

Homework Assignment 01:

1. Find the binary expansions of decimal numbers: 100, 151, 201, 254
2. Find the decimal expansions of binary numbers: 111101111, 10100100101
3. Find the hexadecimal expansion of decimal numbers: 1901, 1999, 2015, 2020
4. Explain why the negation algorithm (in Two's-Complement) works.
5. Give the negation algorithm for One's-Complement.
6. Compute $123+111$ in 8-bit binary.
7. Compute $123-111$ in 8-bit Two's-Complement.
8. Give the range of integers x in 8-bit Two's-Complement for which $x+123$ would overflow.