```
1    Algorithm BinSearch(a, n, x)
2    // Given an array a[1 : n] of elements in nondecreasing
3    // order, n ≥ 0, determine whether x is present, and
4    // if so, return j such that x = a[j]; else return 0.
5    {
6        low := 1; high := n;
7        while (low ≤ high) do
8        {
9            mid := ⌊(low + high)/2⌋;
10           if (x < a[mid]) then high := mid − 1;
11           else if (x > a[mid]) then low := mid + 1;
12               else return mid;
13       }
14       return 0;
15   }
```

Algorithm 3.3 Iterative binary search