

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 // O(n) time | O(n) space - where n is the total number of elements in the array
4 function zigzagTraverse(array) {
5   const height = array.length - 1;
6   const width = array[0].length - 1;
7   const result = [];
8   let row = 0;
9   let col = 0;
10  let goingDown = true;
11  while (!isOutOfBounds(row, col, height, width)) {
12    result.push(array[row][col]);
13    if (goingDown) {
14      if (col === 0 || row === height) {
15        goingDown = false;
16        if (row === height) {
17          col++;
18        } else {
19          row++;
20        }
21      } else {
22        row++;
23        col--;
24      }
25    } else {
26      if (row === 0 || col === width) {
27        goingDown = true;
28        if (col === width) {
29          row++;
30        } else {
31          col++;
32        }
33      } else {
34        row++;
35        col++;
36      }
37    }
38  }
39  return result;
40 }
```

Solution 1

Solution 2

Solution 3

```
1 function zigzagTraverse(array) {
2   // Write your code here.
3 }
4
5 // Do not edit the line below.
6 exports.zigzagTraverse = zigzagTraverse;
7
```

Our Tests

Custom Output

Submit Code

```
1 // Test Case 1: zigzagTraverse([1, 2, 3, 4, 5, 6, 7, 8, 9, 10])
2 // Expected: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
3
4 // Test Case 2: zigzagTraverse([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20])
5 // Expected: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20]
6
7 // Test Case 3: zigzagTraverse([1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30])
8 // Expected: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30]
```

```
10 #! /usr/bin/env python3
11 """
12     """
13
14 # Import the necessary modules
15 import sys
16
17 # Define the main function
18 def main():
19     # Get the command line arguments
20     args = sys.argv[1:]
21
22     # Check if the number of arguments is correct
23     if len(args) != 1:
24         print("Usage: python3 script.py <number>")
25         sys.exit(1)
26
27     # Convert the argument to an integer
28     number = int(args[0])
29
30     # Calculate the sum of the first 'number' natural numbers
31     sum = number * (number + 1) // 2
32
33     # Print the result
34     print(sum)
35
36 # Call the main function
37 if __name__ == '__main__':
38     main()
```

Run or submit code when you're ready.