Problem 1405: Longest Happy String

Problem Information

Difficulty: Medium
Acceptance Rate: 65.48%
Paid Only: No
Tags: String, Greedy, Heap (Priority Queue)

Problem Description

A string `s` is called **happy** if it satisfies the following conditions:

* `s` only contains the letters `'a'`, `'b'`, and `'c'`. * `s` does not contain any of `"aaa"`, `"bbb"`, or `"ccc"` as a substring. * `s` contains **at most** `a` occurrences of the letter `'a'`. * `s` contains **at most** `b` occurrences of the letter `'b'`. * `s` contains **at most** `c` occurrences of the letter `'c'`.

Given three integers `a`, `b`, and `c`, return _the**longest possible happy** string_. If there are multiple longest happy strings, return _any of them_. If there is no such string, return _the empty string_`""`.

A **substring** is a contiguous sequence of characters within a string.

Example 1:

Input: a = 1, b = 1, c = 7 **Output:** "ccaccbcc" **Explanation:** "ccbccacc" would also be a correct answer.

Example 2:

Input: a = 7, b = 1, c = 0 **Output:** "aabaa" **Explanation:** It is the only correct answer in this case.

Constraints:

* `0 <= a, b, c <= 100` * `a + b + c > 0`

Code Snippets

C++:

```
class Solution {
public:
string longestDiverseString(int a, int b, int c) {

}
};
```

Java:

```
class Solution {
public String longestDiverseString(int a, int b, int c) {

}
}
```

Python3:

```
class Solution:
def longestDiverseString(self, a: int, b: int, c: int) -> str:
```