

```
public class SortMaster {
```

```
    //returns the index position of the first occurrence of x in A,  
    //if x is not found, return -1
```

```
    public int sequentialSearch(int[] A, int x) {  
        for(int k=0; k<A.length; k++)  
            if (A[k]==x)  
                return(k);  
  
        return(-1);  
    }
```

```
    //returns the index position of the first occurrence of x in A,  
    //if x is not found, return -1
```

```
    public int binarySearch(int[] A, int x) {  
        int lo = 0;  
        int hi = A.length - 1;  
        while (lo <= hi) {  
            int mid = lo + (hi - lo) / 2;  
            if (x < A[mid]) {  
                hi = mid - 1;  
                System.out.println("Moved HI to " + hi);  
            }  
            else if (x > A[mid]) {  
                lo = mid + 1;  
                System.out.println("Moved LO to " + lo);  
            }  
            else {  
                System.out.println("Found it at " + mid);  
                return mid;  
            }  
        }  
  
        return(-1);  
    }
```

```
} //end class
```