



Introduction to Java Programming

Sheet # 08: Multi-Dimensional Arrays

- ▶ Textbook: Introduction to Java Programming and Data Structures, Comprehensive Version (11th Edition)
- ▶ This sheet covers chapter 08 “Multi-Dimensional Arrays”

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➤ Check Point Questions:

Review the questions at the following URL:

<https://liveexample.pearsoncmg.com/checkpoint12/Chapter8.html>

➤ Solve the following Programming Exercises from the textbook (pages 329-343)

8.2 8.3 8.7 8.8 8.11 8.15

➤ Mini Project: consecutive four equal numbers

Write the following function that tests whether a two-dimensional list has four consecutive numbers of the same value, either horizontally, vertically, or diagonally.

```
public static boolean isConsecutiveFour(int[][] values)
```

Write a test program that prompts the user to enter the number of rows and columns of a two-dimensional list and then the values in the list and displays True if the list contains four consecutive numbers with the same value. Otherwise, display False. Here are some examples of the true cases:

0	1	0	3	1	6	1
0	1	6	8	6	0	1
5	6	2	1	8	2	9
6	5	6	1	1	9	1
1	3	6	1	4	0	7
3	3	3	3	4	0	7

0	1	0	3	1	6	1
0	1	6	8	6	0	1
5	5	2	1	8	2	9
6	5	6	1	1	9	1
1	5	6	1	4	0	7
3	5	3	3	4	0	7

0	1	0	3	1	6	1
0	1	6	8	6	0	1
5	6	2	1	6	2	9
6	5	6	6	1	9	1
1	3	6	1	4	0	7
3	6	3	3	4	0	7

0	1	0	3	1	6	1
0	1	6	8	6	0	1
9	6	2	1	8	2	9
6	9	6	1	1	9	1
1	3	9	1	4	0	7
3	3	3	9	4	0	7

With our best wishes;