

Q.1) Print 2nd largest and 2nd smallest elements from a given integer array 'arr' of size arr_len in a single loop.

Method Signature

```
void print2nd(int arr[], int arr_len) {  
    //Your code here  
}
```

Example 1

Input:

arr[]: 5, 10, 0, 2, 3, 4

arr_size = 6

Output: 2, 5

```
package logic;
```

```
public class SecondMinMax {
```

```
    public static void secondminmax(int[] arr, int arr_len) {
```

```
        int firstmin = Integer.MAX_VALUE, secondmin = Integer.MAX_VALUE;
```

```
        int firstmax = Integer.MIN_VALUE, secondmax = Integer.MIN_VALUE;
```

```
        for (int x : arr) {
```

```
            if (x < firstmin) {
```

```
                secondmin = firstmin;
```

```
                firstmin = x;
```

```
            } else if (x < secondmin && x != firstmin) {
```

```
                secondmin = x;
```

```
            }
```

```
            if (x > firstmax) {
```

```
                secondmax = firstmax;
```

```
                firstmax = x;
```

```
            } else if (x > secondmax && x != firstmax) {
```

```
                secondmax = x;
```

```
            }
```

```
        }
```

```
        System.out.println("Second Smallest = " + secondmin);
```

```
        System.out.println("Second Largest = " + secondmax);
```

```
}
```

```
    public static void main(String[] args) {
```

```
        int[] arr = { 5, 10, 0, 2, 3, 4 };
```

```
        int arr_size = 6;
```

```
        secondminmax(arr, arr_size);
```

```
    }
```

```
}
```

Q.2) Given 2 sorted arrays of integers, print common elements between 2 arrays in single loop.

Method Signature void printCommon(int[] arr1, int [] arr2, int arr1_len, int arr2_len) {}

Example 1

Input-
arr1[] = {1, 3, 4, 5, 7}
arr2[] = {2,3,5, 6}
Output: 3,5

Example 2

Input -
arr1[] = {2,5, 6}
arr2[] = {4, 6, 8, 10}
Output: 6

```
package logic;

public class CommonElements {

    public static void printCommon(int[] arr1, int[] arr2, int arr1_len, int arr2_len) {
        int i = 0, j = 0;

        while (i < arr1_len && j < arr2_len) {
            if (arr1[i] == arr2[j]) {
                System.out.print(arr1[i] + " ");
                i++;
                j++;
            } else if (arr1[i] < arr2[j]) {
                i++;
            } else {
                j++;
            }
        }
    }

    public static void main(String[] args) {
        // int[] arr1 = { 1, 3, 4, 5, 7 };
        // int[] arr2 = { 2, 3, 5, 6 };
        int[] arr1 = { 2, 5, 6 };
        int[] arr2 = { 4, 6, 8, 10 };
        printCommon(arr1, arr2, arr1.length, arr2.length);
    }
}
```