

Package

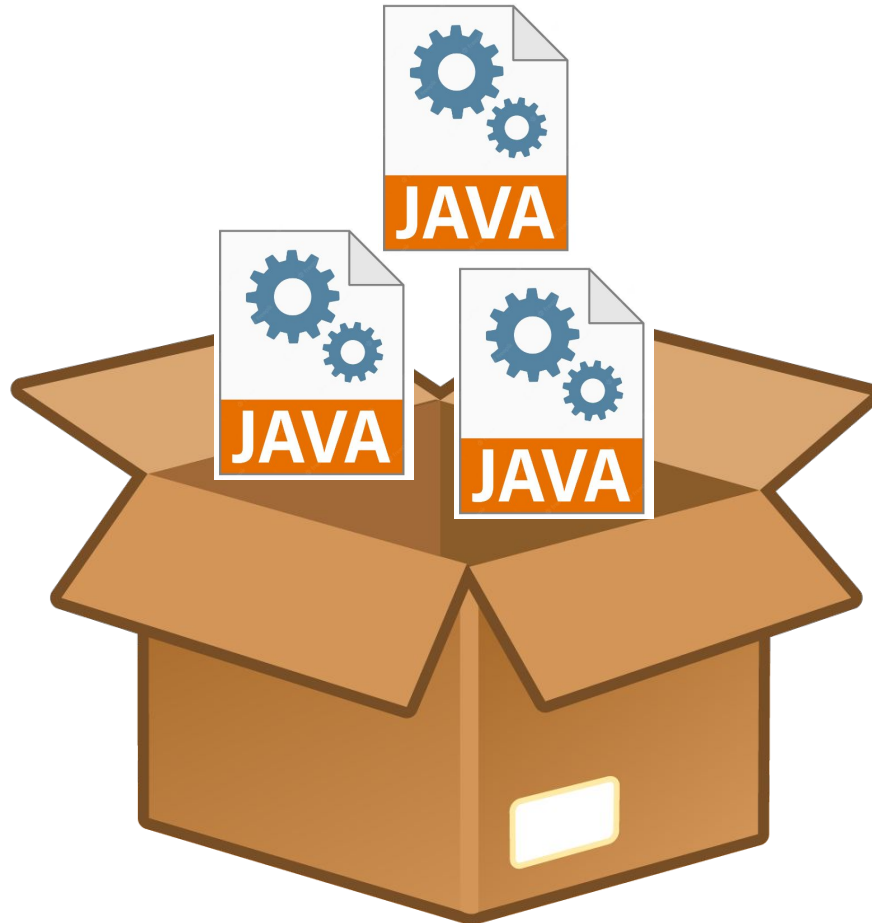
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Package



Package

- Packages are containers for classes.



Built-in Packages

```
import java.util.Scanner;

class MyClass {
    public static void main(String[] args) {
        Scanner myObj = new Scanner(System.in);
        System.out.println("Enter username");

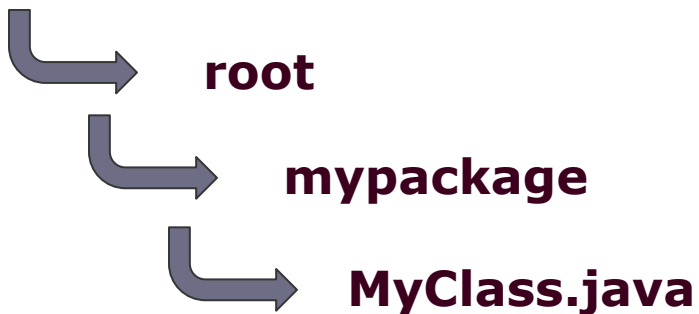
        String userName = myObj.nextLine();
        System.out.println("Username is: " + userName);
    }
}
```

Built-in Packages

1. `import package.name.Class; // Import a single class`
 - `import java.util.Scanner;`
2. `import package.name.*; // Import the whole package`
 - `import java.util.*;`

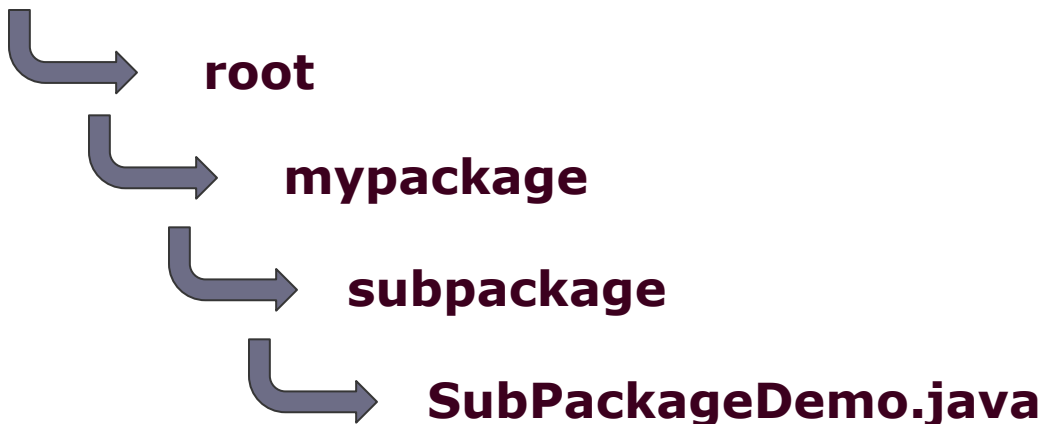
User-defined Packages

```
package mypackage;  
public class MyClass {  
    public static void main(String[] args) {  
        System.out.println("Our first package!");  
    }  
}
```



Nested Package

```
package mypackage.subpackage;  
public class SubPackageDemo {  
    public static void main(String[] args) {  
        System.out.println("Example of nested package");  
    }  
}
```



Access Protection

- ☐ Packages act as containers for classes and other subordinate packages
- ☐ Classes act as containers for data and code

	Private	No Modifier	Protected	Public
Same class	Yes	Yes	Yes	Yes
Same package subclass	No	Yes	Yes	Yes
Same package non-subclass	No	Yes	Yes	Yes
Different package subclass	No	No	Yes	Yes
Different package non-subclass	No	No	No	Yes

Note

- ❑ The basic language functions are stored in a package inside of the java package called *java.lang*
- ❑ It is implicitly imported by the compiler for all programs
- ❑ The String and Math class belong to this package

List of Packages

- <https://docs.oracle.com/javase/8/docs/api/>