Date: 10/09/2025

Lab Practical #15:

Implementation of parity bit check Using C/Java language with example.

Practical Assignment #15:

C/Java Program: Implementation of Bit stuffing Using C/Java language.

1. **Enter the binary data: 011111101111110**
   Bit-stuffed data: 01111101011111010
2. **Enter the binary data: 111110111111**
   Bit-stuffed data: 1 1 1 1 1 0 0 1 1 1 1 1 0 1

Code:

```
// Java Program to perform Bit Stuffing
import java.util.Scanner;

public class BitStuffing {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the binary data: ");
        String data = sc.nextLine();

        StringBuilder stuffed = new StringBuilder();
        int count = 0;

        for (int i = 0; i < data.length(); i++) {
            char bit = data.charAt(i);
            stuffed.append(bit);

            if (bit == '1') {
                count++;
                if (count == 5) { // After 5 consecutive 1s, stuff a 0
                    stuffed.append('0');
                    count = 0;
                }
            } else {
                count = 0;
            }
        }

        System.out.println("Bit-stuffed data: " + stuffed.toString());
        sc.close();
    }
}
```