10. Write a program for frame sorting technique used in buffers.

#include<stdio.h>

#include<string.h>

#define FRAM\_TXT\_SIZ 3

#define MAX\_NOF\_FRAM 12

char str[FRAM\_TXT\_SIZ\* MAX\_NOF\_FRAM];

struct frame

{

char text[FRAM\_TXT\_SIZ];

int seq\_no;

}

Fr[MAX\_NOF\_FRAM],shut\_array[MAX\_NOF\_FRAM];

int assign\_seq\_no()

{

int k=0,i,j;

for(i=0;i<strlen(str);k++)

{

Fr[k].seq\_no=k;

for(j=0;j<FRAM\_TXT\_SIZ && str[i]=='\0';)

Fr[k].text[j]=str[i++];

}

printf("\n After assigning sequence no:s\n");

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

printf("%d::%s",i,Fr[i].text);

return k;

}

void generator(int \*random\_ary,const int limit)

{

int r,i=0,j;

while(i<limit)

{

r=random() %limit;

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

if(random\_ary[j]==r)

break;

if(i==j)

random\_ary[i++]=r;

}

}

void shuffle(const int no\_frames)

{

int i,k=0,random\_ary[no\_frames];

generate(random\_ary no\_frames);

for(i=0;i<no\_frames;i++)

shuf\_ary[i]=fr[random\_ary[i]];

printf("\n \n After stuffing\n");

for(i=0;i<no\_frames;i++)

printf("%d%r",shuf\_ary[i],seq\_no,shunt\_ary[i],text);

}

}

void sort(const int no\_frames)

{

int i,j,flag=1;

struct frame hold;

for(i=0;i<no\_frames-1 && flag==1)

flag=0;

for(j=0;j<no\_frames-1-j;j++)

{

if(shuf\_ary[j].seq\_no>shuff\_ary[j+1])

{

hold=shuf\_ary[i];

shuf\_ary[j]=shuf\_ary[j+1];

shuf\_ary[j+1]=hold;

flag=1;

}

}

}

int main()

{

int no\_frames,i;

printf("Enter the msg");

gets(str);

no\_frames=assign\_seq\_no();

shuffle(no\_frames);

sort(no\_frames);

printf("\n After sorting\n");

for(i=0;i<no\_frames;i++)

printf("%s",shuff\_ary[i].text);

printf("\n\n");

}

}

Output:

A screenshot of a computer

Description automatically generated with medium confidence