

Code

1.Character Count

```
#include <stdio.h>
#include <string.h>

int main() {
    char str[100];
    int n, i, c, j, count = 0;

    printf("Enter the String: ");
    scanf("%s", str);

    printf("Enter the number of frames: ");
    scanf("%d", &n);

    int frames[n];

    printf("Enter the size of the frames:\n");

    for (i = 0; i < n; i++) {
        printf("Frame %d: ", i + 1);
        scanf("%d", &frames[i]);
    }

    printf("\nThe number of frames: %d\n", n);

    for (i = 0; i < n; i++) {
        printf("\nThe content of frame %d: ", i + 1);

        j = 0;
        while (str[c] != '\0' && j < frames[i]) {
            printf("%c", str[c]);
            count++;
            c++;
            j++;
        }

        printf("\nSize of frame %d: %d\n", i + 1, count);
        count = 0;
    }

    return 0;
}
```

Output

```
PS C:\Users\DHANANJAY\OneDrive\Desktop\RCOEM\V sem\CN\output> & .\'Charcatercount.exe'  
Enter the String: 1234567890  
Enter the number of frames: 2  
Enter the size of the frames:  
Frame 1: 5  
Frame 2: 5  
  
The number of frames: 2  
  
The content of frame 1: 12345  
Size of frame 1: 5  
  
The content of frame 2: 67890  
Size of frame 2: 5
```

2.Bit stuffing

```
#include <stdio.h>  
#include <string.h>  
  
int main() {  
    int i, j = 8, c = 0, cl = 0;  
    char s[100], res[110];  
  
    printf("Enter a string: ");  
    scanf("%s", s);  
  
    strcpy(res, "011111110");  
    strcat(res, " ");  
  
    for (i = 0; i < strlen(s); i++) {  
        res[j] = s[i];  
        j++;  
  
        if (s[i] == '1') {  
            c++;  
            if (c == 5) {  
                res[j] = '0';  
                j++;  
                c = 0;  
            }  
        } else {  

```

```

        c = 0;
    }
}

strcat(res, "01111110");

printf("Stuffed string: %s\n", res);

printf("Destuffed string: ");
for (i = 8; i < strlen(res) - 8; i++) {
    if (res[i] == '1') {
        cl++;
    } else {
        cl = 0;
    }

    printf("%c", res[i]);

    if (cl == 5) {
        i++;
        cl = 0;
    }
}

printf("\n");

return 0;
}

```

Output

```

PS C:\Users\DHANANJAY\OneDrive\Desktop\RCOEM\V sem\CN\output> & .\'bitStuffing.exe'
Enter a string: 1111011110
Stuffed string: 0111111011110111100111110
Destuffed string: 1111011110
PS C:\Users\DHANANJAY\OneDrive\Desktop\RCOEM\V sem\CN\output>

```