Algorithms, Friend Circles - Monday, January 25, 2021

There are \( N \) students in a class. Some of them are friends, while some are not. Their friendship is transitive in nature, i.e., if \( A \) is a friend of \( B \) and \( B \) is a friend of \( C \), then \( A \) is also a friend of \( C \).

A friend circle is a group of students who are directly or indirectly friends.

You must write a function `friendCircles` that returns the number of friend circles in a class. Its argument, \( \text{friends} \), is an \( NxN \) matrix that comprises characters \( Y \) or \( N \). If \( \text{friends}[i][j] \) is \( Y \) then the \( i^{th} \) and \( j^{th} \) students are friends, otherwise they are not friends.

Constraints:
- \( 1 \leq N \leq 300 \).
- Each element of friends will be \( Y \) or \( N \).
- The number of rows and columns in \( \text{friends} \) will be equal.
- \( \text{friends}[i][i] \) is \( Y \), where \( 0 \leq i < N \).
- \( \text{friends}[i][j] = \text{friends}[j][i] \), where \( 0 \leq i < j < N \).

Sample input 1:
```
YYNN
YYYN
NYYN
NNNY
```

Sample output 1:
```
2
```

Sample input 2:
```
YNNNN
NYNNN
NYNNN
NNYNN
NNYN
NNNNY
```

Sample output 2:
```
5
```