Problem 1717: Maximum Score From Removing Substrings

Problem Information

Difficulty: Medium
Acceptance Rate: 66.54%
Paid Only: No
Tags: String, Stack, Greedy

Problem Description

You are given a string `s` and two integers `x` and `y`. You can perform two types of operations any number of times.

* Remove substring `"ab"` and gain `x` points. * For example, when removing `"ab"` from `"c _ab_ xbae"` it becomes `"cxbae"`. * Remove substring `"ba"` and gain `y` points. * For example, when removing `"ba"` from `"cabx _ba_ e"` it becomes `"cabxe"`.

Return _the maximum points you can gain after applying the above operations on_ `s`.

Example 1:

Input: s = "cdbcbbaaabab", x = 4, y = 5 **Output:** 19 **Explanation:** - Remove the "ba" underlined in "cdbcbbaaa _ba_ b". Now, s = "cdbcbbaaab" and 5 points are added to the score. - Remove the "ab" underlined in "cdbcbbaa _ab_ ". Now, s = "cdbcbbaa" and 4 points are added to the score. - Remove the "ba" underlined in "cdbcb _ba_ a". Now, s = "cdbcba" and 5 points are added to the score. - Remove the "ba" underlined in "cdbc _ba_ ". Now, s = "cdbc" and 5 points are added to the score. Total score = 5 + 4 + 5 + 5 = 19.

Example 2:

Input: s = "aabbaaxybbaabb", x = 5, y = 4 **Output:** 20

Constraints:

* `1 <= s.length <= 105` * `1 <= x, y <= 104` * `s` consists of lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
int maximumGain(string s, int x, int y) {

}
};
```

Java:

```
class Solution {
public int maximumGain(String s, int x, int y) {

}
}
```

Python3:

```
class Solution:
def maximumGain(self, s: str, x: int, y: int) -> int:
```