Annotations

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Agenda :

- Annotations Basics
- Declaring an Annotation Type
- Predefined Annotation Types

1. Annotations Basics

In its simplest form, an annotation looks like the following:

```
@Entity
```

Annotations can be applied to declarations: declarations of classes, fields, methods, and other program elements. When used on a declaration, each annotation often appears, by convention, on its own line.

Annotation types are a form of *interface*

2. Declaring Annotations Types:

public class Generation3List extends Generation2List {
// Author: John Doe
  // Date: 3/17/2002
  // Current revision: 6
  // Last modified: 4/12/2004
  // By: Jane Doe
  // Reviewers: Alice, Bill, Cindy
// class code goes here
}
	To add this same metadata with an annotation, you must first define the *annotation type*. The syntax for doing this is:
	
	@interface ClassPreamble {
	  String author();
	  String date();
	  int currentRevision() default 1;
	  String lastModified() default "N/A";
	  String lastModifiedBy() default "N/A";
	  // Note use of array
	  String[] reviewers();
	}

After the annotation type is defined, you can use annotations of that type, with the values filled in, like this:

```
@ClassPreamble (
  author = "John Doe",
  date = "3/17/2002",
  currentRevision = 6,
  lastModified = "4/12/2004",
  lastModifiedBy = "Jane Doe",
  // Note array notation
  reviewers = {"Alice", "Bob", "Cindy"}
)
public class Generation3List extends Generation2List {
// class code goes here
}
```

Note: To make the information in @ClassPreamble appear in Javadoc-generated documentation, you must annotate the @ClassPreamble definition with the @Documented annotation:

```
// import this to use @Documented
import java.lang.annotation.*;
@Documented
@interface ClassPreamble {
// Annotation element definitions
}
```

3. Predefined Annotations Types

The predefined annotation types defined in java.lang are @Deprecated, @Override, @SuppressWarnings, **@SafeVarargs, @FunctionalInterface**

https://docs.oracle.com/javase/tutorial/java/annotations/predefined.html