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Flexi Credit Course (Assignment_2)

Github- https://github.com/Abhinav-kr-2807/JAVA

Problem Statement-Write a 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.

Code-

```
package EvenOddArray;
import java.util.*;
import java.util.Scanner;

class Smallest_distance
{
   static void smallest_distance()
   {
      int[] arr = new int[10];
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter 10 numbers: ");
      for (int i = 0; i < 10; i++) {
         arr[i] = sc.nextInt();
      }
      int min = Integer.MAX_VALUE;
      int minI=0,minJ=0;
      for (int i = 0; i < 9; i++) {
         int diff = arr[i+1] - arr[i];
         if(diff < min){
            min = diff;
            minI = i;
            minJ = i+1;
         }
      }
      System.out.println("The smallest distance is between " + arr[minI] + " and " + arr[minJ]+
" and the distance is " + min);
      sc.close();
   }
}

class Array_List{
```

```
    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<Integer>();
        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();
        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++)
            {
               if(odd[i] != 0)
               {
                  System.out.print(odd[i]+" ");
               }
            }

         default:
            System.out.println("Invalid choice");
      }
      sc1.close();
   }
}
```

Output-

```
OUTPUT:
Enter 10 numbers:
Enter a number: 5
Enter a number: 2
Enter a number: 7
Enter a number: 1
Enter a number: 9
Enter a number: 22
Enter a number: 9
Enter a number: 12
Enter a number: 14
Enter a number: 19


Even numbers:
2
22
12
14
Odd numbers:
5
7
1
9
9
19


Enter 10 numbers:
Enter a number: 2
Enter a number: 13
Enter a number: 56
Enter a number: 89
Enter a number: 12
Enter a number: 11
Enter a number: 54
```