KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)

Deemed to be University U/S 3 of the UGC Act, 1956

School of Computer Engineering

WT LAB - 5

Submitted By :

Name : ISHU KUMAR

Roll No. : 2006270

Section: IT-04

Branch : Information Technology

ISHU KUMAR 2006270

Q-1 Write a java program to find the largest among three user-entered number at the command prompt using java

Code :-

```
import java.util.Scanner;
public class q1 {
public static void main(String args[]) {
Scanner scan = new Scanner(System.in);
System.out.println("Please enter 3 numbers :-");
int a = scan.nextInt();
int b = scan.nextInt();
int c = scan.nextInt();
scan.close();
if(a > b && a > c){
System.out.println(a+" is greater!");
}
else if (b > a && b > c){
System.out.println(b+" is greater!");
}
else{
System.out.println(c+" is greater!");
}}}
```

OUTPUT:

```
C:\Users\Lenovo>java q1
Please enter 3 numbers :-
1 2 4
4 is greater!
```

Q-2 write a java program to accept 10 numbers from the command line and check how many of them are even or odd

CODE:

```
import java.util.Scanner;
public class q2{
public static void main(String args[]) {
System.out.print("Enter a number: ");
Scanner scan = new Scanner(System.in);
int num = scan.nextInt();
scan.close();
if(num % 2 == 0)
System.out.println(num + " is even");
else
System.out.println(num + " is odd");
```

```
}
}
```
ISHU KUMAR 2006270

OUTPUT:

```
C:\Users\Lenovo>java q2
Enter a number: 76
76 is even
```

Q-3 write a java program to sort the user entered list of numbers of any size in ascending order

CODE:

```
import java.util.Scanner;
public class q3{
public static void main(String[] args) {
int count, temp;
Scanner scan = new Scanner(System.in);
System.out.print("Enter number of elements you want in the array: ");
count = scan.nextInt();
int num[] = new int[count];
System.out.println("Enter array elements:");
for (int i=0; i<count; i++) {
num[i] = scan.nextInt();
}
scan.close();
for (int i=0; i<count; i++) {
for (int j=i+1; j<count; j++) {
if (num[i] > num[j]) {
temp = num[i];
num[i] = num[j];
num[j] = temp;
}
}
}
System.out.print("Array Elements in Ascending Order: ");
for (int i = 0; i < count - 1; i++) {
System.out.print(num[i] + ", ");
}
System.out.print(num[count - 1]);
}
}
```

ISHU KUMAR 2006270

OUTPUT:

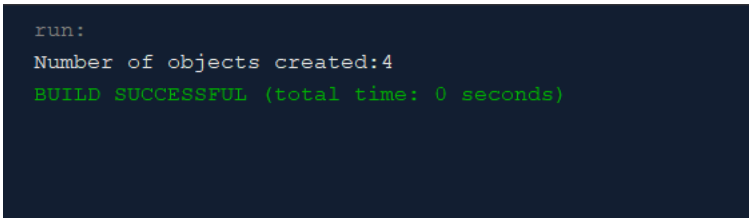
```
run:
Enter number of elements you want in the array: 4
Enter array elements:
4
2
6
9
Array Elements in Ascending Order: 2, 4, 6, 9BUILD SUCCESSFUL (total time: 9 seconds)
```

Q-4 write a java program to count the total number of objects(of a certain class) created

Code :-

```
package lab5;

public class Q4 {

    static int count = 0;

    Q4() {
        count++;
    }

    public static void main(String[] args) {
        Q4 obj1 = new Q4();
        Q4 obj2 = new Q4();
        Q4 obj3 = new Q4();
        Q4 obj4 = new Q4();
        System.out.println("Number of objects created:" + count);
    }

}
```

ISHU KUMAR 2006270
OUTPUT:



Q-5 Write a java program to create objects and show destructor calls and also find out the total number of objects destroyed.

CODE:

```
package lab5;

public class Q5 {

   static int count = 0;

   Q5() {
   }

   protected void finalize() {
      count++;
      System.out.println("Object Destroyed");
   }

   public static void main(String[] args) {

      Q5 ob = new Q5();
      Q5 ob1 = new Q5();
      Q5 ob2 = new Q5();
      ob.finalize();
      ob1.finalize();
      ob2.finalize();
      System.gc();
      System.out.println("Total no. of objects Destroyed: " + count);
   }
}
```

OUTPUT:

```
run:
Object Destroyed
Object Destroyed
Object Destroyed
Total no. of objects Destroyed: 3
BUILD SUCCESSFUL (total time: 0 seconds)
```

Q-6 Write a java program to find out the total number of occurrences of an element in a user input array.

Code :-

```
package lab5;

import java.util.Scanner;

public class Q6 {

    public static void main(String[] args) {
        int n, x, count = 0, i = 0;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the no of elements : ");
        n = sc.nextInt();
        int a[] = new int[n];
        System.out.println("Enter all the elements: ");
        for (i = 0; i < n; i++) {
            a[i] = sc.nextInt();
        }
        System.out.println("Enter the element of which you want to count number of occurrences: ");
        x = sc.nextInt();
        for (i = 0; i < n; i++) {
            if (a[i] == x) {
                count++;
            }
        }
        System.out.println("Number of Occurrence : " + count);
    }

}
```

ISHU KUMAR 2006270

OUTPUT:

```
run:
Enter the no of elements :
4
Enter all the elements:
1 1 4 5
Enter the element of which you want to count number of occurrences:
1
Number of Occurrence : 2
BUILD SUCCESSFUL (total time: 8 seconds)
```

ISHU KUMAR 2006270

Q-7 write a java program to find the sum of each diagonal element separately of a user-entered 3x3 matrix

CODE:

```
package lab5;
import java.util.*;
public class Q7 {

    public static void main(String[] args) {
        int LeftDiag = 0;
        int RightDiag = 0;
        Scanner sc = new Scanner(System.in);
        int[][] arr = new int[3][3];
        System.out.println("Enter 9 elements : ");
        for (int i = 0; i < 3; i++) {
            for (int j = 0; j < 3; j++) {
                arr[i][j] = sc.nextInt();
                if (i == j) {
                    RightDiag += arr[i][j];
                }
            }
        }
        int m = 3;
        for (int i = 0; i < 3; i++) {
            m--;
            for (int j = 0; j < 3; j++) {
                if (j == m) {
                    LeftDiag += arr[i][j];
                }
            }
        }
        System.out.println("Right Diagonal sum : " + RightDiag);
```

```
        System.out.println("Left Diagonal sum : " + LeftDiag);
    }

}
```

OUTPUT:

```
run:
Enter 9 elements :
1 2 3 4 5 6 7 8 9
Right Diagonal sum : 15
Left Diagonal sum : 15
BUILD SUCCESSFUL (total time: 7 seconds)
```

ISHU KUMAR 2006270