1N Generate the d-Neighborhood of a String

***d*-Neighborhood Problem**
Find all the neighbors of a pattern.

Input: A DNA string *Pattern* and an integer d.
Output: The collection of strings NEIGHBORS(*Pattern*, d).

CGA AAA AGC

AGA GGA ACA AGG

TGA ATA AGT

Formatting

Input: A DNA string *Pattern* and an integer d.
Output: A space-separated list of strings containing all *Neighbors*(*Pattern*, d).

Constraints

- The length of *Pattern* will be between 1 and 10^1.
- The integer d will be between 1 and 10^1.
- *Pattern* will be a DNA string.

Test Cases

Case 1

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

Input:

```
ACG
1
```

Output:

```
AAG ACA ACC ACG ACT AGG ATG CCG GCG TCG
```

Case 2

Description: $d = 0$.

Input:

```
AGA
0
```

Output:

```
AGA
```

Case 3

Description: *Pattern* is made up of one character.

Input:

```
AAA
1
```

Output:

```
AAA AAC AAG AAT ACA AGA ATA CAA GAA TAA
```

Case 4

Description: *Pattern* has a length of 1.

Input:

```
A
1
```

Output:

```
A C G T
```

Case 5

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