



## Code, Compile & Run





Ide ✕ +

Contest Code/Name (e.g. JULY15/PRACTICE)


Problem Code/Name (e.g. TEST)

Select

C (gcc 6.3)   Code gets autosaved every second

```
4
5 #include <stdio.h>
6 #include <stdlib.h>
7 #include <string.h>
8 void sort_string(char*);
9 int main()
10 { char string[100];
11   printf("Enter some text\n");
12   gets(string);
13   sort_string(string);
14   printf("%s\n", string);
15   return 0;
16 }
17 void sort_string(char *s)
18 {
19   int c, d = 0, length;
20   char *pointer, *result, ch;
21   length = strlen(s);
22   result = (char*)malloc(length+1);
23   pointer = s;
24   for ( ch = 'a' ; ch <= 'z' ; ch++ )
25   {
26     for ( c = 0 ; c < length ; c++ )
27     {
28       if ( *pointer == ch )
29       {
30         *(result+d) = *pointer; d++;
31       }
32       pointer++;
33     }
34   }
```

0:0 

Open File

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Run

Custom Input

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Status Successfully executed Date 2020-06-21 09:28:46 Time 0 sec Mem 9.424 kB ✕

Input

pink

Output

Enter some text  
iknp

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C (gcc 6.3)

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```
14 printf("%s\n", string);
15 return 0;
16 }
17 void sort_string(char *s)
18 {
19     int c, d = 0, length;
20     char *pointer, *result, ch;
21     length = strlen(s);
22     result = (char*)malloc(length+1);
23     pointer = s;
24     for ( ch = 'a' ; ch <= 'z' ; ch++ )
25     {
26         for ( c = 0 ; c < length ; c++ )
27         {
28             if ( *pointer == ch )
29             {
30                 *(result+d) = *pointer; d++;
31             }
32             pointer++;
33         }
34         pointer = s;
35     }
36     *(result+d) = '\0';
37     strcpy(s, result);
38     free(result);
39 }
40
41
```

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(ii) Algorithm: (sort string in alphabetic order)

step 1: start

step 2: create two 2D character array of some fixed capacity

step 3: Take the size of the array as input from the user, & fill the array with names taking them as input.

step 4: Now to sort this array, first make a nested loop with  $i$  and  $j$  as iterators respectively.

step 5: The outer will run from 0 to  $\text{size} - 1$ , extracting each name of position  $i$ , one by one

step 6: The inner loop will run from  $i+1$  to  $\text{size}-1$ , comparing the name extracted by outer loop to all the names below it.

step 7: At each comparison, if the name above is alphabetically greater than the name below, then these two names are interchanged.

step 8: After executing the nested loop code section we will obtain an array of names in proper alphabetical order

step 9: stop.

(ii) Flowchart :

