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1) Accept an array size n from the user. Find the sum of even indices (i.e. 0, 2, 4 ...) and sum of odd indices (1, 3, 5) and print the same

```
import java.util.Scanner;
public class oddandeven
{
public static void main (String [] args) {
Scanner in = new Scanner (system.in);
int a1[];
int even =0, odd =0;
System.out.println ("Enter n: ");
int n = in.nextInt();
a1 = new int[n];
for (int i =0; i<n ; i++)
 {
 System.out.println ("Enter a1 [" +i+ "] ");
 a1[i] = in.nextInt();
}
for (int i=0; i<n; i++) {
 if (i%2 ==0)
 even += a1[i];
 else
 odd+ =a1[i];
}
```

```
System.out.println("Even idex positions sum : "+even);
System.out.println("Odd index positions sum: "+odd);
  }
  }
```

OUTPUT-

```
Enter n :
5
Enter a1[0]
2
Enter a1[1]
39
Enter a1[2]
12
Enter a1[3]
11
Enter a1[4]
6
Even index positions sum: 20
Odd index positions sum : 50
```

2) Accept an array of n integers. Find the number of postive numbers, negative numbers and zeroes.

```
import java.util.Scanner;
public class posnegzer
{
public static void main (String[] args) {
 Scanner in = new Scanner (System.in);
 int a1[];
 int pos=0, neg=0, zer=0;
 System.out.println ("enter n :");
 int n = in.nextInt();
 a1 = new int[n];
 for(int i=0; i<n; i++)
 {
 System.out.println ("enter a1[" +i+ "]");
 a1[i] = in.nextInt();
 }
 for (int i=0; i<n; i++) {
 if (a1[i] > 0)
 pos++;
 else if (a1[i] < 0)
 neg++;
 else zer++;
 }
```

```
System.out.println("number of positive numbers = "+pos);
System.out.println("number of negative numbers = "+neg);
System.out.println("number of zeroes = "+zer);
 }
}
```

3) Consider a supermarket bill. Accept a double array holding rate per item of say x items and an int array showing the quantity purchased by a customer. Calculate the total bill amount and the final bill amount after giving discounts as per the following:
If the total bill amount >= 10000, discount = 5%.
If the total bill amount >= 7500 and < 10000, discount = 3%.
If the total bill amount >= 5000, discount = 2%.

```
import java.util.Scanner;
public class Bill
 {
public static void main(String[] args) {
 Scanner in = new Scanner("enter number of items:");
 int n = in.nextInt();
 double total = 0;
 double rip[] = new double[n];
 int q = new int[n];
 double tot[] = new double[n];
```

```
System.out.println("enter rate and quantity of each item");
for (int i=0; i<n; i++)
  {
  System.out.print((i+1)+"_");
  System.out.print ("Rs. ");
  rip[i] = in.nextDouble();
  System.out.print("quantity = ");
  q[i] = in.nextInt();
  }
  for (int i=0; i<n; i++)
    {
    tot[i] = rp[i] * q[i];
    total += tot[i];
    }
    if (total >= 10000) {
System.out.println (" Discount = 5%. Total bill = " + total + "Discounted
bill = " + (total - total * 0.05)); }
else if (total >= 7500 && total < 10000) {
System.out.println ("Discount = 3%. Total bill = " + total + "Discounted
bill = " + (total - total * 0.03)); }
else if (total >= 5000) {
System.out.println ("Discount = 2%. Total bill = " + total + "
Discounted bill = " + (total - total * 0.02)); }
else {
```

```
System.out.println("No discount. Total bill = " + Total);
    }
}
}
}
```

4) Accept an array of A of n elements. Create 2 new arrays where the first one say B that holds all the odd numbers from array A and the second say C holds the even numbers from array A. Display the sum, average, max and min of array C.

```
import java.util.Scanner;
public class Oddandeven
{
public static void main(String[] args) {
 Scanner in = new Scanner(System.in);
 int a[], b[], c[];
 int j=0, k=0;
 System.out.println("enter no. of elements :");
 int n = in.nextInt();
 a= new int[n];
 b=new int[n];
 c=new int[n];
 System.out.print("enter the elements :");
 for(int i=0; i<n; i++)
```

```
{
a[i] = in.nextInt();
}
for (int i=0; i<n; i++)
{
 if (a[i] % 2 != 0)
  {
 b[j] = a[i];
  j++;
}
else
{
c[k] = a[i];
 k++;
 }
}
}
System.out.println("Odd:");
if (j>1)
{
for (int i=0; i<j-1; i++)
 {
 System.out.print (b[i] + ", ");
 }
 System.out.print (b[j-1]);
```

```
}
else
{
System.out.println("no number");
}
System.out.println(" ");
System.out.println("Even :");
if(k>1)
{
for(int i=0; i<k-1; i++)
  {
  System.out.print(c[i]+", ");
  }
System.out.print(c[k-1]);
}
else
{
System.out.println("no number");
}
double sum=0, avg=0;
int max=c[0], min=c[0];
for(int i=0; i<k; i++)
 {
if (c[i]>max) {
max=c[i]; }
```

```
        if(c[i]<min){
        min=c[i];}
        sum+=c[i];
    }
    avg=(sum/k);
    System.out.println("\n Even array:");
    System.out.println("sum= "+sum+"\naverage= "+avg+
    "\nmaximum= "+max+"\nminimum= "+min);
    }
}
```