**Optional homework (1 bonus point): function and class templates**

**Description:This is an optional homework assignment. You will earn one bonus point if a correct solution is submitted by the due time. NO LATE SUBMISSION CAN BE ACCEPTED.**

**Q1.**Implement and test the swap() function template as shown on the slides posted above. Include the template and main() function in one .cpp file. (Some c++ compilers don't allow a template defined in a separate file.)  
  
**Q2.** Implement and test the Array class template as shown on the slides. Check whether your compiler supports separate compilation for class templates. If the answer is no, create one header file that includes both the declaration of the class template and the implementation of each member function. Then create another cpp file to include the main() function for testing.   
  
**Requirement:**   
Electronic submission only. No late submission is allowed.