Ex. No13

Sorting Names

Aim:

To write a C program to sort given ‘n’ names in alphabetical order.

Algorithm:

1) Start the program.
2) Declare variables ‘i', ‘j’, ‘n’ and ‘cmp’.
3) Declare a two dimensional character array to store multiple ‘names’ and ‘tmp’ store single name.
4) Get number of names ‘n’.
5) For i equal to 0 to n do the following
   a). Get the ‘name’.
6) For i equal to 0 to n do the following
   a). For j equal to i+1 to n do the following
      i). Compare ‘name[i]’, ‘name[j]’ and store the result in ‘cmp’.
      ii). Check if cmp is greater than 0.
         I. Copy ‘name[i]’ to ‘tmp.
         II. Copy ‘name[j]’ to ‘name[i]’.
         III. Copy ‘tmp’ to ‘name[j]’.
7) Display the sorted names
8) For i equal to 0 to n do the following
   a). Display name.
9) Strop the program.

Program:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>

void main()
{
 int i,j,n,cmp;
 char name[20][30], tmp[30];
 clrscr();
 printf("\nEnter the number of names: ");
 scanf("%d",&n);
 printf("Enter Names one by one\n");
 for(i=0;i<n;i++)
  scanf("%s",name[i]);
 for(i=0;i<n;i++)
 {
  for(j=i+1;j<n;j++)
  {
   cmp = strcmp(name[i],name[j]);
   if(cmp>0)
   {
    strcpy(tmp,name[i]);
    strcpy(name[i],name[j]);
    strcpy(name[j],tmp);
   }
  }
 }
 printf("\nSorted Names are...\n");
 for(i=0;i<n;i++)
  printf("\n%s",name[i]);
 getch();
}
```

Result:

Thus the C program to sort given ‘n’ names in alphabetical order is executed successfully.