DESMOND RICHARD DOSS.L

JAVA TASK-5

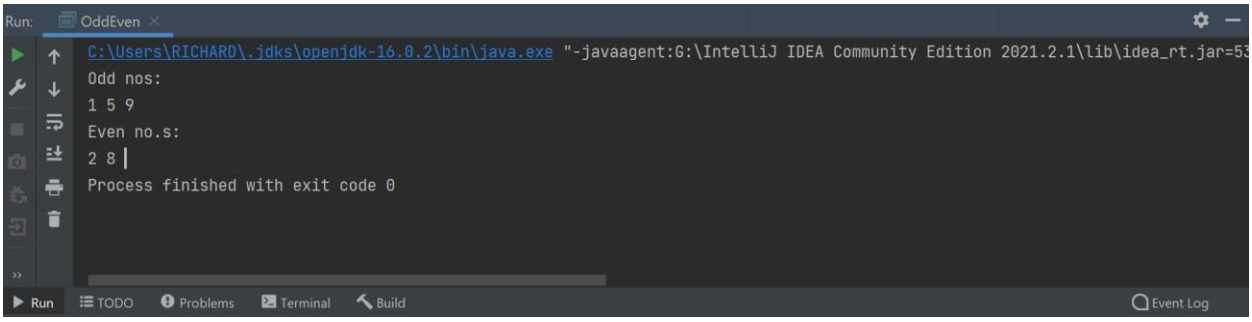
1. Write a java program to Read an array from the keyboad and separate odd numbers and even numbers in to two different arrays:

program:

```
package com.desmond.javatask;
class d{
   void display(){
      int a[] = {1, 5, 2, 8, 9};
      System.out.println("Odd nos:");
      for(int i=0;i<a.length;i++){
         if(a[i]%2!=0){
            System.out.print(a[i]+" ");
         }

      }
      System.out.println(); //for new line
      System.out.println("Even no.s:");
      for(int i=0;i<a.length;i++){
         if(a[i]%2==0){
            System.out.print(a[i]+" ");
         }
      }
   }
}
public class OddEven {
   public static void main(String[] args) {
   d obj=new d();
   obj.display();
```

```
    }
}
```

o/p:



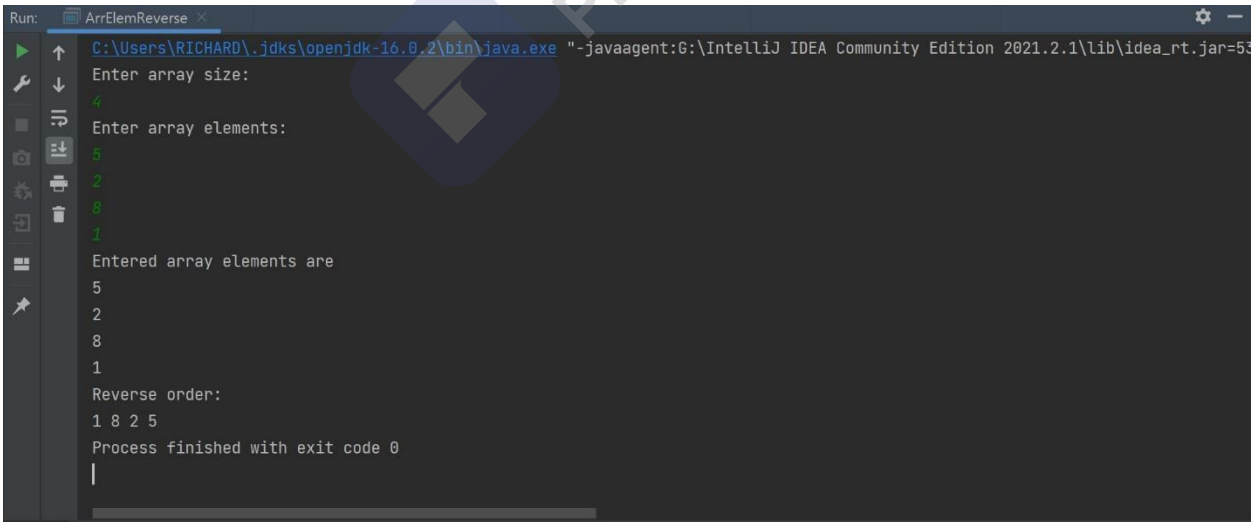
2. program to reverse the content of an array:

Program:

```
package com.desmond.javatask;


import java.util.Scanner;


class Sample3{
   void display(){
      int size; //declared size
      Scanner input =new Scanner(System.in);
      System.out.println("Enter array size:");
      size=input.nextInt();//initialized size value
      int arr[]=new int[size];//declared array elements
      System.out.println("Enter array elements:");
      for(int i=0;i<size;i++){ //initialized array elements
         arr[i]=input.nextInt();//decl array elements
      }
      System.out.println("Entered array elements are");
      for(int i=0;i<size;i++){
```

```
            System.out.println(arr[i]);
        }
        System.out.println("Reverse order:");
        for(int i= arr.length-1;i>=0;i--){
            System.out.print(arr[i]+" ");
        }

    }
}
 class ArrElemReverse {
    public static void main(String[] args) {
        Sample3 s=new Sample3();
        s.display();
    }
}
```

o/p:



3. Write a program to sort an array:

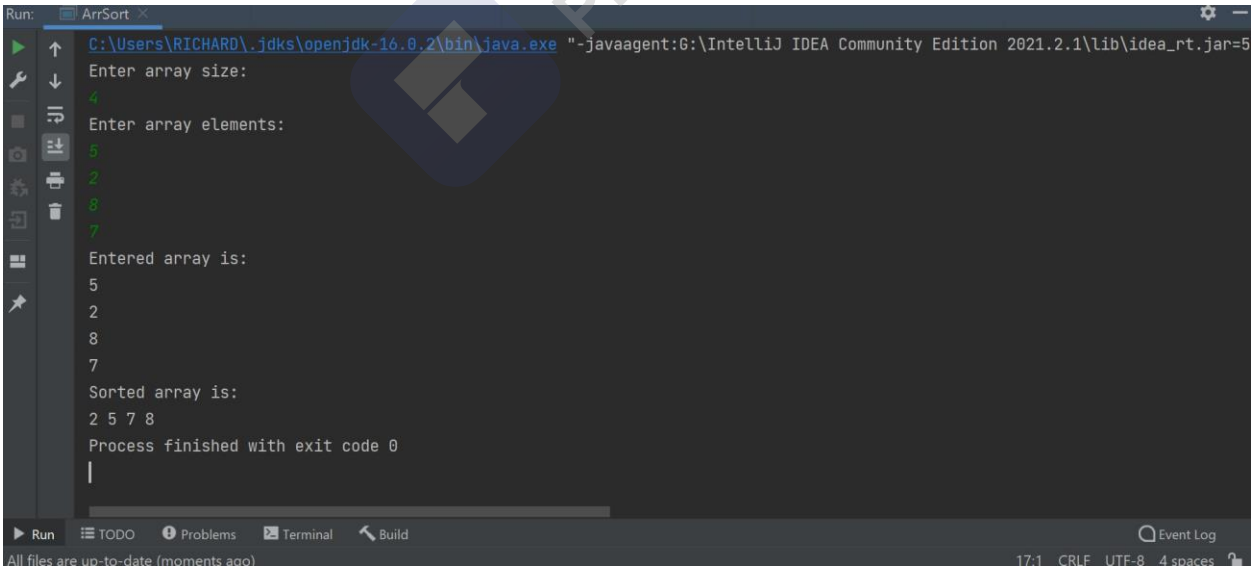
Program:

```
package com.desmond.javatask;
```

```
import java.util.Scanner;


class Sample4{
   void display(){
      int size;//declared array size
      int temp=0;
      Scanner input=new Scanner(System.in);
      System.out.println("Enter array size:");
      size=input.nextInt();//initialized array size
      int arr[]=new int[size];//declared array elements
      System.out.println("Enter array elements:");
      for(int i=0;i<size;i++){
         arr[i]=input.nextInt(); //initialized arr elements
      }
      System.out.println("Entered array is:");
      for(int i=0;i<size;i++){
         System.out.println(arr[i]);
      }
      //sorting operation starts:
      for(int i=0;i<size;i++){    //compares i's 0 index with j's 1 index then i's 1 index and j's 2 index..
         for(int j=i+1;j<size;j++){
            if(arr[i]>arr[j]){
               temp=arr[i]; //swapping operation
               arr[i]=arr[j];
               arr[j]=temp;
            }
         }
      }
```

```
        System.out.println("Sorted array is:");
        for(int i=0;i<size;i++){
            System.out.print(arr[i]+" ");
        }
    }
}

public class ArrSort {
    //Ascending order
    public static void main(String[] args) {
        Sample4 s=new Sample4();
        s.display();

    }
}
```

o/p:



4. Given an array containing value between 1 and n , the array is not sorted and one the value is missing find out the value that is missing

for example

1 ,4 ,6, 2, 3,8,7

In the above array contains numbers from 1 to 8 , the missing out number is 5

Program:

```
package com.desmond.javatask;


import java.util.Scanner;


class Sample5{
   void display(){
      int size;//declared array size
      Scanner input=new Scanner(System.in);
      System.out.println("enter array size:");
      size=input.nextInt();//init array size
      int arr[]=new int[size];//declared array elements
      System.out.println("Enter n-1 elements:");
      for(int i=0;i<=size-2;i++){
         arr[i]=input.nextInt(); //init array elements
      }
      //finding missing no operation:
      int sumAll=(size*(size+1))/2; //=15 so,1+2+3+4+5=15     (eg:5 as size)
      int sumArray=0;
      for(int i=0;i<=size-2;i++){
         sumArray=sumArray+arr[i]; //1+2+3+4+5=15 =sumArray
         //sumAll=1,2,4,5(input from user)=12
      }
      int missingNo=sumAll-sumArray; //15-12=3
      System.out.println("missing number is:"+missingNo);
   }
```

```
}
public class MissingNoinArray {
   public static void main(String[] args) {
      Sample5 s=new Sample5();
      s.display();

   }
}
```

o/p:

5. Consider two arrays that contains the arrival and departure time of trains in a station find out the minimum number of platform should be available so that no train will be waiting to get a platform

example

int [] arrival ={10:20,11:00,11:10,12:40,12:15,12:30}

int [] departure ={10:40,11:20,12:00,12:50,13:20,12:45}

in the above example the first array containt the arrival time of all trains and the

second array contains the departure time of the trains in the same order of the arrival times

that is index 0 in arrival array contains of a arraival time of a train

and the index 0 in departure array contain the departure time of the same trains and so on..

Program:

```
package com.desmond.javatask;


import java.util.Arrays;


class T{
    int findPlatforms1(double arr[], double dep[], int n)
   {
      int platform_needed = 0, m= 0;
      Arrays.sort(arr);
      Arrays.sort(dep);
      int i = 0, j = 0;
      while (i < n && j < n)
      {
         if (arr[i] < dep[j])
         {
            platform_needed++;
            i++;
            if (platform_needed > m)
               m = platform_needed;
         }
         else
         {
            platform_needed--;
            j++;
         }
      }
      return m;
   }
```

```
}
public class NewTrainsArr {
   public static void main(String[] args) {
      double arr[] = {12.20, 11.00, 11.10, 12.40, 12.15, 12.30};
      double dep[] = {10.40, 11.20, 12.00, 12.50, 13.20, 12.45};
      T ob=new T();
      System.out.println("Minimum number of platform required is:");
      System.out.println(ob.findPlatforms1(arr,dep,6));
   }
}
```

o/p:

6. Read a number as input and display all the pairs in array which will sum up to the given input:

Program:

```
package com.desmond.javatask;


import java.util.Scanner;


class Sample6{
   void display(){
```

```
        int size,sum=0;//declared size
        Scanner input=new Scanner(System.in);
        System.out.println("Enter array size:");
        size=input.nextInt();//init size

        int arr[]=new int[size];//decl array elements
        System.out.println("enter array elements: ");
        for(int i=0;i<size;i++){
            arr[i]=input.nextInt();//init array elements
            sum=sum+arr[i];
        }
        System.out.println(sum);
    }
}
class SuminputArr {
    public static void main(String[] args) {
        Sample6 s=new Sample6();
        s.display();
        }
    }
```

o/p:

```
C:\Users\RICHARD\.jdks\openjdk-16.0.2\bin\java.exe "-javaagent:G:\IntelliJ IDEA Community Edition 2021.2.1\lib\idea_rt.jar=53
Enter array size:
5
enter array elements:
5
2
9
6
1
23

Process finished with exit code 0
```

7. In an array find the maximium number of consecutive occurence value

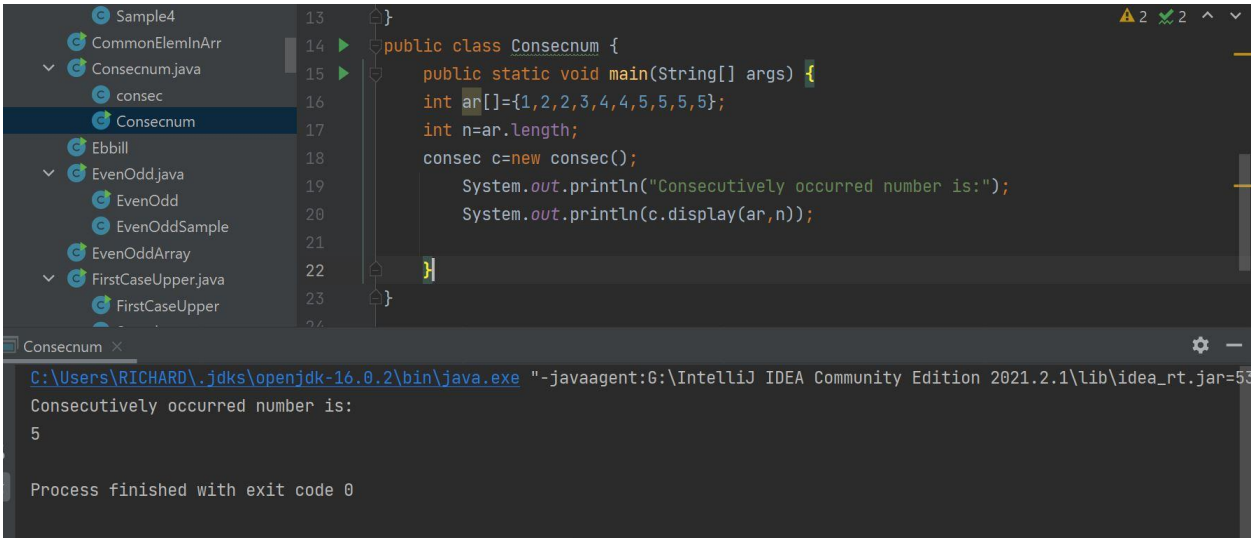
example: 1,2,3,3,4,5,6,7,7,7,8,9,9,9,9

In the above example 9 is the maximium consecutive occurrence

Program:

```
package com.desmond.javatask;
class consec{
   int display(int ar[],int n) {
      int count = 0;
      for (int i = 0; i < n - 1; i++) {
         if (ar[i] == ar[i + 1]) {
            count++;
         }

      }
      return count;
   }
}
public class Consecnum {
   public static void main(String[] args) {
   int ar[]={1,2,2,3,4,4,5,5,5,5};
   int n=ar.length;
   consec c=new consec();
      System.out.println("Consecutively occurred number is:");
      System.out.println(c.display(ar,n));

   }
}
```

o/p:



8. Read a number form the keyboard and display it in words:

Program:

```
package com.desmond.javatask;


import java.util.Scanner;


class Sample8{
   void disp(){
      Scanner in =new Scanner(System.in);
      System.out.println("Enter the number:");
      int n=in.nextInt();
      if(n<1 ||n>999) {
         System.out.println("Wrong Input,Sorry");
}
      else
      {
         int u=n%10;//last digit
         int tt=n/10;
```

```
        int t=tt%10;//second digit
        int h=n/100;
        String
uw[]={"","One","Two","Three","Four","Five","Six","Seven","Eight","Nine","Ten","Eleven","Twelve","Thirt
een","Fourteen","Fifteen","Sixteen","Seventeen","Eighteen","Ninteen"};
        String tw[]={" ","Ten","Twenty","Thirty","Fourty","Fifty","Sixty","Seventy","Eighty","Ninety"};
        String hw=" Hundred ";
        if(n<20)//till 19
           System.out.println(uw[n]);
        else if(n<100)//till 99
           System.out.println(tw[t]+" "+uw[u]);
        else //from 100 to 999
           System.out.println(uw[h]+hw+tw[t]+" "+uw[u]);
     }

  }
     }
class numberwords
{
  public static void main(String args [])
  {
     Sample8 t=new Sample8();
     t.disp();

  }
}
```

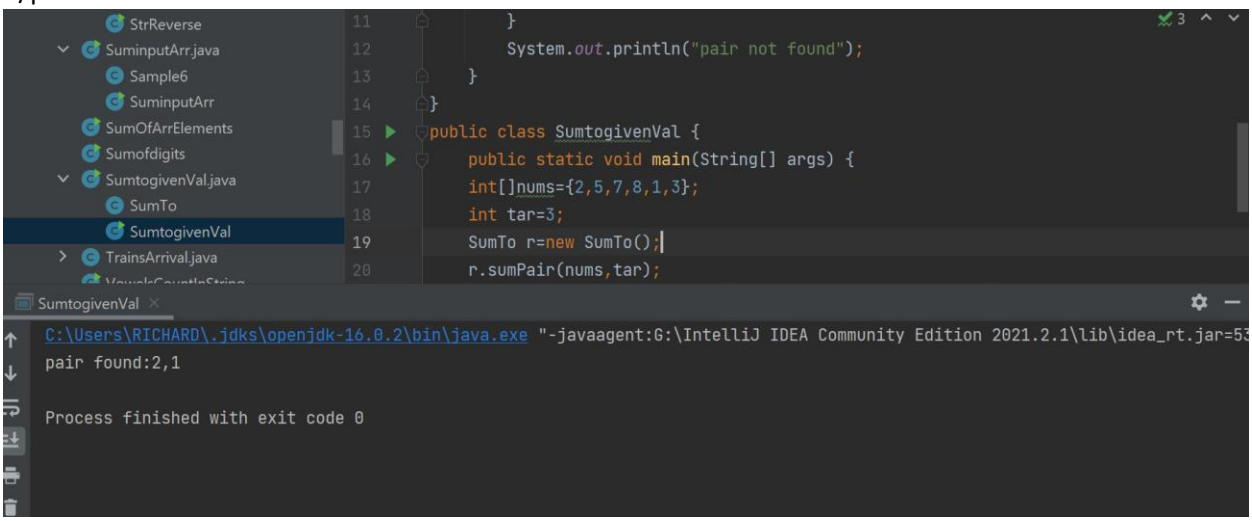
o/p:

9. In an array of values display a element that will be sum if all the other elements:

Program:

```
package com.desmond.javatask;

class SumTo{
   void sumPair(int[] nums,int tar){
      for(int i=0;i<nums.length-1;i++){
         for(int j=i+1;j<nums.length;j++){
            if(nums[i]+nums[j]==tar){
               System.out.println("pair found:"+nums[i]+","+nums[j]);
            return;
            }
         }
      }
      System.out.println("pair not found");
   }
}
public class SumtogivenVal {
   public static void main(String[] args) {
   int[]nums={2,5,7,8,1,3};
   int tar=3;
   SumTo r=new SumTo();
   r.sumPair(nums,tar);
   }
}
```

o/p:



10. Write a program that can generate random password , the password should contain alphabets and numbers and 10 characters length:

Program:

```
package com.desmond.javatask;


import java.security.SecureRandom;


class Random{


}
public class RandomPwd {
    public static String generateRand(int len)
    {

     final String chars = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789";
      SecureRandom random = new SecureRandom();
      StringBuilder sb = new StringBuilder();



      for (int i= 0;i<len;i++)
```

```
        {
            int randomIndex = random.nextInt(chars.length());
            sb.append(chars.charAt(randomIndex));
        }

        return sb.toString();
    }
    public static void main(String[] args)
    {
        int len = 10;
        System.out.println("Your Random password is:");
        System.out.println(generateRand(len));
    }
}
```

o/p: