

**Institute of Engineering & Management**  
**Department of Computer Science & Engineering**  
**Object Oriented Programming (IT) Lab for 3<sup>rd</sup> year 5<sup>th</sup> semester 2018**  
**Code: CS594D**

**Date: 15/08/18**

**WEEK-6**

**Assignment-1**

**Problem Statement:** Write a program to demonstrate the functionality of the various access specifiers.

**Public:** accessible from anywhere

**Protected:** accessible in the same class, classes in the same package as well as subclasses in other packages

**Default:** accessible in the same class and classes in the same package

**Private:** accessible in the same class only

To demonstrate the above features, create a class test inside package pkg with four data members of different access specifiers. Create another class test1 inside the same package pkg and access the data members, comment out the ones which are not visible. Lastly create another class test2 in another package pkg1 as a subclass of test and access the permissible data members.

**Source code:**

**Same package same class:**

```
package pkg;
public class test
{
    public int pub_int;
    protected int pro_int;
    int def_int;
    private int pri_int;
    public test()
    {
        pub_int = 0;
        pro_int = 1;
        def_int = 2;
        pri_int = 3;
    }
}
```

**Same package different class:**

```
package pkg;
public class test1
{
    public static void main(String[] args)
```

```

    {
        test obj = new test();
        System.out.print(obj.pub_int);
        System.out.print(obj.pro_int);
        System.out.print(obj.def_int);
        System.out.print(obj.pri_int);
    }
}

```

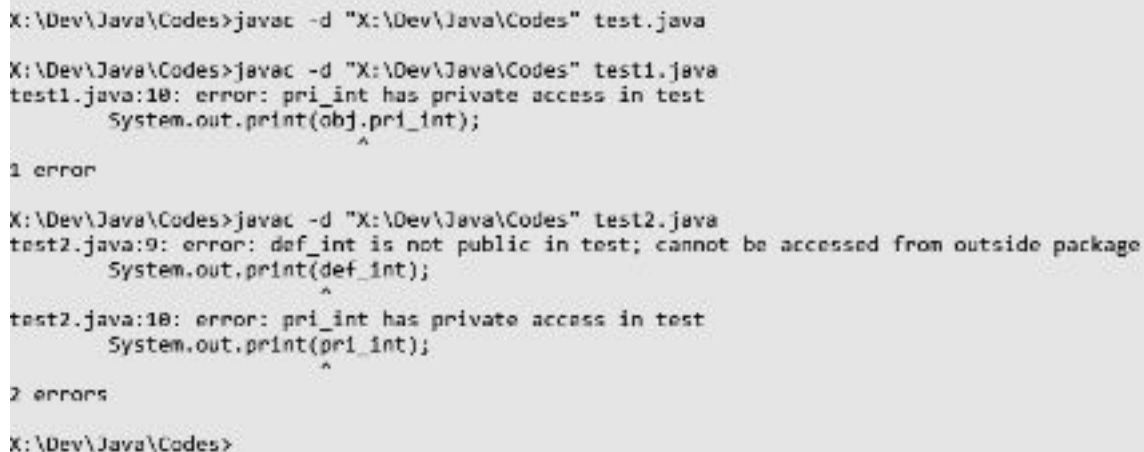
### Different package different class

```

package pkg1;
import pkg.*;
public class test2 extends test
{
    test2()
    {
        System.out.print(pub_int);
        System.out.print(pro_int);
    }
    public static void main(String[] args)
    {
        test2 obj = new test2();
    }
}

```

### Screen-Shot:



```

X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test.java

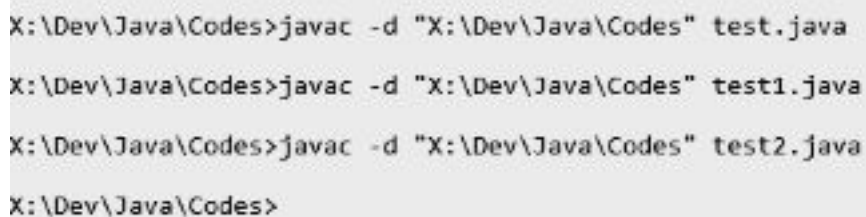
X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test1.java
test1.java:10: error: pri_int has private access in test
    System.out.print(obj.pri_int);
                        ^
1 error

X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test2.java
test2.java:9: error: def_int is not public in test; cannot be accessed from outside package
    System.out.print(def_int);
                    ^
test2.java:10: error: pri_int has private access in test
    System.out.print(pri_int);
                    ^
2 errors

X:\Dev\Java\Codes>

```

**Fig: without comment**



```

X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test.java

X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test1.java

X:\Dev\Java\Codes>javac -d "X:\Dev\Java\Codes" test2.java

X:\Dev\Java\Codes>

```

**Fig: with comment**