## 1. Bit Stuffing

```
#include<stdio.h>
#include<string.h>
int main()
{
   int a,i,j,k,cnt;
   char str[100];
   printf("Enter the bit");
   gets(str);
   for(i=0;i<strlen(str);i++)
   {
      cnt =0;
      for(j=i;j<=(i+5);j++)
      {
         if(str[j]=='1')
            cnt++;
      }
      if(cnt == 6)
      {
         a = strlen(str)+2;
         for(k=a;k>=(i+5);k--)
         {
            str[k] = str[k-1];
         }
      }
      str[i+5] = '0';
      i = i+5;
   }
   puts(str);
}
```

2. Byte stuffing

```
#include<stdio.h>
#include<string.h>
int main() {
    char a[30], fs[50] = " ", t[3], sd, ed, x[3], s[3], d[3], y[3];
    int i, j, p = 0, q = 0;
    printf("Enter characters to be stuffed:");
    scanf("%s", a);
    printf("\nEnter a character that represents starting delimiter:");
    scanf(" %c", &sd);
    printf("\nEnter a character that represents ending delimiter:");
    scanf(" %c", &ed);
    x[0] = s[0] = s[1] = sd;
    x[1] = s[2] = '\0';
    y[0] = d[0] = d[1] = ed;
    d[2] = y[1] = '\0';
    strcat(fs, x);
    for(i = 0; i < strlen(a); i++)
    {
       t[0] = a[i];
       t[1] = '\0';
       if(t[0] == sd)
          strcat(fs, s);
       else if(t[0] == ed)
          strcat(fs, d);
       else
          strcat(fs, t);
    }
    strcat(fs, y);
    printf("\n After stuffing:%s", fs);
  }
```

3. Char count

```
#include <stdio.h>

#include <string.h>


int main()

{

   char str[100];//character array

   int i,totChar;//variable  declaration

totChar=0;//variable initialization

   printf("Please enter the string for count words\n");

   gets(str);//get and store string from user


   for(i=0; str[i] != '\0'; i++){

      if(str[i]!=' ')// this condition is used to avoid counting space

      {

         totChar++;//totChar=totChar+1

      }

   }

   printf("The total characters of the given string= %d",totChar);

   return 0;

}
```

4. Make even parity

```
#include<stdio.h>
#include<string.h>
int main()  {
   int i=0,count=0;
   char databits[8];
   printf("Enter Data Bits : \n");
   scanf("%s",databits);
   printf("Databits before adding parity bit\t %s",databits);
   for ( i = 0; i < strlen(databits); i++)
   {
      if(databits[i] == '1')
         count++;
   }
   printf(" \nCount%d",count);
   if(count % 2 == 0)
   {
      databits[7]='0';
      databits[8]='\0';
   }
   else
   {
      databits[7]='1';
      databits[8]='\0';
   }
   printf("\nData Bits After adding parity bit :\t%s",databits);
}
```

5. Odd Parity

```
#include<stdio.h>
#include<string.h>
int main()  {
   int i=0,count=0;
   char databits[8];
   printf("Enter Data Bits : \n");
   scanf("%s",databits);
   printf("Databits before adding parity bit\t %s",databits);
   for ( i = 0; i < strlen(databits); i++)
   {
      if(databits[i] == '1')
         count++;
   }
   printf(" \nCount%d",count);
   if(count % 2 == 0)
   {
      databits[7]='1';
      databits[8]='\0';
   }
   else
   {
      databits[7]='0';
      databits[8]='\0';
   }
   printf("\nData Bits After adding parity bit :\t%s",databits);
}
```