Assignment No:-21

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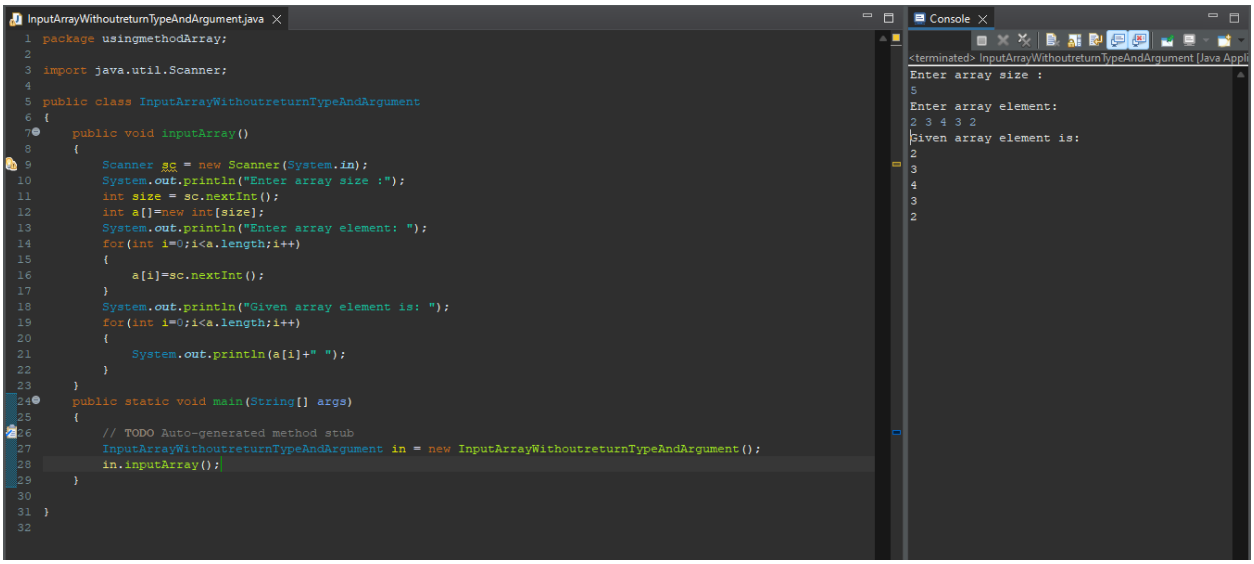
Batch: - Delta - DCA (Java) 2024 Date:-3/6/2024

***First day Question.**

Q1. Write a program to input an array and print it.



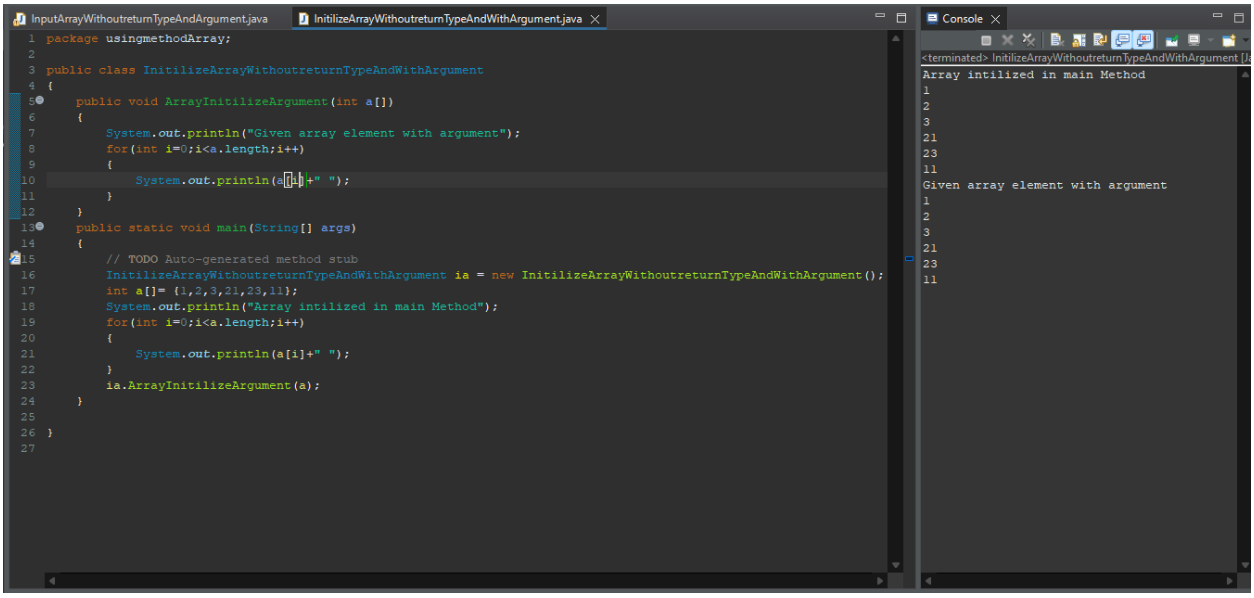
InputArrayWithoutreturnTypeAndArgument.java

```
package usingmethodArray;

import java.util.Scanner;

public class InputArrayWithoutreturnTypeAndArgument
{
    public void inputArray()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        InputArrayWithoutreturnTypeAndArgument in = new InputArrayWithoutreturnTypeAndArgument();
        in.inputArray();
    }

}
```

Console

```
<terminated> InputArrayWithoutreturnTypeAndArgument [Java Appli
Enter array size :
5
Enter array element:
2 3 4 3 2
Given array element is:
2
3
4
3
2
```

Q2. Write a program initialise an array and print it.



```
package usingmethodArray;

public class InitilizeArrayWithoutreturnTypeAndWithArgument
{
    public void ArrayInitilizeArgument(int a[])
    {
        System.out.println("Given array element with argument");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        InitilizeArrayWithoutreturnTypeAndWithArgument ia = new InitilizeArrayWithoutreturnTypeAndWithArgument();
        int a[]= {1,2,3,21,23,11};
        System.out.println("Array intilized in main Method");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        ia.ArrayInitilizeArgument(a);
    }

}
```

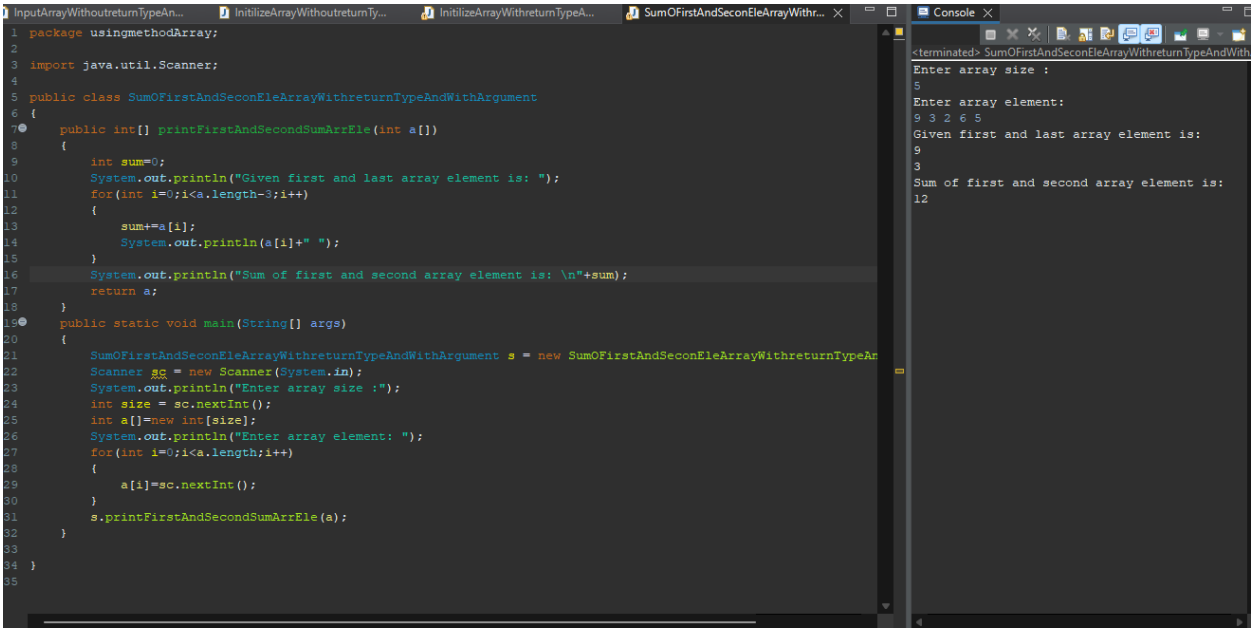
```
<terminated> InitilizeArrayWithoutreturnTypeAndWithArgument
Array intilized in main Method
1
2
3
21
23
11
Given array element with argument
1
2
3
21
23
11
```

Q3. Write a program to input an array and print its 1st and last element.

```
package usingmethodArray;

import java.util.Scanner;

public class InitilizeArrayWithreturnTypeAndWithoutArgument
{
    public int[] printFirstAndLastArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given first and last array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(i==0)
            System.out.println(a[i]+" ");
            else if(i==a.length-1)
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        InitilizeArrayWithreturnTypeAndWithoutArgument ia = new InitilizeArrayWithreturnTypeAndWithoutArgument ();
        ia.printFirstAndLastArrEle();
    }
}
```

```
<terminated> InitilizeArrayWithreturnTypeAndWithoutArgume
Enter array size :
5
Enter array element:
3 4 2 6 4
Given first and last array element is:
3
4
```

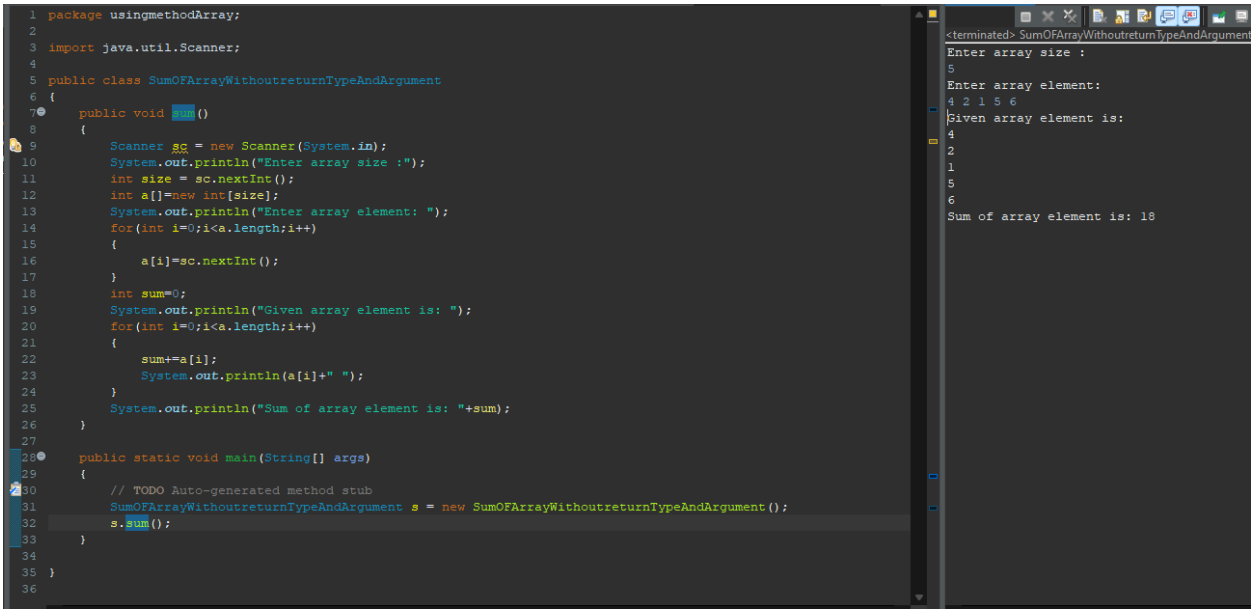
Q4. Write a program to input an array and find sum of its 1st and 2nd element.



```
package usingmethodArray;

import java.util.Scanner;

public class SumOFirstAndSeconEleArrayWithreturnTypeAndWithArgument
{
    public int[] printFirstAndSecondSumArrEle(int a[])
    {
        int sum=0;
        System.out.println("Given first and last array element is: ");
        for(int i=0;i<a.length-3;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Sum of first and second array element is: \n"+sum);
        return a;
    }
    public static void main(String[] args)
    {
        SumOFirstAndSeconEleArrayWithreturnTypeAndWithArgument s = new SumOFirstAndSeconEleArrayWithreturnTypeAr
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        s.printFirstAndSecondSumArrEle(a);
    }

}
```

```
<terminated> SumOFirstAndSeconEleArrayWithreturnTypeAndWith
Enter array size :
5
Enter array element:
9 3 2 6 5
Given first and last array element is:
9
3
Sum of first and second array element is:
12
```

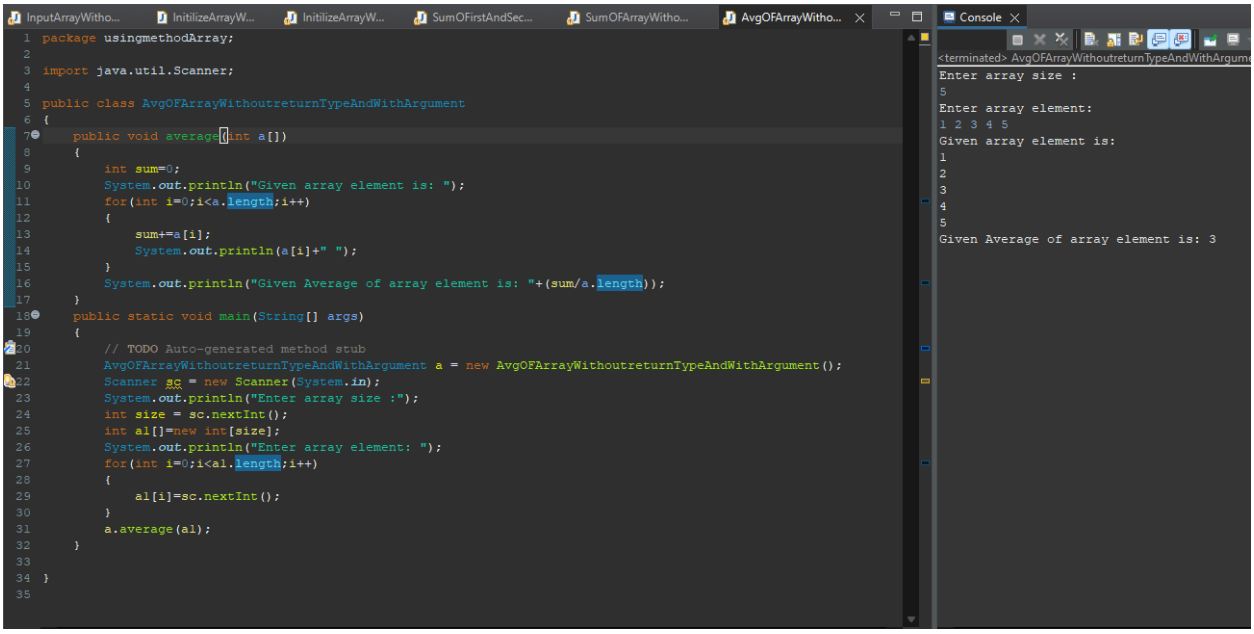
Q5. Write a program to input an array and find sum.



```
package usingmethodArray;

import java.util.Scanner;

public class SumOFArrayWithoutreturnTypeAndArgument
{
    public void sum()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int sum=0;
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Sum of array element is: "+sum);
    }

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumOFArrayWithoutreturnTypeAndArgument s = new SumOFArrayWithoutreturnTypeAndArgument();
        s.sum();
    }

}
```

```
<terminated> SumOFArrayWithoutreturnTypeAndArgument
Enter array size :
5
Enter array element:
4 2 1 5 6
Given array element is:
4
2
1
5
6
Sum of array element is: 18
```

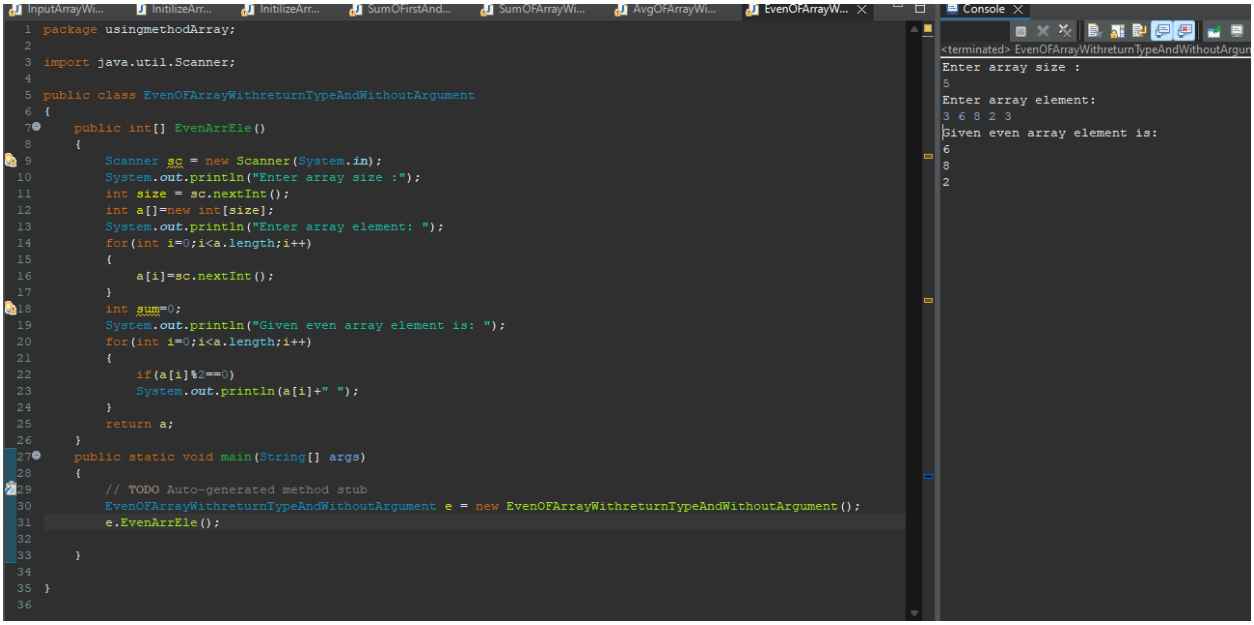
Q6. Write a program to input an array and find its average.



```
package usingmethodArray;

import java.util.Scanner;

public class AvgOFArrayWithoutreturnTypeAndWithArgument
{
    public void average(int a[])
    {
        int sum=0;
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Given Average of array element is: "+(sum/a.length));
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        AvgOFArrayWithoutreturnTypeAndWithArgument a = new AvgOFArrayWithoutreturnTypeAndWithArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int al[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<al.length;i++)
        {
            al[i]=sc.nextInt();
        }
        a.average(al);
    }

}
```

```
Enter array size :
5
Enter array element:
1 2 3 4 5
Given array element is:
1
2
3
4
5
Given Average of array element is: 3
```

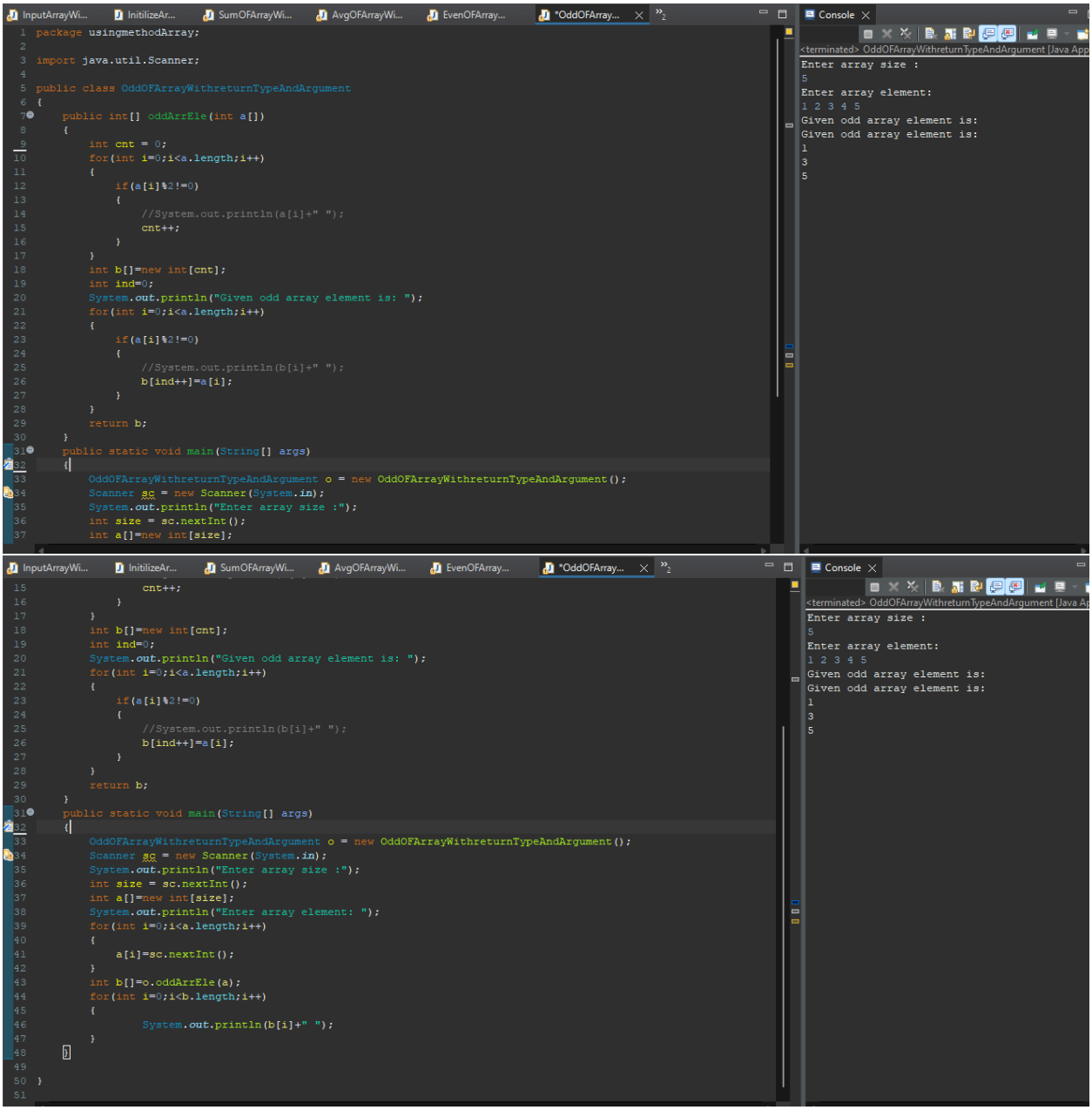
Q7. Write a program to input an array and print even no



```
package usingmethodArray;

import java.util.Scanner;

public class EvenOFArrayWithreturnTypeAndWithoutArgument
{
    public int[] EvenArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int sum=0;
        System.out.println("Given even array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2==0)
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        EvenOFArrayWithreturnTypeAndWithoutArgument e = new EvenOFArrayWithreturnTypeAndWithoutArgument();
        e.EvenArrEle();

    }

}
```

```
Enter array size :
5
Enter array element:
3 6 8 2 3
Given even array element is:
6
8
2
```

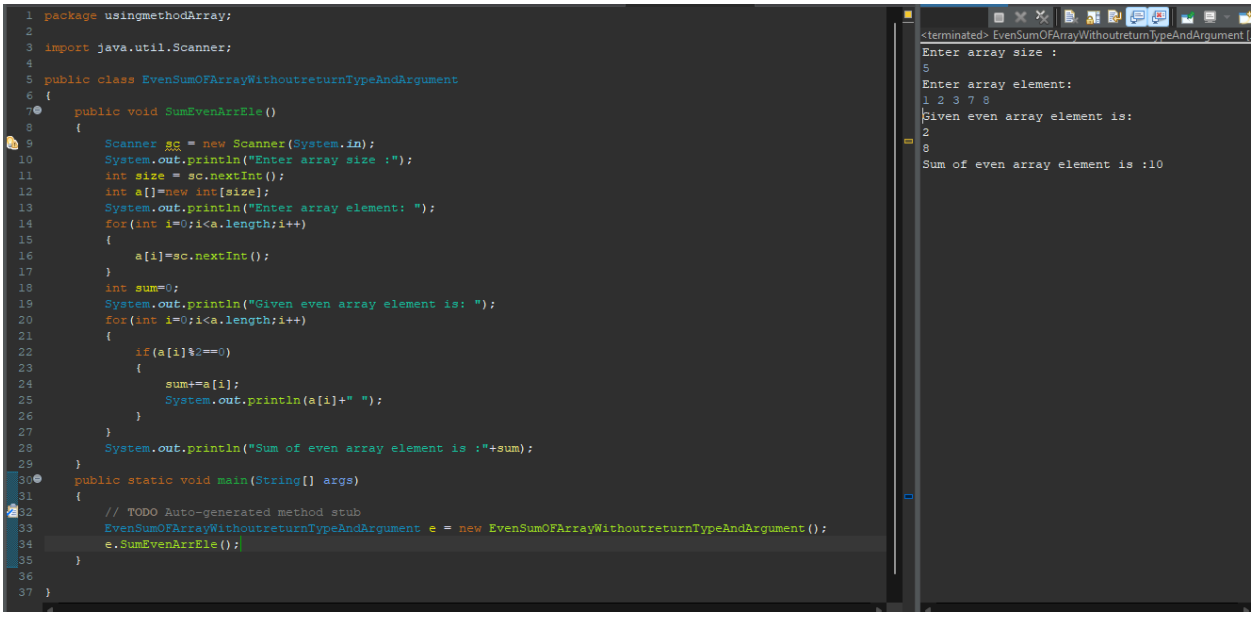
Q8. Write a program to input an array and print odd no.



```
package usingmethodArray;

import java.util.Scanner;

public class OddOFArrayWithreturnTypeAndArgument
{
    public int[] oddArrEle(int a[])
    {
        int cnt = 0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                //System.out.println(a[i]+" ");
                cnt++;
            }
        }
        int b[]=new int[cnt];
        int ind=0;
        System.out.println("Given odd array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                //System.out.println(b[i]+" ");
                b[ind++]=a[i];
            }
        }
        return b;
    }
    public static void main(String[] args)
    {
        OddOFArrayWithreturnTypeAndArgument o = new OddOFArrayWithreturnTypeAndArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int b[]=o.oddArrEle(a);
        for(int i=0;i<b.length;i++)
        {
            System.out.println(b[i]+" ");
        }
    }

}
```

```
Enter array size :
5
Enter array element:
1 2 3 4 5
Given odd array element is:
Given odd array element is:
1
3
5
```

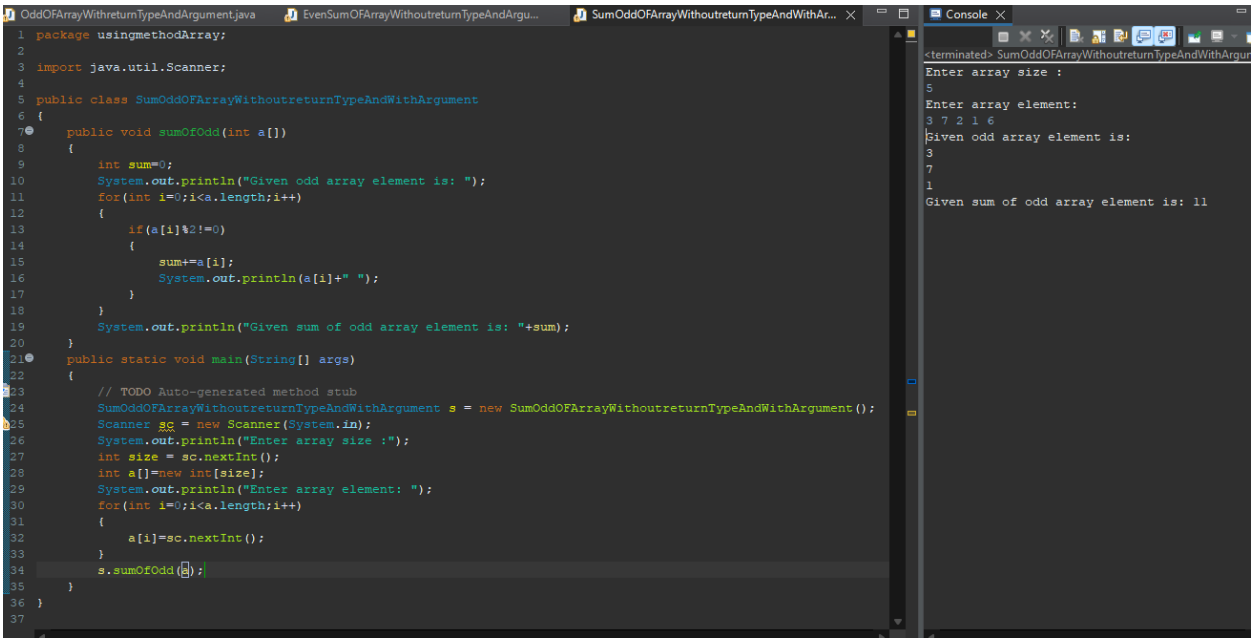
Q9. Write a program to input an array and find the sum of even no.



```
package usingmethodArray;

import java.util.Scanner;

public class EvenSumOFArrayWithoutreturnTypeAndArgument
{
    public void SumEvenArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int sum=0;
        System.out.println("Given even array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2==0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
            }
        }
        System.out.println("Sum of even array element is :"+sum);
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        EvenSumOFArrayWithoutreturnTypeAndArgument e = new EvenSumOFArrayWithoutreturnTypeAndArgument();
        e.SumEvenArrEle();
    }

}
```

```
<terminated> EvenSumOFArrayWithoutreturnTypeAndArgument
Enter array size :
5
Enter array element:
1 2 3 7 8
Given even array element is:
2
8
Sum of even array element is :10
```

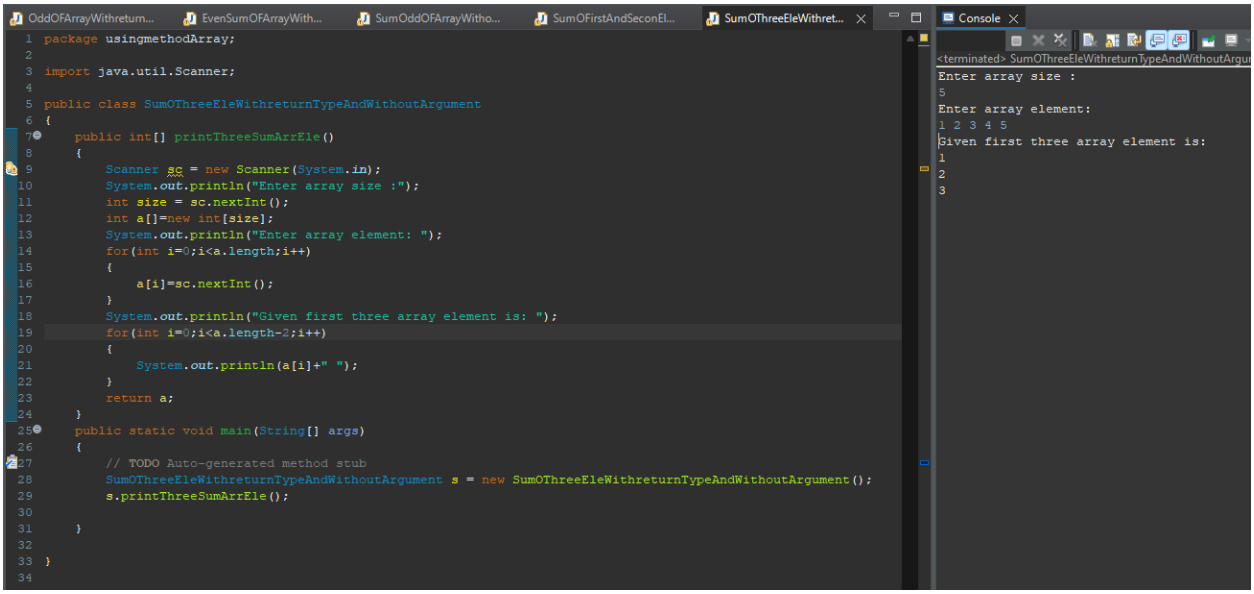
Q10. Write a program to input an array and find the sum of odd no.



```
package usingmethodArray;

import java.util.Scanner;

public class SumOddOFArrayWithoutreturnTypeAndWithArgument
{
    public void sumOfOdd(int a[])
    {
        int sum=0;
        System.out.println("Given odd array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
            }
        }
        System.out.println("Given sum of odd array element is: "+sum);
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumOddOFArrayWithoutreturnTypeAndWithArgument s = new SumOddOFArrayWithoutreturnTypeAndWithArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        s.sumOfOdd(a);
    }
}
```

```
<terminated> SumOddOFArrayWithoutreturnTypeAndWithArgur
Enter array size :
5
Enter array element:
3 7 2 1 6
Given odd array element is:
3
7
1
Given sum of odd array element is: 11
```

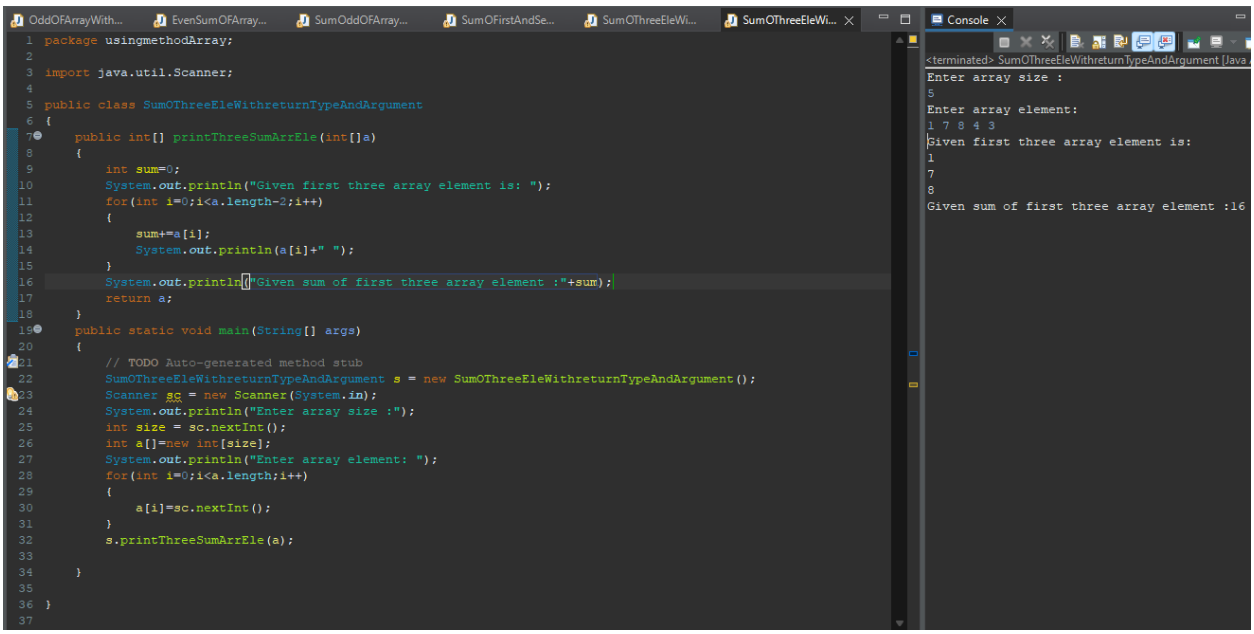
Q11. Write a program to input an array and print its 1st 2nd and 3rd element.



```
package usingmethodArray;

import java.util.Scanner;

public class SumOThreeEleWithreturnTypeAndWithoutArgument
{
    public int[] printThreeSumArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given first three array element is: ");
        for(int i=0;i<a.length-2;i++)
        {
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumOThreeEleWithreturnTypeAndWithoutArgument s = new SumOThreeEleWithreturnTypeAndWithoutArgument();
        s.printThreeSumArrEle();

    }

}
```

```
Enter array size :
5
Enter array element:
1 2 3 4 5
Given first three array element is:
1
2
3
```

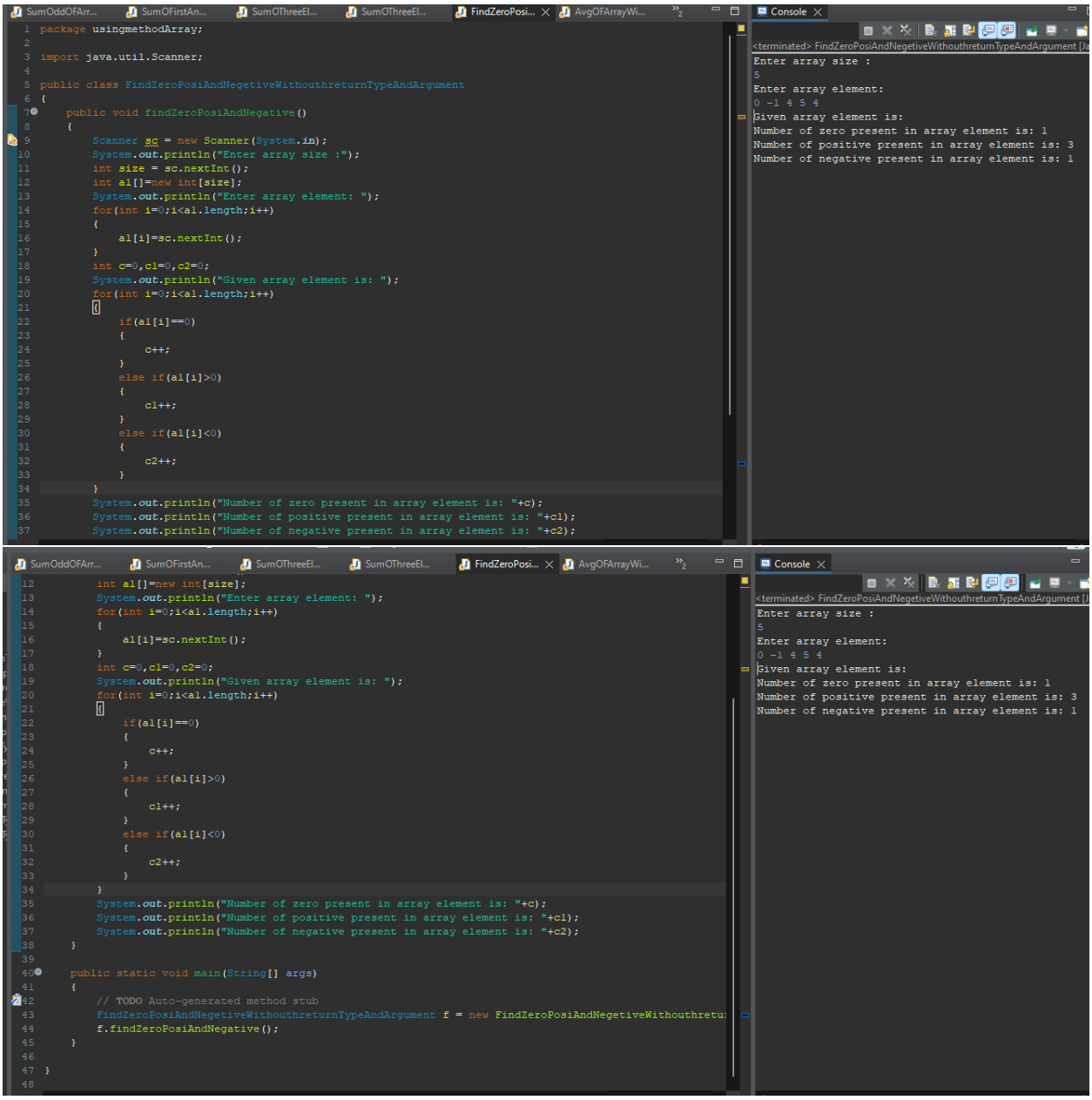
Q12. Write a program to input an array and find sum of its 1st and 2nd and 3rd element.



```
package usingmethodArray;

import java.util.Scanner;

public class SumOThreeEleWithreturnTypeAndArgument
{
    public int[] printThreeSumArrEle(int[]a)
    {
        int sum=0;
        System.out.println("Given first three array element is: ");
        for(int i=0;i<a.length-2;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Given sum of first three array element :"+sum);
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumOThreeEleWithreturnTypeAndArgument s = new SumOThreeEleWithreturnTypeAndArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        s.printThreeSumArrEle(a);

    }

}
```

```
Enter array size :
5
Enter array element:
1 7 8 4 3
Given first three array element is:
1
7
8
Given sum of first three array element :16
```

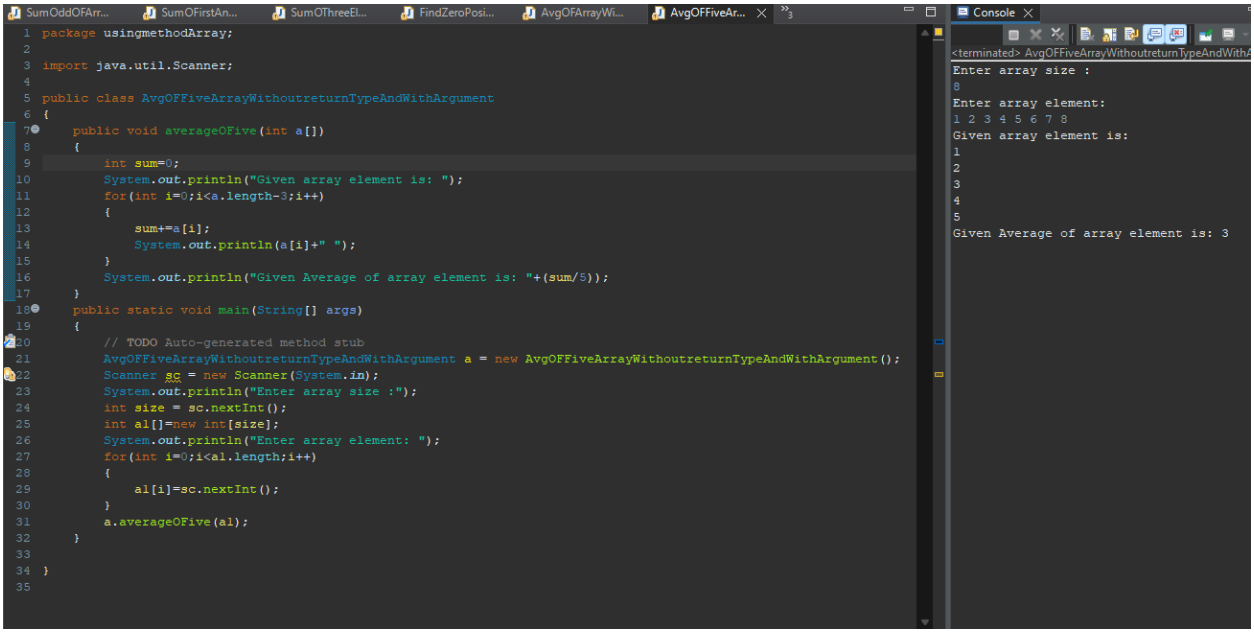
Q13. Write a program to input an array and find no of 0s.no of positive no.no of negative no.



```
package usingmethodArray;

import java.util.Scanner;

public class FindZeroPosiAndNegetiveWithouthreturnTypeAndArgument
{
    public void findZeroPosiAndNegative()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int al[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<al.length;i++)
        {
            al[i]=sc.nextInt();
        }
        int c=0,c1=0,c2=0;
        System.out.println("Given array element is: ");
        for(int i=0;i<al.length;i++)
        {
            if(al[i]==0)
            {
                c++;
            }
            else if(al[i]>0)
            {
                c1++;
            }
            else if(al[i]<0)
            {
                c2++;
            }
        }
        System.out.println("Number of zero present in array element is: "+c);
        System.out.println("Number of positive present in array element is: "+c1);
        System.out.println("Number of negative present in array element is: "+c2);
    }

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        FindZeroPosiAndNegetiveWithouthreturnTypeAndArgument f = new FindZeroPosiAndNegetiveWithouthretu
        f.findZeroPosiAndNegative();
    }

}
```

```
Console
<terminated> FindZeroPosiAndNegetiveWithouthreturnTypeAndArgument
Enter array size :
5
Enter array element:
0 -1 4 5 4
Given array element is:
Number of zero present in array element is: 1
Number of positive present in array element is: 3
Number of negative present in array element is: 1
```

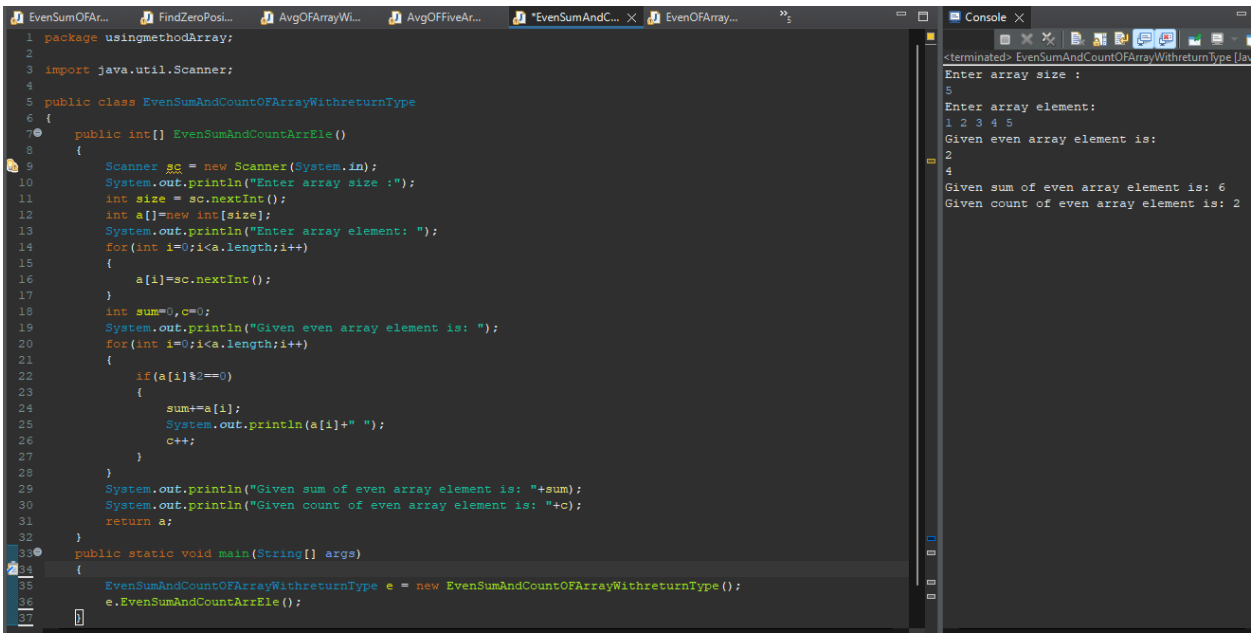
Q14. Write a program to input an array and find its average of first 5 element.



```
package usingmethodArray;

import java.util.Scanner;

public class AvgOFFiveArrayWithoutreturnTypeAndWithArgument
{
    public void averageOFive(int a[])
    {
        int sum=0;
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length-3;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Given Average of array element is: "+(sum/5));
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        AvgOFFiveArrayWithoutreturnTypeAndWithArgument a = new AvgOFFiveArrayWithoutreturnTypeAndWithArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int al[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<al.length;i++)
        {
            al[i]=sc.nextInt();
        }
        a.averageOFive(al);
    }

}
```

```
Console
<terminated> AvgOFFiveArrayWithoutreturnTypeAndWithA
Enter array size :
8
Enter array element:
1 2 3 4 5 6 7 8
Given array element is:
1
2
3
4
5
Given Average of array element is: 3
```

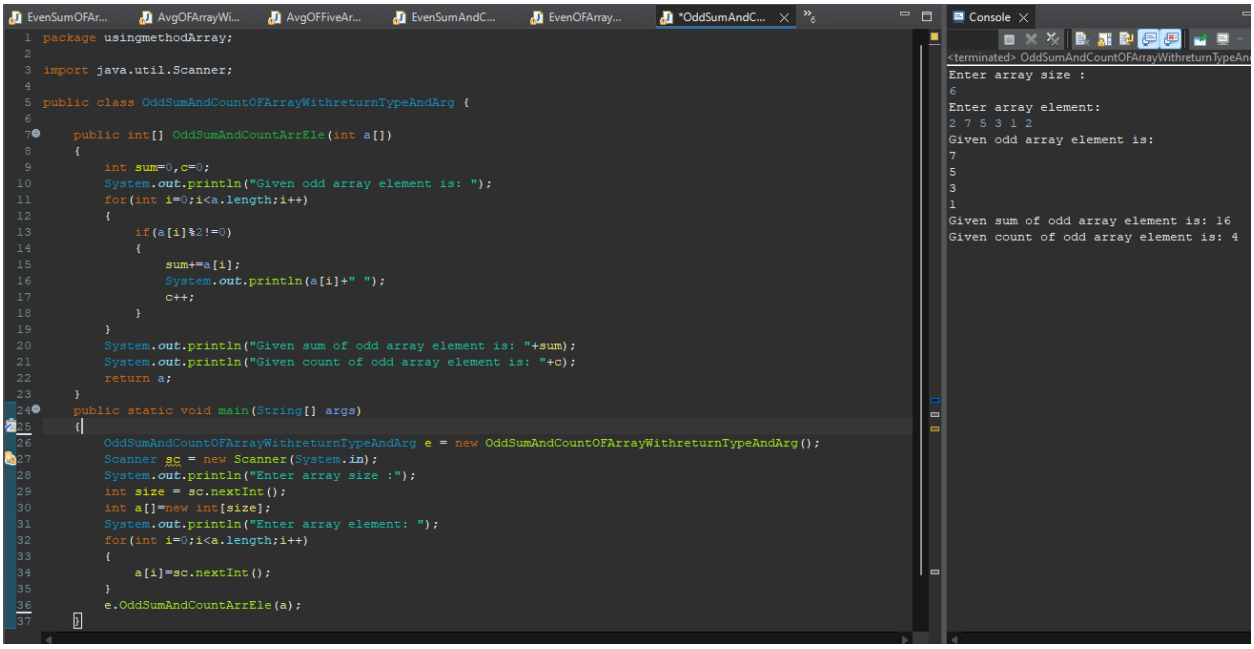
Q15. Write a program to input an array and print the sum and count of even no.



```
package usingmethodArray;

import java.util.Scanner;

public class EvenSumAndCountOFArrayWithreturnType
{
    public int[] EvenSumAndCountArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int sum=0,c=0;
        System.out.println("Given even array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2==0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Given sum of even array element is: "+sum);
        System.out.println("Given count of even array element is: "+c);
        return a;
    }
    public static void main(String[] args)
    {
        EvenSumAndCountOFArrayWithreturnType e = new EvenSumAndCountOFArrayWithreturnType();
        e.EvenSumAndCountArrEle();
    }
```

```
Console
<terminated> EvenSumAndCountOFArrayWithreturnType [Jav
Enter array size :
5
Enter array element:
1 2 3 4 5
Given even array element is:
2
4
Given sum of even array element is: 6
Given count of even array element is: 2
```

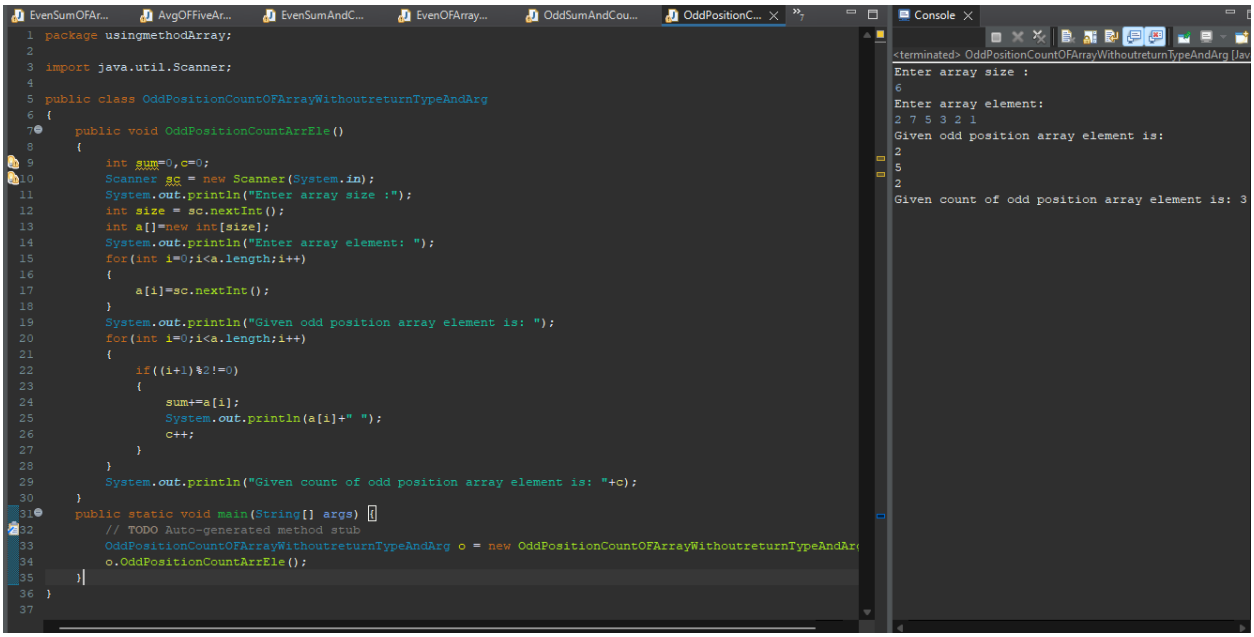
Q16. Write a program to input an array and print the sum and count of odd no.



```
package usingmethodArray;

import java.util.Scanner;

public class OddSumAndCountOFArrayWithreturnTypeAndArg {

    public int[] OddSumAndCountArrEle(int a[])
    {
        int sum=0,c=0;
        System.out.println("Given odd array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Given sum of odd array element is: "+sum);
        System.out.println("Given count of odd array element is: "+c);
        return a;
    }
    public static void main(String[] args)
    {
        OddSumAndCountOFArrayWithreturnTypeAndArg e = new OddSumAndCountOFArrayWithreturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        e.OddSumAndCountArrEle(a);
    }
```

```
Console
<terminated> OddSumAndCountOFArrayWithreturnTypeAn
Enter array size :
6
Enter array element:
2 7 5 3 1 2
Given odd array element is:
7
5
3
1
Given sum of odd array element is: 16
Given count of odd array element is: 4
```

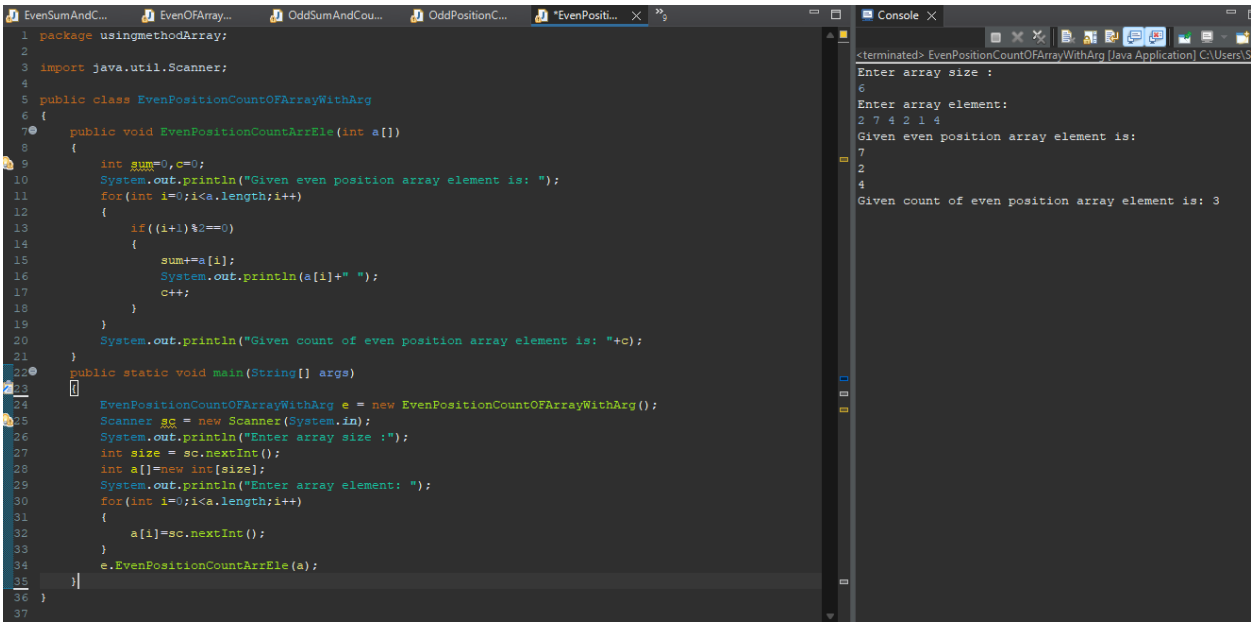
Q17. Write a program to enter an array and print element present at odd position and also find count.



```
package usingmethodArray;

import java.util.Scanner;

public class OddPositionCountOFArrayWithoutreturnTypeAndArg
{
    public void OddPositionCountArrEle()
    {
        int sum=0,c=0;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given odd position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2!=0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Given count of odd position array element is: "+c);
    }
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        OddPositionCountOFArrayWithoutreturnTypeAndArg o = new OddPositionCountOFArrayWithoutreturnTypeAndAr
        o.OddPositionCountArrEle();
    }
}
```

```
Console
<terminated> OddPositionCountOFArrayWithoutreturnTypeAndArg [Jav
Enter array size :
6
Enter array element:
2 7 5 3 2 1
Given odd position array element is:
2
5
2
Given count of odd position array element is: 3
```

Q18. Write a program to enter an array and print element present at even position and also find count.

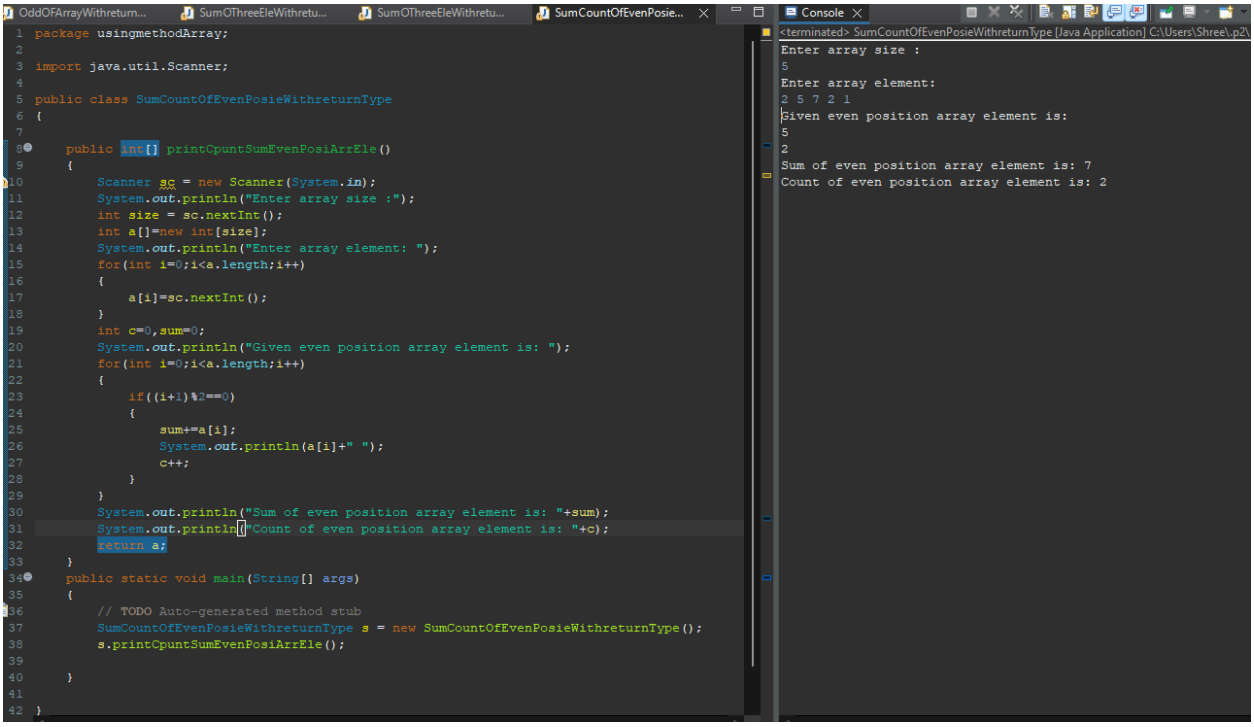


```
package usingmethodArray;

import java.util.Scanner;

public class EvenPositionCountOFArrayWithArg
{
    public void EvenPositionCountArrEle(int a[])
    {
        int sum=0,c=0;
        System.out.println("Given even position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2==0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Given count of even position array element is: "+c);
    }
    public static void main(String[] args)
    {
        EvenPositionCountOFArrayWithArg e = new EvenPositionCountOFArrayWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        e.EvenPositionCountArrEle(a);
    }
}
```

```
Console
<terminated> EvenPositionCountOFArrayWithArg [Java Application] C:\Users\S
Enter array size :
6
Enter array element:
2 7 4 2 1 4
Given even position array element is:
7
2
4
Given count of even position array element is: 3
```

Second Assignment:

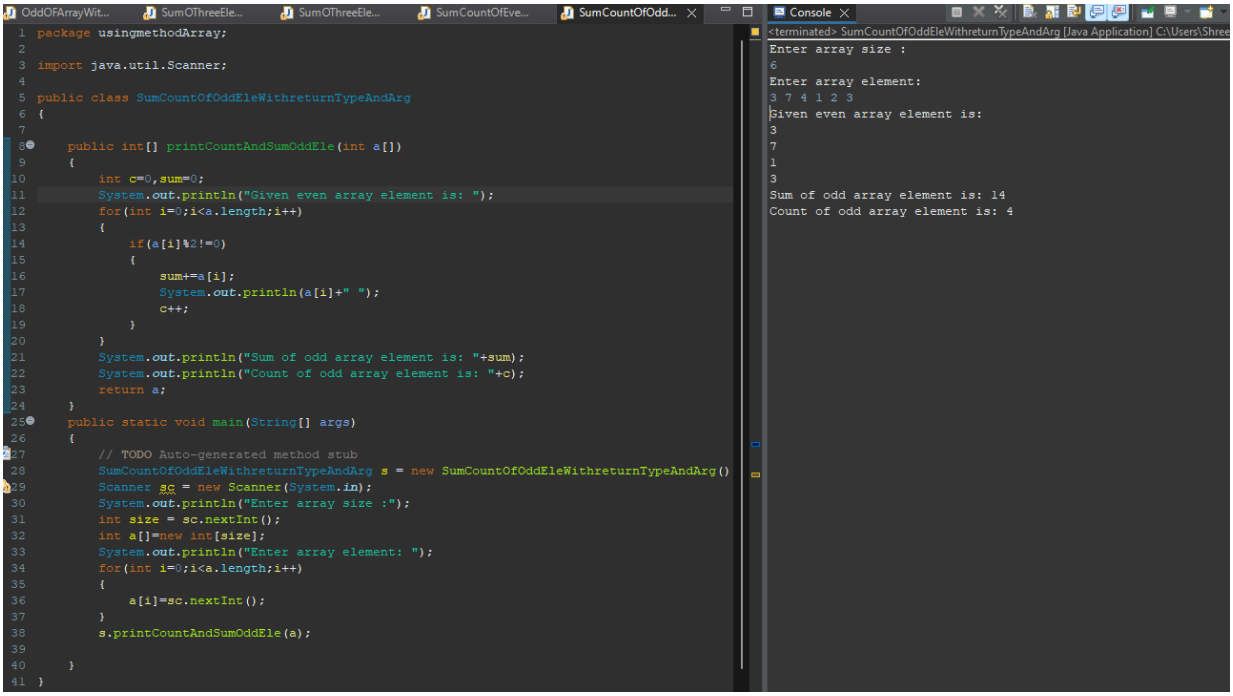
Q1. Write a program to enter an array and find the sum and count of element present at even position.



```
package usingmethodArray;

import java.util.Scanner;

public class SumCountOfEvenPosieWithreturnType
{

    public int[] printCpuntSumEvenPosiArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int c=0,sum=0;
        System.out.println("Given even position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2==0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Sum of even position array element is: "+sum);
        System.out.println("Count of even position array element is: "+c);
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumCountOfEvenPosieWithreturnType s = new SumCountOfEvenPosieWithreturnType();
        s.printCpuntSumEvenPosiArrEle();

    }

}
```

```
<terminated> SumCountOfEvenPosieWithreturnType [Java Application] C:\Users\Shree\.p2\
Enter array size :
5
Enter array element:
2 5 7 2 1
Given even position array element is:
5
2
Sum of even position array element is: 7
Count of even position array element is: 2
```

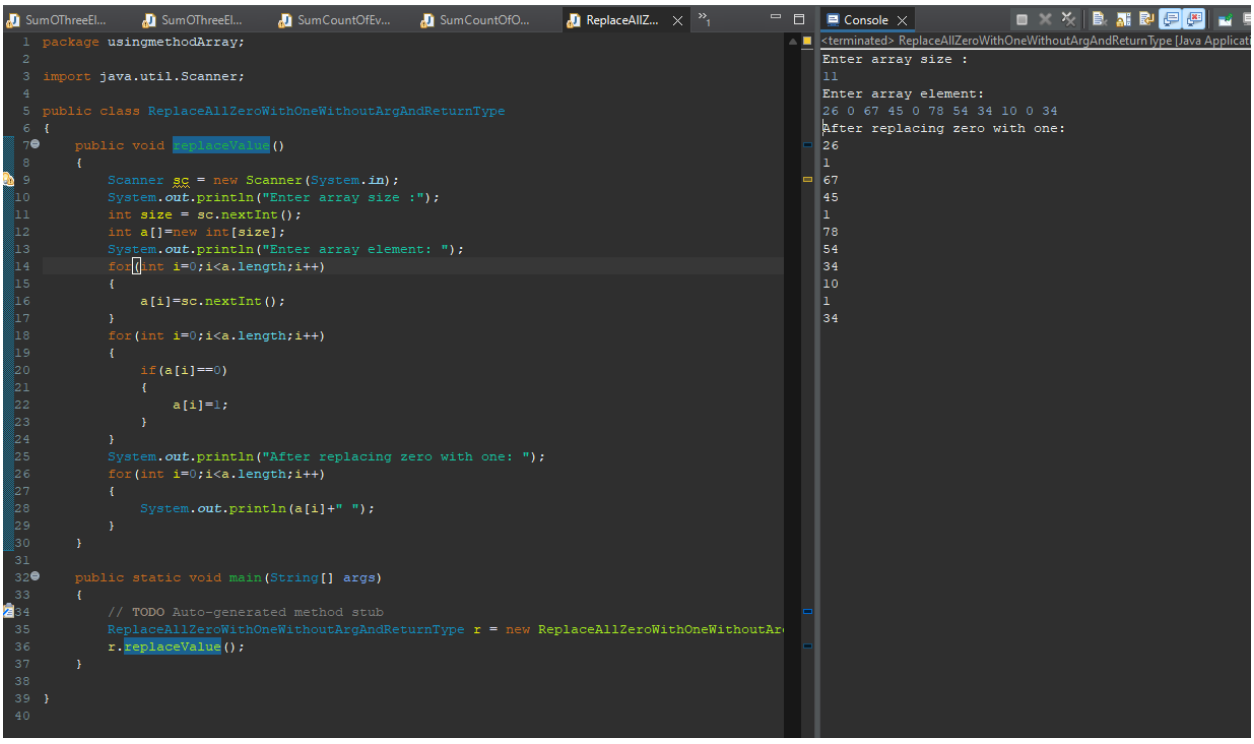
Q2. Write a program to enter an array and find the sum and count of odd element.



```
package usingmethodArray;

import java.util.Scanner;

public class SumCountOfOddEleWithreturnTypeAndArg
{

    public int[] printCountAndSumOddEle(int a[])
    {
        int c=0,sum=0;
        System.out.println("Given even array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]%2!=0)
            {
                sum+=a[i];
                System.out.println(a[i]+" ");
                c++;
            }
        }
        System.out.println("Sum of odd array element is: "+sum);
        System.out.println("Count of odd array element is: "+c);
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SumCountOfOddEleWithreturnTypeAndArg s = new SumCountOfOddEleWithreturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        s.printCountAndSumOddEle(a);

    }
}
```

```
<terminated> SumCountOfOddEleWithreturnTypeAndArg [Java Application] C:\Users\Shree
Enter array size :
6
Enter array element:
3 7 4 1 2 3
Given even array element is:
3
7
1
3
Sum of odd array element is: 14
Count of odd array element is: 4
```

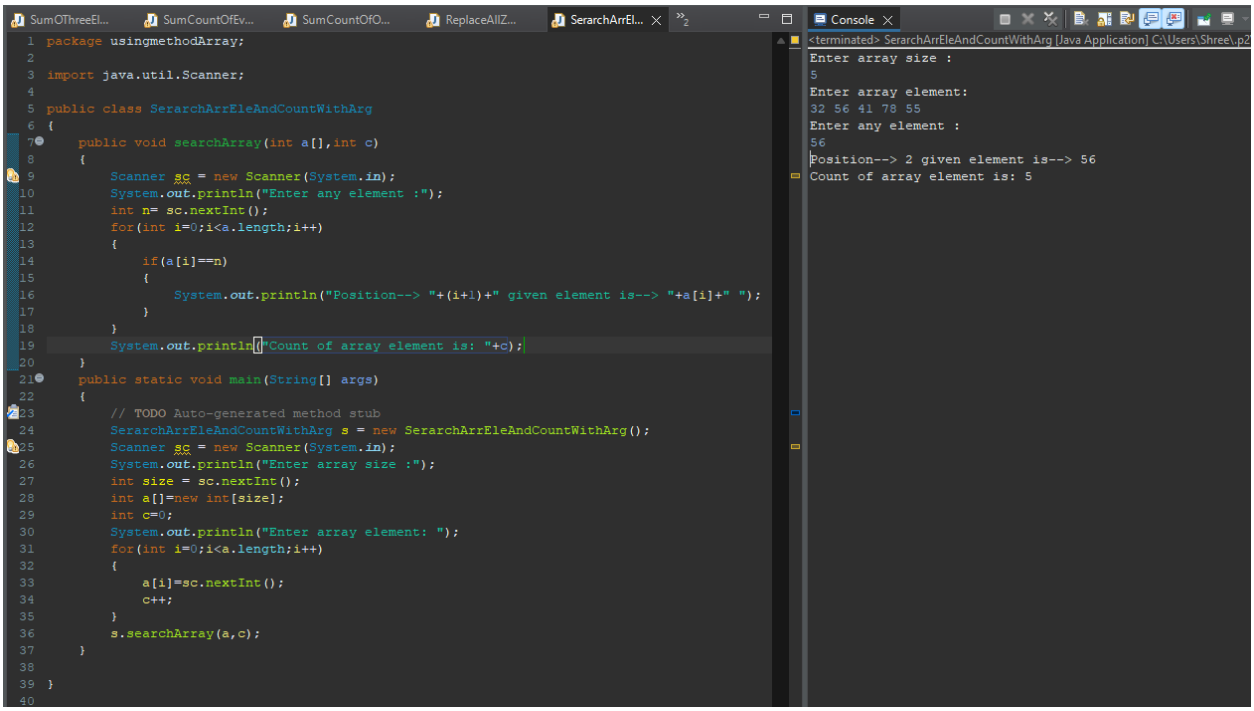
Q3. Write a program to replace all the 0's with 1's in your array. Your array is [26, 0, 67, 45, 0, 78, 54, 34, 10, 0,34].



```
package usingmethodArray;

import java.util.Scanner;

public class ReplaceAllZeroWithOneWithoutArgAndReturnType
{
    public void replaceValue()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==0)
            {
                a[i]=1;
            }
        }
        System.out.println("After replacing zero with one: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        ReplaceAllZeroWithOneWithoutArgAndReturnType r = new ReplaceAllZeroWithOneWithoutAr
        r.replaceValue();
    }

}
```

```
<terminated> ReplaceAllZeroWithOneWithoutArgAndReturnType [Java Applicat
Enter array size :
11
Enter array element:
26 0 67 45 0 78 54 34 10 0 34
After replacing zero with one:
26
1
67
45
1
78
54
34
10
1
34
```

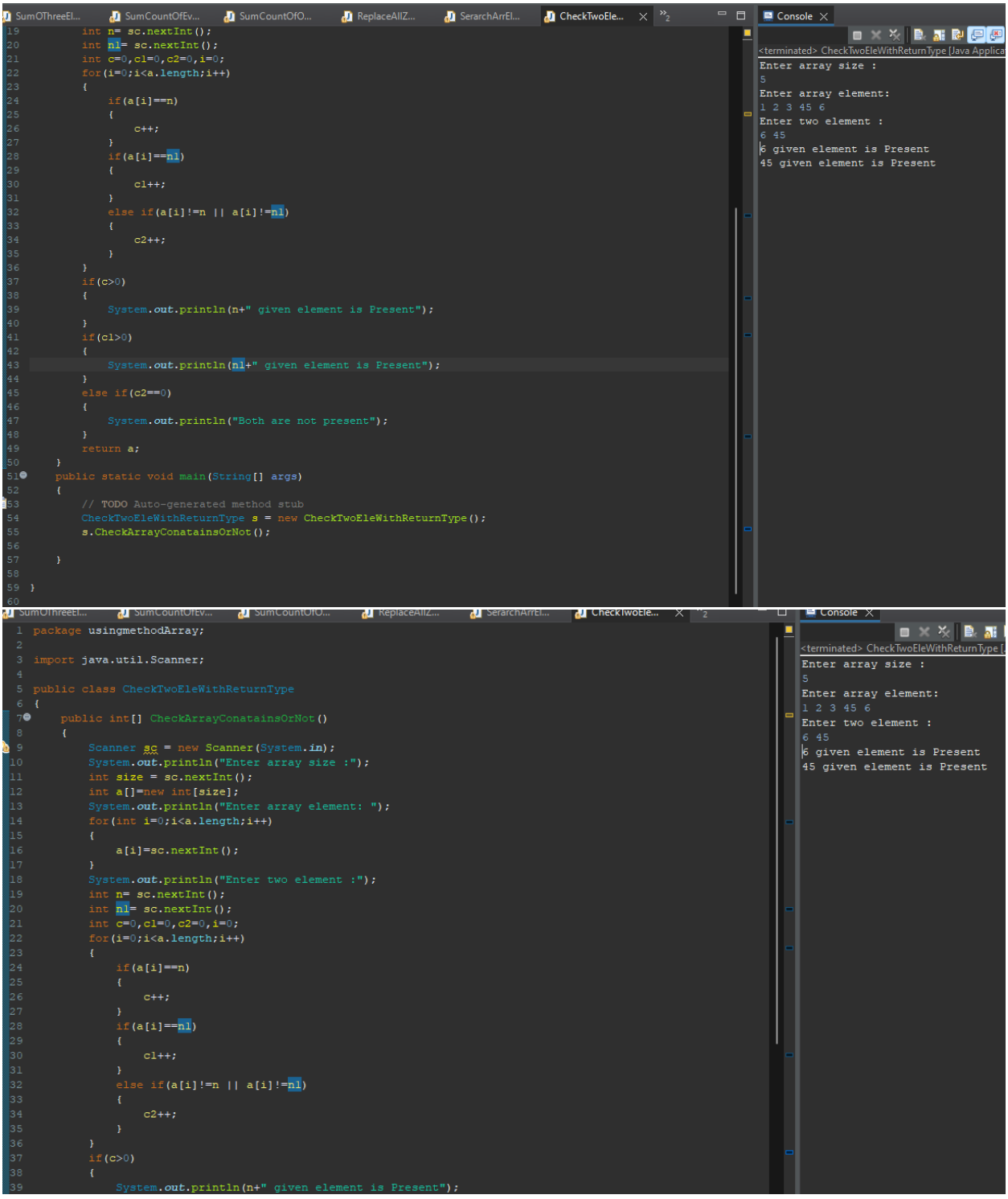
Q4. Write a program to enter an array and search any particular element and find the count.



```
package usingmethodArray;

import java.util.Scanner;

public class SerarchArrEleAndCountWithArg
{
    public void searchArray(int a[],int c)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter any element :");
        int n= sc.nextInt();
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==n)
            {
                System.out.println("Position--> "+(i+1)+" given element is--> "+a[i]+" ");
            }
        }
        System.out.println("Count of array element is: "+c);
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        SerarchArrEleAndCountWithArg s = new SerarchArrEleAndCountWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        int c=0;
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
            c++;
        }
        s.searchArray(a,c);
    }

}
```

```
<terminated> SerarchArrEleAndCountWithArg [Java Application] C:\Users\Shree\.p2
Enter array size :
5
Enter array element:
32 56 41 78 55
Enter any element :
56
Position--> 2 given element is--> 56
Count of array element is: 5
```

Q5. Write a program to check if an array of integers contains two specified elements.



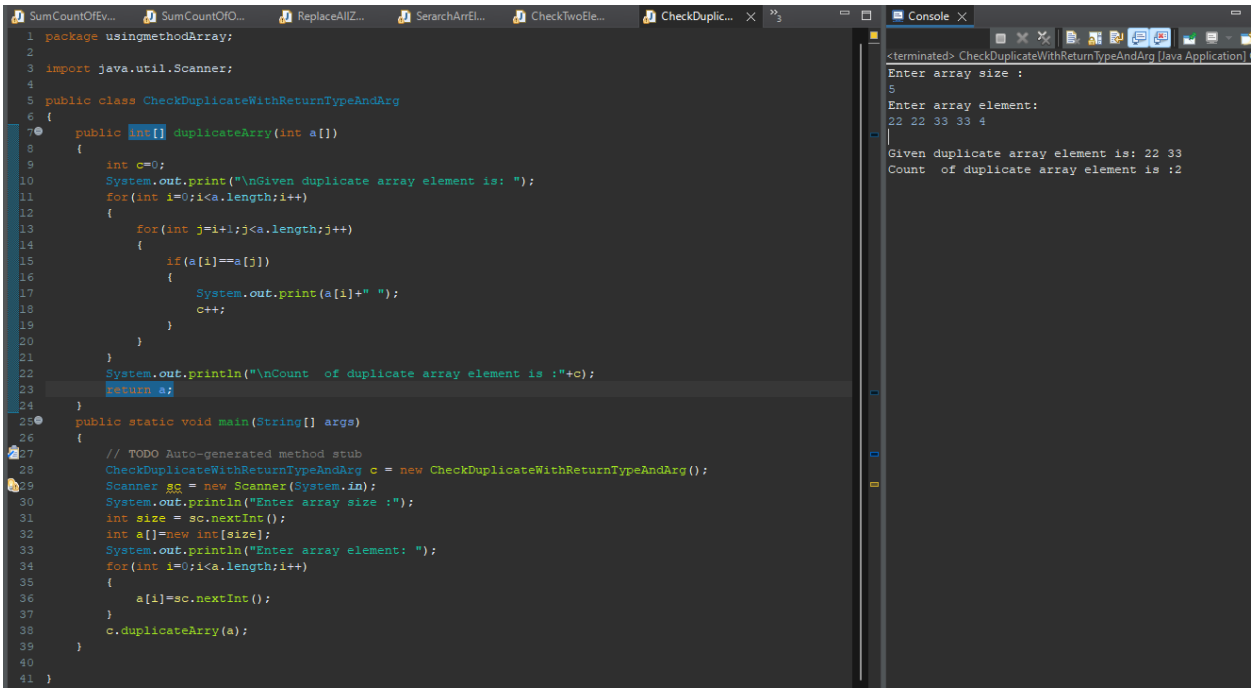
```
        int n= sc.nextInt();
        int nl= sc.nextInt();
        int c=0,c1=0,c2=0,i=0;
        for(i=0;i<a.length;i++)
        {
            if(a[i]==n)
            {
                c++;
            }
            if(a[i]==nl)
            {
                c1++;
            }
            else if(a[i]!=n || a[i]!=nl)
            {
                c2++;
            }
        }
        if(c>0)
        {
            System.out.println(n+" given element is Present");
        }
        if(c1>0)
        {
            System.out.println(nl+" given element is Present");
        }
        else if(c2==0)
        {
            System.out.println("Both are not present");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        CheckTwoEleWithReturnType s = new CheckTwoEleWithReturnType();
        s.CheckArrayConatainsOrNot();

    }

}
```

```
Console
<terminated> CheckTwoEleWithReturnType [Java Applica
Enter array size :
5
Enter array element:
1 2 3 45 6
Enter two element :
6 45
6 given element is Present
45 given element is Present
```

```
package usingmethodArray;

import java.util.Scanner;

public class CheckTwoEleWithReturnType
{
    public int[] CheckArrayConatainsOrNot()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter two element :");
        int n= sc.nextInt();
        int nl= sc.nextInt();
        int c=0,c1=0,c2=0,i=0;
        for(i=0;i<a.length;i++)
        {
            if(a[i]==n)
            {
                c++;
            }
            if(a[i]==nl)
            {
                c1++;
            }
            else if(a[i]!=n || a[i]!=nl)
            {
                c2++;
            }
        }
        if(c>0)
        {
            System.out.println(n+" given element is Present");
```

```
Console
<terminated> CheckTwoEleWithReturnType [
Enter array size :
5
Enter array element:
1 2 3 45 6
Enter two element :
6 45
6 given element is Present
45 given element is Present
```

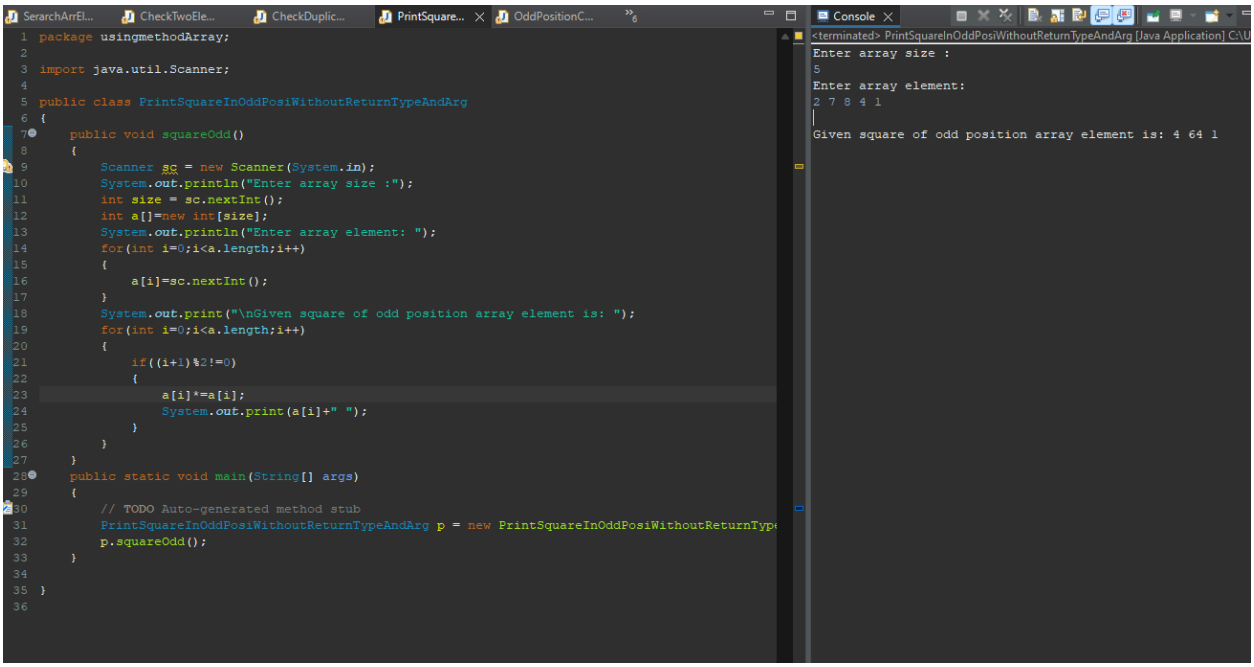
Q6. Write a program to enter an array and find the duplicate element and also count of that.



```
package usingmethodArray;

import java.util.Scanner;

public class CheckDuplicateWithReturnTypeAndArg
{
    public int[] duplicateArry(int a[])
    {
        int c=0;
        System.out.print("\nGiven duplicate array element is: ");
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    System.out.print(a[i]+" ");
                    c++;
                }
            }
        }
        System.out.println("\nCount  of duplicate array element is :"+c);
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        CheckDuplicateWithReturnTypeAndArg c = new CheckDuplicateWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        c.duplicateArry(a);
    }

}
```

```
<terminated> CheckDuplicateWithReturnTypeAndArg [Java Application]
Enter array size :
5
Enter array element:
22 22 33 33 4

Given duplicate array element is: 22 33
Count  of duplicate array element is :2
```

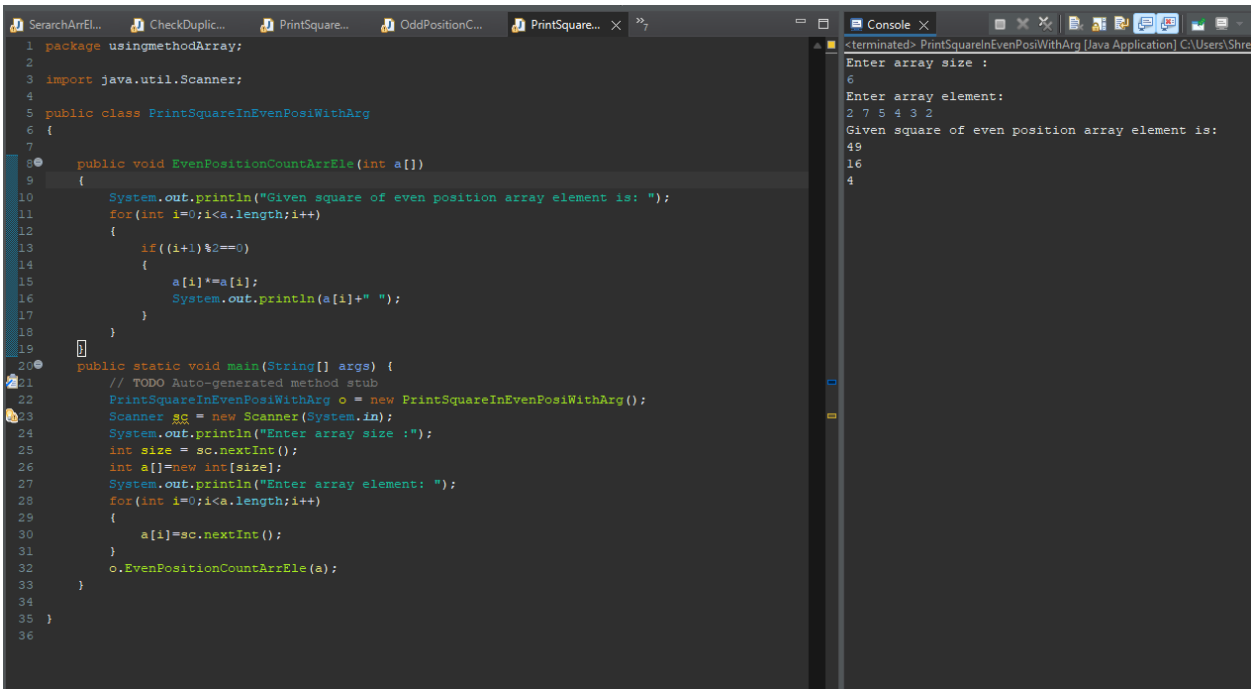
Q7. Write a program to enter an array and print the square of the element which is on odd position.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintSquareInOddPosiWithoutReturnTypeAndArg
{
    public void squareOdd()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("\nGiven square of odd position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2!=0)
            {
                a[i]*=a[i];
                System.out.print(a[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintSquareInOddPosiWithoutReturnTypeAndArg p = new PrintSquareInOddPosiWithoutReturnTyp
        p.squareOdd();
    }

}
```

```
<terminated> PrintSquareInOddPosiWithoutReturnTypeAndArg [Java Application] C:\U
Enter array size :
5
Enter array element:
2 7 8 4 1

Given square of odd position array element is: 4 64 1
```

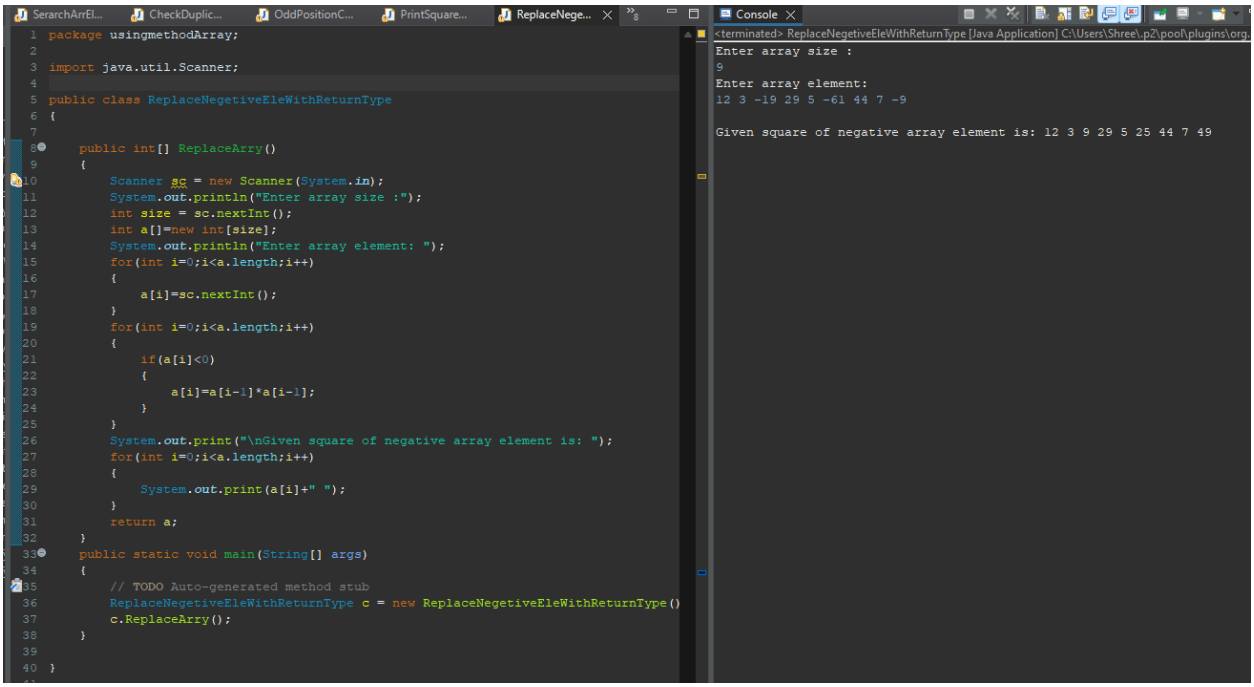
Q8. Write a program to enter an array and print the square of the element which is on even position.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintSquareInEvenPosiWithArg
{

    public void EvenPositionCountArrEle(int a[])
    {
        System.out.println("Given square of even position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2==0)
            {
                a[i]*=a[i];
                System.out.println(a[i]+" ");
            }
        }
    }
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        PrintSquareInEvenPosiWithArg o = new PrintSquareInEvenPosiWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        o.EvenPositionCountArrEle(a);
    }

}
```

```
<terminated> PrintSquareInEvenPosiWithArg [Java Application] C:\Users\Shre
Enter array size :
6
Enter array element:
2 7 5 4 3 2
Given square of even position array element is:
49
16
4
```

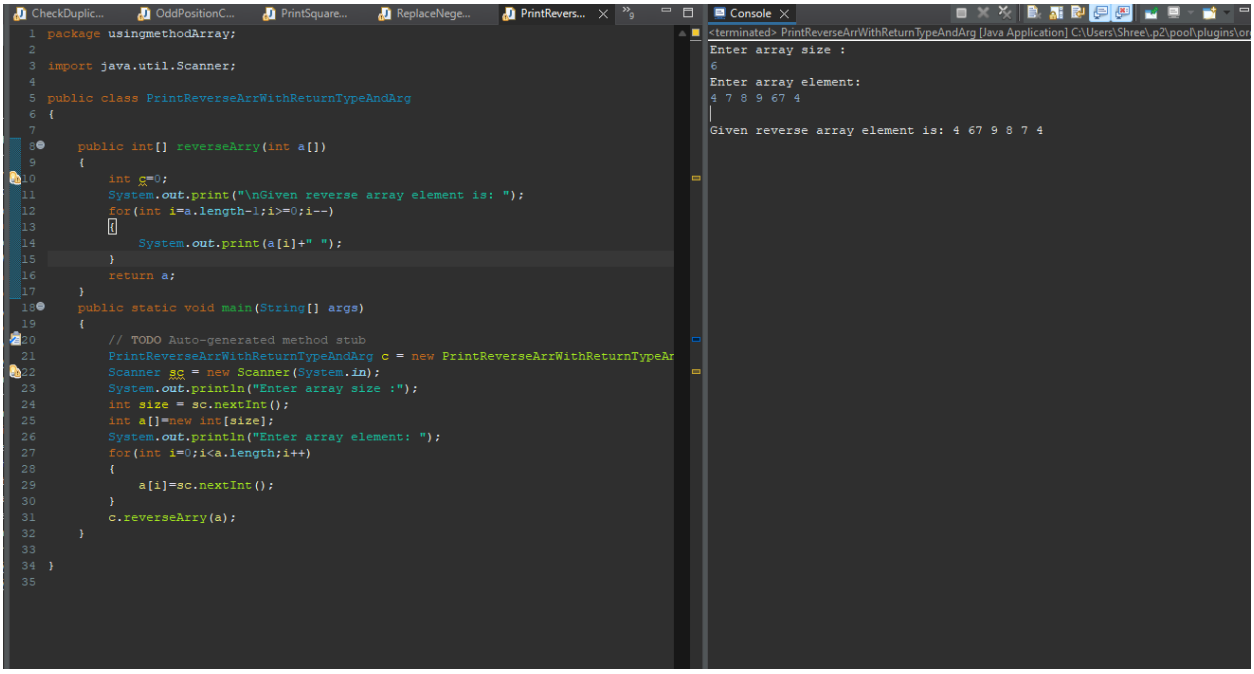
Q9. Write a program to to replace all negative value with its immediate left elements square. Means arr[] = [12, 3, -19, 29, 5, -61, 44, 7, -9] Output array will be [12, 3, 9, 29, 5, 25, 44, 7, 49].//i=3a [i-1]



```
package usingmethodArray;

import java.util.Scanner;

public class ReplaceNegetiveEleWithReturnType
{

    public int[] ReplaceArry()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=0;i<a.length;i++)
        {
            if(a[i]<0)
            {
                a[i]=a[i-1]*a[i-1];
            }
        }
        System.out.print("\nGiven square of negative array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        ReplaceNegetiveEleWithReturnType c = new ReplaceNegetiveEleWithReturnType()
        c.ReplaceArry();
    }

}
```

```
<terminated> ReplaceNegetiveEleWithReturnType [Java Application] C:\Users\Shree\.p2\pool\plugins\org.
Enter array size :
9
Enter array element:
12 3 -19 29 5 -61 44 7 -9

Given square of negative array element is: 12 3 9 29 5 25 44 7 49
```

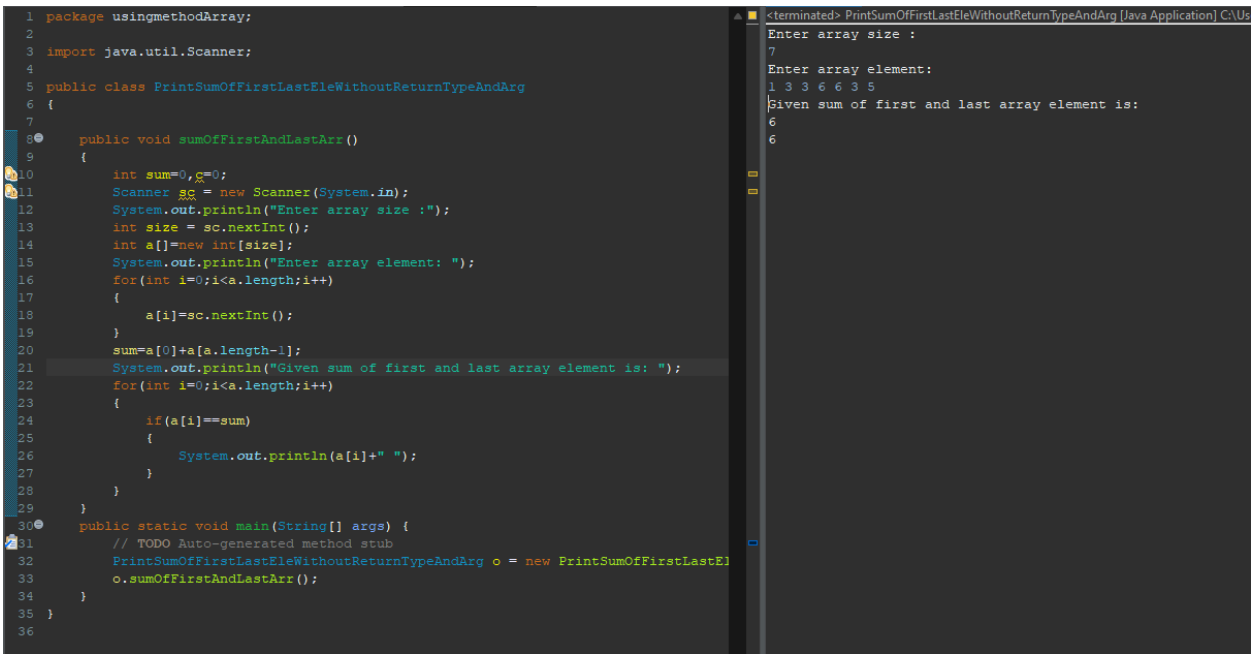
Q10. Write a program to enter an array and print it in reverse order.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintReverseArrWithReturnTypeAndArg
{

    public int[] reverseArry(int a[])
    {
        int c=0;
        System.out.print("\nGiven reverse array element is: ");
        for(int i=a.length-1;i>=0;i--)
        {
            System.out.print(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintReverseArrWithReturnTypeAndArg c = new PrintReverseArrWithReturnTypeAr
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        c.reverseArry(a);
    }

}
```

```
<terminated> PrintReverseArrWithReturnTypeAndArg [Java Application] C:\Users\Shree\.p2\pool\plugins\or
Enter array size :
6
Enter array element:
4 7 8 9 67 4

Given reverse array element is: 4 67 9 8 7 4
```

Q11. Write a program to enter an array and find the no in array which is equal to the sum of 1st and last element.

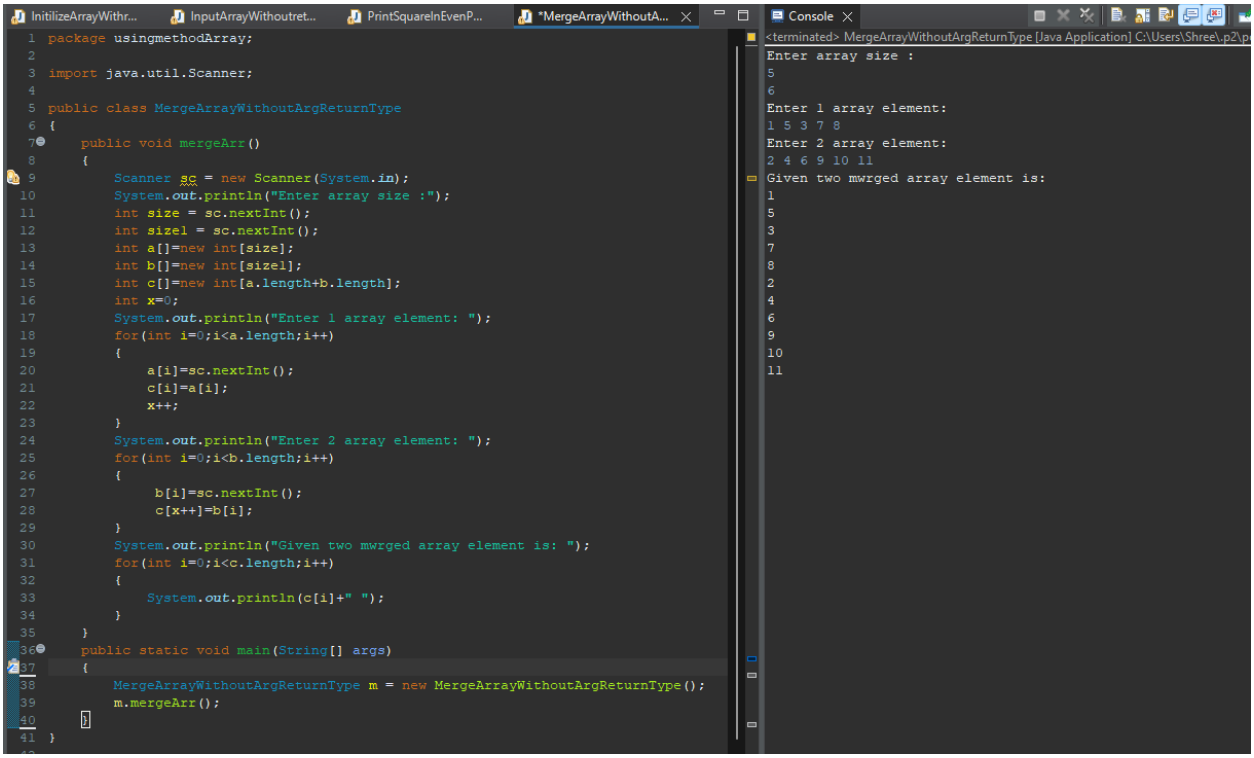


```
package usingmethodArray;

import java.util.Scanner;

public class PrintSumOfFirstLastEleWithoutReturnTypeAndArg
{

    public void sumOfFirstAndLastArr()
    {
        int sum=0,c=0;
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        sum=a[0]+a[a.length-1];
        System.out.println("Given sum of first and last array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==sum)
            {
                System.out.println(a[i]+" ");
            }
        }
    }
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        PrintSumOfFirstLastEleWithoutReturnTypeAndArg o = new PrintSumOfFirstLastEl
        o.sumOfFirstAndLastArr();
    }
}
```

```
<terminated> PrintSumOfFirstLastEleWithoutReturnTypeAndArg [Java Application] C:\Us
Enter array size :
7
Enter array element:
1 3 3 6 6 3 5
Given sum of first and last array element is:
6
6
```

3rd Assignment

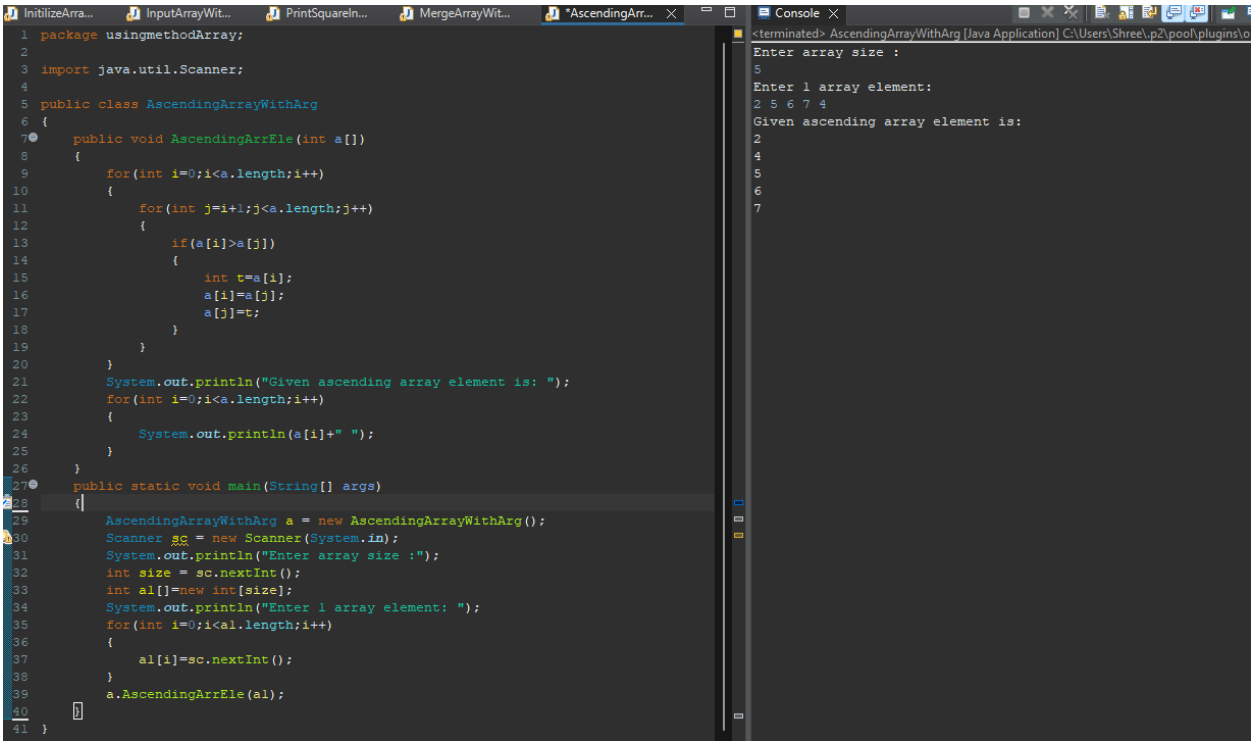
Q1. Write a program to merge two Array and print the final array.



```
package usingmethodArray;

import java.util.Scanner;

public class MergeArrayWithoutArgReturnType
{
    public void mergeArr()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int sizel = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[sizel];
        int c[]=new int[a.length+b.length];
        int x=0;
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
            c[i]=a[i];
            x++;
        }
        System.out.println("Enter 2 array element: ");
        for(int i=0;i<b.length;i++)
        {
             b[i]=sc.nextInt();
             c[x++]=b[i];
        }
        System.out.println("Given two mwrged array element is: ");
        for(int i=0;i<c.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        MergeArrayWithoutArgReturnType m = new MergeArrayWithoutArgReturnType();
        m.mergeArr();
    }
}
```

```
<terminated> MergeArrayWithoutArgReturnType [Java Application] C:\Users\Shree\.p2\p
Enter array size :
5
6
Enter 1 array element:
1 5 3 7 8
Enter 2 array element:
2 4 6 9 10 11
Given two mwrged array element is:
1
5
3
7
8
2
4
6
9
10
11
```

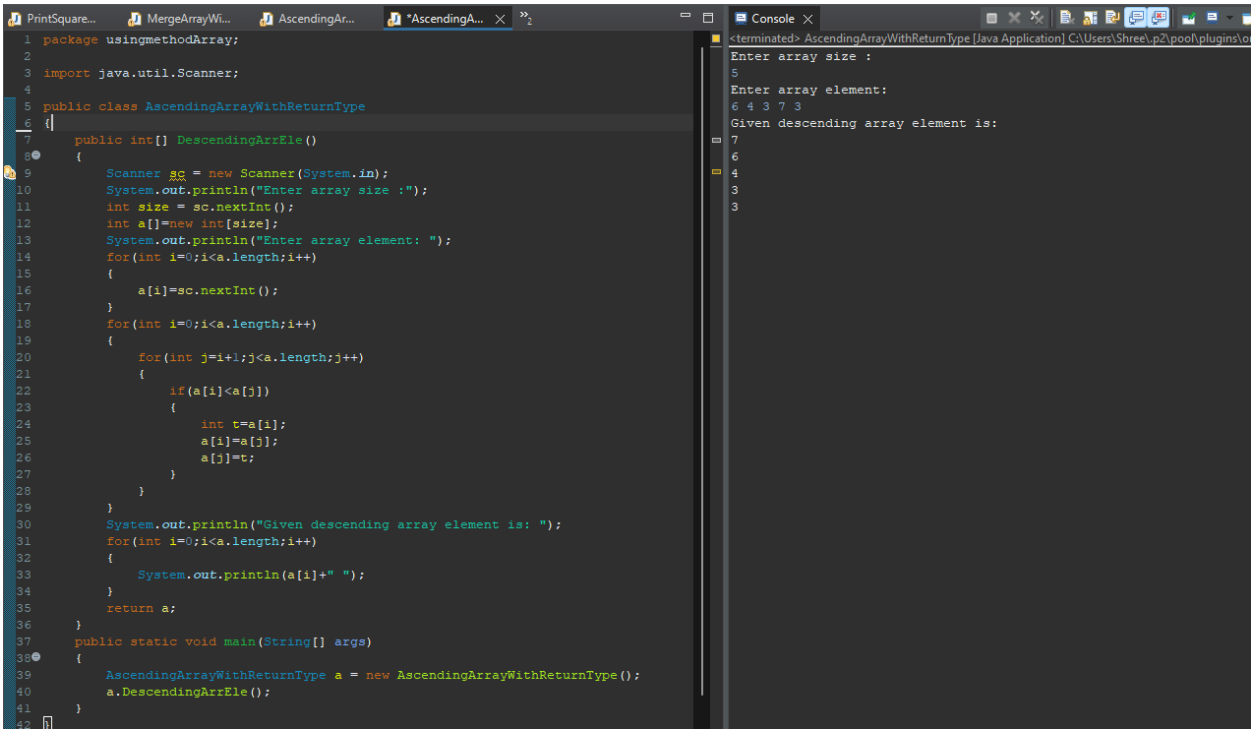
Q2. Write a program to enter an array and sort that in ascending order.



```
package usingmethodArray;

import java.util.Scanner;

public class AscendingArrayWithArg
{
    public void AscendingArrEle(int a[])
    {
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]>a[j])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("Given ascending array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        AscendingArrayWithArg a = new AscendingArrayWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int al[]=new int[size];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<al.length;i++)
        {
            al[i]=sc.nextInt();
        }
        a.AscendingArrEle(al);
    }
}
```

```
<terminated> AscendingArrayWithArg [Java Application] C:\Users\Shree\.p2\pool\plugins\o
Enter array size :
5
Enter 1 array element:
2 5 6 7 4
Given ascending array element is:
2
4
5
6
7
```

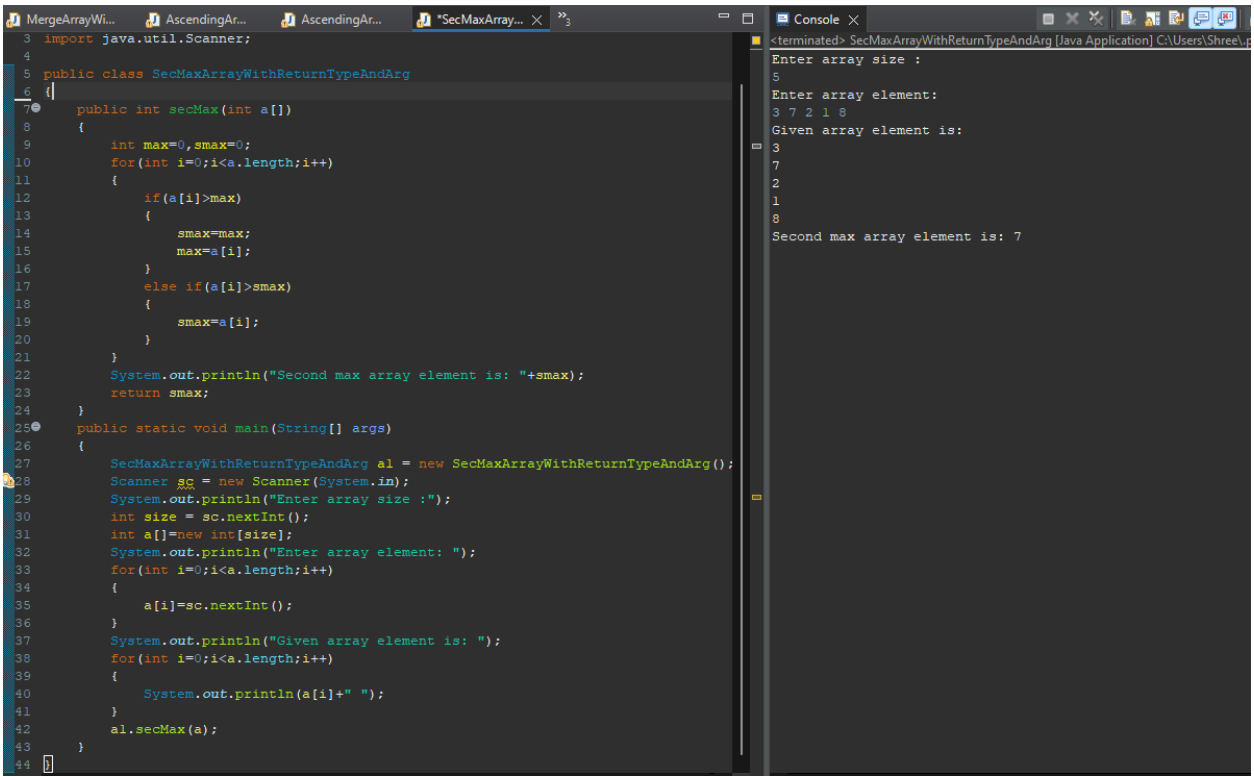
Q3. Write a program to enter an array and sort that in descending order.



```
package usingmethodArray;

import java.util.Scanner;

public class AscendingArrayWithReturnType
{
    public int[] DescendingArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]<a[j])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("Given descending array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        AscendingArrayWithReturnType a = new AscendingArrayWithReturnType();
        a.DescendingArrEle();
    }
}
```

```
Enter array size :
5
Enter array element:
6 4 3 7 3
Given descending array element is:
7
6
4
3
3
```

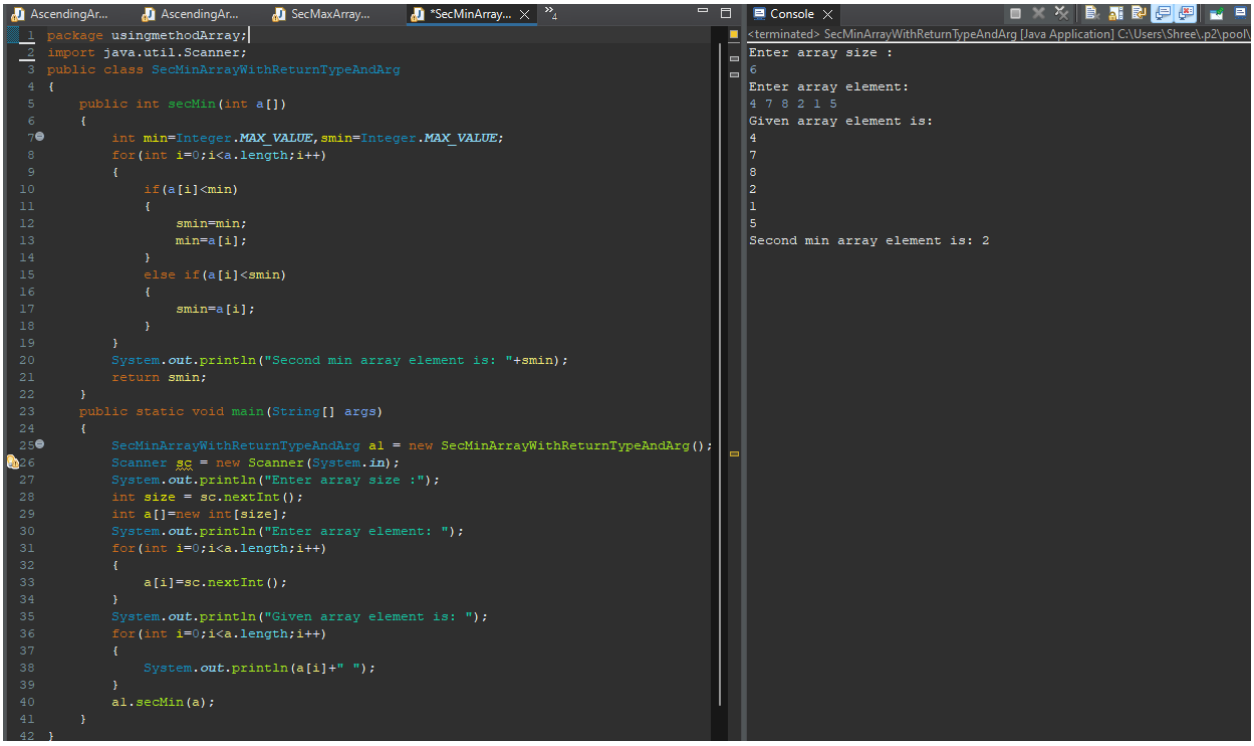
Q4. Write a program to enter an array and find the second max element.



```
import java.util.Scanner;

public class SecMaxArrayWithReturnTypeAndArg
{
    public int secMax(int a[])
    {
        int max=0,smax=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]>max)
            {
                smax=max;
                max=a[i];
            }
            else if(a[i]>smax)
            {
                smax=a[i];
            }
        }
        System.out.println("Second max array element is: "+smax);
        return smax;
    }
    public static void main(String[] args)
    {
        SecMaxArrayWithReturnTypeAndArg al = new SecMaxArrayWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.secMax(a);
    }
}
```

```
Enter array size :
5
Enter array element:
3 7 2 1 8
Given array element is:
3
7
2
1
8
Second max array element is: 7
```

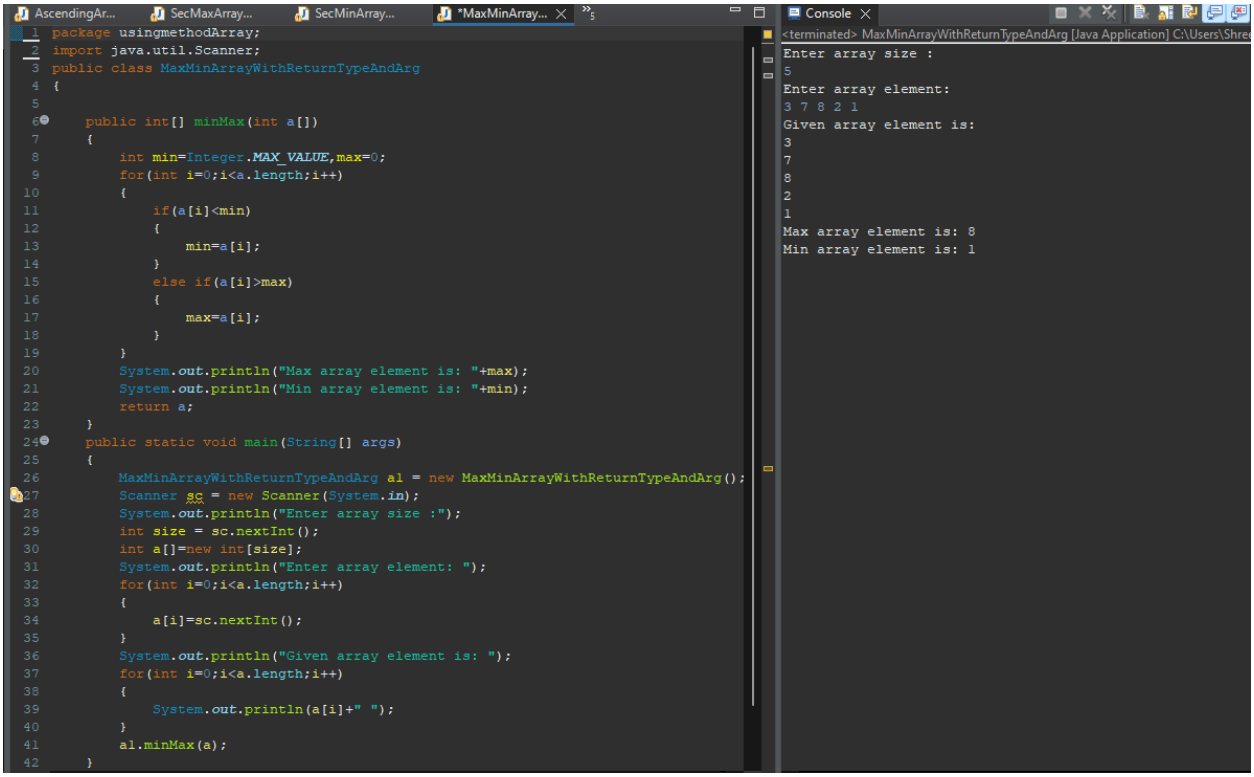
Q5. Write a program to enter an array and find the second min element.



```
package usingmethodArray;
import java.util.Scanner;
public class SecMinArrayWithReturnTypeAndArg
{
    public int secMin(int a[])
    {
        int min=Integer.MAX_VALUE,smin=Integer.MAX_VALUE;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]<min)
            {
                smin=min;
                min=a[i];
            }
            else if(a[i]<smin)
            {
                smin=a[i];
            }
        }
        System.out.println("Second min array element is: "+smin);
        return smin;
    }
    public static void main(String[] args)
    {
        SecMinArrayWithReturnTypeAndArg al = new SecMinArrayWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.secMin(a);
    }
}
```

```
<terminated> SecMinArrayWithReturnTypeAndArg [Java Application] C:\Users\Shree\.p2\pool\
Enter array size :
6
Enter array element:
4 7 8 2 1 5
Given array element is:
4
7
8
2
1
5
Second min array element is: 2
```

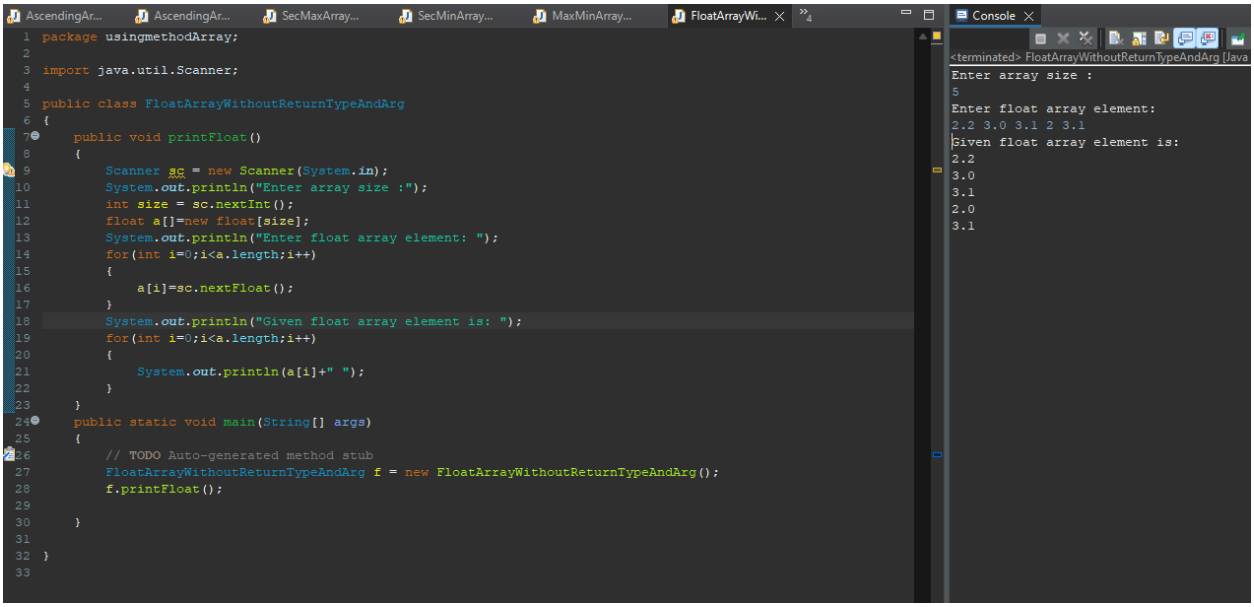
Q6. Write a program to enter an array and find max and min element.



```
package usingmethodArray;
import java.util.Scanner;
public class MaxMinArrayWithReturnTypeAndArg
{

    public int[] minMax(int a[])
    {
        int min=Integer.MAX_VALUE,max=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]<min)
            {
                min=a[i];
            }
            else if(a[i]>max)
            {
                max=a[i];
            }
        }
        System.out.println("Max array element is: "+max);
        System.out.println("Min array element is: "+min);
        return a;
    }
    public static void main(String[] args)
    {
        MaxMinArrayWithReturnTypeAndArg al = new MaxMinArrayWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.minMax(a);
    }
```

```
<terminated> MaxMinArrayWithReturnTypeAndArg [Java Application] C:\Users\Shre
Enter array size :
5
Enter array element:
3 7 8 2 1
Given array element is:
3
7
8
2
1
Max array element is: 8
Min array element is: 1
```

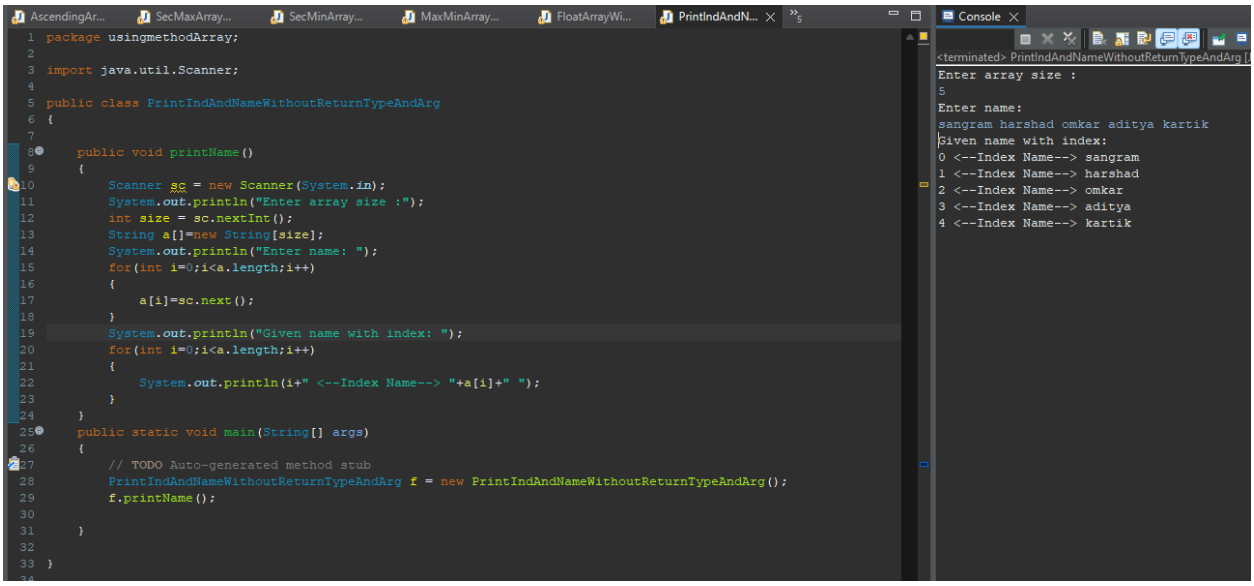
Q7. Write a program to input 10 elements in float and print it.



```
package usingmethodArray;

import java.util.Scanner;

public class FloatArrayWithoutReturnTypeAndArg
{
    public void printFloat()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        float a[]=new float[size];
        System.out.println("Enter float array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextFloat();
        }
        System.out.println("Given float array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        FloatArrayWithoutReturnTypeAndArg f = new FloatArrayWithoutReturnTypeAndArg();
        f.printFloat();

    }

}
```

```
<terminated> FloatArrayWithoutReturnTypeAndArg [Java
Enter array size :
5
Enter float array element:
2.2 3.0 3.1 2 3.1
Given float array element is:
2.2
3.0
3.1
2.0
3.1
```

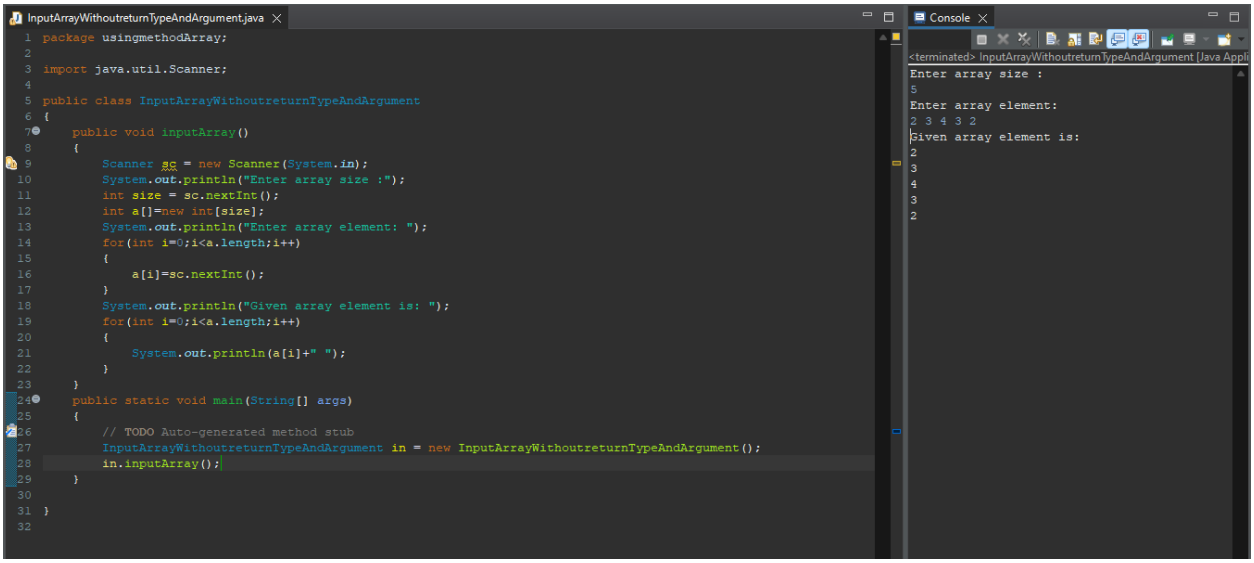
Q8. Write a program to input 10 name and print with index, name.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintIndAndNameWithoutReturnTypeAndArg
{

    public void printName()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        String a[]=new String[size];
        System.out.println("Enter name: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.next();
        }
        System.out.println("Given name with index: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(i+" <--Index Name--> "+a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintIndAndNameWithoutReturnTypeAndArg f = new PrintIndAndNameWithoutReturnTypeAndArg();
        f.printName();

    }

}
```

```
<terminated> PrintIndAndNameWithoutReturnTypeAndArg [
Enter array size :
5
Enter name:
sangram harshad omkar aditya kartik
Given name with index:
0 <--Index Name--> sangram
1 <--Index Name--> harshad
2 <--Index Name--> omkar
3 <--Index Name--> aditya
4 <--Index Name--> kartik
```

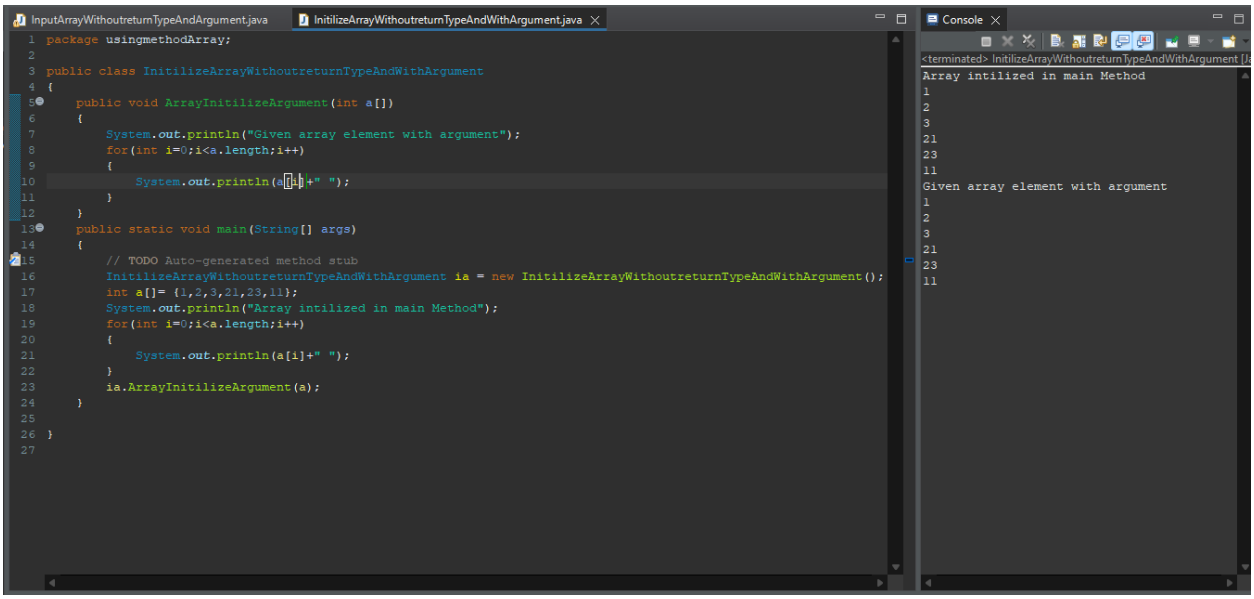
Q9. Write a program to input an array and print it.



```java
package usingmethodArray;

import java.util.Scanner;

public class InputArrayWithoutreturnTypeAndArgument
{
    public void inputArray()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        InputArrayWithoutreturnTypeAndArgument in = new InputArrayWithoutreturnTypeAndArgument();
        in.inputArray();
    }

}
```

```
Enter array size :
5
Enter array element:
2 3 4 3 2
Given array element is:
2
3
4
3
2
```

Q10. Write a program initialize an array and print it.



```java
package usingmethodArray;

public class InitilizeArrayWithoutreturnTypeAndWithArgument
{
    public void ArrayInitilizeArgument(int a[])
    {
        System.out.println("Given array element with argument");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        InitilizeArrayWithoutreturnTypeAndWithArgument ia = new InitilizeArrayWithoutreturnTypeAndWithArgument();
        int a[]= {1,2,3,21,23,11};
        System.out.println("Array intilized in main Method");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        ia.ArrayInitilizeArgument(a);
    }

}
```

```
Array intilized in main Method
1
2
3
21
23
11
Given array element with argument
1
2
3
21
23
11
```

Q11. Write a program to input 10 elements and multiply 5th elements by 25.

```java
package usingmethodArray;

import java.util.Scanner;

public class FifthEleMulWithArg
{
    public void printMulEle(int a[])
    {
        for(int i=0;i<a.length;i++)
        {
            if((i+1)==5)
            {
                a[i]=a[i]*25;
            }
        }
        System.out.println("Given changed array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        FifthEleMulWithArg al = new FifthEleMulWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.printMulEle(a);
    }
}
```

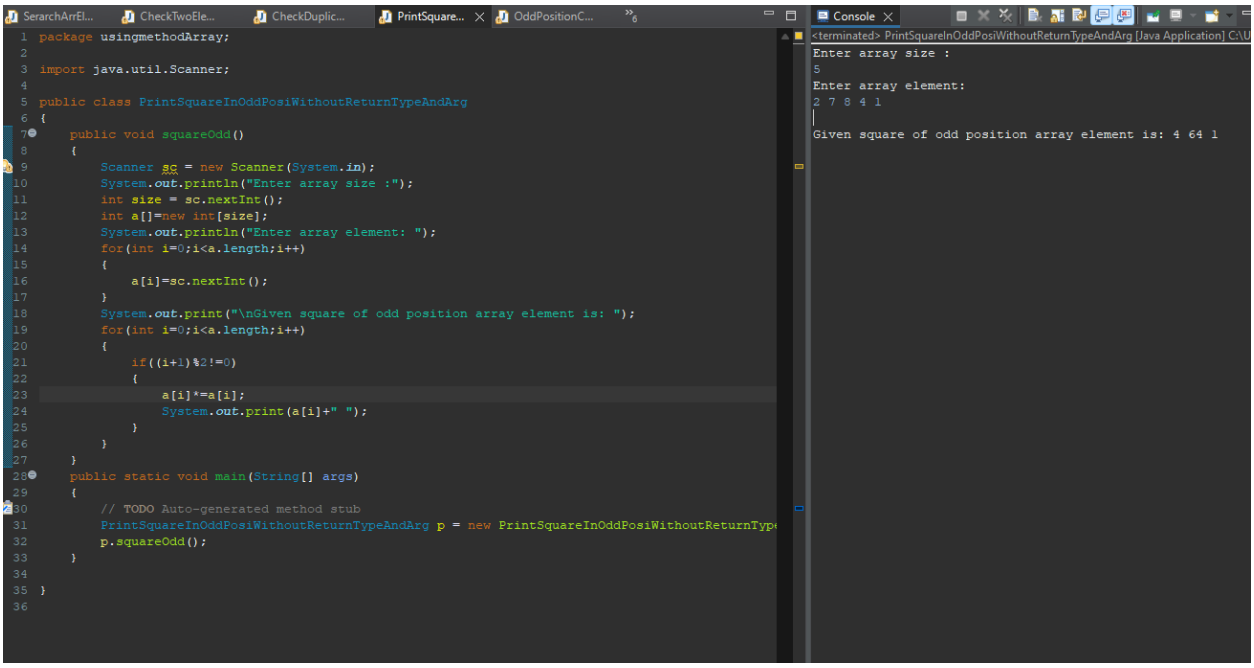
```
<terminated> FifthEleMulWithArg [Java Application] C:\Users
Enter array size :
5
Enter array element:
3 6 2 7 2
Given array element is:
3
6
2
7
2
Given changed array element is:
3
6
2
7
50
```

Q12. Write a program to input an array and find its average of first 5 element.

```java
package usingmethodArray;

import java.util.Scanner;

public class AvgOFFiveArrayWithoutreturnTypeAndWithArgument
{
    public void averageOFive(int a[])
    {
        int sum=0;
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length-3;i++)
        {
            sum+=a[i];
            System.out.println(a[i]+" ");
        }
        System.out.println("Given Average of array element is: "+(sum/5));
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        AvgOFFiveArrayWithoutreturnTypeAndWithArgument a = new AvgOFFiveArrayWithoutreturnTypeAndWithArgument();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int al[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<al.length;i++)
        {
            al[i]=sc.nextInt();
        }
        a.averageOFive(al);
    }

}
```

```
<terminated> AvgOFFiveArrayWithoutreturnTypeAndWithA
Enter array size :
8
Enter array element:
1 2 3 4 5 6 7 8
Given array element is:
1
2
3
4
5
Given Average of array element is: 3
```

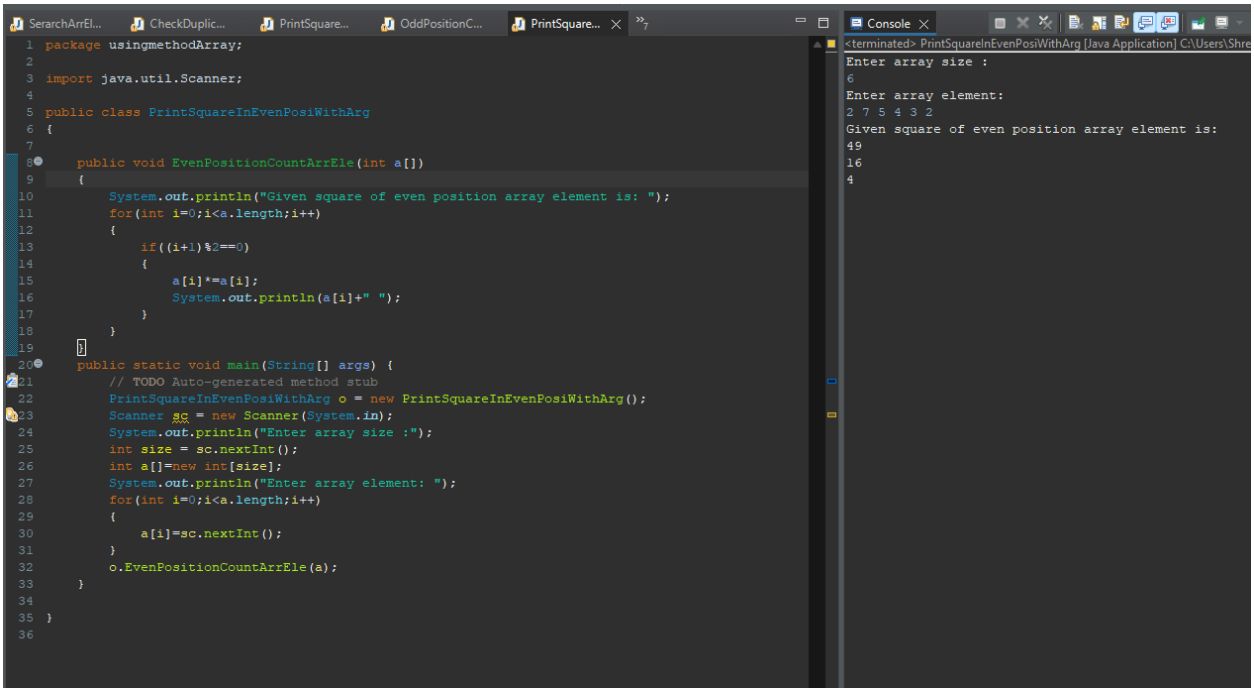
Q16. Write a program enter an array and print the square of the element which is present at odd position.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintSquareInOddPosiWithoutReturnTypeAndArg
{
    public void squareOdd()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("\nGiven square of odd position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2!=0)
            {
                a[i]*=a[i];
                System.out.print(a[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintSquareInOddPosiWithoutReturnTypeAndArg p = new PrintSquareInOddPosiWithoutReturnTyp
        p.squareOdd();
    }

}
```

```
<terminated> PrintSquareInOddPosiWithoutReturnTypeAndArg [Java Application] C:\U
Enter array size :
5
Enter array element:
2 7 8 4 1

Given square of odd position array element is: 4 64 1
```

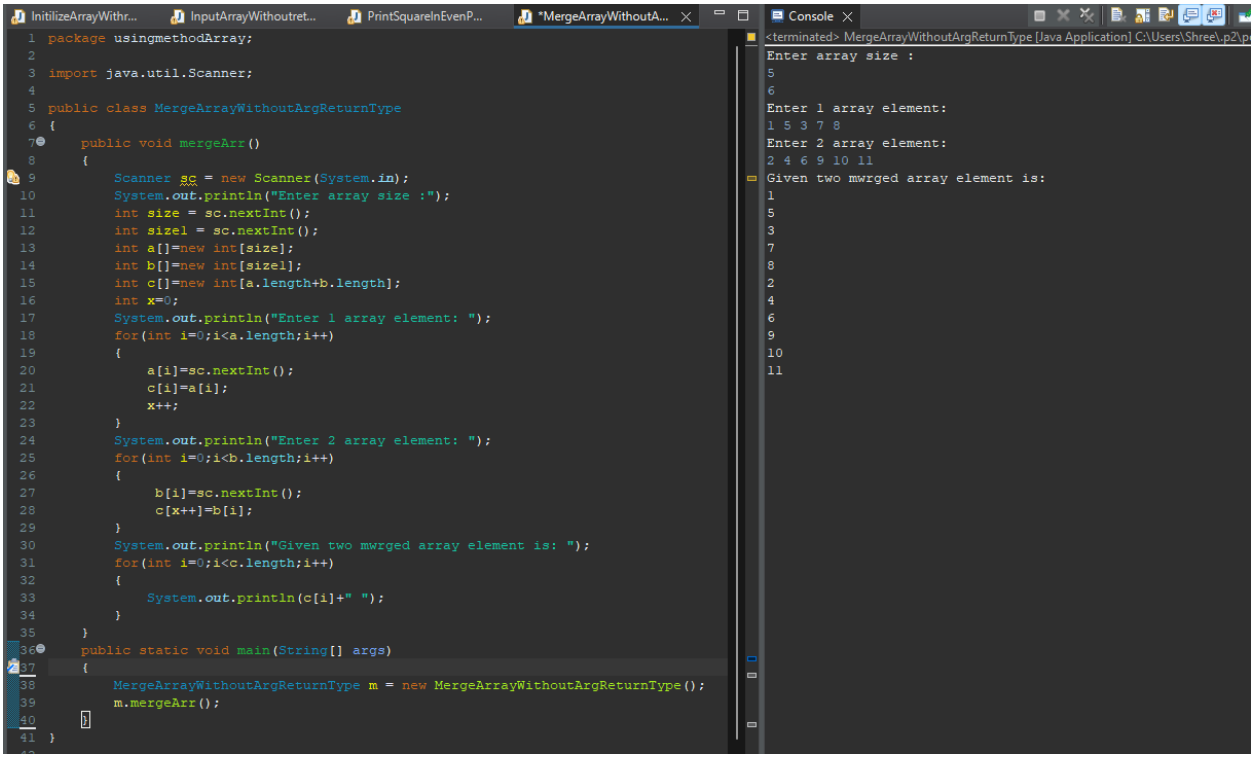
Q17. Write a program to enter an array and print the square of the element which is present at even position.



```
package usingmethodArray;

import java.util.Scanner;

public class PrintSquareInEvenPosiWithArg
{

    public void EvenPositionCountArrEle(int a[])
    {
        System.out.println("Given square of even position array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)%2==0)
            {
                a[i]*=a[i];
                System.out.println(a[i]+" ");
            }
        }
    }
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        PrintSquareInEvenPosiWithArg o = new PrintSquareInEvenPosiWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        o.EvenPositionCountArrEle(a);
    }

}
```

```
<terminated> PrintSquareInEvenPosiWithArg [Java Application] C:\Users\Shre
Enter array size :
6
Enter array element:
2 7 5 4 3 2
Given square of even position array element is:
49
16
4
```

Q18. Write a program to input two array and merge in third array.

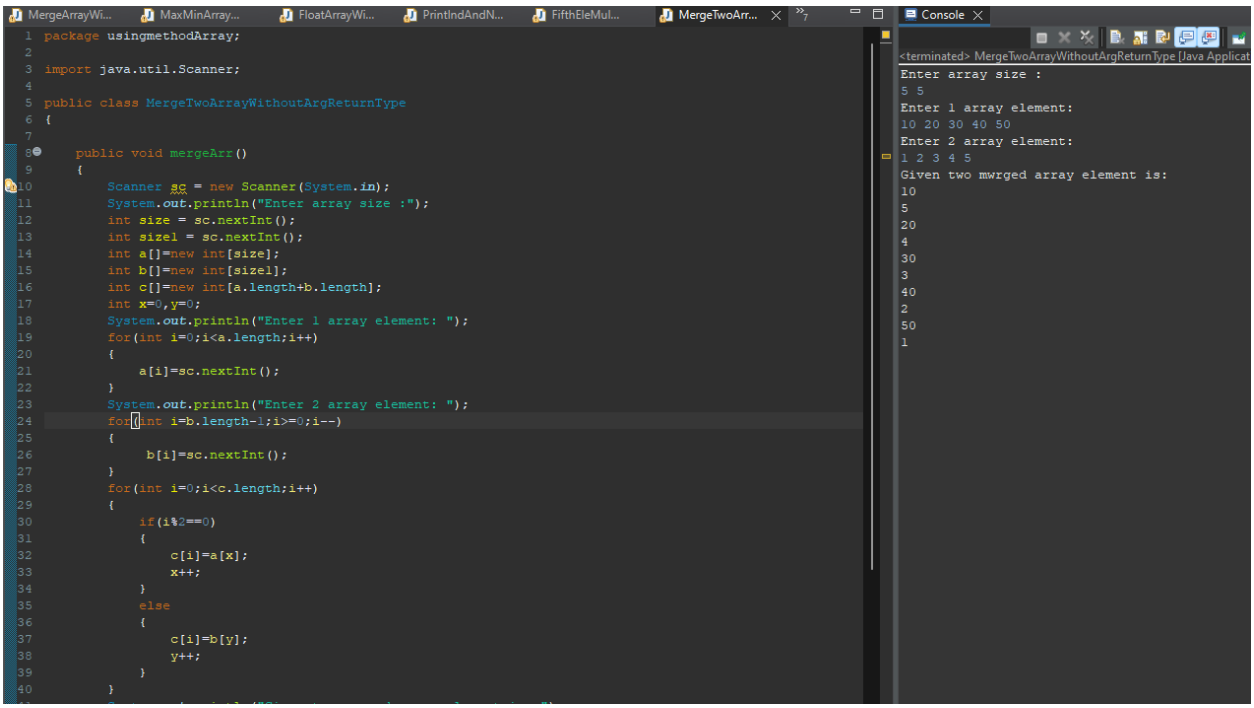


```
package usingmethodArray;

import java.util.Scanner;

public class MergeArrayWithoutArgReturnType
{
    public void mergeArr()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int sizel = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[sizel];
        int c[]=new int[a.length+b.length];
        int x=0;
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
            c[i]=a[i];
            x++;
        }
        System.out.println("Enter 2 array element: ");
        for(int i=0;i<b.length;i++)
        {
             b[i]=sc.nextInt();
             c[x++]=b[i];
        }
        System.out.println("Given two mwrged array element is: ");
        for(int i=0;i<c.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        MergeArrayWithoutArgReturnType m = new MergeArrayWithoutArgReturnType();
        m.mergeArr();
    }
}
```

```
<terminated> MergeArrayWithoutArgReturnType [Java Application] C:\Users\Shree\.p2\p
Enter array size :
5
6
Enter 1 array element:
1 5 3 7 8
Enter 2 array element:
2 4 6 9 10 11
Given two mwrged array element is:
1
5
3
7
8
2
4
6
9
10
11
```

Q19. a[]={10,20,30,40,50}, b[]={1,2,3,4,5}

output array=c[]={10,5,20,4,30,3,40,2,50,1}



```
package usingmethodArray;

import java.util.Scanner;

public class MergeTwoArrayWithoutArgReturnType
{

    public void mergeArr()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int sizel = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[sizel];
        int c[]=new int[a.length+b.length];
        int x=0,y=0;
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter 2 array element: ");
        for(int i=b.length-1;i>=0;i--)
        {
             b[i]=sc.nextInt();
        }
        for(int i=0;i<c.length;i++)
        {
            if(i%2==0)
            {
                c[i]=a[x];
                x++;
            }
            else
            {
                c[i]=b[y];
                y++;
            }
        }
```

```
<terminated> MergeTwoArrayWithoutArgReturnType [Java Applicat
Enter array size :
5 5
Enter 1 array element:
10 20 30 40 50
Enter 2 array element:
1 2 3 4 5
Given two mwrged array element is:
10
5
20
4
30
3
40
2
50
1
```

```java
        int size = sc.nextInt();
        int sizel = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[sizel];
        int c[]=new int[a.length+b.length];
        int x=0,y=0;
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter 2 array element: ");
        for(int i=b.length-1;i>=0;i--)
        {
             b[i]=sc.nextInt();
        }
        for(int i=0;i<c.length;i++)
        {
            if(i%2==0)
            {
                c[i]=a[x];
                x++;
            }
            else
            {
                c[i]=b[y];
                y++;
            }
        }
        System.out.println("Given two mwrged array element is: ");
        for(int i=0;i<c.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        MergeTwoArrayWithoutArgReturnType m = new MergeTwoArrayWithoutArgReturnType();
        m.mergeArr();
    }
}
```

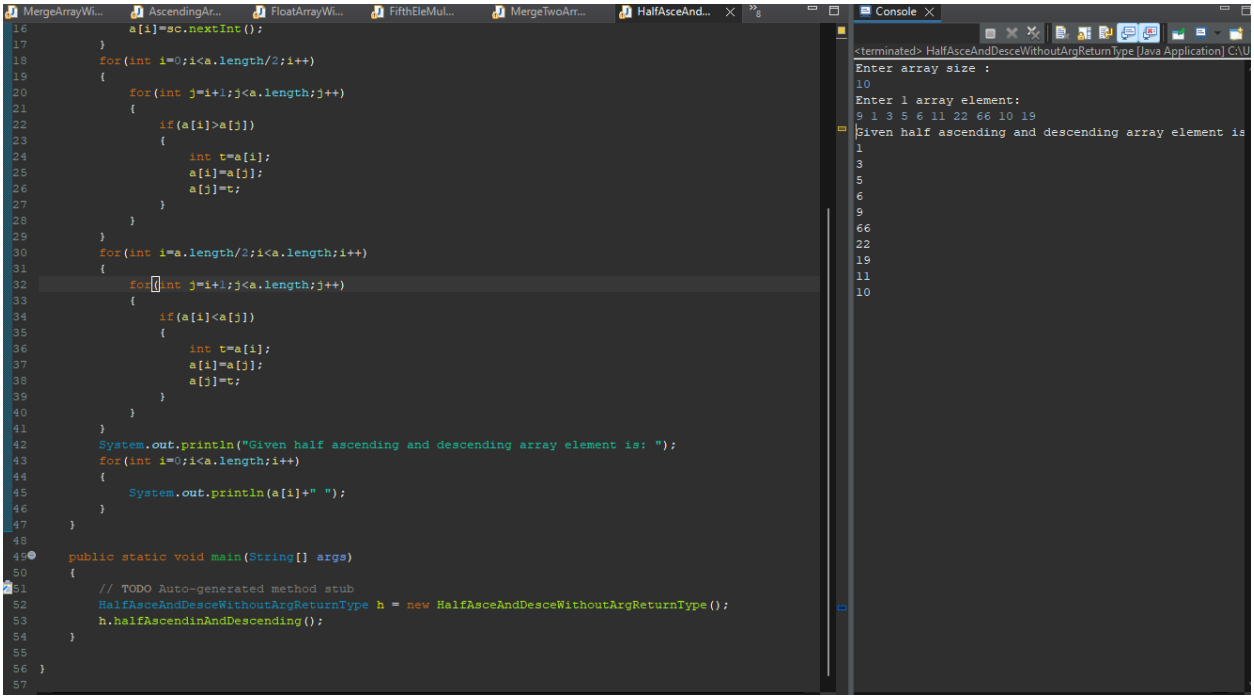
```
<terminated> MergeTwoArrayWithoutArgReturnType [Java Application
Enter array size :
5 5
Enter 1 array element:
10 20 30 40 50
Enter 2 array element:
1 2 3 4 5
Given two mwrged array element is:
10
5
20
4
30
3
40
2
50
1
```

Q20. Write a program sort half array in ascending and half in descending order

input= int [] a={9,1,3,5,6,11,22,66,10,19}. output={1,3,5,6,9,10,66,22,19,11,10}

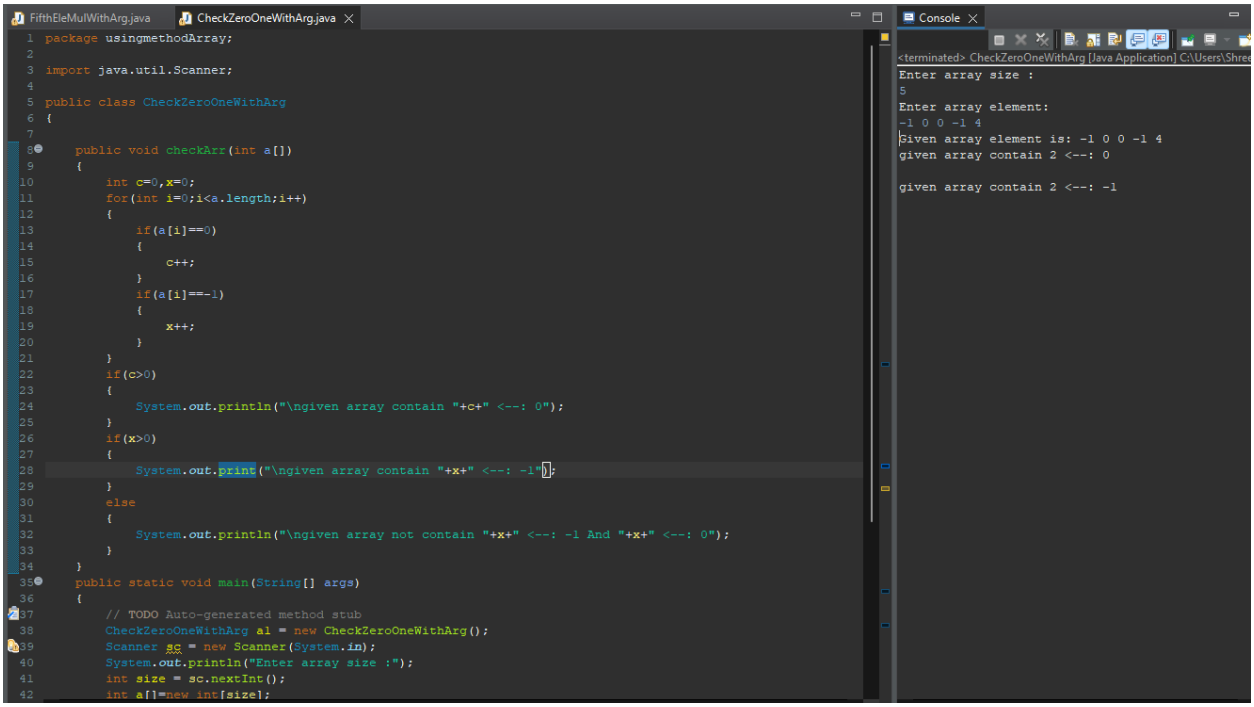
```java
package usingmethodArray;

import java.util.Scanner;

public class HalfAsceAndDesceWithoutArgReturnType
{
    public void halfAscendinAndDescending()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=0;i<a.length/2;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]>a[j])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        for(int i=a.length/2;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]<a[j])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("Given half ascending and descending array element is: ");
```

```
<terminated> HalfAsceAndDesceWithoutArgReturnType [Java Application] C:\U
Enter array size :
10
Enter 1 array element:
9 1 3 5 6 11 22 66 10 19
Given half ascending and descending array element is
1
3
5
6
9
66
22
19
11
10
```


MergeArrayWi...
AscendingAr...
FloatArrayWi...
FifthEleMul...
MergeTwoArr...
HalfAsceAnd...
a[i]=sc.nextInt();
}
for(int i=0;i<a.length/2;i++)
{
for(int j=i+1;j<a.length;j++)
{
if(a[i]>a[j])
{
int t=a[i];
a[i]=a[j];
a[j]=t;
}
}
}
for(int i=a.length/2;i<a.length;i++)
{
for(int j=i+1;j<a.length;j++)
{
if(a[i]<a[j])
{
int t=a[i];
a[i]=a[j];
a[j]=t;
}
}
}
System.out.println("Given half ascending and descending array element is: ");
for(int i=0;i<a.length;i++)
{
System.out.println(a[i]+" ");
}
}
public static void main(String[] args)
{
// TODO Auto-generated method stub
HalfAsceAndDesceWithoutArgReturnType h = new HalfAsceAndDesceWithoutArgReturnType();
h.halfAscendinAndDescending();
}
}
Console
<terminated> HalfAsceAndDesceWithoutArgReturnType [Java Application] C:\U
Enter array size :
10
Enter 1 array element:
9 1 3 5 6 11 22 66 10 19
Given half ascending and descending array element is
1
3
5
6
9
66
22
19
11
10

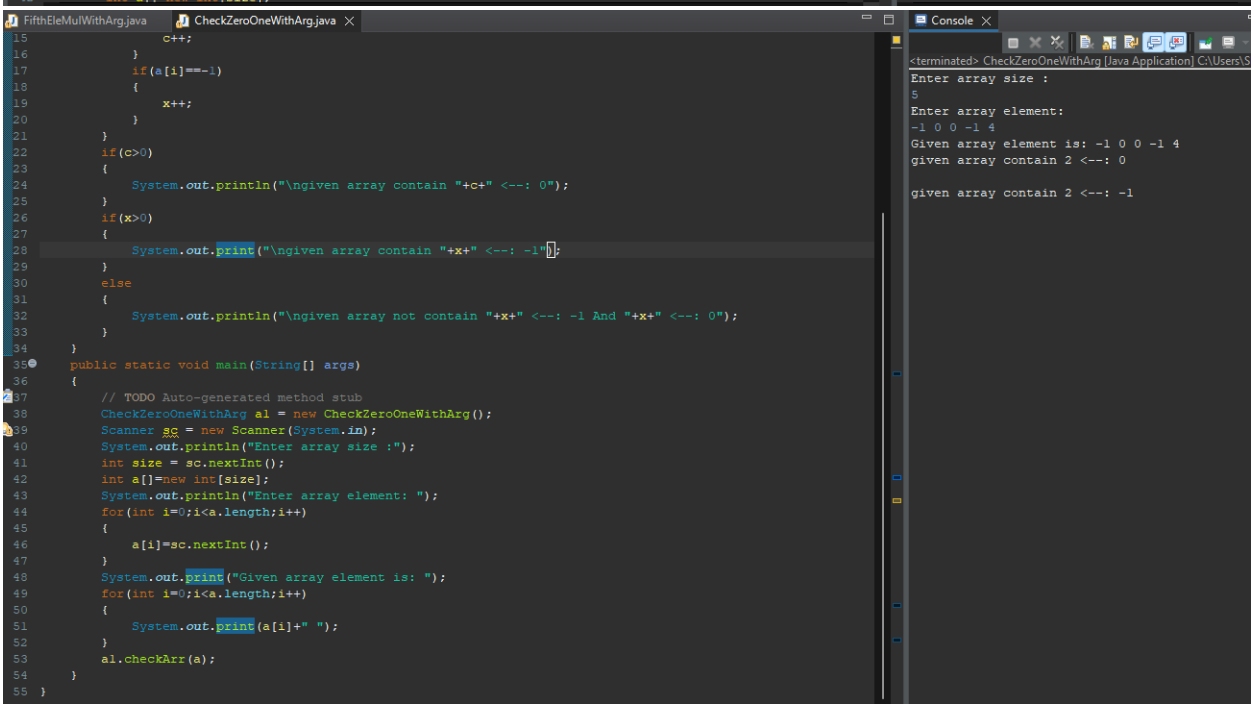
4th Assignment

Q1. Write a program to check if an array of integers without 0 and -1.



```
FifthEleMulWithArg.java   CheckZeroOneWithArg.java

1  package usingmethodArray;
2
3  import java.util.Scanner;
4
5  public class CheckZeroOneWithArg
6  {
7
8      public void checkArr(int a[])
9      {
10         int c=0,x=0;
11         for(int i=0;i<a.length;i++)
12         {
13             if(a[i]==0)
14             {
15                 c++;
16             }
17             if(a[i]==-1)
18             {
19                 x++;
20             }
21         }
22         if(c>0)
23         {
24             System.out.println("\ngiven array contain "+c+" <--: 0");
25         }
26         if(x>0)
27         {
28             System.out.print("\ngiven array contain "+x+" <--: -1");
29         }
30         else
31         {
32             System.out.println("\ngiven array not contain "+x+" <--: -1 And "+x+" <--: 0");
33         }
34     }
35     public static void main(String[] args)
36     {
37         // TODO Auto-generated method stub
38         CheckZeroOneWithArg al = new CheckZeroOneWithArg();
39         Scanner sc = new Scanner(System.in);
40         System.out.println("Enter array size :");
41         int size = sc.nextInt();
42         int a[]=new int[size];
```

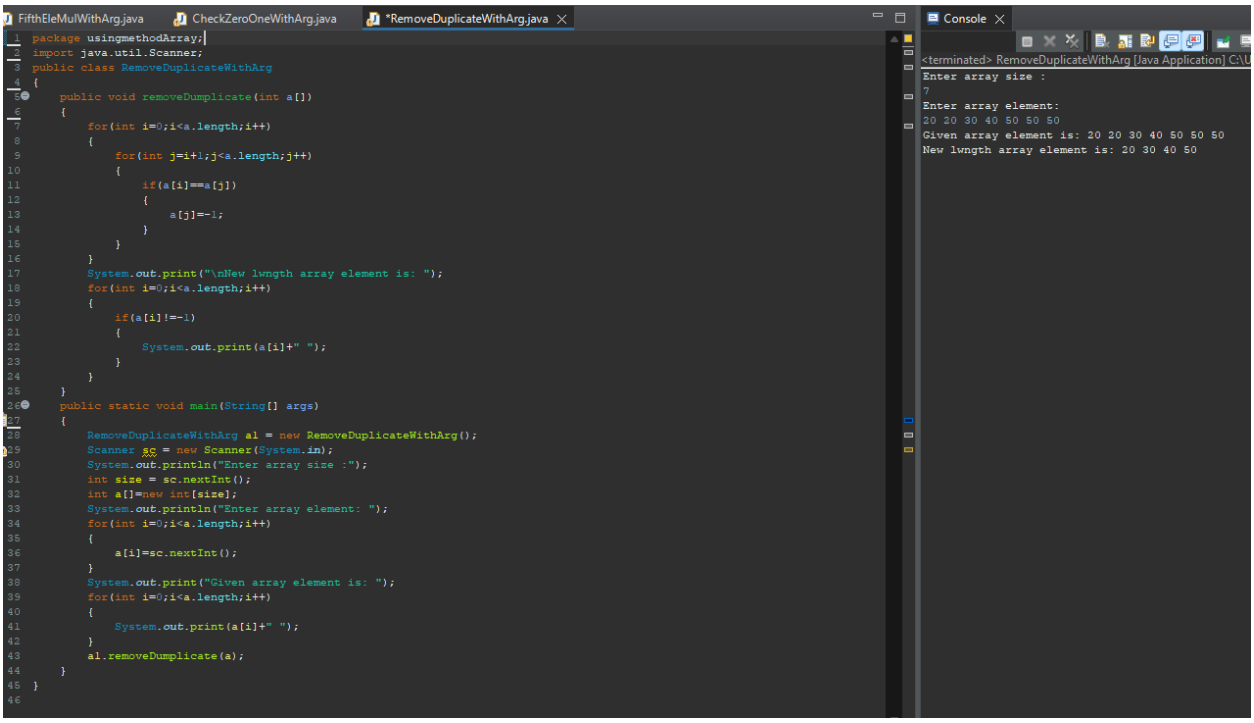
```
Console
<terminated> CheckZeroOneWithArg [Java Application] C:\Users\Shree
Enter array size :
5
Enter array element:
-1 0 0 -1 4
Given array element is: -1 0 0 -1 4
given array contain 2 <--: 0

given array contain 2 <--: -1
```



```
FifthEleMulWithArg.java   CheckZeroOneWithArg.java

15                 c++;
16             }
17             if(a[i]==-1)
18             {
19                 x++;
20             }
21         }
22         if(c>0)
23         {
24             System.out.println("\ngiven array contain "+c+" <--: 0");
25         }
26         if(x>0)
27         {
28             System.out.print("\ngiven array contain "+x+" <--: -1");
29         }
30         else
31         {
32             System.out.println("\ngiven array not contain "+x+" <--: -1 And "+x+" <--: 0");
33         }
34     }
35     public static void main(String[] args)
36     {
37         // TODO Auto-generated method stub
38         CheckZeroOneWithArg al = new CheckZeroOneWithArg();
39         Scanner sc = new Scanner(System.in);
40         System.out.println("Enter array size :");
41         int size = sc.nextInt();
42         int a[]=new int[size];
43         System.out.println("Enter array element: ");
44         for(int i=0;i<a.length;i++)
45         {
46             a[i]=sc.nextInt();
47         }
48         System.out.print("Given array element is: ");
49         for(int i=0;i<a.length;i++)
50         {
51             System.out.print(a[i]+" ");
52         }
53         al.checkArr(a);
54     }
55 }
```

```
Console
<terminated> CheckZeroOneWithArg [Java Application] C:\Users\S
Enter array size :
5
Enter array element:
-1 0 0 -1 4
Given array element is: -1 0 0 -1 4
given array contain 2 <--: 0

given array contain 2 <--: -1
```

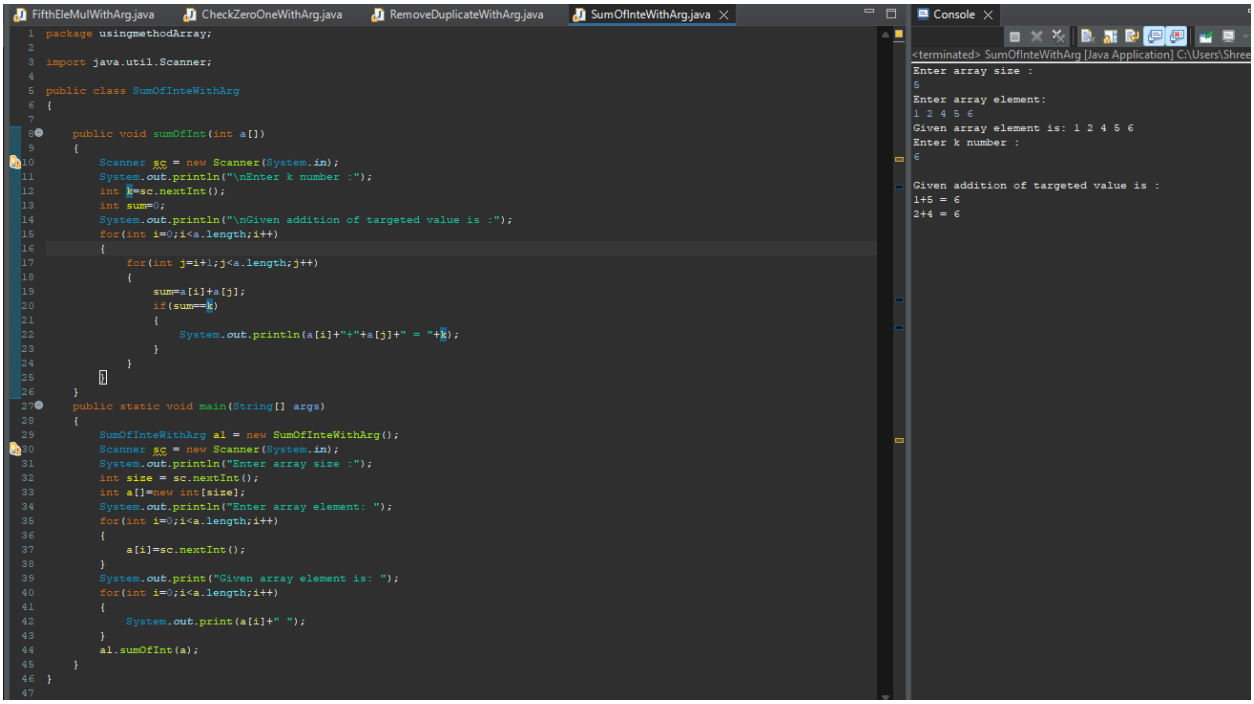
Q2. Write a Java program to remove the duplicate elements of a given array and print the new length of the array. Sample array: [20, 20, 30, 40, 50, 50, 50].After removing the duplicate elements the program should return 4 as the new length of the array.



```
package usingmethodArray;
import java.util.Scanner;
public class RemoveDuplicateWithArg
{
    public void removeDumplicate(int a[])
    {
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    a[j]=-1;
                }
            }
        }
        System.out.print("\nNew lwngth array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]!=-1)
            {
                System.out.print(a[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        RemoveDuplicateWithArg al = new RemoveDuplicateWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        al.removeDumplicate(a);
    }
}
```

```
<terminated> RemoveDuplicateWithArg [Java Application] C:\U
Enter array size :
7
Enter array element:
20 20 30 40 50 50 50
Given array element is: 20 20 30 40 50 50 50
New lwngth array element is: 20 30 40 50
```

Q3. Write a Java program to find the sum of the two elements of a given array which is equal to a given integer. Sample array: [1, 2, 4, 5, 6]Target value: 6.

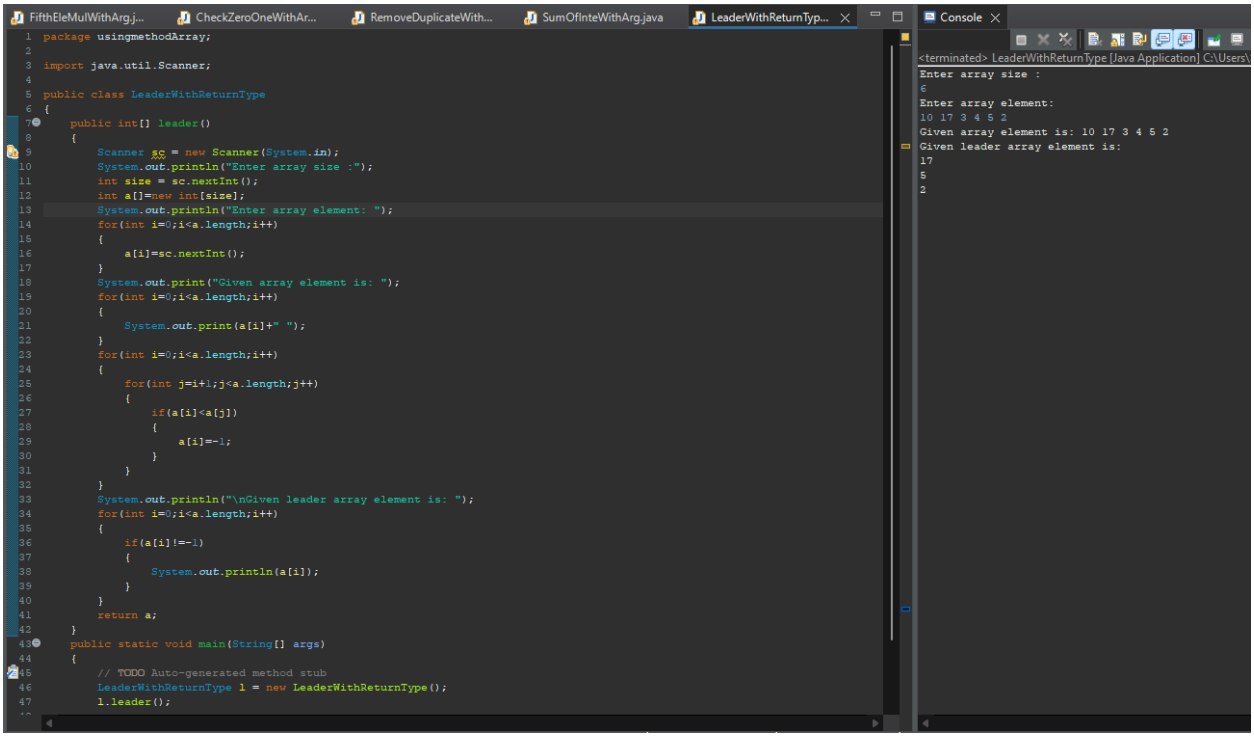


```
package usingmethodArray;

import java.util.Scanner;

public class SumOfInteWithArg
{

    public void sumOfInt(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("\nEnter k number :");
        int k=sc.nextInt();
        int sum=0;
        System.out.println("\nGiven addition of targeted value is :");
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                sum=a[i]+a[j];
                if(sum==k)
                {
                    System.out.println(a[i]+"+"+a[j]+" = "+k);
                }
            }
        }
    }
    public static void main(String[] args)
    {
        SumOfInteWithArg al = new SumOfInteWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        al.sumOfInt(a);
    }
}
```

```
<terminated> SumOfInteWithArg [Java Application] C:\Users\Shree
Enter array size :
6
Enter array element:
1 2 4 5 6
Given array element is: 1 2 4 5 6
Enter k number :
6

Given addition of targeted value is :
1+5 = 6
2+4 = 6
```

Q4. Write a Java program to print all the LEADERS in the array.

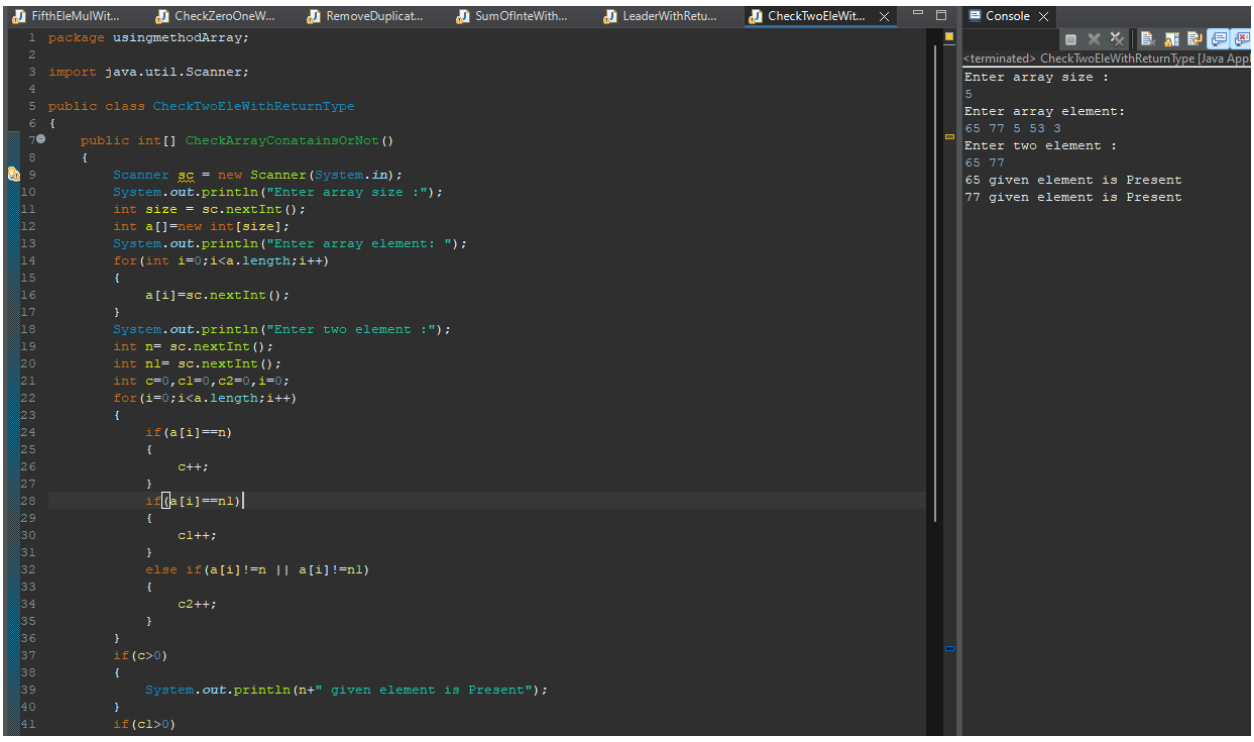
Note: An element is leader if it is greater than all the elements to its right side.



```
package usingmethodArray;

import java.util.Scanner;

public class LeaderWithReturnType
{
    public int[] leader()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]<a[j])
                {
                    a[i]=-1;
                }
            }
        }
        System.out.println("\nGiven leader array element is: ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]!=-1)
            {
                System.out.println(a[i]);
            }
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        LeaderWithReturnType l = new LeaderWithReturnType();
        l.leader();
```

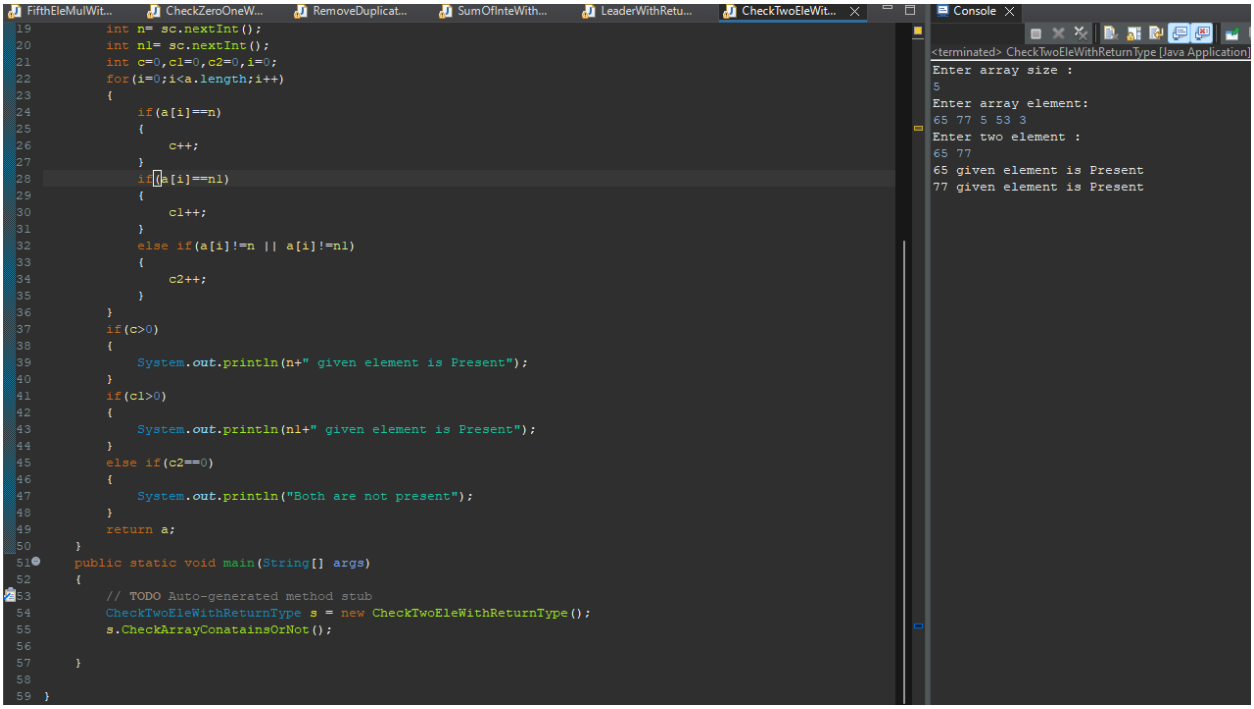
```
Console
<terminated> LeaderWithReturnType [Java Application] C:\Users\
Enter array size :
6
Enter array element:
10 17 3 4 5 2
Given array element is: 10 17 3 4 5 2
Given leader array element is:
17
5
2
```

Q5. Write a Java program to check if an array of integers contains two specified elements 65 and 77.



```
package usingmethodArray;

import java.util.Scanner;

public class CheckTwoEleWithReturnType
{
    public int[] CheckArrayConatainsOrNot()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter two element :");
        int n= sc.nextInt();
        int n1= sc.nextInt();
        int c=0,c1=0,c2=0,i=0;
        for(i=0;i<a.length;i++)
        {
            if(a[i]==n)
            {
                c++;
            }
            if(a[i]==n1)
            {
                c1++;
            }
            else if(a[i]!=n || a[i]!=n1)
            {
                c2++;
            }
        }
        if(c>0)
        {
            System.out.println(n+" given element is Present");
        }
        if(c1>0)
```

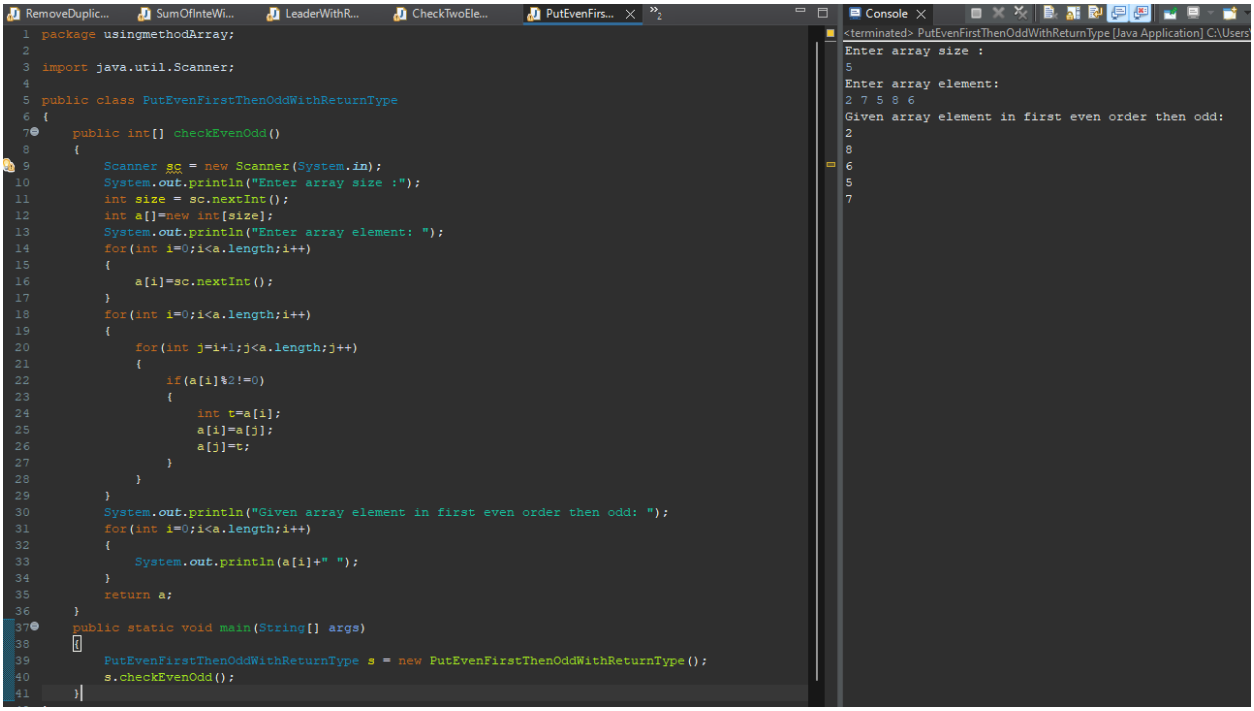
```
Console
<terminated> CheckTwoEleWithReturnType [Java App
Enter array size :
5
Enter array element:
65 77 5 53 3
Enter two element :
65 77
65 given element is Present
77 given element is Present
```



```
        int n= sc.nextInt();
        int n1= sc.nextInt();
        int c=0,c1=0,c2=0,i=0;
        for(i=0;i<a.length;i++)
        {
            if(a[i]==n)
            {
                c++;
            }
            if(a[i]==n1)
            {
                c1++;
            }
            else if(a[i]!=n || a[i]!=n1)
            {
                c2++;
            }
        }
        if(c>0)
        {
            System.out.println(n+" given element is Present");
        }
        if(c1>0)
        {
            System.out.println(n1+" given element is Present");
        }
        else if(c2==0)
        {
            System.out.println("Both are not present");
        }
        return a;
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        CheckTwoEleWithReturnType s = new CheckTwoEleWithReturnType();
        s.CheckArrayConatainsOrNot();

    }

}
```

```
<terminated> CheckTwoEleWithReturnType [Java Application]
Enter array size :
5
Enter array element:
65 77 5 53 3
Enter two element :
65 77
65 given element is Present
77 given element is Present
```

Q6. Write a Java program to separate even and odd numbers of a given array of integers. Put all even numbers first, and then odd numbers.



```
package usingmethodArray;

import java.util.Scanner;

public class PutEvenFirstThenOddWithReturnType
{
    public int[] checkEvenOdd()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]%2!=0)
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("Given array element in first even order then odd: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        PutEvenFirstThenOddWithReturnType s = new PutEvenFirstThenOddWithReturnType();
        s.checkEvenOdd();
    }
```

```
<terminated> PutEvenFirstThenOddWithReturnType [Java Application] C:\Users
Enter array size :
5
Enter array element:
2 7 5 8 6
Given array element in first even order then odd:
2
8
6
5
7
```

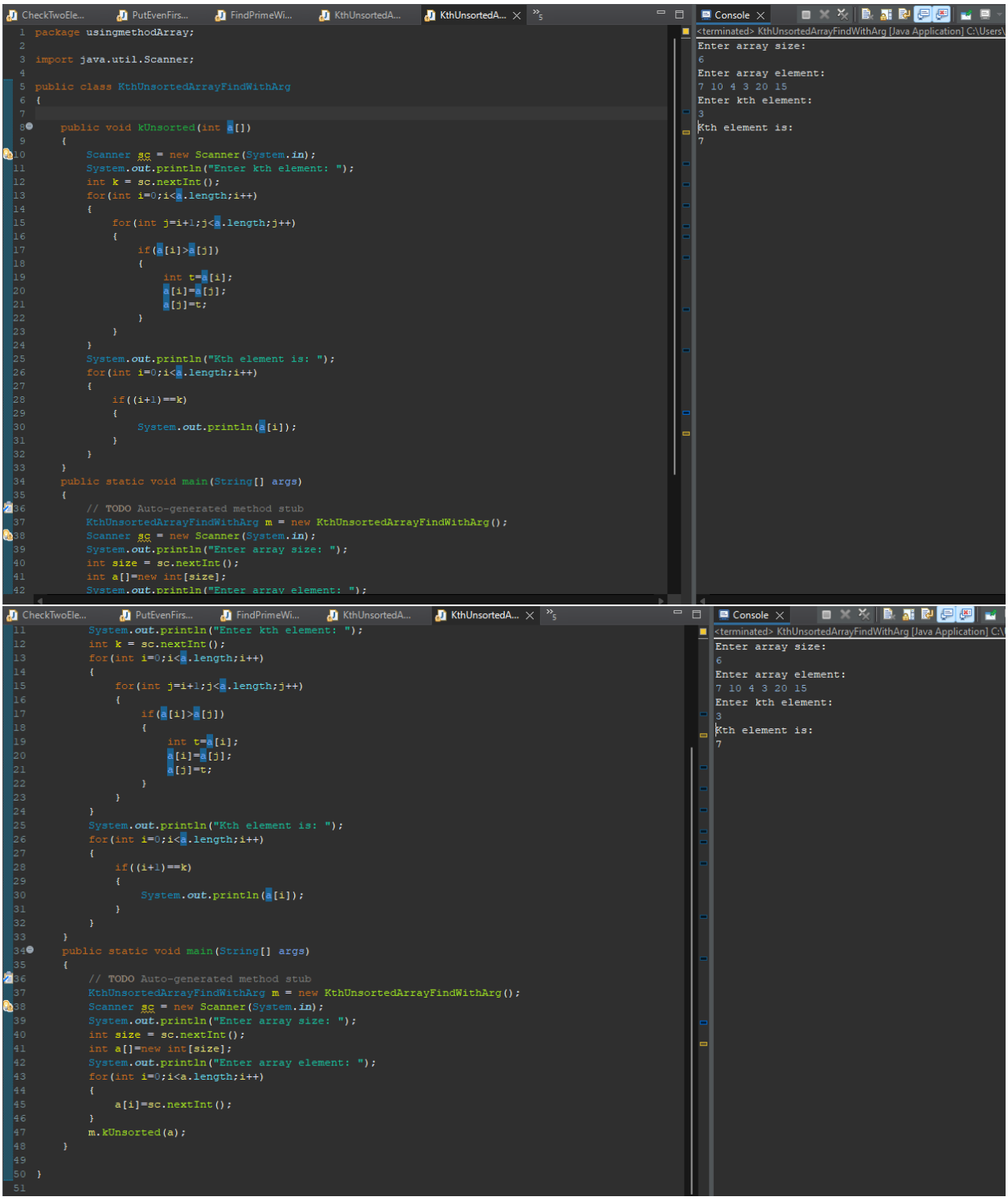
Q7. Write a java program to find prime number between an arrays of element.

```java
import java.util.Scanner;

public class FindPrimeWithReturnType
{

    public int[] checkPrime()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given prime array element is: ");
        for(int i=0;i<a.length;i++)
        {
            int c=0;
            int n=a[i];
            for(int j=1;j<=n;j++)
            {
                if(n%j==0)
                {
                    c++;
                }
            }
            if(c==2)
            {
                System.out.println(n+" ");
            }
        }
        return a;
    }
    public static void main(String[] args)
    {
        FindPrimeWithReturnType s = new FindPrimeWithReturnType();
        s.checkPrime();
    }
}
```

```
<terminated> FindPrimeWithReturnType [Java Applicati
Enter array size :
5
Enter array element:
1 2 7 9 5
Given prime array element is:
2
7
5
```

Q1.Given an array and a number K where K is smaller than the size of the array. Find the K'th smallest element in the given array. Given that all array elements are distinct.

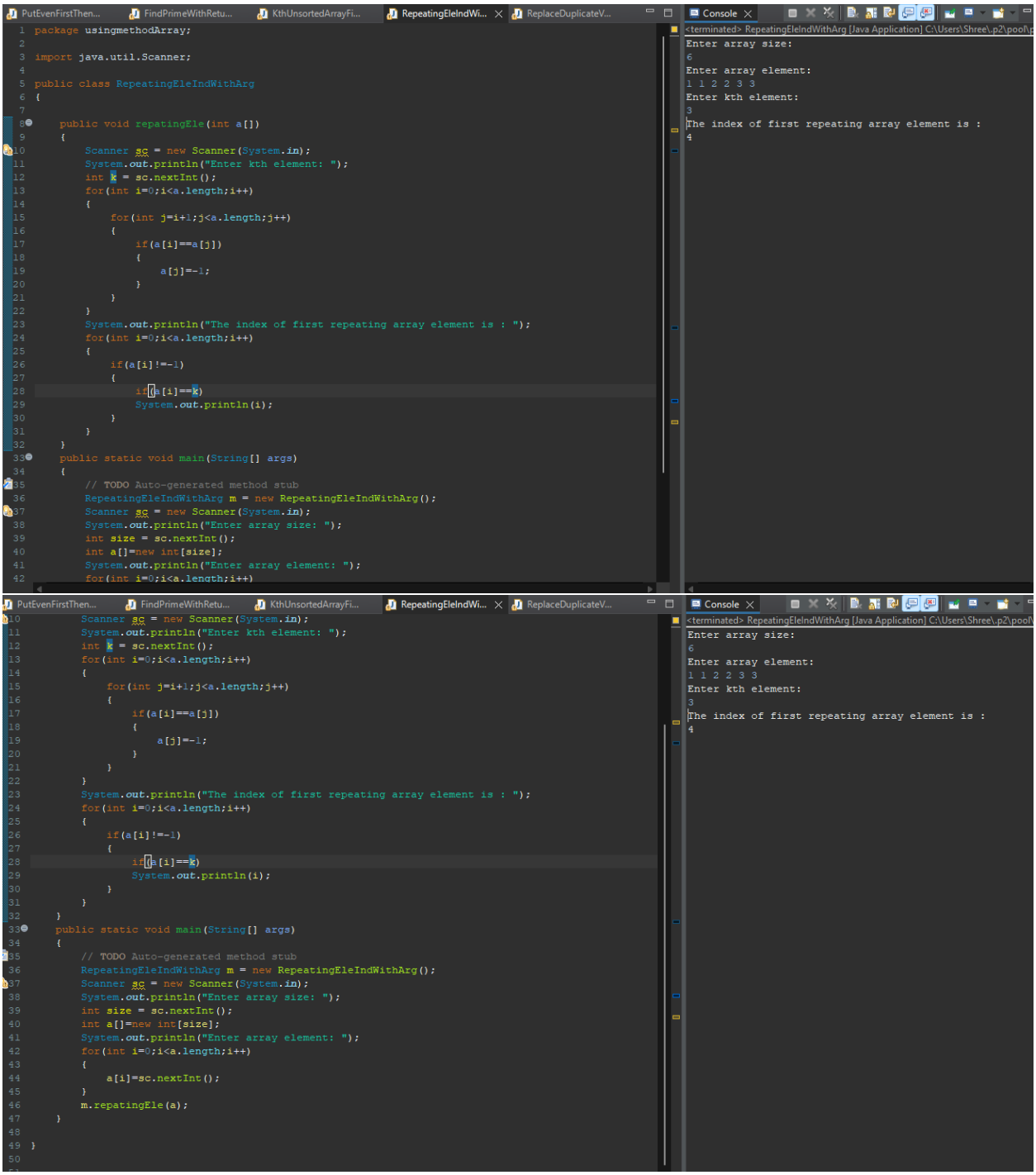
Examples: Input: arr[] = {7, 10, 4, 3, 20, 15}, K = 3 Output: 7



```
package usingmethodArray;

import java.util.Scanner;

public class KthUnsortedArrayFindWithArg
{

    public void kUnsorted(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter kth element: ");
        int k = sc.nextInt();
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]>a[j])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("Kth element is: ");
        for(int i=0;i<a.length;i++)
        {
            if((i+1)==k)
            {
                System.out.println(a[i]);
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        KthUnsortedArrayFindWithArg m = new KthUnsortedArrayFindWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.kUnsorted(a);
    }

}
```

```
Enter array size:
6
Enter array element:
7 10 4 3 20 15
Enter kth element:
3
Kth element is:
7
```

Q2.Given an array of integers arr[], The task is to find the index of first repeating element in it i.e. the element that occurs more than once and whose index of the first occurrence is the smallest.

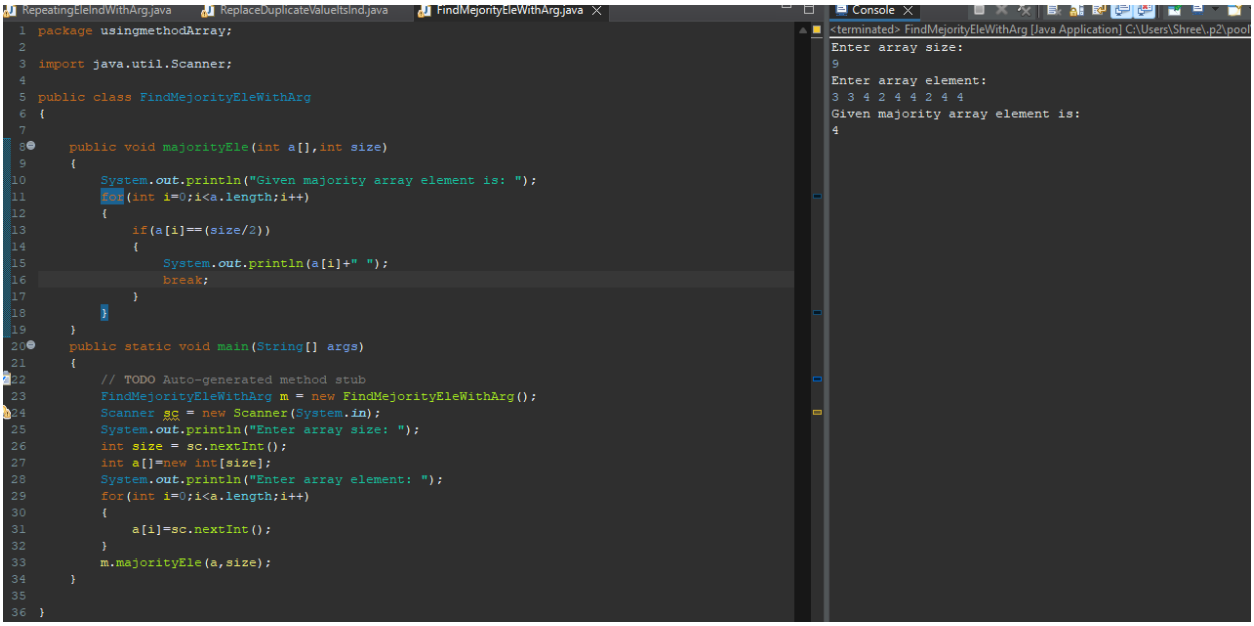


```
package usingmethodArray;

import java.util.Scanner;

public class RepeatingEleIndWithArg
{

    public void repatingEle(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter kth element: ");
        int k = sc.nextInt();
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    a[j]=-1;
                }
            }
        }
        System.out.println("The index of first repeating array element is : ");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]!=-1)
            {
                if(a[i]==k)
                System.out.println(i);
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        RepeatingEleIndWithArg m = new RepeatingEleIndWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.repatingEle(a);
    }

}
```

```
Enter array size:
6
Enter array element:
1 1 2 2 3 3
Enter kth element:
3
The index of first repeating array element is :
4
```

Q3. Find the majority element in the array. A majority element in an array A[] of size n is an element that appears more than n/2 times (and hence there is at most one such element).

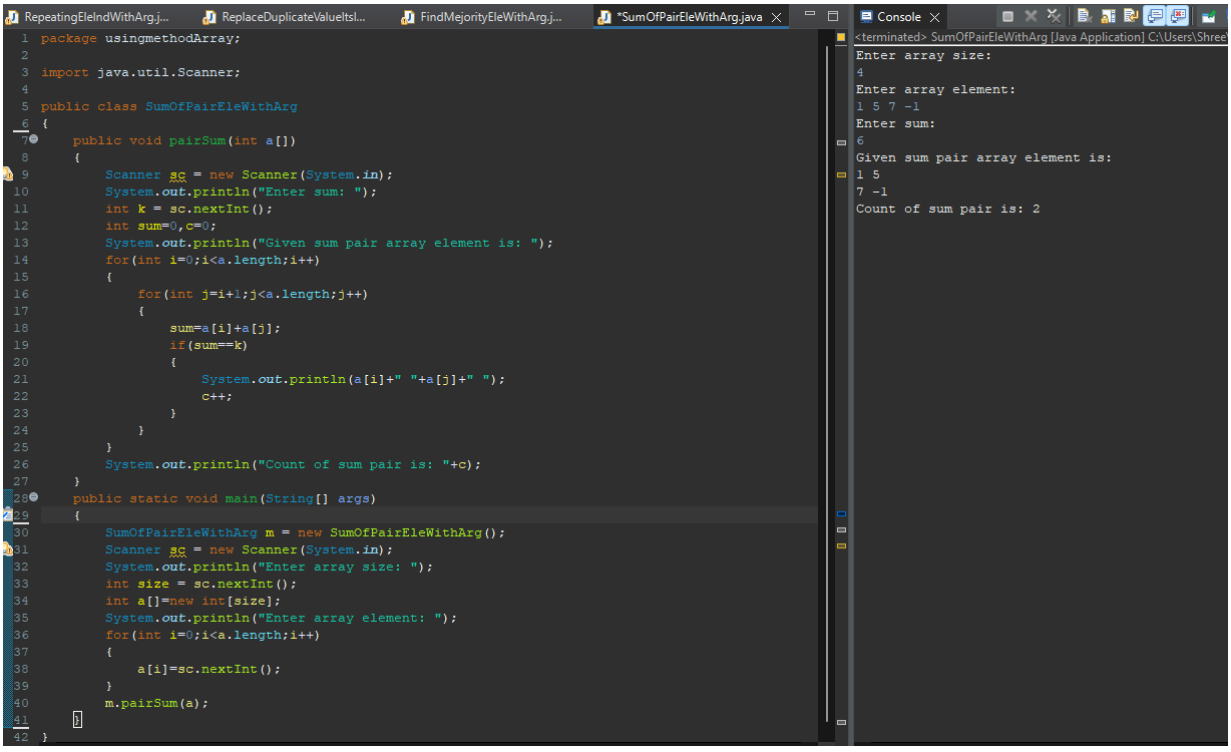
Examples : Input : {3, 3, 4, 2, 4, 4, 2, 4, 4},Output : 4 Explanation: The frequency of 4 is 5 which is greater than the half of the size of the array size.



```
RepeatingEleIndWithArg.java  ReplaceDuplicateValueItsInd.java  FindMejorityEleWithArg.java
1  package usingmethodArray;
2
3  import java.util.Scanner;
4
5  public class FindMejorityEleWithArg
6  {
7
8      public void majorityEle(int a[],int size)
9      {
10         System.out.println("Given majority array element is: ");
11         for(int i=0;i<a.length;i++)
12         {
13             if(a[i]==(size/2))
14             {
15                 System.out.println(a[i]+" ");
16                 break;
17             }
18         }
19     }
20     public static void main(String[] args)
21     {
22         // TODO Auto-generated method stub
23         FindMejorityEleWithArg m = new FindMejorityEleWithArg();
24         Scanner sc = new Scanner(System.in);
25         System.out.println("Enter array size: ");
26         int size = sc.nextInt();
27         int a[]=new int[size];
28         System.out.println("Enter array element: ");
29         for(int i=0;i<a.length;i++)
30         {
31             a[i]=sc.nextInt();
32         }
33         m.majorityEle(a,size);
34     }
35
36 }
```

```
Console
<terminated> FindMejorityEleWithArg [Java Application] C:\Users\Shree\.p2\pool
Enter array size:
9
Enter array element:
3 3 4 2 4 4 2 4 4
Given majority array element is:
4
```

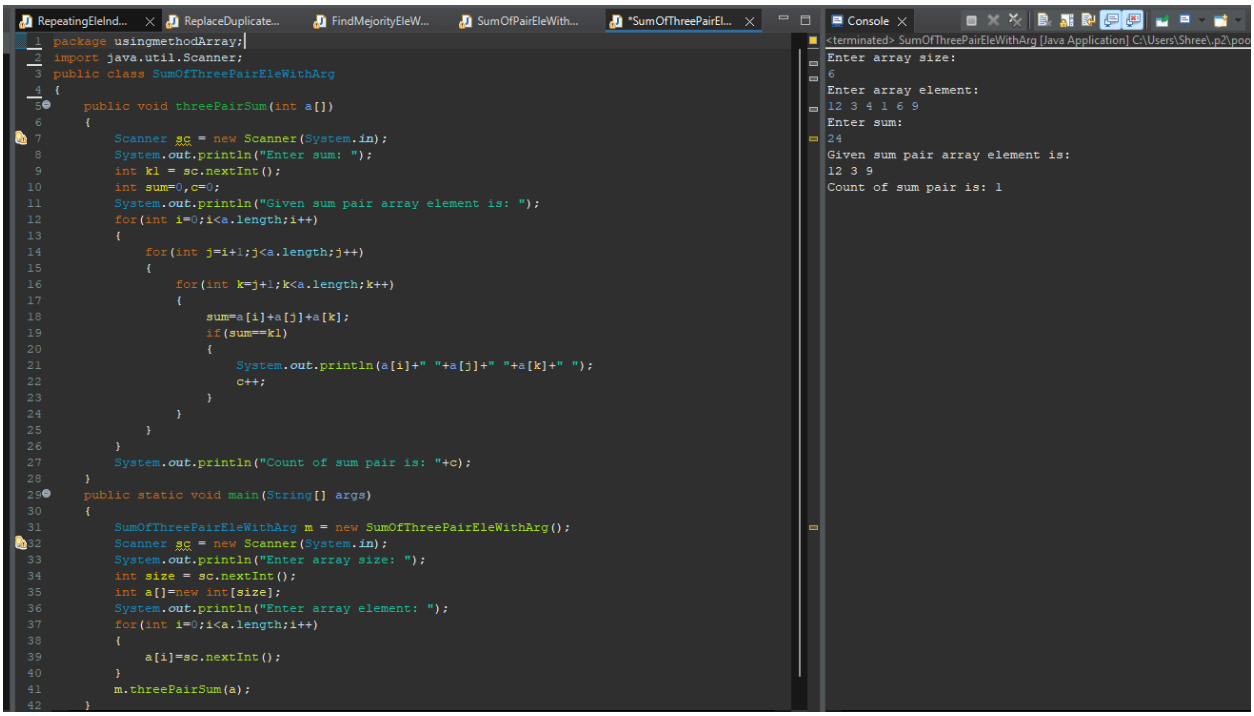
Q4.Given an array of N integers, and a number sum, the task is to find the number of pairs of integers in the array whose sum is equal to sum.Examples: Input: arr[] = {1, 5, 7, -1}, sum = 6,Output: 2



```
RepeatingEleIndWithArg.j...  ReplaceDuplicateValueItsI...  FindMejorityEleWithArg.j...  *SumOfPairEleWithArg.java
1  package usingmethodArray;
2
3  import java.util.Scanner;
4
5  public class SumOfPairEleWithArg
6  {
7      public void pairSum(int a[])
8      {
9          Scanner sc = new Scanner(System.in);
10         System.out.println("Enter sum: ");
11         int k = sc.nextInt();
12         int sum=0,c=0;
13         System.out.println("Given sum pair array element is: ");
14         for(int i=0;i<a.length;i++)
15         {
16             for(int j=i+1;j<a.length;j++)
17             {
18                 sum=a[i]+a[j];
19                 if(sum==k)
20                 {
21                     System.out.println(a[i]+" "+a[j]+" ");
22                     c++;
23                 }
24             }
25         }
26         System.out.println("Count of sum pair is: "+c);
27     }
28     public static void main(String[] args)
29     {
30         SumOfPairEleWithArg m = new SumOfPairEleWithArg();
31         Scanner sc = new Scanner(System.in);
32         System.out.println("Enter array size: ");
33         int size = sc.nextInt();
34         int a[]=new int[size];
35         System.out.println("Enter array element: ");
36         for(int i=0;i<a.length;i++)
37         {
38             a[i]=sc.nextInt();
39         }
40         m.pairSum(a);
41     }
42 }
```

```
Console
<terminated> SumOfPairEleWithArg [Java Application] C:\Users\Shree
Enter array size:
4
Enter array element:
1 5 7 -1
Enter sum:
6
Given sum pair array element is:
1 5
7 -1
Count of sum pair is: 2
```

Q5.Given an array and a value, find if there is a triplet in array whose sum is equal to the given value. If there is such a triplet present in array, then print the triplet and return true. Else return false. Examples: Input: array = {12, 3, 4, 1, 6, 9}, sum = 24, Output: 12, 3, 9

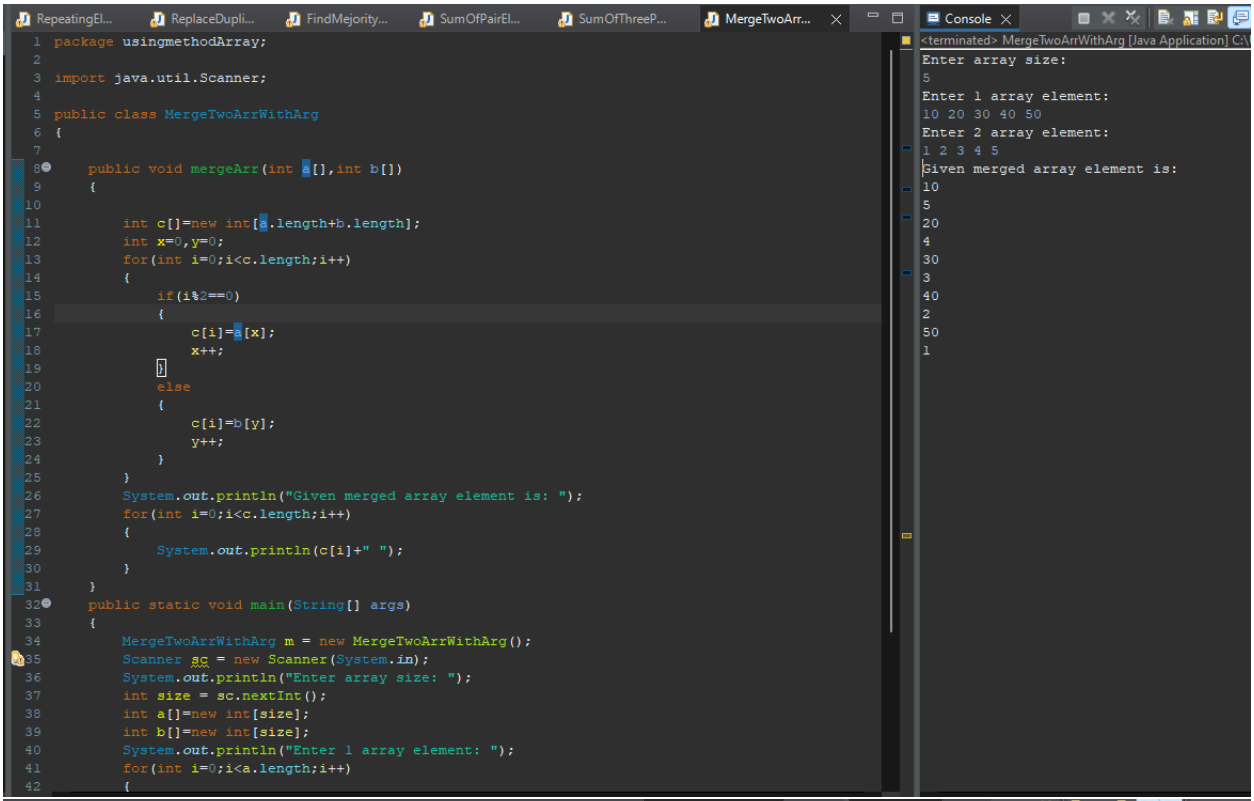


```
package usingmethodArray;
import java.util.Scanner;
public class SumOfThreePairEleWithArg
{
    public void threePairSum(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter sum: ");
        int kl = sc.nextInt();
        int sum=0,c=0;
        System.out.println("Given sum pair array element is: ");
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                for(int k=j+1;k<a.length;k++)
                {
                    sum=a[i]+a[j]+a[k];
                    if(sum==kl)
                    {
                        System.out.println(a[i]+" "+a[j]+" "+a[k]+" ");
                        c++;
                    }
                }
            }
        }
        System.out.println("Count of sum pair is: "+c);
    }
    public static void main(String[] args)
    {
        SumOfThreePairEleWithArg m = new SumOfThreePairEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.threePairSum(a);
    }
```

```
<terminated> SumOfThreePairEleWithArg [Java Application] C:\Users\Shree\.p2\poo
Enter array size:
6
Enter array element:
12 3 4 1 6 9
Enter sum:
24
Given sum pair array element is:
12 3 9
Count of sum pair is: 1
```

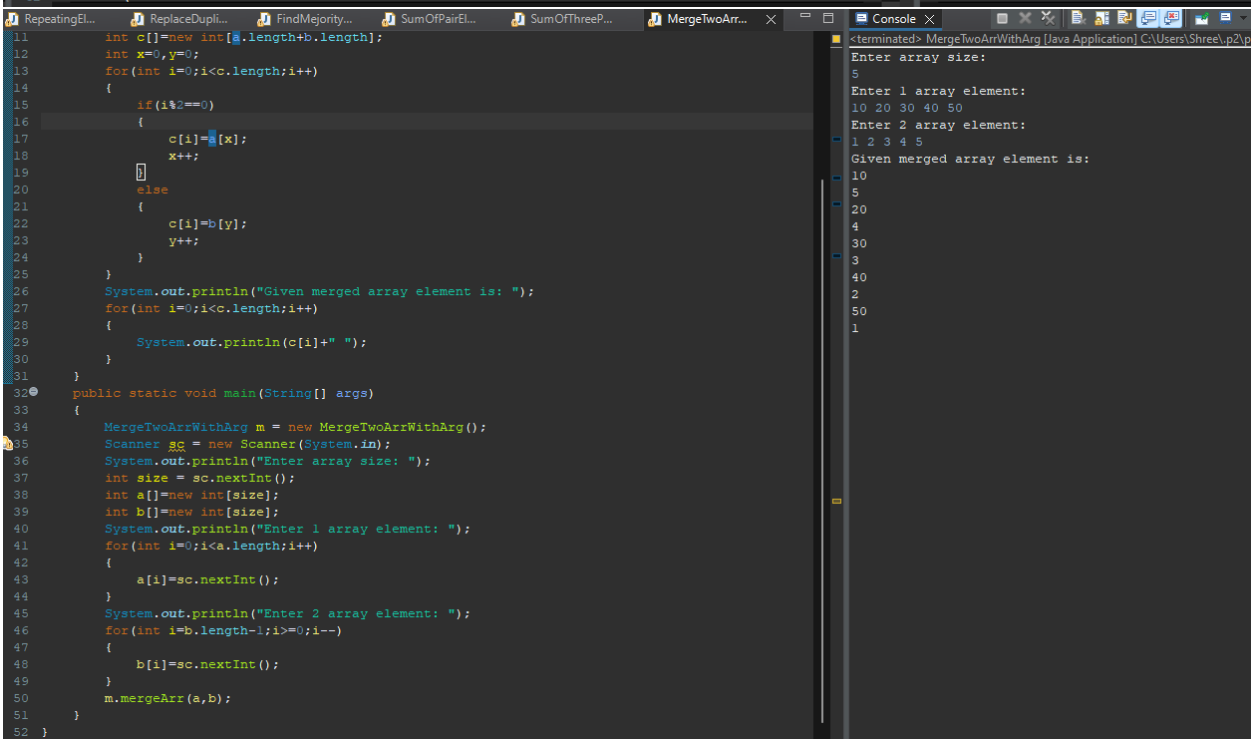
Q3.a[]={10,20,30,40,50}, b[]={1,2,3,4,5}

output array=c[]={10,5,20,4,30,3,40,2,50,1}



```
package usingmethodArray;

import java.util.Scanner;

public class MergeTwoArrWithArg
{

    public void mergeArr(int a[],int b[])
    {

        int c[]=new int[a.length+b.length];
        int x=0,y=0;
        for(int i=0;i<c.length;i++)
        {
            if(i%2==0)
            {
                c[i]=a[x];
                x++;
            }
            else
            {
                c[i]=b[y];
                y++;
            }
        }
        System.out.println("Given merged array element is: ");
        for(int i=0;i<c.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        MergeTwoArrWithArg m = new MergeTwoArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[size];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
```

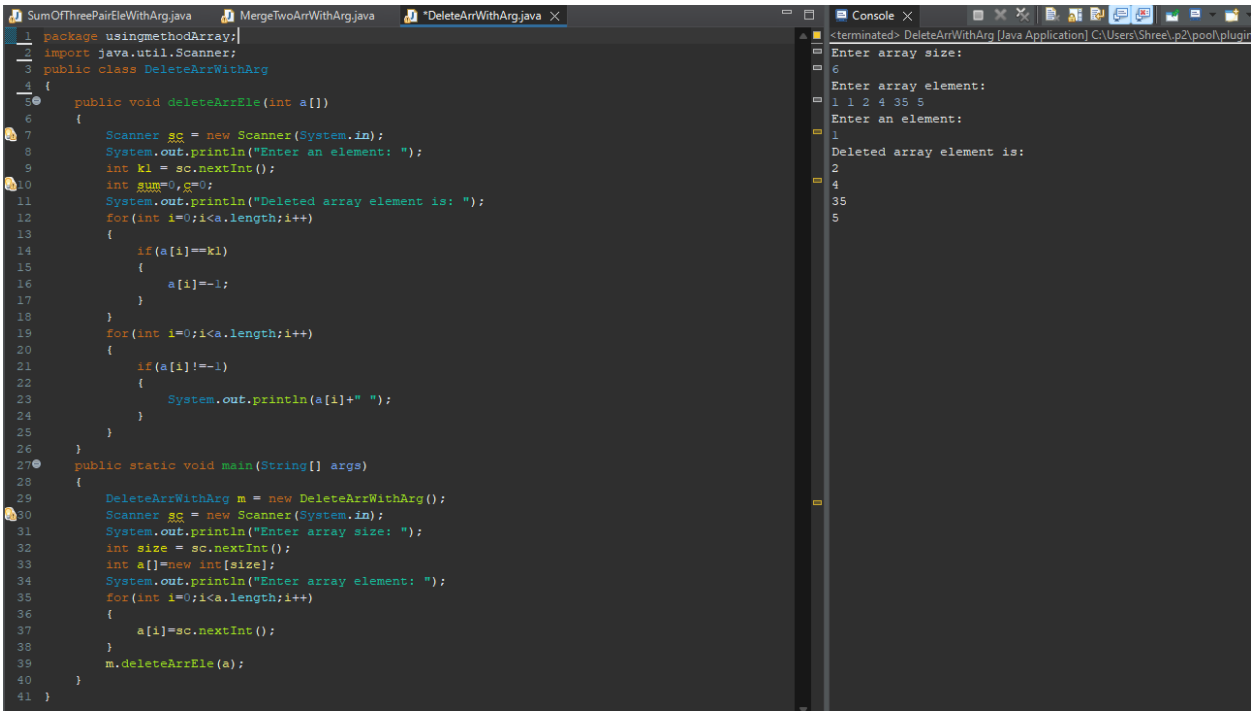
```
<terminated> MergeTwoArrWithArg [Java Application] C:\
Enter array size:
5
Enter 1 array element:
10 20 30 40 50
Enter 2 array element:
1 2 3 4 5
Given merged array element is:
10
5
20
4
30
3
40
2
50
1
```



```
        int c[]=new int[a.length+b.length];
        int x=0,y=0;
        for(int i=0;i<c.length;i++)
        {
            if(i%2==0)
            {
                c[i]=a[x];
                x++;
            }
            else
            {
                c[i]=b[y];
                y++;
            }
        }
        System.out.println("Given merged array element is: ");
        for(int i=0;i<c.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        MergeTwoArrWithArg m = new MergeTwoArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[size];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter 2 array element: ");
        for(int i=b.length-1;i>=0;i--)
        {
            b[i]=sc.nextInt();
        }
        m.mergeArr(a,b);
    }
}
```

```
<terminated> MergeTwoArrWithArg [Java Application] C:\Users\Shree\.p2\p
Enter array size:
5
Enter 1 array element:
10 20 30 40 50
Enter 2 array element:
1 2 3 4 5
Given merged array element is:
10
5
20
4
30
3
40
2
50
1
```

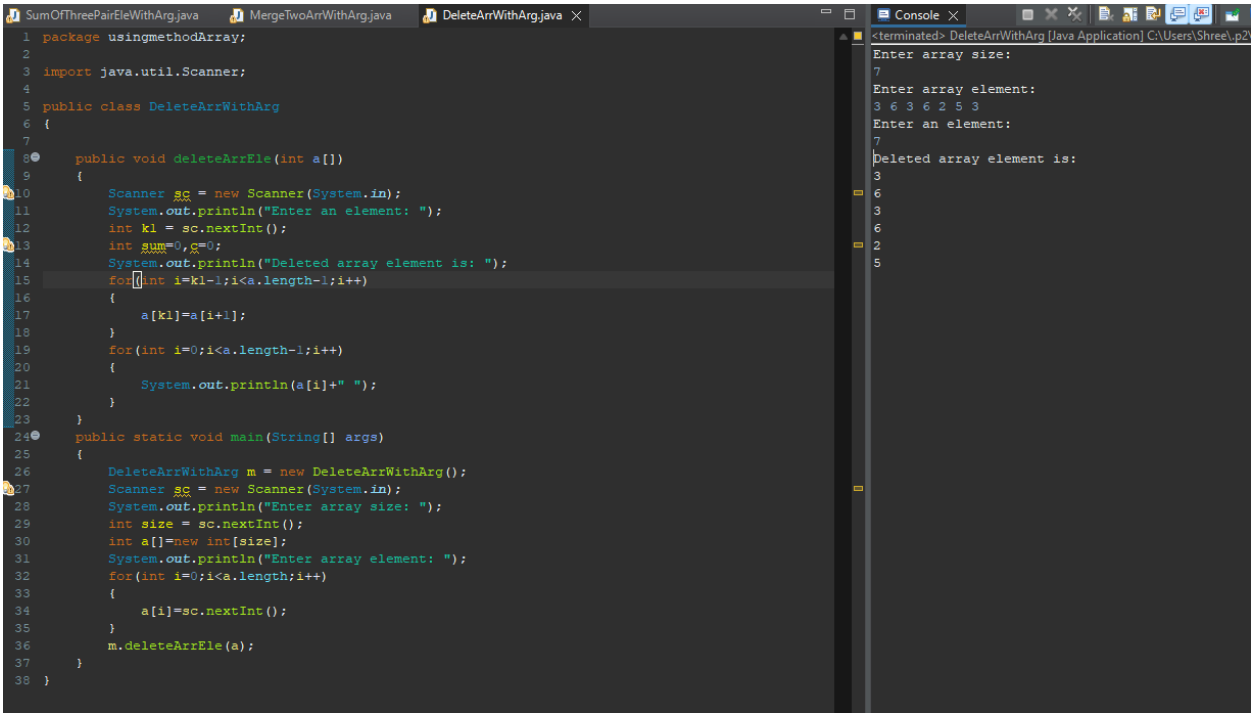
Q4. Write a program to input an array now delete element from array, element is taken from user.



```
SumOfThreePairEleWithArg.java | MergeTwoArrWithArg.java | *DeleteArrWithArg.java

1  package usingmethodArray;
2  import java.util.Scanner;
3  public class DeleteArrWithArg
4  {
5      public void deleteArrEle(int a[])
6      {
7          Scanner sc = new Scanner(System.in);
8          System.out.println("Enter an element: ");
9          int k1 = sc.nextInt();
10         int sum=0,c=0;
11         System.out.println("Deleted array element is: ");
12         for(int i=0;i<a.length;i++)
13         {
14             if(a[i]==k1)
15             {
16                 a[i]=-1;
17             }
18         }
19         for(int i=0;i<a.length;i++)
20         {
21             if(a[i]!=-1)
22             {
23                 System.out.println(a[i]+" ");
24             }
25         }
26     }
27     public static void main(String[] args)
28     {
29         DeleteArrWithArg m = new DeleteArrWithArg();
30         Scanner sc = new Scanner(System.in);
31         System.out.println("Enter array size: ");
32         int size = sc.nextInt();
33         int a[]=new int[size];
34         System.out.println("Enter array element: ");
35         for(int i=0;i<a.length;i++)
36         {
37             a[i]=sc.nextInt();
38         }
39         m.deleteArrEle(a);
40     }
41 }
```

```
Console
<terminated> DeleteArrWithArg [Java Application] C:\Users\Shree\.p2\pool\plugin
Enter array size:
6
Enter array element:
1 1 2 4 35 5
Enter an element:
1
Deleted array element is:
2
4
35
5
```

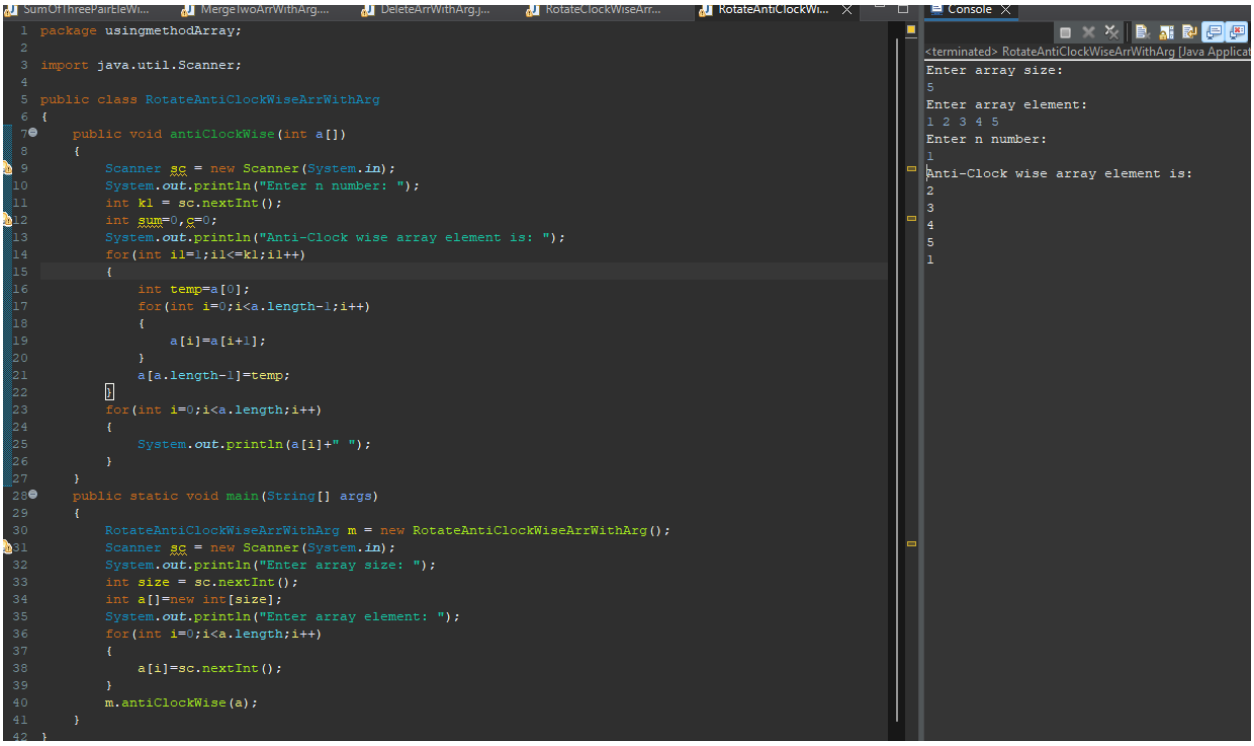
Q5. Write a program to input an array now delete element from array, position is taken from user.



```
SumOfThreePairEleWithArg.java | MergeTwoArrWithArg.java | DeleteArrWithArg.java

1  package usingmethodArray;
2
3  import java.util.Scanner;
4
5  public class DeleteArrWithArg
6  {
7
8      public void deleteArrEle(int a[])
9      {
10         Scanner sc = new Scanner(System.in);
11         System.out.println("Enter an element: ");
12         int k1 = sc.nextInt();
13         int sum=0,c=0;
14         System.out.println("Deleted array element is: ");
15         for(int i=k1-1;i<a.length-1;i++)
16         {
17             a[k1]=a[i+1];
18         }
19         for(int i=0;i<a.length-1;i++)
20         {
21             System.out.println(a[i]+" ");
22         }
23     }
24     public static void main(String[] args)
25     {
26         DeleteArrWithArg m = new DeleteArrWithArg();
27         Scanner sc = new Scanner(System.in);
28         System.out.println("Enter array size: ");
29         int size = sc.nextInt();
30         int a[]=new int[size];
31         System.out.println("Enter array element: ");
32         for(int i=0;i<a.length;i++)
33         {
34             a[i]=sc.nextInt();
35         }
36         m.deleteArrEle(a);
37     }
38 }
```

```
Console
<terminated> DeleteArrWithArg [Java Application] C:\Users\Shree\.p2
Enter array size:
7
Enter array element:
3 6 3 6 2 5 3
Enter an element:
7
Deleted array element is:
3
6
3
6
2
5
```

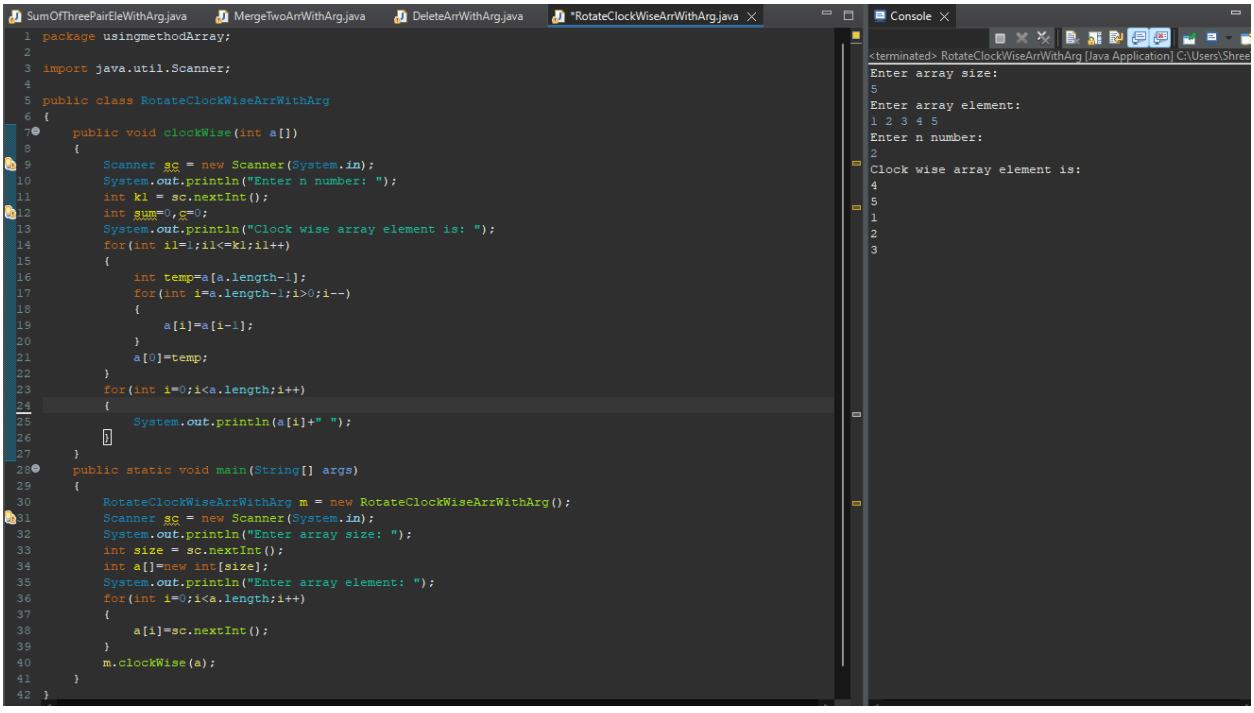
Q5. Write a program to input an array and rotate it in anti-clock wise by any no given by user.



```
package usingmethodArray;

import java.util.Scanner;

public class RotateAntiClockWiseArrWithArg
{
    public void antiClockWise(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number: ");
        int kl = sc.nextInt();
        int sum=0,c=0;
        System.out.println("Anti-Clock wise array element is: ");
        for(int il=1;il<=kl;il++)
        {
            int temp=a[0];
            for(int i=0;i<a.length-1;i++)
            {
                a[i]=a[i+1];
            }
            a[a.length-1]=temp;
        }
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        RotateAntiClockWiseArrWithArg m = new RotateAntiClockWiseArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.antiClockWise(a);
    }
}
```

```
<terminated> RotateAntiClockWiseArrWithArg [Java Applicat
Enter array size:
5
Enter array element:
1 2 3 4 5
Enter n number:
1
Anti-Clock wise array element is:
2
3
4
5
1
```

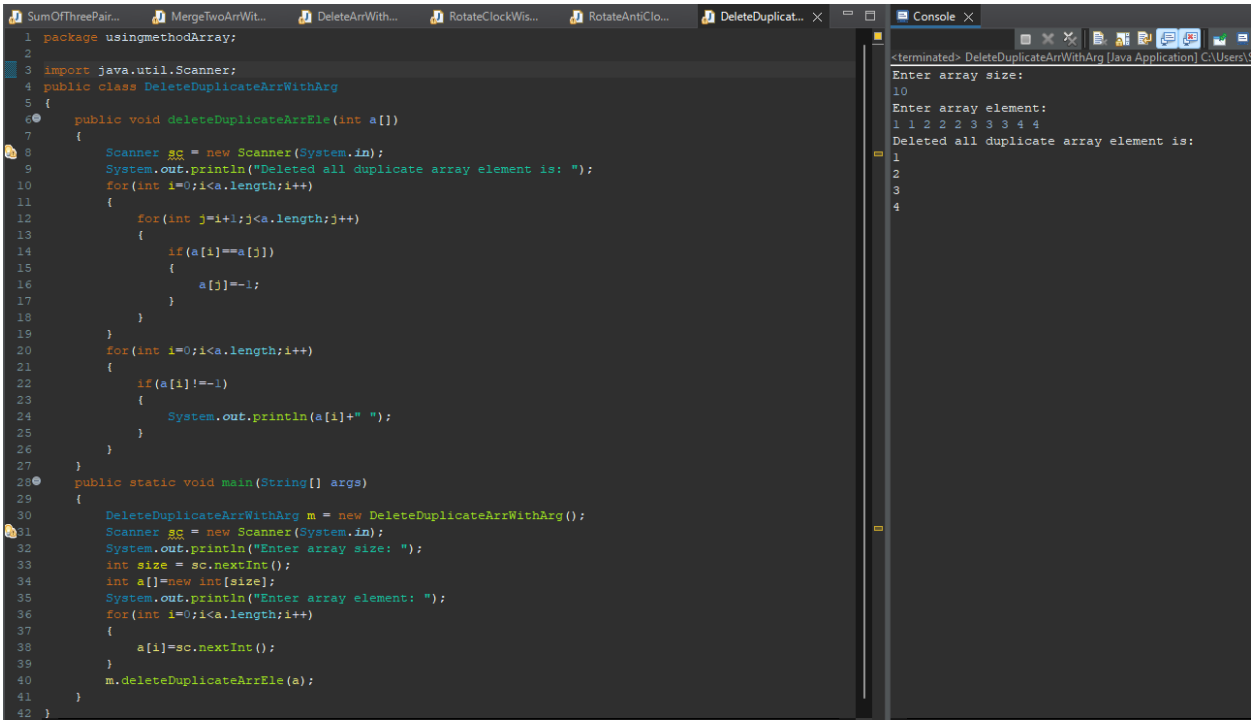
Q6. Write a program to input an array and rotate it in clock wise by any no given by user.



```
package usingmethodArray;

import java.util.Scanner;

public class RotateClockWiseArrWithArg
{
    public void clockWise(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number: ");
        int kl = sc.nextInt();
        int sum=0,c=0;
        System.out.println("Clock wise array element is: ");
        for(int il=1;il<=kl;il++)
        {
            int temp=a[a.length-1];
            for(int i=a.length-1;i>0;i--)
            {
                a[i]=a[i-1];
            }
            a[0]=temp;
        }
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
    }
    public static void main(String[] args)
    {
        RotateClockWiseArrWithArg m = new RotateClockWiseArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.clockWise(a);
    }
}
```

```
<terminated> RotateClockWiseArrWithArg [Java Application] C:\Users\Shree
Enter array size:
5
Enter array element:
1 2 3 4 5
Enter n number:
2
Clock wise array element is:
4
5
1
2
3
```

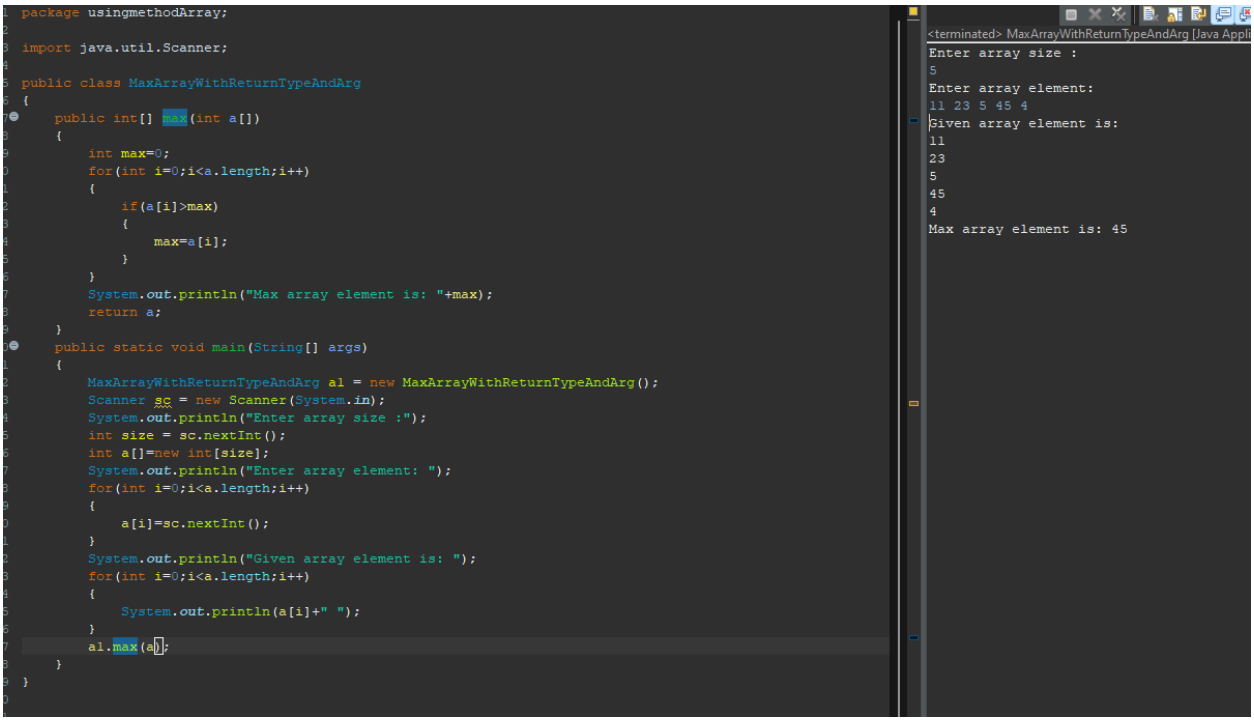
Q7. Write a program to input an array and delete all duplicate element from array.



```
package usingmethodArray;

import java.util.Scanner;
public class DeleteDuplicateArrWithArg
{
    public void deleteDuplicateArrEle(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Deleted all duplicate array element is: ");
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    a[j]=-1;
                }
            }
        }
        for(int i=0;i<a.length;i++)
        {
            if(a[i]!=-1)
            {
                System.out.println(a[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        DeleteDuplicateArrWithArg m = new DeleteDuplicateArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        m.deleteDuplicateArrEle(a);
    }
}
```

```
<terminated> DeleteDuplicateArrWithArg [Java Application] C:\Users\
Enter array size:
10
Enter array element:
1 1 2 2 2 3 3 3 4 4
Deleted all duplicate array element is:
1
2
3
4
```

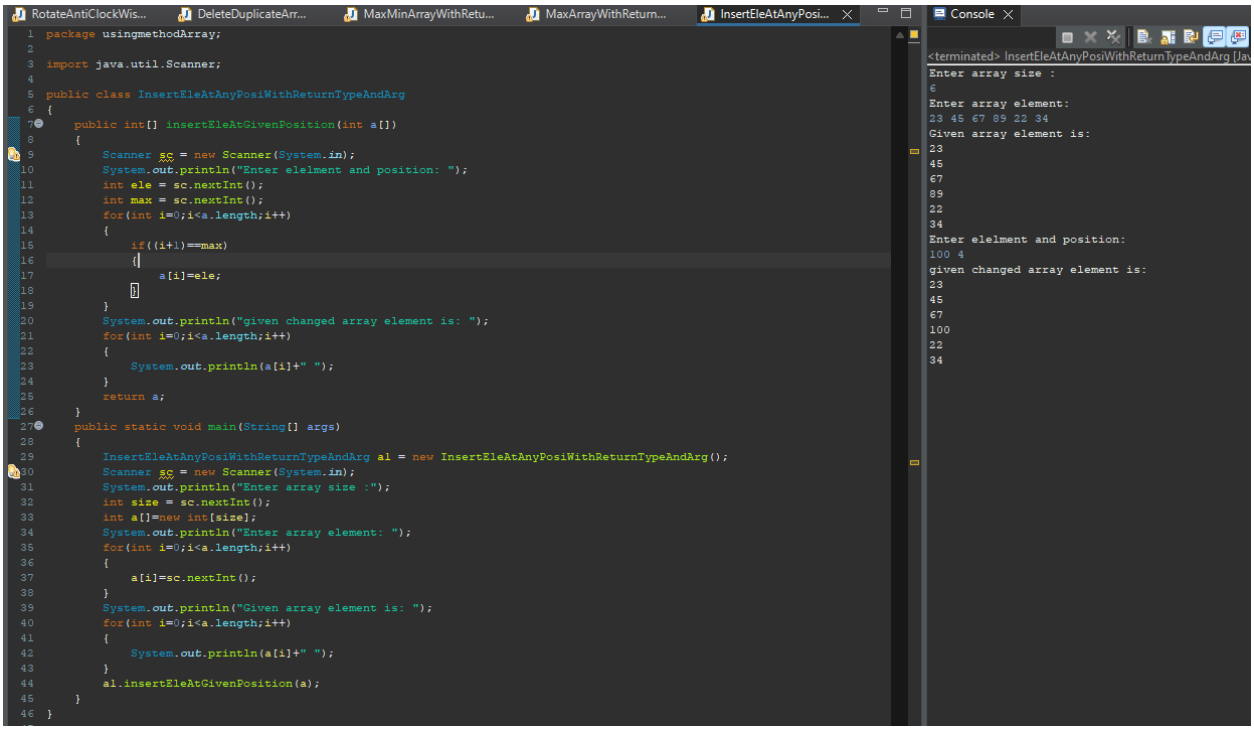
Q8. Write a Java program to find max number in an array.



```
package usingmethodArray;

import java.util.Scanner;

public class MaxArrayWithReturnTypeAndArg
{
    public int[] max(int a[])
    {
        int max=0;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]>max)
            {
                max=a[i];
            }
        }
        System.out.println("Max array element is: "+max);
        return a;
    }
    public static void main(String[] args)
    {
        MaxArrayWithReturnTypeAndArg al = new MaxArrayWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.max(a);
    }
}
```

```
<terminated> MaxArrayWithReturnTypeAndArg [Java Appli
Enter array size :
5
Enter array element:
11 23 5 45 4
Given array element is:
11
23
5
45
4
Max array element is: 45
```

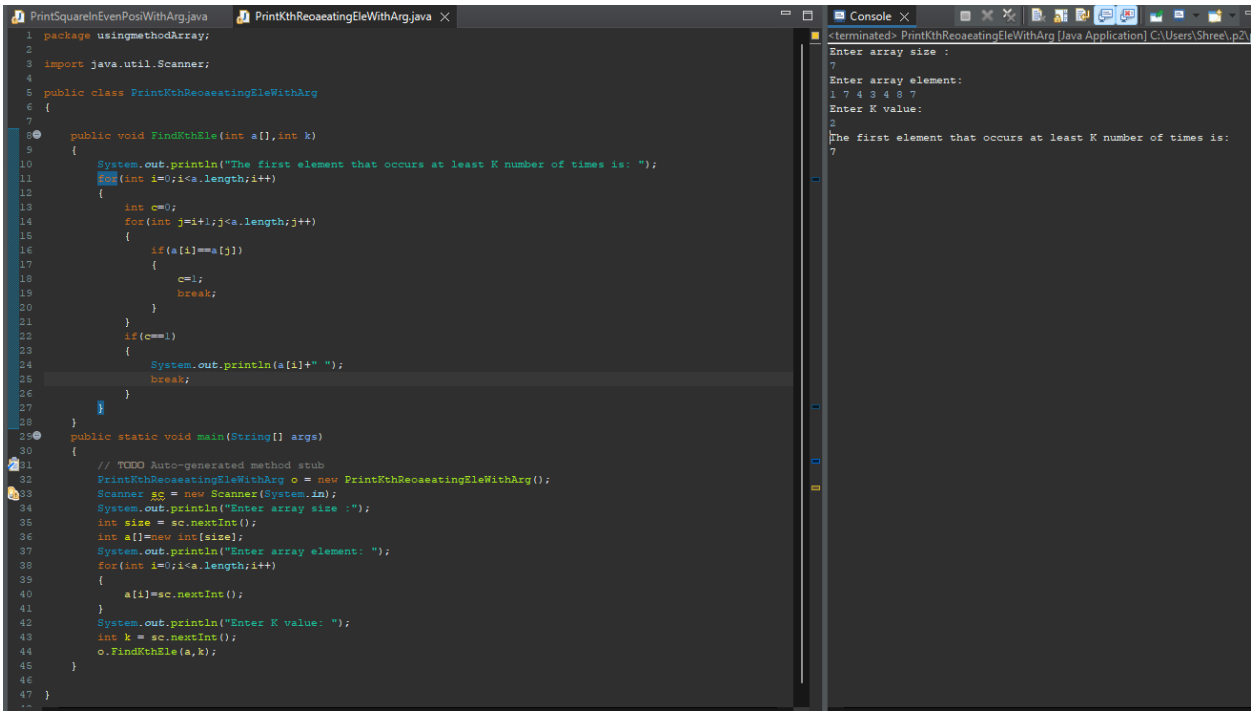
Q9. Write a program to input an array now insert any element at any position, element and position is taken by user.



```
package usingmethodArray;

import java.util.Scanner;

public class InsertEleAtAnyPosiWithReturnTypeAndArg
{
    public int[] insertEleAtGivenPosition(int a[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter elelment and position: ");
        int ele = sc.nextInt();
        int max = sc.nextInt();
        for(int i=0;i<a.length;i++)
        {
            if((i+1)==max)
            {
                a[i]=ele;
            }
        }
        System.out.println("given changed array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        return a;
    }
    public static void main(String[] args)
    {
        InsertEleAtAnyPosiWithReturnTypeAndArg al = new InsertEleAtAnyPosiWithReturnTypeAndArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        al.insertEleAtGivenPosition(a);
    }
}
```

```
<terminated> InsertEleAtAnyPosiWithReturnTypeAndArg [Jav
Enter array size :
6
Enter array element:
23 45 67 89 22 34
Given array element is:
23
45
67
89
22
34
Enter elelment and position:
100 4
given changed array element is:
23
45
67
100
22
34
```

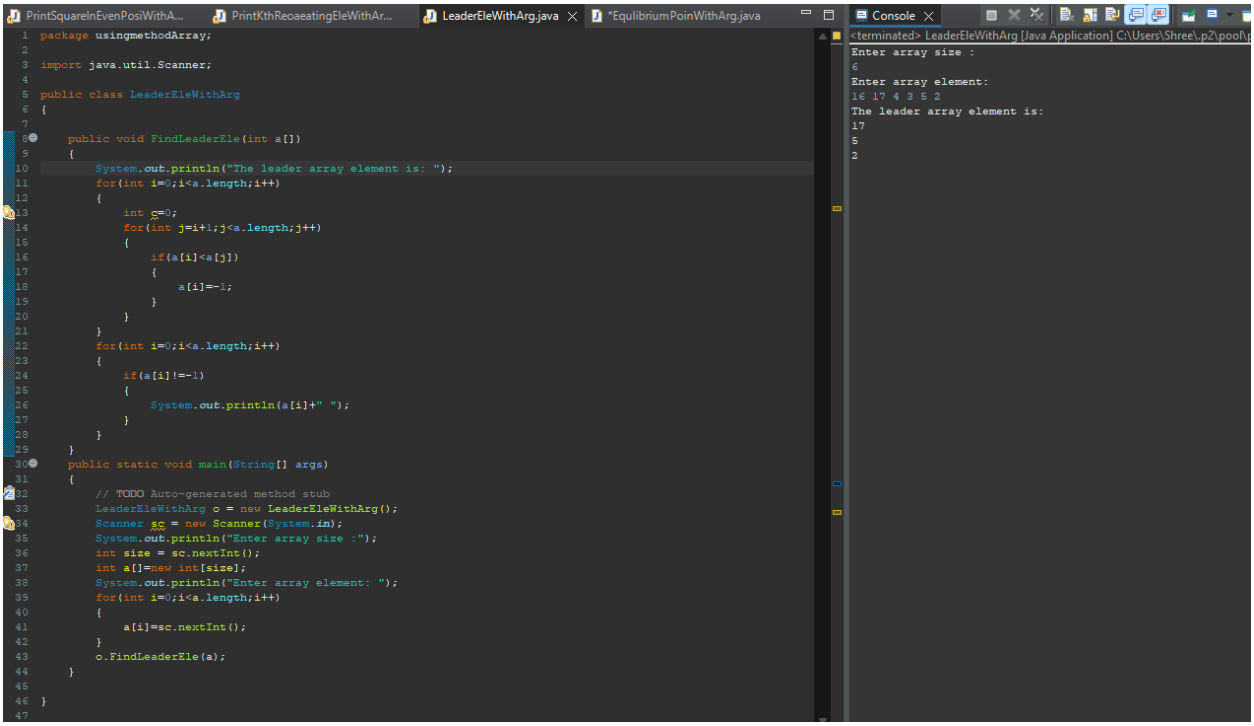
Q1.Given an array of N integers. Find the first element that occurs at least K number of times.Example 1:Input :N = 7, K = 2, A[] = {1, 7, 4, 3, 4, 8, 7}Output :7



```
package usingmethodArray;

import java.util.Scanner;

public class PrintKthReoaeatingEleWithArg
{

    public void FindKthEle(int a[],int k)
    {
        System.out.println("The first element that occurs at least K number of times is: ");
        for(int i=0;i<a.length;i++)
        {
            int c=0;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    c=1;
                    break;
                }
            }
            if(c==1)
            {
                System.out.println(a[i]+" ");
                break;
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintKthReoaeatingEleWithArg o = new PrintKthReoaeatingEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter K value: ");
        int k = sc.nextInt();
        o.FindKthEle(a,k);
    }

}
```

```
Enter array size :
7
Enter array element:
1 7 4 3 4 8 7
Enter K value:
2
The first element that occurs at least K number of times is:
7
```

Q2.Given an array A of positive integers. Your task is to find the leaders in the array. An element of array is leader if it is greater than or equal to all the elements to its right side. The rightmost element is always a leader. Example 1: Input: n = 6A[] = {16,17,4,3,5,2} Output: 17 5 2

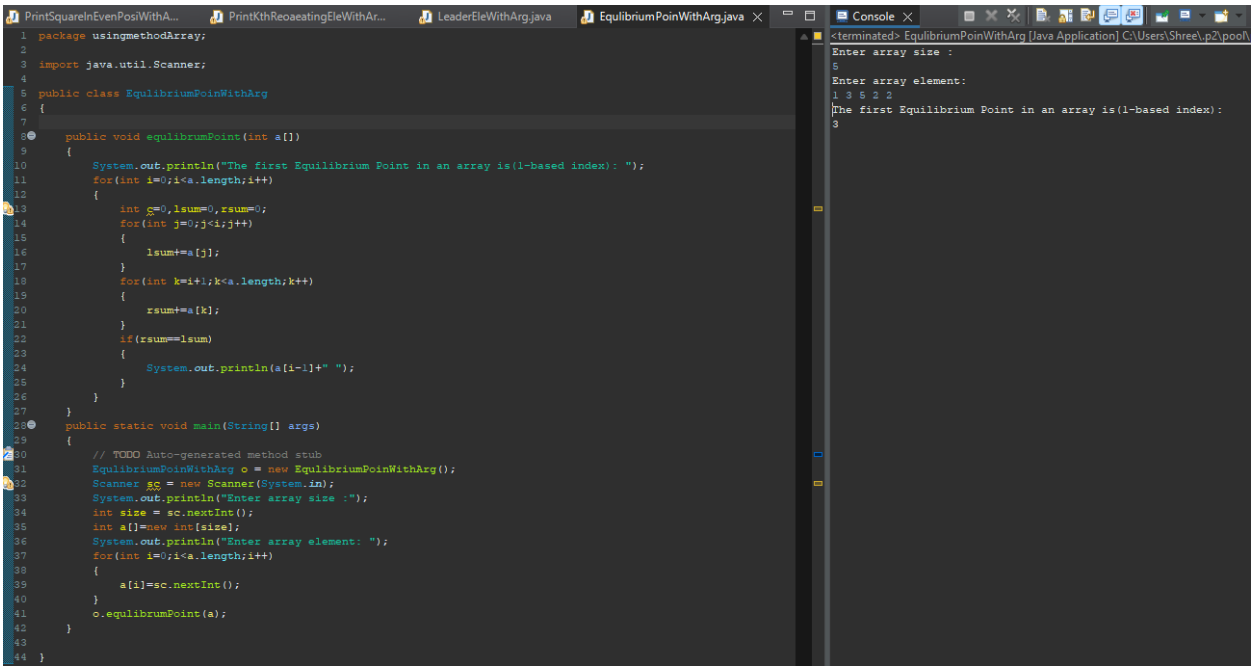


```
package usingmethodArray;

import java.util.Scanner;

public class LeaderEleWithArg
{

    public void FindLeaderEle(int a[])
    {
        System.out.println("The leader array element is: ");
        for(int i=0;i<a.length;i++)
        {
            int c=0;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]<a[j])
                {
                    a[i]=-1;
                }
            }
        }
        for(int i=0;i<a.length;i++)
        {
            if(a[i]!=-1)
            {
                System.out.println(a[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        LeaderEleWithArg o = new LeaderEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        o.FindLeaderEle(a);
    }

}
```

```
Enter array size :
6
Enter array element:
16 17 4 3 5 2
The leader array element is:
17
5
2
```

Q3.Given an array A of n positive numbers. The task is to find the first Equilibrium Point in an array. Equilibrium Point in an array is a position such that the sum of elements before it is equal to the sum of elements after it. Note: Retun the index of Equilibrium point. (1-based index)Example 1:Input: n = 5

A[] = {1,3,5,2,2} Output: 3




```
package usingmethodArray;

import java.util.Scanner;

public class EqulibriumPoinWithArg
{

    public void equlibrumPoint(int a[])
    {
        System.out.println("The first Equilibrium Point in an array is(1-based index): ");
        for(int i=0;i<a.length;i++)
        {
            int g=0,lsum=0,rsum=0;
            for(int j=0;j<i;j++)
            {
                lsum+=a[j];
            }
            for(int k=i+1;k<a.length;k++)
            {
                rsum+=a[k];
            }
            if(rsum==lsum)
            {
                System.out.println(a[i-1]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        EqulibriumPoinWithArg o = new EqulibriumPoinWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        o.equlibrumPoint(a);
    }

}
```

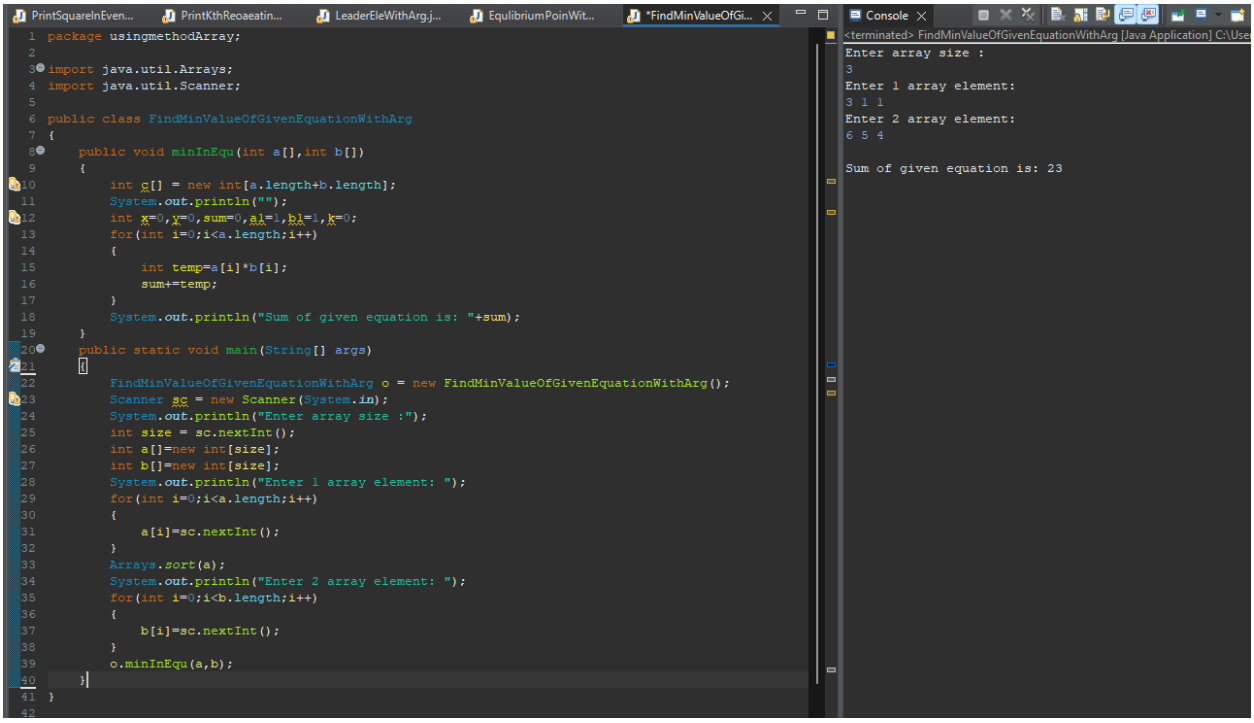
Q4.You are given two arrays, A and B, of equal size N. The task is to find the minimum value of A[0] * B[0] + A[1] * B[1] + ... + A[N-1] * B[N-1], where shuffling of elements of arrays A and B is allowed.

Example 1:

Input: N = 3 A[] = {3, 1, 1}

B[] = {6, 5, 4}

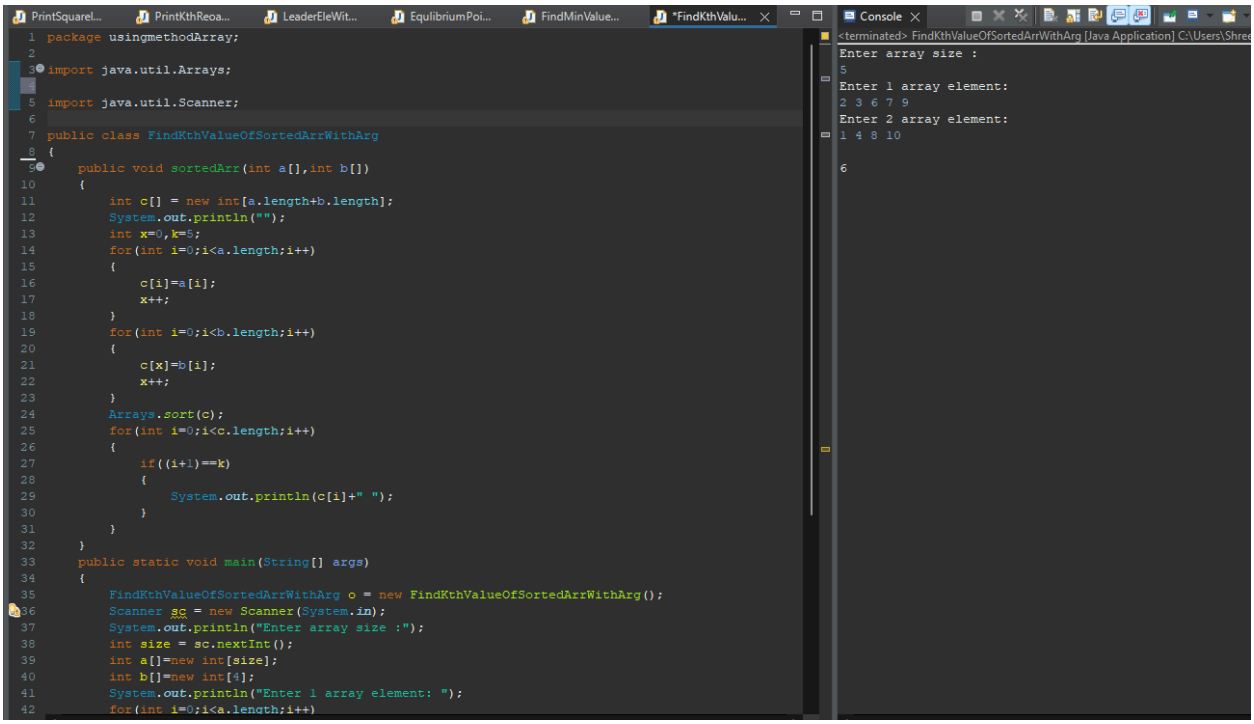
Output:23



Q5.Given two sorted arrays arr1 and arr2 of size N and M respectively and an element K. The task is to find the element that would be at the k'th position of the final sorted array.

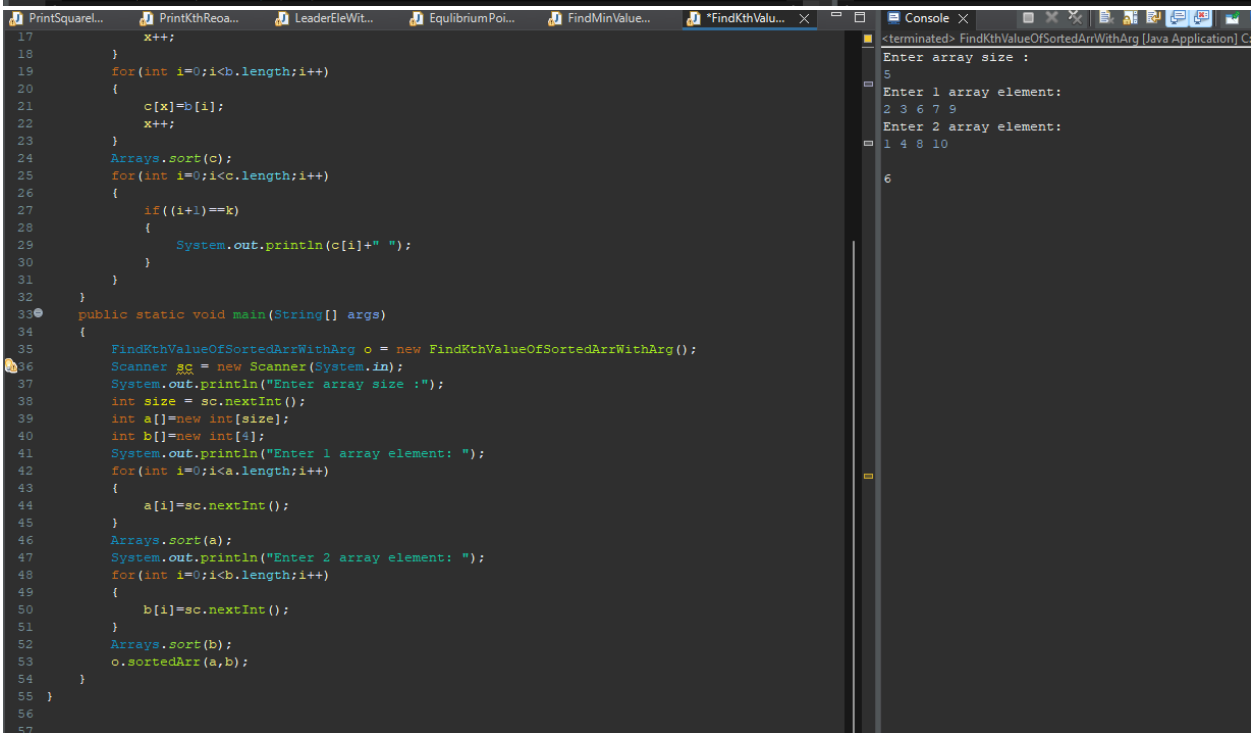
Example 1:

Input: arr1[] = {2, 3, 6, 7, 9}, arr2[] = {1, 4, 8, 10}, k = 5, Output:6



```
package usingmethodArray;

import java.util.Arrays;

import java.util.Scanner;

public class FindKthValueOfSortedArrWithArg
{
    public void sortedArr(int a[],int b[])
    {
        int c[] = new int[a.length+b.length];
        System.out.println("");
        int x=0,k=5;
        for(int i=0;i<a.length;i++)
        {
            c[i]=a[i];
            x++;
        }
        for(int i=0;i<b.length;i++)
        {
            c[x]=b[i];
            x++;
        }
        Arrays.sort(c);
        for(int i=0;i<c.length;i++)
        {
            if((i+1)==k)
            {
                System.out.println(c[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        FindKthValueOfSortedArrWithArg o = new FindKthValueOfSortedArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[4];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
```

```
Console
<terminated> FindKthValueOfSortedArrWithArg [Java Application] C:\Users\Shree
Enter array size :
5
Enter 1 array element:
2 3 6 7 9
Enter 2 array element:
1 4 8 10

6
```



```
            x++;
        }
        for(int i=0;i<b.length;i++)
        {
            c[x]=b[i];
            x++;
        }
        Arrays.sort(c);
        for(int i=0;i<c.length;i++)
        {
            if((i+1)==k)
            {
                System.out.println(c[i]+" ");
            }
        }
    }
    public static void main(String[] args)
    {
        FindKthValueOfSortedArrWithArg o = new FindKthValueOfSortedArrWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[4];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        Arrays.sort(a);
        System.out.println("Enter 2 array element: ");
        for(int i=0;i<b.length;i++)
        {
            b[i]=sc.nextInt();
        }
        Arrays.sort(b);
        o.sortedArr(a,b);
    }
}
```

```
Console
<terminated> FindKthValueOfSortedArrWithArg [Java Application] C
Enter array size :
5
Enter 1 array element:
2 3 6 7 9
Enter 2 array element:
1 4 8 10

6
```

Q6.Given an array of size N filled with numbers from 1 to N-1 in random order. The array has only one repetitive element. The task is to find the repetitive element.

Examples:

Input: a[] = {1, 3, 2, 3, 4}

Output: 3

```java
package usingmethodArray;

import java.util.Scanner;

public class PrintKthReoaeatingEleWithArg
{

    public void FindKthEle(int a[],int k)
    {
        System.out.println("The first element that occurs at least K number of times is: ");
        for(int i=0;i<a.length;i++)
        {
            int c=1;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    c++;
                }
            }
            if(c==k)
            {
                System.out.println(a[i]+" ");
                break;
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintKthReoaeatingEleWithArg o = new PrintKthReoaeatingEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter K value: ");
        int k = sc.nextInt();
```

```
Enter array size :
5
Enter array element:
1 3 2 3 4
Enter K value:
2
The first element that occurs at least K number of times is:
3
```

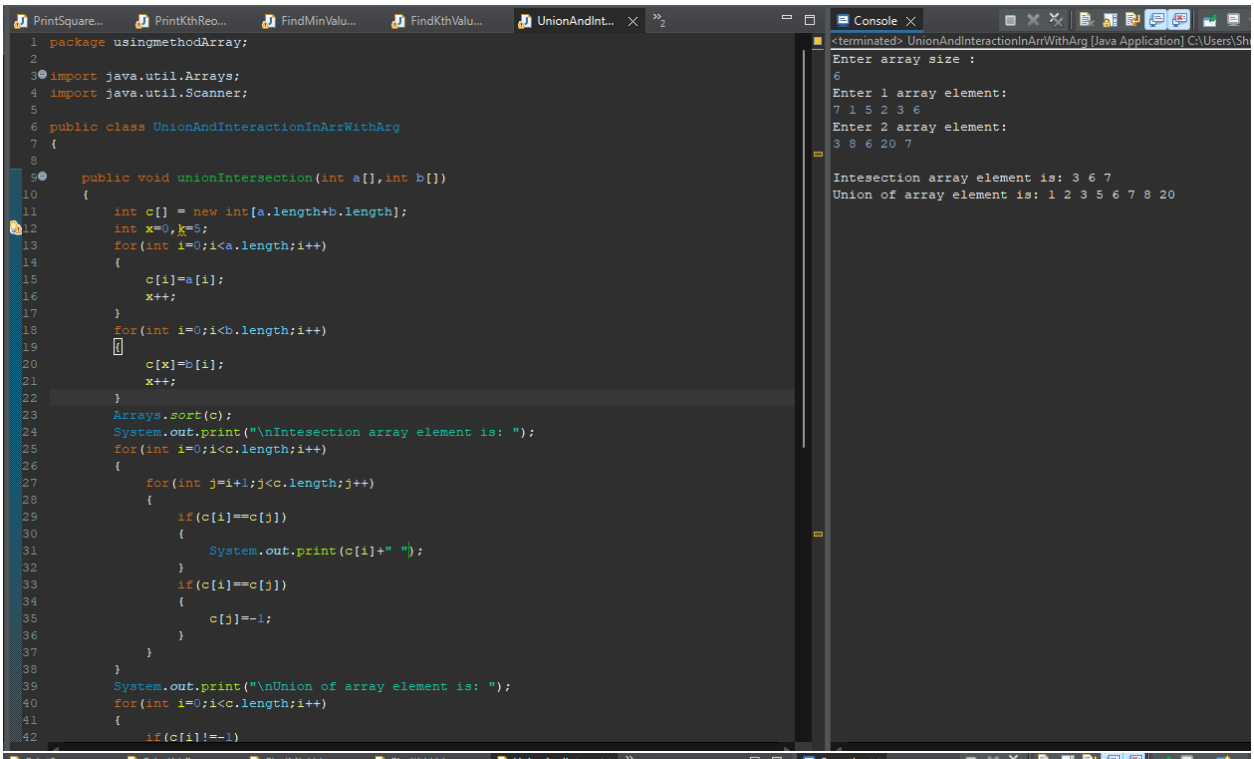
```java
{

    public void FindKthEle(int a[],int k)
    {
        System.out.println("The first element that occurs at least K number of times is: ");
        for(int i=0;i<a.length;i++)
        {
            int c=1;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    c++;
                }
            }
            if(c==k)
            {
                System.out.println(a[i]+" ");
                break;
            }
        }
    }
    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        PrintKthReoaeatingEleWithArg o = new PrintKthReoaeatingEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter K value: ");
        int k = sc.nextInt();
        o.FindKthEle(a,k);
    }

}
```

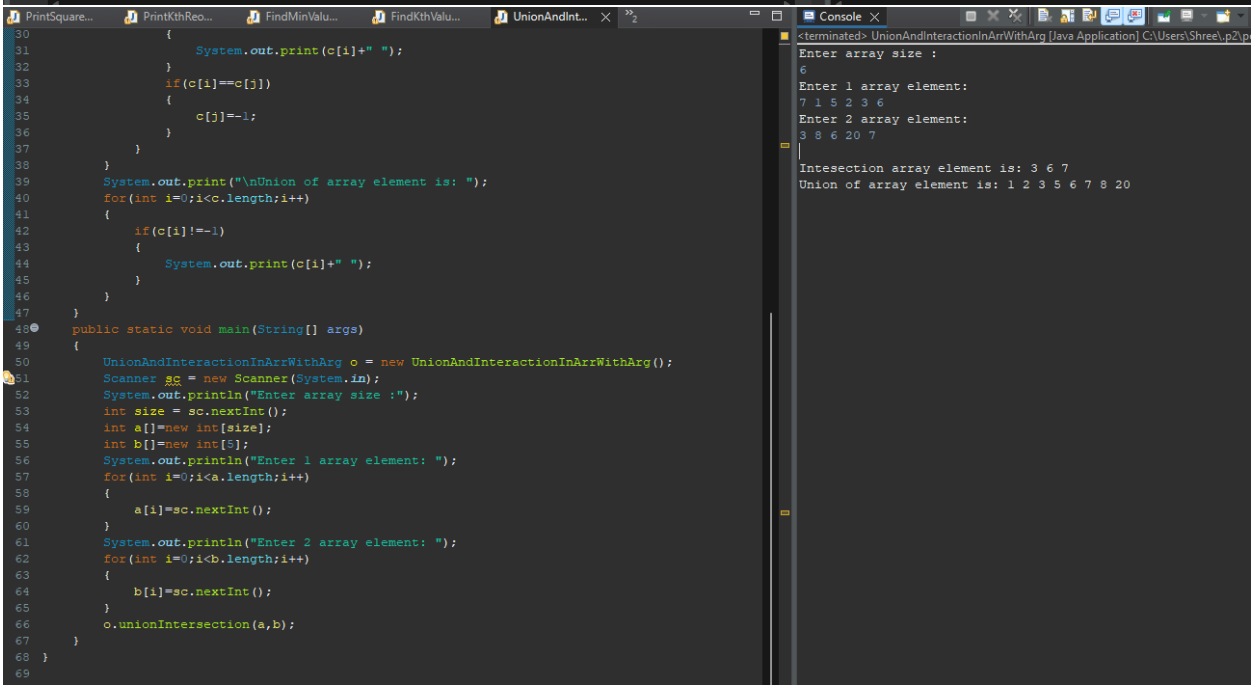
```
Enter array size :
5
Enter array element:
1 3 2 3 4
Enter K value:
2
The first element that occurs at least K number of times is:
3
```

Q7.Given two unsorted arrays that represent two sets (elements in every array are distinct), find the union and intersection of two arrays.

Example: arr1[] = {7, 1, 5, 2, 3, 6} ,arr2[] = {3, 8, 6, 20, 7}

Then your program should print Union as {1, 2, 3, 5, 6, 7, 8, 20} and Intersection as {3, 6, 7}. Note that the elements of union and intersection can be printed in any order.





Q8.Given three arrays sorted in non-decreasing order, print all common elements in these arrays.

Examples: Input: ar1[] = {1, 5, 10, 20, 40, 80} ,ar2[] = {6, 7, 20, 80, 100} ,ar3[] = {3, 4, 15, 20, 30, 70, 80, 120} ,Output: 20, 80

```java
package usingmethodArray;

import java.util.Arrays;
import java.util.Scanner;

public class PrintCommonArrEleWithArg
{

    public void printCoomonEle(int a[],int b[],int c[])
    {
        Arrays.sort(c);
        System.out.print("\nCommon array element is: ");
        for(int i=0;i<c.length;i++)
        {
            for(int j=0;j<a.length;j++)
            {
                for(int k=0;k<b.length;k++)
                {
                    if(c[i]==a[j] && c[i]==b[k])
                    {
                        System.out.print(c[i]+" ");
                        break;
                    }
                }
            }
        }
    }
    public static void main(String[] args)
    {
        PrintCommonArrEleWithArg o = new PrintCommonArrEleWithArg();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter 3 array size: ");
        int size = sc.nextInt();
        int size1 = sc.nextInt();
        int size2 = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[size1];
        int c[]=new int[size2];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter 2 array element: ");
        for(int i=0;i<b.length;i++)
        {
            b[i]=sc.nextInt();
        }
        System.out.println("Enter 3 array element: ");
        for(int i=0;i<c.length;i++)
        {
            c[i]=sc.nextInt();
        }
        o.printCoomonEle(a,b,c);
    }
}
```

```
Enter 3 array size:
8 6 5
Enter 1 array element:
3 4 15 20 30 70 80 120
Enter 2 array element:
1 5 10 20 40 80
Enter 3 array element:
6 7 20 80 100

Common array element is: 20 80
```

Q10.Given an array arr[] of integers, segregate even and odd numbers in the array. Such that all the even numbers should be present first, and then the odd numbers.

Examples:

Input: arr[] = 1 9 5 3 2 6 7 11

Output: 2 6 5 3 1 9 7 11

PrimeReturnType.java | SegregateEvenAndOddWithReturnTypeAndArg.java

```
package usingmethodArray;

import java.util.Scanner;

class EvenOdd
{
    public int[] segregateEvenOdd(int a[])
    {
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[j]%2==0)
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        int te=a[0];
        int t1=a[1];
        a[0]=t1;
        a[1]=te;
        return a;
    }
}
public class SegregateEvenAndOddWithReturnTypeAndArg
{

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
```

Console

```
<terminated> SegregateEvenAndOddWithReturnTypeAndArg [Java Application] C:\Users\Shree\.p2\pool\plu
Enter array size:
8
Enter array element:
1 9 5 3 2 6 7 11
The even numbers present first and then the odd numbers:
2
6
5
3
1
9
7
11
```

PrimeReturnType.java | SegregateEvenAndOddWithReturnTypeAndArg.java

```
                    a[j]=t;
                }
            }
        }
        int te=a[0];
        int t1=a[1];
        a[0]=t1;
        a[1]=te;
        return a;
    }
}
public class SegregateEvenAndOddWithReturnTypeAndArg
{

    public static void main(String[] args)
    {
        // TODO Auto-generated method stub
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        EvenOdd  e= new EvenOdd();
        int c[]=e.segregateEvenOdd(a);
        System.out.println("The even numbers present first and ther
        for(int i=0;i<a.length;i++)
        {
            System.out.println(c[i]+" ");
        }
    }

}
```

Console

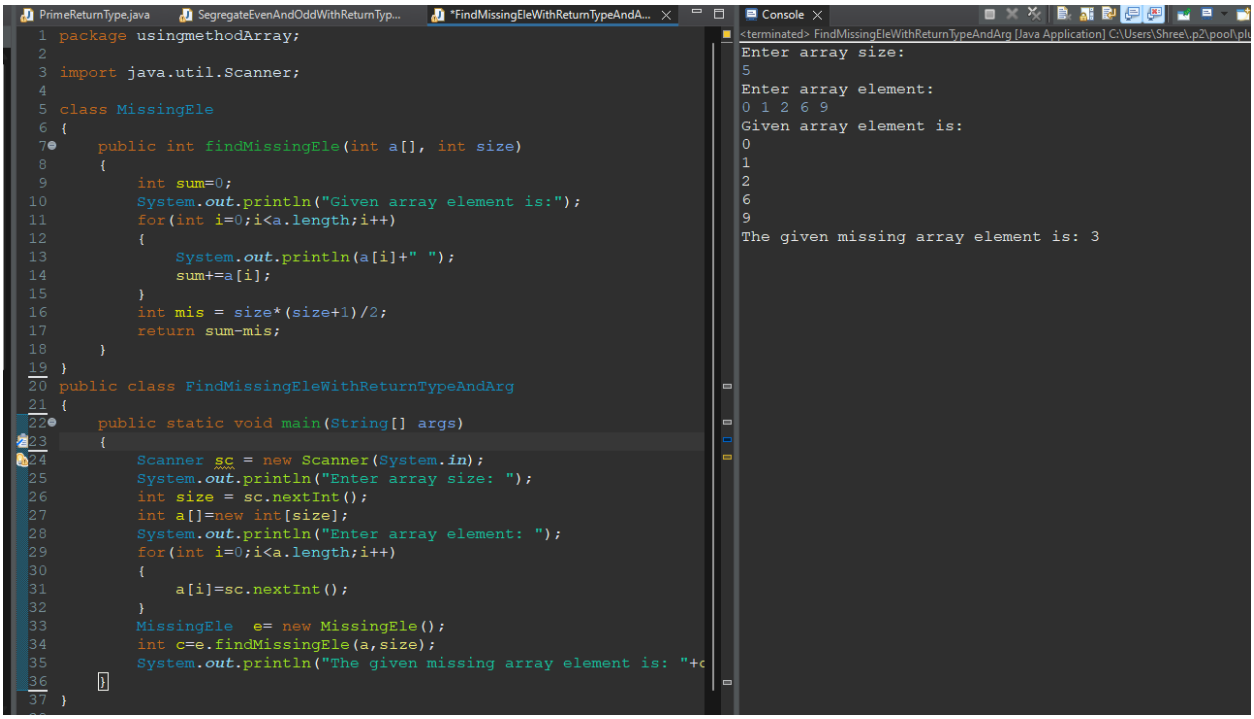
```
<terminated> SegregateEvenAndOddWithReturnTypeAndArg [Java Application] C:\Users\Shree\.p2\pool\plu
Enter array size:
8
Enter array element:
1 9 5 3 2 6 7 11
The even numbers present first and then the odd numbers:
2
6
5
3
1
9
7
11
```

Q11.Given a sorted array of n distinct integers where each integer is in the range from 0 to m-1 and m > n. Find the smallest number that is missing from the array.

Examples:

Input: {0, 1, 2, 6, 9}, n = 5, m = 10

Output: 3




```
package usingmethodArray;

import java.util.Scanner;

class MissingEle
{
    public int findMissingEle(int a[], int size)
    {
        int sum=0;
        System.out.println("Given array element is:");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
            sum+=a[i];
        }
        int mis = size*(size+1)/2;
        return sum-mis;
    }
}
public class FindMissingEleWithReturnTypeAndArg
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        MissingEle  e= new MissingEle();
        int c=e.findMissingEle(a,size);
        System.out.println("The given missing array element is: "+c
    }
}
```

Q12.Given a sorted array with possibly duplicate elements. The task is to find indexes of first and last occurrences of an element X in the given array.

Note: If the element is not present in the array return {-1,-1} as pair.

Example 1:

Input:N = 9

v[] = {1, 3, 5, 5, 5, 5, 67, 123, 125}

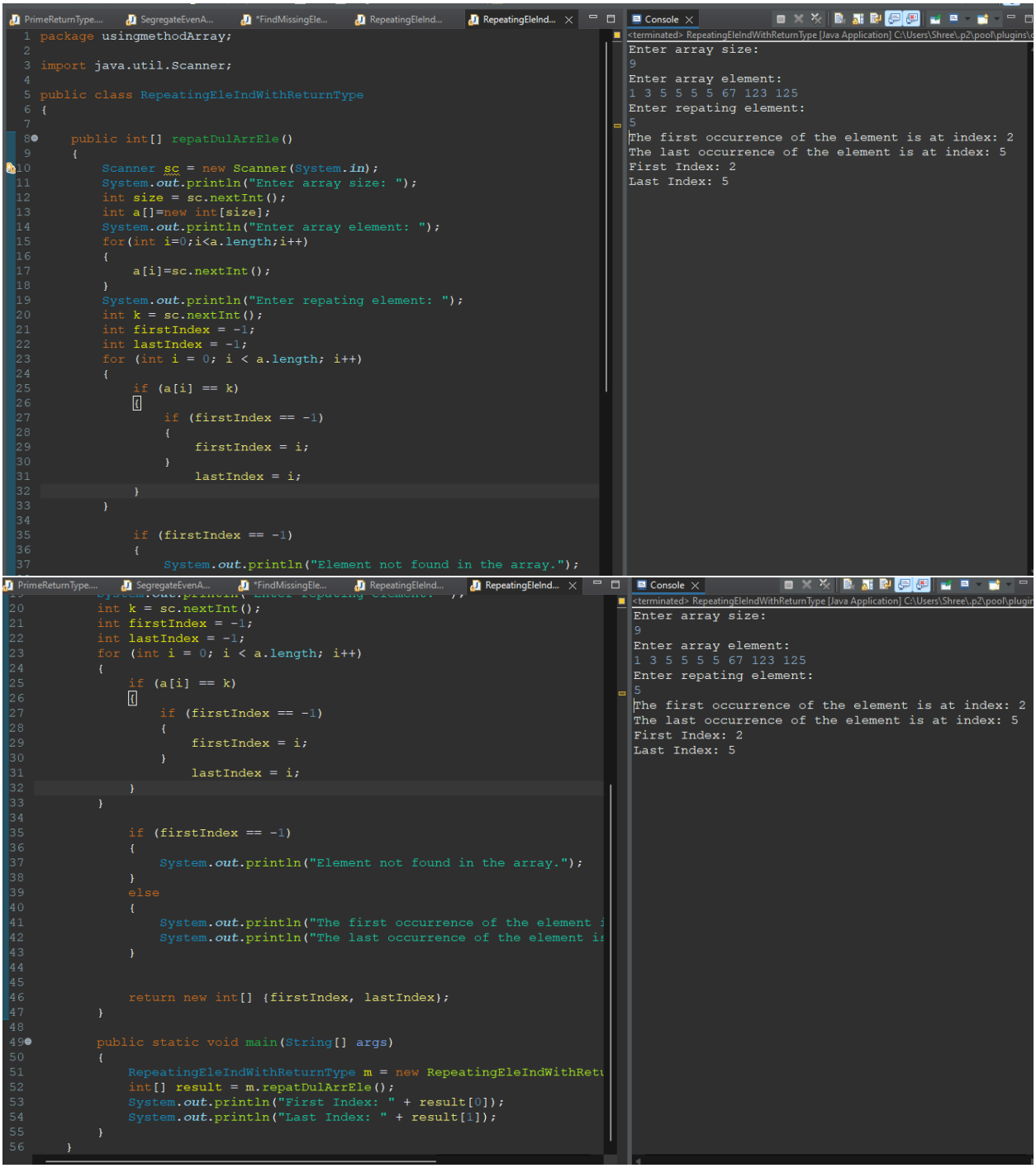
X = 5

Output:2 5

Explanation:

Index of first occurrence of 5 is 2

and index of last occurrence of 5 is 5.



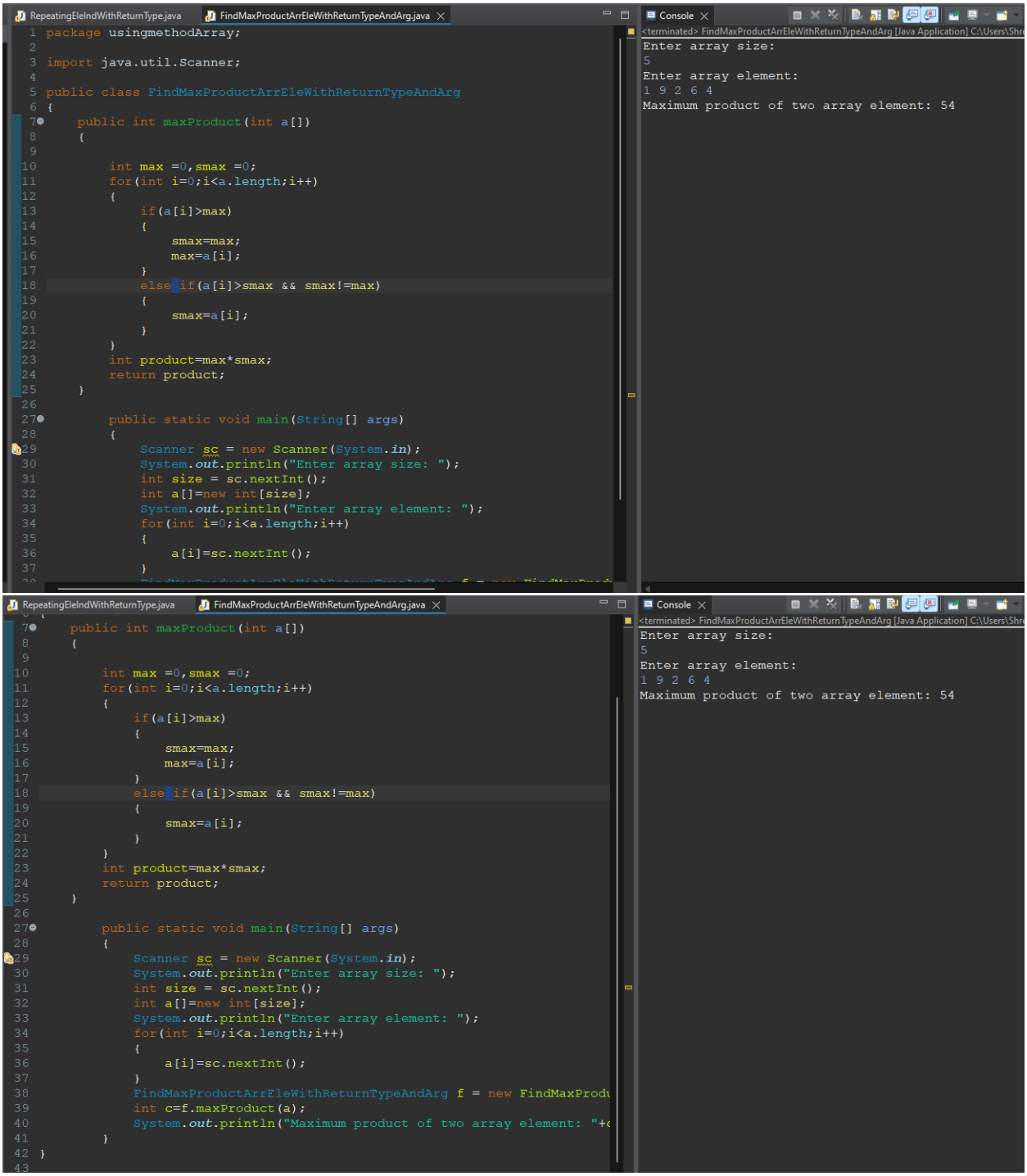
```java
package usingmethodArray;

import java.util.Scanner;

public class RepeatingEleIndWithReturnType
{

    public int[] repatDulArrEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter repating element: ");
        int k = sc.nextInt();
        int firstIndex = -1;
        int lastIndex = -1;
        for (int i = 0; i < a.length; i++)
        {
            if (a[i] == k)
            {
                if (firstIndex == -1)
                {
                    firstIndex = i;
                }
                    lastIndex = i;
            }
        }

            if (firstIndex == -1)
            {
                System.out.println("Element not found in the array.");
```

```
Console
<terminated> RepeatingEleIndWithReturnType [Java Application] C:\Users\Shree\.p2\pool\plugins\
Enter array size:
9
Enter array element:
1 3 5 5 5 5 67 123 125
Enter repating element:
5
The first occurrence of the element is at index: 2
The last occurrence of the element is at index: 5
First Index: 2
Last Index: 5
```

```java
        int k = sc.nextInt();
        int firstIndex = -1;
        int lastIndex = -1;
        for (int i = 0; i < a.length; i++)
        {
            if (a[i] == k)
            {
                if (firstIndex == -1)
                {
                    firstIndex = i;
                }
                    lastIndex = i;
            }
        }

            if (firstIndex == -1)
            {
                System.out.println("Element not found in the array.");
            }
            else
            {
                System.out.println("The first occurrence of the element i
                System.out.println("The last occurrence of the element is
            }


            return new int[] {firstIndex, lastIndex};
        }

        public static void main(String[] args)
        {
            RepeatingEleIndWithReturnType m = new RepeatingEleIndWithRetu
            int[] result = m.repatDulArrEle();
            System.out.println("First Index: " + result[0]);
            System.out.println("Last Index: " + result[1]);
        }
    }
```

```
Console
<terminated> RepeatingEleIndWithReturnType [Java Application] C:\Users\Shree\.p2\pool\plugin
Enter array size:
9
Enter array element:
1 3 5 5 5 5 67 123 125
Enter repating element:
5
The first occurrence of the element is at index: 2
The last occurrence of the element is at index: 5
First Index: 2
Last Index: 5
```

1. Write a Java program to find maximum product of two integers in a given array of integers.



```
RepeatingEleIndWithReturnType.java | FindMaxProductArrEleWithReturnTypeAndArg.java

1  package usingmethodArray;
2
3  import java.util.Scanner;
4
5  public class FindMaxProductArrEleWithReturnTypeAndArg
6  {
7      public int maxProduct(int a[])
8      {
9
10         int max =0,smax =0;
11         for(int i=0;i<a.length;i++)
12         {
13             if(a[i]>max)
14             {
15                 smax=max;
16                 max=a[i];
17             }
18             else if(a[i]>smax && smax!=max)
19             {
20                 smax=a[i];
21             }
22         }
23         int product=max*smax;
24         return product;
25     }
26
27         public static void main(String[] args)
28         {
29             Scanner sc = new Scanner(System.in);
30             System.out.println("Enter array size: ");
31             int size = sc.nextInt();
32             int a[]=new int[size];
33             System.out.println("Enter array element: ");
34             for(int i=0;i<a.length;i++)
35             {
36                 a[i]=sc.nextInt();
37             }
```

```
Console
<terminated> FindMaxProductArrEleWithReturnTypeAndArg [Java Application] C:\Users\Shr
Enter array size:
5
Enter array element:
1 9 2 6 4
Maximum product of two array element: 54
```

```
RepeatingEleIndWithReturnType.java | FindMaxProductArrEleWithReturnTypeAndArg.java

7      public int maxProduct(int a[])
8      {
9
10         int max =0,smax =0;
11         for(int i=0;i<a.length;i++)
12         {
13             if(a[i]>max)
14             {
15                 smax=max;
16                 max=a[i];
17             }
18             else if(a[i]>smax && smax!=max)
19             {
20                 smax=a[i];
21             }
22         }
23         int product=max*smax;
24         return product;
25     }
26
27         public static void main(String[] args)
28         {
29             Scanner sc = new Scanner(System.in);
30             System.out.println("Enter array size: ");
31             int size = sc.nextInt();
32             int a[]=new int[size];
33             System.out.println("Enter array element: ");
34             for(int i=0;i<a.length;i++)
35             {
36                 a[i]=sc.nextInt();
37             }
38             FindMaxProductArrEleWithReturnTypeAndArg f = new FindMaxProdu
39             int c=f.maxProduct(a);
40             System.out.println("Maximum product of two array element: "+c
41         }
42 }
43
```

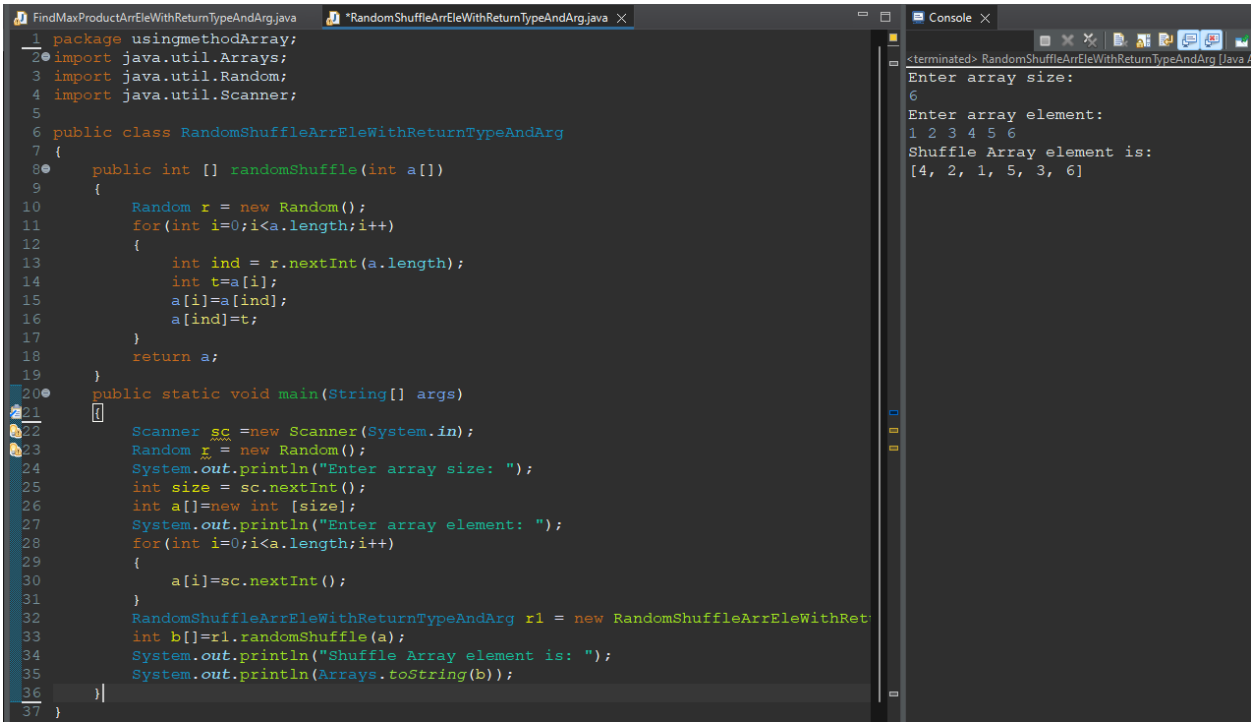
```
Console
<terminated> FindMaxProductArrEleWithReturnTypeAndArg [Java Application] C:\Users\Shr
Enter array size:
5
Enter array element:
1 9 2 6 4
Maximum product of two array element: 54
```

2. Write a Java program to shuffle a given array of integers.

Example:

Input: nums = { 1, 2, 3, 4, 5, 6 }

Output: Shuffle Array: [4, 2, 6, 5, 1, 3]



```
FindMaxProductArrEleWithReturnTypeAndArg.java   *RandomShuffleArrEleWithReturnTypeAndArg.java

1  package usingmethodArray;
2  import java.util.Arrays;
3  import java.util.Random;
4  import java.util.Scanner;
5
6  public class RandomShuffleArrEleWithReturnTypeAndArg
7  {
8      public int [] randomShuffle(int a[])
9      {
10         Random r = new Random();
11         for(int i=0;i<a.length;i++)
12         {
13             int ind = r.nextInt(a.length);
14             int t=a[i];
15             a[i]=a[ind];
16             a[ind]=t;
17         }
18         return a;
19     }
20     public static void main(String[] args)
21     {
22         Scanner sc =new Scanner(System.in);
23         Random r = new Random();
24         System.out.println("Enter array size: ");
25         int size = sc.nextInt();
26         int a[]=new int [size];
27         System.out.println("Enter array element: ");
28         for(int i=0;i<a.length;i++)
29         {
30             a[i]=sc.nextInt();
31         }
32         RandomShuffleArrEleWithReturnTypeAndArg r1 = new RandomShuffleArrEleWithRet
33         int b[]=r1.randomShuffle(a);
34         System.out.println("Shuffle Array element is: ");
35         System.out.println(Arrays.toString(b));
36     }
37 }
```

```
Console
<terminated> RandomShuffleArrEleWithReturnTypeAndArg [Java
Enter array size:
6
Enter array element:
1 2 3 4 5 6
Shuffle Array element is:
[4, 2, 1, 5, 3, 6]
```

3. Write a Java program to rearrange a given array of unique elements such that every second element of the array is greater than its left and right elements.

Example:

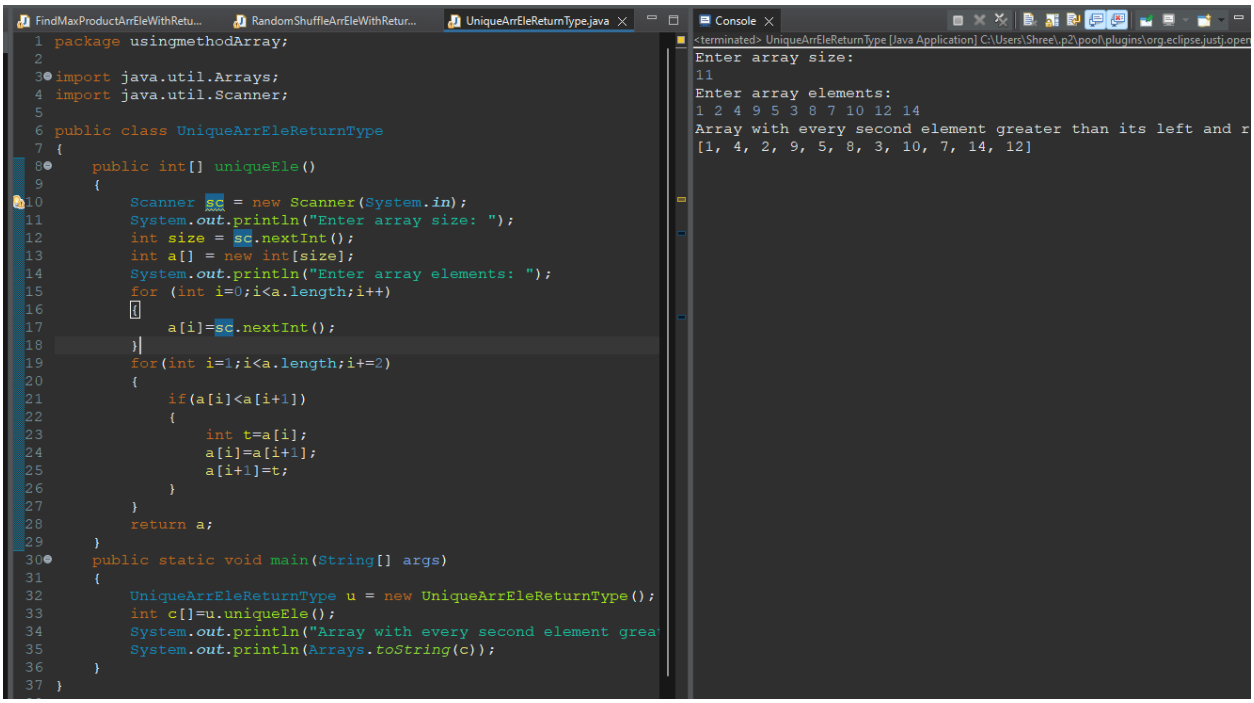
Input :

nums= { 1, 2, 4, 9, 5, 3, 8, 7, 10, 12, 14 }

Output:

Array with every second element is greater than its left and right elements:

[1, 4, 2, 9, 3, 8, 5, 10, 7, 14, 12]




```java
package usingmethodArray;

import java.util.Arrays;
import java.util.Scanner;

public class UniqueArrEleReturnType
{
    public int[] uniqueEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[] = new int[size];
        System.out.println("Enter array elements: ");
        for (int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        for(int i=1;i<a.length;i+=2)
        {
            if(a[i]<a[i+1])
            {
                int t=a[i];
                a[i]=a[i+1];
                a[i+1]=t;
            }
        }
        return a;
    }
    public static void main(String[] args)
    {
        UniqueArrEleReturnType u = new UniqueArrEleReturnType();
        int c[]=u.uniqueEle();
        System.out.println("Array with every second element grea
        System.out.println(Arrays.toString(c));
    }
}
```

4.Write a Java program to replace each element of the array with product of every other element in a given array of integers.

Example:

Input :nums1 = { 1, 2, 3, 4, 5, 6, 7},nums2 = {0, 1, 2, 3, 4, 5, 6, 7}

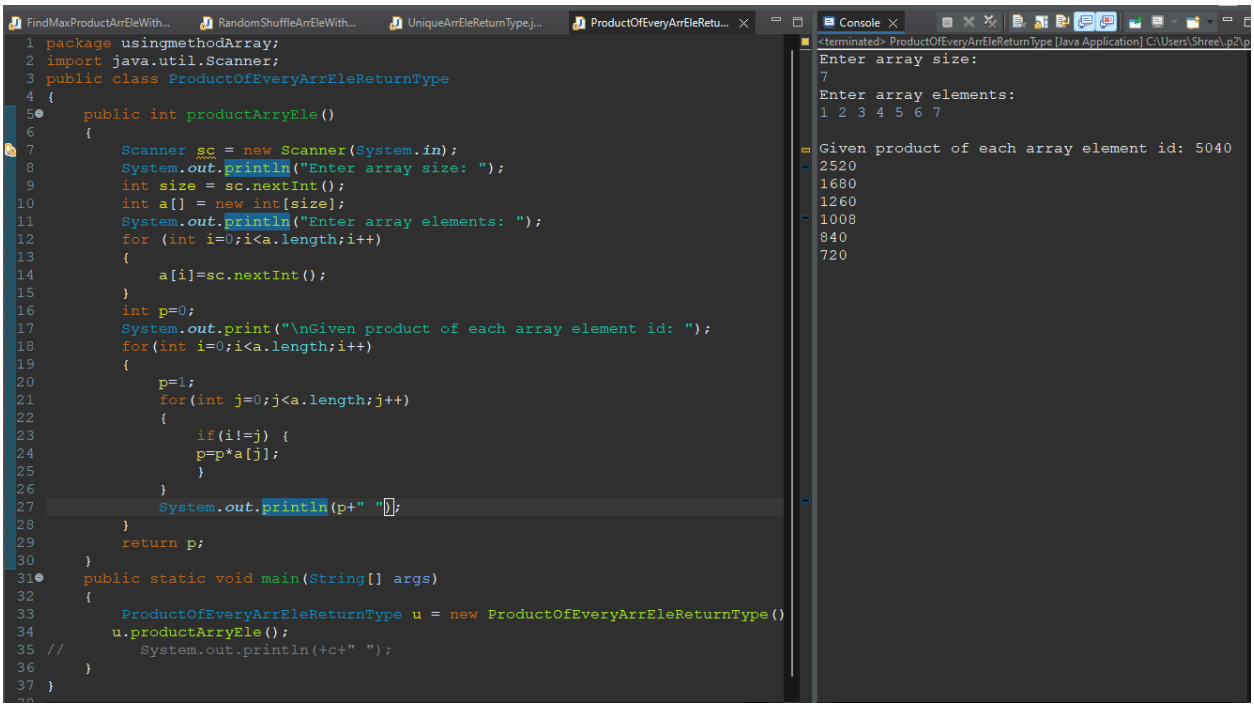
Output:

Array with product of every other element:

[5040, 2520, 1680, 1260, 1008, 840, 720]

Array with product of every other element:

[5040, 0, 0, 0, 0, 0, 0, 0]



```
package usingmethodArray;
import java.util.Scanner;
public class ProductOfEveryArrEleReturnType
{
    public int productArryEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size: ");
        int size = sc.nextInt();
        int a[] = new int[size];
        System.out.println("Enter array elements: ");
        for (int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int p=0;
        System.out.print("\nGiven product of each array element id: ");
        for(int i=0;i<a.length;i++)
        {
            p=1;
            for(int j=0;j<a.length;j++)
            {
                if(i!=j) {
                p=p*a[j];
                }
            }
            System.out.println(p+" ");
        }
        return p;
    }
    public static void main(String[] args)
    {
        ProductOfEveryArrEleReturnType u = new ProductOfEveryArrEleReturnType();
       u.productArryEle();
//        System.out.println(+c+" ");
    }
}
```

```
Enter array size:
7
Enter array elements:
1 2 3 4 5 6 7

Given product of each array element id: 5040
2520
1680
1260
1008
840
720
```

5. Write a Java program to find maximum difference between two elements in a given array of integers such that smaller element appears before larger element.

Example:

Input :nums = { 2, 3, 1, 7, 9, 5, 11, 3, 5 }

Output:The maximum difference between two elements of the said array elements:10

```java
package usingmethodArray;

import java.util.Scanner;

public class MaxDiffrenceArrEleReturnType
{
    public int maxDiffrence()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        int max=0,min=Integer.MAX_VALUE;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]>max)
            {
                max=a[i];
            }
            else if(a[i]<min)
            {
                min=a[i];
            }
        }
        int diff=max-min;
        return diff;
    }
```

```
Enter array size :
9
Enter array element:
2 3 1 7 9 5 11 3 5
Given array element is:
2
3
1
7
9
5
11
3
5
Given diffrence between two integer number is: 10
```

```java
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Given array element is: ");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]+" ");
        }
        int max=0,min=Integer.MAX_VALUE;
        for(int i=0;i<a.length;i++)
        {
            if(a[i]>max)
            {
                max=a[i];
            }
            else if(a[i]<min)
            {
                min=a[i];
            }
        }
        int diff=max-min;
        return diff;
    }
    public static void main(String[] args)
    {
        MaxDiffrenceArrEleReturnType a1 = new MaxDiffrenceArrEleReturnType(
        int c=a1.maxDiffrence();
        System.out.println("Given diffrence between two integer number is:
    }
}
```

```
Enter array size :
9
Enter array element:
2 3 1 7 9 5 11 3 5
Given array element is:
2
3
1
7
9
5
11
3
5
Given diffrence between two integer number is: 10
```

6. Find a peak element which is not smaller than its neighbors

Input: array[]= {5, 10, 20, 15}

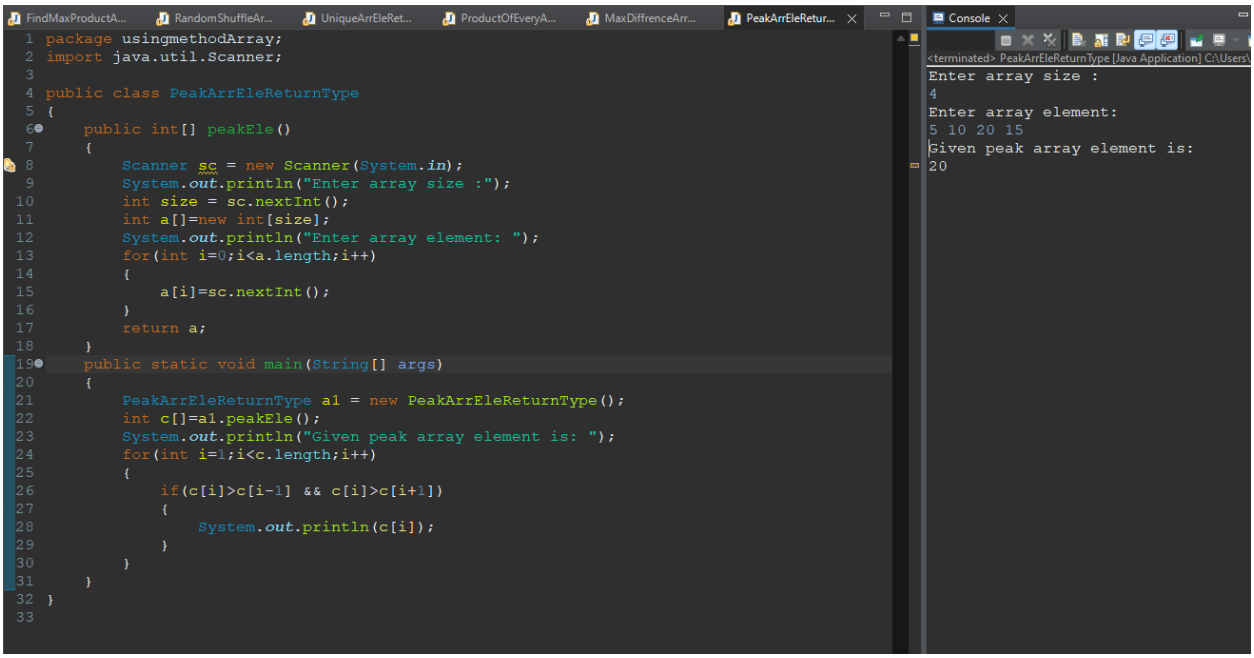
Output: 20

Explanation: The element 20 has neighbors 10 and 15, both of them are less than 20.

Input: array[] = {10, 20, 15, 2, 23, 90, 67}

Output: 20 or 90

Explanation: The element 20 has neighbors 10 and 15, both of them are less than 20, similarly 90 has neighbors 23 and 67.




```
package usingmethodArray;
import java.util.Scanner;

public class PeakArrEleReturnType
{
    public int[] peakEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        return a;
    }
    public static void main(String[] args)
    {
        PeakArrEleReturnType a1 = new PeakArrEleReturnType();
        int c[]=a1.peakEle();
        System.out.println("Given peak array element is: ");
        for(int i=1;i<c.length;i++)
        {
            if(c[i]>c[i-1] && c[i]>c[i+1])
            {
                System.out.println(c[i]);
            }
        }
    }
}
```

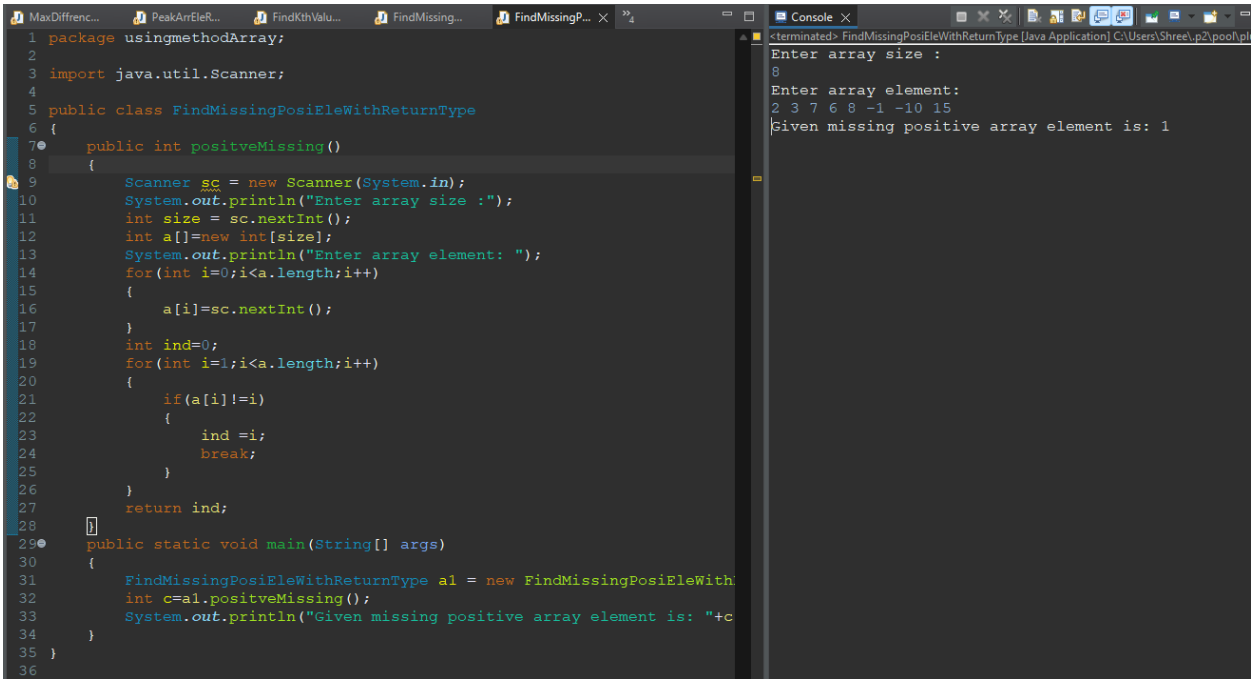
Q11.Given an unsorted array arr[] with both positive and negative elements, the task is to find the smallest positive number missing from the array.

Note: You can modify the original array.

Examples:

Input: arr[] = {2, 3, 7, 6, 8, -1, -10, 15}

Output: 1



```java
package usingmethodArray;

import java.util.Scanner;

public class FindMissingPosiEleWithReturnType
{
    public int positveMissing()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int ind=0;
        for(int i=1;i<a.length;i++)
        {
            if(a[i]!=i)
            {
                ind =i;
                break;
            }
        }
        return ind;
    }
    public static void main(String[] args)
    {
        FindMissingPosiEleWithReturnType a1 = new FindMissingPosiEleWith
        int c=a1.positveMissing();
        System.out.println("Given missing positive array element is: "+c
    }
}
```

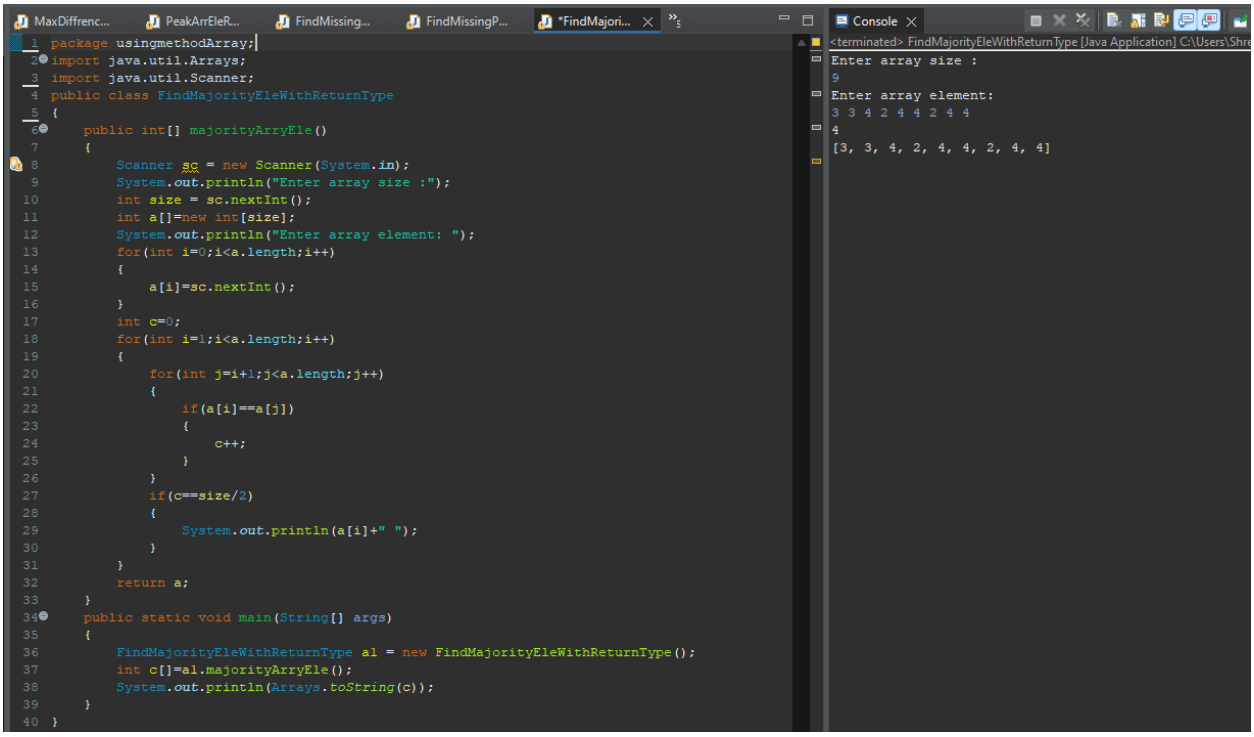
```
<terminated> FindMissingPosiEleWithReturnType [Java Application] C:\Users\Shree\.p2\pool\pl
Enter array size :
8
Enter array element:
2 3 7 6 8 -1 -10 15
Given missing positive array element is: 1
```

Q12.Find the majority element in the array. A majority element in an array A[] of size n is an element that appears more than n/2 times (and hence there is at most one such element).

Examples :

Input : {3, 3, 4, 2, 4, 4, 2, 4, 4}

Output : 4



```
package usingmethodArray;
import java.util.Arrays;
import java.util.Scanner;
public class FindMajorityEleWithReturnType
{
    public int[] majorityArryEle()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("Enter array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int c=0;
        for(int i=1;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    c++;
                }
            }
            if(c==size/2)
            {
                System.out.println(a[i]+" ");
            }
        }
        return a;
    }
    public static void main(String[] args)
    {
        FindMajorityEleWithReturnType al = new FindMajorityEleWithReturnType();
        int c[]=al.majorityArryEle();
        System.out.println(Arrays.toString(c));
    }
}
```

```
<terminated> FindMajorityEleWithReturnType [Java Application] C:\Users\Shre
Enter array size :
9
Enter array element:
3 3 4 2 4 4 2 4 4
4
[3, 3, 4, 2, 4, 4, 2, 4, 4]
```

Q13. Given two sorted arrays A and B of size p and q, write a Java program to merge elements of A with B by maintaining the sorted order i.e.

fill A with first p smallest elements and fill B with remaining elements.

Example:Input :int[] A = { 1, 5, 6, 7, 8, 10 }int[] B = { 2, 4, 9 } Output:Sorted Arrays:A: [1, 2, 4, 5, 6, 7] B: [8, 9, 10]

```java
package usingmethodArray;

import java.util.Arrays;
import java.util.Scanner;

public class ChangeSortedArrWithReturn
{
    public int[] sorteArr()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size :");
        int size = sc.nextInt();
        int size1 = sc.nextInt();
        int a[]=new int[size];
        int b[]=new int[size1];
        System.out.println("Enter 1 array element: ");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("Enter 2 array element: ");
        for(int i=0;i<b.length;i++)
        {
            b[i]=sc.nextInt();
        }
        int c=0;
        for(int i=0;i<a.length;i++)
        {
            for(int j=0;j<b.length;j++)
            {
                if(i==4)
                {
                    int t=b[0];
                    b[0]=a[i];
                    a[i]=t;
                }
                else if(i==5)
                {
                    int t=b[1];
                    b[1]=a[i];
                    a[i]=t;
                }
            }
        }
        System.out.println("Enter 1 array element is: ");
        Arrays.sort(a);
        System.out.println(Arrays.toString(a));
        System.out.println("Enter 2 array element is: ");
        Arrays.sort(b);
        System.out.println( Arrays.toString(b));
        return a;
    }
    public static void main(String[] args)
    {
        ChangeSortedArrWithReturn a1 = new ChangeSortedArrWithReturn();
        int c[]=a1.sorteArr();
        //System.out.println(Arrays.toString(c));
    }
}
```

```
Enter array size :
6 3
Enter 1 array element:
1 5 6 7 8 10
Enter 2 array element:
2 4 9
Enter 1 array element is:
[1, 2, 4, 5, 6, 7]
Enter 2 array element is:
[8, 9, 10]
```