

## 2B Find a Median String

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### Median String Problem

Find a median string.

**Input:** A collection of strings  $Dna$  and an integer  $k$ .

**Output:** A  $k$ -mer  $Pattern$  that minimizes  $D(Pattern, Dna)$  among all possible choices of  $k$ -mers.

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CTTAAC
GATATC
ACGGCG
CTAAAG
```

AAA

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### Formatting

**Input:** An integer  $k$ , followed by a newline-separated collection of strings  $Dna$ .

**Output:** A string representing a  $k$ -mer  $Pattern$  that minimizes  $d(Pattern, Dna)$  over all  $k$ -mers  $Pattern$  (If multiple answers exist, you may return any one).

### Constraints

- The integer  $k$  will be between 1 and  $10^1$ .
- The number of strings in  $Dna$  will be between 1 and  $10^2$ .
- The length of each string in  $Dna$  will be between 1 and  $10^2$ .
- Each string in  $Dna$  will be a DNA string.