

## **Experiment 2**

Write a Program to implement the data link layer framing methods such as

- i) bit stuffing    ii) Character stuffing

**AIM:** Implement the data link layer framing methods such as bit stuffing.

### **Program**

```
#include<stdio.h>

void main()
{
    int i=0,count=0;
    char databits[80];
    clrscr();
    printf("Enter Data Bits: ");
    scanf("%s",&databits);
    printf("Data Bits Before Bit Stuffing:%s",databits);
    printf("\nData Bits After Bit stuffing :");
    for(i=0; i<strlen(databits); i++)
    {
        if(databits[i]=='1')
            count++;
        else
            count=0;
        printf("%c",databits[i]);
        if(count==5)
        {
            printf("0");
            count=0;
        }
    }
    getch();
}
```

**AIM:** Implement the data link layer framing methods such as character stuffing.

**Program**

```
#include<stdio.h>
#include<string.h>
#include<conio.h>
void main()
{
    int j,l,m,c,k;
    char a[50],b[50];
    clrscr();
    printf("Enter the string:");
    scanf("%s",&a);
    strcpy(b,"DLESTX");
    m=strlen(a);
    for(j=0;j<m;j++)
    {
        if(a[j]=='d')
        {
            if(a[j+1]=='l')
            {
                if(a[j+2]=='e')
                {
                    c=j+2;
                    for(l=0;l<3;l++)
                    {
                        for(k=m;k>c;k--)
                        {
                            a[k]=a[k-1];
                        }
                        m++;
                        a[m]='\0';
                        c=c+1;
                    }
                    a[j+3]='d';
                    a[j+4]='l';
                    a[j+5]='e';
                    a[m]='\0';
                    j=j+5;
                }
            }
        }
        j++;
    }
    strcat(b,a);
    strcat(b,"DLEETX");
```

```
printf("\n%s",b);
printf("\nReceiver side:");
m=strlen(a);
for(j=0;j<m;j++)
{
if(a[j]=='d')
{
if(a[j+1]=='l')
{
if(a[j+2]=='e')
{
c=j;
for(l=0;l<3;l++)
{
for(k=c;k<m;k++)
a[k]=a[k+1];
}
c++;
}
j=c;
}
}
j++;
}
printf("\n%s",a);
getch();
}
```