3C   Construct the Overlap Graph of a Collection of k-mers
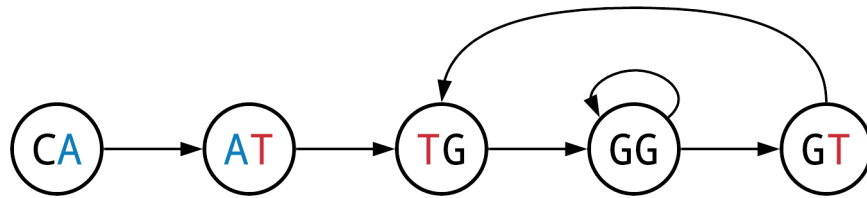
Overlap Graph Problem

Construct the overlap graph of a collection of k-mers.

Input: A collection *Patterns* of k-mers.
Output: The overlap graph of *Patterns*.

Formatting

Input: A space-separated list of strings *Patterns*.
Output: An adjacency list representing the overlap graph of *Patterns*.

Constraints

- The number of patterns in the string-set *Patterns* will be between 1 and 10^3.

- The length of any one pattern in *Patterns* will be between 1 and 10^2.

Test Cases ⊙

Case 1

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

Input:
```
AGGCA ATGCG CATGC GCATG GGCAC GGCAT
```

Output:
```
AGGCA: GGCAC GGCAT
CATGC: ATGCG
GCATG: CATGC
GGCAT: GCATG
```

Case 2

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

Input:
```
AT CA GG GT TG
```

Output:
```
AT: TG
CA: AT
GG: GG GT
GT: TG
TG: GG GT
```

Case 3

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

Input:
```
ATG TGA
```

Output:
```
ATG: TGA
```

Case 4

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

Input:

```
AA AC AG AT CA GT TA
```

Output:

```
AA: AA AC AG AT
AC: CA
AT: TA
AG: GT
CA: AA AC AG AT
GT: TA
TA: AA AC AG AT
```

Case 5

Description: A larger dataset of the same size as that provided by the randomized autograder.