/\*\*

\* Q1. Write a Java program to search an element in an array list.

\*/

import java.util.\*;

public class searchElement {

public static void main(String[] args) {

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

list.add(12);

list.add(52);

list.add(58);

check(15,list);

check(58,list);

}

private static void check(int num,ArrayList<Integer> ls)

{

if (ls.contains(num)) {

System.out.println(num +" Found \n" );

} else {

System.out.println( num +" Not found \n");

}

}

}

Output:

kaustubh@kaustubh-Desktop:~/Practicals$ /usr/lib/jvm/java-11-openjdk-amd64/bin/java -agentlib:jdwp=transport=dt\_socket,server=n,suspend=y,address=localhost:42353 -Dfile.encoding=UTF-8 -cp /home/kaustubh/.config/Code/User/workspaceStorage/396014f1ff50643332ea6caa709cdf58/redhat.java/jdt\_ws/Practicals\_eb71bab1/bin searchElement

15 Not found

58 Found

/\*\*

\* Q 2. Write a Java program to compare two hash sets.

\*

\*/

import java.util.\*;

public class compareHash {

public static void main(String[] args) {

HashSet<String> hash1 = new HashSet<String>();

HashSet<String> hash2 = new HashSet<String>();

hash1.add("A");

hash1.add("B");

hash1.add("C");

hash2.add("A");

hash2.add("B");

if(hash1.equals(hash2))

{

System.out.println("Both hash are equal ");

}

else

{

System.out.println("Not Equal ");

}

hash2.add("C");

if(hash1.equals(hash2))

{

System.out.println("Both hash are equal ");

}

else

{

System.out.println("Not Equal ");

}

}

}

Output:

kaustubh@kaustubh-Desktop:~/Practicals$ cd /home/kaustubh/Practicals ; /usr/lib/jvm/java-11-openjdk-amd64/bin/java -agentlib:jdwp=transport=dt\_socket,server=n,suspend=y,address=localhost:41527 -Dfile.encoding=UTF-8 -cp /home/kaustubh/.config/Code/User/workspaceStorage/396014f1ff50643332ea6caa709cdf58/redhat.java/jdt\_ws/Practicals\_eb71bab1/bin compareHash

Not Equal

Both hash are equal

/\*\*

\* Q 3. Write a Java program to get the first and last elements in a tree set.

\*/

import java.util.\*;

public class firstLast {

public static void main(String[] args) {

TreeSet<Integer> tree = new TreeSet<Integer>();

tree.add(15);

tree.add(25);

System.out.println("First is "+tree.first()+" and 2nd is "+tree.last());

}

}

Output:

kaustubh@kaustubh-Desktop:~/Practicals$ cd /home/kaustubh/Practicals ; /usr/lib/jvm/java-11-openjdk-amd64/bin/java -agentlib:jdwp=transport=dt\_socket,server=n,suspend=y,address=localhost:43437 -Dfile.encoding=UTF-8 -cp /home/kaustubh/.config/Code/User/workspaceStorage/396014f1ff50643332ea6caa709cdf58/redhat.java/jdt\_ws/Practicals\_eb71bab1/bin firstLast

First is 15 and 2nd is 25

/\*\*

\* 4. Write a Java program to get an element in a tree set which is strictly

less than the given element

\*/

import java.util.\*;

public class lessThan {

public static void main(String[] args) {

TreeSet<Integer> tree = new TreeSet<Integer>();

tree.add(15);

tree.add(22);

tree.add(13);

System.out.println(tree.lower(16)+ " is strictly less than 16");

}

}

Output:

kaustubh@kaustubh-Desktop:~/Practicals$ cd /home/kaustubh/Practicals ; /usr/lib/jvm/java-11-openjdk-amd64/bin/java -agentlib:jdwp=transport=dt\_socket,server=n,suspend=y,address=localhost:42213 -Dfile.encoding=UTF-8 -cp /home/kaustubh/.config/Code/User/workspaceStorage/396014f1ff50643332ea6caa709cdf58/redhat.java/jdt\_ws/Practicals\_eb71bab1/bin lessThan

15 is strictly less than 16

/\*\*

\*

\*Q 5. Write a Java program to get the number of elements in a hash set.

\*/

import java.util.\*;

public class numberofElements {

public static void main(String[] args) {

HashSet<String> hashSet = new HashSet<String>();

hashSet.add("A");

hashSet.add("B");

System.out.println("Hashset size is "+hashSet.size());

hashSet.add("C");

System.out.println("Hashset size is "+hashSet.size());

}

}

Output:

kaustubh@kaustubh-Desktop:~/Practicals$ cd /home/kaustubh/Practicals ; /usr/lib/jvm/java-11-openjdk-amd64/bin/java -agentlib:jdwp=transport=dt\_socket,server=n,suspend=y,address=localhost:42679 -Dfile.encoding=UTF-8 -cp /home/kaustubh/.config/Code/User/workspaceStorage/396014f1ff50643332ea6caa709cdf58/redhat.java/jdt\_ws/Practicals\_eb71bab1/bin numberofElements

Hashset size is 2

Hashset size is 3