

\* Print elements in waveform :-

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

5x4

O/P :- 1 5 9 13 17 18 14 10 6 2 3  
7 11 15 19 20 16 12 8 4

\* Solution:-

Even col → Up to down print

Odd col → Down to up print

```
test.js > ...
1 function printWaveForm(grid, rows, cols) {
2   let str = "";
3   for (let col = 0; col < cols; col++) {
4     // Even col -> Up to down
5     if (col % 2 == 0) {
6       for (let row = 0; row < rows; row++) {
7         str += grid[row][col] + " ";
8       }
9     } else {
10      // Odd col -> Down to up
11      for (let row = rows - 1; row >= 0; row--) {
12        str += grid[row][col] + " ";
13      }
14    }
15  }
16  return str;
17 }
18
19 let grid = [
20   [1, 2, 3, 4],
21   [5, 6, 7, 8],
22   [9, 10, 11, 12],
23   [13, 14, 15, 16],
24 ];
25
26 let rows = grid.length;
27 let cols = grid[0].length;
28
29 console.log(printWaveForm(grid, rows, cols));
```

```
[Running] node "/home/parth/Developer/DSA/test.js"
1 5 9 13 14 10 6 2 3 7 11 15 16 12 8 4
```