

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);  
    }  
}
```