ITRW222

KLASTOETS 4A /CLASS TEST 4A

Naam / Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nr. / No:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assume the following code exists: / Aanvaar die volgende kode bestaan:

public class UOA<T>

{ private int next; // equal to the index of the first open space in the array

private T[] data;

private int size;

….

}

In the client class:

public int compareTo(Object targetKey)

Ontwerp ’n metode vir die klas UOA genaamd: *smallesteFirst(),* wat die kleinste element (volgens waarde) voor in die skikking sal plaas. Die huidige eerste element moet met die kleinste element omgeruil word.

* 1. Teken ‘n diagram om die problem te demonstreer.
  2. Skryf die algoritme in jou eie woorde vir die algemene geval.
  3. Wat is die spesiale gevalle (uitsonderings) en hoe moet dit hanteer word?
  4. Gee die Java kode vir die metode.

Design a method for the class UOA called: *smalletstFirst*(), that will put the smallest element (according to value) first in the array. The current first element should be swapped with the smallest element.

* 1. Draw a diagram to demonstrate the problem.
  2. Write the algorithm in your own words for the general case.
  3. What are the special cases (exceptions) and how should it be handled?
  4. Give the Java code for the method.