

WARM UP LESSONS – MORE ON BITS OPERATION

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EXERCISE ABOUT BITWISE OPERATIONS

Problems:

- 1) About Parity bit .

When data is transmitted from one device to another, one among many error detection and cryptography methods involved is to check the parity bit. Parity of a number can be odd or even. If the number contains odd number of 1-bits, it is a odd-parity; otherwise, "even parity".:

Write a program to ask user for a number, and you will display it's value in base-10, base-16, and base-2, and its parity bit.

Examples for your output:

Sample 1: Num = 13 = D (Hex) = 1101 (Binary). Odd Parity

Sample 2: Num = 8 = 8 (Hex) = 1000 (Binary). Even Parity

- 2) Write 4 functions to perform +, -, x, /, % with using ONLY bitwise operations.
- 3) Write a swap function without creating a separate variables to hold the temp.
- 4) Write abs(int) without using +, -, x, /, %
- 5) Write abs(float) without using +, -, x, /, % (This needs you to understand the structure of a floating point number) . Skip this if you have yet covered this.