Spring Fundamentals

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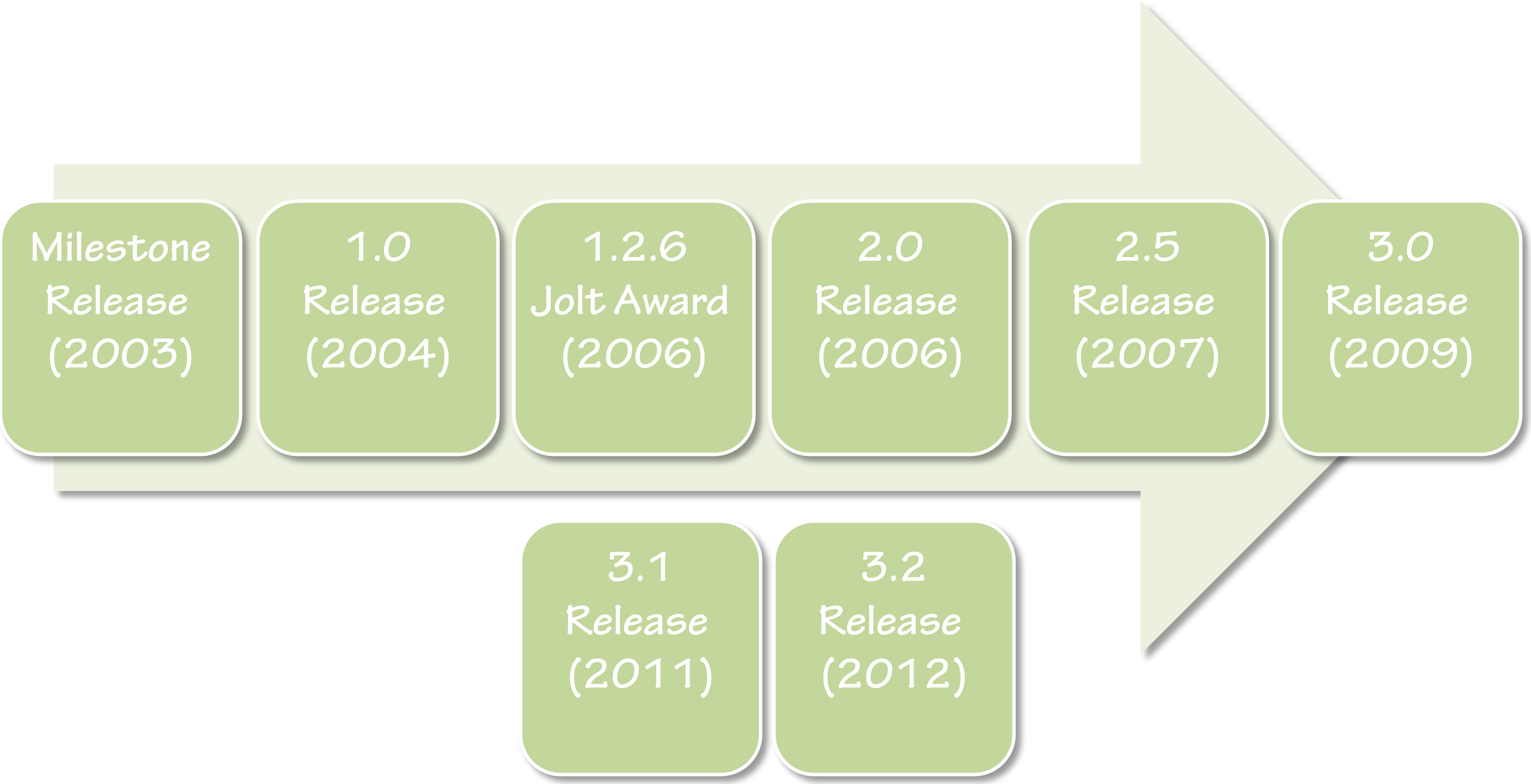
What is Spring?

What is Spring?

- **A framework originally built to reduce the complexities of Enterprise Java development**
- **POJO based and Interface driven**
- **Very lightweight and unobtrusive compared to older J2EE methodologies**
- **AOP/Proxies**
- **Built around patterns and best practices**
  - Singleton
  - Factory
  - Abstract Factory
  - Template Method
  - Annotation based configuration

History



Milestone Release (2003)

1.0 Release (2004)

1.2.6 Jolt Award (2006)

2.0 Release (2006)

2.5 Release (2007)

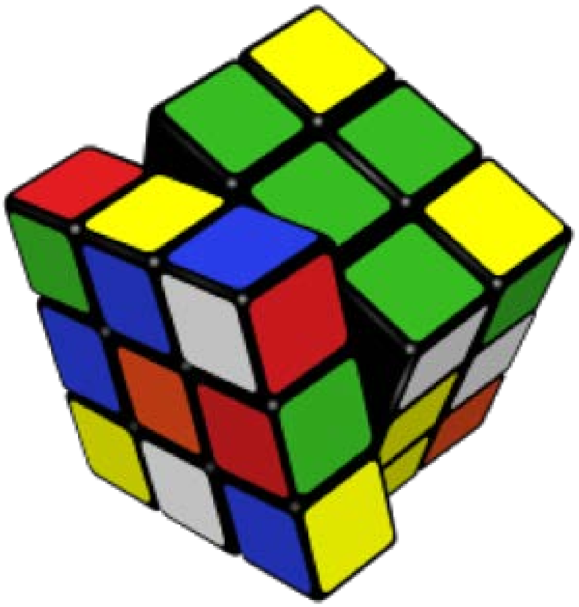
3.0 Release (2009)

3.1 Release (2011)

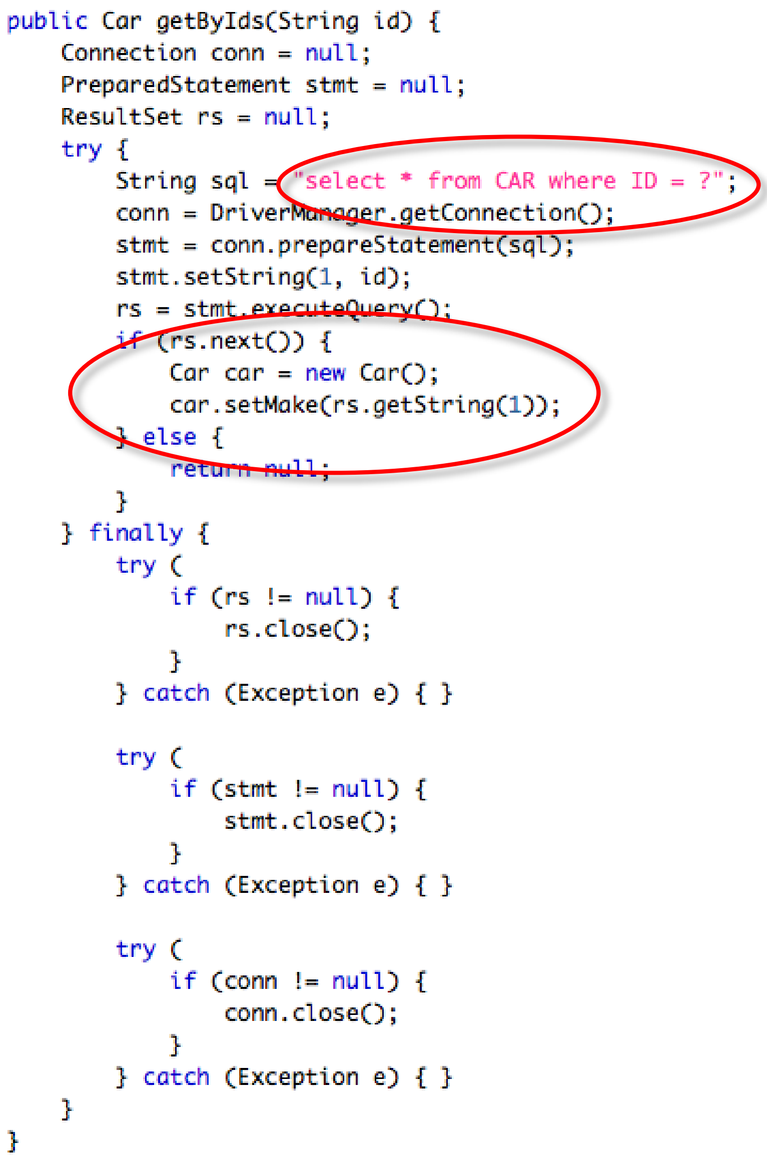
3.2 Release (2012)

The Problem

- Testability
- Maintainability
- Scalability
- Complexity
- Business Focus



Business Focus



```
public Car getByIds(String id) {
    Connection conn = null;
    PreparedStatement stmt = null;
    ResultSet rs = null;
    try {
        String sql = "select * from CAR where ID = ?";
        conn = DriverManager.getConnection();
        stmt = conn.prepareStatement(sql);
        stmt.setString(1, id);
        rs = stmt.executeQuery();
        if (rs.next()) {
            Car car = new Car();
            car.setMake(rs.getString(1));
        } else {
            return null;
        }
    } finally {
        try (
            if (rs != null) {
                rs.close();
            }
        } catch (Exception e) { }

        try (
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}
```
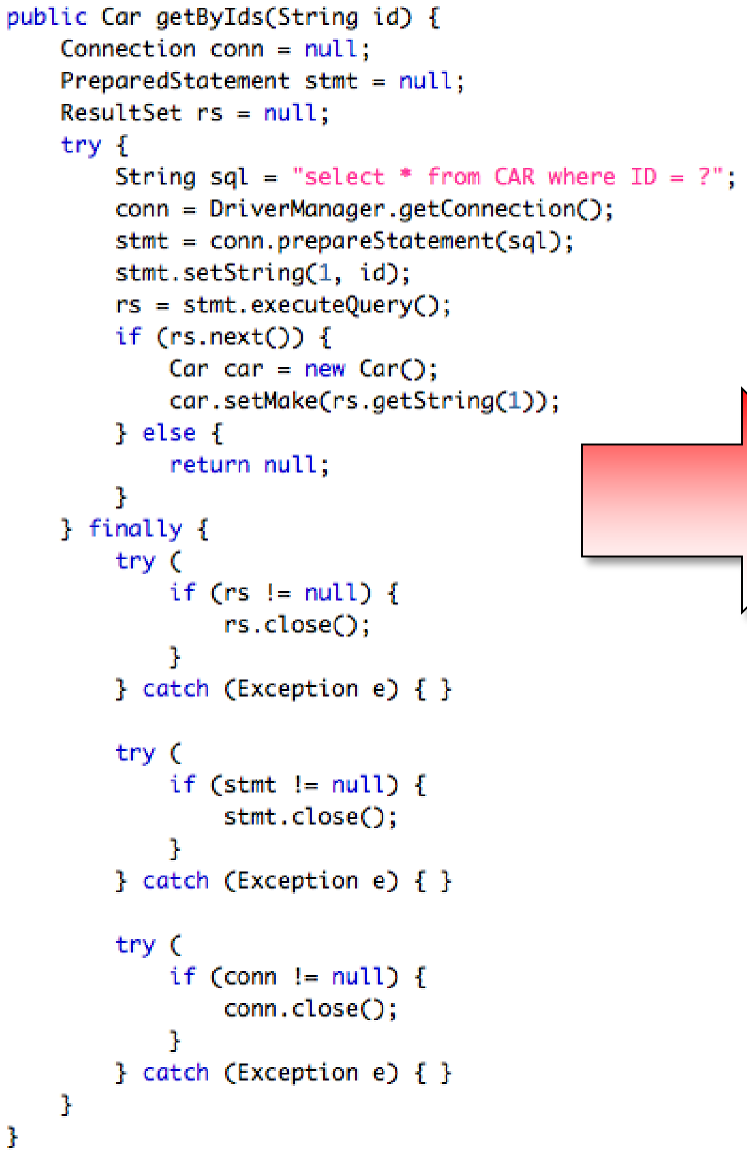

The Solution

- Removes configuration/lookup code
- Developers can focus on the business needs
- Code can focus on testing
- Annotation or XML based development

Business Focus



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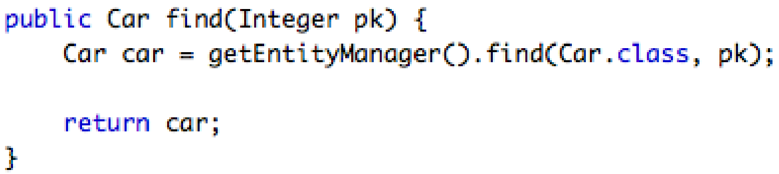
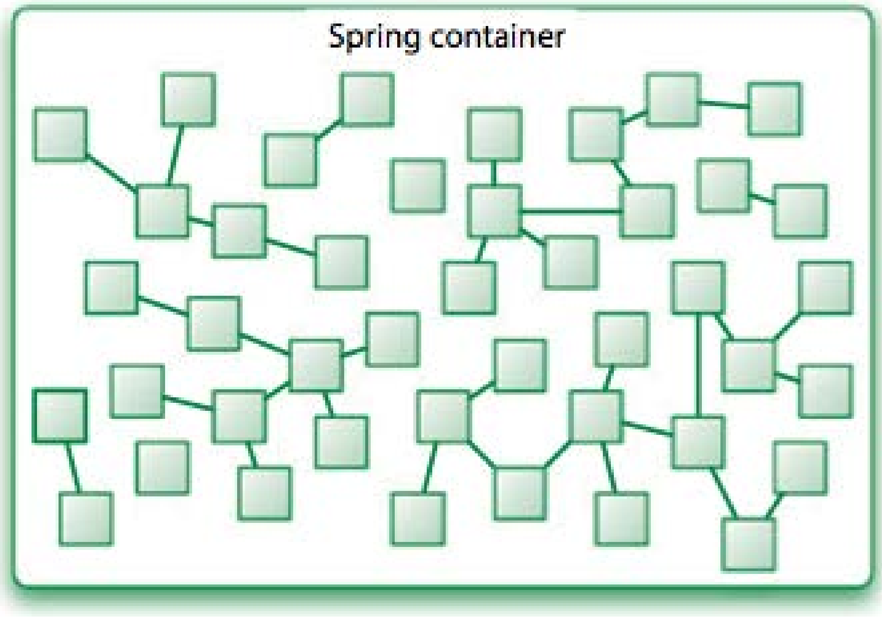


```java
public Car find(Integer pk) {
    Car car = getEntityManager().find(Car.class, pk);

    return car;
}
```

How It Works

- Everything is a simple POJO
- Essentially a glorified HashMap
- Can be used as a Registry



Summary

- What is Spring
- The Problem
- The Solution
- Business Focus