

Write a C/C++ program to add two floating point numbers represented in IEEE 754 format.

Example: Input of your C program would be 0x40280000 and 0x3f900000 and output would be 0x40700000

Decimal Form	Binary Form	Floating point
2.625	10.101	0x40280000
1.125	1.001	0x3f900000
3.75	11.11	0x40700000

Steps:

1. Extract sign, exponent, and mantissa
2. Create significand from mantissa
3. Shift smaller number to right such that exponent is same for both numbers
4. Add significands
5. Normalize (and round and then re-normalize if going for extra credits)
6. Construct the floating point number from sign, exponent and mantissa

The program should read the input from file, where each line in the file has two numbers written in hex format.

The result would be displayed on stdout and should be written in IEEE 754 format in form of Hex number

Additional credits for implementing rounding.

The program run on Linux machines with gcc compiler.

Deadline:12 August, 12 midnight.

Example input test file:

```
1 0x40280000 0x3f900000 0x40700000
2 0xc0280000 0xbf900000 0xc0700000
3 0x40280000 0xbf900000 0x3fc00000
4 0xc0280000 0x3f900000 0xbfc00000
5 0x42480000 0x49f42400 0x49f42590
6 0x3f800000 0x3f800000 0x40000000
7 0x447a0000 0x00000000 0x447a0000
8 0x3a800000 0x3f800000 0x3f802000
9 0x3a800000 0xbf800000 0xbf7fc000
```

Example expected output file:

Test 1 PASSED

Test 2 PASSED

Test 3 FAILED

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Total 6 PASSED 3 FAILED.

<https://www.h-schmidt.net/FloatConverter/IEEE754.html>