# THE SHORTEST PATH

YOU ARE GIVEN A 2D GRID WITH EACH CELL CONTAINING AN ALPHABET , YOU HAVE TO START AT ANY POINT AND MOVE EITHER UP,DOW,LEFT AND RIGHT TO CREATE THE WORD "ALCATRAZ" BY PICKING UP ALPHABETS **_IN ORDER_** . AFTER CHOOSING AN ALPHABET , IT GETS REMOVED FROM THERE AND LEAVES AN EMPTY CELL BEHIND . YOU HAVE TO TELL THE MINIMUM NUMBER OF MOVES NEEDED TO DO SO

## Input

2 SPACE SEPERATED INTEGERS N,M ( ROWS AND COLUMNS RESPECTIVELY )

1<= N,M <=500

THEN NEXT N LINES GIVES THE DETAILS OF THE MAZE

## Output

THE SHORTEST PATH AS DESCRIBED IN THE ABOVE PROBLEM

PRINT "IMPOSSIBLE" (WITHOUT QUOTES) IF YOU CAN'T MAKE UP THAT WORD .

## Example

**Input:**
4 5

AZCLT

AARAL

SJATC

LARAZ

**Output:**
9

PATH IS AS FOLLOWS : 2,4 - 2,5 - 3,5 - 3,4 - 3,3 - 3,4 - 4,4 - 4,3 - 4,4 - 4,5