**EXP 11 - BITSTUFF**

#include <stdio.h>

#include <string.h>

void stuff(char \*input, char \*output) {

int count = 0;

for (int i = 0, j = 0; input[i]; i++) {

output[j++] = input[i];

if (input[i] == '1' && ++count == 5) {

output[j++] = '0';

count = 0;

} else if (input[i] == '0') {

count = 0;

}

}

}

void destuff(char \*input, char \*output) {

int count = 0;

for (int i = 0, j = 0; input[i]; i++) {

if (input[i] == '1' && ++count == 5) {

i++; // Skip the stuffed '0'

count = 0;

} else {

output[j++] = input[i];

if (input[i] == '0') count = 0;

}

}

}

int main() {

char input[] = "111111001111101111110";

char stuffed[50], destuffed[50];

stuff(input, stuffed);

printf("Original: %s\nStuffed: %s\n", input, stuffed);

destuff (stuffed, destuffed);

printf("Destuffed: %s\n", destuffed);

return 0;

}

OUTPUT:

Original: 111111001111101111110

Stuffed: 111110100111110011111010

Destuffed: 111110011110111110