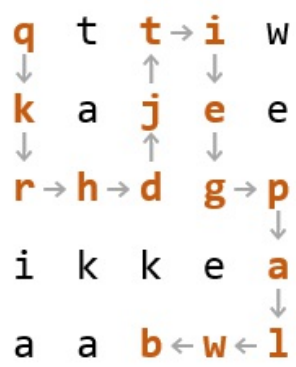
LONGEST PATH

CHALLENGE DESCRIPTION:

You are given a 2D N×N matrix. Each element of the matrix is a letter: from ‘a’ to ‘z’. Your task is to find the length L of the longest path in which not a single letter is repeated. The path can start at any cell, the transfer to the next element can be vertical or horizontal.

Example of a 5×5 matrix, where L=15:



INPUT SAMPLE:

The first argument is a file with test cases. Each line contains a serialized N×N matrix .

For example:

```
qttiwkajeerhdgpikkeaaabwl
vavprkykiloeizzt
skwajgaaxqpfcxmadpwaraksnkbgcaukbgli
kaja
bjzanjikh
```

OUTPUT SAMPLE:

Print to stdout the length of the longest path of unique elements for each test case, one per line.

For example:

```
15
11
16
3
7
```

CONSTRAINTS:

1. N is in a range from 2 to 6.
2. The number of test cases is 20.