



Java 核心技术

第七章 package, import和classpath

第四节 Java访问权限

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Java访问权限(1)



- Java访问权限有四种
 - private: 私有的, 只能本类访问
 - default(通常忽略不写): 同一个包内访问
 - protected: 同一个包, 子类均可以访问
 - public: 公开的, 所有类都可以访问
- 使用范围
 - 四种都可以用来修饰成员变量、成员方法、构造函数
 - default和public可以修饰类

Java访问权限(1)



	同一个类	同一个包	不同包的子类	不同包的非子类
private	√			
default	√	√		
protected	√	√	√	
public	√	√	√	√

总结



- Java属性和方法有四种权限
 - private
 - default
 - protected
 - public
- 个人推荐
 - 成员变量都是private
 - 成员方法都是public

代码(1) B和A是同包的(对等)类



```
package test1;

public class A {
    private int v1 = 1;
    int v2 = 2;
    protected int v3 = 3;
    public int v4 = 4;

    private void showV1()
    {
        System.out.println(v1);
    }
    void showV2()
    {
        System.out.println(v2);
    }
    protected void showV3()
    {
        System.out.println(v3);
    }
    public void showV4()
    {
        System.out.println(v4);
    }
}
```

```
package test1;

//B and A are in the same package
public class B {
    public void show()
    {
        //B is not subclass of A
        // System.out.println(v1); //error
        // System.out.println(v2); //error
        // System.out.println(v3); //error
        // System.out.println(v4); //error
        // showV1(); //error
        // showV2(); //error
        // showV3(); //error
        // showV4(); //error

        A obj = new A();
        //System.out.println(obj.v1); error, private
        System.out.println(obj.v2);
        System.out.println(obj.v3);
        System.out.println(obj.v4);

        //obj.showV1(); error, private
        obj.showV2();
        obj.showV3();
        obj.showV4();
    }
}
```

代码(2) C是A的(同包)子类



```
package test1;

public class A {
    private int v1 = 1;
    int v2 = 2;
    protected int v3 = 3;
    public int v4 = 4;

    private void showV1()
    {
        System.out.println(v1);
    }
    void showV2()
    {
        System.out.println(v2);
    }
    protected void showV3()
    {
        System.out.println(v3);
    }
    public void showV4()
    {
        System.out.println(v4);
    }
}
```

```
package test1;

//C is a subclass of A, and in the same package of A.
public class C extends A {
    public void show()
    {
        //System.out.println(v1); error, private
        System.out.println(v2);
        System.out.println(v3);
        System.out.println(v4);
        //showV1(); error, private
        showV2();
        showV3();
        showV4();

        A obj = new A();
        //System.out.println(obj.v1); error, private
        System.out.println(obj.v2);
        System.out.println(obj.v3);
        System.out.println(obj.v4);

        //obj.showV1(); error, private
        obj.showV2();
        obj.showV3();
        obj.showV4();
    }
}
```

代码(3) D是A的(不同包的)子类



```
package test1;

public class A {
    private int v1 = 1;
    int v2 = 2;
    protected int v3 = 3;
    public int v4 = 4;

    private void showV1()
    {
        System.out.println(v1);
    }
    void showV2()
    {
        System.out.println(v2);
    }
    protected void showV3()
    {
        System.out.println(v3);
    }
    public void showV4()
    {
        System.out.println(v4);
    }
}
```

```
package test2;

import test1.A;

public class D extends A{
    public void show()
    {
        //System.out.println(v1); error, private
        //System.out.println(v2); error, default
        System.out.println(v3);
        System.out.println(v4);
        //showV1(); error, private
        //showV2(); error, default
        showV3();
        showV4();

        A obj = new A();
        //System.out.println(obj.v1); error, private
        //System.out.println(obj.v2); error, default
        //System.out.println(obj.v3); error, protected 只能作为子类才能访问
        System.out.println(obj.v4);

        //obj.showV1(); error, private
        //obj.showV2(); error, default
        //obj.showV3(); error, protected 只能作为子类才能访问
        obj.showV4();
    }
}
```


代码(4) E是A的不同包对等类



```
package test1;

public class A {
    private int v1 = 1;
    int v2 = 2;
    protected int v3 = 3;
    public int v4 = 4;

    private void showV1()
    {
        System.out.println(v1);
    }
    void showV2()
    {
        System.out.println(v2);
    }
    protected void showV3()
    {
        System.out.println(v3);
    }
    public void showV4()
    {
        System.out.println(v4);
    }
}
```

```
package test2;

import test1.A;

public class E {
    public void show()
    {
        //E is not a subclass of A. And E is not in the same package of A.
        //System.out.println(v1); error, private
        //System.out.println(v2); error, default
        //System.out.println(v3);
        //System.out.println(v4);
        //showV1(); error, private
        //showV2(); error, default
        //showV3();
        //showV4();

        A obj = new A();
        //System.out.println(obj.v1); error, private
        //System.out.println(obj.v2); error, default
        //System.out.println(obj.v3); error, protected 只能作为子类才能访问
        System.out.println(obj.v4);

        //obj.showV1(); error, private
        //obj.showV2(); error, default
        //obj.showV3(); error, protected 只能作为子类才能访问
        obj.showV4();
    }
}
```




谢谢!