In Java, there are four access modifiers that control the visibility and accessibility of classes, methods, and variables within a program. These access modifiers determine who can access or modify a particular class, method, or variable. The four access modifiers are:

1. **public**: The **public** access modifier allows unrestricted access to the class, method, or variable from any other class or package. This means that it is accessible from anywhere in the program. For example, a public class can be accessed from any other class in any package, and a public method or variable can be accessed from any other class.
2. **protected**: The **protected** access modifier restricts access to the class, method, or variable within the same package or by subclasses (regardless of the package). This modifier is often used when you want to provide some level of access to derived classes while still maintaining some level of encapsulation.
3. **default** (no modifier): If a class, method, or variable has no access modifier (also known as "package-private" or "package-local"), it is accessible only within the same package. This means that classes, methods, or variables with default access are not accessible from classes in different packages.
4. **private**: The **private** access modifier restricts access to the class, method, or variable to the same class where it is defined. It is the most restrictive access level and provides strong encapsulation. A private method or variable cannot be accessed from outside the class in any way.

Here's a summary of their significance in terms of class, method, and variable accessibility:

* For classes:
  + **public**: Accessible from any class or package.
  + **protected**: Accessible within the same package and by subclasses.
  + **default**: Accessible only within the same package.
  + **private**: Accessible only within the same class.
* For methods and variables:
  + **public**: Accessible from any class or package.
  + **protected**: Accessible within the same package and by subclasses, even if they are in different packages.
  + **default**: Accessible only within the same package.
  + **private**: Accessible only within the same class.

The choice of access modifier depends on the desired level of encapsulation and access control in your Java program. It is an important aspect of designing and maintaining a well-structured and secure codebase.

Top of Form