

LAB 6

1. Write a code to perform bit stuffing and byte stuffing.

Bit Stuffing using C language:-

```
#include<stdio.h>
#include<string.h>
int main()
{
    int a[20],b[30],i,j,k,count,n;
    printf("Enter frame size (Example: 8):");
    scanf("%d",&n);
    printf("Enter the frame in the form of 0 and 1 :");
    for(i=0; i<n; i++)
        scanf("%d",&a[i]);
    i=0;
    count=1;
    j=0;
    while(i<n)
    {
        if(a[i]==1)
        {
            b[j]=a[i];
            for(k=i+1; a[k]==1 && k<n && count<5; k++)
            {
                j++;
                b[j]=a[k];
                count++;
            }
            if(count==5)
            {
                j++;
                b[j]=0;
            }
        }
        i++;
    }
}
```

```

    }

    i=k;

    }

}

else

{ b[j]=a[i];}

i++;

j++;}

printf("After Bit Stuffing :");

for(i=0; i<j; i++)

    printf("%d",b[i]);

return 0;

}

```

Output:-

Run	Output
	<pre> /tmp/Bhm5JfX2X8.o Enter frame size (Example: 8):8 Enter the frame in the form of 0 and 1 :0 1 1 1 1 1 0 1 After Bit Stuffing :011111010 </pre>

Byte Stuffing using C language:-

```

#include<stdio.h>

#include<string.h>

void main(){

char frame[50][50],str[50][50];

char flag[10];

strcpy(flag,"flag");

char esc[10];

strcpy(esc,"esc");

int i,j,k=0,n;

```

```
strcpy(frame[k++], "flag");
printf("Enter no.of String :\\t");
scanf("%d", &n);
printf("Enter String \\n");
for(i=0; i<=n; i++)
{
    gets(str[i]);
}
printf("You entered :\\n");
for(i=0; i<=n; i++)
{
    puts(str[i]);
}
printf("\\n");
for(i=1; i<=n; i++)
{
    if(strcmp(str[i], flag) != 0 && strcmp(str[i], esc) != 0)
    {
        strcpy(frame[k++], str[i]);
    }
    else
    {
        strcpy(frame[k++], "esc");
        strcpy(frame[k++], str[i]);
    }
}
strcpy(frame[k++], "flag");
printf("Byte stuffing at sender side:\\n\\n");
for(i=0; i<k; i++)
{
```

```
printf("%s\t",frame[i]);  
}  
}
```

Output-

```
Enter no.of String :    3  
Enter String  
Vaibhavi  
sweta  
ujjwal  
You entered :  
  
Vaibhavi  
sweta  
ujjwal  
  
Byte stuffing at sender side:  
  
flag    Vaibhavi        sweta    ujjwal    flag
```
