CS241

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Contents

0.1 2's complement operation and 2s complement representation

0.1.1 2's complement

-4 ->3 bits, 2's complement:

1. Write down in unsigned binary
2. Invert the bits
3. Add 1

0.1.2 2's Representation

1 0 0
0 1 1
1 0 0

0.1.3 Unsigned binary integer

Hello 1010_2 => 10_{10}

0.1.4 Signed

2's Complement Integer — Perform the 2's complement operation
1 0 1 0
0 1 0 1
0 1 1 0

0.1.5 Characters

0001010 (8 bits)

1. Unsigned binary # =>$(10)_{10}$
2. 2's complement binary # =>$(10)_{10}$
3. '\n' (newline)

ASCII => 8 bits