**面向对象程序设计基础 第十四次作业**

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**验证部分**

我先对程序输入格式进行说明：

输入1之后输入浮点数，输出该浮点数的二进制存储形式。

输入2直接输出非数的二进制存储形式。

* 首先我先测试0和“非数”等易于验证结果的案例

|  |  |
| --- | --- |
| 输入 | 输出 |
| 1 0 | 0000000000000000000000000000000000000000000000000000000000000000 |
| 2 | 1111111111111000000000000000000000000000000000000000000000000000 |

Double类型变量一共有64位，为1位符号位+11位阶码+52位位码，恰与运行的结果相符。这里初步验证了程序的正确性。

* 其次，我再取正负整数一对对验证

|  |  |
| --- | --- |
| 输入 | 输出 |
| 1 1 | 0011111111110000000000000000000000000000000000000000000000000000 |
| 1 -1 | 1011111111110000000000000000000000000000000000000000000000000000 |
| 1 2 | 0100000000000000000000000000000000000000000000000000000000000000 |
| 1 -2 | 1100000000000000000000000000000000000000000000000000000000000000 |
| 1 4 | 0100000000010000000000000000000000000000000000000000000000000000 |
| 1 -4 | 1100000000010000000000000000000000000000000000000000000000000000 |
| 1 8 | 0100000000100000000000000000000000000000000000000000000000000000 |
| 1 -8 | 1100000000100000000000000000000000000000000000000000000000000000 |
| 1 15 | 0100000000101110000000000000000000000000000000000000000000000000 |
| 1 -15 | 1100000000101110000000000000000000000000000000000000000000000000 |
| 1 4096 | 0100000010110000000000000000000000000000000000000000000000000000 |
| 1 -4096 | 1100000010110000000000000000000000000000000000000000000000000000 |

* 再次，我取正负小数一对对验证

|  |  |
| --- | --- |
| 输入 | 输出 |
| 1 0.1 | 0011111110111001100110011001100110011001100110011001100110011010 |
| 1 -0.1 | 1011111110111001100110011001100110011001100110011001100110011010 |
| 1 0.01 | 0011111110000100011110101110000101000111101011100001010001111011 |
| 1 -0.01 | 1011111110000100011110101110000101000111101011100001010001111011 |
| 1 0.5 | 0011111111100000000000000000000000000000000000000000000000000000 |
| 1 -0.5 | 1011111111100000000000000000000000000000000000000000000000000000 |
| 1 0.25 | 0011111111010000000000000000000000000000000000000000000000000000 |
| 1 -0.25 | 1011111111010000000000000000000000000000000000000000000000000000 |
| 1 1314.1314 | 0100000010010100100010001000011010001101101110001011101011000111 |
| 1 -1314.1314 | 1100000010010100100010001000011010001101101110001011101011000111 |
| 1 1949.10 | 0100000010011110011101000110011001100110011001100110011001100110 |
| 1 -1949.10 | 1100000010011110011101000110011001100110011001100110011001100110 |

以上样例比较充分地验证了程序的正确性。