Meet - hip-dfph-xws

meet.google.com/hip-dfph-xws?pli=1&authuser=1

REC

Naresh Sammeta is presenting

4093 NEL
and 21 mo

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REG NO:

ANNA UNIVERSITY PRACTICAL EXAMINATION - DECEMBER 2020

COLLEGE CODE: 1116
YEAR / SEM: II / III
DEGREE: B.E

SUBJECT CODE: CS8383
SUBJECT: OBJECT ORIENTED PROGRAMMING LAB
MARKS: 100

Question: 17

119

Write a Java program to perform the following task.

- Take an integer array of size 20, initialize values randomly between 10 and 90, simultaneously sum all values and calculate average. Now separate values below average and above average in ArrayLists. Finally print both lists in 2 separate rows.

MCQ (15)	Aim & Procedure (15)	Program (30)	Output & Results (20)	Viva-Voce (10)	Record (10)	Total (100)

INTERNAL EXAMINER

EXTERNAL EXAMINER

Type here to search

ENG 13:19 21-12-2020

Meeting details

Reg. No: 111619104119

Subject Name: OBJECT ORIENTED PROGRAMMING LABORATORY

Subject Code: CS 8383

College Code: 1116

Session: AfterNoon

Date: 21.12.2020

Question NO: 17

Write a Java program to perform the following task.

Take an array size of 20. Randomly give the values between 10 and 90 and calculate the sum simultaneously and find the average. Now separate the values below average and above average in Arraylists and finally print the both lists.

AIM:-

To write a Java program to declare an array with 20 values and separate them into two arraylist based on the average of the initial array.

PROCEDURE:-

* Declare an arraylist which consists of 20 values ranging from 10 to 90. And 2 empty arraylist.
* Find the average of the arraylist by adding the values and diving the sum by 20.
* Now traverse through the arraylist and check whether the values lesser or greater than the average of the initial list.
* If the value is lesser add it to the any one of the empty arraylist so it will contain only values less than average and similarly for values greater than average.
* Thus at the end we get two arraylist with one values less than average and another with values greater than average.

xc

PROGRAM: -

```
package array;
import java.util.*;
public class Main {
    public static void main(String[] args) {
        int[] A = new[] {10,15,20,25,30,35,40,45,50,55,
                         60,65,70,75,80,85,86,87,88,89};
        int S=0;
        for(int i=0; i<20; i++) {
            S+ = A[i];
        }
        int avg = S/20;
        Scanner sc = new Scanner(System.in);
        ArrayList<Integer> a1 = new ArrayList<Integer>();
        ArrayList<Integer> a2 = new ArrayList<Integer>();
        for(int i=0; i<20; i++) {
            if( A[i] <= avg) {
                a1.add(A[i]);
            }
            else {
                a2.add(A[i]);
            }
        int x;
        System.out.println("Array List with numbers
                                less than average");
        for( int i=0; i<a1.size(); i++) {
            x = a1.get(i);
            System.out.print(x+" ");
        }
```

```
System.out.println("Array List with numbers more than average");

for(int i=0; i<a2.size(); i++){
    x = a2.get(i);
    System.out.print(x+" ");
  }
 }
}
```

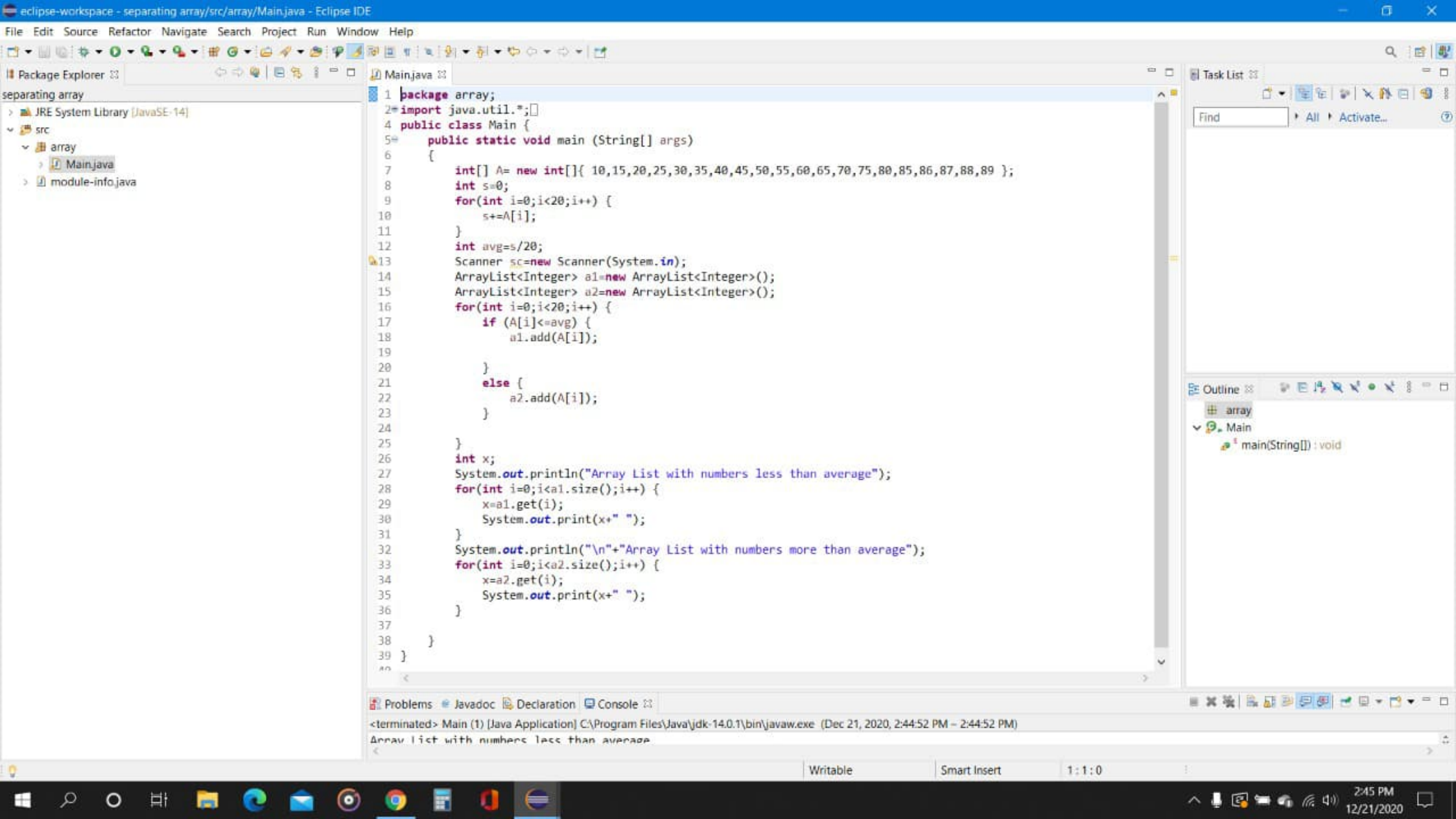
SAMPLE OUTPUT:-

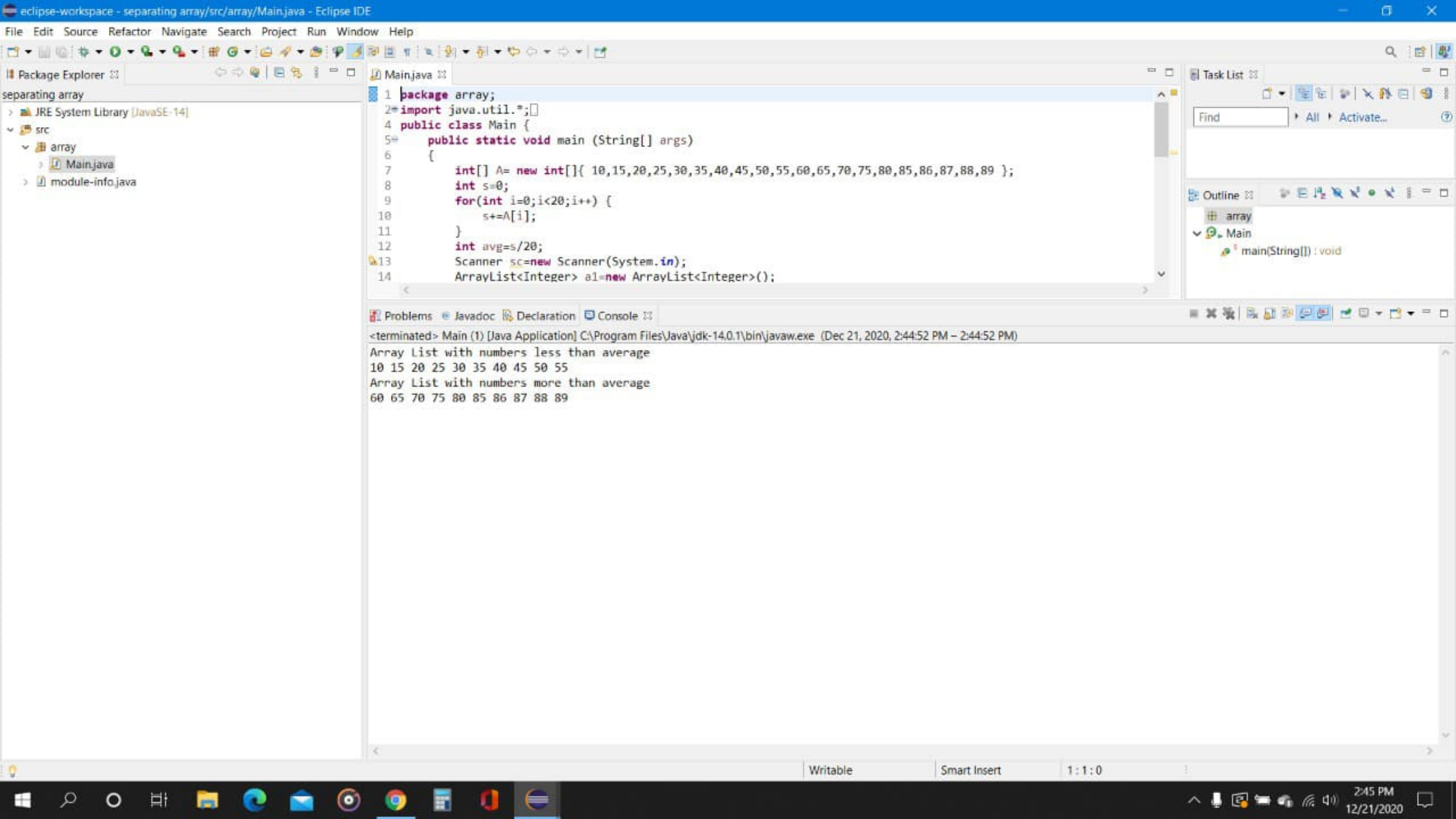
Array list with number less than average

10 15 20 25 30 35 40 45 50 55

Array list with number more than average

60 65 70 75 80 85 86 87 88 89


eclipse-workspace - separating array/src/array/Main.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
separating array
JRE System Library [JavaSE-14]
src
array
Main.java
module-info.java
Main.java
1 package array;
2 import java.util.*;
4 public class Main {
5 public static void main (String[] args)
6 {
7 int[] A= new int[]{ 10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,86,87,88,89 };
8 int s=0;
9 for(int i=0;i<20;i++) {
10 s+=A[i];
11 }
12 int avg=s/20;
13 Scanner sc=new Scanner(System.in);
14 ArrayList<Integer> a1=new ArrayList<Integer>();
15 ArrayList<Integer> a2=new ArrayList<Integer>();
16 for(int i=0;i<20;i++) {
17 if (A[i]<=avg) {
18 a1.add(A[i]);
20 }
21 else {
22 a2.add(A[i]);
23 }
25 }
26 int x;
27 System.out.println("Array List with numbers less than average");
28 for(int i=0;i<a1.size();i++) {
29 x=a1.get(i);
30 System.out.print(x+" ");
31 }
32 System.out.println("\n"+"Array List with numbers more than average");
33 for(int i=0;i<a2.size();i++) {
34 x=a2.get(i);
35 System.out.print(x+" ");
36 }
38 }
39 }
Task List
Find
All
Activate...
Outline
array
Main
main(String[]) : void
Problems
Javadoc
Declaration
Console
<terminated> Main (1) [Java Application] C:\Program Files\Java\jdk-14.0.1\bin\javaw.exe (Dec 21, 2020, 2:44:52 PM – 2:44:52 PM)
Array List with numbers less than average
Writable
Smart Insert
1 : 1 : 0
2:45 PM
12/21/2020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5 public static void main (String[] args)
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8 int s=0;
9 for(int i=0;i<20;i++) {
10 s+=A[i];
11 }
12 int avg=s/20;
13 Scanner sc=new Scanner(System.in);
14 ArrayList<Integer> a1=new ArrayList<Integer>();
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Array List with numbers more than average
60 65 70 75 80 85 86 87 88 89
Writable
Smart Insert
1 : 1 : 0
2:45 PM
12/21/2020

Result;-

Thus the java program to separate a array based on average is executed successfully.