9G Construct the Suffix rray of a String

Suffix rray Construction Problem
Construct the suffix array of a string.

Input: A string *Text*.
Output: SUFFIXARRAY(*Text*).

```
7  $
1  ANANAS$
3  ANAS$
5  AS$
0  BANANAS$
2  NANAS$
4  NAS$
6  S$
```

Formatting

Input: A string *Text*.
Output: A space-separated list of integers corresponding to SUFFIXARRAY(*Text*).

Constraints

- The length of *Text* will be between 1 and 10^3.

Test Cases

Case 1

Description: The sample dataset is not actually run on your code.

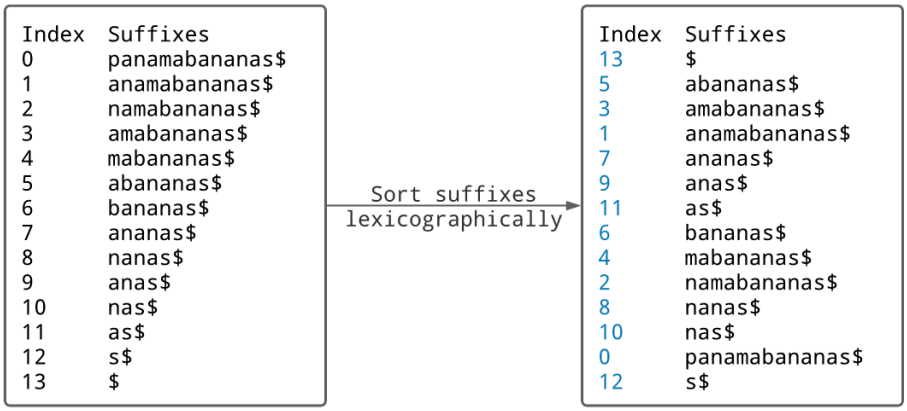
Input:

```
panamabananas$
```

Output:

```
13 5 3 1 7 9 11 6 4 2 8 10 0 12
```

Figure:



Shown above is a general (and inefficient) construction of the suffix array of the input string `panamabananas$`. We first generate all suffixes of *Text* before sorting the suffixes lexicographically and outputting the indices representing the sorted suffixes as the complete suffix array of *Text*.

Case 2

Description: There are repeats in *Text*.

Input:

```
  TC  TC$
```

Output:

```
8 4 0 5 1 7 2 6 3
```

Case 3

Description: There are no repeats in *Text*.

Input:

```
 TCG$
```

Output:

```
4 0 2 3 1
```

Case 4

Description: Large regions of *Text* being a single character or short tandem repeat (STR).

Input:

```
   C $
```

Output:

```
5 4 0 1 2 3
```

Case 5

Description: Many different characters in one pattern.

Input:

```
 BCFED$
```

Output:

```
6 0 1 2 5 4 3
```

Case 6

Description: A larger dataset of the same size as that provided by the randomized autograder. Check input/output folders for this dataset.