Practical 2

Part 2: Programming Exercise

1.

public static Integer min(ArrayList<Integer> list) {

Integer currentMin = list.get(0);

for(int i = 1; i < list.size(); i++){

if (currentMin > list.get(i))

currentMin = list.get(i);

}

return currentMin;

}

public static void main(String[] args) {

ArrayList<Integer> nums = new ArrayList<Integer>();

nums.add(new Integer(2));

nums.add(new Integer(1));

nums.add(new Integer(5));

System.out.println(min(nums));

}

2.

public static Integer max(ArrayList<Integer> list) {

Integer currentMax = list.get(0);

for(int i = 1; i < list.size(); i++){

if (currentMax < list.get(i))

currentMax = list.get(i);

}

return currentMax;

}

public static void main(String[] args) {

ArrayList<Integer> nums = new ArrayList<Integer>();

nums.add(new Integer(2));

nums.add(new Integer(1));

nums.add(new Integer(5));

System.out.println(max(nums));

}

Modified:

1.

- need Comparable interface

- compareTo(Object o)

- 1 >

- 0 =

- -1 <

public static <E extends Comparable<E>> E min(ArrayList<E> list) {

E currentMin = list.get(0);

for(int i = 1; i < list.size(); i++){

if (currentMin.compareTo(list.get(i)) > 0)

currentMin = list.get(i);

}

return currentMin;

}

class Student implements Comparable <Student> {

private int indexNo;

private String name;

private int age;

public int compareTo(Student st) {

if (this.age == st.age)

return 0;

else if (this.age > st.age)

return 1;

else

return -1;

}

}