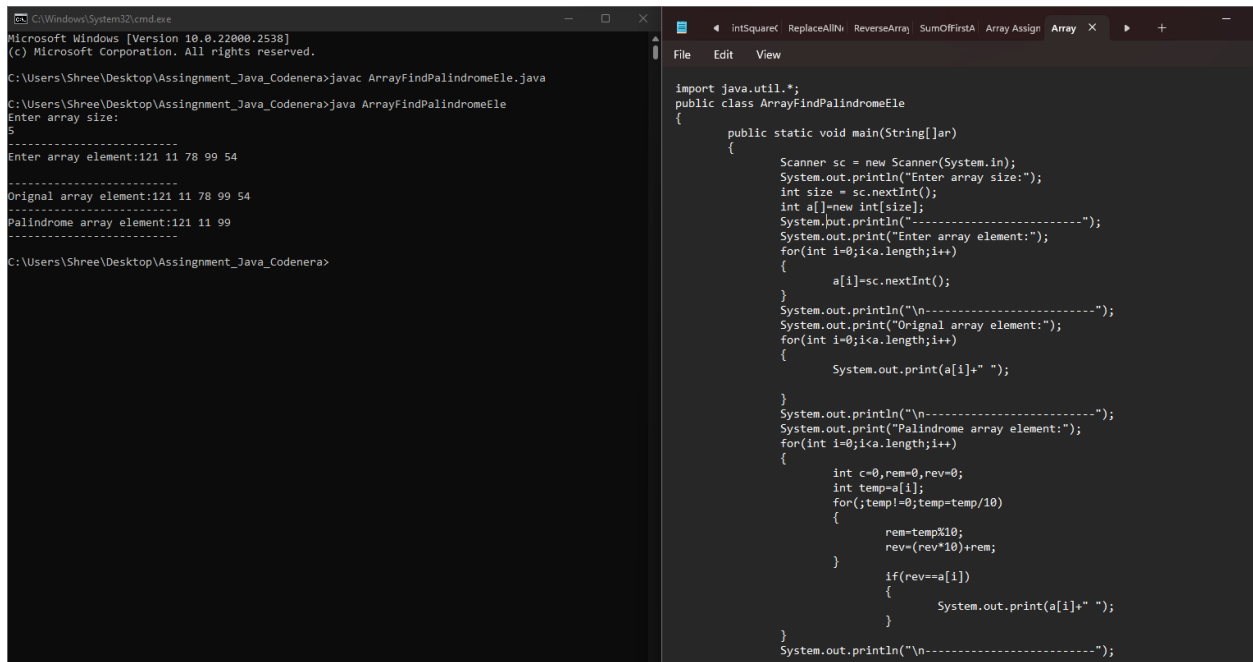


Assignment No:-15

Name:-Suryawanshi Sangramsingh Sambhaji

Batch: - Delta - DCA (Java) 2024 Date:-22/5/2024

1. Write a java program to find all the palindrome numbers from the array.

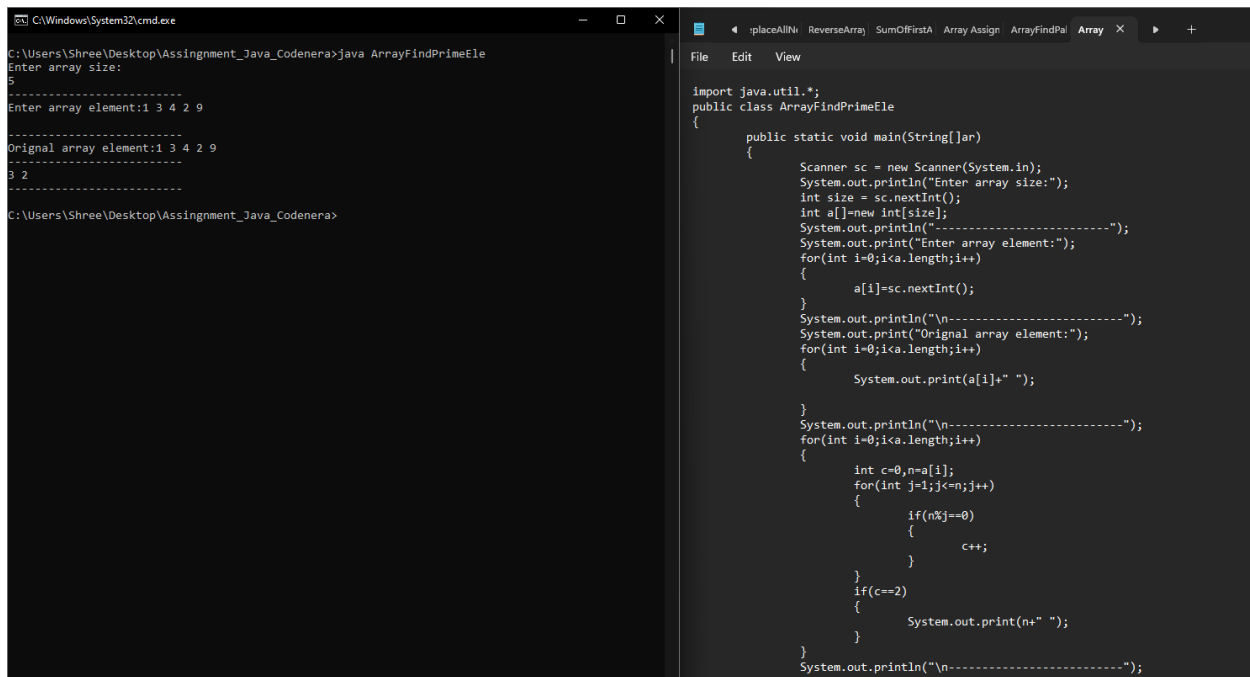


```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.22000.2538]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac ArrayFindPalindromeEle.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ArrayFindPalindromeEle
Enter array size:
5
-----
Enter array element:121 11 78 99 54
-----
Original array element:121 11 78 99 54
-----
Palindrome array element:121 11 99
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class ArrayFindPalindromeEle
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size:");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("-----");
        System.out.print("Enter array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("\n-----");
        System.out.print("Original array element:");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        System.out.println("\n-----");
        System.out.print("Palindrome array element:");
        for(int i=0;i<a.length;i++)
        {
            int c=0,rem=0,rev=0;
            int temp=a[i];
            for(;temp!=0;temp=temp/10)
            {
                rem=temp%10;
                rev=(rev*10)+rem;
            }
            if(rev==a[i])
            {
                System.out.print(a[i]+" ");
            }
        }
        System.out.println("\n-----");
    }
}
```

2. Write a java program to find all the prime numbers from the array.

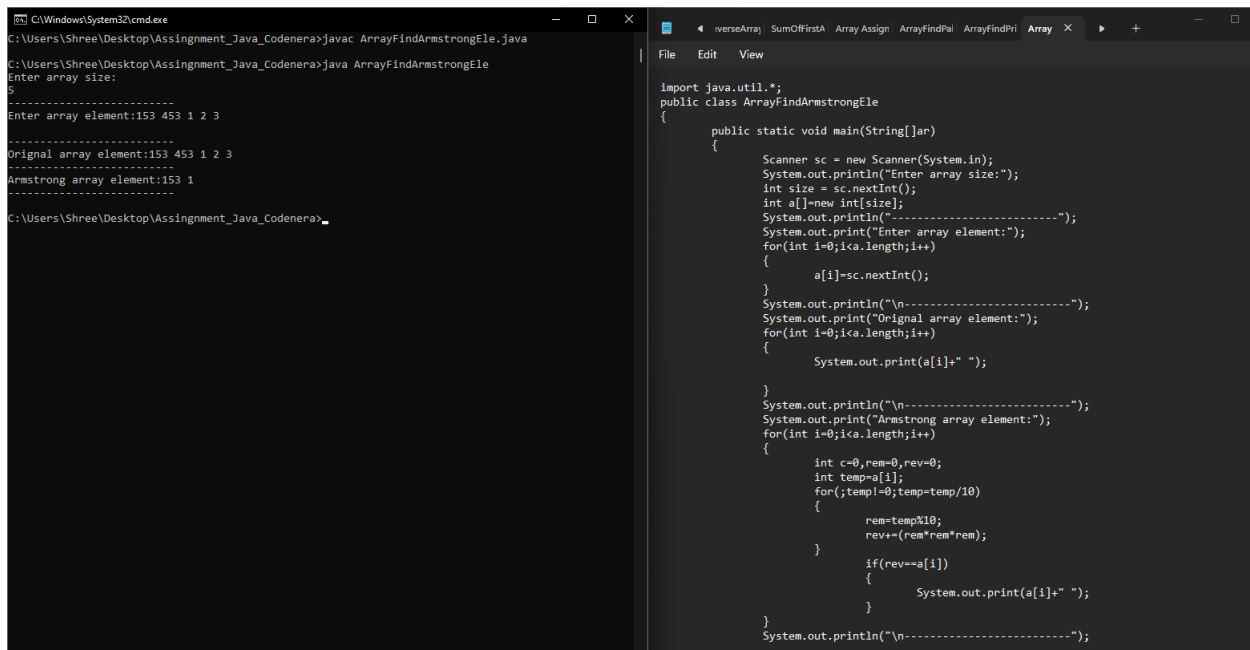


The image shows a Java IDE with a file named `ArrayFindPrimeFile` and a command prompt window. The command prompt shows the execution of the program, where the user enters an array size of 5 and elements 1 3 4 2 9. The program outputs the original array and then lists the prime numbers found, which are 3 and 2.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ArrayFindPrimeFile
Enter array size:
5
-----
Enter array element:1 3 4 2 9
-----
Original array element:1 3 4 2 9
-----
3 2
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class ArrayFindPrimeFile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size:");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("-----");
        System.out.print("Enter array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("\n-----");
        System.out.print("Original array element:");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        System.out.println("\n-----");
        for(int i=0;i<a.length;i++)
        {
            int c=0,n=a[i];
            for(int j=1;j<=n;j++)
            {
                if(n%j==0)
                {
                    c++;
                }
            }
            if(c==2)
            {
                System.out.print(n+" ");
            }
        }
        System.out.println("\n-----");
    }
}
```

3. Write a java program to find all the Armstrong numbers from the array.



The screenshot displays a Java IDE with two windows. The left window is a command prompt showing the execution of a Java program. The right window shows the source code of the program, `ArrayFindArmstrongEle.java`.

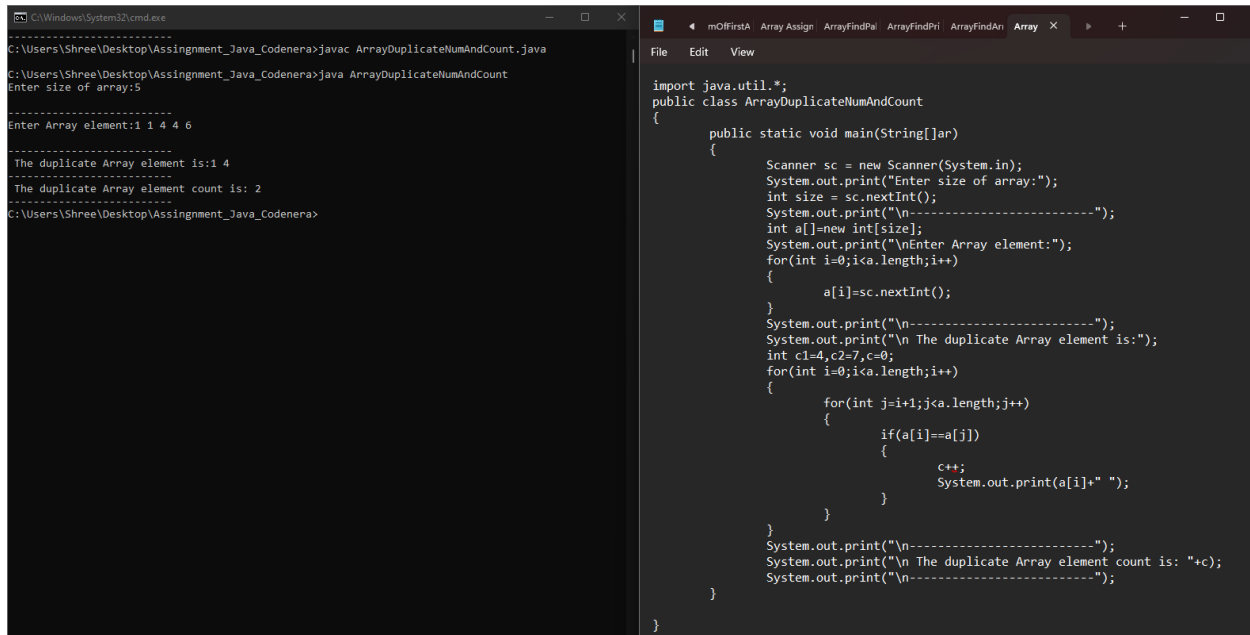
Command Prompt Output:

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assignment_Java_Codenera>javac ArrayFindArmstrongEle.java
C:\Users\Shree\Desktop\Assignment_Java_Codenera>java ArrayFindArmstrongEle
Enter array size:
5
-----
Enter array element:153 453 1 2 3
-----
Original array element:153 453 1 2 3
-----
Armstrong array element:153 1
-----
C:\Users\Shree\Desktop\Assignment_Java_Codenera>
```

Source Code:

```
import java.util.*;
public class ArrayFindArmstrongEle
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size:");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("-----");
        System.out.print("Enter array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("\n-----");
        System.out.print("Original array element:");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        System.out.println("\n-----");
        System.out.print("Armstrong array element:");
        for(int i=0;i<a.length;i++)
        {
            int c=0,rem=0,rev=0;
            int temp=a[i];
            for(;temp!=0;temp=temp/10)
            {
                rem=temp%10;
                rev+=(rem*rem*rem);
            }
            if(rev==a[i])
            {
                System.out.print(a[i]+" ");
            }
        }
        System.out.println("\n-----");
    }
}
```

4. Write a java program to find all the duplicate numbers from the array.



The image shows a Java IDE with two windows. The left window is a command prompt showing the execution of a Java program. The right window is the code editor showing the source code of the program.

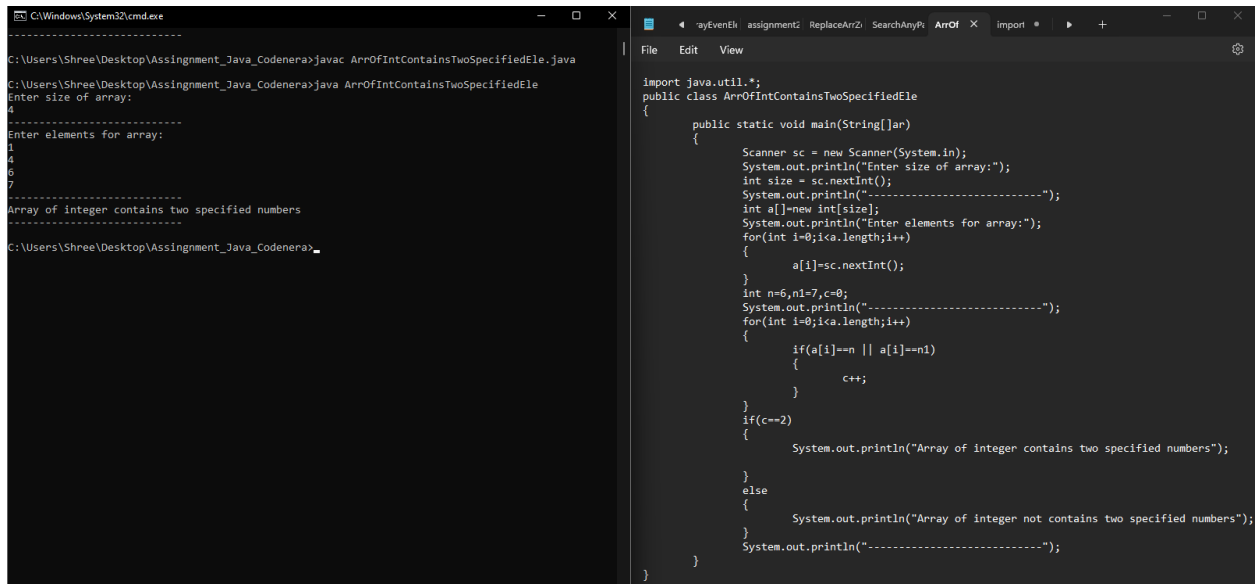
Command Prompt Output:

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac ArrayDuplicateNumAndCount.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ArrayDuplicateNumAndCount
Enter size of array:5
Enter Array element:1 1 4 4 6
-----
The duplicate Array element is:1 4
-----
The duplicate Array element count is: 2
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

Source Code:

```
import java.util.*;
public class ArrayDuplicateNumAndCount
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter size of array:");
        int size = sc.nextInt();
        System.out.print("\n-----");
        int a[]=new int[size];
        System.out.print("\nEnter Array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("\n-----");
        System.out.print("\n The duplicate Array element is:");
        int c1=4,c2=7,c=0;
        for(int i=0;i<a.length;i++)
        {
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    c++;
                    System.out.print(a[i]+" ");
                }
            }
        }
        System.out.print("\n-----");
        System.out.print("\n The duplicate Array element count is: "+c);
        System.out.print("\n-----");
    }
}
```

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



The image shows a screenshot of a Windows environment with two windows. The left window is a Command Prompt titled 'C:\Windows\System32\cmd.exe' showing the execution of a Java program. The right window is an IDE titled 'ArrayContainsTwoSpecifiedElements.java' showing the source code of the program.

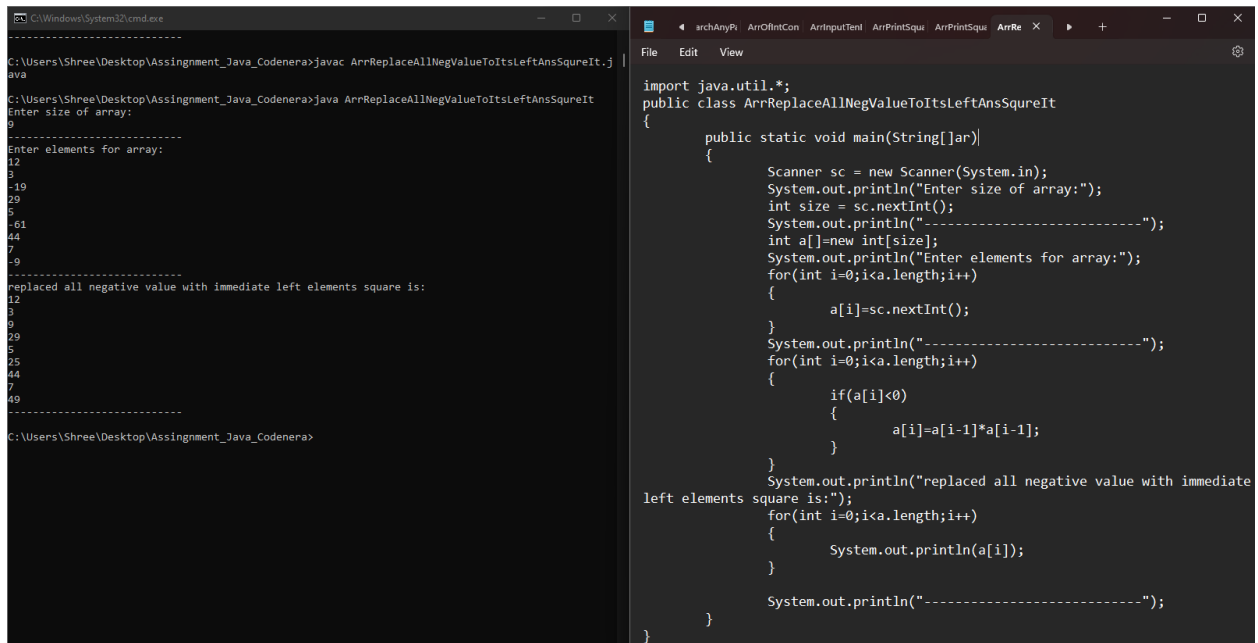
Command Prompt Output:

```
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac ArrOfIntContainsTwoSpecifiedEle.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ArrOfIntContainsTwoSpecifiedEle
Enter size of array:
4
-----
Enter elements for array:
1
4
6
7
-----
Array of integer contains two specied numbers
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

Source Code (ArrayContainsTwoSpecifiedElements.java):

```
import java.util.*;
public class ArrOfIntContainsTwoSpecifiedEle
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter size of array:");
        int size = sc.nextInt();
        System.out.println("-----");
        int a[]=new int[size];
        System.out.println("Enter elements for array:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        int n=6,n1=7,c=0;
        System.out.println("-----");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==n || a[i]==n1)
            {
                c++;
            }
        }
        if(c==2)
        {
            System.out.println("Array of integer contains two specified numbers");
        }
        else
        {
            System.out.println("Array of integer not contains two specified numbers");
        }
        System.out.println("-----");
    }
}
```

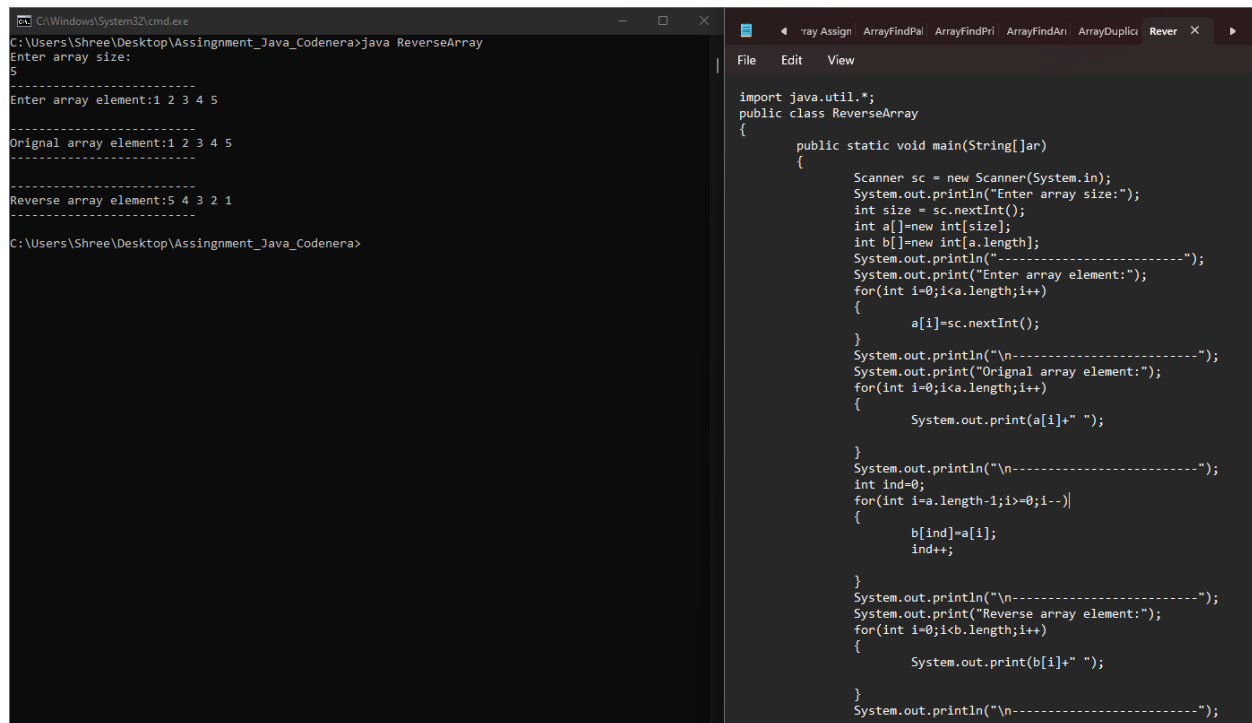
6. Write a program replace all negative value with its immediate left elements square.
Means arr[] = [12, 3, -19, 29, 5, -61, 44, 7, -9] Output array will be [12, 3, 9, 29, 5, 25, 44, 7, 49].



```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac ArrReplaceAllNegValueToItsLeftAnsSquireIt.j
ava
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ArrReplaceAllNegValueToItsLeftAnsSquireIt
Enter size of array:
9
-----
Enter elements for array:
12
3
-19
29
5
-61
44
7
-9
-----
replaced all negative value with immediate left elements square is:
12
3
9
29
5
25
44
7
49
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class ArrReplaceAllNegValueToItsLeftAnsSquireIt
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter size of array:");
        int size = sc.nextInt();
        System.out.println("-----");
        int a[]=new int[size];
        System.out.println("Enter elements for array:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("-----");
        for(int i=0;i<a.length;i++)
        {
            if(a[i]<0)
            {
                a[i]=a[i-1]*a[i-1];
            }
        }
        System.out.println("replaced all negative value with immediate
left elements square is:");
        for(int i=0;i<a.length;i++)
        {
            System.out.println(a[i]);
        }
        System.out.println("-----");
    }
}
```

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



The image displays a Java program designed to reverse an array. It is presented in two side-by-side windows. The left window shows the program's execution, and the right window shows the source code.

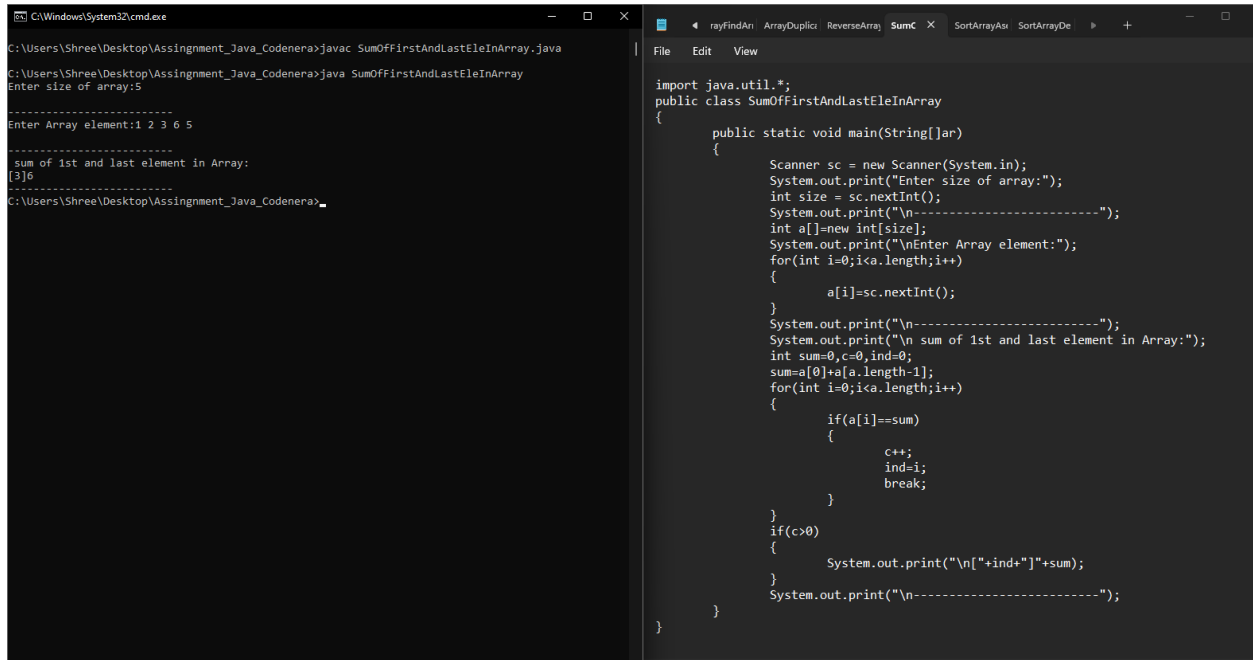
Execution Output (Left Window):

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java ReverseArray
Enter array size:
5
-----
Enter array element:1 2 3 4 5
-----
Original array element:1 2 3 4 5
-----
Reverse array element:5 4 3 2 1
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

Source Code (Right Window):

```
import java.util.*;
public class ReverseArray
{
    public static void main(String[]ar)
    {
        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[a.length];
        System.out.println("-----");
        System.out.print("Enter array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("\n-----");
        System.out.print("Original array element:");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
        System.out.println("\n-----");
        int ind=0;
        for(int i=a.length-1;i>=0;i--)
        {
            b[ind]=a[i];
            ind++;
        }
        System.out.println("\n-----");
        System.out.print("Reverse array element:");
        for(int i=0;i<b.length;i++)
        {
            System.out.print(b[i]+" ");
        }
        System.out.println("\n-----");
    }
}
```

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



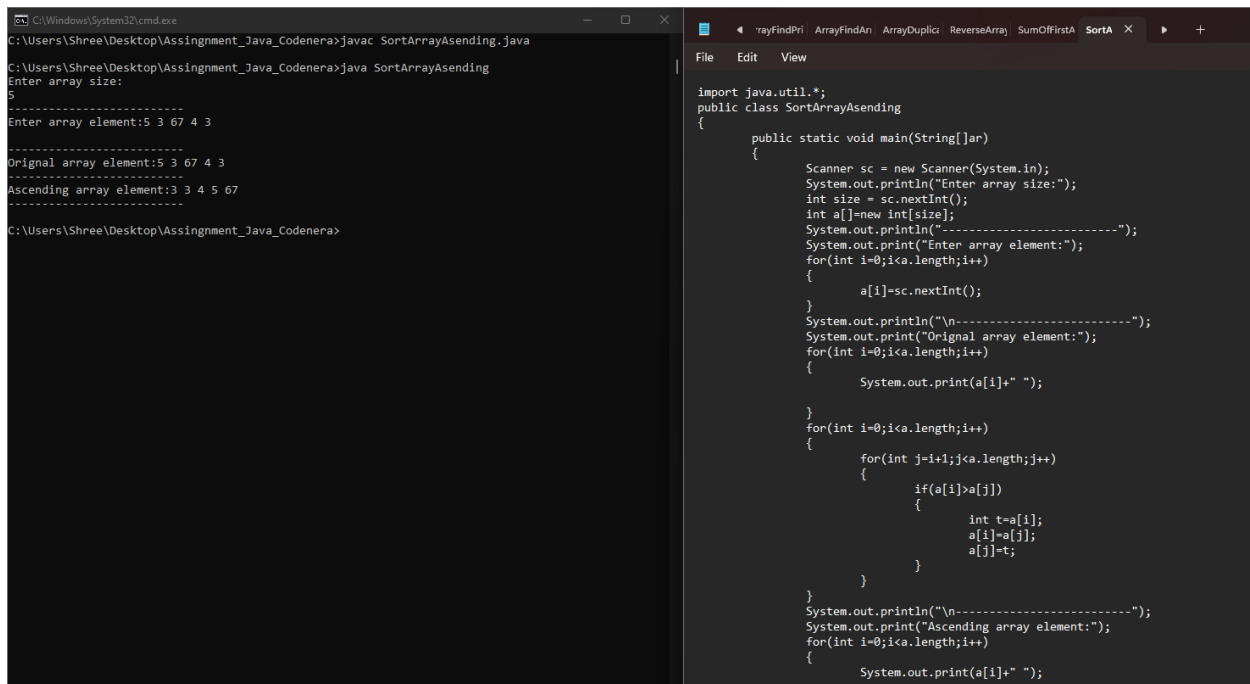
The image shows a Java IDE with a file named `SumOffFirstAndLastEleInArray.java` open. The code defines a class `SumOffFirstAndLastEleInArray` with a `main` method. The `main` method prompts the user to enter the size of the array, then enters the array elements. It calculates the sum of the first and last elements and finds the index of the element equal to this sum.

```
import java.util.*;
public class SumOffFirstAndLastEleInArray
{
    public static void main(String[] ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter size of array:");
        int size = sc.nextInt();
        System.out.print("\n-----");
        int a[]=new int[size];
        System.out.print("\nEnter Array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.print("\n-----");
        System.out.print("\n sum of 1st and last element in Array:");
        int sum=0,c=0,ind=0;
        sum=a[0]+a[a.length-1];
        for(int i=0;i<a.length;i++)
        {
            if(a[i]==sum)
            {
                c++;
                ind=i;
                break;
            }
        }
        if(c>0)
        {
            System.out.print("\n["+ind+"]"+sum);
        }
        System.out.print("\n-----");
    }
}
```

The command prompt shows the execution of the program. The user enters the size of the array as 5, then enters the array elements 1 2 3 6 5. The program outputs the sum of the first and last elements as 6, and the index of the element equal to the sum as 3.

```
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac SumOffFirstAndLastEleInArray.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java SumOffFirstAndLastEleInArray
Enter size of array:5
-----
Enter Array element:1 2 3 6 5
-----
sum of 1st and last element in Array:
3]6
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```


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



```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac SortArrayAsending.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java SortArrayAsending
Enter array size:
5
-----
Enter array element:5 3 67 4 3
-----
Original array element:5 3 67 4 3
-----
Ascending array element:3 3 4 5 67
-----
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
import java.util.*;
public class SortArrayAsending
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter array size:");
        int size = sc.nextInt();
        int a[]=new int[size];
        System.out.println("-----");
        System.out.print("Enter array element:");
        for(int i=0;i<a.length;i++)
        {
            a[i]=sc.nextInt();
        }
        System.out.println("\n-----");
        System.out.print("Original array element:");
        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])
                {
                    int t=a[i];
                    a[i]=a[j];
                    a[j]=t;
                }
            }
        }
        System.out.println("\n-----");
        System.out.print("Ascending array element:");
        for(int i=0;i<a.length;i++)
        {
            System.out.print(a[i]+" ");
        }
    }
}
```

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

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java SortArrayDescending
Enter array size:
5
-----
Enter array element:54
67
3
6
11
-----
Original array element:54 67 3 6 11
-----
Descending array element:67 54 11 6 3
-----
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
File Edit View
Scanner sc = new Scanner(System.in);
System.out.println("Enter array size:");
int size = sc.nextInt();
int a[]=new int[size];
System.out.println("-----");
System.out.print("Enter array element:");
for(int i=0;i<a.length;i++)
{
    a[i]=sc.nextInt();
}
System.out.println("\n-----");
System.out.print("Original array element:");
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])
        {
            int t=a[i];
            a[i]=a[j];
            a[j]=t;
        }
    }
}
System.out.println("\n-----");
System.out.print("Descending array element:");
for(int i=0;i<a.length;i++)
{
    System.out.print(a[i]+" ");
}
System.out.println("\n-----");
}
```

