

IQ. #2: Given two sorted arrays, find the number of elements in common. The arrays are the same length and each has all distinct elements.

A: 13 27 35 40 49 55 59

B: 17 35 39 40 55 58 60

Solution:

Pseudocode: Have two pointers start from the beginning. If  $A[i] > B[j]$  move  $j++$ . If  $A[i] < B[j]$  move  $i++$ . If  $A[i] == B[j]$  add to Array list.

Code:

```
public ArrayList<Integer> matches(int[] A, int[] B) {
```

```
    ArrayList<Integer> al = new ArrayList();
```

```
    int i = 0; int j = 0
```

```
    while (i < A.length && j < B.length) {
```

```
        if (A[i] == B[j]) {
```

```
            al.add(A[i]);
```

```
            i++; j++;
```

```
        } else if (A[i] < B[j])
```

```
            i++;
```

```
        } else
```

```
            j++;
```

```
    }
```

```
    return al;
```

```
}
```