CLASS CREATION

D:\Java Programs

A.class

B.class

Demo3.class

```
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

A.class

B.class

Demo4.class

`D:\Java Programs`

A.class
B.class
Demo3.class
Demo4.class
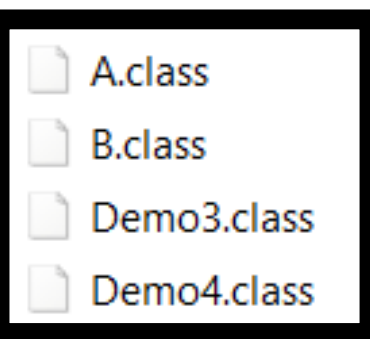
```java
class A{

}
class Demo1{
        public static void main(String ss[]){

                new A() { };

        }

}
```

A.class
Demo1$1.class
Demo1.class

```
class A{

}
class B extends A{

}

class Demo4{
        public static void main(String aa[]){

        }
}
```

A.java

javac A.java
java Demo4

```
class A{

}
class B extends A{

}

public class Demo3{
        public static void main(String aa[]){

        }
}
```

Demo3.java ✓

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>
```

```java
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
```

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
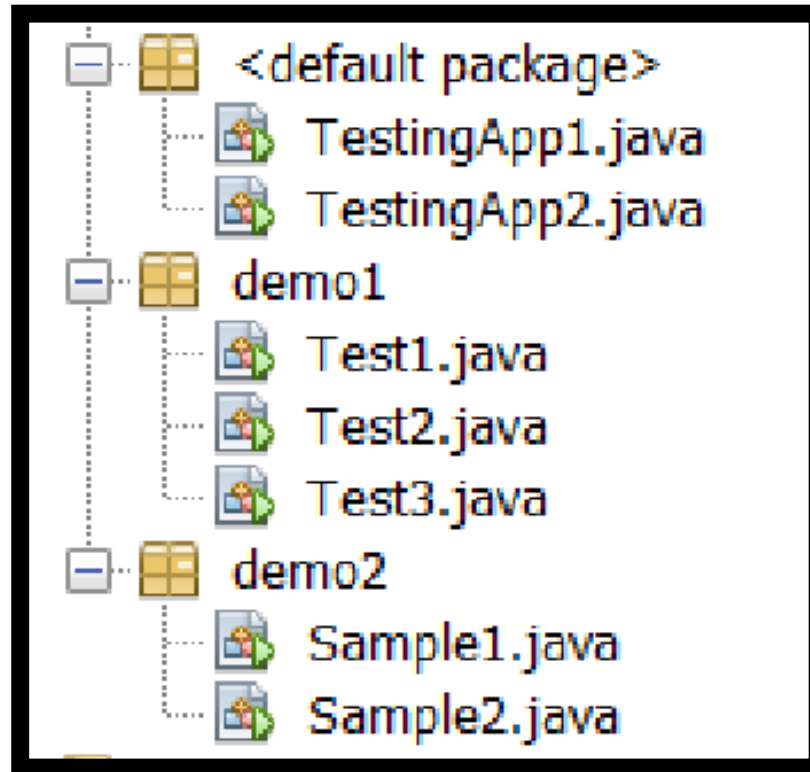
```
D:\Java Programs
```

```
package demo;

public class A{

}
```

```
package test.sample.app;

public class A{

}
```

```java
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!
```

```java
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
```

```java
package com.sample.app;

import demo.MyProgram;

class  Test{

        public static void main(String ss[]){

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

        }
}
```

```java
package com.sample.app;

import demo.*;

class  Test{

        public static void main(String ss[]){

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

        }
}
```

```java
package com.sample.app;

class  Test{

        public static void main(String ss[]){

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

        }
}
```

ACCESS MODIFIERS

```
class Test{

          public   int a;
          private  int b;
          protected int c;
                   int d;

}
```

Package Level Access

Modifiers

Java provides two types of modifiers

1. **Access Modifiers**

2. **Non-Access Modifiers**

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

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

```java
class A
{

}
```

```java
class B
{

}
```

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

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

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

```java
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
{
}
```

Test1.java

Test2.java

Test3.java

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

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

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
{
}
```