

# Instructions



How is it going ? Do you have problems with practical tasks ? Any concerns with learning materials ?

0 responses

# Today's agenda

- Total Recall
- Spring Framework
- Quiz
- Questions



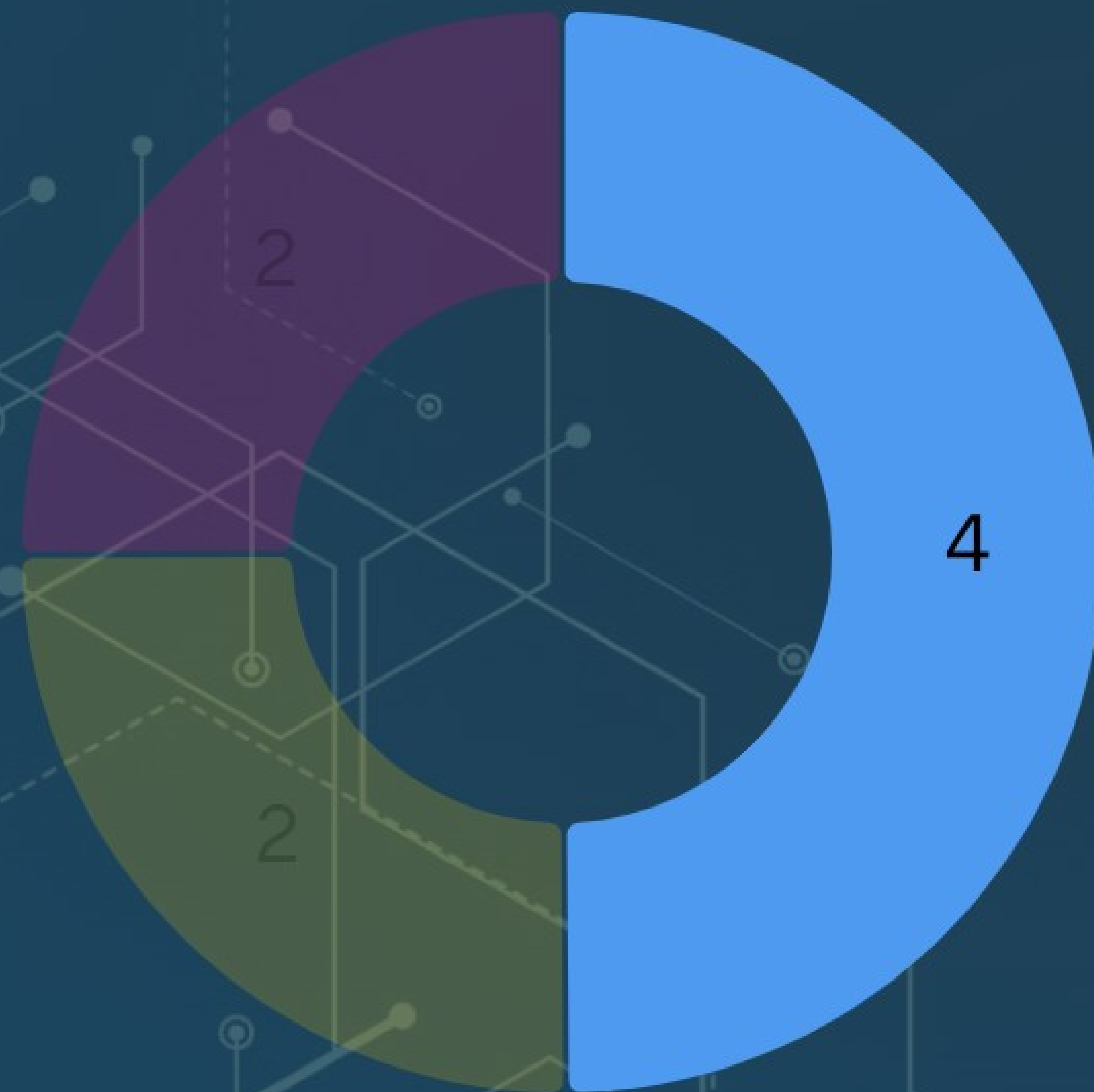
# Total Recall

# What do you remember from the previous workshop ?

MVC task

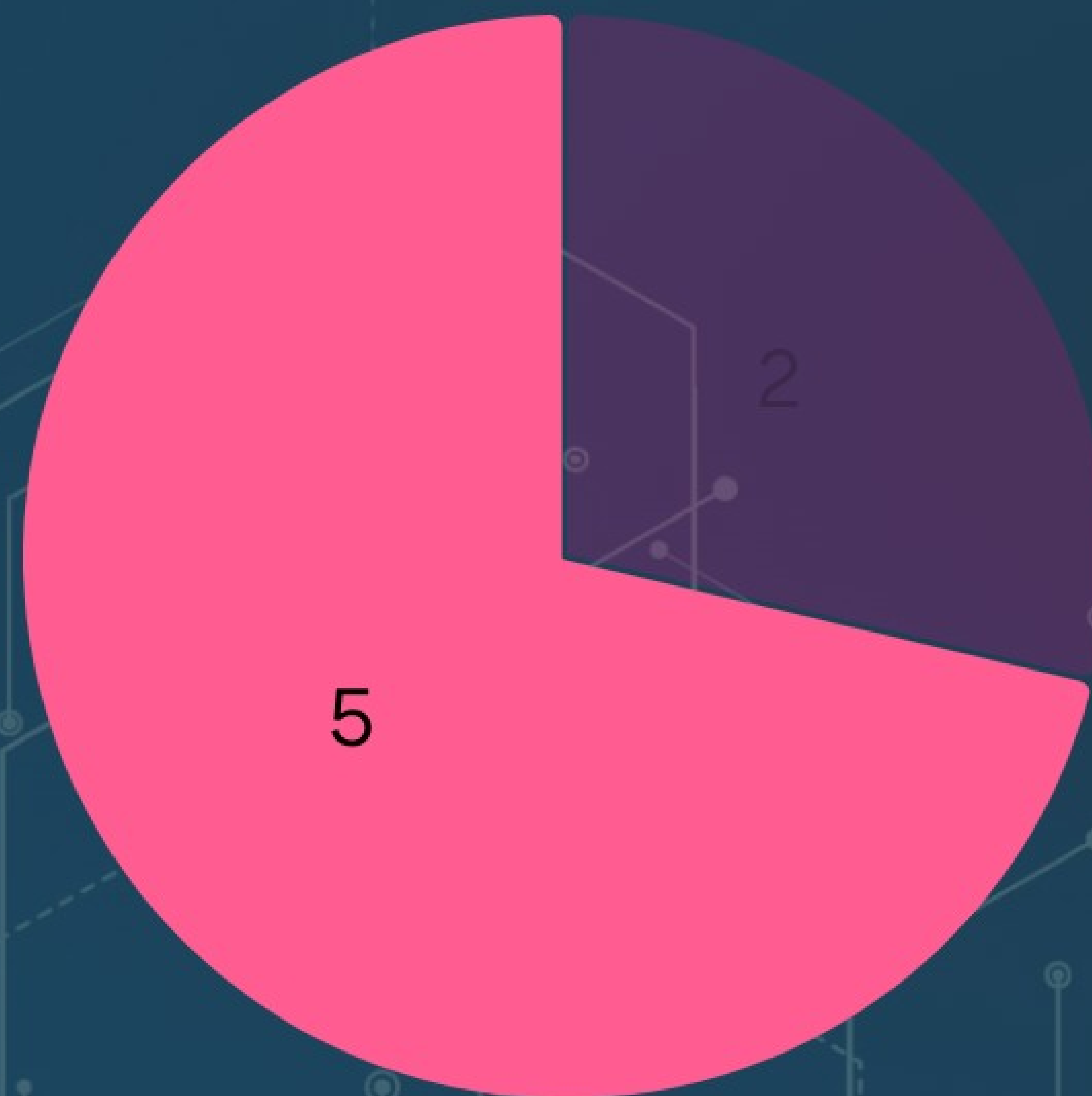


# Which of the following is NOT a special bean type in Spring MVC?



4	DispatcherServlet	✓
2	ThemeResolver	✗
2	LocaleResolver	✗
0	HandlerExceptionResolver	✗

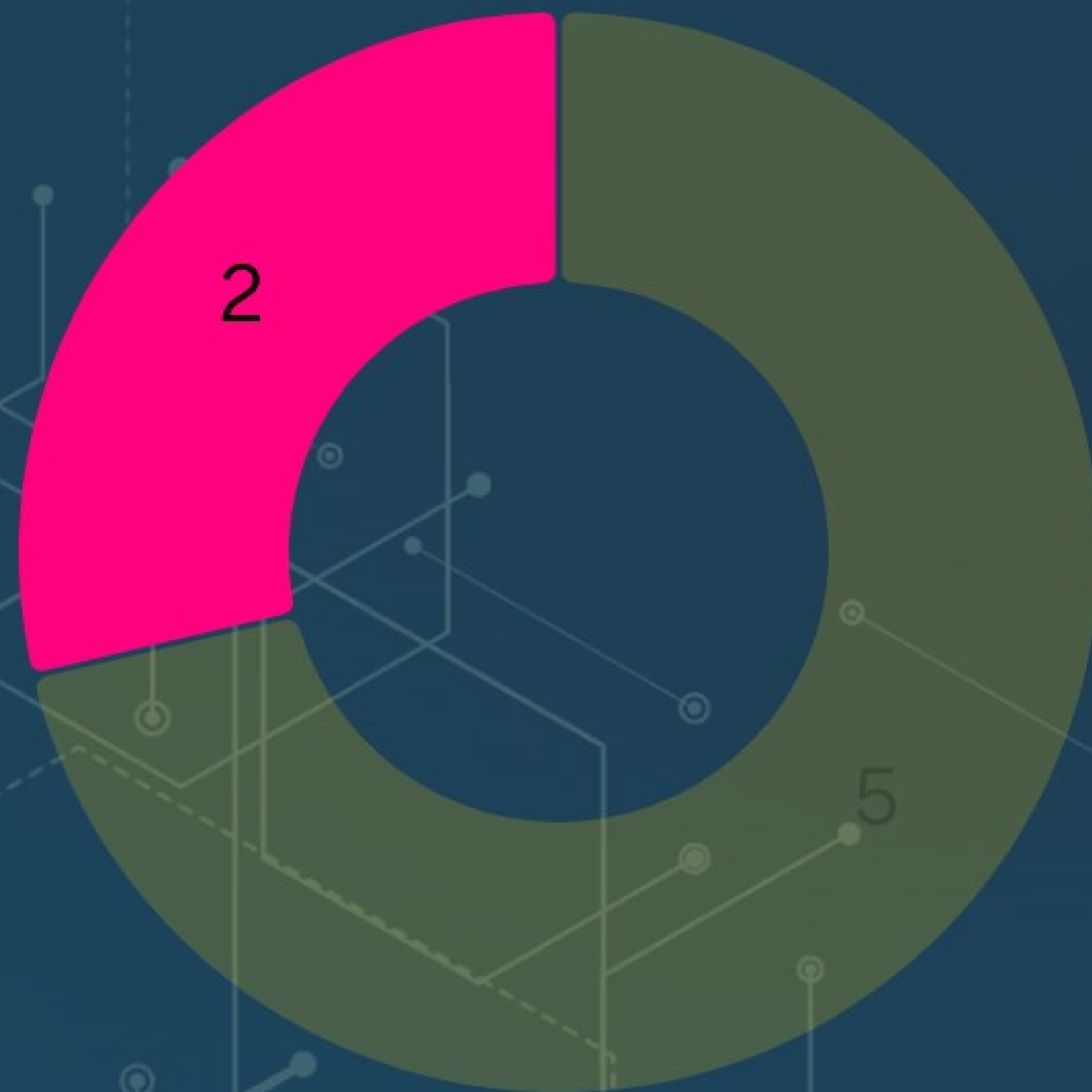
# Which one is NOT exception handler class?



0	ExceptionHandlerExceptionResolver	✗
0	SimpleMappingExceptionResolver	✗
2	ResponseStatusExceptionResolver	✗
5	RequestExceptionResolver	✓



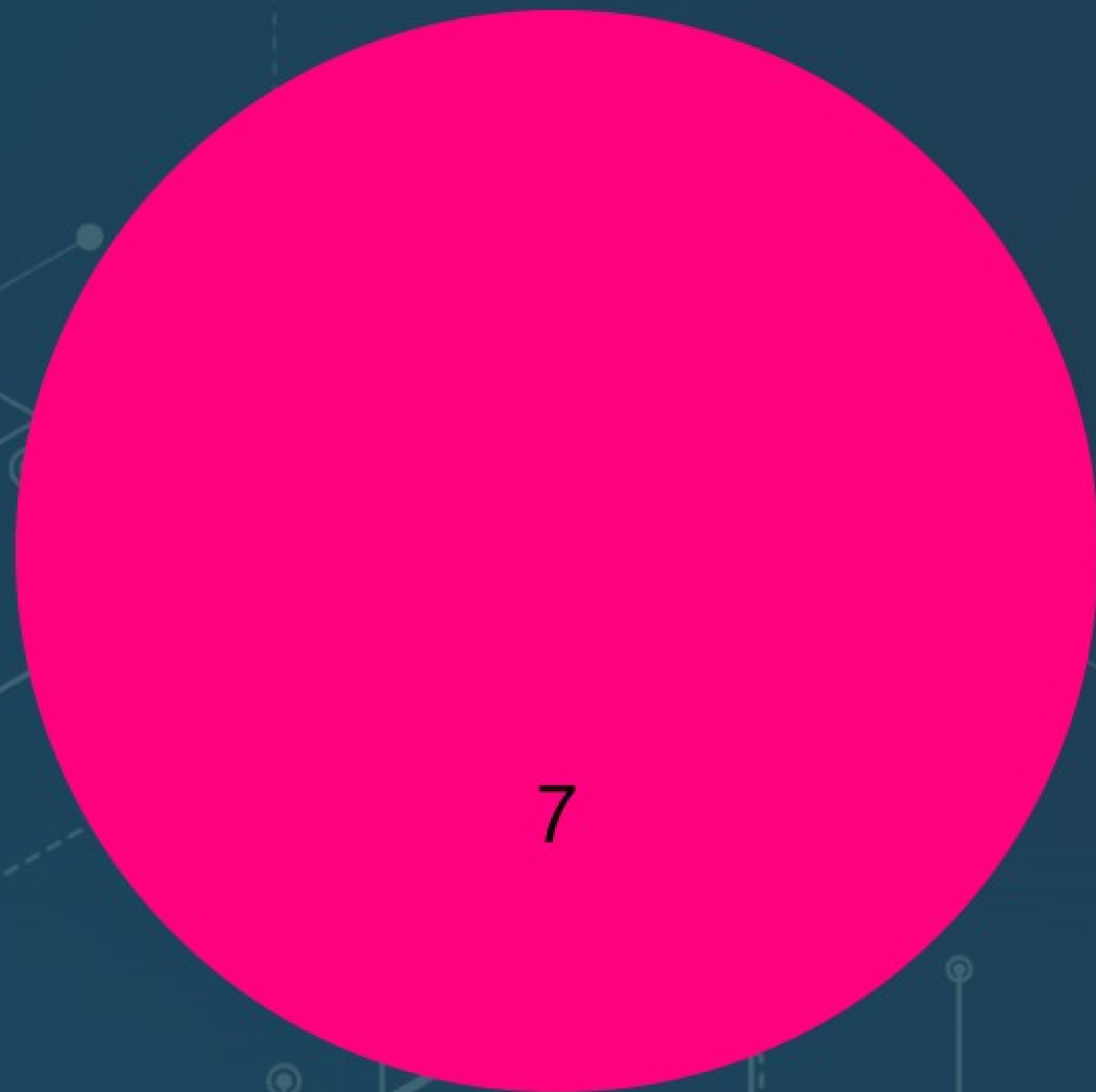
Which annotation is used to define a global exception handler method in a Spring MVC controller?



0	@ExceptionHandler	✗
5	@ExceptionHandler	✗
2	ControllerAdvice	✓



Which of the following is NOT a built-in implementation of the ViewResolver interface in Spring MVC?



0	InternalResourceViewResolver	✗
0	XmlViewResolver	✗
7	ThymeleafViewResolver	✓



# Spring AOP (ws-21)

Aspect-oriented programming



Do you have questions \ uncertainties \ concerns on materials? (If no - it means all clear for you)

no

no no no

# Spring

practice...



# Quiz

# When should we use AOP?

2 ✓



- Logging

1 ✓



- Measurements

2 ✓



- Side functionality

2 ✓



- Transactions

1 ✓



- Security



# When should we use AOP?

When cross-cutting concerns break OOP:

- Logging
- Measurements
- Side functionality
- Transactions
- Security

# How places in the code where the aspect is applied are called

6 ✓



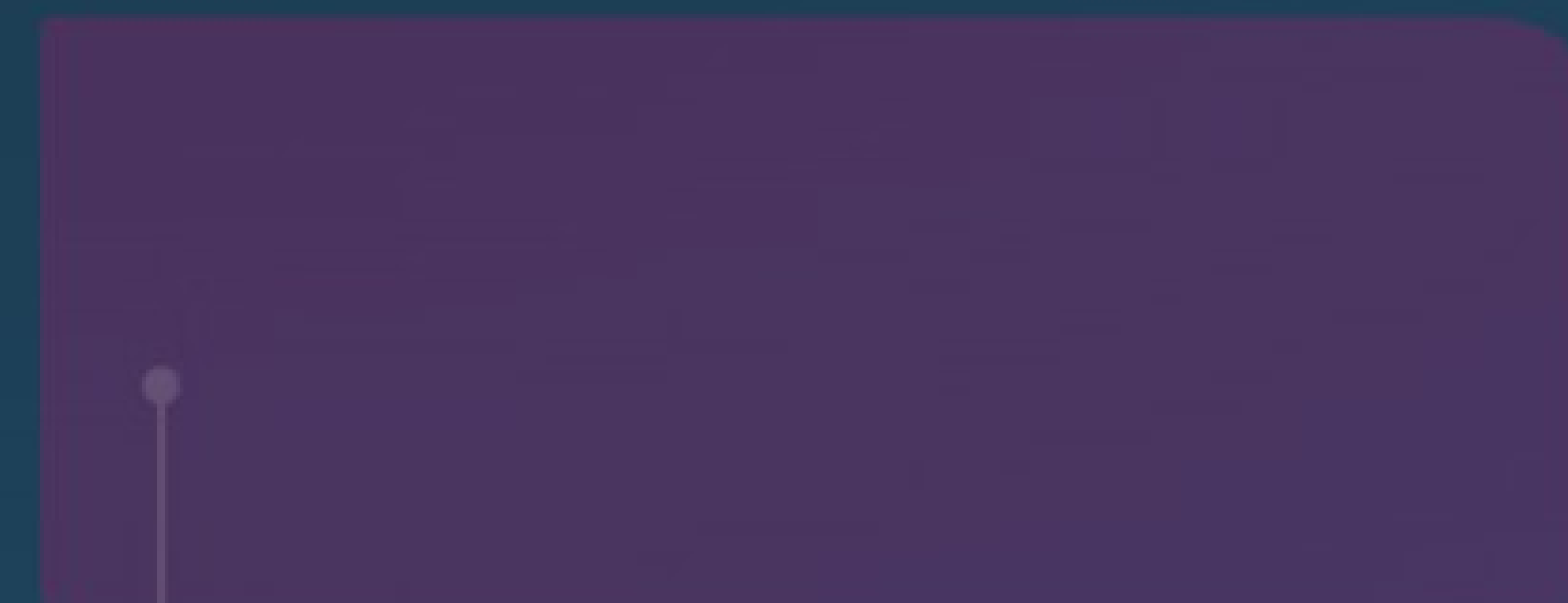
Points (Join points)

1 ✗



Advice

2 ✗



Aspect

0 ✗

Weaving



# Expression that select one or more join points is called

9 ✓



Pointcut

0 ✗

Advice

0 ✗

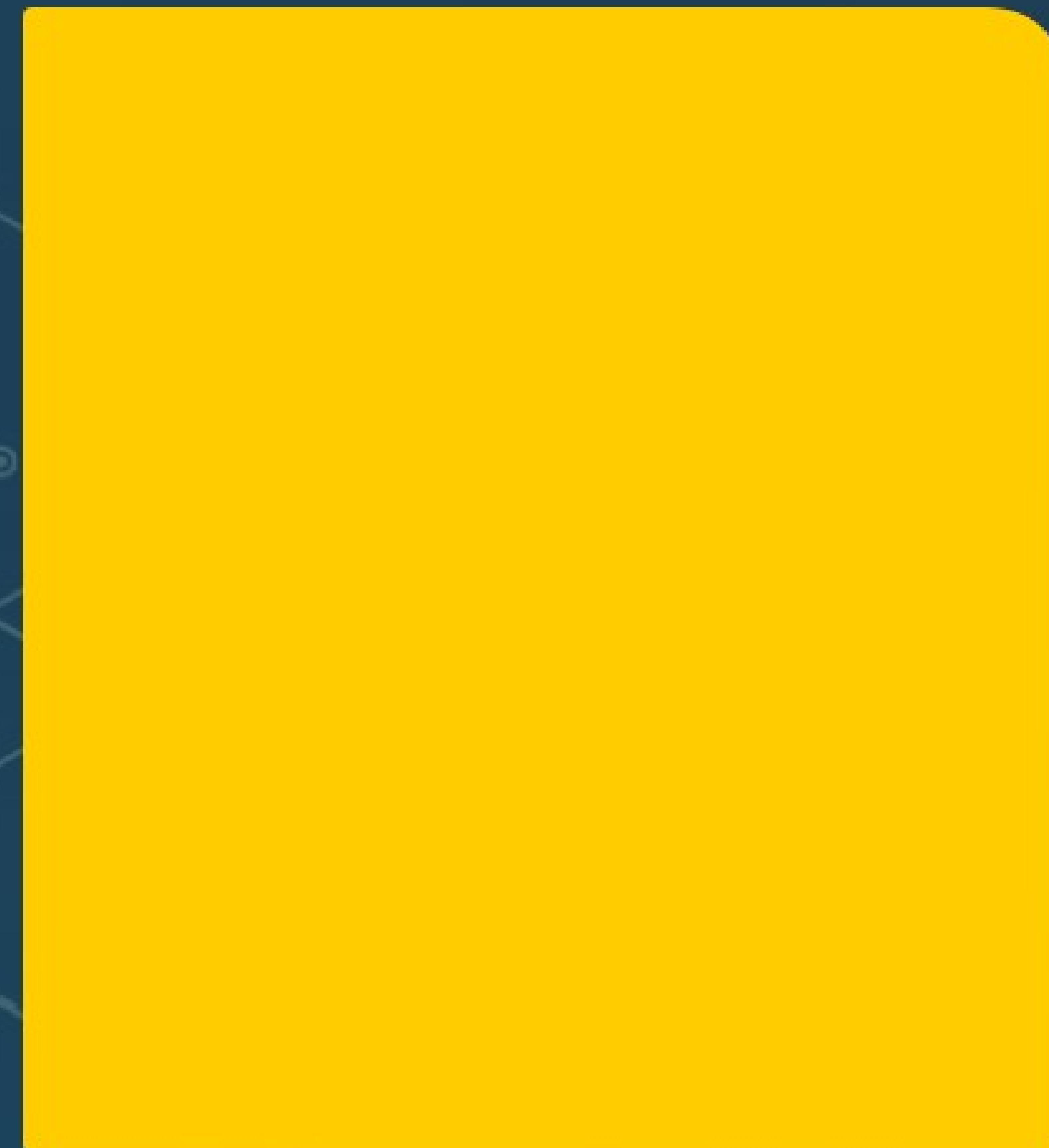
Aspect

0 ✗

Weaving

The action taken by an aspect at a particular join point is called

10 ✓



0 ✗

Pointcut

0 ✗

Aspect

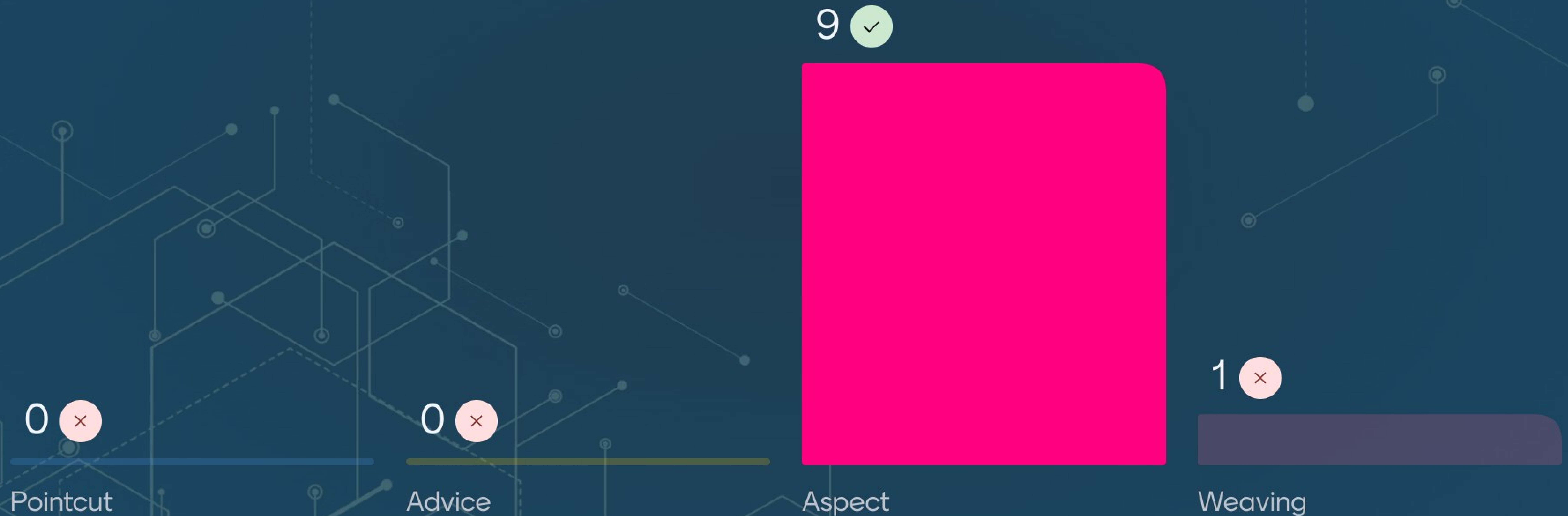
0 ✗

Weaving

Advice



A module that encapsulates pointcuts and advice is called



Name the process of applying aspects to target objects to create advised objects. This can happen at compile time, load time, or runtime.

10 ✓

0 ✗

Pointcut

0 ✗

Advice

0 ✗

Aspect

Weaving



# What are the differences between pointcut and join point in Spring AOP?

4 ✓

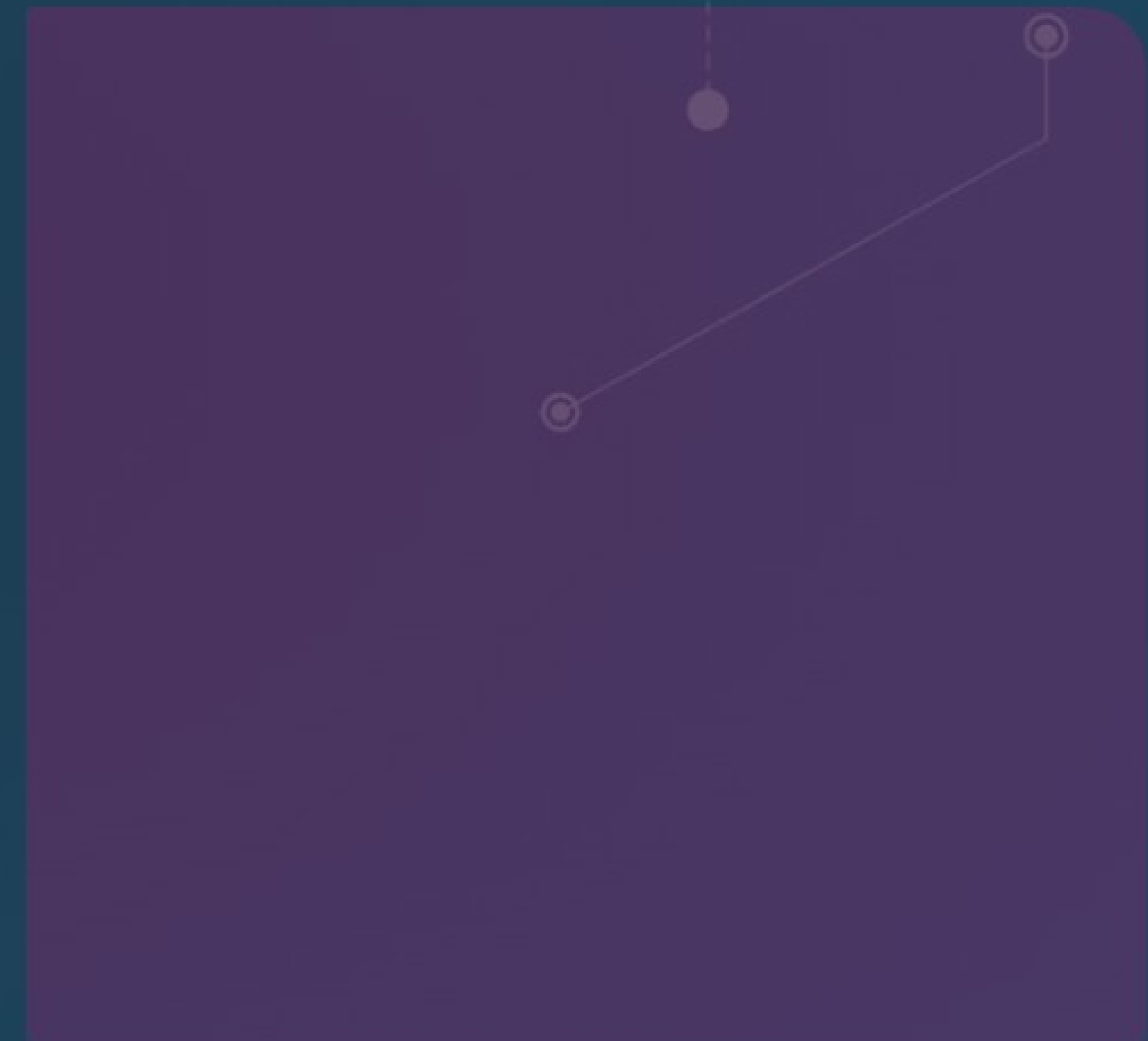


join point is a step while pointcut is an expression

0 ✗

no difference

4 ✗



join point is an expression while pointcut is a step

# What are the differences between pointcut and join point in Spring AOP?

A *join point* is a step in the program or application where you apply the AOP aspect. It can also be a specific advice execution instance.

For example, it can be an execution handling, method execution or a change in the object variable's value. In the Spring framework, a join point always denotes a method execution.

A *pointcut* is an expression that uses one or more join points to give advice. You can define a pointcut using patterns or expressions.

For example, if a point cut chooses two join points, it has two expressions.



# What type of weaving does Spring AOP use?

1 ✗

compile-time

1 ✓

load-time

7 ✗

during initialization

0 ✗

post-compile

# What type of weaving does Spring AOP use?

There are three types of weaving in AOP, including *compile-time*, *post-compile* and *load-time weaving*. Spring AOP makes use of runtime weaving, also known as load-time weaving. In runtime weaving, the proxies of the targeted object weave the aspects during the application's execution using dynamic, JDK or CGLIB proxies.



# How to enable advice in Spring AOP?

6 ✓



use annotation

3 ✗



run specific java compile process

0 ✓



use xml configuraion

0 ✗



using vm options

# How to enable advice in Spring AOP?

To enable advice in Spring, you can use the annotations available in AspectJ. Before executing this step, ensure that you implement the `@EnableAspectJAutoProxy` annotation to the configuration class. This ensures that Spring AOP can handle components denoted with AspectJ's annotations.



# How many types of advice supported in Spring AOP?

7 ✓

1 ✗

0 ✗

1 ✗

7

3

5

4

# What are the types of advice supported in Spring AOP?

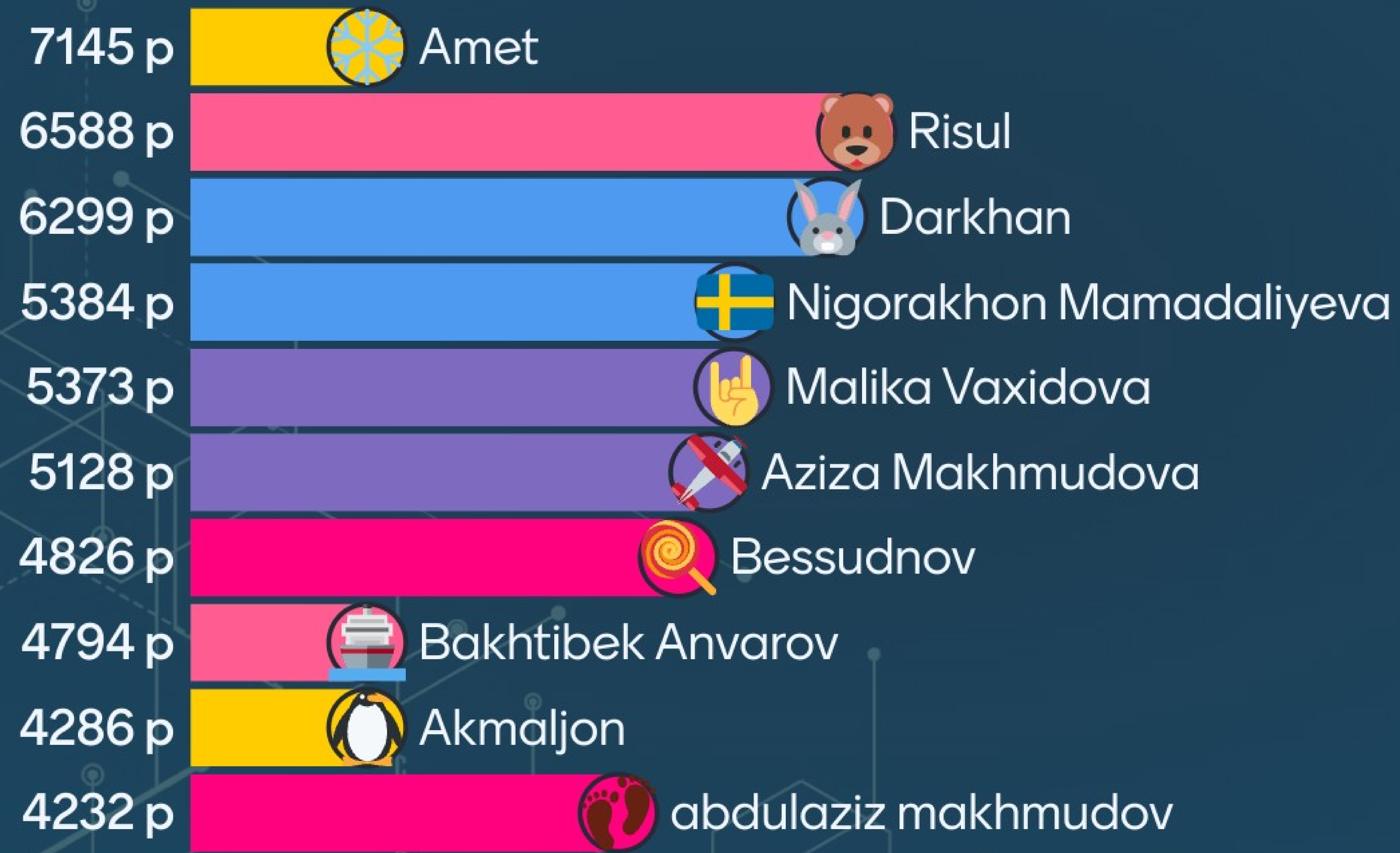
There are 5 types of advice in the Spring AOP framework. They are *before*, *after returning*, *after throwing*, *after* and *around* advice.

The before advice executes before a join point, but it cannot prevent execution flow unless it throws an exception. The after-returning advice executes after a join point finishes normally.

The after-throwing advice executes if a method exits by throwing an exception. The after advice executes irrespective of how the join point exits. The around is the most powerful advice and surrounds a join point using a method invocation.



# Quiz leaderboard



# Next time: Spring AOP



# Questions?

