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Дисциплина «Функциональное и логическое программирование»

Отчет к лабораторной работе № 5

«Основные операции со списками на Haskell»

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module Main where

un :: Eq a => [a] -> [a] -> [a]

un [] ys = ys

un xs [] = xs

un (x:xs) ys

| x `elem` ys = un xs ys

| otherwise = x : un xs ys

intersection :: Eq a => [a] -> [a] -> [a]

intersection [] ys = []

intersection xs [] = []

intersection (x:xs) ys

| x `elem` ys = x: intersection xs ys

| otherwise = intersection xs ys

diff :: Eq a => [a] -> [a] -> [a]

diff [] ys = []

diff xs [] = xs

diff (x:xs) ys

| x `elem` ys = diff xs ys

| otherwise = x : diff xs ys

main :: IO ()

main = do

let list1 = [1, 2, 3, 5]

list2 = [3, 5, 7, 6]

completedUnion = un list1 list2

completedInter = intersection list1 list2

completedDiff = diff list1 list2

print completedUnion

print completedInter

print completedDiff