

„C++ / GUI “

Exercise 19

1 Informative Constructors

This task shall reveal when constructors are called. For testing you can use your program from the template exercise.

1. Create a new class `Number` which contains just one integer.
2. Define two methods `value` get and set the integer value.
3. Define a speaking constructor for `Number`. The constructor shall have no parameters. The constructor shall say what type of constructor it is. For debugging purposes it is useful to print the objects address.
4. Create a copy constructor, Of course with some output.
5. Define a destructor. It shall print a message, too.
6. Test your constructors with `new/delete`.
7. Define a function `int sorted(Number one, Number two)` which returns 1 if number one is less or equal than number two.
8. Write a swap function which exchanges two variables of your type. Compare the source to the generic swap function of the vector exercise.
9. Write a generic swap function which uses references.
10. Create a `vector<Number>`. Try to sort the vector. Test both swap functions.

Have fun!