

Problem 2796: Repeat String

Problem Information

Difficulty: Easy

Acceptance Rate: 93.21%

Paid Only: Yes

Problem Description

Write code that enhances all strings such that you can call the `string.replicate(x)` method on any string and it will return repeated string `x` times.

Try to implement it without using the built-in method `string.repeat`.

Example 1:

Input: `str = "hello", times = 2` **Output:** `"hellohello"` **Explanation:** `"hello"` is repeated 2 times

Example 2:

Input: `str = "code", times = 3` **Output:** `"codecodecode"` **Explanation:** `"code"` is repeated 3 times

Example 3:

Input: `str = "js", times = 1` **Output:** `"js"` **Explanation:** `"js"` is repeated 1 time

Constraints:

`1 <= times <= 105` `1 <= str.length <= 1000`

Follow up: Let's assume, for the sake of simplifying analysis, that concatenating strings is a constant time operation $O(1)$. With this assumption in mind, can you write an algorithm with a runtime complexity of $O(\log n)$?

Code Snippets

JavaScript:

```
/**
 * @param {number} times
 * @return {string}
 */
String.prototype.replicate = function(times) {

}
```

TypeScript:

```
interface String {
  replicate(times: number): string;
}

String.prototype.replicate = function(times): string {

}
```