

**Lab report**

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| **Course**: | Class Libraries and Data Structures |
| **Semester**: | 1st semester of the academic year **2021-2022** |
| **Major**: | Software Engineering |
| **Class**: | 2020 |
| **Student Name**: | 温长锟 |
| **Student ID:** | 222020321062106 |
| **Teacher:** | ZHAO, Hengjun (赵恒军) |

**School of Computer and Information Science**

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| Name | | Review of C++ and Object-Oriented Programming | | | |
| Date | | Sep. 13，2021 | Type | | √ Confirmatory  √ Design  □Comprehensive |
| 1. **Objective & Requirements**    1. Review the concepts of class, object, inheritance, overriding and overloading in the C++ programming language    2. Learn the Data Abstraction Principle, the Open-Closed Principle, and the Subclass Substitution Rule    3. Practice C++ programming skills | | | | | |
| 1. **Experimental environment (**platform and software**)**   Windows 7 (or higher versions) + Visual Studio 2010 (or higher versions) | | | | | |
| 1. **Experimental content and design** (Main Content, Procedure, Codes and Results) 2. Task 1    1. Read the source codes of the Employee and Company classes. Compile and run the code to get the best paid employee.    2. Declare and define the Employee and Company classes for the case of monthly paid employee by using inheritage. The requirements are as stated in the slides and specified in the given source files:       1. Implement the input() method for the derived Employee2 class       2. Implement the findBestPaid() method for the derived Company2 class    3. Test your classes implementation to get and output the best paid employee   **CODE：**  Employee2.cpp：  QQ截图20210922172420  Company2.cpp：  QQ截图20210922172339  BestPaidEmployee.cpp:  QQ截图20210922172525  Input&&Output  QQ截图20210922172235 | | | | | |
| 1. **Result analysis and discussion**（Analysis of experimental results and summing up the harvest and the existing problems）   Before doing the experiment, I thought it would not be difficult. Just like doing the C + + experiment before, I finished the experiment and then finished the experimental report at once. I didn't know it was not easy to do until I finished the test experiment, but the knowledge I learned was proportional to the difficulty, which benefited me a lot  Be sure to thoroughly understand the knowledge in the textbook, because this is the basis of doing the experiment, otherwise I will not understand it when the teacher explains, which will make it more difficult for I to do the experiment and waste the precious time of doing the experiment. If I don't know it, I should explore it when doing the experiment, which will greatly waste my time and get half the result with twice the effort  When doing the experiment, you must do it yourself. Be sure to clarify and understand each step and detail. After the experiment, I have to review and think. In this way, I will be impressed and remember firmly. Otherwise, I will forget everything soon. It's better not to do it  According to her personal experience, Mr. Zhao taught me some knowledge not in the textbook, broadened my horizons, and made us realize that this course is so widely used in life. Through this C + + experiment, I learned a lot of practical knowledge. More importantly, the process of doing the experiment and the method of thinking about problems are common with other experiments. It really benefited me a lot | | | | | |
| Comments & Evaluation | Content & Design (A-E) | | |  | |
| Procedure & Codes (A-E) | | |  | |
| Results (A-E) | | |  | |
| Analysis & Discussion (A-E) | | |  | |
| Score (A-E):  Feedback comments: | | | | |