Polymorphic copy

[](http://www.rosettacode.org/wiki/Category:Solutions_by_Programming_Task)

**Polymorphic copy**  
You are encouraged to [solve this task](http://www.rosettacode.org/wiki/Rosetta_Code:Solve_a_Task) according to the task description, using any language you may know.

An object is [polymorphic](http://www.rosettacode.org/wiki/Polymorphism) when its specific type may vary. The types a specific value may take, is called *class*.

It is trivial to copy an object if its type is known:

**int** x;  
**int** y = x;

Here x is not polymorphic, so y is declared of same type (*int*) as x. But if the specific type of x were unknown, then y could not be declared of any specific type.

The task: let a polymorphic object contain an instance of some specific type S derived from a type T. The type T is known. The type S is possibly unknown until [run time](http://www.rosettacode.org/wiki/Run_time). The objective is to create an exact copy of such polymorphic object (not to create a [reference](http://www.rosettacode.org/wiki/Reference), nor a pointer to). Let further the type T have a method overridden by S. This method is to be called on the copy to demonstrate that the specific type of the copy is indeed S.