Algorithm: BinarySearch

```
1  Procedure BinarySearch(A, x)
2  |  low ← 0
3  |  high ← |A| − 1
4  |  while low ≤ high do
5  |  |  i ← ⌊(low+high)/2⌋
6  |  |  if A[i] = x then
7  |  |  |  return true
8  |  |  else if A[i] > x then
9  |  |  |  high ← i − 1
10 |  |  else
11 |  |  |  low ← i + 1
12 |  end
13 |  return false
```