A certain puzzle consists of four tiles, as shown in the top two figures below. To solve this puzzle, the tiles must be rotated so that wherever two tiles share a border, either both tiles have a pipe at that border, or neither does. Thus, the second puzzle below is solved, but the first is not. Note that the presence or absence of a pipe at exterior edges doesn’t matter.

You are to write a program that takes as input a description of such a puzzle, and outputs whether the puzzle as presented is solved. (Note: You don’t have to find a solution — just report whether it is already solved.) An input consists of a string of eight characters, each of which is either ‘Y’ or ‘N’. Each character indicates the presence or absence of a pipe on an edge of a tile, beginning with the right edge of the upper left tile and working clockwise around the shared edges. A ‘Y’ indicates the presence of a pipe, and an ‘N’ indicates the absence of one. Thus, the first figure below is represented by “NNNNYNNY”, and the second by “YYYYYNNY”, as shown in the bottom two figures below. The input string must be provided as a unit — it must not be entered on separate lines or text fields, or separated by other characters or white space.

Example 1:

Enter puzzle description: NNNNYNNY
The puzzle is not solved.

Example 2:

Enter puzzle description: YYYYYYNN
The puzzle is solved.