S.No: 28	Exp. Name: ***Design a C program that sorts the strings using array of pointers.***	Date:2023-04-07

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 sort(char *s[],int);
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 10. Defaulting. ");
      num_strings =10;
   }
   for(i=0;i<num_strings;i++)
```

```
   {
      printf("Enter string %d: ",i+1);
      strarray[i]=(char*) malloc(10 *sizeof(char));
      scanf("%s",strarray[i]);
   }
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;
}
}
}
```

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
After Sorting
Dhoni
Kohli
Rohit

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