Case-specific Sorting of Strings

Given a string **S** consisting of **only uppercase** and **lowercase** characters. The task is to **sort** uppercase and lowercase letters **separately** such that if the i_{th} place in the original string had an Uppercase character then it should not have a lowercase character after being sorted and vice versa.

Example 1:

```
Input:
N = 12
S = defRTSersUXI
Output: deeIRSfrsTUX
Explanation: Sorted form of given string
with the same case of character as that
in original string is deeIRSfrsTUX
```

Example 2:

```
Input:
N = 6
S = srbDKi
Output: birDKs
Explanation: Sorted form of given string
with the same case of character will
result in output as birDKs.
```

Your Task:
You only need to complete the function **caseSort** that takes a string str and length of the string n and **returns** sorted **string**.

Expected Time Complexity: O(Nlog(N)).
Expected Auxiliary Space: O(N).

Constraints:

$1 \leq N \leq 10^5$