

CLASS CREATION

```
class A{  
  
}  
class Demo1{  
    public static void main(String ss[]){  
  
        new A() { };  
  
    }  
}
```



A.class









Demo1\$1.class



Demo1.class

```
class A{  
  
}  
class Demo2{  
    public static void main(String ss[]){  
  
        new A() { };  
        new A() { };  
        new A() { };  
        new A() { };  
    }  
}
```

-  A.class
-  Demo2\$1.class
-  Demo2\$2.class
-  Demo2\$3.class
-  Demo2\$4.class
-  Demo2.class

D:\Java Programs>_

```
class A{  
    }  
class B extends A{  
    }  
class Demo3{  
    public static void main(String aa[]){  
    }  
}
```

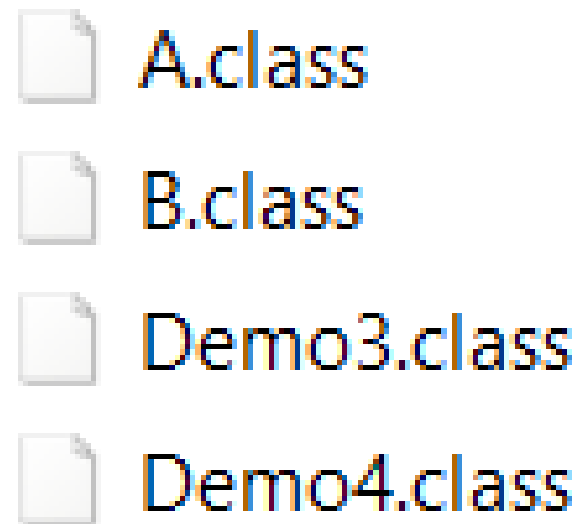
Demo3.java





D:\Java Programs>_

```
class A{  
    }  
class B extends A{  
    }  
  
class Demo4{  
    public static void main(String aa[]){  
    }  
}
```

Demo4.java

```
D:\Java Programs>_
```



-  A.class
-  B.class
-  Demo3.class
-  Demo4.class

ACCESS MODIFIERS

```
class Test{  
    int a;  
    public int b;  
    private int c;  
    protected int d;  
}
```

ACCESS MODIFIERS

```
class Test{
```

```
    public
```

```
    private
```

```
    protected
```

```
    int a;
```

```
    int b;
```

```
    int c;
```

```
    int d;
```

```
}
```

Package Level Access

```
class A{
```

```
}
```

```
public class B{
```

```
}
```

```
class A{
```

A.java

```
}
```

```
class B extends A{
```

**javac A.java
java Demo4**

```
}
```

```
class Demo4{
```

```
    public static void main(String aa[]){
```

```
    }
```

```
}
```

Demo3.java

```
class A{  
}  
class B extends A{  
}  
  
public class Demo3{  
    public static void main(String aa[]){  
    }  
}
```

```
class A{
```

```
}
```

```
class B extends A{
```

```
}
```

```
public class Demo3{
```

```
    public static void main(String aa[]){
```

```
    }
```

```
}
```

A.java



```
D:\Java Programs>javac A.java
```

```
A.java:10: error: class Demo3 is public,  
should be declared in a file named Demo3.java
```

```
    public class Demo3{  
            ^
```

```
1 error
```

```
D:\Java Programs>
```

```
class A{
```

```
}
```

```
public class B extends A{
```

```
}
```

```
public class Demo3{
```

```
    public static void main(String aa[]){
```

```
    }
```

```
}
```




```
D:\Java Programs>javac A.java
```

```
A.java:6: error: class B is public,  
should be declared in a file named B.java
```

```
    public class B extends A{  
           ^
```

```
A.java:10: error: class Demo3 is public,  
should be declared in a file named Demo3.java
```

```
    public class Demo3{  
           ^
```

```
2 errors
```

D:\Java Programs>_

A.java

```
public class A{  
}
```

B.java

```
public class B extends A{  
}
```

Demo3.java

```
public class Demo3{  
    public static void main(String aa[]){  
  
        new A();  
  
        new B();  
  
    }  
}
```

D:\Java Programs>

A.java

B.java

Demo3.java

D:\Java Programs>

A.java

B.java

Demo3.java

✗ A.java

A.java

```
public class A{  
  
}
```

B.java

```
public class B extends A{  
  
}
```

D:\Java Programs>

PACKAGES

A.java

```
package test1;  
public class A{  
  
}
```

B.java

```
package test1;  
public class B extends A{  
  
}
```

D:\Java Programs>

D:\Java Programs\test1>

A.java

B.java



C.java


D:\Java Programs\test2>

A.java

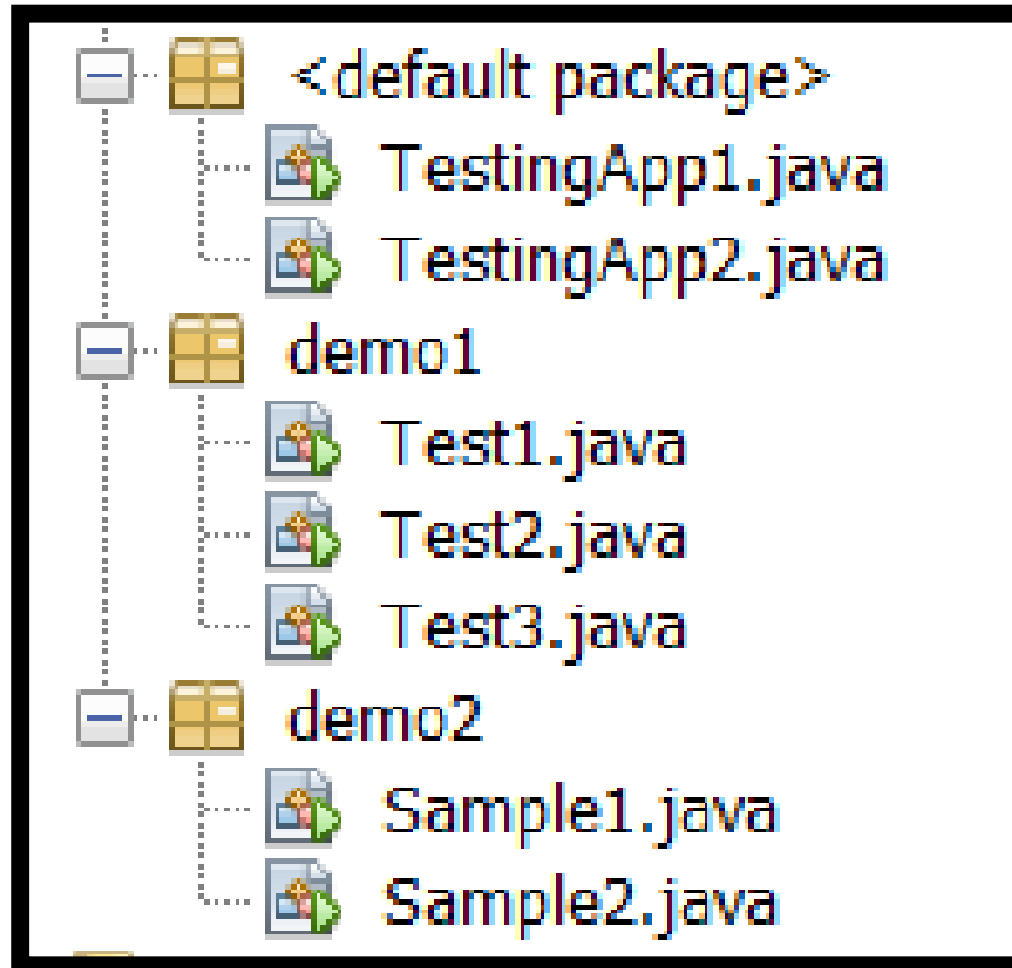
B.java

C.java

 **Statement** (java.beans)
⌘ **Statement** (java.sql)
 **Statement** (jdk.nashorn.internal.ir)

⌘ **Connection** (java.sql)
⌘ **Connection** (com.sun.corba.se.pept.transport)
⌘ **Connection** (com.sun.corba.se.spi.legacy.c...
 **Connection** (com.sun.jndi.ldap)
⌘ **Connection** (sun.rmi.transport)

D:\Java Programs>



D:\Java Programs

```
package demo;  
  
public class A{  
  
}
```

```
package test.sample.app;  
  
public class A{  
  
}
```

```
package demo;

public class MyProgram{

    public static void main(String ss[]){

        System.out.println(" Good Morning! ");

    }

    public void show(){

        System.out.println(" Method Show ");

    }

}
```

```
D:\Java Programs>javac demo\MyProgram.java
```

```
D:\Java Programs>java demo.MyProgram  
Good Morning!
```

```
package com.sample.app;

class Test{

    void display(){

        System.out.println(" Welcome ");

    }

    public static void main(String ss[]){

        new Test().display();

    }

}
```

```
D:\Java Programs>javac com\sample\app\Test.java
```

```
D:\Java Programs>java com.sample.app.Test  
Welcome
```

```
package com.sample.app;
```

```
import demo.MyProgram;
```

```
class Test{
```

```
    public static void main(String ss[]){
```

```
        MyProgram ob = new MyProgram();  
        ob.show();
```

```
    }
```

```
}
```



```
package com.sample.app;
```

```
import demo.*;
```

```
class Test{
```

```
    public static void main(String ss[]){
```

```
        MyProgram ob = new MyProgram();  
        ob.show();
```

```
    }
```

```
}
```

```
package com.sample.app;
```

```
class Test{
```

```
    public static void main(String ss[]){
```

```
        demo.MyProgram ob = new demo.MyProgram();  
        ob.show();
```

```
    }
```

```
}
```

Modifiers

Java provides two types of modifiers

- 1. Access Modifiers**
- 2. Non-Access Modifiers**

Access Modifiers	Non-Access Modifiers
<p>private</p> <p>default or No Modifier</p> <p>protected</p> <p>public</p>	<p>static</p> <p>final</p> <p>abstract</p> <p>synchronized</p> <p>transient</p> <p>volatile</p> <p>strictfp</p>

```
class Test
{
    int x,y;
    void test1()
    {
        System.out.println(" X   : "+x);
        System.out.println(" Y   : "+y);
    }
}
```

```
class A
{

}
```

```
class B
{

}
```

```
class Test
{
    int x,y;
    void test1()
    {
        System.out.println(" X   : "+x);
        System.out.println(" Y   : "+y);
    }
}
```

```
class A
{
    void display1()
    {
        Test t1=new Test();
        t1.x=50;
        t1.y=60;
        t1.test1();
    }
}
```

```
class Test
{
    int x,y;
    void test1()
    {
        System.out.println(" X  : "+x);
        System.out.println(" Y  : "+y);
    }
}
```

```
class B extends Test
{
    void display1()
    {
        x=50;
        y=60;

        test1();
    }
}
```


Access Modifiers

private

protected

public

default (**friendly modifier**)

Packages

```
package yahoo;
```

```
class Registration  
{  
}
```



Sub packages

Classes

Interfaces

Packages

```
package demo1;  
public class Test1  
{  
}
```

```
package demo1;  
public class Test2  
{  
}
```

```
package demo1;  
public class Test3  
{  
}
```

Test1.java

Test2.java

Test3.java

Packages

```
package demo1;  
public class Test1  
{  
    int v1;  
    private int v2;  
    protected int v3;  
    public int v4;  
}
```

```
package demo1;  
public class Test2  
{  
  
}
```

```
package demo2;  
public class Test3  
{  
}
```

```
public class Test4  
{  
}
```