JAVA ASSIGNMENT

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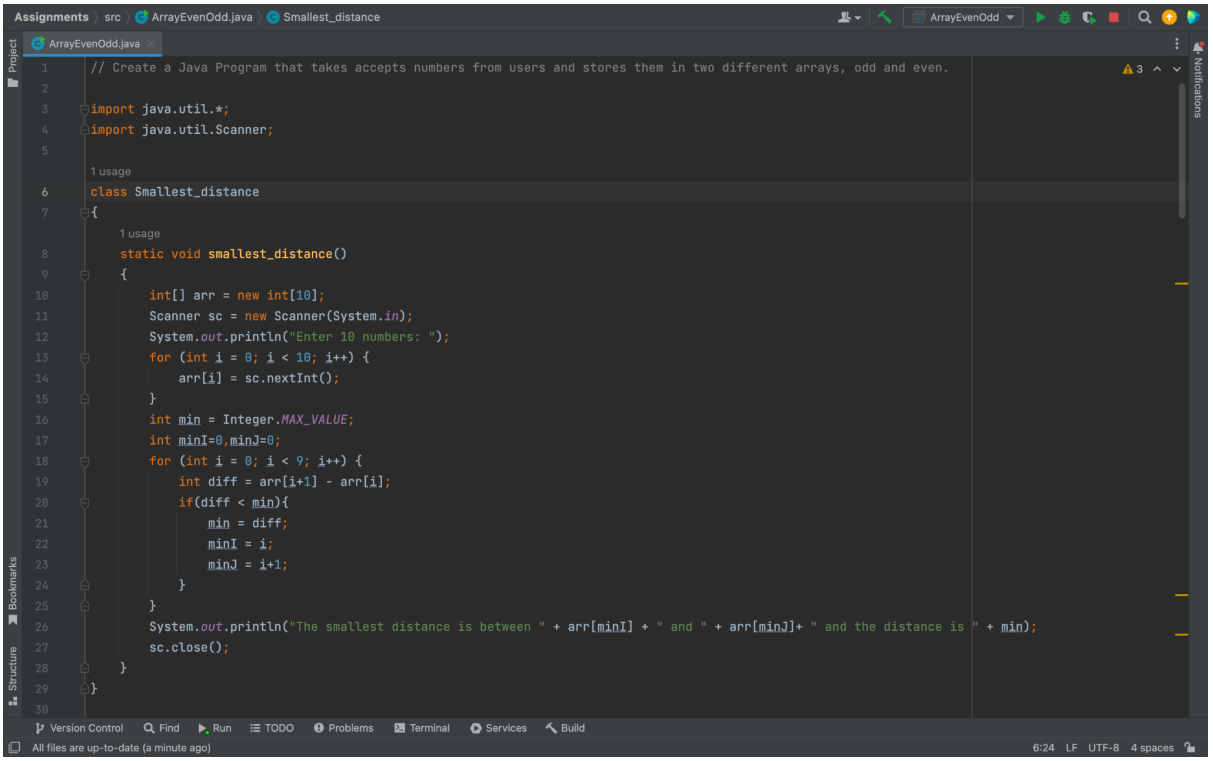
AIML A1

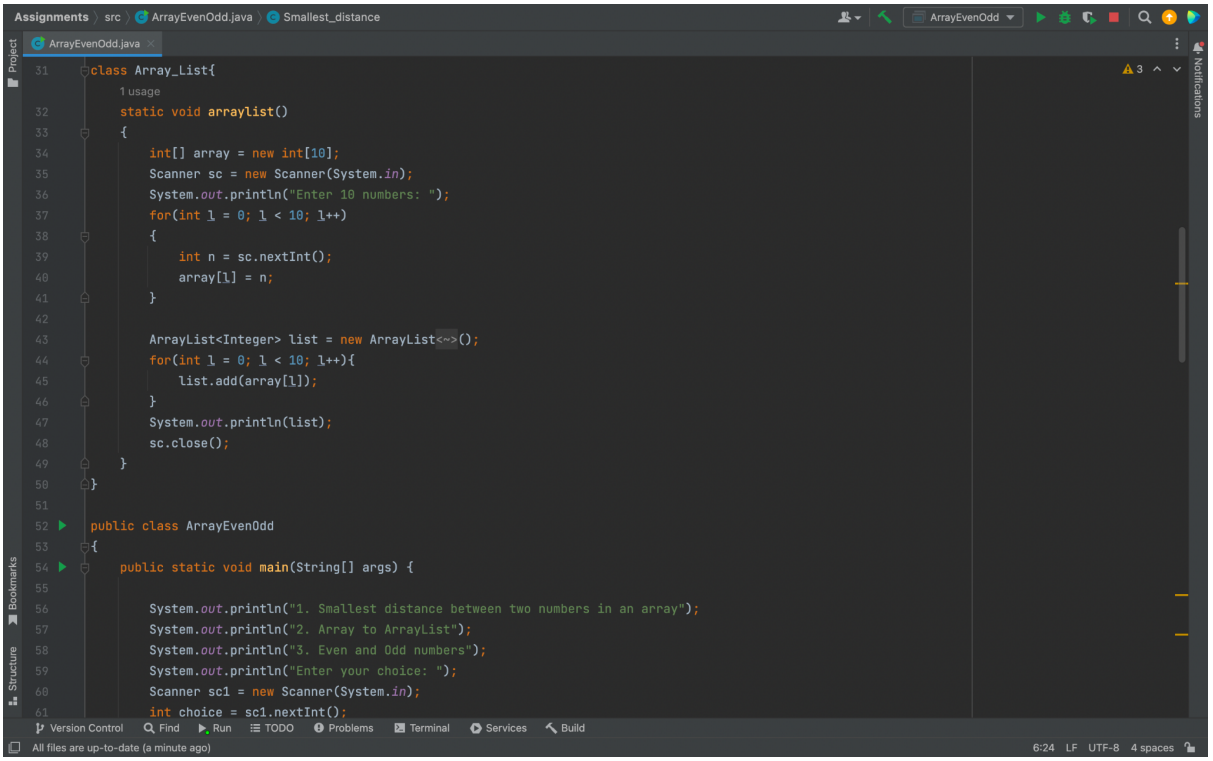
QUESTION:-

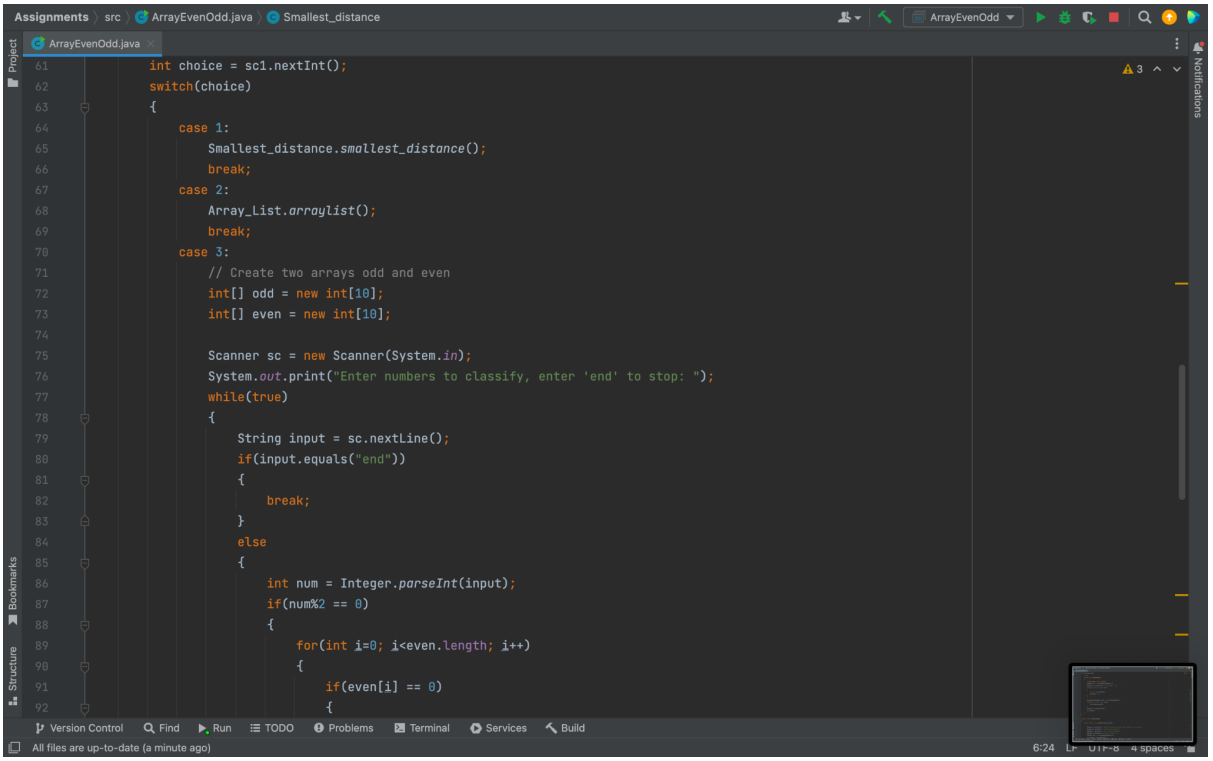
Part1: Write a Java program that declares two arrays named ‘even’ and ‘odd’. Accept numbers from the user and move them to respective arrays depending on whether they are even or odd.

Part2: Implement a java function that finds 2 neighbouring numbers in an array with the smallest distance to each. The function should return the index of the 1st number.

Part 3: Write a Java program to convert an array into ArrayList and vice versa.

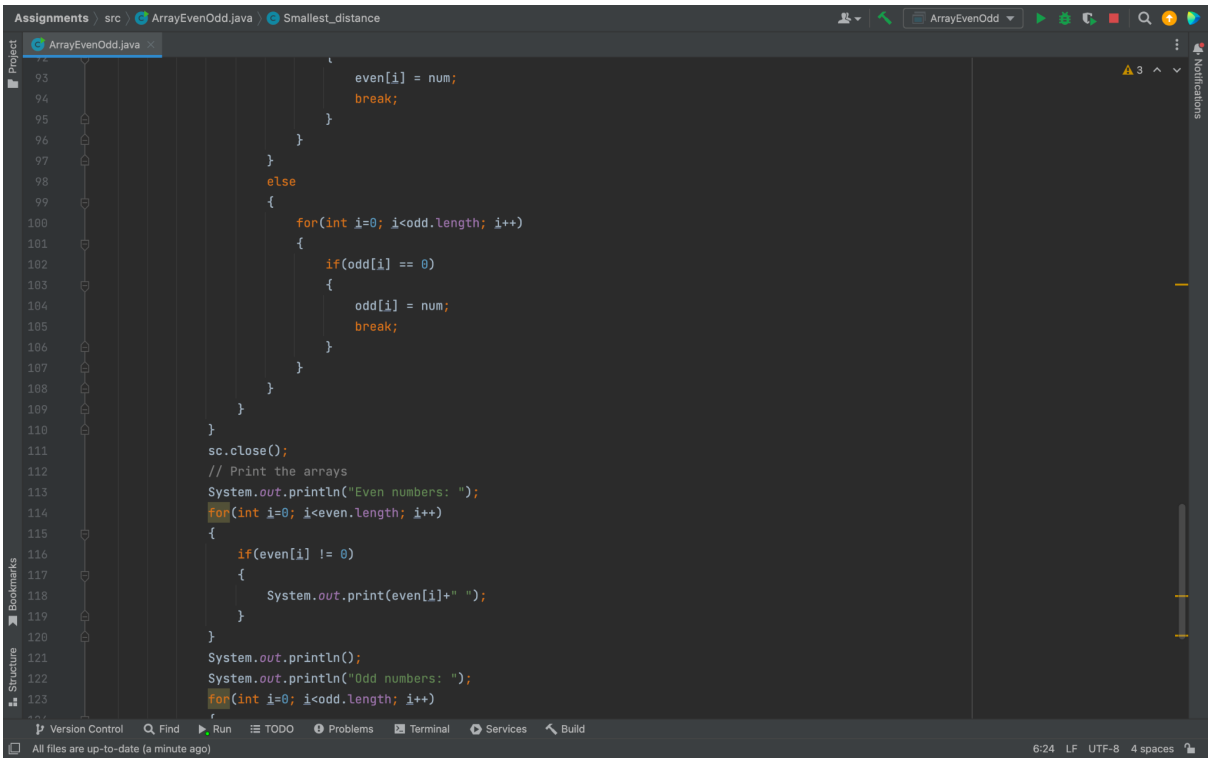



Assignments
src
ArrayEvenOdd.java
Smallest_distance
ArrayEvenOdd
ArrayEvenOdd.java
class Array_List{
1 usage
static void arraylist()
{
int[] array = new int[10];
Scanner sc = new Scanner(System.in);
System.out.println("Enter 10 numbers: ");
for(int l = 0; l < 10; l++)
{
int n = sc.nextInt();
array[l] = n;
}
ArrayList<Integer> list = new ArrayList<~>();
for(int l = 0; l < 10; l++){
list.add(array[l]);
}
System.out.println(list);
sc.close();
}
}
public class ArrayEvenOdd
{
public static void main(String[] args) {
System.out.println("1. Smallest distance between two numbers in an array");
System.out.println("2. Array to ArrayList");
System.out.println("3. Even and Odd numbers");
System.out.println("Enter your choice: ");
Scanner sc1 = new Scanner(System.in);
int choice = sc1.nextInt();
Version Control
Find
Run
TODO
Problems
Terminal
Services
Build
All files are up-to-date (a minute ago)
6:24
LF
UTF-8
4 spaces
Project
Bookmarks
Structure
Notifications

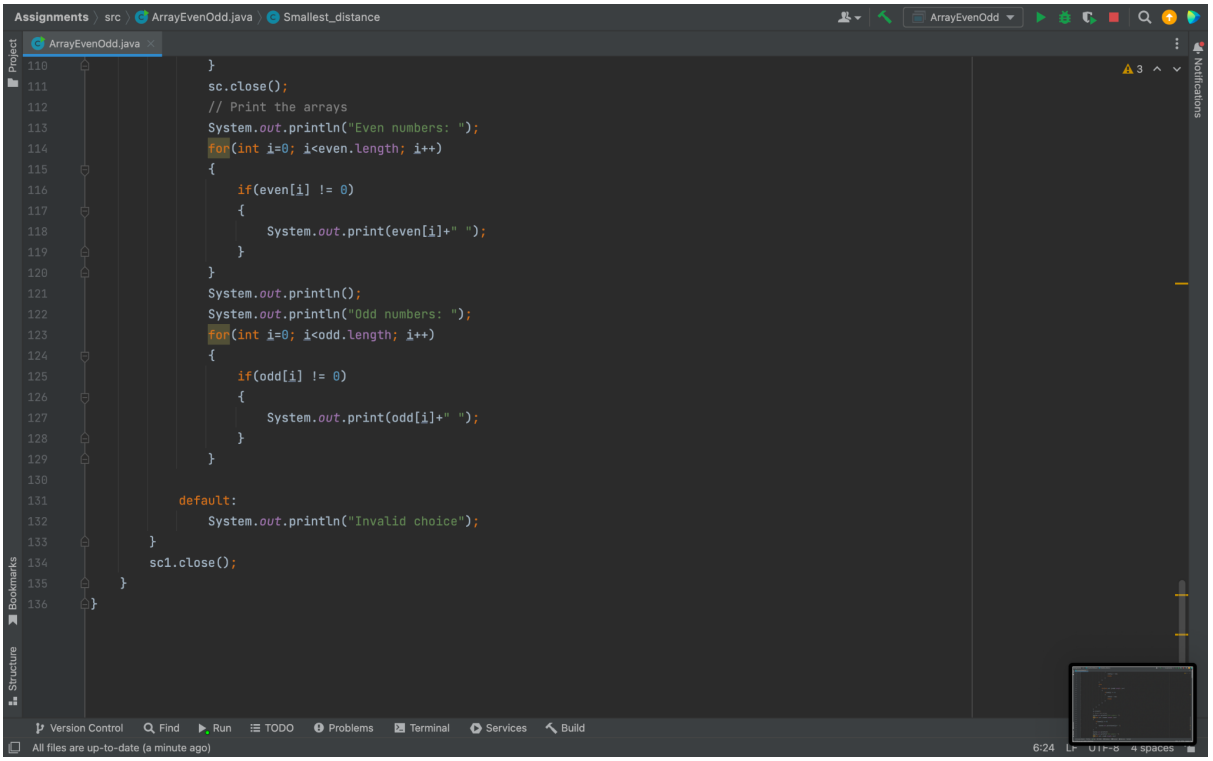


```
int choice = sc1.nextInt();
switch(choice)
{
    case 1:
        Smallest_distance.smallest_distance();
        break;
    case 2:
        Array_List.arraylist();
        break;
    case 3:
        // Create two arrays odd and even
        int[] odd = new int[10];
        int[] even = new int[10];

        Scanner sc = new Scanner(System.in);
        System.out.print("Enter numbers to classify, enter 'end' to stop: ");
        while(true)
        {
            String input = sc.nextLine();
            if(input.equals("end"))
            {
                break;
            }
            else
            {
                int num = Integer.parseInt(input);
                if(num%2 == 0)
                {
                    for(int i=0; i<even.length; i++)
                    {
                        if(even[i] == 0)
                        {
```



```
                            even[i] = num;
                            break;
                        }
                    }
                }
                else
                {
                    for(int i=0; i<odd.length; i++)
                    {
                        if(odd[i] == 0)
                        {
                            odd[i] = num;
                            break;
                        }
                    }
                }
            }
        }
        sc.close();
        // Print the arrays
        System.out.println("Even numbers: ");
        for(int i=0; i<even.length; i++)
        {
            if(even[i] != 0)
            {
                System.out.print(even[i]+" ");
            }
        }
        System.out.println();
        System.out.println("Odd numbers: ");
        for(int i=0; i<odd.length; i++)
```


Assignments
src
ArrayEvenOdd.java
Smallest_distance
ArrayEvenOdd
ArrayEvenOdd.java
}
sc.close();
// Print the arrays
System.out.println("Even numbers: ");
for(int i=0; i<even.length; i++)
{
if(even[i] != 0)
{
System.out.print(even[i]+" ");
}
}
System.out.println();
System.out.println("Odd numbers: ");
for(int i=0; i<odd.length; i++)
{
if(odd[i] != 0)
{
System.out.print(odd[i]+" ");
}
}
default:
System.out.println("Invalid choice");
}
sc1.close();
}
}
Project
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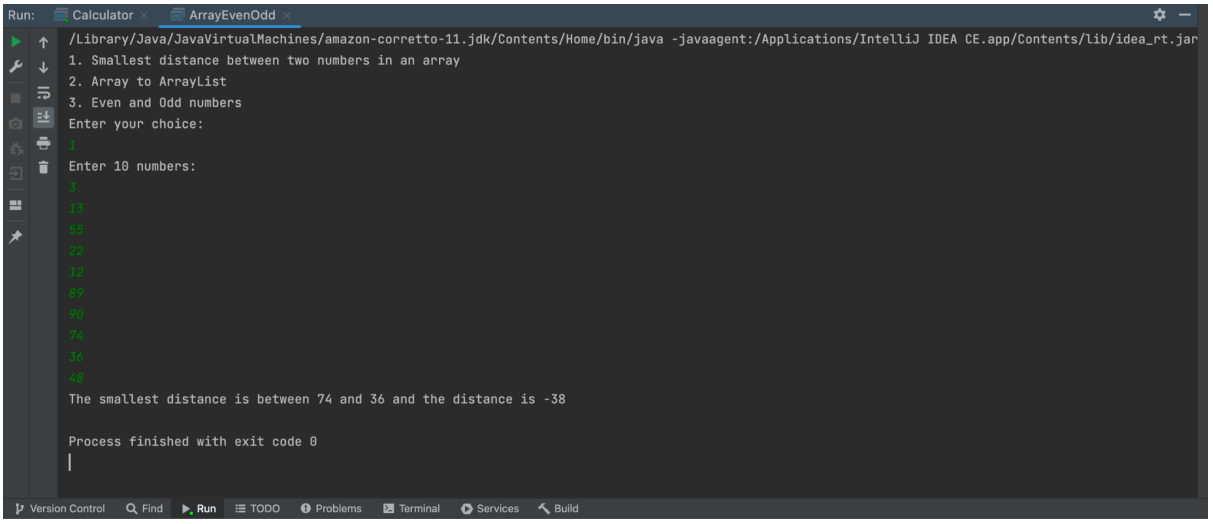
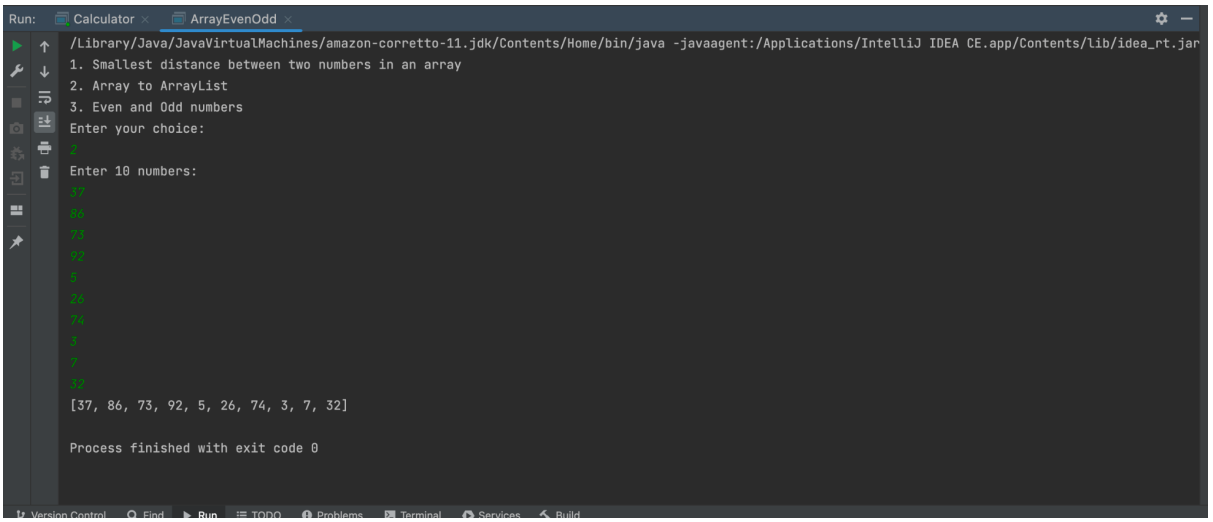
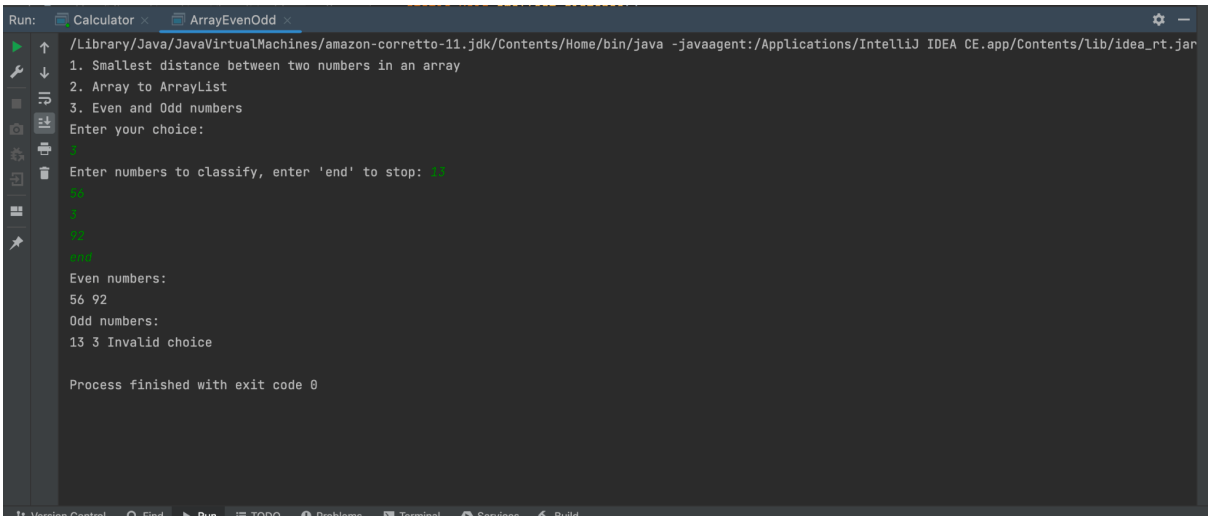
6:24
4 spaces

OUTPUT: -


Run: Calculator ArrayEvenOdd
/Library/Java/JavaVirtualMachines/amazon-corretto-11.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA CE.app/Contents/lib/idea_rt.jar
1. Smallest distance between two numbers in an array
2. Array to ArrayList
3. Even and Odd numbers
Enter your choice:
1
Enter 10 numbers:
3
13
55
22
12
89
90
74
36
48
The smallest distance is between 74 and 36 and the distance is -38
Process finished with exit code 0
Version Control Find Run TODO Problems Terminal Services Build


Run: Calculator ArrayEvenOdd
/Library/Java/JavaVirtualMachines/amazon-corretto-11.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA CE.app/Contents/lib/idea_rt.jar
1. Smallest distance between two numbers in an array
2. Array to ArrayList
3. Even and Odd numbers
Enter your choice:
2
Enter 10 numbers:
37
86
73
92
5
26
74
3
7
32
[37, 86, 73, 92, 5, 26, 74, 3, 7, 32]
Process finished with exit code 0


Run: Calculator ArrayEvenOdd
/Library/Java/JavaVirtualMachines/amazon-corretto-11.jdk/Contents/Home/bin/java -javaagent:/Applications/IntelliJ IDEA CE.app/Contents/lib/idea_rt.jar
1. Smallest distance between two numbers in an array
2. Array to ArrayList
3. Even and Odd numbers
Enter your choice:
3
Enter numbers to classify, enter 'end' to stop: 13
56
3
92
end
Even numbers:
56 92
Odd numbers:
13 3 Invalid choice
Process finished with exit code 0

GITHUB LINK:-

https://github.com/anvesha31/Java_assignments/blob/b20d007b37b15c1784d64346fa0571539d8a9d15/Assignment%202