California State University, Monterey Bay

Week 4 - Homework 5

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CST311

Introduction to Computer Networks

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Problem

This problem is taken from 'Computer Networking: A Top-Down Approach', 6/E by Kurose

and Ross.

1. Suppose you have the following 2 bytes: 01011100 and 01100101. What is the 1s complement of the sum of these 2 bytes?

    01011100
    +01100101
    ─────────
    11000001

2. Suppose you have the following 2 bytes: 11011010 and 01100101. What is the 1s complement of the sum of these 2 bytes?

    11011010
    +01100101
    ──────────────
    00111111

3. For the bytes in part (a), give an example where one bit is flipped in each of the 2 bytes and yet the 1s complement doesn't change.

    11011100
    +11100101
    ─────────
    11000001