

Implement a sorting function using qsort() to read and sort a list of strings stored in an array

PROGRAM:

```
#include<stdio.h>
#include<string.h>
void swap(char* x,char* y){
char t;
t=*x;
*x=*y;
*y=t;
}
int partition(char a[],int first, int last){
int i,j;
char x;
x=a[last];
i=first-1;
for(j=first;j<last;j++){
if(a[j]<=x)
{
i=i+1;
swap(&a[i],&a[j]);
}
}
swap(&a[i+1],&a[last]);
return i+1;
}
void quicksort(char a[],int first,int last){
```

```

int pi;
if(first<last){
    pi=partition(a,first,last);
    quicksort(a,first,pi-1);
    quicksort(a,pi+1,last);
}
}

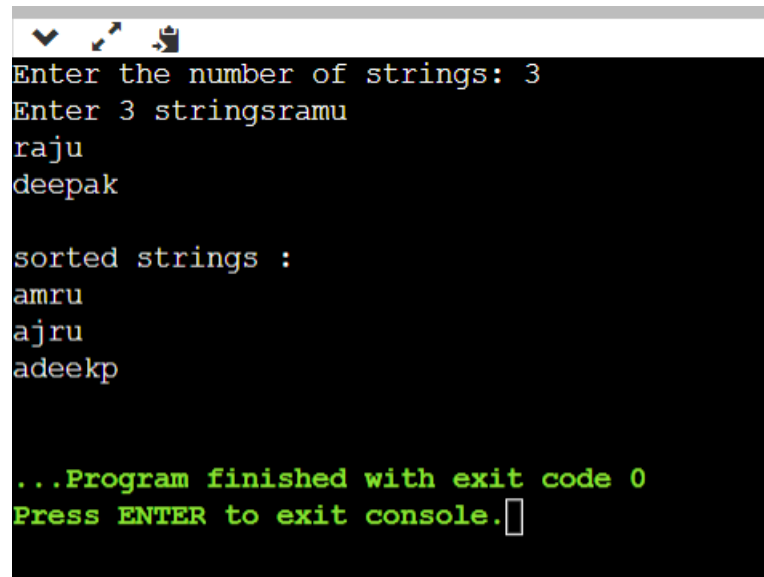
void main(){
    char a[20][100];
    int n,i,first=0,last,size;

    printf("Enter the number of string you want to store: ");

    scanf("%d",&size);
    printf("Enter %d strings",size);
    for(i=0;i<=size;i++)
    {
        fgets(a[i],100,stdin);
        last=strlen(a[i])-2;
        quicksort(a[i],first,last);
    }
    printf("\nsorted strings are:");
    for(i=0;i<5;i++)
        printf("%s",a[i]);
}

```

OUTPUT:

A terminal window with a dark background and a light gray title bar. The title bar contains three icons: a downward arrow, a double-headed arrow, and a clipboard. The terminal displays the following text in a monospaced font: "Enter the number of strings: 3", "Enter 3 stringsramu", "raju", "deepak", "sorted strings :", "amru", "ajru", "adeekp", "...Program finished with exit code 0", and "Press ENTER to exit console." followed by a cursor icon.

```
Enter the number of strings: 3
Enter 3 stringsramu
raju
deepak

sorted strings :
amru
ajru
adeekp

...Program finished with exit code 0
Press ENTER to exit console.
```