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Дисциплина «Функциональное и логическое программирование»

Отчет к лабораторной работе № 8

«Операции с упорядоченными множествами на Haskell»

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module Main where

union :: Ord a => [a] -> [a] -> [a]

union [] [] = []

union [] xs = xs

union ys [] = ys

union (x:xs) (y:ys)

| x < y = x : (union xs (y:ys))

| x > y = y : (union (x:xs) ys)

| otherwise = x : (union xs ys)

inter :: Ord a => [a] -> [a] -> [a]

inter [] [] = []

inter [] xs = []

inter ys [] = []

inter (x:xs) (y:ys)

| x < y = inter xs (y:ys)

| x > y = inter (x:xs) ys

| otherwise = x : (inter xs ys)

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

diff [] [] = []

diff [] xs = []

diff ys [] = ys

diff (x:xs) (y:ys)

| x < y = x : (diff xs (y:ys))

| x > y = diff (x:xs) ys

| otherwise = diff xs ys

simdiff :: Ord a => [a] -> [a] -> [a]

simdiff [] [] = []

simdiff [] xs = xs

simdiff ys [] = ys

simdiff (x:xs) (y:ys)

| x < y = x : (simdiff xs (y:ys))

| x > y = y : (simdiff (x:xs) ys)

| otherwise = simdiff xs ys