

<Spring Data Lecture Ten />

<Recap />

- > Reviewed the example spring data project**
- > Entities**
- > Repositories**
- > The H2 database**

<Deeper dig in to the code />

<Autowiring />

Think of this as an alternative way of injecting a dependency

<Dependency injection />

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
       xsi:schemaLocation="http://www.springframework.org/schema/beans
                           http://www.springframework.org/schema/beans/spring-beans.xsd">

    <bean name="car" class="com.northcoders.javaioc.Car">
        <constructor-arg name="engineSize" value="1500" />
        <property name="gearSystem" ref="gearSystem" />
    </bean>

    <bean name="gearSystem" class="com.northcoders.javaioc.SixSpeedGearSystem" />

</beans>
```



<Dependency injection />

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
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        <property name="gearSystem" ref="gearSystem" />
    </bean>

    <bean name="gearSystem" class="com.northcoders.javaioc.SixSpeedGearSystem" />

</beans>
```



<Dependency injection />

```
package com.northcoders.controller;

import com.northcoders.model.Car;
import com.northcoders.repository.CarRepository;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RestController;

import java.util.List;

@RestController
public class CarRestController {

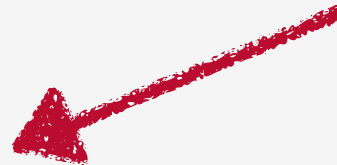
    @Autowired
    protected CarRepository carRepository;

    @RequestMapping(value="/cars", method = RequestMethod.GET)
    public List<Car> getAllCars() {
        return (List<Car>)carRepository.findAll();
    }

    @RequestMapping(value="/cars/{carId}", method = RequestMethod.GET)
    public Car getIndividulaCar(@PathVariable Long carId) {
        Car car = carRepository.findOne(carId);

        return car;
    }
}
```

Injected a dependency on
our repository



<New dependencies />

New dependencies declared in the Maven pom.xml

<Spring Data />

```
<dependency>  
  <groupId>org.springframework.boot</groupId>  
  <artifactId>spring-boot-starter-data-jpa</artifactId>  
</dependency>
```



<Flyway />

```
<dependency>  
  <groupId>org.flywaydb</groupId>  
  <artifactId>flyway-core</artifactId>  
</dependency>
```



<H2 Database />

```
<dependency>  
  <groupId>com.h2database</groupId>  
  <artifactId>h2</artifactId>  
  <scope>runtime</scope>  
</dependency>
```



<DevTools />

```
<dependency>  
  <groupId>org.springframework.boot</groupId>  
  <artifactId>spring-boot-devtools</artifactId>  
  <optional>true</optional>  
</dependency>
```

<https://spring.io/blog/2015/06/17/devtools-in-spring-boot-1-3>



<MySQL Connector />

```
<dependency>  
  <groupId>mysql</groupId>  
  <artifactId>mysql-connector-java</artifactId>  
  <scope>runtime</scope>  
</dependency>
```



<More config />

We've now got some external config

<application.properties />

```
spring.datasource.url=jdbc:h2:mem:cars
```

```
flyway.locations=db/updates
```

```
spring.jpa.hibernate.ddl-auto=none
```



<Flyway />

A way of automatically applying SQL updates.

They get applied when your app starts up

<Flyway />

- > <https://flywaydb.org/>
- > Incremental versioning scheme
- > Version table
- > KISS

<schema_version />

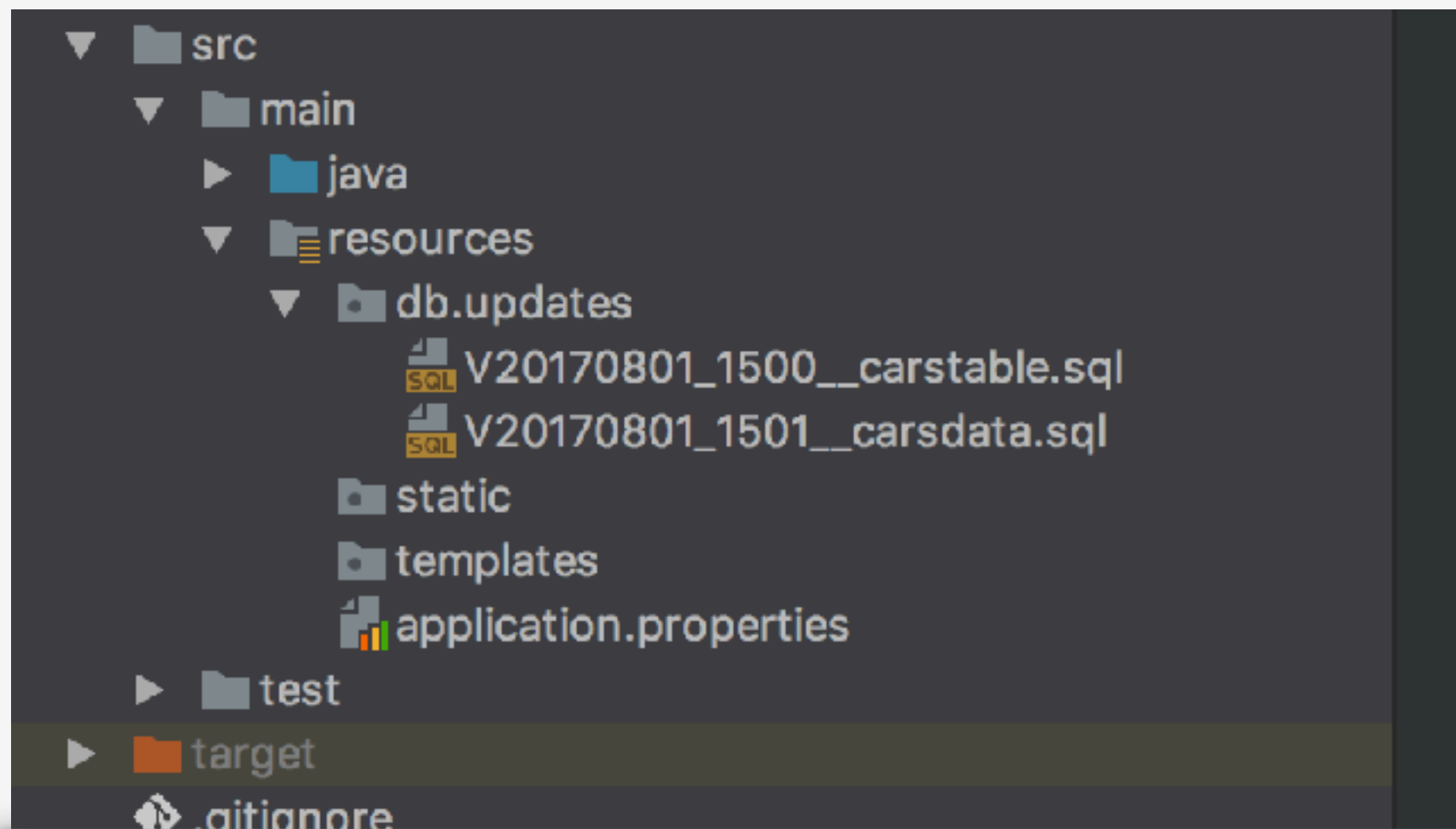
```
SELECT * FROM "schema_version";
```

version_rank	installed_rank	version	description	type	script	checksum	installed_by	installed_on	execution_time	success
1	1	20170801.1500	carstable	SQL	V20170801_1500__carstable.sql	523660651	SA	2017-08-14 10:35:18.371	15	TRUE
2	2	20170801.1501	carsdata	SQL	V20170801_1501__carsdata.sql	-77809307	SA	2017-08-14 10:35:18.439	30	TRUE

(2 rows, 6 ms)

Edit

<Updates directory />



<Task nine />

- > Introduce data in to your full stack code base**