# Multi-dimensional array → Spiral



Hard 32 minutes

Output the matrix of size $n \times n$, filled by the integers from $1$ to $n^2$ in a spiral, coming from the top left corner and twisted clockwise, as shown in the example (here $n = 5$).



Sample Input 1:

```
5
```

Sample Output 1:

```
1 2 3 4 5
16 17 18 19 6
15 24 25 20 7
14 23 22 21 8
13 12 11 10 9
```

Write a program

Code Editor IDE

Java

```java
import java.util.Scanner;
class Main {
    public static void main(String args[]) {
        // System.out.println("Enter The Value For N :");

        Scanner sc = new Scanner(System.in);

        int n = sc.nextInt();

        int[][] spiral = new int[n][n];

        int value = 1;

        int minCol = 0;

        int maxCol = n - 1;

        int minRow = 0;

        int maxRow = n - 1;
        sc.close();

        while (value <= n * n) {
            for (int i = minCol; i <= maxCol; i++) {
                spiral[minRow][i] = value;

                value++;
            }

            for (int i = minRow + 1; i <= maxRow; i++) {
                spiral[i][maxCol] = value;

                value++;
            }

            for (int i = maxCol - 1; i >= minCol; i--) {
                spiral[maxRow][i] = value;

                value++;
            }

            for (int i = maxRow - 1; i >= minRow + 1; i--) {
                spiral[i][minCol] = value;

                value++;
            }

            minCol++;
```

```
49
50              minRow++;
51
52              maxCol--;
53
54              maxRow--;
55          }
56
57          for (int i = 0; i < spiral.length; i++) {
58              for (int j = 0; j < spiral.length; j++) {
59                  System.out.print(spiral[i][j] + " ");
60              }
61
62              System.out.println();
63          }
64      }
65  }
66
```

✓ Correct, but can be improved.

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