**Organization and Architecture Computer**

**Assignment III**

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Represent Floating number 32bit from these number :

1. 1110.011101
2. 10000.010001

Answer :

1. 1110.011101 = 1.110011101 x 211

Biased exponent = 11+01111111 = 10000010 = 1302

⬄ 0 10000010 11100111010000000000000

e = 1302-1272 =32

m = 11100111010000000000000 = 0.90332031252

⬄ (-1)s x (1 + m) x 2e = 1.90332031252 x 23

1. 10000.010001 = 1.0000010001 x 2100

Biased exponent = 100 + 01111111 = 100000011 = 1312

⬄ 0 10000011 10000010001000000000000

e = 1312-1272 = 42

m = 10000010001000000000000 = 0.508300781252

⬄ (-1)s x (1 + m) x 2e = 1.508300781252 x 24