

## Find the Index of the First Occurrence in a String

Given two strings needle and haystack, return the index of the first occurrence of needle in haystack, or -1 if needle is not part of haystack.

### **Example 1:**

**Input:** haystack = "sadbutsad", needle = "sad"

**Output:** 0

**Explanation:** "sad" occurs at index 0 and 6.

The first occurrence is at index 0, so we return 0.

### **Example 2:**

**Input:** haystack = "leetcode", needle = "leeto"

**Output:** -1

**Explanation:** "leeto" did not occur in "leetcode", so we return -1.

### **Constraints:**

- $1 \leq \text{haystack.length}, \text{needle.length} \leq 10^4$
- haystack and needle consist of only lowercase English characters.