Universidad de los Andes

ISIS-4217 Paradigmas de programación
Mozart
Date: January 27, 2023

Please han-in each of the following tasks on an independent `.oz` file. Make sure to add examples to test the functionality of each the procedures used to solve the task.

Task 1. Write a program that given a list of playing cards (you have to choose the format of cards), returns the best poker hand.

Task 2. Implement a binary search tree including the procedures to add, remove, and search (integer) elements in the tree.

Task 3. Define a procedure (or procedures) to use list comprehension expressions (like Python's list comprehensions). As a reference, Python list comprehensions are of the form `[2*x for x in BODY if x%2 == 0]`, where `BODY` can be a range or a list. The result of this comprehension is a list where every element is doubled.

Task 4. Define a procedure to determine if two records are `equal`, `equivalent`, `subsimilar`, or `different`. Given two records, the procedure must return the corresponding atom to their category. Two records are:

equal if their names, cardinality, and items all correspond to each other

equivalent if their names and cardinality correspond, but at least one of their items have different values

subsimilar if one of the records is contained in the other

different in any other case