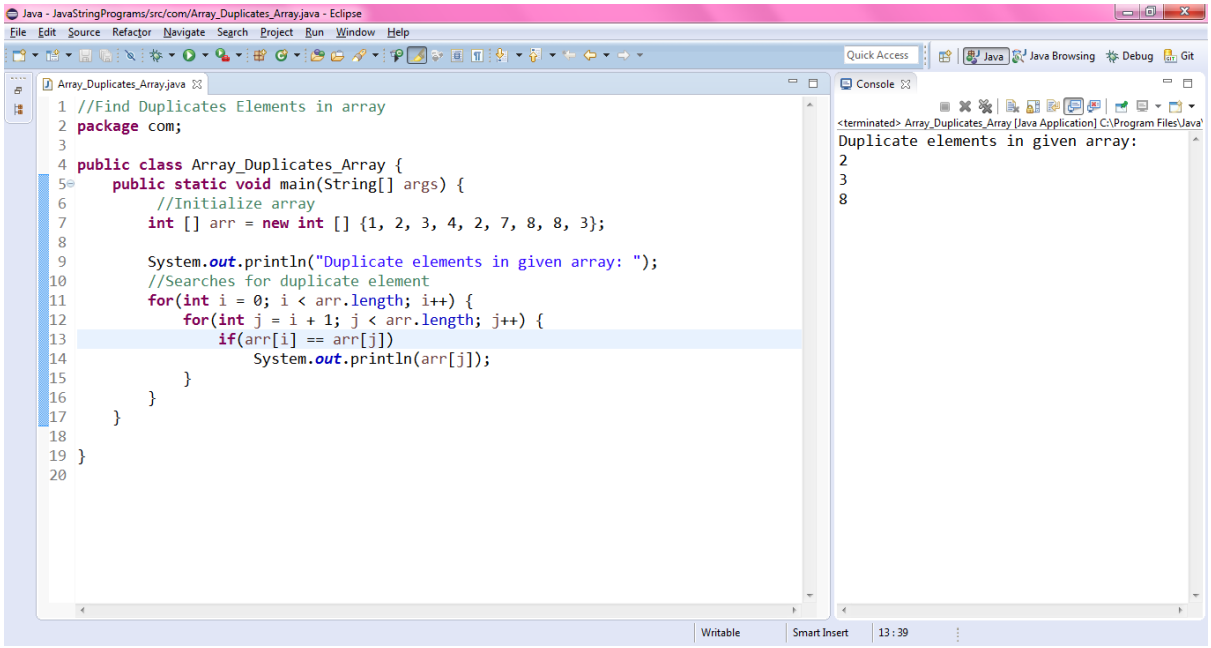
Array Interview Program

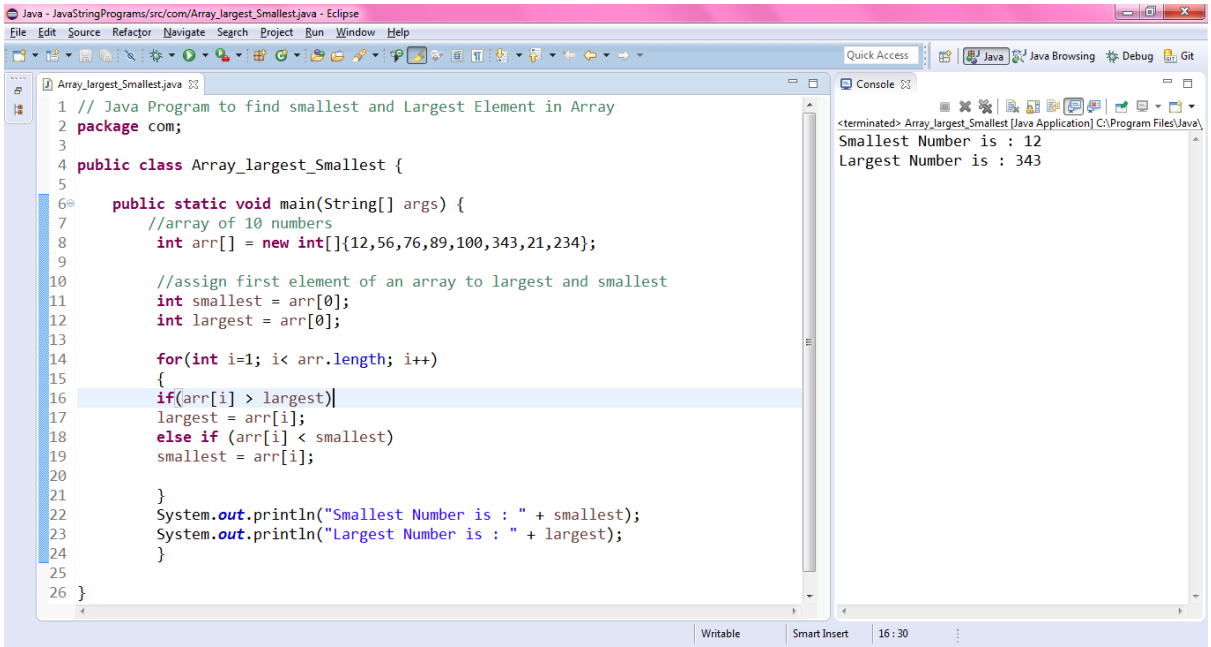
Find Duplicates Elements in array

```
package com;

public class Array_Duplicates_Array {
	public static void main(String[] args) {
		//Initialize array
	 int [] arr = new int [] {1, 2, 3, 4, 2, 7, 8, 8, 3};

	 System.out.println("Duplicate elements in given array: ");
	 //Searches for duplicate element
	 for(int i = 0; i < arr.length; i++) {
	     for(int j = i + 1; j < arr.length; j++) {
	         if(arr[i] == arr[j])
	             System.out.println(arr[j]);
	     }
	 }
	}

}
```



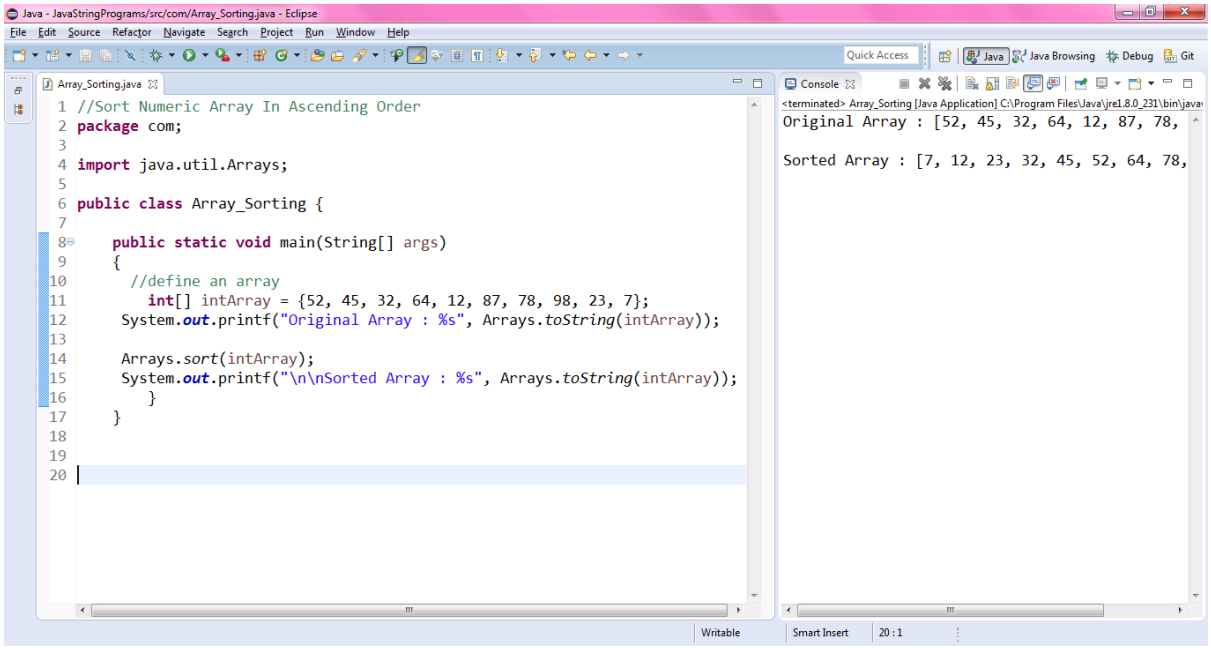
// Java Program to find smallest and Largest Element in Array

```java
// Java Program to find smallest and Largest Element in Array
package com;

public class Array_largest_Smallest {

	public static void main(String[] args) {
		//array of 10 numbers
		 int arr[] = new int[]{12,56,76,89,100,343,21,234};

		 //assign first element of an array to largest and smallest
		 int smallest = arr[0];
		 int largest = arr[0];

		 for(int i=1; i< arr.length; i++)
		 {
		 if(arr[i] > largest)
		 largest = arr[i];
		 else if (arr[i] < smallest)
		 smallest = arr[i];

		 }
		 System.out.println("Smallest Number is : " + smallest);
		 System.out.println("Largest Number is : " + largest);
		 }

}
```

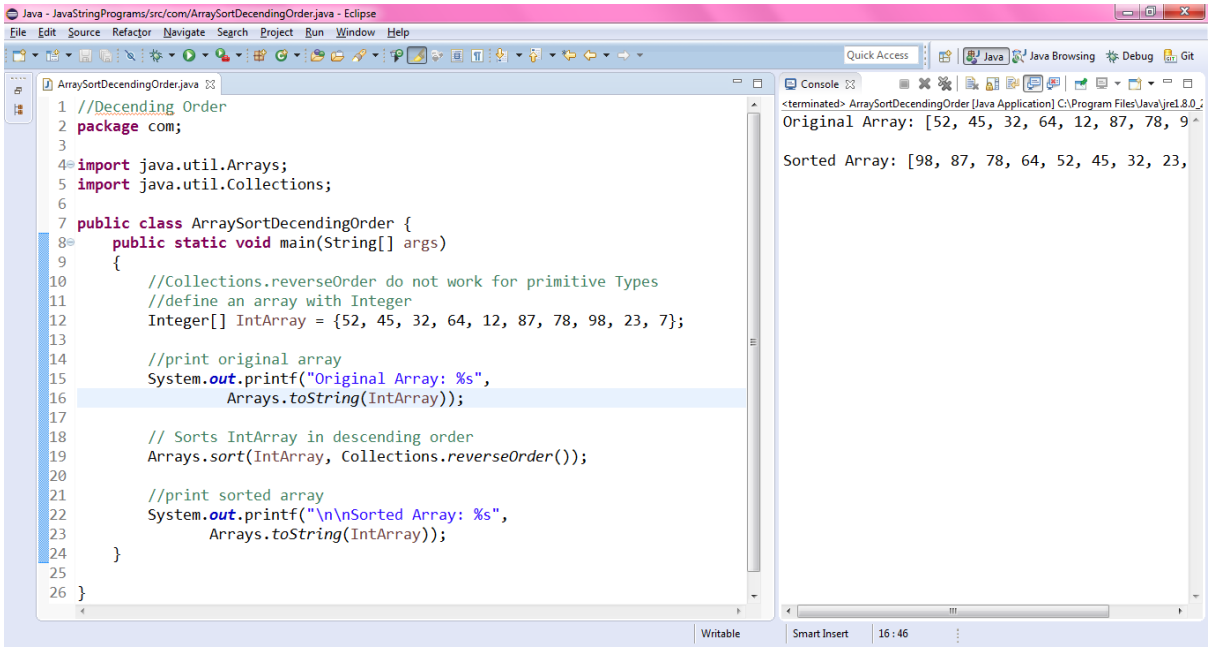


//Sort Numeric Array In Ascending Order

```java
//Sort Numeric Array In Ascending Order
package com;

import java.util.Arrays;

public class Array_Sorting {

	public static void main(String[] args)
	{
	  //define an array
		int[] intArray = {52, 45, 32, 64, 12, 87, 78, 98, 23, 7};
	 System.out.printf("Original Array : %s", Arrays.toString(intArray));

	 Arrays.sort(intArray);
	 System.out.printf("\n\nSorted Array : %s", Arrays.toString(intArray));
	    }
	}
```

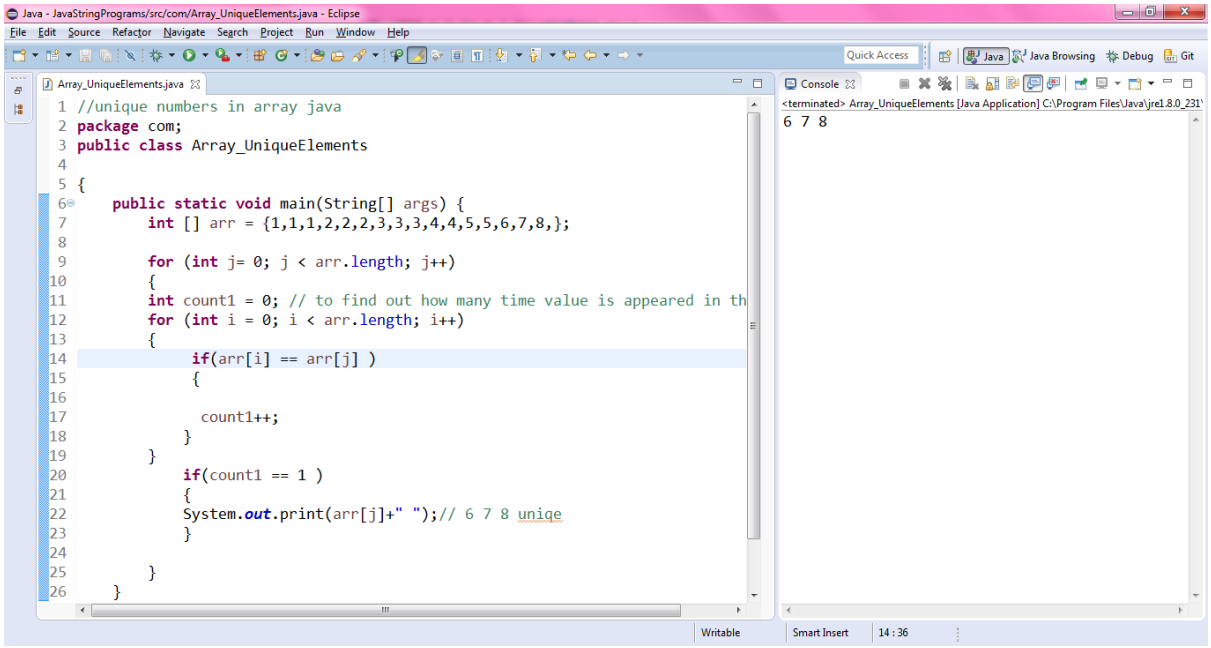


//Sort Numeric Array In Decending Order



//unique numbers in array java

```java
//unique numbers in array java
package com;
public class Array_UniqueElements

{
	public static void main(String[] args) {
		int [] arr = {1,1,1,2,2,2,3,3,3,4,4,5,5,6,7,8,};

		for (int j= 0; j < arr.length; j++)
		{
		int count1 = 0; // to find out how many time value is appeared in the arry
		for (int i = 0; i < arr.length; i++)
		{
		     if(arr[i] == arr[j] )
		     {

		       count1++;
		     }
		}
		    if(count1 == 1 )
		    {
		    System.out.print(arr[j]+" ");// 6 7 8 unige
		    }

		}
	}
}
```



Sort the array in Ascending Order without using sort function

In this program, we need to sort the given array in ascending order such that elements will be arranged from smallest to largest. This can be achieved through two loops. The outer loop will select an element, and inner loop allows us to compare selected element with rest of the elements.

Original array:

5	2	8	7	1

Array after sorting:

1	2	5	7	8

```java
//Ascending Order
package com;
public class Array_Sort_Ascending_loop {
        public static void main(String[] args) {
         //Initialize array
        int [] arr = new int [] {5, 2, 8, 7, 1};
        int temp = 0;

        //Displaying elements of original array
        System.out.println("Elements of original array: ");
        for (int i = 0; i < arr.length; i++) {
            System.out.print(arr[i] + " ");
        }
        //Sort the array in ascending order
        for (int i = 0; i < arr.length; i++) {
            for (int j = i+1; j < arr.length; j++) {
               if(arr[i] > arr[j]) {
                   temp = arr[i];
                   arr[i] = arr[j];
                   arr[j] = temp;
               }
            }
        }
        System.out.println();
         //Displaying elements of array after sorting
        System.out.println("Elements of array sorted in ascending order: ");
        for (int i = 0; i < arr.length; i++) {
            System.out.print(arr[i] + " ");
        }
    }

}
```

Sort the array in Decending Order without using sort function

```java
//Java Program to sort array element in decending order
package com;

public class Array_Sor_Decending {
	public static void main(String[] args) {


	    //Initialize array
	int [] arr = new int [] {5, 2, 8, 7, 1};
	int temp = 0;

	//Displaying elements of original array
	System.out.println("Elements of original array: ");
	for (int i = 0; i < arr.length; i++) {
	    System.out.print(arr[i] + " ");
	}

	//Sort the array in descending order
	for (int i = 0; i < arr.length; i++) {
	    for (int j = i+1; j < arr.length; j++) {
	       if(arr[i] < arr[j]) {
	           temp = arr[i];
	           arr[i] = arr[j];
	           arr[j] = temp;
	       }
	    }
	}

	System.out.println();

	//Displaying elements of array after sorting
	System.out.println("Elements of array sorted in descending order: ");
	for (int i = 0; i < arr.length; i++) {
	    System.out.print(arr[i] + " ");
	}
	   }
}
```