Lab1

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1 Problems I Met and How I Solved Them

1. In bits reversal, the brutal force method uses too many ops, thus I used binary method to reverse bits after I had discussed with my classmates.

2. In isPositive, I didn't take care of the 0 situation at first, only focusing on the sign bit. But after I test the puzzle, I realized the problem and fixed it.

3. In Log2, I realized I should find the highest 1 but I couldn't figure out how to find it without going through all bits. Since I happened to learn binary search in DSA, and I found that problem resemble this to some extent, so I use binary search to find the highest 1.

4. In floatIsEqual, I didn't realize there is +0/-0 problem but I fixed it after test.

2 What I Have Learned

1. Take care of the boundary situations, such as 0, 0x80000000, 0x7fffffff.

2. Applying the DSA algorithms in many ways, including this class.

3. Discussions can coin new point of view.