Haskell — Functions with lists P25054_en

In this problem you have to define some functions about lists in Haskell.

1. Define a function *myLength* :: [**Int**] → **Int** that, given a list of integers, returns its length.
2. Define a function *myMaximum* :: [**Int**] → **Int** that, given a non-empty list of integers, returns its maximal element.
3. Define a function *average* :: [**Int**] → **Float** that, given a non-empty list of integers, returns its average.
4. Define a function *buildPalindrome* :: [**Int**] → [**Int**] that, given a list, returns its palindrome that starts with the reserved list.
5. Define a function *remove* :: [**Int**] → [**Int**] → [**Int**] that given a list of integers x and a list of integers y, returns x after having removed all the ocurrences of the elements in y.
6. Define a function *flatten* :: [[**Int**]] → [**Int**] that flattens a list of lists yielding a single list of elements.
7. Define a function *oddsNevens* :: [**Int**] → ([**Int**],[**Int**]) that, given a list of integers, returns two lists: Onw with all the even numbers and one with all the odd numbers, each of them in the same relative order as in the original list.
8. Define a function *primeDivisors* :: **Int** → [**Int**] that returns the list of prime divisors of a non-zero natural.

Scoring

Esch function scores 12 points and the sample 4.

Sample input

```
myMaximum [4,3,1,5,4,5,2]
average [1,2,3]
buildPalindrome [2,4,6]
flatten [[2,6],[8,1,4],[],[1]]
remove [1,4,5,3,4,5,1,2,7,4,2] [2,4]
myLength [1,3..10]
oddsNevens [1,4,5,3,4,5,1,2,7,4,2]
primeDivisors 255
```

Sample output

```
5
2.0
[6,4,2,2,4,6]
[2,6,8,1,4,1]
[1,5,3,5,1,7]
5
([1,5,3,5,1,7],[4,4,2,4,2])
[3,5,17]
```

Problem information

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