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/*1*/ // Com.cpp : Defines the entry point for the console application.
/*2*/ //
/*3*/
/*4*/ #include "stdio.h"
/*5*/
/*6*/ class IUnknown
/*7*/ {
/*8*/ public:
/*9*/     virtual _stdcall HRESULT QueryInterface(REFIID iid, void** ppvObj) = 0;
/*10*/     virtual _stdcall ULONG AddRef() = 0;
/*11*/     virtual _stdcall ULONG Release() = 0;
/*12*/ };
/*13*/
/*14*/ class I9Interface:public IUnknown
/*15*/ {
/*16*/     virtual _stdcall HRESULT Func9() = 0;
/*17*/ };
/*18*/
/*19*/ class I90Interface:public IUnknown
/*20*/ {
/*21*/     virtual _stdcall HRESULT Func90() = 0;
/*22*/ };
/*23*/
/*24*/
/*25*/ class CAllObj
/*26*/ {
/*27*/     CAllObj();
/*28*/     virtual _stdcall HRESULT QueryInterface(REFIID iid, void** ppvObj);
/*29*/     virtual _stdcall ULONG AddRef();
/*30*/     virtual _stdcall ULONG Release();
/*31*/     DWORD m_dwRef;
/*32*/
/*33*/     class C9Obj:public I9Interface
/*34*/     {
/*35*/     };
/*36*/     CAllObj* m_pParent;
/*37*/     virtual _stdcall HRESULT QueryInterface(REFIID iid, void** ppvObj) {return m_pParent-
>QueryInterface(iid,ppvObj)};
/*38*/     virtual _stdcall ULONG AddRef() {return m_pParent->AddRef()};
/*39*/     virtual _stdcall ULONG Release() {return m_pParent->Release()};
/*40*/     virtual _stdcall HRESULT Func9();
/*41*/ } m_9Obj;
/*42*/
/*43*/     class C90Obj:public I90Interface
/*44*/     {
/*45*/     };
/*46*/     CAllObj* m_pParent;
/*47*/     virtual _stdcall HRESULT QueryInterface(REFIID iid, void** ppvObj) {return m_pParent-
>QueryInterface(iid,ppvObj)};
/*48*/     virtual _stdcall ULONG AddRef() {return m_pParent->AddRef()};
/*49*/     virtual _stdcall ULONG Release() {return m_pParent->Release()};
/*50*/     virtual _stdcall HRESULT Func90();
/*51*/ } m_90Obj;
};

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/*51*/ CAllObj::C9Obj::Func9()
/*52*/ {
/*53*/     printf("I9Obj\n");
/*54*/ }
/*55*/
/*56*/
/*57*/ CAllObj::C9Obj::Func90()
/*58*/ {
/*59*/     printf("I90Obj\n");
/*60*/ }
/*61*/
/*62*/ CAllObj::CAllObj()
/*63*/ {
/*64*/     m_9Obj.m_pParent = this;
/*65*/     m_90Obj.m_pParent = this;
/*66*/     m_dwRef = 0;
/*67*/ }
/*68*/
/*69*/ ULONG CAllObj::AddRef()
/*70*/ {
/*71*/     return ++m_dwRef;
/*72*/ }
/*73*/
/*74*/ ULONG CAllObj::Release()
/*75*/ {
/*76*/     if(--m_dwRef==0)
/*77*/     {
/*78*/         delete this;
/*79*/         return 0;
/*80*/     }
/*81*/     return m_dwRef;
/*82*/ }
/*83*/
/*84*/ HRESULT CAllObj::QueryInterface(REFIID iid, void** ppvObj)
/*85*/ {
/*86*/     if(iid==IID_IUnknown || iid==IID_I9Interface)
/*87*/     {
/*88*/         *ppvObj = &m_9Obj;
/*89*/         AddRef();
/*90*/         return NOERROR;
/*91*/     }
/*92*/     else if(iid==IID_I90Interface)
/*93*/     {
/*94*/         *ppvObj = &m_90Obj;
/*95*/         AddRef();
/*96*/         return NOERROR;
/*97*/     }
/*98*/     return ResultFromScode(E_NOINTERFACE);
/*99*/ }
/*100*/
/*101*/ int main(int argc, char* argv[])

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/*102*/ {
/*103*/     IUnknown *pUnk = new IUnknown;
/*104*/     I9Interface *p9 = NULL;
/*105*/     I90Interface *p90 = NULL;
/*106*/     if(pUnk->QueryInterface(IID_I9Interface, (void**) &p9) == NOERROR)
/*107*/     {
/*108*/         p9->Func9();
/*109*/         p9->Release();
/*110*/     }
/*111*/
/*112*/     if(pUnk->QueryInterface(IID_I90Interface, (void**) &p90) == NOERROR)
/*113*/     {
/*114*/         p90->Func90();
/*115*/         p90->Release();
/*116*/     }
/*117*/     return 0;
/*118*/ }
```