Objective:

- Reviewing the Bitwise operators.
- Implementing Bit Vector, which could help us implementing many problems in optimized way.

IEEE 754 Format:

What is IEEE 754 Format?
http://en.wikipedia.org/wiki/Single-precision_floating-point_format

Online program to convert floating-point value to 32 Bit binary numbers as per IEEE 754 format:

http://babbage.cs.qc.cuny.edu/IEEE-754.old/Decimal.html

Online program to convert a 32 Bit binary number stored as per IEEE 754 format into floating point value:

http://www.ajdesigner.com/fl_ieee_754_word/ieee_32_bit_word.php

Hopefully, you have explored the links listed above before coming to lab, because this is what you need to implement now ☺

So, In this Lab:

You are to implement two functions:

1. Floating-point number to binary representation — Marks 5
2. Binary representation to floating-point number? — Marks 5

***Motivation**: If not before then now, You will certainly get to know the following after completing this task.*

- How the floating-point values are stored in computer.
- Problems related to comparing floating point values.
- What is the meaning of single precision or double precision?

Sample Run

Press 1: Floating-Point Number to Binary Number
2: Binary Number to Floating-Pointer Number
1
Enter Number to get Single Precision Floating Point Representation: 3.1

01000000010001100110011001100110

Do you want to test another number [Y/N] N

"Be like a postage stamp. Stick to one thing until you get there."
[... Josh Billings ...]