

## 6. ZigZag Conversion

Medium

2446

5990

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The string "PAYPALISHIRING" is written in a zigzag pattern on a given number of rows like this: (you may want to display this pattern in a fixed font for better legibility)

```
P   A   H   N
A P L S I I G
Y   I   R
```

And then read line by line: "PAHNAPLSIIGYIR"

Write the code that will take a string and make this conversion given a number of rows:

```
string convert(string s, int numRows);
```

### Example 1:

**Input:** s = "PAYPALISHIRING", numRows = 3  
**Output:** "PAHNAPLSIIGYIR"

### Example 2:

**Input:** s = "PAYPALISHIRING", numRows = 4  
**Output:** "PINALSIGYAHRPI"  
**Explanation:**

```
P       I       N
A    L S    I G
Y A    H R
P       I
```

### Example 3:

**Input:** s = "A", numRows = 1  
**Output:** "A"

### Constraints:

- 1 <= s.length <= 1000
- s consists of English letters (lower-case and upper-case), ' ', and

1

2

3

4

```
class Solution:
    def convert(self, s: str, numRows: int) -> str:
        if numRows == 1:
            return s
        zigzag = ['' for _ in range(numRows)]
        cur_row = 0
        for char in s:
            zigzag[cur_row] += char
            if cur_row == 0:
                cur_row = numRows - 1
            elif cur_row == numRows - 1:
                cur_row = 0
            else:
                cur_row += 1 if cur_row < numRows - 1 else -1
        return ''.join(zigzag)
```

Your previous code was rejected.