```
//Yujian Li floatingpoint.pdf 02/15/16

Decimal to Binary:

Floating point number: -9.671875
      because it is a signed floating point number, last digit = 1
exponent:9.671875/2^3=1.208984375
      exponent is 3+127=130
      130 = 2^7 + 2^1 = 10000010
Mantissa:
      1.208984375-1 = 0.208984375
      0.208984375*2 = 0.41796875 "0"
      0.41796875*2  = 0.8359375  "0"
      0.8359375*2   = 1.671875   "1"
      0.671875*2    = 1.34375    "1"
      0.34375*2     = 0.6875     "0"
      0.6875*2      = 1.375      "1"
      0.375*2       = 0.75       "0"
      0.75*2        = 1.5        "1"
      0.5*2         = 1          "1"

Normalizing:
      mantissa  = 00110101100000000000000
      exponent  = 10000010
      sign      = 1

The Binary number is 11000001000110101100000000000000
In hex is 1100=c
        0001=1
        0001=1
        1010=a
        1100=c
        0000=0
        0000=0
        0000=0
      0xc11ac000
      In Little Endian form is 0x00c01ac1

Binary To Decimal:

Floating point number :0x00c01f40
      To Big Endian form: 0x401fc000
      Hex to binary:
      4=>0100
      0=>0000
      1=>0001
      f=>1111
      c=>1100
      0=>0000
      0=>0000
      0=>0000
Binary Number:01000000000111111100000000000000
      Signed = 0 = postive
      exponent : 10000000 = 2^7-127 = 128-127=
```

```
      exponent = 1
Mantaissa : 00111111100000000000000
=2^-3+2^-4+2^-5+2^-6+2^-7+2^-8+2^-9
=0.248046
Mantaissa = 0.248046+1 =1.248046875
Decimal = Mantaissa*2^exponent = 2.49609375
```