

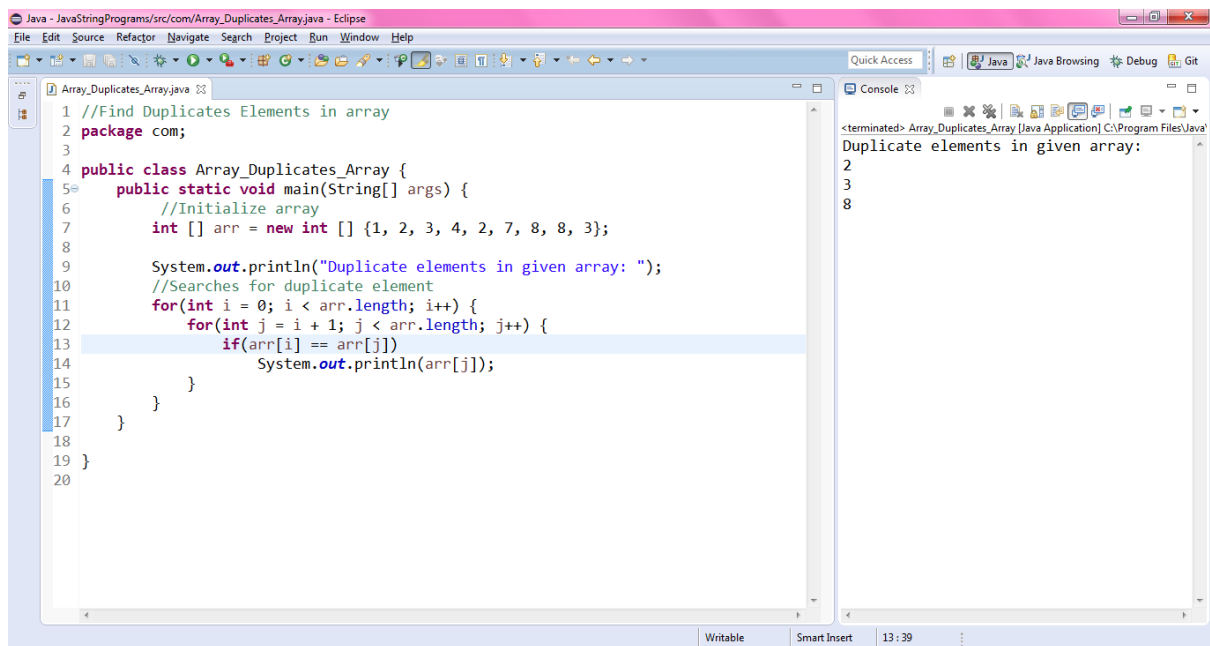
Array Interview Program

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]);
            }
        }
    }
}
```



The screenshot shows the Eclipse IDE with the following components:

- Editor:** Displays the Java code for finding duplicate elements in an array. The code is as follows:

```
1 //Find Duplicates Elements in array
2 package com;
3
4 public class Array_Duplicates_Array {
5     public static void main(String[] args) {
6         //Initialize array
7         int [] arr = new int [] {1, 2, 3, 4, 2, 7, 8, 8, 3};
8
9         System.out.println("Duplicate elements in given array: ");
10        //Searches for duplicate element
11        for(int i = 0; i < arr.length; i++) {
12            for(int j = i + 1; j < arr.length; j++) {
13                if(arr[i] == arr[j])
14                    System.out.println(arr[j]);
15            }
16        }
17    }
18 }
19 }
20 }
```
- Console:** Shows the output of the program, which is "Duplicate elements in given array:" followed by the duplicate elements 2, 3, and 8 on separate lines.
- Bottom Bar:** Displays "Writable", "Smart Insert", and the time "13:39".

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

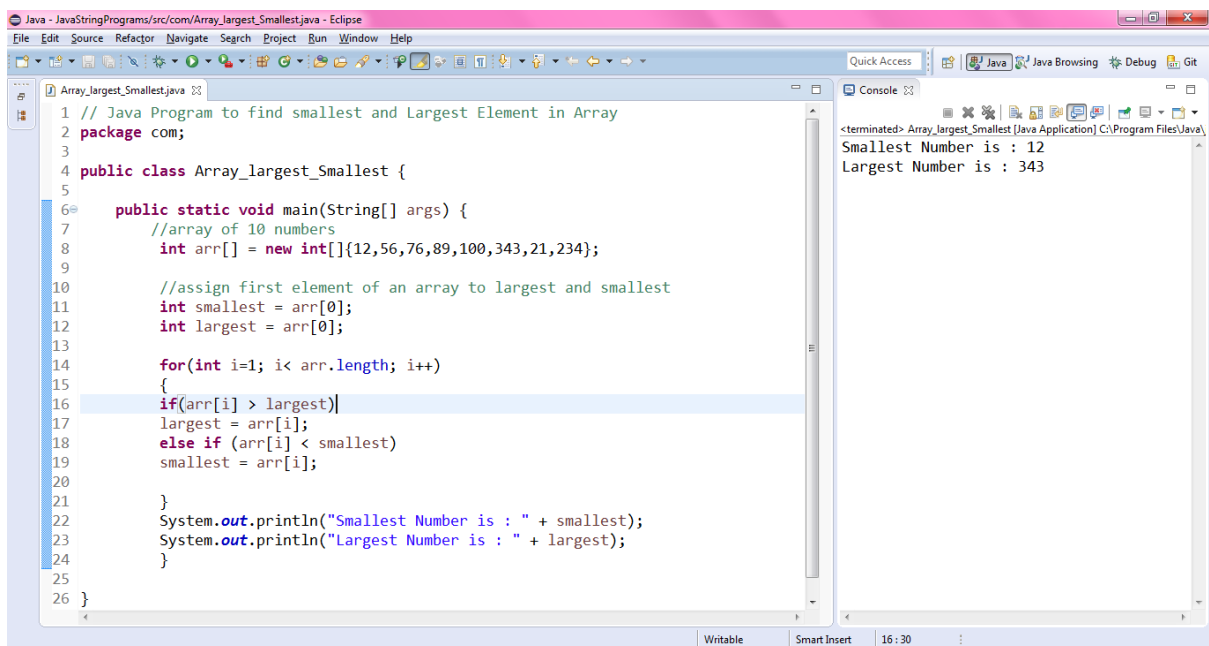
```
// Java Program to find smallest and Largest Element in Array
package com;

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

```
//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);
```

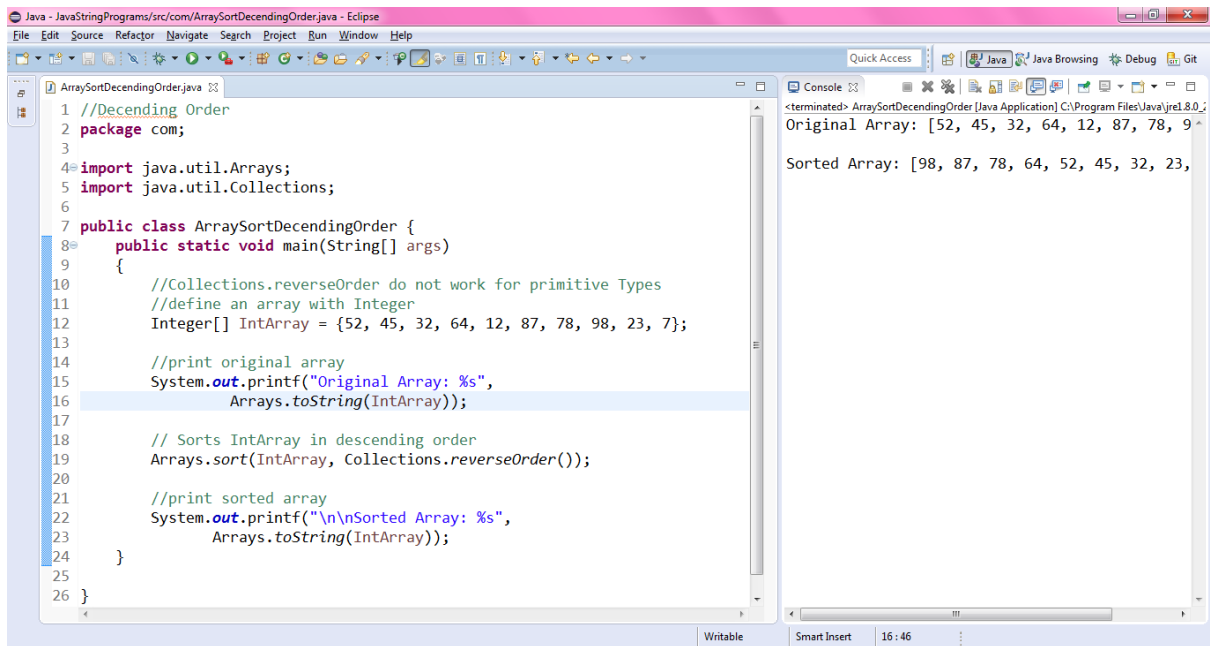
```
        System.out.printf("\n\nSorted Array : %s", Arrays.toString(intArray));
```

```
    }
```

```
}
```

```
Java - JavaStringPrograms/src/com/Array_Sorting.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java Java Browing Debug Git
Array_Sorting.java
1 //Sort Numeric Array In Ascending Order
2 package com;
3
4 import java.util.Arrays;
5
6 public class Array_Sorting {
7
8     public static void main(String[] args)
9     {
10         //define an array
11         int[] intArray = {52, 45, 32, 64, 12, 87, 78, 98, 23, 7};
12         System.out.printf("Original Array : %s", Arrays.toString(intArray));
13
14         Arrays.sort(intArray);
15         System.out.printf("\n\nSorted Array : %s", Arrays.toString(intArray));
16     }
17 }
18
19
20
Console
<terminated> Array_Sorting [Java Application] C:\Program Files\Java\jdk1.8.0_231\bin\java
Original Array : [52, 45, 32, 64, 12, 87, 78, 98, 23, 7]
Sorted Array : [7, 12, 23, 32, 45, 52, 64, 78, 87, 98]
```

//Sort Numeric Array In Decending Order



The screenshot shows the Eclipse IDE with a Java project. The main editor displays the file `ArraySortDecendingOrder.java` with the following code:

```
1 //Decending Order
2 package com;
3
4 import java.util.Arrays;
5 import java.util.Collections;
6
7 public class ArraySortDecendingOrder {
8     public static void main(String[] args)
9     {
10         //Collections.reverseOrder do not work for primitive Types
11         //define an array with Integer
12         Integer[] IntArray = {52, 45, 32, 64, 12, 87, 78, 98, 23, 7};
13
14         //print original array
15         System.out.printf("Original Array: %s",
16             Arrays.toString(IntArray));
17
18         // Sorts IntArray in descending order
19         Arrays.sort(IntArray, Collections.reverseOrder());
20
21         //print sorted array
22         System.out.printf("\n\nSorted Array: %s",
23             Arrays.toString(IntArray));
24     }
25 }
26 }
```

The console on the right shows the output of the program:

```
<terminated> ArraySortDecendingOrder [Java Application] C:\Program Files\Java\jre1.8.0_
Original Array: [52, 45, 32, 64, 12, 87, 78, 98, 23, 7]
Sorted Array: [98, 87, 78, 64, 52, 45, 32, 23, 12, 7]
```

//unique numbers in array 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 array
            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
            }
        }
    }
}
```

```
1 //unique numbers in array java
2 package com;
3 public class Array_UniqueElements
4 {
5     public static void main(String[] args) {
6         int [] arr = {1,1,1,2,2,2,3,3,3,4,4,5,5,6,7,8,};
7
8         for (int j= 0; j < arr.length; j++)
9         {
10             int count1 = 0; // to find out how many time value is appeared in the array
11             for (int i = 0; i < arr.length; i++)
12             {
13                 if(arr[i] == arr[j] )
14                 {
15                     count1++;
16                 }
17             }
18             if(count1 == 1 )
19             {
20                 System.out.print(arr[j]+" "); // 6 7 8 unique
21             }
22         }
23     }
24 }
25
26 }
```

Console: <terminated> Array_UniqueElements [Java Application] C:\Program Files\Java\jre1.8.0_231\bin\java.exe
6 7 8

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

```

//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 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 decending 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 decending order: ");
        for (int i = 0; i < arr.length; i++) {
            System.out.print(arr[i] + " ");
        }
    }
}
```