

# Problem 3213: Construct String with Minimum Cost

## Problem Information

**Difficulty:** Hard

**Acceptance Rate:** 18.96%

**Paid Only:** No

**Tags:** Array, String, Dynamic Programming, Suffix Array

## Problem Description

You are given a string `target`, an array of strings `words`, and an integer array `costs`, both arrays of the same length.

Imagine an empty string `s`.

You can perform the following operation any number of times (including **zero**):

\* Choose an index `i` in the range `[0, words.length - 1]`. \* Append `words[i]` to `s`. \* The cost of operation is `costs[i]`.

Return the **minimum** cost to make `s` equal to `target`. If it's not possible, return `-1`.

**Example 1:**

**Input:** `target = "abcdef", words = ["abdef", "abc", "d", "def", "ef"], costs = [100, 1, 1, 10, 5]`

**Output:** 7

**Explanation:**

The minimum cost can be achieved by performing the following operations:

\* Select index 1 and append `"abc"` to `s` at a cost of 1, resulting in `s = "abc"`. \* Select index 2 and append `"d"` to `s` at a cost of 1, resulting in `s = "abcd"`. \* Select index 4 and append

`"ef"` to `s` at a cost of 5, resulting in `s` = "abcdef".

**\*\*Example 2:\*\***

**\*\*Input:\*\*** target = "aaaa", words = ["z","zz","zzz"], costs = [1,10,100]

**\*\*Output:\*\*** -1

**\*\*Explanation:\*\***

It is impossible to make `s` equal to `target`, so we return -1.

**\*\*Constraints:\*\***

\* `1` <= target.length <= 5 \* 104` \* `1` <= words.length == costs.length <= 5 \* 104` \* `1` <= words[i].length <= target.length` \* The total sum of `words[i].length` is less than or equal to `5 \* 104`. \* `target` and `words[i]` consist only of lowercase English letters. \* `1` <= costs[i] <= 104`

## Code Snippets

**C++:**

```
class Solution {
public:
    int minimumCost(string target, vector<string>& words, vector<int>& costs) {

    }
};
```

**Java:**

```
class Solution {
    public int minimumCost(String target, String[] words, int[] costs) {

    }
}
```

**Python3:**

```
class Solution:
    def minimumCost(self, target: str, words: List[str], costs: List[int]) ->
        int:
```