计算机学院 高级语言程序设计 课程实验报告

实验题目: 流类库与输入输出流 学号: 202200130048

日期: 2023.5.16 班级: 6 姓名: 陈静雯

Email: 1205037094@qq.com

实验步骤与内容:

- 1. 练习流类库中常用的类及成员函数的用法。
- 2. 练习标准输入/输出及格式控制
- 3. 练习文件的操作(文本文件、二进制文件)

结论分析与体会:

1.

```
© 000.cpp × ≡ b.out ×
cpppp > ≡ b.out

1 123;456
```

2.

```
Zoot
           1
Jimmy
          4e+01
Al
          7e+02
Stan
          4e+03
Zoot
           1.23
Jimmy
           35.36
Al
           653.7
Stan
        124358.2
```

```
Zoot
           1.23
 Jimmy
           35.36
 Al
           653.7
         4358.24
 Stan
解释: setprecision 表示保留几位有效数字, setw 是控制输出字符宽度
 Zoot
           1.23
 Jimmy
           35.36
 Al
           653.7
 Stan
          124358
?? Double "124358. 24" 输出原数字只输出 124358 六位
3.
 date.dat - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)
G 000.cpp ≡ date.dat X
 cpppp > ≡ date.dat
       ACKNULNULNUL
    2 NULNULNUL\NULNULNUL
二进制文件打开
```

```
≣ date.dat ×
  cpppp > ≡ date.dat
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F Decoded Text
  00000000 06 00 00 00 0A 00 00 00 5C 00 00 00
4.
                 --abgexe=b:\mingw64\bin\gab.exe
  5
 PS D:\code repository\code> [
5.
  Type a line terminated by 't'
  hello worldt
  hello world
              renository\codes
  Type a line terminated by 't'
 123djfnrj rfjetmsdj t
  123djfnrj rfje
 PS D:\code repositorv\code>
解释: getline(cin, line, 't');读取键盘输入存到 line 中, 遇到字符 t 停止
读取
Get 函数
#include <iostream>
#include <string>
using namespace std;
int main() {
    char line[20];
    cout << "Type a line terminated by 't' " << endl;</pre>
     cin.get(line, 10, 't');
    cout << line << endl;</pre>
   return 0;
}
 Type a line terminated by 't'
 12 dj sitdjew
 12 dj si
```

```
6.
              ≡ payroll
 cpppp > ≡ payroll
        00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 000000000 C1 27 09 00 00 00 00 00 00 00 00 00 40 BF 40
                  '--dbgExe=D:\mingw64\bin\gdb.exe
 600001 8000
 PS D:\code repository\code>
7.
二进制
#include <iostream>
#include <fstream>
#include <cstring>
using namespace std;
class dog{
public:
   int weight;
    int age;
   dog(int x, int y):weight(x), age(y) {}
   dog() {}
    ~dog() {};
};
int main() {
   dog dog1 (5, 10);
   ofstream os("dog", ios_base::out| ios_base::binary);
   os.write(reinterpret_cast<char *>(&dog1), sizeof(dog1));
   os. close();
    ifstream is("dog", ios_base::in| ios_base::binary);
    if (is) {
       dog dog2;
       is.read(reinterpret_cast<char *>(&dog2), sizeof(dog2));
       cout << dog2.weight << " " << dog2.age << endl;</pre>
   } else {
       cout << "ERROR: Cannot open file 'dog'." << endl;</pre>
    is.close();
    return 0;
```

```
▷ Ш …

  dog

                                             ×
 € 000.cpp
                                  ≣ dog
 cpppp > 

dog
          00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
 00000000 05 00 00 00 0A 00 00 00
   d4zpxfk.n4a' '--dbgExe=D:\mingw64\bin\gdb.exe' '--interprete
   5 10
  PS D:\code repository\code> [
十进制
#include <iostream>
#include <fstream>
#include <cstring>
using namespace std;
class dog{
public:
   int weight;
   int age;
   dog(int x, int y): weight(x), age(y) {}
   dog() {}
   ~dog() {};
};
int main() {
   dog dog1(5, 10);
   ofstream os("dog");
   os.write(reinterpret_cast<char *>(&dog1), sizeof(dog1));
   os. close();
   ifstream is("dog");
   if (is) {
       dog dog2;
       is. read(reinterpret_cast<char *>(&dog2), sizeof(dog2));
       cout << dog2.weight << " " << dog2.age << endl;</pre>
       cout << "ERROR: Cannot open file 'dog'." << endl;</pre>
   is.close();
   return 0;
```

```
€ 000.cpp
                   ≣ dog
                                   ≡ dog
                                              X
                                                               cpppp > \ \ \ dog
           00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F Decoded Text
  00000000 05 00 00 00 0D 0A 00 00 00
  d4zpxfk.n4a' '--dbgExe=D:\mingw64\bin\gdb.exe' '--interprete
   5 10
  PS D:\code repository\code> []
差别: 十进制多一个 OD
9.
#include <iostream>
#include <fstream>
#include <cstring>
using namespace std;
int main() {
   ifstream is("11-9.txt");
   string s;
   ofstream(os);
   if (is) {
       for (int i=1; i < 5; i++) {
          os.write(reinterpret_cast<char *>(&i), sizeof(i));
       is.read(reinterpret_cast<char *>(&s), sizeof(s));
       os.write(reinterpret_cast<char *>(&s), sizeof(s));
   } else {
       cout << "ERROR: Cannot open file 'dog'." << endl;</pre>
   is.close();
   return 0;
```