

451. Sort Characters By Frequency

Given a string *s*, sort it in decreasing order based on the frequency of the characters. The frequency of a character is the number of times it appears in the string.

Return the sorted string. If there are multiple answers, return any of them.

Example 1:

- **Input:** *s* = "tree"
- **Output:** "eert"
- **Explanation:** 'e' appears twice while 'r' and 't' both appear once.

So 'e' must appear before both 'r' and 't'. Therefore "eetr" is also a valid answer.

Example 2:

- **Input:** *s* = "cccaaa"
- **Output:** "aaaccc"
- **Explanation:** Both 'c' and 'a' appear three times, so both "cccaaa" and "aaaccc" are valid answers.

Note that "cacaca" is incorrect, as the same characters must be together.

Example 3:

- **Input:** *s* = "Aabb"
- **Output:** "bbAa"
- **Explanation:** "bbaA" is also a valid answer, but "Aabb" is incorrect.

Note that 'A' and 'a' are treated as two different characters.

Constraints:

- $1 \leq s.length \leq 5 * 10^5$
- *s* consists of uppercase and lowercase English letters and digits.