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// Roll No: 3

```
#include <stdio.h>
#include <string.h>

#define FLAG "01111110"

void bitstuffing(char* input, char* stuffedData) {
    int i, j = 0, count = 0;
    int length = strlen(input);

    for (i = 0; i < length; i++) {
        stuffedData[j] = input[i];
        j++;

        if (input[i] == '1') {
            count++;
            if (count == 5) {
                stuffedData[j] = '0';
                j++;
                count = 0;
            }
        } else {
            count = 0;
        }
    }

    stuffedData[j] = '\0';
}

int main() {
    char input[100], stuffedData[200];

    printf("Enter the input Data stream: ");
    scanf("%s", input);

    printf("The Un-Stuffed data is: %s\n", input);

    bitstuffing(input, stuffedData);

    printf("The Stuffed data is: %s\n", stuffedData);

    printf("The final frame is: %s%s%s\n", FLAG, stuffedData, FLAG);

    return 0;
}
```

Output:

```
E:\syco BTECH\cn6aa.exe
Enter the input Data stream: 01001111110111111011
The Un-Stuffed data is: 01001111110111111011
The Stuffed data is: 0100111101101111011011
The final frame is: 0111110010011111011011110110111110

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Process exited after 119.2 seconds with return value 0
Press any key to continue . . .
```