

## ArrayPracticeOne.java

```
/*
 * Class: NumberChecker
 * Author: Jacob Rust
 * Date: September 19, 2018
 */
import java.util.Arrays;

public class ArrayPracticeOne
{
    public static void main(String[] args)
    {
        int numElements = 20, max;
        int[] data = new int[numElements];

        // Put random values from 1-100 in the array
        for(int i=0; i<numElements; i++)
        {
            data[i] = (int)(Math.random()*100+1);
        }

        // Display the unsorted array
        System.out.println("Unsorted:");
        for(int i=0; i<numElements; i++)
        {
            System.out.print(data[i]+" ");
        }
        System.out.println();

        /*
         * Put code here to reverse the elements in the array.
         * Note this means actually reversing the elements, not
         * just printing them in reverse order.
         */

        for(int a=0, b = numElements -1; a<numElements/2; a++, b--)
        {
            int temp2 = data[a];
            data[a] = data[b];
            data[b] = temp2;
        }
    }
}
```

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```
}

// Display the now reversed array
System.out.println("With elements reversed:");
for(int i=0; i<numElements; i++)
{
    System.out.print(data[i]+" ");
}
System.out.println();

max = data[0];
for(int a=0; a<numElements; a++)
{
    if(data[a] > max)
    {
        max = data[a];
    }
}
System.out.println("The largest element is :" + max);

int small = data[0];
for(int a=0; a<numElements; a++)
{
    if(data[a] < small)
    {
        small = data[a];
    }
}
System.out.println("The smallest element is :" + small);

System.out.print("Order: ");
for (int i = 0; i < data.length; i++)
{
    Arrays.sort(data);
    System.out.print(data[i] + ", ");
}
System.out.println();
```

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```
    for (int i = 0, b = 1; i < 19 ; i++,b++)
    {
        int temp = data[b];
        data[b] = data[i];
        data[i] = temp;
    }

    System.out.print("With elements shifted: ");
    for(int i=0; i<numElements; i++)
    {
        System.out.print( data[i]+" ");
    }

}

public static double computeMean(double data[])
{
    double sum = 0;
    for (int i = 0; i < data.length; i++)
```

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```
{
    sum = sum + data[i];
}
return sum/data.length;
}

}

/*
 * Unsorted:
49 22 28 70 69 37 75 93 71 84 96 34 2 83 38 11 82 75 38 80
With elements reversed:
80 38 75 82 11 38 83 2 34 96 84 71 93 75 37 69 70 28 22 49
The largest element is :96
The smallest element is :2
Order: 2, 11, 22, 28, 34, 37, 38, 38, 49, 69, 70, 71, 75, 75, 80, 82,
83, 84, 93, 96,
With elements shifted:  11 22 28 34 37 38 38 49 69 70 71 75 75 80 82 83
84 93 96 2
*/
```