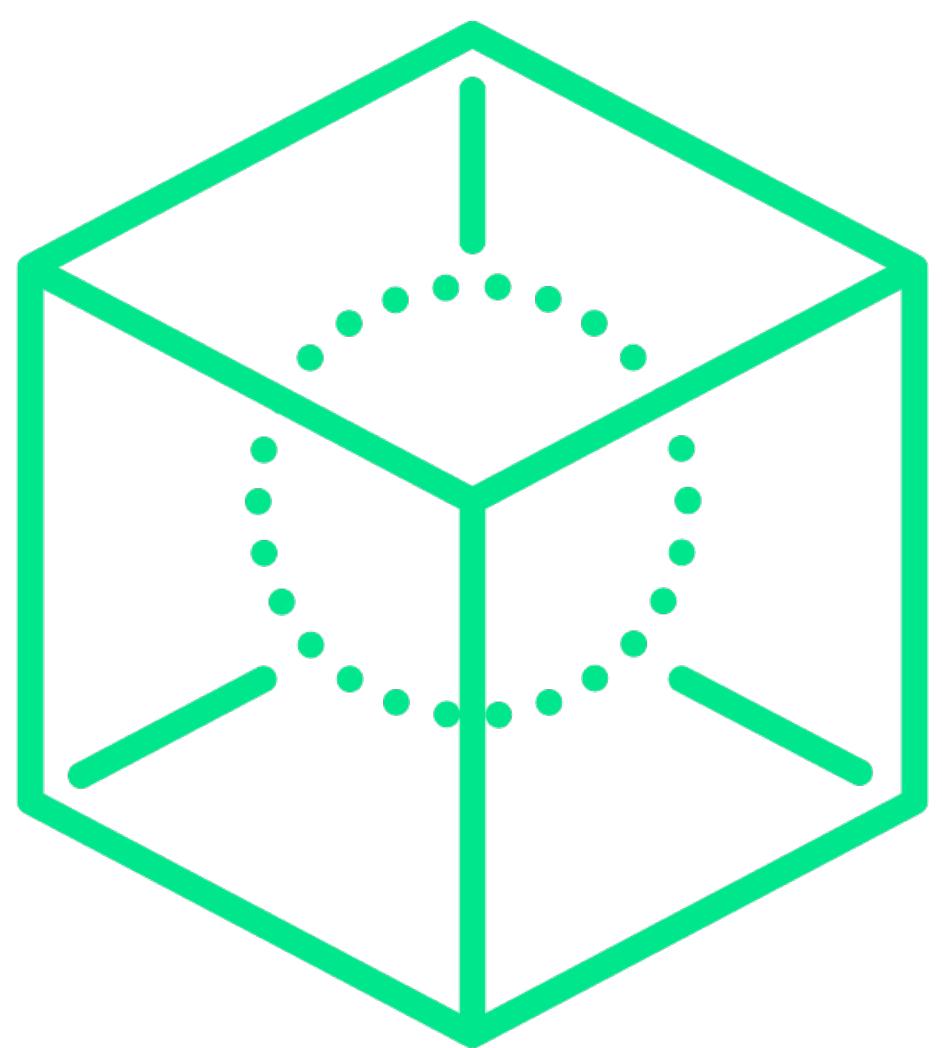
Version Check



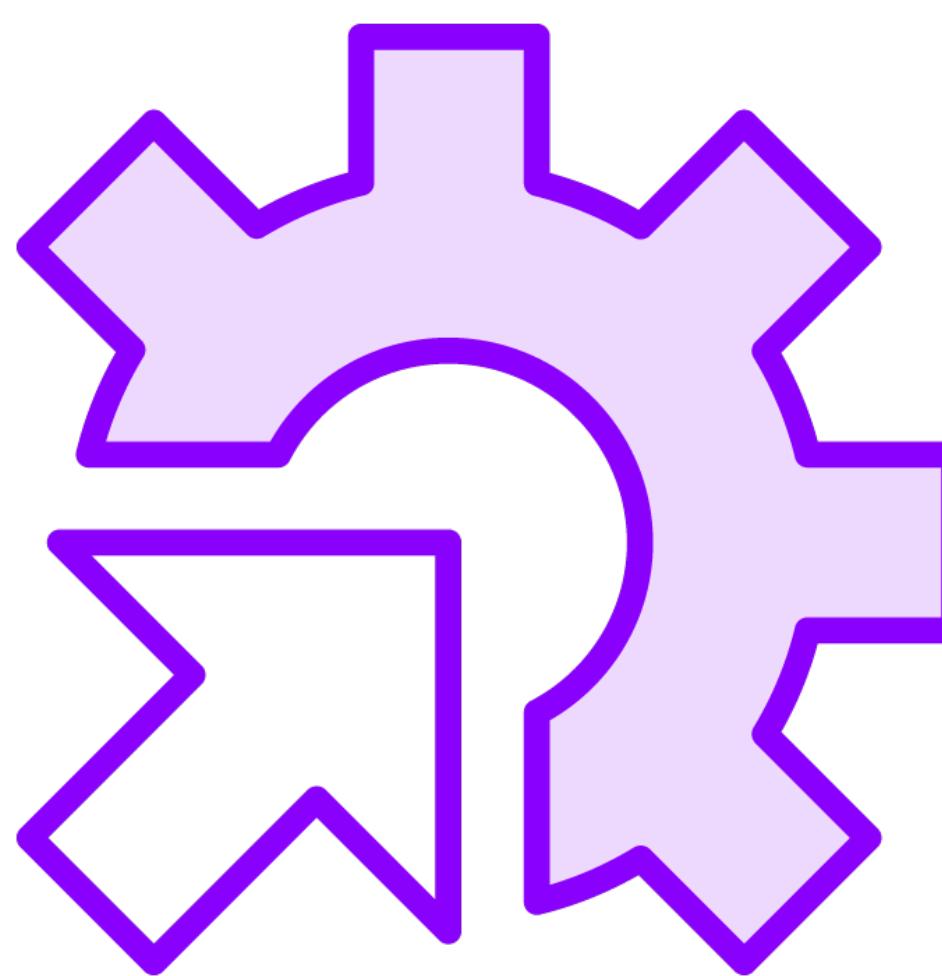
This version was created by using:

- Java 17
- Spring Boot 3
- Spring Framework 6

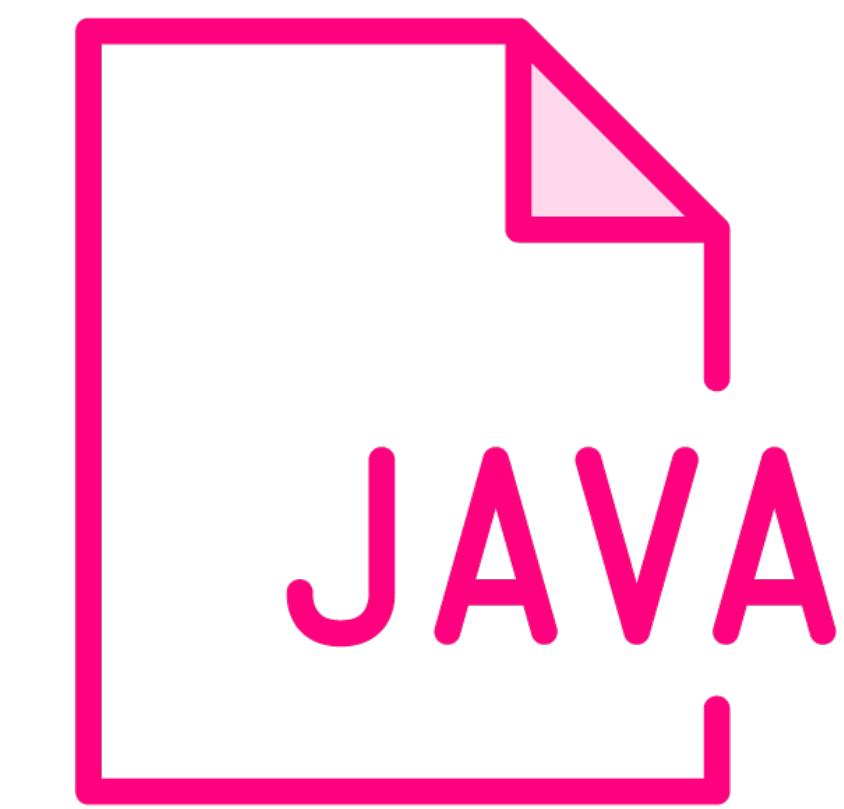
What is Spring?



**Inversion of Control
Container**



Dependency Injection



**Java without Enterprise
JavaBeans (EJBs)**



Dependency Injection

What is Spring?

JEE

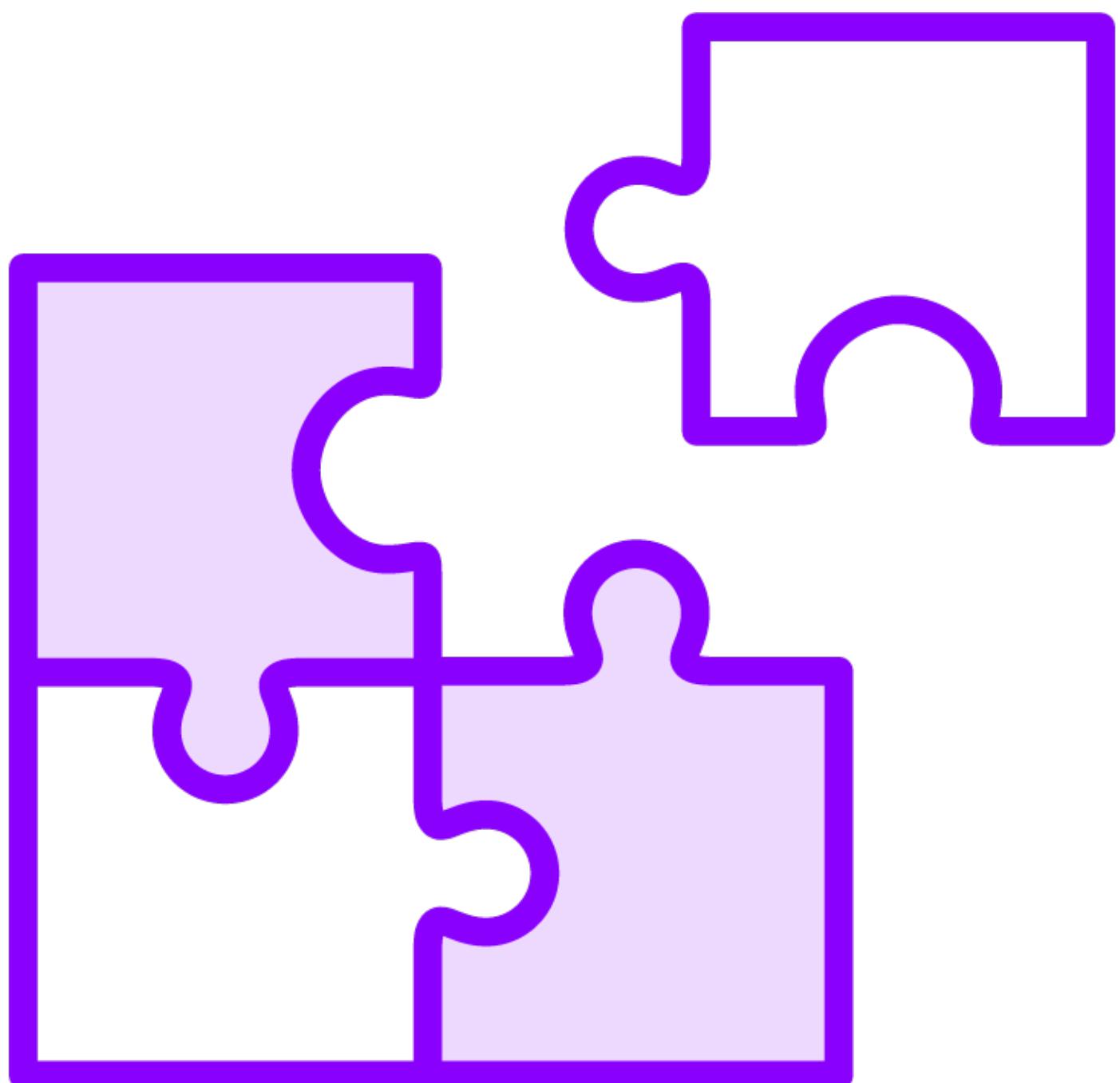
POJO Based

Unobtrusive

AOP/Proxies

Best Practices

The Problem

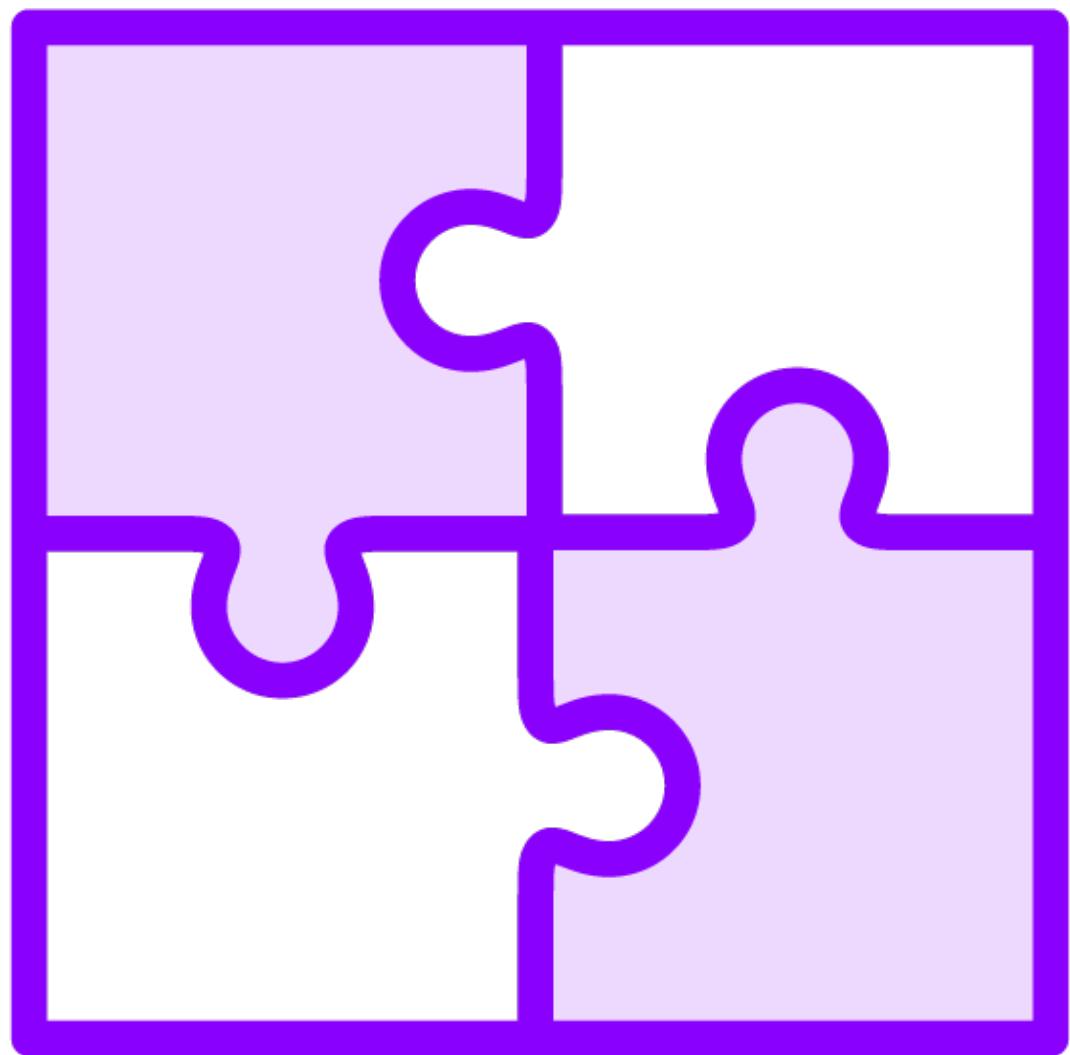


Testability
Maintainability
Scalability
Complexity
Business Focus

Business Focus

```
public Car getById(String id) {  
    Connection con = null;  
    PreparedStatement stmt = null;  
    ResultSet rs = null;  
  
    try {  
        String sql = "select * from CAR where ID = ?";  
        con = DriverManager.getConnection("localhost:3306/cars");  
        stmt = con.prepareStatement(sql);  
        stmt.setString(1, id);  
        rs = stmt.executeQuery();  
        if(rs.next()) {  
            Car car = new Car();  
            car.setMake(rs.getString(1));  
            return car;  
        }  
        else {  
            return null;  
        }  
    } catch (SQLException e) { e.printStackTrace();}  
    finally {  
        try {  
            if(rs != null && !rs.isClosed()) {  
                rs.close();  
            }  
        } catch (Exception e) {}  
    }  
    return null;  
}
```

The Solution



Configuration
Focus
Testing
Annotation or XML Based
Interface Based

Business Focus Revisted

CarJdbc.java

```
public Car getById(String id) {
    Connection con = null;
    PreparedStatement stmt = null;
    ResultSet rs = null;

    try {
        String sql = "select * from CAR where ID = ?";
        con = DriverManager.getConnection("localhost:3306/cars");
        stmt = con.prepareStatement(sql);
        stmt.setString(1, id);
        rs = stmt.executeQuery();
        if(rs.next()) {
            Car car = new Car();
            car.setMake(rs.getString(1));
            return car;
        }
        else {
            return null;
        }
    } catch (SQLException e) { e.printStackTrace();}
    finally {
        try {
            if(rs != null && !rs.isClosed())
                rs.close();
        }
        catch (Exception e) {}
    }
    return null;
}
```

CarDao.java

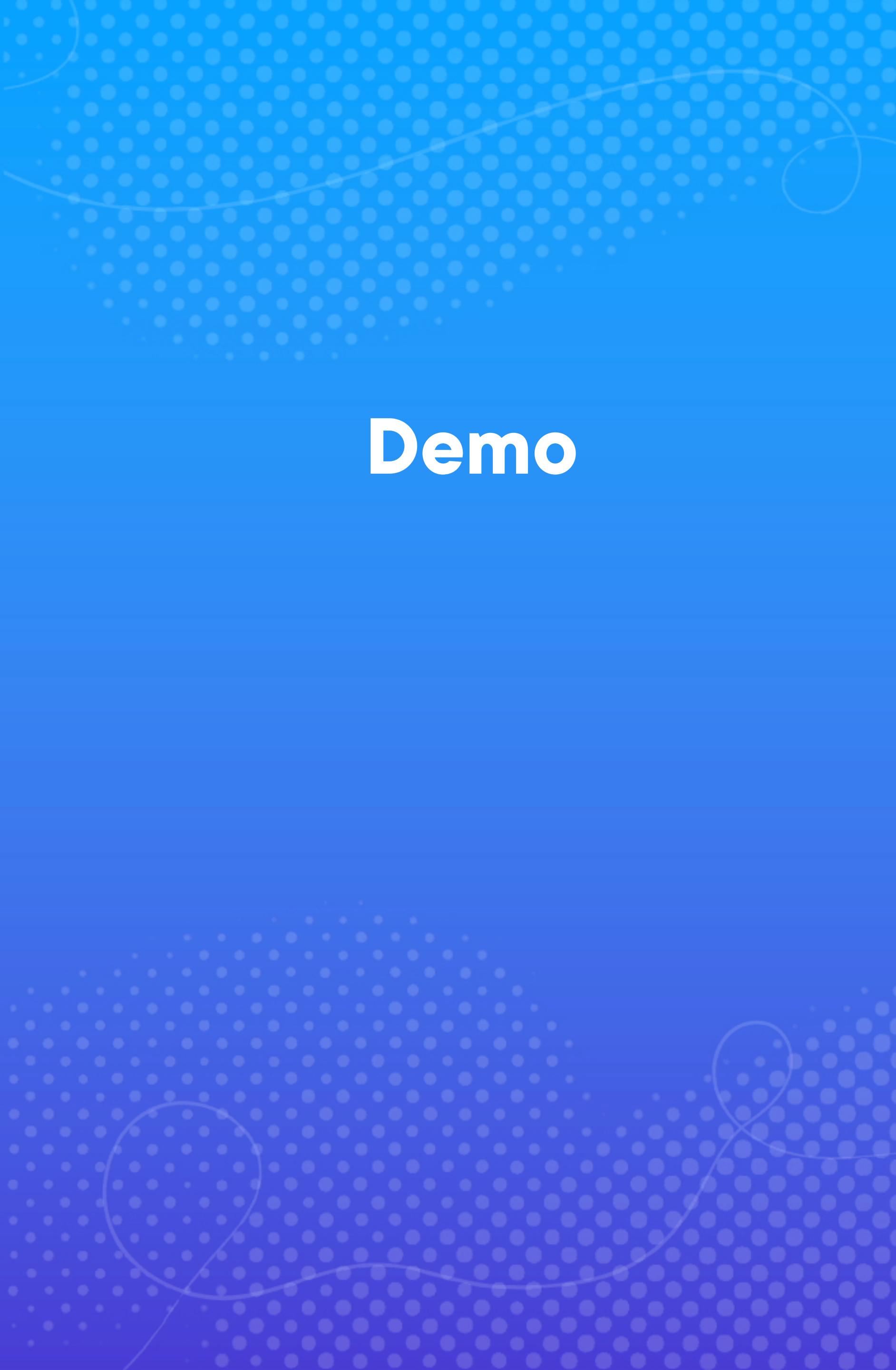
```
public Car findCar(String id) {
    return getEntityManager().find(Car.class, id);
}
```

How It Works

POJOs

HashMap

Registry



Demo

Conference Registration App

- Model / Wiring

Summary

What is Spring?

The Problem

The Solution

Business Focus