

SESSION PROGRAMS(SPRING Autowiring)

Autowiring

Spring provides a way to **automatically**

1. Create Bean Objects in the background without **new ()** keyword
2. Detect the relationships between various beans.
3. Inject above objects/dependencies in the required class.
i.e. Dependency Injection

This is called as **Autowiring. Used to inject dependencies.**

Code Example

Program 1 : Classroom.java

```
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;

@Component
public class Classroom {

    @Autowired
    Student studentbean;

    private int no;

    public Classroom()
    {
        //this.studentbean = studentbean;
        System.out.println("Called default Constructor");
    }

    //@Autowired
    public Classroom(Student studentbean)
    {
        this.studentbean = studentbean;
        System.out.println("Autowiring done by Constructor");
    }

    public int getNo() {
        return no;
    }

    public Student getStudentbean() {
        return studentbean;
    }
}
```

```

    public void setStudentbean(Student studentbean) {
        this.studentbean = studentbean;
        System.out.println("Autowiring done by Setter method");
    }

    public void setNo(int no) {
        this.no = no;
    }

    @Override
    public String toString()
    {
        return ( "Student Name in Classroom is :
"+this.studentbean.getName() );
    }
}

```

Program 2: Student.java

```

import org.springframework.stereotype.Component;

@Component
public class Student {
    private String name;

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String displayInfo(){
        System.out.println("Student Name in Student is : "+name);
        return (name);
    }

}

```

Program 3: appliationContext.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:context="http://www.springframework.org/schema/context"
    xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-3.0.xsd
http://www.springframework.org/schema/context

```

<http://www.springframework.org/schema/context/spring-context-3.0.xsd>>

```
<context:annotation-config />

    <bean id="classroombean"
class="com.springcore.examples.ClassRoom" >
        <property name="no" value="3" ></property>

    </bean>

    <bean id="studentbean"
class="com.springcore.examples.Student">
        <property name="name" value="Deepak" ></property>
    </bean>

</beans>
```

Program 4: Test.java

```
import org.springframework.context.ConfigurableApplicationContext;

import org.springframework.context.support.ClassPathXmlApplicationContext;

public class Test {

    public static void main(String[] args) {
        String confFile = "applicationContext.xml";
        ConfigurableApplicationContext context
            = new ClassPathXmlApplicationContext(confFile);

        Student studentbean=(Student) context.getBean("studentbean");
        studentbean.displayInfo();

        ClassRoom classroom=(ClassRoom) context.getBean("classroombean");
        System.out.println(classroom.toString());
        System.out.println(classroom.getNo());

    }

}
```