**Computer Networks Assignment-4**

(Implementation of Bit Stuffing and Bit Destuffing using C or C++)

1. [Bit Stuffing](https://www.geeksforgeeks.org/bit-stuffing-in-computer-network/) is a process of inserting an extra bit as 0, once the frame sequence encountered 5 consecutive 1’s. Given an [array](https://www.geeksforgeeks.org/array-data-structure/), arr[] of size N consisting of 0’s and 1’s, the task is to return an array after the bit stuffing.

**Test Case 1:** Input: N = 6, arr[] = {1, 1, 1, 1, 1, 1}  
 Output: 1111101

Test Case 2: Input: N = 6, arr[] = {1, 0, 1, 0, 1, 0}  
 Output: 101010

Test Case 3: Input: N=8, arr[]={0, 1, 1, 1, 1, 1, 1, 0}

Output: 011111010

1. Bit Destuffing or Bit Unstuffing is a process of undoing the changes in the array made during the [bit stuffing](https://www.geeksforgeeks.org/bit-stuffing-in-computer-network/) process i.e, removing the extra 0 bit after encountering 5 consecutive 1’s.

Test Case 1: Input: N = 7, arr[] = {1, 1, 1, 1, 1, 0, 1}  
 Output: 111111

Test Case 2: Input: N = 6, arr[] = {1, 0, 1, 0, 1, 0}  
 Output: 101010

Test Case 3: Input: N=9, arr[]= {0, 1, 1, 1, 1, 1, 0, 1, 0}

Output: 011111010