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

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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];
   char tem[25];
   printf("Enter the number of strings: ");
   scanf("%d",&num_strings);
   for(i=0;i<num_strings;i++)
   {
      strArray[i] = (char*)malloc(num_strings*sizeof(char));
   }
   for(i=0;i<num_strings;i++)
   {
      printf("Enter string %d: ",i+1);
      scanf("%s",strArray[i]);
   }
```

```
    printf("Before Sorting\n");
    for(i=0;i<num_strings;i++)
    {
       printf("%s\n",strArray[i]);
    }
    for(i=0;i<num_strings;i++)
    {
       {
          for(j=i+1;j<num_strings;j++)
          {
       if(strcmp(strArray[i],strArray[j])>0)
       {
          strcpy(tem,strArray[i]);
          strcpy(strArray[i],strArray[j]);
          strcpy(strArray[j],tem);
       }
          }
       }
    }
 printf("After Sorting\n");
 for(i=0;i<num_strings;i++)
 {
    printf("%s\n",strArray[i]);
 }
 }
```

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