

Java Package

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Access Modifiers

Private < Default < Protected < Public

- Public (accessible from anywhere)
- Private (accessible within the class)
- Protected (accessible within the package and outside the package through inheritance)
- Default (accessible within the package)

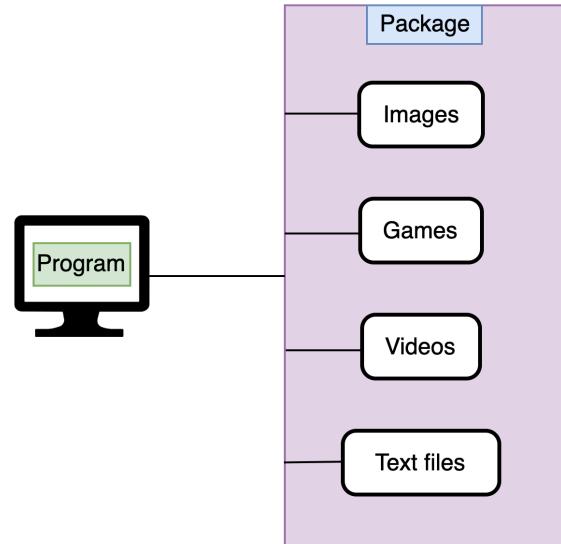
	Private	Default	Protected	Public
Same Class	✓	✓	✓	✓
Same package sub class	✗	✓	✓	✓
Same package non-sub class	✗	✓	✓	✓
Different package Sub class	✗	✗	✓	✓
Different package Non-sub class	✗	✗	✗	✓

Why Package?

- Java package provides access protection.
- Java package removes naming collision.
- Java package is used to categorize the classes and interfaces so that they can be easily maintained.

Package

A java package is a group of similar types of classes, interfaces and sub-packages.



Types of Package

1. Built-in Package
2. User-defined Package

Java Package Import

There are two types of package import in Java:

- Specific Importing
- Wildcard Importing

If you use `package.*` then all the classes and interfaces of this package will be accessible but **not subpackages**.

The import keyword is used to make the classes and interface of another package accessible to the current package.

Specific Importing

```
1 import java.util.ArrayList;  
2 import java.util.List;
```

Wildcard Importing

```
1 import java.util.*;
```

Code Example of Package

```
1 package package1;
2 public class A {
3     public void msg() {
4         System.out.println("Hello");
5     }
6 }
```

```
1 package package2;
2 import package1.A;
3 public class B {
4     public static void main(String[] args) {
5         A obj = new A();
6         obj.msg();
7     }
8 }
```

Example of fully qualified name

```
1 package package1;
2 public class A {
3     public void msg() {
4         System.out.println("Hello");
5     }
6 }
```

```
1 public class B {
2     public static void main(String[] args) {
3         package1.A obj = new package1.A();
4         obj.msg();
5     }
6 }
```

Subpackage in Java

- A package inside another package is called the subpackage.

The standard of defining package is domain.company.package e.g. com.mahmud.bean

```
1 package com.mahmud;
2 public class A {
3     public void msg() {
4         System.out.println("Hello");
5     }
6 }
```

```
1 package com.mahmud.A;
2 public class B {
3     public static void main(String[] args) {
4         com.mahmud.A obj = new com.mahmud.A();
5         obj.msg();
6     }
7 }
```

Thank you ❤

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