

## person\_s.cpp (Vererbung)

```
#include <iostream>
#include <string>
using namespace std;

class person {
    string name;
    int jahr;

public:
    person(string n = "", int j = 2005) : jahr(j), name(n) {}

    int get_jahr() const { return jahr; }
    string get_name() const { return name; }
    person get_person() const { return *this; }
};

class student : public person {
    unsigned long matrnr;
    string studg;

public:
    student(string n="", int j=2005, unsigned long m=4711,
            string s="WI04"): person(n, j), matrnr(m), studg(s){}

    unsigned long get_matrnr() const { return matrnr; }
    string get_studg() const { return studg; }
    student get_person() const { return *this; } // overwrite
};

void main(){
    student s1("Lehmann", 1984, 22337, "WI07");
    person p1(s1);
    cout<<"s1.jahr    = "<<p1.get_jahr()<<endl;
    cout<<"s1.matrnr  = "<<s1.get_matrnr()<<endl;
    cout<<"s1.name    = "<<p1.get_name()<<endl;
    cout<<"s1.studg   = "<<s1.get_studg()<<endl;
    p1 = s1.get_person();
    p1 = ((person)s1).get_person();
    student s2 = s1.get_person();

    //  student s3 = ((person)s1).get_person(); //Compile-Error
    //  student s4 = p1.get_person();           //Compile-Error
    //  student s5 = ((student)p1).get_person(); //Compile-Error
}

/* s1.jahr    = 1984
   s1.matrnr  = 22337
   s1.name    = Lehmann
   s1.studga  = WI07    */
```