

Course Name: A Level (2nd Sem)

Subject: JAVA

Topic: Package in java

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Package are used in Java, in-order to avoid name conflicts and to control access of class, interfaces etc. Packages in Java are a way to **encapsulate** interfaces, Java classes and also subclasses. They are used for the following tasks –

- Java Packages are used to prevent the naming conflicts which can occur between the classes.
- Packages in Java make the searching and locating of classes or annotations much easier.
- Java Packages provide access control to the classes.
- Packages are used for data encapsulation.

Types of Packages in Java

Built-in Packages in Java

Built-in Java packages are a part of Java API and it offers a variety of packages, list of java packages are –

lang – Automatically imported and it contains language support classes.

io – Contains classes for input and output operations.

util – Contains utility classes for implementing data structures.

applet – This package contains classes that create applets.

awt – Contain classes that implement compounds for GUI.

net – This package contains classes that support networking operations.

User-defined Packages in Java:-Java User creates these Java packages

First example of java package:

```
package A;
public class First
{
    public static void main(String args[])
    {
        System.out.println("First package");
    }
}
```

How to compile: javac -d . First.java

How to run: java A.First

access package from another package

Write a separate program A.java and B.java

1) Using packagename.*

A.java

```
package pack1;
public class A
{
    public void msg()
    {
        System.out.println("Hello package");
    }
}
```

B.java

```
package pack2;
import pack1.*;
class B
{
    public static void main(String args[])
    {
        A obj = new A();
        obj.msg();
    }
}
```

2) Using packagename.classname

A.java

```
package P1;
public class A
{
    public void msg()
    {
        System.out.println("Hello Package");
    }
}
```

B.java

```
package P2;
import P1.A;
class B
{
    public static void main(String args[])
    {
        A obj = new A();
    }
}
```

```
        obj.msg();  
    }  
}
```

Exercise:-

- 1- Make a package named “nielit” and sub packages named “nielitgkp” “nielitlko” “nielitdel” and access package nielit through sub packages.
- 2- Why packages are important in java? Explain it .