

## Lab 2 – Reflection and Results

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Jason Gasparini  
Jason.Gasparini@Marist.edu

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### 1 Reflection

#### 1.1 Erlang vs. Java

With choosing to make use of the natural loops that are available to Java, coding this program between Erlang and Java required two different approaches. For a basic algorithm like this one, its complexity could be measured by how many total lines of code were needed. But, from my experience with this lab, that is not an accurate measurement of complexity. Because of the fact that I do not favor recursion over a basic for loop, the Erlang version was more complex yet it required many less lines to accomplish the same goal. The difficulty that I faced while coding the Erlang version can certainly be attributed to my inexperience with the syntax but also is because of the forced recursive nature. While this program in Erlang may be easier to code, I still think that it is harder to understand conceptually.

### 2 Results

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
(ok, lab2)
14> lab2:start().
Enter in a value for X: 14
Enter in a value for Y: 6
[[64,70,56,42,20,14],
 "5f7"levv",
 [82,68,54,40,26,12],
 [81,67,53,39,25,11],
 [80,66,52,38,24,10],
 [79,65,51,37,23,9],
 [78,64,50,36,22,8],
 [77,63,49,35,21,7],
 [76,62,48,34,20,6],
 [75,61,47,33,19,5],
 [70,60,46,32,10,4],
 [73,59,45,31,17,3],
 [72,58,44,30,16,2],
 [71,57,43,29,15,1]]
ok
15>

```

Figure 1: 1st successful run mirrored across

```

16> lab2:start().
Enter in a value for X: 2
Enter in a value for Y: 20
[[40,38,36,34,32,30,28,26,24,22,20,18,16,14,12,10,8,6,4,2],
 [39,37,35,33,31,29,27,25,23,21,19,17,15,13,11,9,7,5,3,1]]
ok
19>

```

Figure 2: 2nd successful run

```

@jasongasparini →/workspaces/erSlang/lab 2 (main) $ java lab2
Enter a value for X: -32139021
Invalid input. Please enter a non-negative integer.
Enter a value for X: dsajdiosa
Invalid input. Please enter an integer.
Enter a value for X: 14
Enter a value for Y: -321321
Invalid input. Please enter a non-negative integer.
Enter a value for Y: dsajidosadjasio
Invalid input. Please enter an integer.
Enter a value for Y: 6
[14, 28, 42, 56, 70, 84]
[13, 27, 41, 55, 69, 83]
[12, 26, 40, 54, 68, 82]
[11, 25, 39, 53, 67, 81]
[10, 24, 38, 52, 66, 80]
[9, 23, 37, 51, 65, 79]
[8, 22, 36, 50, 64, 78]
[7, 21, 35, 49, 63, 77]
[6, 20, 34, 48, 62, 76]
[5, 19, 33, 47, 61, 75]
[4, 18, 32, 46, 60, 74]
[3, 17, 31, 45, 59, 73]
[2, 16, 30, 44, 58, 72]
[1, 15, 29, 43, 57, 71]
@jasongasparini →/workspaces/erSlang/lab 2 (main) $

```

Figure 3: Java run with error checking/unexpected inputs

```
2> lab2:start().
Enter a value for X: -329
Invalid input. Please enter an integer.
Enter a value for X: dasdas
Invalid input. Please enter an integer.
Enter a value for X: 14
Enter a value for Y: -320931
Invalid input. Please enter an integer.
Enter a value for Y: oepwiqueoqwop
Invalid input. Please enter an integer.
Enter a value for Y: 6
[[84,70,56,42,28,14],
 "SE7)\e\r",
 [82,68,54,40,26,12],
 [81,67,53,39,25,11],
 [80,66,52,38,24,10],
 [79,65,51,37,23,9],
 [78,64,50,36,22,8],
 [77,63,49,35,21,7],
 [76,62,48,34,20,6],
 [75,61,47,33,19,5],
 [74,60,46,32,18,4],
 [73,59,45,31,17,3],
 [72,58,44,30,16,2],
 [71,57,43,29,15,1]]
ok
3> 
```

Figure 4: Erlang run with error checking/unexpected inputs, List 13 has all printable ASCII characters