

```

import java.util.Scanner;
public class Main {
    public static void main (String args[]) {
        double secondRoot = 0, firstRoot = 0;
        Scanner sc = new
        Scanner (System.in);
        System.out.println ("Enter the value of a::");
        double a = sc.nextDouble ();
        System.out.println ("Enter the value of b::");
        double b = sc.nextDouble ();
        System.out.println ("Enter the value of c::");
        double c = sc.nextDouble ();

        double determinant = (b*b) - (4*a*c);
        double Sqrt =
        Math.sqrt (determinant);

        if (determinant > 0) {
            firstRoot = (-b + Sqrt) / (2*a);
            secondRoot = (-b - Sqrt) / (2*a);
            System.out.println ("Roots are::" +
            firstRoot + "and" + secondRoot);
        }
    }
}

```

if (determinant == 0) {

system.out.println("Root : :")

(-b + sqrt(12*a)) / (2*a);

;

;

}

;

;

;

;

;

;

;

;

;

;

② `import java.io.*;`

```
class Main{  
    public static void main (String args [])  
    {  
        int arr[] = {1, 2, 3, 4, 5, 6};  
        int even = 0, odd = 0;
```

```
        // Loop to find even ; odd sum  
        for (int i = 0; i < arr.length; i++) {  
            if (i % 2 == 0)  
                even += arr[i];  
            else  
                odd += arr[i];
```

```
        }  
        System.out.println("Even
```

③ Public class main

{

public static void main(String[] args)

{

int number = 12;

if (number > 0)

{

System.out.println(number + " is a
positive number");

}

else if (number < 0)

{

System.out.println(number + " is a
negative number");

}

else

{

System.out.println(number + " is
neither positive nor
negative");

}

}

}

output: 12 is a positive number.

3.

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

```
public class bill {
```

```
public static void main (String [] args)
```

```
{
```

```
Scanner sc = new Scanner (System.in);  
System.out.println ("Enter the no of items:");
```

```
int n = sc.nextInt ();
```

```
double int tot, tot = 0;
```

```
double [] vpi = new double[n];
```

```
int [] quant = new int[n];
```

```
for (int i=0; i<n; i++) {
```

```
System.out.println ("enter quantity of  
purchase and rate per item for  
item" + (i+1));
```

```
int q = sc.nextInt ();
```

```
double r = sc.nextDouble ();
```

```
quant [i] = q;
```

```
vpi [i] = r;
```

```
}
```

```
for (int i=0; i<n; i++) {
```

```
int Tot = quant [i] * vpi [i];
```

```
tot += int Tot;
```

```
}
```

if (tot >= 10000) {

system.out.println("Discount = 5%. Total bill =
+ tot + "Discounted bill = " + (tot - tot * 0.05));

}

else if (tot >= 7500)

{
system.out.println("Discount = 3%. Total bill =
+ tot + "Discounted bill = " + (tot
- tot * 0.03));

}

else if (tot >= 5000) {
system.out.println("Discount = 2%. Total bill =
+ tot + "Discounted bill = " + (tot - tot * 0.02);

}

else {
system.out.println("No discount. Total bill = " +
tot);

}

}

}

4

```
import java.util.Scanner;
public class odd-even-array {
    int i, j=0, k=0, sum=0, avg, max, min;
    Scanner s = new Scanner(System.in);
    System.out.print("Enter the number of
    elements in array");

    n = s.nextInt();
    int[] a = new int[n];
    int[] b = new int[n];
    int[] c = new int[n];
    System.out.print("Enter the elements of the
    array");

    for (int i=0; i<n; i++) {
        if (a[i] % 2 == 0) {
            c[k] = a[i];
            k++;
        }
        else {
            b[j] = a[i];
            j++;
        }
    }
    avg = sum(j);
    max = c[0];
    min = c[0];
}
```

```
for (int i = 0; i < j, i++)
```

```
{  
    if (c[i] > max) {  
        max = c[i];  
    }
```

```
    if (c[i] < min) {  
        min = c[i];  
    }
```

```
}
```

```
}
```

```
system.out.println("for the even array  
sum is " + sum + " average is " + (sum / i) + "
```

```
maximum is " + max + " minimum is " + min);
```

```
}
```

```
}
```



```

1 import java.util.*;
2 public class Main {
3
4     public static void main(String[] args)
5     {
6         double a, b, c;
7         double root1, root2, imaginary, discriminant;
8         Scanner sc = new Scanner(System.in);
9
10
11         System.out.print(" ENTER CO-EFFICIENTS a,b,c : \n");
12         a = sc.nextDouble();
13         b = sc.nextDouble();
14         c = sc.nextDouble();
15
16         discriminant = (b * b) - (4 * a * c);
17
18         if(discriminant > 0)
19         {
20             root1 = (-b + Math.sqrt(discriminant) / (2 * a));
21             root2 = (-b - Math.sqrt(discriminant) / (2 * a));
22             System.out.printf(" TWO DISTINCT REAL ROOTS ARE: root1 = %.4f and root2 = %.4f",root1,root2);
23         }
24         else if(discriminant == 0)
25         {
26             root1 = root2 = -b / (2 * a);
27             System.out.printf("TWO EQUAL ROOTS: %.4f",root1);

```

```

9
10
11 System.out.print(" ENTER CO-EFFICIENTS a,b,c : \n");
12 a = sc.nextDouble();
13 b = sc.nextDouble();
14 c = sc.nextDouble();
15
16 discriminant = (b * b) - (4 * a * c);
17
18 if(discriminant > 0)
19 {
20     root1 = (-b + Math.sqrt(discriminant) / (2 * a));
21     root2 = (-b - Math.sqrt(discriminant) / (2 * a));
22     System.out.printf(" TWO DISTINCT REAL ROOTS ARE: root1 = %.4f and root2 = %.4f",root1,root2);
23 }
24 else if(discriminant == 0)
25 {
26     root1 = root2 = -b / (2 * a);
27     System.out.printf("TWO EQUAL ROOTS: %.4f",root1);
28 }
29 else if(discriminant < 0)
30 {
31
32     System.out.println(" ROOTS ARE NOT REAL");
33 }
34 }
35 }

```

```
1 import java.util.*;  
2 public class Main {  
3  
4     public static void main(String[] args)  
5     {
```

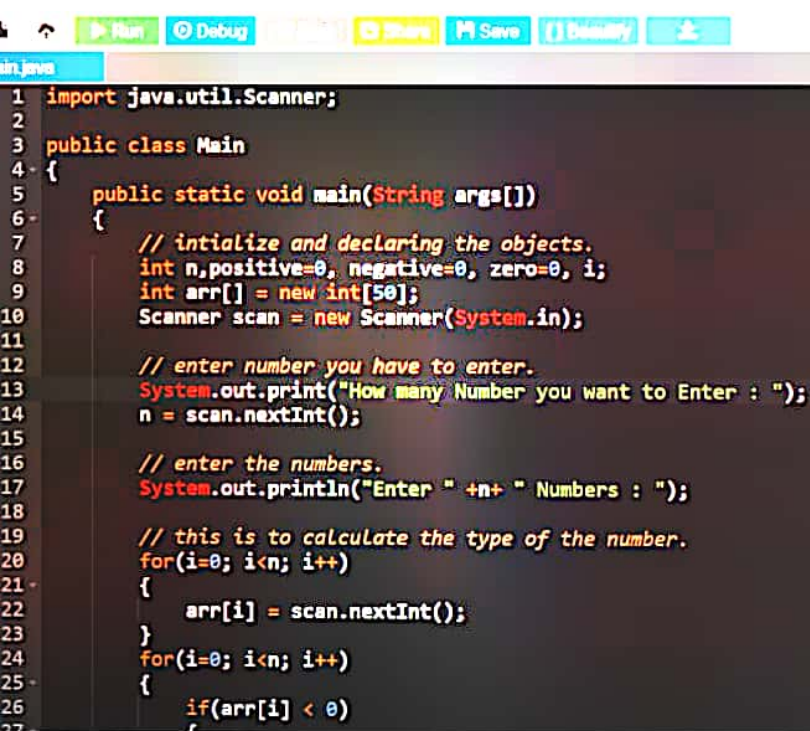
Input

ENTER CO-EFFICIENTS a,b,c :

1
4
4

TWO EQUAL ROOTS: -2.0000

...Program finished with exit code 0
Press ENTER to exit console.



The image shows a screenshot of a Java IDE. At the top, there is a toolbar with buttons for Run, Debug, Share, Save, and Beautify. The file name 'Main.java' is visible in the top left. The code is as follows:

```

1 import java.util.Scanner;
2
3 public class Main
4 {
5     public static void main(String args[])
6     {
7         // initialize and declaring the objects.
8         int n, positive=0, negative=0, zero=0, i;
9         int arr[] = new int[50];
10        Scanner scan = new Scanner(System.in);
11
12        // enter number you have to enter.
13        System.out.print("How many Number you want to Enter : ");
14        n = scan.nextInt();
15
16        // enter the numbers.
17        System.out.println("Enter " +n+ " Numbers : ");
18
19        // this is to calculate the type of the number.
20        for(i=0; i<n; i++)
21        {
22            arr[i] = scan.nextInt();
23        }
24        for(i=0; i<n; i++)
25        {
26            if(arr[i] < 0)
27            {

```

```

// this is to calculate the type of the number.
for(i=0; i<n; i++)
{
    arr[i] = scan.nextInt();
}
for(i=0; i<n; i++)
{
    if(arr[i] < 0)
    {
        negative++;
    }
    else if(arr[i] == 0)
    {
        zero++;
    }
    else
    {
        positive++;
    }
}
// print all +ve, -ve and zero number.
System.out.print("Positive Numbers are: " + positive );
System.out.print("\nNegative Numbers are: " + negative );
System.out.print("\nZeros are: " + zero );
}

```

How many Number you want to Enter : 5

Enter 5 Numbers :

0

20

-30

-2

4

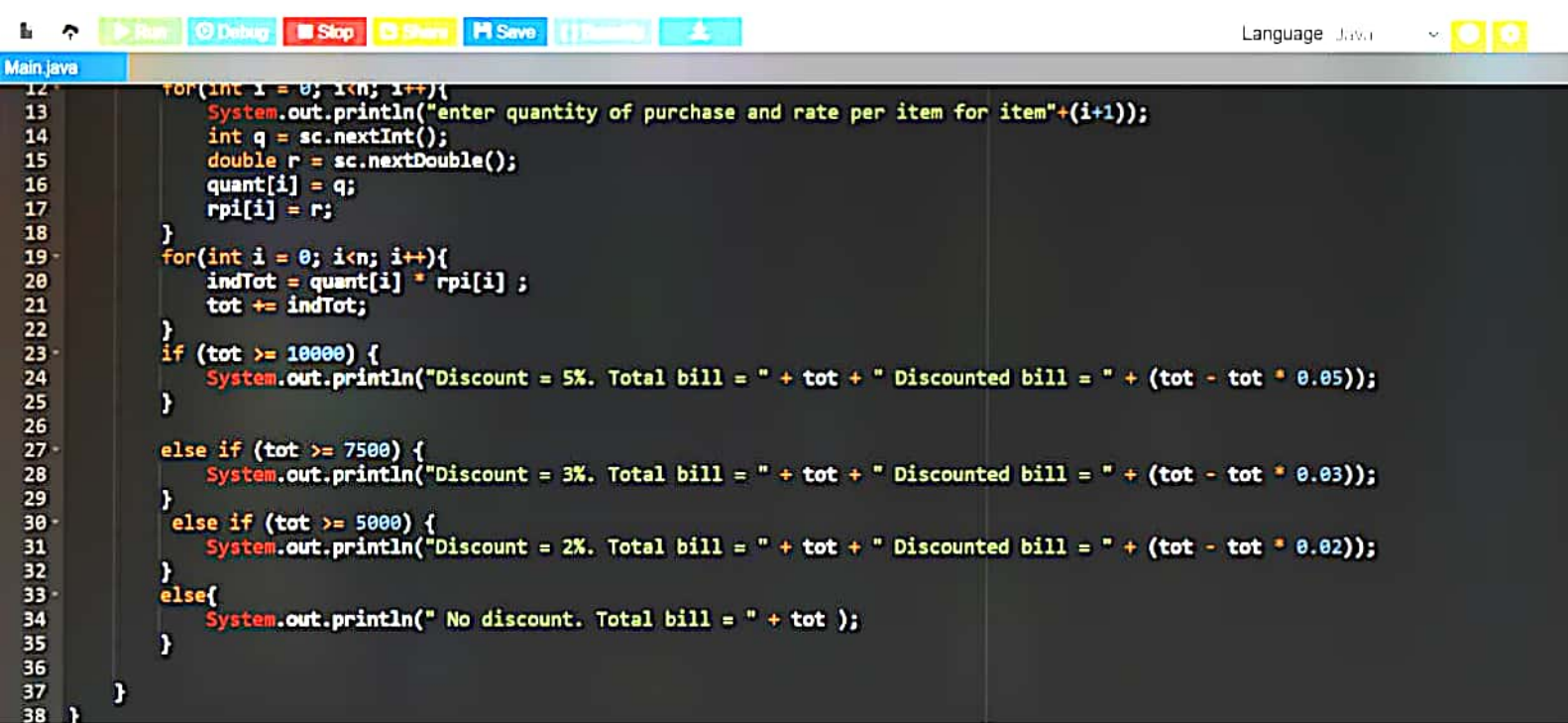
Positive Numbers are: 2

Negative Numbers are: 2

Zeros are: 1

...Program finished with exit code 0

Press ENTER to exit console.



The image shows a screenshot of an IDE with a toolbar at the top containing icons for Run, Debug, Stop, Show, Save, and Run/Debug. The language is set to Java. The code is in a file named 'Main.java' and implements a program to calculate a total bill with discounts based on the total amount. The code uses arrays to store quantities and rates per item, and a loop to calculate the total. It then uses a series of if-else statements to apply discounts of 5%, 3%, 2%, or no discount based on the total bill amount.

```
12 for(int i = 0; i<n; i++){
13     System.out.println("enter quantity of purchase and rate per item for item"+(i+1));
14     int q = sc.nextInt();
15     double r = sc.nextDouble();
16     quant[i] = q;
17     rpi[i] = r;
18 }
19 for(int i = 0; i<n; i++){
20     indTot = quant[i] * rpi[i] ;
21     tot += indTot;
22 }
23 if (tot >= 10000) {
24     System.out.println("Discount = 5%. Total bill = " + tot + " Discounted bill = " + (tot - tot * 0.05));
25 }
26
27 else if (tot >= 7500) {
28     System.out.println("Discount = 3%. Total bill = " + tot + " Discounted bill = " + (tot - tot * 0.03));
29 }
30 else if (tot >= 5000) {
31     System.out.println("Discount = 2%. Total bill = " + tot + " Discounted bill = " + (tot - tot * 0.02));
32 }
33 else{
34     System.out.println(" No discount. Total bill = " + tot );
35 }
36
37 }
38 }
```

```

public static void main(String[] args)
{
    int n, sumE = 0, sumO = 0;
    Scanner s = new Scanner(System.in);
    System.out.print("Enter the number of elements in array:");
    n = s.nextInt();
    int[] a = new int[n];
    System.out.println("Enter the elements of the array:");
    for(int i = 0; i < n; i++)
    {
        a[i] = s.nextInt();
    }
    for(int i = 0; i < n; i++)
    {
        if(a[i] % 2 == 0)
        {
            sumE = sumE + a[i];
        }
        else
        {
            sumO = sumO + a[i];
        }
    }
    System.out.println("Sum of Even Numbers:"+sumE);
    System.out.println("Sum of Odd Numbers:"+sumO);
}
}

```

```
Enter the number of items:
3
Enter quantity of purchase and rate per item for item1
200
300
Enter quantity of purchase and rate per item for item2
3000
100
Enter quantity of purchase and rate per item for item3
2000
10
Discount = 5%. Total bill = 380000.0 Discounted bill = 361000.0

...Program finished with exit code 0
Press ENTER to exit console.
```

Input


```

1 import java.util.Scanner;
2 public class Main{
3     public static void main(String[] args){
4         Scanner sc = new Scanner(System.in);
5
6
7         System.out.println("Enter the number of items:");
8         int n = sc.nextInt();
9         double indTot, tot = 0;
10        double[] rpi = new double[n];
11        int[] quant = new int[n];
12        for(int i = 0; i<n; i++){
13            System.out.println("enter quantity of purchase and rate per item for item" + (i+1));
14            int q = sc.nextInt();
15            double r = sc.nextDouble();
16            quant[i] = q;
17            rpi[i] = r;
18        }
19        for(int i = 0; i<n; i++){
20            indTot = quant[i] * rpi[i];
21            tot += indTot;
22        }
23        if (tot >= 10000) {
24            System.out.println("Discount = 5%. Total bill = " + tot + " Discounted bill = " + (tot - tot * 0.05));
25        }
26
27        else if (tot >= 7500) {

```

```

import java.util.Scanner;

public class Main {
    public static void main(String[] args){
        int n, j = 0, k = 0, sum = 0, avg, max, min;
        Scanner s = new Scanner(System.in);
        System.out.print("Enter the number of elements in array:");
        n=s.nextInt();
        int[] a = new int[n];
        int[] b = new int[n];
        int[] c = new int[n];
        System.out.println("Enter the elements of the array:");
        for(int i = 0;i<n;i++){
            a[i] = s.nextInt();
        }
        for(int i = 0;i<n;i++){
            if (a[i] % 2 == 0) {
                c[j] = a[i];
                sum += a[i];
                j++;
            } else {
                b[k] = a[i];
                k++;
            }
        }
        //avg = sum / j;
        max = c[0];
    }
}

```

```

14     a[i] = s.nextInt();
15 }
16 for(int i = 0; i < n; i++){
17     if (a[i] % 2 == 0) {
18         c[j] = a[i];
19         sum += a[i];
20         j++;
21     } else {
22         b[k] = a[i];
23         k++;
24     }
25 }
26 //avg = sum / j;
27 max = c[0];
28 min = c[0];
29 for(int i = 0; i < j; i++){
30     if (c[i] > max){
31         max = c[i];
32     }
33     if (c[i] < min){
34         min = c[i];
35     }
36 }
37 System.out.println("For the even array sum is "+sum+" average is "+(sum/j)+" maximum is "+max+" minimum is "+min);
38 }
39 }
40 }

```

input

Enter the number of elements in array:5

Enter the elements of the array:

5

6

7

8

9

Sum of Even Numbers:14

Sum of Odd Numbers:21

...Program finished with exit code 0

Press ENTER to exit console.


```

Enter the number of elements in array:5
Enter the elements of the array:
20
1
2
56
78
For the even array sum is 156 average is 39 maximum is 78 minimum is 2

...Program finished with exit code 0
Press ENTER to exit console.

```