

# **Data Communication & Computer Networks Lab**

**Submitted by: Submitted to:**

**NAME : Rahul Gusain Ved Prakash Bhardwaj**

**SAP: 500084143**

**ROLL NO.: R214220900**

**BATCH: 1 DevOps**

**EXPERIMENT 2**

**Write a program for Bit stuffing and De-stuffing in a bitstream.**

​​Bit stuffing is the insertion of non-information bits into data. Note that stuffed bits should not be confused with overhead bits. Overhead bits are non-data bits that are necessary for transmission (usually as part of headers, checksums etc.).

Algorithm:

Stage 1-Create a 3 single cluster of adequate size

Stage 2-For Bit Stuffing: Create 2 single type pointer variable highlighting the principal component of information and stuff exhibit.

Stage 3-Traverse the information exhibit till last component.

Stage 4-Create an if condition to actually take a look at the component in string; in the event that the component is '0' store it in \*y and increase the pointer variable.

Stage 5-If the component found isn't '0' then in else condition make some time circle which will run till \*x is '1' and counter factor isn't 5 and afterward increase counter and store \*x variable in \*y variable and augmentation x and y.

Stage 6-is count=5 then store '0' at that record after which 5 sequential 1 happens and increase y. Store it in \*y pointer variable.

Stage 7-For Bit Destuffing; x=stuff and y=destuff

Stage 8-All the means would be same as we did in stiffing other than the last advance rather than putting away '0' in the stuff exhibit just addition the pointer variable.

**Code-**

#include<stdio.h>

#include<stdlib.h>

int main()

{

char temp;

char input[100];

char stuff[100];

char \*x,\*y;

char destuff[100];

int count=0;

printf("enter the input character string \n");

scanf("%s",input);

// for Bit Stuffing

x=input;

y=stuff;

while(\*x!='\0')

{

if(\*x=='0')

{

\*y=\*x;

y++;

x++;

}

else

{

while(\*x=='1' && count!=5)

{

count++;

\*y=\*x;

y++;

x++;

}

if(count==5)

{

\*y='0';

y++;

}

count=0;

}

}

\*y='\0';

printf("\nBit stuffed string is");

printf("\n%s",stuff);

// for Bit Destuffing and taking the value of x from y of stuffing part

x=stuff;

y=destuff;

while(\*x!='\0')

{

if(\*x=='0')

{

\*y=\*x;

y++;

x++;

}

else

{

while(\*x=='1' && count!=5)

{

count++;

\*y=\*x;

y++;

x++;

}

if(count==5)

{

x++;

}

count=0;

}

}

\*y='\0';

printf("\nThe destuffed string is");

printf("\n%s\n",destuff);

printf("\n\nRahul Gusain\n");

printf("SAP ID: 500084143");

return 0;

}

