

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

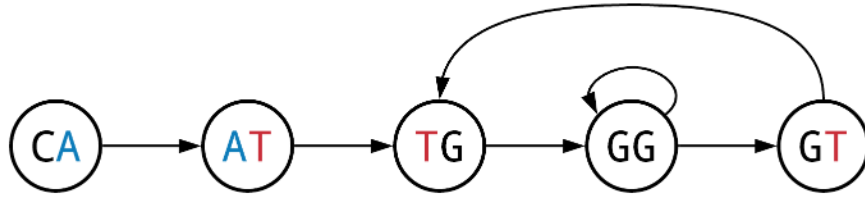
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#### Overlap Graph Problem

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

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

**Input:**

```
GGC   TCGC C TGC GC TG GGC C GGC T
```

**Output:**

```
GGC : GGC C GGC T
C TGC: TCGC
GC TG: C TGC
GGC T: GC TG
```

### Case 2

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

**Input:**

```
T C   GG GT TG
```

**Output:**

```
T: TG
C : T
GG: GG GT
GT: TG
TG: GG GT
```

### Case 3

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

**Input:**

```
TG TG
```

**Output:**

```
TG: TG
```

#### Case 4

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

**Input:**

C G T C GT T

**Output:**

: C G T  
C: C  
T: T  
G: GT  
C : C G T  
GT: T  
T : C G T

#### Case 5

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