# 1415. The k-th Lexicographical String of All Happy Strings of Length n

y Submissions (/contest/biweekly-contest-24/problems/the-k-th-lexicographical-string-of-all-happy-strings-of-length-n/submissions/)

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### A **happy string** is a string that:

- consists only of letters of the set ['a', 'b', 'c'].
- s[i] != s[i + 1] for all values of i from 1 to s.length 1 (string is 1-indexed).

For example, strings "abc", "ac", "b" and "abcbabcbcb" are all happy strings and strings "aa", "baa" and "ababbc" are not happy strings.

Given two integers n and k, consider a list of all happy strings of length n sorted in lexicographical order.

Return *the kth string* of this list or return an **empty string** if there are less than k happy strings of length n.

User Accepted:	2116
User Tried:	2320
Total Accepted:	2188
Total Submissions:	3249
Difficulty:	Medium

### Example 1:

Input: n = 1, k = 3
Output: "c"

**Explanation:** The list ["a", "b", "c"] contains all happy strings of length 1. The third string is "c".

## Example 2:

**Input:** n = 1, k = 4

Output: ""

Explanation: There are only 3 happy strings of length 1.

# Example 3:

**Input:** n = 3, k = 9

Output: "cab"

Explanation: There are 12 different happy string of length 3 ["aba", "abc", "aca", "acb", "bab", "bac", "

### Example 4:

Input: n = 2, k = 7
Output: ""

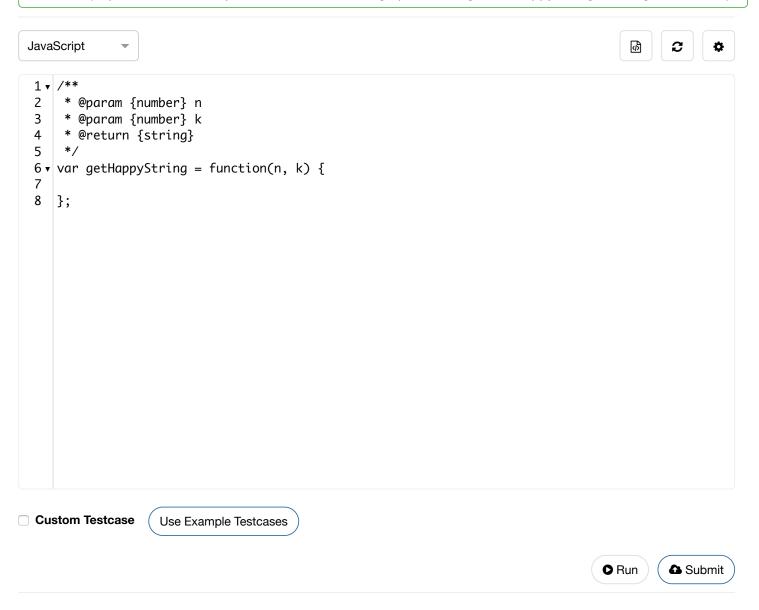
#### Example 5:

Input: n = 10, k = 100
Output: "abacbabacb"

#### **Constraints:**

- 1 <= n <= 10
- 1 <= k <= 100

Discuss (https://leetcode.com/problems/the-k-th-lexicographical-string-of-all-happy-strings-of-length-n/discuss)



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