Project Annotations

@Entity:

Specifies that the class is an entity. This annotation is applied to the entity class.

@Table

Specifies the primary table for the annotated entity. Additional tables may be specified using [SecondaryTable](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/persistence%5C/jakarta.persistence-api%5C/2.2.3%5C/jakarta.persistence-api-2.2.3.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.persistence=/=/maven.artifactId=/jakarta.persistence-api=/=/maven.version=/2.2.3=/=/maven.scope=/compile=/%3Cjavax.persistence(Table.class%E2%98%83Table%E2%98%82SecondaryTable) or [SecondaryTables](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/persistence%5C/jakarta.persistence-api%5C/2.2.3%5C/jakarta.persistence-api-2.2.3.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.persistence=/=/maven.artifactId=/jakarta.persistence-api=/=/maven.version=/2.2.3=/=/maven.scope=/compile=/%3Cjavax.persistence(Table.class%E2%98%83Table%E2%98%82SecondaryTables) annotation.

If no Table annotation is specified for an entity class, the default values apply.

Example:

@Entity

@Table(name="CUST", schema="RECORDS")

public class Customer { ... }

Since:

1.0

@[lombok](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/projectlombok%5C/lombok%5C/1.18.22%5C/lombok-1.18.22.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.projectlombok=/=/maven.artifactId=/lombok=/=/maven.version=/1.18.22=/=/maven.scope=/compile=/=/maven.optionaldependency=/true=/%3Clombok).Getter/Setter/NoArgsConstructor/AllArgsConstructor

Put on any field to make lombok build a standard getter/setter/ NoArgsConstructor/AllArgsConstructor.

@Id

Specifies the primary key of an entity. The field or property to which the Id annotation is applied should be one of the following types: any Java primitive type; any primitive wrapper type; String; java.util.Date; java.sql.Date; java.math.BigDecimal; java.math.BigInteger.

The mapped column for the primary key of the entity is assumed to be the primary key of the primary table. If no Column annotation is specified, the primary key column name is assumed to be the name of the primary key property or field.

@GeneratedValue(strategy=GenerationType.***IDENTITY***)

@[Target](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target~value)={[METHOD](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5EMETHOD), [FIELD](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5EFIELD)})  
@[Retention](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention~value)=[RUNTIME](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(RetentionPolicy.class%E2%98%83RetentionPolicy%5ERUNTIME))

Provides for the specification of generation strategies for the values of primary keys.

The GeneratedValue annotation may be applied to a primary key property or field of an entity or mapped superclass in conjunction with the [Id](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/persistence%5C/jakarta.persistence-api%5C/2.2.3%5C/jakarta.persistence-api-2.2.3.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.persistence=/=/maven.artifactId=/jakarta.persistence-api=/=/maven.version=/2.2.3=/=/maven.scope=/compile=/%3Cjavax.persistence(GeneratedValue.class%E2%98%83GeneratedValue%E2%98%82Id) annotation. The use of the GeneratedValue annotation is only required to be supported for simple primary keys. Use of the GeneratedValue annotation is not supported for derived primary keys.

strategy=GenerationType.***IDENTITY***

Indicates that the persistence provider “A persistence provider refers to an implementation of the Java Persistence API . The persistence provider is a library that provides the functionality to persist objects in the application” must assign primary keys for the entity using a database identity column.

@NotBlank (message="Please provide not blank name")

The annotated element must not be null and must contain at least one non-whitespace character. Accepts CharSequence.

@NotNull(message="please provide your name")

The annotated element must not be null. Accepts any type.

@Size

The annotated element size must be between the specified boundaries (included).

Supported types are:

* CharSequence (length of character sequence is evaluated)
* Collection (collection size is evaluated)
* Map (map size is evaluated)
* Array (array length is evaluated)

null elements are considered valid.

@Column(length=15, nullable=**false**)

Specifies the mapped column for a persistent property or field. If no Column annotation is specified, the default values apply.

@Email

The string has to be a well-formed email address. Exact semantics of what makes up a valid email address are left to Jakarta Bean Validation providers. Accepts CharSequence.

null elements are considered valid.

@Pattern

The annotated CharSequence must match the specified regular expression. The regular expression follows the Java regular expression conventions see [java.util.regex.Pattern](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/validation%5C/jakarta.validation-api%5C/2.0.2%5C/jakarta.validation-api-2.0.2.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.validation=/=/maven.artifactId=/jakarta.validation-api=/=/maven.version=/2.0.2=/=/maven.scope=/compile=/%3Cjavax.validation.constraints(Pattern.class%E2%98%83Pattern%E2%98%82java.util.regex.Pattern). Accepts CharSequence. null elements are considered valid.

@RestController(this is also a component)

A convenience annotation that is itself annotated with [@Controller](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RestController.class%E2%98%83RestController%E2%98%82Controller) and [@ResponseBody](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RestController.class%E2%98%83RestController%E2%98%82ResponseBody).

Types that carry this annotation are treated as controllers where [@RequestMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RestController.class%E2%98%83RestController%E2%98%82RequestMapping) methods assume [@ResponseBody](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RestController.class%E2%98%83RestController%E2%98%82ResponseBody) semantics by default.

NOTE: @RestController is processed if an appropriate HandlerMapping-HandlerAdapter pair is configured such as the RequestMappingHandlerMapping-RequestMappingHandlerAdapter pair which are the default in the MVC Java config and the MVC namespace.

@Service

Indicates that an annotated class is a "Service", originally defined by Domain-Driven Design (Evans, 2003) as "an operation offered as an interface that stands alone in the model, with no encapsulated state."

May also indicate that a class is a "Business Service Facade" (in the Core J2EE patterns sense), or something similar. This annotation is a general-purpose stereotype and individual teams may narrow their semantics and use as appropriate.

This annotation serves as a specialization of [@Component](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.stereotype(Service.class%E2%98%83Service%E2%98%82Component), allowing for implementation classes to be autodetected through classpath scanning.

@Repository

Indicates that an annotated class is a "Repository", originally defined by Domain-Driven Design (Evans, 2003) as "a mechanism for encapsulating storage, retrieval, and search behavior which emulates a collection of objects".

Teams implementing traditional Java EE patterns such as "Data Access Object" may also apply this stereotype to DAO classes, though care should be taken to understand the distinction between Data Access Object and DDD-style repositories before doing so. This annotation is a general-purpose stereotype and individual teams may narrow their semantics and use as appropriate.

A class thus annotated is eligible for Spring [DataAccessException](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.stereotype(Repository.class%E2%98%83Repository%E2%98%82org.springframework.dao.DataAccessException) translation when used in conjunction with a [PersistenceExceptionTranslationPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.stereotype(Repository.class%E2%98%83Repository%E2%98%82org.springframework.dao.annotation.PersistenceExceptionTranslationPostProcessor). The annotated class is also clarified as to its role in the overall application architecture for the purpose of tooling, aspects, etc.

As of Spring 2.5, this annotation also serves as a specialization of [@Component](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.stereotype(Repository.class%E2%98%83Repository%E2%98%82Component), allowing for implementation classes to be autodetected through classpath scanning.

@RequestMapping

Annotation for mapping web requests onto methods in request-handling classes with flexible method signatures.

Both Spring MVC and Spring WebFlux support this annotation through a RequestMappingHandlerMapping and RequestMappingHandlerAdapter in their respective modules and package structure. For the exact list of supported handler method arguments and return types in each, please use the reference documentation links below:

* Spring MVC [Method Arguments](https://docs.spring.io/spring/docs/current/spring-framework-reference/web.html#mvc-ann-arguments) and [Return Values](https://docs.spring.io/spring/docs/current/spring-framework-reference/web.html#mvc-ann-return-types)
* Spring WebFlux [Method Arguments](https://docs.spring.io/spring/docs/current/spring-framework-reference/web-reactive.html#webflux-ann-arguments) and [Return Values](https://docs.spring.io/spring/docs/current/spring-framework-reference/web-reactive.html#webflux-ann-return-types)

Note: This annotation can be used both at the class and at the method level. In most cases, at the method level applications will prefer to use one of the HTTP method specific variants [@GetMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestMapping.class%E2%98%83RequestMapping%E2%98%82GetMapping), [@PostMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestMapping.class%E2%98%83RequestMapping%E2%98%82PostMapping), [@PutMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestMapping.class%E2%98%83RequestMapping%E2%98%82PutMapping), [@DeleteMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestMapping.class%E2%98%83RequestMapping%E2%98%82DeleteMapping), or [@PatchMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestMapping.class%E2%98%83RequestMapping%E2%98%82PatchMapping).

NOTE: When using controller interfaces (e.g. for AOP proxying), make sure to consistently put all your mapping annotations - such as @RequestMapping and @SessionAttributes - on the controller interface rather than on the implementation class.

@Autowired

Marks a constructor, field, setter method, or config method as to be autowired by Spring's dependency injection facilities. This is an alternative to the JSR-330 [javax.inject.Inject](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82javax.inject.Inject) annotation, adding required-vs-optional semantics.

Autowired Constructors

Only one constructor of any given bean class may declare this annotation with the [required](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82%E2%98%82required) attribute set to true, indicating the constructor to autowire when used as a Spring bean. Furthermore, if the required attribute is set to true, only a single constructor may be annotated with @Autowired. If multiple non-required constructors declare the annotation, they will be considered as candidates for autowiring. The constructor with the greatest number of dependencies that can be satisfied by matching beans in the Spring container will be chosen. If none of the candidates can be satisfied, then a primary/default constructor (if present) will be used. Similarly, if a class declares multiple constructors but none of them is annotated with @Autowired, then a primary/default constructor (if present) will be used. If a class only declares a single constructor to begin with, it will always be used, even if not annotated. An annotated constructor does not have to be public.

Autowired Fields

Fields are injected right after construction of a bean, before any config methods are invoked. Such a config field does not have to be public.

Autowired Methods

Config methods may have an arbitrary name and any number of arguments; each of those arguments will be autowired with a matching bean in the Spring container. Bean property setter methods are effectively just a special case of such a general config method. Such config methods do not have to be public.

Autowired Parameters

Although @Autowired can technically be declared on individual method or constructor parameters since Spring Framework 5.0, most parts of the framework ignore such declarations. The only part of the core Spring Framework that actively supports autowired parameters is the JUnit Jupiter support in the spring-test module (see the [TestContext framework](https://docs.spring.io/spring/docs/current/spring-framework-reference/testing.html#testcontext-junit-jupiter-di) reference documentation for details).

Multiple Arguments and 'required' Semantics

In the case of a multi-arg constructor or method, the [required](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82%E2%98%82required) attribute is applicable to all arguments. Individual parameters may be declared as Java-8 style [java.util.Optional](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82java.util.Optional) or, as of Spring Framework 5.0, also as @Nullable or a not-null parameter type in Kotlin, overriding the base 'required' semantics.

Autowiring Arrays, Collections, and Maps

In case of an array, [java.util.Collection](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82java.util.Collection), or [java.util.Map](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82java.util.Map) dependency type, the container autowires all beans matching the declared value type. For such purposes, the map keys must be declared as type String which will be resolved to the corresponding bean names. Such a container-provided collection will be ordered, taking into account [Ordered](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82org.springframework.core.Ordered) and [@Order](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82org.springframework.core.annotation.Order) values of the target components, otherwise following their registration order in the container. Alternatively, a single matching target bean may also be a generally typed Collection or Map itself, getting injected as such.

Not supported in BeanPostProcessor or BeanFactoryPostProcessor

Note that actual injection is performed through a [BeanPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82org.springframework.beans.factory.config.BeanPostProcessor) which in turn means that you cannot use @Autowired to inject references into [BeanPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82org.springframework.beans.factory.config.BeanPostProcessor) or [BeanFactoryPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82org.springframework.beans.factory.config.BeanFactoryPostProcessor) types. Please consult the javadoc for the [AutowiredAnnotationBeanPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-beans%5C/5.3.16%5C/spring-beans-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-beans=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.beans.factory.annotation(Autowired.class%E2%98%83Autowired%E2%98%82AutowiredAnnotationBeanPostProcessor) class (which, by default, checks for the presence of this annotation).

@PostMapping

Annotation for mapping HTTP POST requests onto specific handler methods.

Specifically, @PostMapping is a composed annotation that acts as a shortcut for @RequestMapping(method = RequestMethod.POST).

@Valid

Marks a property, method parameter or method return type for validation cascading.

Constraints defined on the object and its properties are be validated when the property, method parameter or method return type is validated.

This behavior is applied recursively.

@RequestBody

Annotation indicating a method parameter should be bound to the body of the web request. The body of the request is passed through an [HttpMessageConverter](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestBody.class%E2%98%83RequestBody%E2%98%82HttpMessageConverter) to resolve the method argument depending on the content type of the request. Optionally, automatic validation can be applied by annotating the argument with @Valid.

Supported for annotated handler methods.

@Data(for Lombok)

Generates getters for all fields, a useful toString method, and hashCode and equals implementations that check all non-transient fields. Will also generate setters for all non-final fields, as well as a constructor.

Equivalent to @Getter @Setter @RequiredArgsConstructor @ToString @EqualsAndHashCode. Complete documentation is found at [the project lombok features page for @Data](https://projectlombok.org/features/Data).

@GetMapping

Annotation for mapping HTTP GET requests onto specific handler methods.

Specifically, @GetMapping is a composed annotation that acts as a shortcut for @RequestMapping(method = RequestMethod.GET).

@PathVariable

Annotation which indicates that a method parameter should be bound to a URI template variable. Supported for [RequestMapping](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(PathVariable.class%E2%98%83PathVariable%E2%98%82RequestMapping) annotated handler methods.

If the method parameter is [Map<String, String>](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(PathVariable.class%E2%98%83PathVariable%E2%98%82java.util.Map) then the map is populated with all path variable names and values.

@ResponseStatus

Marks a method or exception class with the status [code](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ResponseStatus.class%E2%98%83ResponseStatus%E2%98%82%E2%98%82code) and [reason](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ResponseStatus.class%E2%98%83ResponseStatus%E2%98%82%E2%98%82reason) that should be returned.

The status code is applied to the HTTP response when the handler method is invoked and overrides status information set by other means, like ResponseEntity or "redirect:".

Warning: when using this annotation on an exception class, or when setting the reason attribute of this annotation, the HttpServletResponse.sendError method will be used.

With HttpServletResponse.sendError, the response is considered complete and should not be written to any further. Furthermore, the Servlet container will typically write an HTML error page therefore making the use of a reason unsuitable for REST APIs. For such cases it is preferable to use a [org.springframework.http.ResponseEntity](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ResponseStatus.class%E2%98%83ResponseStatus%E2%98%82org.springframework.http.ResponseEntity) as a return type and avoid the use of @ResponseStatus altogether.

Note that a controller class may also be annotated with @ResponseStatus which is then inherited by all @RequestMapping and @ExceptionHandler methods in that class and its subclasses unless overridden by a local @ResponseStatus declaration on the method.

@RequestParam

Annotation which indicates that a method parameter should be bound to a web request parameter.

Supported for annotated handler methods in Spring MVC and Spring WebFlux as follows:

* In Spring MVC, "request parameters" map to query parameters, form data, and parts in multipart requests. This is because the Servlet API combines query parameters and form data into a single map called "parameters", and that includes automatic parsing of the request body.
* In Spring WebFlux, "request parameters" map to query parameters only. To work with all 3, query, form data, and multipart data, you can use data binding to a command object annotated with [ModelAttribute](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestParam.class%E2%98%83RequestParam%E2%98%82ModelAttribute).

If the method parameter type is [Map](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestParam.class%E2%98%83RequestParam%E2%98%82Map) and a request parameter name is specified, then the request parameter value is converted to a [Map](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestParam.class%E2%98%83RequestParam%E2%98%82Map) assuming an appropriate conversion strategy is available.

If the method parameter is [Map<String, String>](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestParam.class%E2%98%83RequestParam%E2%98%82java.util.Map) or [MultiValueMap<String, String>](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(RequestParam.class%E2%98%83RequestParam%E2%98%82org.springframework.util.MultiValueMap) and a parameter name is not specified, then the map parameter is populated with all request parameter names and values.

@DeleteMapping

Annotation for mapping HTTP DELETE requests onto specific handler methods.

Specifically, @DeleteMapping is a composed annotation that acts as a shortcut for @RequestMapping(method = RequestMethod.DELETE).

@PutMapping

Annotation for mapping HTTP PUT requests onto specific handler methods.

Specifically, @PutMapping is a composed annotation that acts as a shortcut for @RequestMapping(method = RequestMethod.PUT).

@Bean

Indicates that a method produces a bean to be managed by the Spring container.

Overview

The names and semantics of the attributes to this annotation are intentionally similar to those of the <bean/> element in the Spring XML schema. For example:

@Bean

public MyBean myBean() {

// instantiate and configure MyBean obj

return obj;

}

Bean Names

While a [name](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82%E2%98%82name) attribute is available, the default strategy for determining the name of a bean is to use the name of the @Bean method. This is convenient and intuitive, but if explicit naming is desired, the name attribute (or its alias value) may be used. Also note that name accepts an array of Strings, allowing for multiple names (i.e. a primary bean name plus one or more aliases) for a single bean.

@Bean({"b1", "b2"}) // bean available as 'b1' and 'b2', but not 'myBean'

public MyBean myBean() {

// instantiate and configure MyBean obj

return obj;

}

Profile, Scope, Lazy, DependsOn, Primary, Order

Note that the @Bean annotation does not provide attributes for profile, scope, lazy, depends-on or primary. Rather, it should be used in conjunction with [@Scope](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82Scope), [@Lazy](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82Lazy), [@DependsOn](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82DependsOn) and [@Primary](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82Primary) annotations to declare those semantics. For example:

@Bean

@Profile("production")

@Scope("prototype")

public MyBean myBean() {

// instantiate and configure MyBean obj

return obj;

}

The semantics of the above-mentioned annotations match their use at the component class level: @Profile allows for selective inclusion of certain beans. @Scope changes the bean's scope from singleton to the specified scope. @Lazy only has an actual effect in case of the default singleton scope. @DependsOn enforces the creation of specific other beans before this bean will be created, in addition to any dependencies that the bean expressed through direct references, which is typically helpful for singleton startup. @Primary is a mechanism to resolve ambiguity at the injection point level if a single target component needs to be injected but several beans match by type.

Additionally, @Bean methods may also declare qualifier annotations and [@Order](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82org.springframework.core.annotation.Order) values, to be taken into account during injection point resolution just like corresponding annotations on the corresponding component classes but potentially being very individual per bean definition (in case of multiple definitions with the same bean class). Qualifiers narrow the set of candidates after the initial type match; order values determine the order of resolved elements in case of collection injection points (with several target beans matching by type and qualifier).

NOTE: @Order values may influence priorities at injection points, but please be aware that they do not influence singleton startup order which is an orthogonal concern determined by dependency relationships and @DependsOn declarations as mentioned above. Also, [javax.annotation.Priority](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82javax.annotation.Priority) is not available at this level since it cannot be declared on methods; its semantics can be modeled through @Order values in combination with @Primary on a single bean per type.

@Bean Methods in @Configuration Classes

Typically, @Bean methods are declared within @Configuration classes. In this case, bean methods may reference other @Bean methods in the same class by calling them directly. This ensures that references between beans are strongly typed and navigable. Such so-called *'inter-bean references'* are guaranteed to respect scoping and AOP semantics, just like getBean() lookups would. These are the semantics known from the original 'Spring JavaConfig' project which require CGLIB subclassing of each such configuration class at runtime. As a consequence, @Configuration classes and their factory methods must not be marked as final or private in this mode. For example:

@Configuration

public class AppConfig {

@Bean

public FooService fooService() {

return new FooService(fooRepository());

}

@Bean

public FooRepository fooRepository() {

return new JdbcFooRepository(dataSource());

}

// ...

}

@Bean *Lite* Mode

@Bean methods may also be declared within classes that are *not* annotated with @Configuration. For example, bean methods may be declared in a @Component class or even in a *plain old class*. In such cases, a @Bean method will get processed in a so-called *'lite'* mode.

Bean methods in *lite* mode will be treated as plain *factory methods* by the container (similar to factory-method declarations in XML), with scoping and lifecycle callbacks properly applied. The containing class remains unmodified in this case, and there are no unusual constraints for the containing class or the factory methods.

In contrast to the semantics for bean methods in @Configuration classes, *'inter-bean references'* are not supported in *lite* mode. Instead, when one @Bean-method invokes another @Bean-method in *lite* mode, the invocation is a standard Java method invocation; Spring does not intercept the invocation via a CGLIB proxy. This is analogous to inter-@Transactional method calls where in proxy mode, Spring does not intercept the invocation — Spring does so only in AspectJ mode.

For example:

@Component

public class Calculator {

public int sum(int a, int b) {

return a+b;

}

@Bean

public MyBean myBean() {

return new MyBean();

}

}

Bootstrapping

See the @[Configuration](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82Configuration) javadoc for further details including how to bootstrap the container using [AnnotationConfigApplicationContext](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82AnnotationConfigApplicationContext) and friends.

BeanFactoryPostProcessor-returning @Bean methods

Special consideration must be taken for @Bean methods that return Spring [BeanFactoryPostProcessor](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-context%5C/5.3.16%5C/spring-context-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-context=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.context.annotation(Bean.class%E2%98%83Bean%E2%98%82org.springframework.beans.factory.config.BeanFactoryPostProcessor) (BFPP) types. Because BFPP objects must be instantiated very early in the container lifecycle, they can interfere with processing of annotations such as @Autowired, @Value, and @PostConstruct within @Configuration classes. To avoid these lifecycle issues, mark BFPP-returning @Bean methods as static. For example:

@Bean

public static PropertySourcesPlaceholderConfigurer pspc() {

// instantiate, configure and return pspc ...

}

By marking this method as static, it can be invoked without causing instantiation of its declaring @Configuration class, thus avoiding the above-mentioned lifecycle conflicts. Note however that static @Bean methods will not be enhanced for scoping and AOP semantics as mentioned above. This works out in BFPP cases, as they are not typically referenced by other @Bean methods. As a reminder, an INFO-level log message will be issued for any non-static @Bean methods having a return type assignable to BeanFactoryPostProcessor.

@ControllerAdvice

Specialization of [@Component](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82Component) for classes that declare [@ExceptionHandler](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82ExceptionHandler), [@InitBinder](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82InitBinder), or [@ModelAttribute](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82ModelAttribute) methods to be shared across multiple @Controller classes.

Classes annotated with @ControllerAdvice can be declared explicitly as Spring beans or auto-detected via classpath scanning. All such beans are sorted based on [Ordered](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82org.springframework.core.Ordered) semantics or [@Order](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82org.springframework.core.annotation.Order) / [@Priority](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82javax.annotation.Priority) declarations, with Ordered semantics taking precedence over @Order / @Priority declarations. @ControllerAdvice beans are then applied in that order at runtime. Note, however, that @ControllerAdvice beans that implement [PriorityOrdered](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82org.springframework.core.PriorityOrdered) are *not* given priority over @ControllerAdvice beans that implement Ordered. In addition, Ordered is not honored for scoped @ControllerAdvice beans — for example if such a bean has been configured as a request-scoped or session-scoped bean. For handling exceptions, an @ExceptionHandler will be picked on the first advice with a matching exception handler method. For model attributes and data binding initialization, @ModelAttribute and @InitBinder methods will follow @ControllerAdvice order.

Note: For @ExceptionHandler methods, a root exception match will be preferred to just matching a cause of the current exception, among the handler methods of a particular advice bean. However, a cause match on a higher-priority advice will still be preferred over any match (whether root or cause level) on a lower-priority advice bean. As a consequence, please declare your primary root exception mappings on a prioritized advice bean with a corresponding order.

By default, the methods in an @ControllerAdvice apply globally to all controllers. Use selectors such as [annotations](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82%E2%98%82annotations), [basePackageClasses](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82%E2%98%82basePackageClasses), and [basePackages](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82%E2%98%82basePackages) (or its alias [value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ControllerAdvice.class%E2%98%83ControllerAdvice%E2%98%82%E2%98%82value)) to define a more narrow subset of targeted controllers. If multiple selectors are declared, boolean OR logic is applied, meaning selected controllers should match at least one selector. Note that selector checks are performed at runtime, so adding many selectors may negatively impact performance and add complexity.

@ExceptionHandler

Annotation for handling exceptions in specific handler classes and/or handler methods.

Handler methods which are annotated with this annotation are allowed to have very flexible signatures. They may have parameters of the following types, in arbitrary order:

* An exception argument: declared as a general Exception or as a more specific exception. This also serves as a mapping hint if the annotation itself does not narrow the exception types through its [value()](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82%E2%98%82value%E2%98%82). You may refer to a top-level exception being propagated or to a nested cause within a wrapper exception. As of 5.3, any cause level is being exposed, whereas previously only an immediate cause was considered.
* Request and/or response objects (typically from the Servlet API). You may choose any specific request/response type, e.g. [javax.servlet.ServletRequest](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82javax.servlet.ServletRequest) / [javax.servlet.http.HttpServletRequest](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82javax.servlet.http.HttpServletRequest).
* Session object: typically [javax.servlet.http.HttpSession](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82javax.servlet.http.HttpSession). An argument of this type will enforce the presence of a corresponding session. As a consequence, such an argument will never be null. Note that session access may not be thread-safe, in particular in a Servlet environment: Consider switching the ["synchronizeOnSession"](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.mvc.method.annotation.RequestMappingHandlerAdapter%E2%98%82setSynchronizeOnSession) flag to "true" if multiple requests are allowed to access a session concurrently.
* [org.springframework.web.context.request.WebRequest](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.context.request.WebRequest) or [org.springframework.web.context.request.NativeWebRequest](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.context.request.NativeWebRequest). Allows for generic request parameter access as well as request/session attribute access, without ties to the native Servlet API.
* [java.util.Locale](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.util.Locale) for the current request locale (determined by the most specific locale resolver available, i.e. the configured [org.springframework.web.servlet.LocaleResolver](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.LocaleResolver) in a Servlet environment).
* [java.io.InputStream](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.io.InputStream) / [java.io.Reader](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.io.Reader) for access to the request's content. This will be the raw InputStream/Reader as exposed by the Servlet API.
* [java.io.OutputStream](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.io.OutputStream) / [java.io.Writer](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.io.Writer) for generating the response's content. This will be the raw OutputStream/Writer as exposed by the Servlet API.
* [org.springframework.ui.Model](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.ui.Model) as an alternative to returning a model map from the handler method. Note that the provided model is not pre-populated with regular model attributes and therefore always empty, as a convenience for preparing the model for an exception-specific view.

The following return types are supported for handler methods:

* A ModelAndView object (from Servlet MVC).
* A [org.springframework.ui.Model](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.ui.Model) object, with the view name implicitly determined through a [org.springframework.web.servlet.RequestToViewNameTranslator](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.RequestToViewNameTranslator).
* A [java.util.Map](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82java.util.Map) object for exposing a model, with the view name implicitly determined through a [org.springframework.web.servlet.RequestToViewNameTranslator](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.RequestToViewNameTranslator).
* A [org.springframework.web.servlet.View](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.View) object.
* A [String](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82String) value which is interpreted as view name.
* [@ResponseBody](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82ResponseBody) annotated methods (Servlet-only) to set the response content. The return value will be converted to the response stream using [message converters](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.http.converter.HttpMessageConverter).
* An [HttpEntity<?>](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.http.HttpEntity) or [ResponseEntity<?>](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.http.ResponseEntity) object (Servlet-only) to set response headers and content. The ResponseEntity body will be converted and written to the response stream using [message converters](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.http.converter.HttpMessageConverter).
* void if the method handles the response itself (by writing the response content directly, declaring an argument of type [javax.servlet.ServletResponse](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82javax.servlet.ServletResponse) / [javax.servlet.http.HttpServletResponse](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82javax.servlet.http.HttpServletResponse) for that purpose) or if the view name is supposed to be implicitly determined through a [org.springframework.web.servlet.RequestToViewNameTranslator](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82org.springframework.web.servlet.RequestToViewNameTranslator) (not declaring a response argument in the handler method signature).

You may combine the ExceptionHandler annotation with [@ResponseStatus](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/org%5C/springframework%5C/spring-web%5C/5.3.16%5C/spring-web-5.3.16.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/org.springframework=/=/maven.artifactId=/spring-web=/=/maven.version=/5.3.16=/=/maven.scope=/compile=/%3Corg.springframework.web.bind.annotation(ExceptionHandler.class%E2%98%83ExceptionHandler%E2%98%82ResponseStatus) for a specific HTTP error status.

@JsonIgnore

Marker annotation that indicates that the logical property that the accessor (field, getter/setter method or Creator parameter [of [JsonCreator](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/com%5C/fasterxml%5C/jackson%5C/core%5C/jackson-annotations%5C/2.13.1%5C/jackson-annotations-2.13.1.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/com.fasterxml.jackson.core=/=/maven.artifactId=/jackson-annotations=/=/maven.version=/2.13.1=/=/maven.scope=/compile=/%3Ccom.fasterxml.jackson.annotation(JsonIgnore.class%E2%98%83JsonIgnore%E2%98%82JsonCreator)-annotated constructor or factory method]) is to be ignored by introspection-based serialization and deserialization functionality.

Annotation only needs to be added to one of the accessors (often getter method, but may be setter, field or creator parameter), if the complete removal of the property is desired. However: if only particular accessor is to be ignored (for example, when ignoring one of potentially conflicting setter methods), this can be done by annotating other not-to-be-ignored accessors with [JsonProperty](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/com%5C/fasterxml%5C/jackson%5C/core%5C/jackson-annotations%5C/2.13.1%5C/jackson-annotations-2.13.1.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/com.fasterxml.jackson.core=/=/maven.artifactId=/jackson-annotations=/=/maven.version=/2.13.1=/=/maven.scope=/compile=/%3Ccom.fasterxml.jackson.annotation(JsonIgnore.class%E2%98%83JsonIgnore%E2%98%82JsonProperty) (or its equivalents). This is considered so-called "split property" case and allows definitions of "read-only" (read from input into POJO) and "write-only" (write in output but ignore on output)   
NOTE! As Jackson 2.6, there is a new and improved way to define `read-only` and `write-only` properties, using [JsonProperty.access()](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/com%5C/fasterxml%5C/jackson%5C/core%5C/jackson-annotations%5C/2.13.1%5C/jackson-annotations-2.13.1.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/com.fasterxml.jackson.core=/=/maven.artifactId=/jackson-annotations=/=/maven.version=/2.13.1=/=/maven.scope=/compile=/%3Ccom.fasterxml.jackson.annotation(JsonIgnore.class%E2%98%83JsonIgnore%E2%98%82JsonProperty%E2%98%82access%E2%98%82) annotation: this is recommended over use of separate JsonIgnore and [JsonProperty](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/com%5C/fasterxml%5C/jackson%5C/core%5C/jackson-annotations%5C/2.13.1%5C/jackson-annotations-2.13.1.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/com.fasterxml.jackson.core=/=/maven.artifactId=/jackson-annotations=/=/maven.version=/2.13.1=/=/maven.scope=/compile=/%3Ccom.fasterxml.jackson.annotation(JsonIgnore.class%E2%98%83JsonIgnore%E2%98%82JsonProperty) annotations.

For example, a "getter" method that would otherwise denote a property (like, say, "getValue" to suggest property "value") to serialize, would be ignored and no such property would be output unless another annotation defines alternative method to use.

When ignoring the whole property, the default behavior if encountering such property in input is to ignore it without exception; but if there is a [JsonAnySetter](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/com%5C/fasterxml%5C/jackson%5C/core%5C/jackson-annotations%5C/2.13.1%5C/jackson-annotations-2.13.1.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/com.fasterxml.jackson.core=/=/maven.artifactId=/jackson-annotations=/=/maven.version=/2.13.1=/=/maven.scope=/compile=/%3Ccom.fasterxml.jackson.annotation(JsonIgnore.class%E2%98%83JsonIgnore%E2%98%82JsonAnySetter) it will be called instead. Either way, no exception will be thrown.

Annotation is usually used just a like a marker annotation, that is, without explicitly defining 'value' argument (which defaults to true): but argument can be explicitly defined. This can be done to override an existing `JsonIgnore` by explicitly defining one with 'false' argument: either in a sub-class, or by using "mix-in annotations".

@Enumerated(EnumType.***STRING***)

##### [javax](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/persistence%5C/jakarta.persistence-api%5C/2.2.3%5C/jakarta.persistence-api-2.2.3.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.persistence=/=/maven.artifactId=/jakarta.persistence-api=/=/maven.version=/2.2.3=/=/maven.scope=/compile=/%3Cjavax).[persistence](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Users%5C/Asim%5C/.m2%5C/repository%5C/jakarta%5C/persistence%5C/jakarta.persistence-api%5C/2.2.3%5C/jakarta.persistence-api-2.2.3.jar=/maven.pomderived=/true=/=/maven.pomderived=/true=/=/maven.groupId=/jakarta.persistence=/=/maven.artifactId=/jakarta.persistence-api=/=/maven.version=/2.2.3=/=/maven.scope=/compile=/%3Cjavax.persistence).Enumerated

@[Target](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target~value)={[METHOD](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5EMETHOD), [FIELD](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5EFIELD)})  
@[Retention](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention~value)=[RUNTIME](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(RetentionPolicy.class%E2%98%83RetentionPolicy%5ERUNTIME))

Specifies that a persistent property or field should be persisted as a enumerated type. The Enumerated annotation may be used in conjunction with the Basic annotation, or in conjunction with the ElementCollection annotation when the element collection value is of basic type. If the enumerated type is not specified or the Enumerated annotation is not used, the EnumType value is assumed to be ORDINAL.

Example:

public enum EmployeeStatus {FULL\_TIME, PART\_TIME, CONTRACT}

public enum SalaryRate {JUNIOR, SENIOR, MANAGER, EXECUTIVE}

@Entity public class Employee {

public EmployeeStatus getStatus() {...}

...

@Enumerated(STRING)

public SalaryRate getPayScale() {...}

...

}

@PreAuthorize

@[Target](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Target.class%E2%98%83Target~value)={[METHOD](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5EMETHOD), [TYPE](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(ElementType.class%E2%98%83ElementType%5ETYPE)})  
@[Retention](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention)([value](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Retention.class%E2%98%83Retention~value)=[RUNTIME](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(RetentionPolicy.class%E2%98%83RetentionPolicy%5ERUNTIME))  
@[Documented](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Documented.class%E2%98%83Documented)  
@[Inherited](eclipse-javadoc:%E2%98%82=surebank/C:%5C/Program%20Files%5C/Java%5C/jdk-11.0.12%5C/lib%5C/jrt-fs.jar%60java.base=/maven.pomderived=/true=/=/javadoc_location=/https:%5C/%5C/docs.oracle.com%5C/en%5C/java%5C/javase%5C/11%5C/docs%5C/api%5C/=/%3Cjava.lang.annotation(Inherited.class%E2%98%83Inherited)

Annotation for specifying a method access-control expression which will be evaluated to decide whether a method invocation is allowed or not.