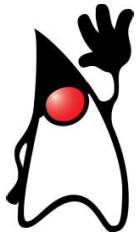
Access Modifiers



Access modifiers

- Οι access modifiers ουσιαστικά, όπως φαίνεται από το όνομά τους, ορίζουν την πρόσβαση στοιχείων της Java
- Οι access modifiers είναι συνολικά 4 στον αριθμό ωστόσο, δεν μπορούν να χρησιμοποιηθούν με τον ίδιο τρόπο από όλα τα στοιχεία του κώδικα Java
- Access modifiers:
  - private
  - default (package)
  - protected
  - public

Access modifiers explanation

Modifier	Description
Private	Declarations are visible within the class only
Default	Declarations are visible only within the package (package private)
Protected	Declarations are visible within the package or and all sub classes
Public	Declarations are visible everywhere

Access modifiers Table 1

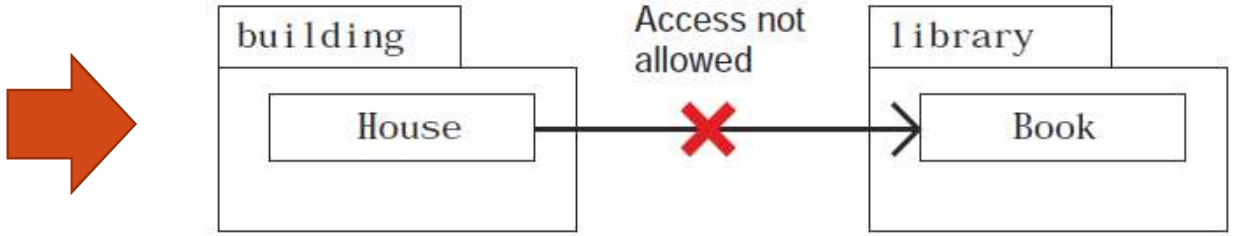
	private	default	protected	public
Class	No	Yes	No	Yes
Nested Class	Yes	Yes	Yes	Yes
Constructor	Yes	Yes	Yes	Yes
Method	Yes	Yes	Yes	Yes
Field	Yes	Yes	Yes	Yes

Access modifiers Table 2

Entity name	public	protected	private
Top-level class, interface, enum	✓	✗	✗
Class variables and methods	✓	✓	✓
Instance variables and methods	✓	✓	✓
Method parameter and local variables	✗	✗	✗

Παράδειγμα 1

```
package building;
class House {}
package library;
class Book {}
```



Παράδειγμα 2

```
package library;
public class Book {
    public String isbn;
    public void printBook() {}
}
```

public class Book

public variable isbn

public method printBook

```
package building;
import library.Book;
public class House {
    House() {
        Book book = new Book();
        String value = book.isbn;
        book.printBook();
    }
}
```

Class Book is accessible to class House.

Variable isbn is accessible in House.

Method printBook is accessible in House.

Private Access Modifier

	Same package	Separate package
Derived classes	✗	✗
Unrelated classes	✗	✗

Default Access Modifier

	Same package	Separate package
Derived classes	✓	✗
Unrelated classes	✓	✗

Protected Access Modifier

Public Access Modifier

	Same package	Separate package
Derived classes	✓	✓
Unrelated classes	✓	✓