**Recursive Binary Search algorithm**

// initially called with low = 0, high = n-1

// initial invocation: BinarySearch(A, value, 0, n-1)

BinarySearch(A[0..N-1], value, low, high)

{

if (high < low)

return not\_found // value would be inserted at index "low"

mid = (low + high) / 2

if (A[mid] > value)

return BinarySearch(A, value, low, mid-1)

else if (A[mid] < value)

return BinarySearch(A, value, mid+1, high)

else return mid

}

**Iterative Binary Search algorithm**

BinarySearch(A[0..N-1], value)

{

low = 0

high = N - 1

while (low <= high)

{

mid = (low + high) / 2

if (A[mid] > value)

high = mid - 1

else if (A[mid] < value)

low = mid + 1

else return mid

}

return not\_found // value would be inserted at index "low"

}