

Quiz: 010 Intro to Scala and FP

12 minutes, no stress, no embarrassment, no consequences

Write a recursive function `f(n : Int) : Int` that returns its argument, but first prints all even integers starting from $2 * n$ to 0 (in reversely sorted order). The only side effect allowed in the function is printing to the standard output.

Assume that there is a function `println` that takes an integer parameter). Also assume that the argument passed to the function is a positive number. Do not use higher order functions in this exercise (for pedagogical reasons).

An example solution

```
1 def f (n :Int) :Int = {  
2   println (n*2)  
3   if ( n > 0 ) {  
4     f (n-1)  
5     n  
6   } else n  
7 }
```

Grading: maximum 2 points in total

If the function has any other side effects than printing, award zero points (so no points if you see variable assignments, while, for loops, exceptions throwing, variable incrementation, decrementation, etc.).

Otherwise, if the function is pure and appears completed, but does not really work, award one point.

If the function is completed, appears to work, and it is pure then award two points.