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#include <iostream>          // enth1.cpp
using namespace std;
class X {   int i;
    public: X(int n):i(n){ // Konstruktor
        cout<<"Konstruktor X, i = "<<i<<endl;
    }
    ~X(){ cout<<"Destruktor X, i = "<<i<<endl; }
    void display(){ cout<<"class X, i = "<<i<<endl; }
};

class C { X a;                // Komposition
    X* p;                    // Aggregation
    X& r;                    // Aggregation
    char *s;

    public:
        C(int i, int j, int k, char *s):a(i), p(new X(j)),
            r(*new X(k)),
            s(s?strcpy(new char[strlen(s)+1],s):0){
            cout<<"Konstruktor C"<<endl; show();
        }

        C(X x, X * xp, X & xr, char s[]):a(x),
            p(new X(*xp)),
            r(*new X(xr)),
            s(s?strcpy(new char[strlen(s)+1],s):0){
            cout<<"Konstruktor C"<<endl; show();
        }

        ~C(){ cout<<"Destruktor C"<<endl; show();
            delete p; p=0; delete &r; delete [] s; s=0;
        }

        void show(){ cout<<"class C,  show\n";
            cout<<(s?s:"0")<<endl; a.display(); p->display();
            r.display();
        }
};

void main(){
    C *c=new C(1,2,3,"HTW Dresden");
    c->show();
    delete c; c = 0;
    X x = 1;                // X x(1);
    X *xp = new X(2);
    X &xr = *new X(3);
    C c1(x,xp,xr,"Versuch 2");
    c1.show();
    delete xp; xp = 0;
    delete &xr;             // &xr = 0; nicht moeglich
}

```