

Java Modifiers



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Modifiers

By now, you are quite familiar with the public keyword that appears in almost all of our examples:

public class Main

The public keyword is an **access modifier**, meaning that it is used to set the access level for classes, attributes, methods and constructors.

We divide modifiers into two groups:

- Access Modifiers controls the access level
- Non-Access Modifiers do not control access level, but provides other functionality

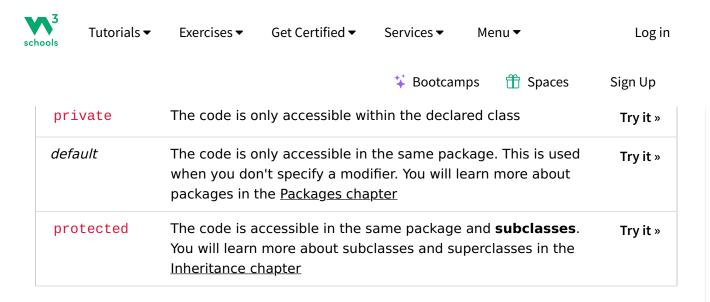
Access Modifiers

For **classes**, you can use either **public** or *default*:

Modifier	Description	Try it
public	The class is accessible by any other class	Try it »
default	The class is only accessible by classes in the same package. This is used when you don't specify a modifier. You will learn more about packages in the <u>Packages chapter</u>	Try it »

For **attributes, methods and constructors**, you can use the one of the following:

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Non-Access Modifiers

For **classes**, you can use either **final** or **abstract**:

Modifier	Description	Try it
final	The class cannot be inherited by other classes (You will learn more about inheritance in the <u>Inheritance chapter</u>)	Try it »
abstract	The class cannot be used to create objects (To access an abstract class, it must be inherited from another class. You will learn more about inheritance and abstraction in the Inheritance and Abstraction chapters)	Try it »

For attributes and methods, you can use the one of the following:

Modifier	Description
final	Attributes and methods cannot be overridden/modified
static	Attributes and methods belongs to the class, rather than an object
abstract	Can only be used in an abstract class, and can only be used on methods. The method does not have a body, for example abstract void run() ;. The body is provided by the subclass (inherited from). You will learn more about inheritance and abstraction in the <u>Inheritance</u> and <u>Abstraction</u> chapters
transient	Attributes and methods are skipped when serializing the object containing them
synchronized	Methods can only be accessed by one thread at a time

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