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!