

Binary search

```
//A[] is an integer array sorted in ascending order  
//determine if x is contained in A[0..N-1]
```

```
low = 0;  
high = N-1;  
found = false;  
  
while (low <= high && !found)  
{  
    mid = (low + high) / 2;  
  
    if (A[mid] < x)  
        low = mid+1;  
    else if (A[mid] > x)  
        high = mid-1;  
    else  
        found = true; // x == A[mid]  
}
```