

## Spring Autowiring by Type

- In Spring, “Autowiring by Type” means, if data type of a bean is compatible with the data type of other bean property, auto wire it.

- **Example:**

1. Create an Engine.java class

```
12 public class Engine {
13
14     private String engineID;
15     private String validity;
16
17     public String getEngineID() {
18         return engineID;
19     }
20     public void setEngineID(String engineID) {
21         this.engineID = engineID;
22     }
23     public String getValidity() {
24         return validity;
25     }
26     public void setValidity(String validity) {
27         this.validity = validity;
28     }
29     @Override
30     public String toString() {
31         return "Engine [engineID=" + engineID + ", validity=" + validity + "];"
32     }
33 }
```

2. Create Truck.java class.

```
12 public class Truck {
13
14     private Engine engine;
15
16     public Engine getEngine() {
17         return engine;
18     }
19
20     public void setEngine(Engine engine) {
21         this.engine = engine;
22     }
23
24 }
```

3. Configure Truck and Engine classes in Spring-Core.xml configuration file.

```

10 <beans xmlns="http://www.springframework.org/schema/beans"
11     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
12     xsi:schemaLocation="http://www.springframework.org/schema/beans
13     http://www.springframework.org/schema/beans/spring-beans-3.0.xsd">
14
15     <bean id="engine" class="com.java2learn.core.Engine">
16         <property name="engineID" value="123"></property>
17         <property name="validity" value="3Yrs."></property>
18     </bean>
19     <bean id="truck" class="com.java2learn.core.Truck" autowire="byType"/>
20
21 </beans>

```

#### 4. Create the client program.

```

12 import org.springframework.context.ApplicationContext;
13 import org.springframework.context.support.ClassPathXmlApplicationContext;
14 import com.java2learn.core.Truck;
15
16 public class ApplicationContextDemo {
17
18     public static void main(String[] args) {
19

```

```

        ApplicationContext applicationContext=new
        ClassPathXmlApplicationContext("Spring-Core.xml");
        Truck truck=(Truck)applicationContext.getBean("truck");
        System.out.println("Validity::"+truck.getEngine().getValidity());
        System.out.println("Engine ID::"+truck.getEngine().getEngineID());

    }
}

```

➤ **Output:**  
 Validity::3Yrs.  
 Engine ID::123