

Given a non-empty string check if it can be constructed by taking a substring of it and appending multiple copies of the substring together. You may assume the given string consists of lowercase English letters only and its length will not exceed 10000.

**Example 1:**

**Input:** "abab"

**Output:** True

**Explanation:** It's the substring "ab" twice.

**Example 2:**

**Input:** "aba"

**Output:** False

**Example 3:**

**Input:** "abccabccabcc"

**Output:** True

**Explanation:** It's the substring "abc" four times. (And the substring "abccabcc" twice.)