

# SPRING FRAMEWORK COURSE

## EXERCISE

### TALENT CONTEST V6

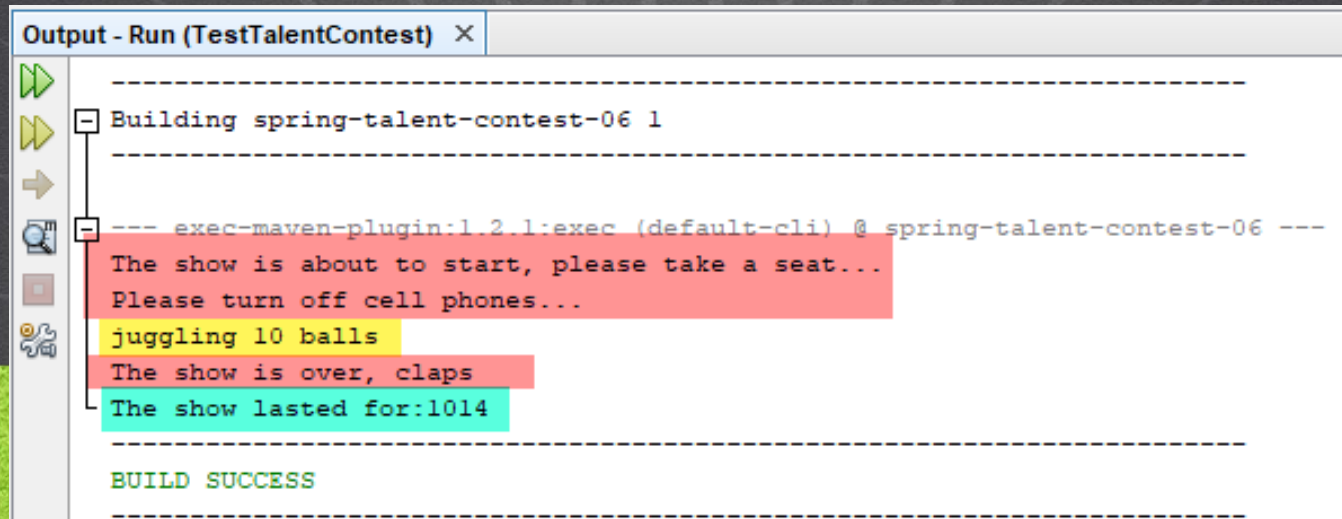


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# EXERCISE OBJECTIVE

- The goal of the exercise is to add AOP functionality with the use of around Advice to our Talent Challenge project.
- At the end we must see the following output, the result of applying the described AOP concepts:

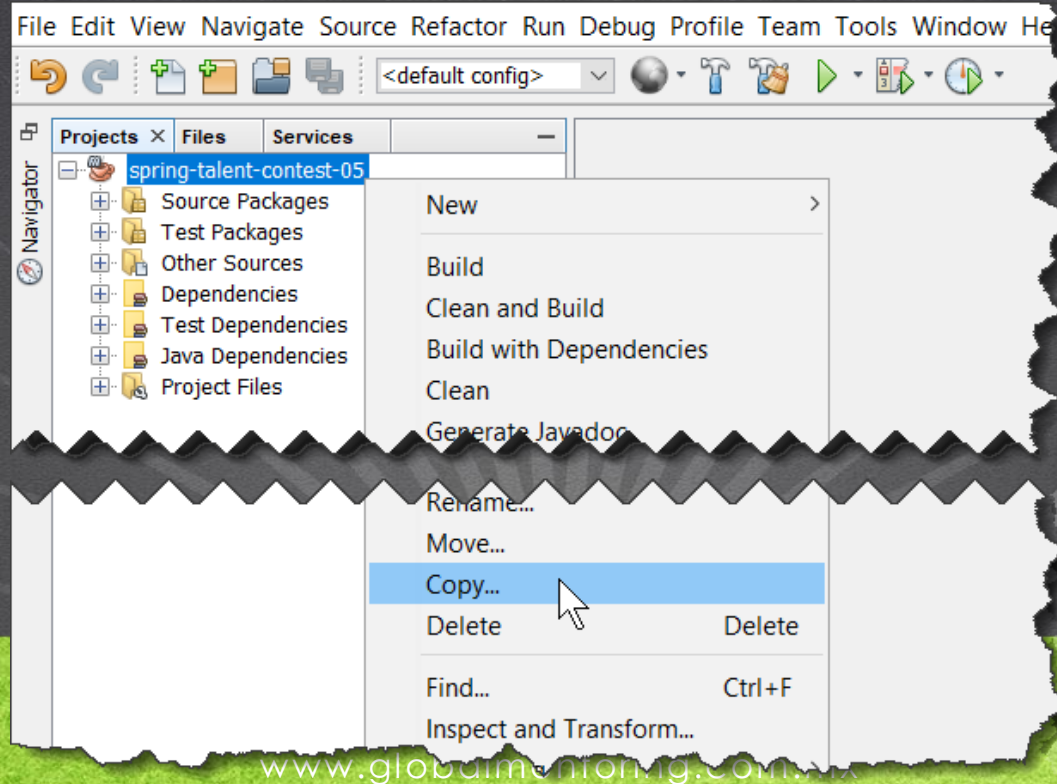


```
Output - Run (TestTalentContest) X
-----
[+] Building spring-talent-contest-06 1
-----
[+] --- exec-maven-plugin:1.2.1:exec (default-cli) @ spring-talent-contest-06 ---
The show is about to start, please take a seat...
Please turn off cell phones...
juggling 10 balls
The show is over, claps
The show lasted for:1014
-----
BUILD SUCCESS
-----
```



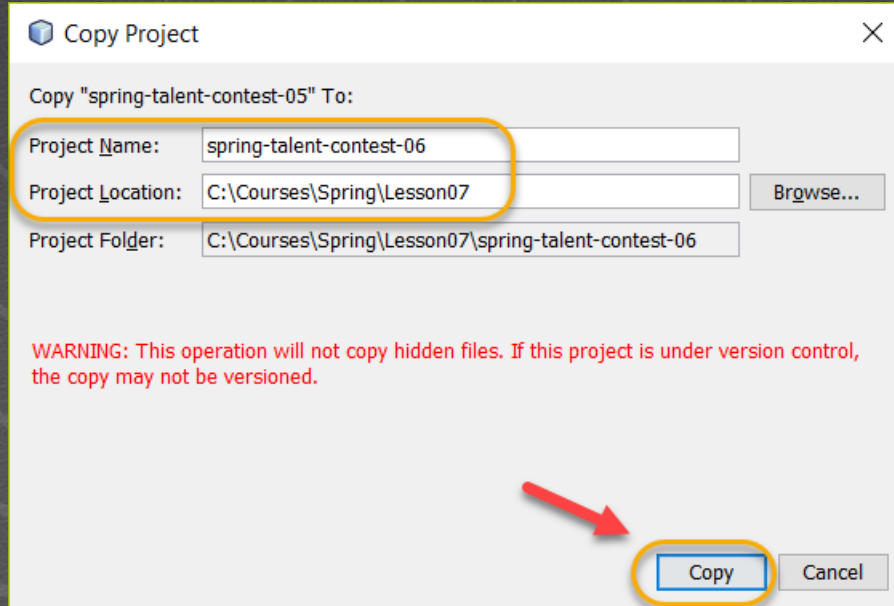
# 1. COPY THE PROJECT

Copy the spring-talent-contest-05 project:



# 1. COPY THE PROJECT

Change the name of the Project to a spring-talent-contest-06:

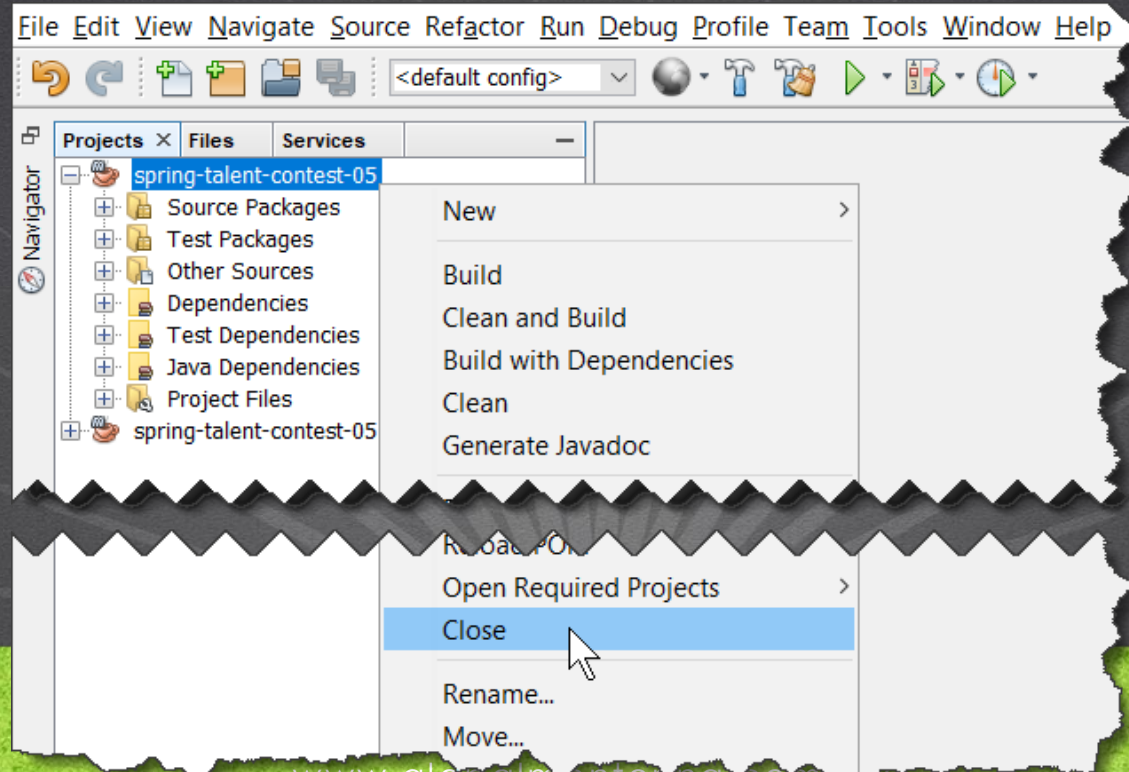


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## 2. CLOSE THE PREVIOUS PROJECT

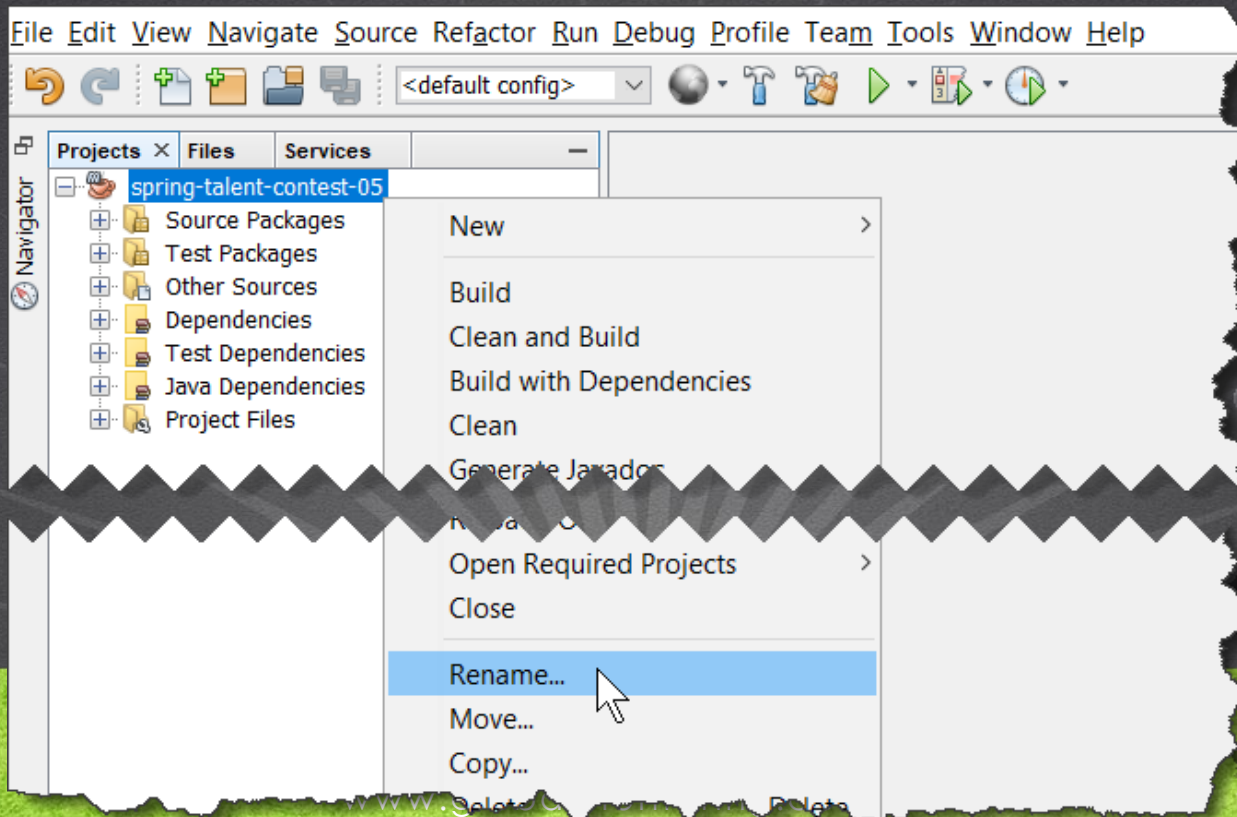
We closed the previous project and we are left with the new one:





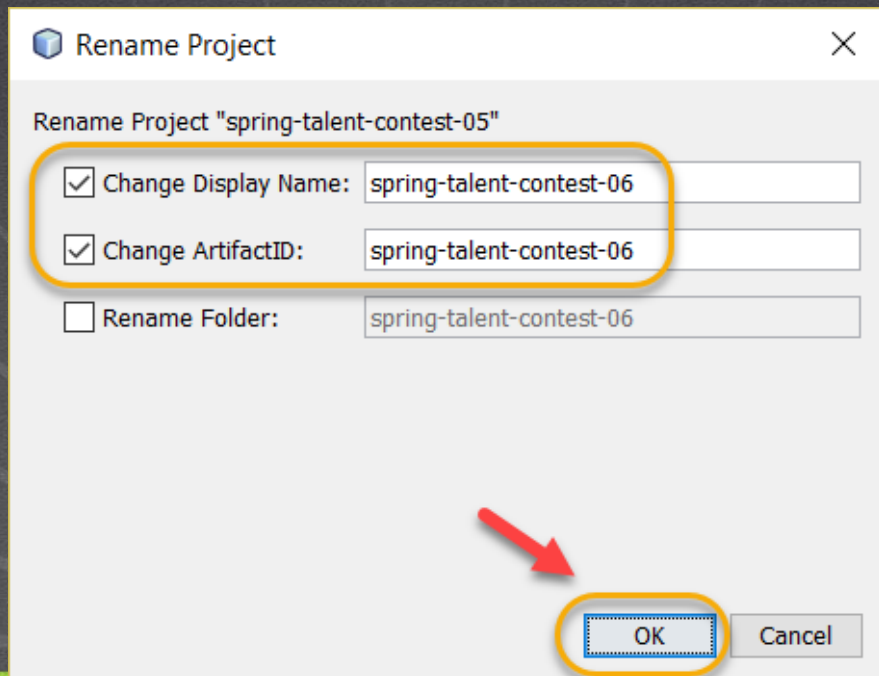
### 3. RENAME THE PROJECT

Rename the Project to spring-talent-contest-06:



### 3. RENAME THE PROJECT

Rename the Project to spring-talent-contest-06:



Rename Project

Rename Project "spring-talent-contest-05"

☒ Change Display Name: spring-talent-contest-06

☒ Change ArtifactID: spring-talent-contest-06

☐ Rename Folder: spring-talent-contest-06

OK Cancel

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## 4. MODIFICATION FILE APPLICATIONCONTEXT.XML

We must modify the definition of the Aspect in the applicationContext.xml file, since now in a single method we will have all the functionality of AOP:

```
<!-- AOP configuration with Aspect Around -->
<aop:config>
    <aop:aspect ref="audience">
        <aop:pointcut expression="execution(* competitors.Competitor.execute(..))" id="show" />
        <aop:around pointcut-ref="show" method="monitorShow" />
    </aop:aspect>
</aop:config>
```



## 5. MODIFY THE FILE

[applicationContext.xml:](#)

Click to download

```
<?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"
        xmlns:aop="http://www.springframework.org/schema/aop"
        xsi:schemaLocation =
            "http://www.springframework.org/schema/beans
            http://www.springframework.org/schema/beans/spring-beans.xsd
            http://www.springframework.org/schema/context
            http://www.springframework.org/schema/context/spring-context.xsd
            http://www.springframework.org/schema/aop
            http://www.springframework.org/schema/aop/spring-aop.xsd">

<!-- cconfiguration of the AOP target Proxy -->
<aop:aspectj-autoproxy proxy-target-class="true"/>

<!-- AOP configuration with Aspect Around -->
<aop:config>
    <aop:aspect ref="audience">
        <aop:pointcut expression="execution(* competitors.Competitor.execute(..))" id="show" />
        <aop:around pointcut-ref="show" method="monitorShow" />
    </aop:aspect>
</aop:config>
```

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## 5. MODIFY THE FILE

[applicationContext.xml:](#)

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```
<context:component-scan base-package="competitors" />

<!-- change of instrument -->
<bean id="saxophonist" class="competitors.Musician">
  <property name="song" value="Equinox"/>
  <!-- inner bean -->
  <property name="instrument">
    <bean class="competitors.Saxophone"/>
  </property>
</bean>

</beans>
```

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## 6. MODIFY THE FILE

Now we modify the Audiencia.java class. This class will now have the monitorShow method, and it is the method that will be executed.

let's see how our class is:



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## 6. MODIFY THE FILE

Audience.java:

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```
package competitors;

import org.aspectj.lang.ProceedingJoinPoint;
import org.springframework.stereotype.Component;

@Component
public class Audience {
    public void monitorShow(ProceedingJoinPoint joinpoint) {
        try {
            System.out.println("The show is about to start, please take a seat...");
            System.out.println("Please turn off cell phones...");
            //We record the start time
            long startTime = System.currentTimeMillis();

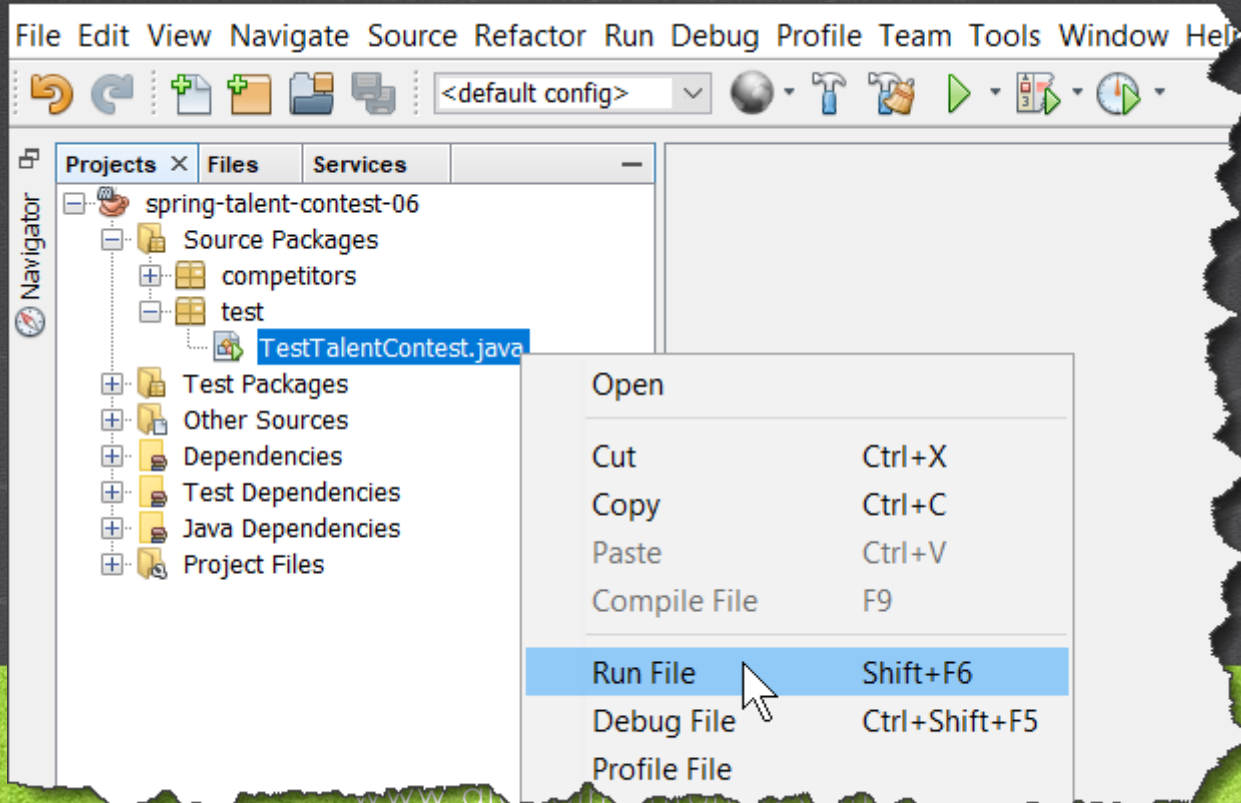
            //The business method is called (target method)
            joinpoint.proceed();

            Thread.sleep(1000); //1 second
            //This delay in milliseconds is optional and can be put into business methods
            //to simulate the duration of the method

            long endTime = System.currentTimeMillis();
            System.out.println("The show is over, claps");
            System.out.println("The show lasted for:" + (endTime - startTime));
        } catch (Throwable t) {
            System.out.println("The show was terrible, the tickets will be refunded");
        }
    }
}
```

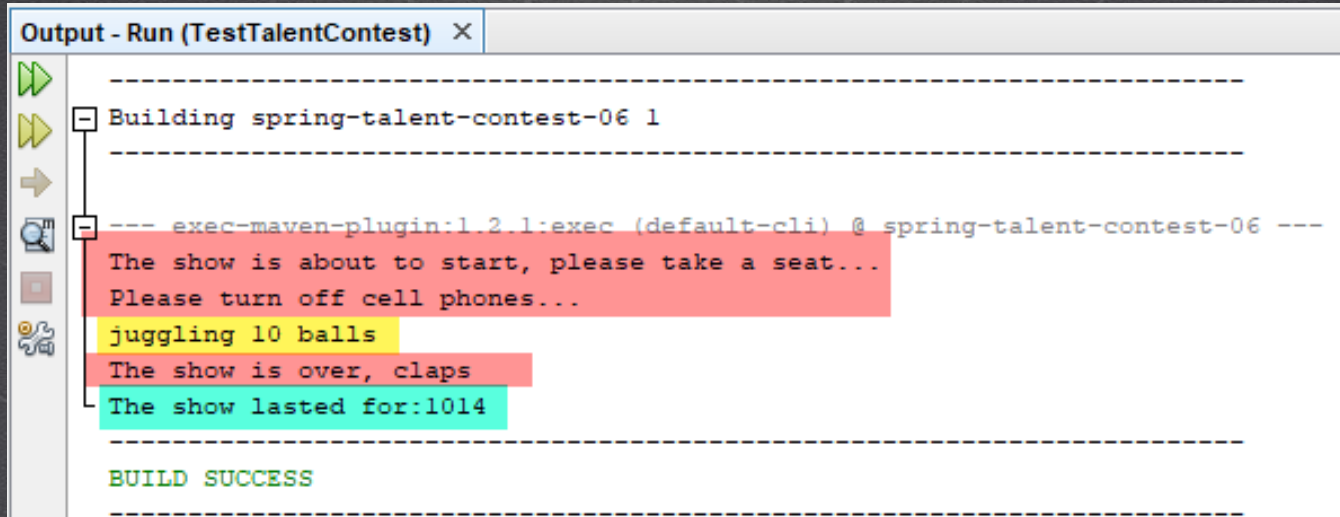
# 7. EXECUTE THE PROJECT

Execute the TestTalentContest.java class:



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juggling 10 balls
The show is over, claps
The show lasted for:1014
-----
BUILD SUCCESS
-----
```



# EXERCISE CONCLUSION

With this exercise we have put into practice the concept of AOP around. With which we observe how to intercept the execution of a method and perform some logic that interests us using AOP.

In the following exercises we will continue adding more AOP features to our project.



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# **SPRING FRAMEWORK**

By: Eng. Ubaldo Acosta



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