



Assignment_2

Apoorv Gupta - 21070126018

```
import java.util.Scanner;
import java.util.ArrayList;

public class As_2_array {
    public static void main(String arg[])
    {
        even_odd obj1 = new even_odd();
        obj1.accept();
        obj1.display();
        distance obj2 = new distance();
        obj2.smallest_distance();
        convert obj3 = new convert();
        obj3.array_list();
        obj3.array_list_2();
    }
}

class even_odd
{
    int even[] = new int[10];
    int odd[] = new int[10];
    int i, j, k;
    void accept()
    {
        Scanner obj = new Scanner(System.in);
        for(i = 0; i < 10; i++)
        {
            System.out.print("Enter a number: ");
            int a = obj.nextInt();
            if(a % 2 == 0)
            {
                even[j] = a;
                j++;
            }
            else
            {
                odd[k] = a;
                k++;
            }
        }
    }
    void display()
    {
        System.out.println("Even numbers: ");
        for(i = 0; i < j; i++)
        {
            System.out.println(even[i]);
        }
        System.out.println("Odd numbers: ");
    }
}
```

```

        for(i = 0; i < k; i++)
        {
            System.out.println(odd[i]);
        }
    }
}

class distance
{
    void smallest_distance() {
        Scanner obj = new Scanner(System.in);
        int a[] = new int[10];
        for (int i = 0; i < 10; i++) {
            System.out.print("Enter a number: ");
            a[i] = obj.nextInt();
        }
        int i, j, min = 1000, index1 = 0, index2 = 0;
        for (i = 0; i < 10; i++) {
            for (j = i + 1; j < 10; j++) {
                if (Math.abs(a[i] - a[j]) < min) {
                    min = Math.abs(a[i] - a[j]);
                    index1 = i;
                    index2 = j;
                }
            }
        }
        System.out.println("The 2 numbers with the smallest distance are: " + a[index1] + " and " + a[index2]);
        System.out.println("The index of the first number is: " + index1);
    }
}

class convert
{
    void array_list()
    {
        int a[] = {1, 2, 3, 4, 5};
        ArrayList<Integer> ar = new ArrayList<Integer>();
        for(int i = 0; i < a.length; i++)
        {
            ar.add(a[i]);
        }
        System.out.println("Array list: "+ ar);
    }

    void array_list_2()
    {
        //array list into array
        ArrayList<Integer> ar = new ArrayList<Integer>();
        for (int i= 0 ; i < 5; i++)
        {
            ar.add(i);
        }
        int a[] = new int[ar.size()];
        for (int i = 0; i < ar.size(); i++)
        {
            a[i] = ar.get(i);
        }
        System.out.println("Array: " );
        for (int i = 0; i < a.length; i++)
        {
            System.out.print(a[i] + " ");
        }
    }
}

```

OUTPUT:

```
Enter 10 numbers:
Enter a number: 1
Enter a number: 2
Enter a number: 3
Enter a number: 4
Enter a number: 5
Enter a number: 6
Enter a number: 7
Enter a number: 8
Enter a number: 9
Enter a number: 10
```

Even numbers:

```
2
4
6
8
10
```

Odd numbers:

```
1
3
5
7
9
```

Enter 10 numbers:

```
Enter a number: 2
Enter a number: 5
Enter a number: 8
Enter a number: 11
Enter a number: 14
Enter a number: 18
Enter a number: 21
Enter a number: 25
Enter a number: 33
Enter a number: 42
The 2 numbers with the smallest distance are: 2 and 5
The index of the first number is: 0
```

Converting array to array list

Array list: [1, 2, 3, 4, 5]

Converting array list to array

Array:
0 1 2 3 4

Github:

SIT_java_assignment_codes/assignment_2 at main · erApoorvGupta/SIT_java_assignment_codes

You can't perform that action at this time. You signed in with another tab or window. You signed out in another tab or window. Reload to refresh your session. Reload to refresh your session.

 https://github.com/erApoorvGupta/SIT_java_assignment_codes/tree/main/assignment_2

erApoorvC
SIT_java_a
SEM4 assignment

As 1
Contributor

https://github.com/erApoorvGupta/SIT_java_assignment_codes/tree/main/assignment_2