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module LKSA_2016_01_11 where
import Data.List
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-- MURGILKETA
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nartzisista_lag :: Integer -> Integer -> Integer -> Integer -> Bool
nartzisista_lag x n a s
  | (x < (10^(n-1))) || (x >= (10^n)) = error "Digitu-kopurua ez da zuzena"
  | (a == 0) && (x==s) = True
  | (a == 0) = False
  | otherwise = nartzisista_lag x n (div a 10) (s+((mod a 10)^3))
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nartzisista :: Integer -> Integer -> Bool
nartzisista x n
  | (x < (10^(n-1))) || (x >= (10^n)) = error "Digitu-kopurua ez da zuzena"
  | otherwise = nartzisista_lag x n x 0
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-- BUKAERA KO ERREKURTSIBITATEA
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atzeratu :: Integer -> [Integer] -> [Integer]
atzeratu x s
  | (null s) = []
  | (x == (head s)) = (atzeratu x (tail s)) ++ [x]
  | otherwise = (head s):(atzeratu x (tail s))
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atzeratu_lag :: Integer -> [Integer] -> [Integer] -> [Integer] -> [Integer]
atzeratu_lag x s p q
  | (null s) = p++q
  | (x == (head s)) = atzeratu_lag x (tail s) p (x:q)
  | otherwise = atzeratu_lag x (tail s) (p++[(head s)]) q
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atzeratu_be :: Integer -> [Integer] -> [Integer]
atzeratu_be x s = atzeratu_lag x s [] []
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-- ZERRENDATA-ERAKETA
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luzerak :: [[Integer]] -> [Integer]
luzerak s = [ (genericLength x) | x <- s ]

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luzeena :: [[Integer]] -> [[Integer]]
luzeena s = [ x | x <- s, (genericLength x) == (maximum (luzerak s)) ]

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sekuentzia :: [Integer] -> Integer -> Integer -> [Integer]
sekuentzia s i n
  | (i < 1) || ((i+n-1) > (genericLength s)) = error "Indizea edo luzera ez dira zuzenak"
  | otherwise = (genericTake n (genericDrop (i-1) s))

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azpisekuentziak :: [Integer] -> [[Integer]]
azpisekuentziak s = [ (sekuentzia s i n) | n <- [1..(genericLength s)], i <- [1..((genericLength s)+1-n)] ]

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aurrizkia :: [Integer] -> [Integer] -> Bool
aurrizkia r s = r == (genericTake (length r) s)

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azpizerrenda :: [Integer] -> [Integer] -> Bool
azpizerrenda r s = or [ (aurrizkia r (genericDrop i s)) | i <- [0..((length s)-(length r)+1)] ]

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bien_azpisekuentziak :: [Integer] -> [Integer] -> [[Integer]]
bien_azpisekuentziak r s = [ x | x <- (azpisekuentziak r), (azpizerrenda x s) ]

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bien_azpisekuentzia_luizenak :: [Integer] -> [Integer] -> [[Integer]]
bien_azpisekuentzia_luizenak r s = luzeena (bien_azpisekuentziak r s)

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