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//Inheritance Example
//Source: Prof. Al Croker, Baruch College
```

```
class Base
{
private:  Bprivmem;
protected: Bprotmem;
public:   Bpubmem;
}

class privDerived: private Base
{
private:  privDprivmem;
protected: privDprotmem;
public:   privDpubmem;
}

class protDerived: protected Base
{
private:  protDprivmem;
protected: protDprotmem;
public:   protDpubmem;
}

class pubDerived: public Base
{
private:  pubDprivmem;
protected: pubDprotmem;
public:   pubDpubmem;
}
```

```

void main()
{
    Base Bobj;                //Base class object
    privDerived privDobj;    //Object of class that is privately derived
    protDerived protDobj;   //Object of class that is protectedly derived
    pubDerived pubDobj;     //Object of class that is publicly derived

    //The following set of expressions are used to indicate which of the
    //members, including those that are inherited, are accessible through
    //objects of the indicated classes

    Bobj.Bprivmem;          //invalid, private member
    Bobj.Bprotmem;         //invalid, protected member
    Bobj.Bpubmem;          //valid, public member

    privDobj.Bprivmem;     //invalid, hidden
    privDobj.Bprotmem;     //invalid, treated as private member
    privDobj.Bpubmem;      //invalid, treated as private member
    privDobj.privDprivmem; //invalid, private member
    privDobj.privDprotmem; //invalid, protected member
    privDobj.privDpubmem;  //valid

    protDobj.Bprivmem;     //invalid, hidden
    protDobj.Bprotmem;     //invalid, treated as protected member
    protDobj.Bpubmem;      //invalid, treated as protected member
    protDobj.protDprivmem; //invalid, private member
    protDobj.protDprotmem; //invalid, protected member
    protDobj.protDpubmem;  //valid

    pubDobj.Bprivmem;     //invalid, hidden
    pubDobj.Bprotmem;     //invalid, treated as protected member
    pubDobj.Bpubmem;      //valid
    pubDobj.protDprivmem; //invalid, private member
    pubDobj.protDprotmem; //invalid, protected member
    pubDobj.protDpubmem;  //valid
}

```

The following table lists the (effective) access specification for those derived class members that are inherited from a base class, under private, protected and public derivation. That is, it lists the access specifiers from the perspective of the derived class.

Base Class Member Specifier	(Effective) Access Specifier in Derived Class		
	private Derived Class	protected Derived Class	public Derived Class
private	(hidden)	(hidden)	(hidden)
protected	private	protected	protected
public	private	protected	public