

Sorting in strings

- Arranging elements in a specific order.  
 (increasing order)  
 (decreasing order)

char str[] = "axebdf";

⇒

abdefx

⇒

xfedba

char str[] = "45132";

⇒

12345

⇒

54321

char str[] = "fa#!&";

⇒

!#&f<  
e f # !

→ Sort following string in increasing order:-

char str[] = "axeb";

⇒

abex

int len = strlen(str);

114

for (int i = 0; i < len - 1; i++)

i < 3

0 1 2

for (int j = i + 1; j < len; j++)

j < 4

1 2 3

if (str[i] > str[j])

if

if (str[i] > str[j])

if

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if (str[i] > str[j])

if

if (str[i] > str[j])

if

if (str[i] > str[j])

a x e b '\0'

length = 4, size 5 bytes

1st a x e b  
2nd a x e b  
3rd a x e b  
4th a e x b  
5th a b x e  
6th a b e x

⇒ sorting done

printf("In str after sorting: %s", str);

a x e b '\0'

i = 0 0 < 3 True

j = 1 1 < 4 True str[1] < str[0] x < a No  
j = 2 2 < 4 True str[2] < str[0] e < a No  
j = 3 3 < 4 True str[3] < str[0] b < a No  
j = 4 4 < 4 False

i = 1 1 < 3 True

j = 2 2 < 4 True str[2] < str[1] e < x T  
j = 3 3 < 4 True str[3] < str[1] b < x T  
j = 4 4 < 4 False

a e x b '\0'  
a b x e '\0'

i = 2 2 < 3 True

j = 3 3 < 4 True str[3] < str[2] e < x T  
j = 4 4 < 4 False

a b e x '\0'

i = 3 3 < 3 False

str after sorting: abex