module Shualeduri where

-- Davit Gogritchiani

-- Shualeduri 1

gamosaxuleba :: (Fractional a, Ord a) => a -> a

gamosaxuleba x

| x == -2.5 = 3.75 \* x^2 + 10/(2-x)\*(1+4\*x)

| x >= -3.7 && x<= 7 = (1-x^2 + 8.2\*x)/(x+2.5) - 4

| otherwise = 5\*x - 7 + (3.5\*x^3)/(4\*(1.5+x))

gamosaxuleba1 :: (Fractional a, Ord a) => a -> a

gamosaxuleba1 x =

if x == -2.5

then 3.75 \* x^2 + 10/(2-x)\*(1+4\*x)

else if x >= -3.7 && x <= 7

then (1-x^2 + 8.2\*x)/(x+2.5) - 4

else 5\*x - 7 + (3.5\*x^3)/(4\*(1.5+x))

--- 2.

firstLambda :: Integer

firstLambda = (\xs -> xs!!1)[1..10]

secondLambda :: [Integer]

secondLambda = map (\ x-> if mod x 2 == 0 then x^2 else x^3)[1..10]

thirdLambda :: [Integer]

thirdLambda = (\ x xs -> xs ++ [x])1 [1..10]

--- 3.

($$) :: Bool -> Bool -> Bool

True $$ True = True

False $$ True = True

True $$ False = False

False $$ False = True

სხვა ვარიანტები -2

--- 4.

listofOdds :: [Integer]

listofOdds = [x | x <- [100..999] , (mod x 10 + div (mod x 100 ) 10 + div x 100) `mod` 2 == 1]

-- ლოგიკა მარტივი რიცხვისთვის

isPrime :: Integral a => a -> Bool

isPrime k = (k > 1) && null [ x | x <- [2..k - 1], k `mod` x == 0]

-- ლისტის კონსტრუქტორი 2-500 მდე

-- წინასწარ განსაზღვრულია

primeList :: [Integer]

primeList = [x | x <- [2..500], isPrime x]

triple :: Integer -> [(Integer, Integer, Integer)]

triple n = [(x, y, x+y) | x <- primeList, y <- primeList, x+y <= n && isPrime (x+y)]

– სია [2^2, 3^3.. 20^20]

mylist:: [Integer]

mylist = [x^x | x ← [1..20]]

-- 5.

couple :: a -> b -> (a, b)

couple x y = (x,y)

-- REPL

--let couple x y = (x,y)

isPalindromeString :: Eq a => [a] -> Bool

isPalindromeString xs = reverse xs == xs

-- REPL

--let isPalindromeString xs = reverse xs == xs

isSorted :: Ord a => a -> a -> a -> Bool

isSorted x y z

| x <= y && y <= z = True

| x >= y && y >= z = True

| otherwise = False

-- REPL

-- let isSorted x y z = if x <= y && y <= z then True else if x >= y && y>= z then True else False

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