S.No: 1	Exp. Name: ***Design a C program which sorts the strings using array of pointers***	Date:2023-04-25

Aim:

Design a C program that sorts the strings using array of pointers.

Sample input output

```
Sample input-output -1:
Enter the number of strings: 2
Enter string 1: Tantra
Enter string 2: Code
Before Sorting
Tantra
Code
After Sorting
Code
Tantra
Sample input-output -2:
Enter the number of strings: 3
Enter string 1: India
Enter string 2: USA
Enter string 3: Japan
Before Sorting
India
USA
Japan
After Sorting
India
Japan
USA
```

Source Code:

stringssort.c

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
void main()
{
   char * temp;
   int i,j,diff,num_strings;
   char * strArray[10];
   printf("Enter the number of strings: ");
   scanf("%d",&num_strings);
   if(num_strings>10)
   {
      printf("Sorry,maximum strings allowed is %d. Defaulting.",10);
      num_strings =10;
   }
   for(i=0;i<num_strings;i++)
   {
      printf("Enter string %d: ",i+1);
      strArray[i] =(char *)malloc(10 *sizeof(char));
```

```
    printf("Before Sorting\n");
    for(i=0;i<num_strings;i++)
    {
       printf("%s\n",strArray[i]);
    }
    sort(strArray,num_strings);
    printf("After Sorting\n");
    for(i=0;i<num_strings;i++)
    {
       printf("%s\n",strArray[i]);
    }
 }
 void sort(char *s[],int num_strings)
 {
    char* temp;
    int item,i;
    for(item=0;item<num_strings;item++)
    {
       temp =s[item];
       for(i=item;i>0 && strcasecmp(s[i-1],temp)>0;i--);
       {
          memmove(&s[i+1],&s[i],(item-i) * sizeof(char *));
          s[i] =temp;
       }
    }
    return 0;
 }
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the number of strings: 2
Enter string 1: Tantra
Enter string 2: Code
Before Sorting
Tantra
Code
After Sorting
Code
Tantra

Test Case - 2
User Output
Enter the number of strings: 3
Enter string 1: Dhoni
Enter string 2: Kohli
Enter string 3: Rohit
Before Sorting
Dhoni
Kohli
Rohit

ID: 224G1A0541

After Sorting
Dhoni
Kohli
Rohit