package matos.binarysearch;

public class BinarySearch {

    public static void main(String[] args) {
        int[] data =
            {2, 3, 10, 12, 14, 16, 20, 25, 30, 32, 25, 40, 55, 77, 80, 89};
        int theValue = 10;

        int left = 0;
        int right= data.length-1;
        int middle=0;
        boolean found = false;

        while ( !(found) && (left <= right)){
            middle = (left + right) / 2;
            System.out.println("data["+ middle + "]= " + data[middle]);
            if (data[middle] == theValue) {
                found = true;
            } else {
                if ( data[middle] > theValue)
                    right = middle -1;
                else
                    left = middle + 1;
            }
        } //while
        if (found) {
            System.out.println("data found at loc: " + middle);
        } else {
            System.out.println("Sorry - not found");
        }
    } //main

}