

Language Study: Erlang

Summer 2019

-Assignment 2

Goals

To enjoy Erlang's functional nature, experiment with modules that have both public and private components, compare and contrast Erlang with an Object-oriented language, and (most importantly) bask in the glory that is recursion.

Instructions

Develop two programs, one in Erlang and the other in Java, to generate a list of M other lists where each of the other lists contain an N -length sequence of every M^{th} integer. Write the Erlang version first, as it may affect how you approach programming the second version.

For example, if N is bound to 6 and M is bound to 14 then we expect 14 lists of 6 elements each, spaced by 14 units.

```
[ [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] ]
```

(Don't use N and M as variables; those are terrible names. Pick better identifiers.)

Lastly, write a paragraph or two reflecting on practical and philosophical differences between your two programs. I am particularly interested in the philosophical aspects.

Submitting

Submit ...

- your source code for both programs;
- your test cases;
- a transcript of two successful runs for each program with expected data;
- a transcript of two successful runs for each program with unexpected data that would have caused errors had you not prevented it; and
- your reflections.

Remember to include your name somewhere where I can easily find it.