Bean Scope

Singleton

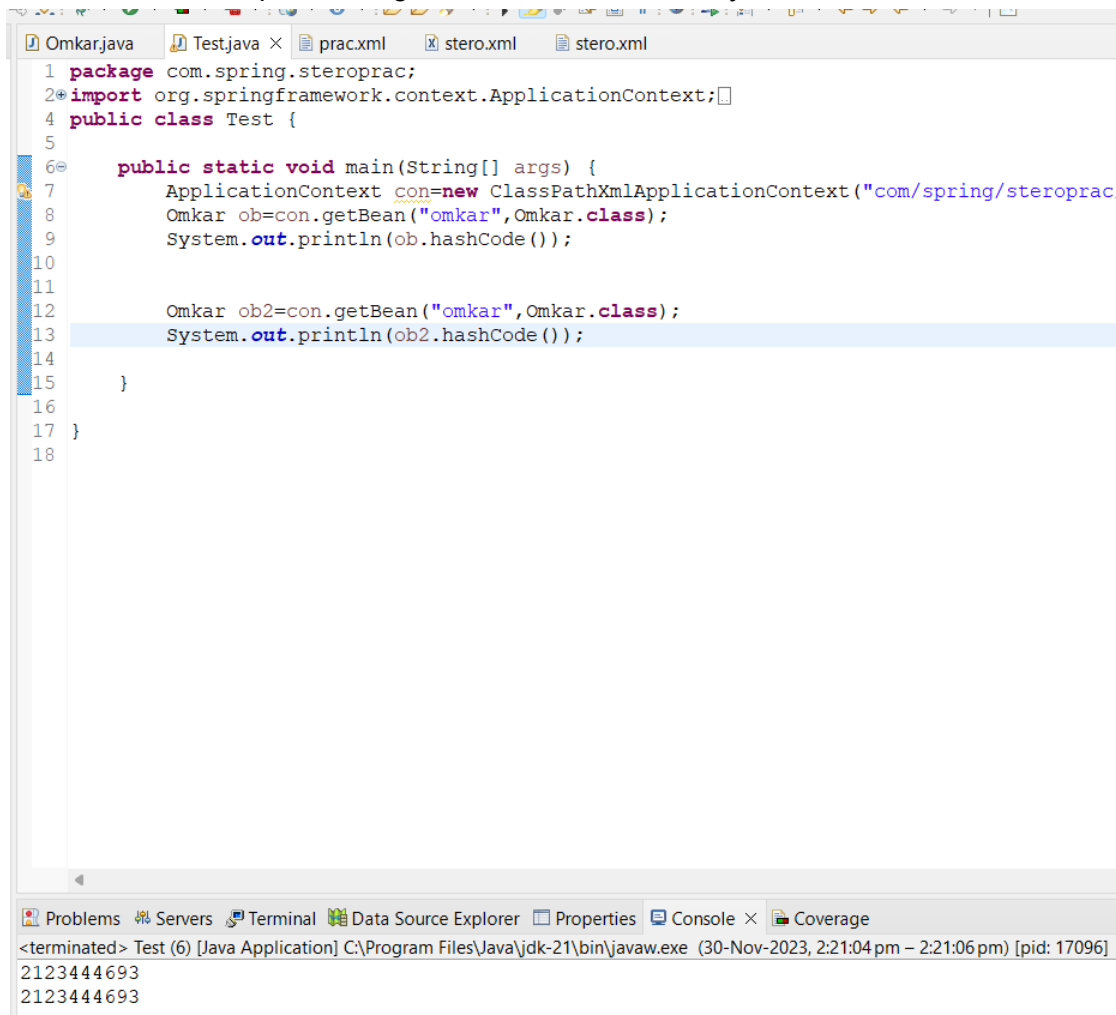**prototype**

request

session

globalsession

==**Bean Sope** : allow to have control on spring bean instance creation.==

- **Request** →used in web application(with HTTP)

- **Singleton** : it applied automatically(its default)[Single object is created and provided to you every time].As when we ask obj from IOC container it provide single object and even we ask multiple time it give reference of same object.

```
Omkar.java    Test.java ×    prac.xml    stero.xml    stero.xml
 1 package com.spring.steroprac;
 2⊕import org.springframework.context.ApplicationContext;
 4 public class Test {
 5
 6⊝    public static void main(String[] args) {
 7        ApplicationContext con=new ClassPathXmlApplicationContext("com/spring/steroprac/
 8        Omkar ob=con.getBean("omkar",Omkar.class);
 9        System.out.println(ob.hashCode());
10
11
12        Omkar ob2=con.getBean("omkar",Omkar.class);
13        System.out.println(ob2.hashCode());
14
15    }
16
17 }
18
```

```
Problems  Servers  Terminal  Data Source Explorer  Properties  Console ×  Coverage
<terminated> Test (6) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe  (30-Nov-2023, 2:21:04 pm – 2:21:06 pm) [pid: 17096]
2123444693
2123444693
```

- **Prototype** : as singleton is default we can convert it into priototype.in this every time different object of bean is created and provided to you.

Configure bean scope

```
<bean class=" " name=" " scope=" " />

@Component
@Scope( " ")
Class Student
{


}
```

We have to specify scope as prototype because it is singleton by default.
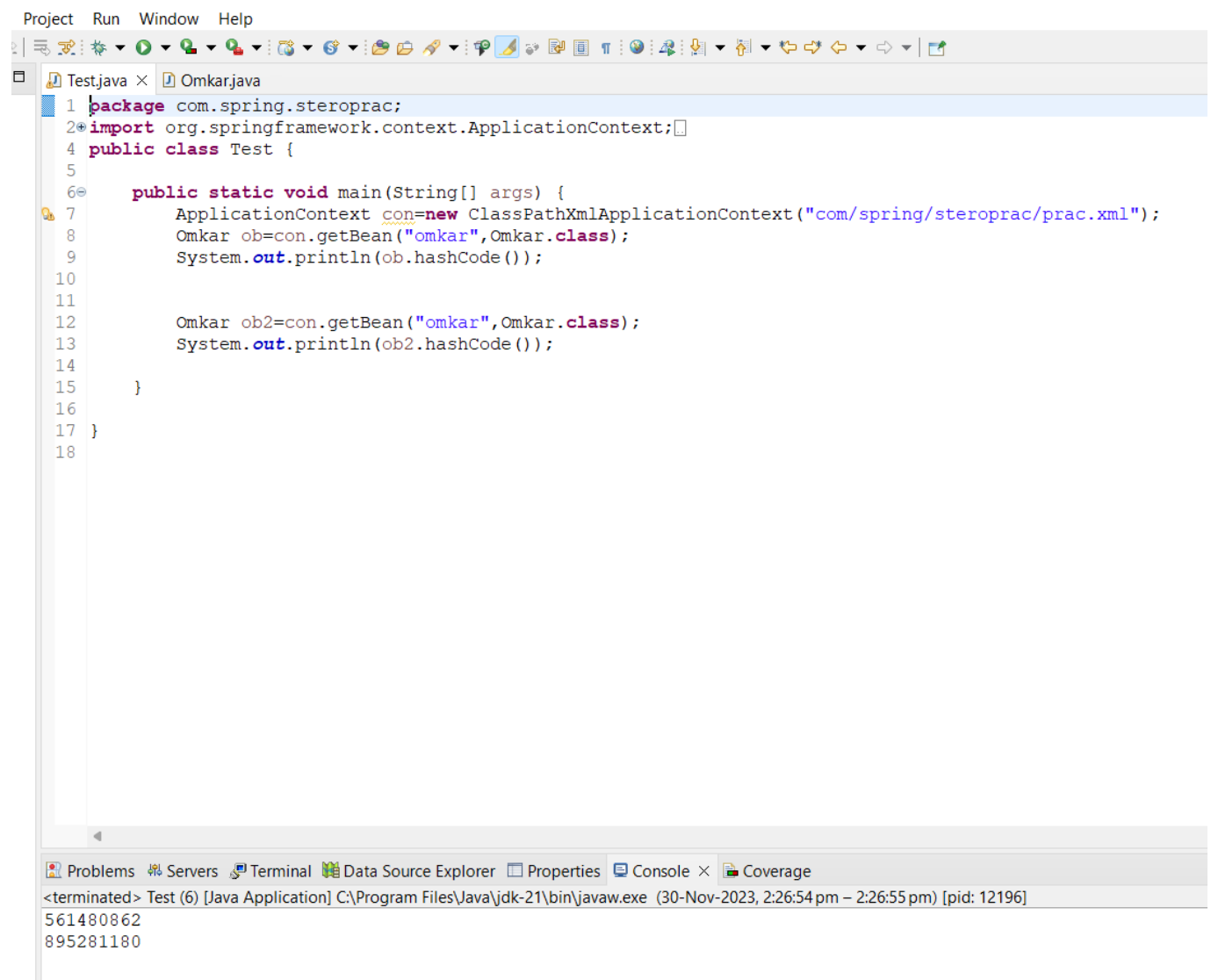
E.g with annotation:->

```java
 1 package com.spring.steroprac;
 2
 3⊕import java.util.Map;▯
 8
 9 @Component
10 @Scope("prototype")
11 public class Omkar {
12⊖     @Value("Omkar R Lokhande")
13     private String name;
14⊖     @Value("22")
15     private String Age;
16⊖     @Value("#{omi}")
17     private Map<String ,String> map;
18⊖     public String getName() {
19         return name;
20     }
21⊖     public void setName(String name) {
22         this.name = name;
23     }
24⊖     public String getAge() {
25         return Age;
26     }
27⊖     public void setAge(String age) {
28         Age = age;
29     }
30
31⊖     public Map<String, String> getMap() {
32         return map;
33     }
34⊖     public void setMap(Map<String, String> map) {
35         this.map = map;
36     }
37⊖     @Override
▲38     public String toString() {
```

📋 Problems 🔠 Servers 💻 Terminal 🗃 Data Source Explorer ▢ Properties 💻 Console × 📇 Coverage
<terminated> Test (6) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (30-Nov-2023, 2:26:54 pm – 2:26:55 pm) [pid: 12196]
561480862
895281180

Project   Run   Window   Help

Test.java ×   Omkar.java

```java
1  package com.spring.steroprac;
2  import org.springframework.context.ApplicationContext;
4  public class Test {
5
6      public static void main(String[] args) {
7          ApplicationContext con=new ClassPathXmlApplicationContext("com/spring/steroprac/prac.xml");
8          Omkar ob=con.getBean("omkar",Omkar.class);
9          System.out.println(ob.hashCode());
10
11
12          Omkar ob2=con.getBean("omkar",Omkar.class);
13          System.out.println(ob2.hashCode());
14
15      }
16
17  }
18
```

Problems   Servers   Terminal   Data Source Explorer   Properties   Console ×   Coverage

<terminated> Test (6) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (30-Nov-2023, 2:26:54 pm – 2:26:55 pm) [pid: 12196]
561480862
895281180

E.g with bean

```java
1  package com.spring.SpringStandaloneCollection;
2
3⊖ import org.springframework.context.ApplicationContext;☐
5  public class App
6  {
7⊖     public static void main( String[] args )
8      {
9          ApplicationContext con=new ClassPathXmlApplicationContext("com/spring/SpringStandaloneCollection/standalc.
10         Person p=(Person) con.getBean("pp");
11         System.out.println(p.hashCode());
12
13         Person p2=con.getBean("pp",Person.class);
14         System.out.println(p2.hashCode());
15
16
17
18
19
20     }
21 }
22
```

App.java × | Person.java

Problems | Servers | Terminal | Data Source Explorer | Properties | Console × | Coverage

<terminated> App (7) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (30-Nov-2023, 2:31:15 pm – 2:31:17 pm) [pid: 5608]
2021707251
1541857308

```xml
   http://www.springframework.org/schema/beans/spring-beans-3.0.xsd (xsi:schemaLocation) | http://www
1  <?xml version="1.0" encoding="UTF-8"?>
2  <beans xmlns="http://www.springframework.org/schema/beans"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xmlns:p="http://www.springframework.org/schema/p"
5      xmlns:util="http://www.springframework.org/schema/util"
6      xsi:schemaLocation="http://www.springframework.org/schema/beans
7
8      http://www.springframework.org/schema/beans/spring-beans-3.0.xsd
9      http://www.springframework.org/schema/context
10     http://www.springframework.org/schema/context/spring-context.xsd
11     http://www.springframework.org/schema/util
12     http://www.springframework.org/schema/util/spring-util.xsd
13     ">
14     <util:properties id="prop">
15
16     <prop key="1" >One</prop>
17     <prop key="2" >Two</prop>
18     <prop key="3" >Three</prop>
19     </util:properties>
20
21
22
23     <bean class="com.spring.SpringStandaloneCollection.Person" name="pp" scope="prototype">
24     <property name="pro" ref="prop" />
25     </bean>
26
27 </beans>
```

Problems | Servers | Terminal | Data Source Explorer | Properties | Console × | Coverage

<terminated> App (7) [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (30-Nov-2023, 2:31:15 pm – 2:31:17 pm) [pid: 5608]
2021707251
1541857308